ONTARIO POWER GENERATION

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OPG Proprietary

February 9, 2023

CD# NK054-CORR-00531-10749

MS. S. EATON
Director
Advanced Reactor Licensing Division

Canadian Nuclear Safety Commission
280 Slater Street
Ottawa, ON
K1P 5S9

Dear Ms. Eaton:

DNNP – Submission of Site Geotechnical Investigation Reports for Excavation and Stockpiling and Request for Closure of Commitment D-P-9.2

Reference: 1. OPG Letter, M. Knutson to S. Eaton, "DNNP – Notification of Document Changes to NK054-REP-01210-00078, Darlington New Nuclear Project Commitments Report", September 29, 2022, CD# NK054-CORR-00531-10708.

The purpose of this letter is to submit the "Darlington New Nuclear Project Phase 1 Geotechnical Investigation Report Volume 2", NK054-REP-01210-00175 Sheet 00002 Rev 001 (Enclosure 1) and the "Darlington New Nuclear Project Soil Characterization Report", NK054 -REP-07730-00053 (Enclosure 2) for information and closure of commitment D-P-9.2. This submission is pursuant to Licence Condition 15.1 of the DNNP Power Reactor Site Preparation Licence, PRSL 18.00/2031.

The enclosed reports fulfill the requirements of commitment D-P-9.2 as described in the DNNP Commitments Report submitted under Reference 1. Attachment 1.1 of Reference 1 provides the mapping of the Joint Review Panel recommendations to commitment D-P-9.2. Additionally, OPG has developed a soil management plan to guide soil management during the site preparation and construction activities on the DNNP site. OPG requests CNSC's concurrence to close Commitment D-P-9.2 by March 14, 2023.

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Should you have any questions or require additional information, please contact Ms. Sevana Bedrossian, Manager, Regulatory Affairs - DNNP Licensing at (416) 716-3879 or by email at sevana.bedrossian@opg.com.

Sincerely,



Mark R. Knutson, P.Eng.
Senior Vice President
Chief Enterprise Engineering and Chief Nuclear Engineer
Ontario Power Generation Inc.

Attach.
Enc.

cc: C. Ducros - CNSC (Ottawa)
N. Simon - CNSC (Ottawa)
B. Rzentkowski - CNSC (Ottawa)
M. Naraine - CNSC (Ottawa)
N. Dormer - CNSC (Ottawa)

Enclosure 1

Darlington New Nuclear Project Phase 1 Geotechnical Investigation Report Volume 2

NK054-REP-01210-00175 Sheet 00002

January 12, 2023

OPG Document #	OPG Proprietary			
NK054-REP-01210-00175				
Units	REV	OPG	Submitter	Sht. 00002
		R01	R03	

REPORT

VOLUME 2 OF 2
GEOTECHNICAL INTERPRETATION AND DESIGN PARAMETERS

PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK)
DARLINGTON NEW NUCLEAR PROJECT

Submitted to:

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21451329 R3 V2of2

December 9, 2022

ONTARIO POWER GENERATION	
ACCEPTED	√
ACCEPTED AS NOTED	
REVISE AND RESUBMIT	
P.H. Sitha Signature	06 Jan 2023 Date
Name: Piraba Pirabaharan	
Dept: Plant Design & Analysis -Nuclear	
This acceptance does not relieve the contractor from responsibility for errors or omissions or from any obligations or liability under this contract.	
Notes:	

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EVS File named: “21451329 REV3_3 DNNP EVS Model.4dm”

EVS 4DIM Player Instructions for Use

1.0 INTRODUCTION

1.1 General

Ontario Power Generation (OPG) has commenced the federal approvals process for site preparation, construction, and operation of a new small modular nuclear reactor to be constructed within the eastern portion of the Darlington site. The proposed new project is herein referred to as the Darlington New Nuclear Project (DNNP).

Golder Associate Ltd., a member of WSP (Golder) has prepared this report for ES Fox. Fox Limited Nuclear Services (Fox), on behalf OPG, in accordance with the Engineering Specification, Darlington New Nuclear (ESDNN) for the Onshore/Offshore Geotechnical Investigation - Darlington New Nuclear Project (DNNP), Document No. NK054-REP-01210-00117-R002 and subsequent clarifications (collectively called the "Specification" or "ESDNN").

The geotechnical investigations for DNNP have been divided into three phases, as follows:

- Phase 1 – Onshore Power Block;
- Phase 2 – Offshore/Onshore Intake/Discharge Tunnels; and
- Phase 3 – Onshore Additional Boreholes.

The Phase 1 geotechnical field investigation for the onshore power block was carried out from June 2021 to November 2021 and the geotechnical laboratory testing was completed in December 2022. Based on the completed Phase 1 investigation and in accordance with the Specification Golder has prepared this Geotechnical Interpretation and Design Parameters Report.

The reader is referred to the "Important Information and Limitations of This Report" which follows the text and forms an integral part of this document.

1.2 Purpose and Overview

The purpose of the Phase 1 geotechnical investigation was to advance exploratory holes and conduct in situ geotechnical, geophysical and laboratory testing to obtain the required geotechnical data, as outlined in the Specification, and to provide geotechnical engineering interpretation and design parameters for the DNNP.

The results from the Phase 1 geotechnical investigation are presented in two volumes. Volume 1 – Factual Geotechnical Data Report (Golder Report No. 21451329-001) is presented under separate cover and provides the procedures and equipment used for the field investigations and laboratory testing and the resulting factual subsurface information from the investigations and testing. Volume 2 – Geotechnical Interpretation and Design Parameters Report (Golder Report No. 21451329-002) presented herein provides the interpreted subsurface stratigraphy and the geotechnical engineering parameters associated with each stratigraphic unit, including estimates of the parameter variability, for use in the design of the DNNP.

The interpreted design values provided herein are highly dependent on the stress conditions and structural interactions inherent in the detailed design aspects of the project, which are currently evolving. The designers may need to re-interpret the in situ and laboratory results and parameters based on the subject matter and circumstances being examined such that the parameters correspond to strain/stress levels expected from the permanent and transitory loads being analyzed as the project details evolve. The detailed interpretations are best

left to the specialist designers who best understand the intended use of those parameters and the conditions under which they are to be applied. Golder cannot be responsible for the interpretations and soil parameters provided in the report if applied to unanticipated analyses or boundary conditions.

1.3 Coordinate, Datum and Unit Systems

All coordinates given in this report are referenced to the North American Datum of 1983 (NAD83CSRS), Universal Transverse Mercator (UTM) Grid Projection Zone 17N. All elevations presented in this report are referenced to the Canadian Geodetic Vertical Datum of 1928 (CGVD28).

This report is presented using the International System of Units (SI), where length is quantified in metres (m), force in newtons (N), and pressure in pascals (Pa). Kilonewtons (kN) are used to quantify large values of force, and kilopascals (kPa), megapascals (MPa) and gigapascals (GPA) are used to quantify large values of pressure or stiffness. Centimetres (cm) and millimetres (mm) are used to quantify small values of length and kilometers (km) to quantify large values of length.

A list of symbols and terms used in the report is provided in Appendix A.

2.0 SITE DESCRIPTION

The proposed DNNP site, as shown on Figure 1 (following the text of this report), is located within the eastern portions of the existing Darlington Nuclear Generating Station (DNGS) at 1 Holt Road South, Bowmanville, Ontario. The DNNP site is located outside of the protected area (PA) and is bordered by Lake Ontario to the south, an existing storage building and a gravel parking lot and laydown area to the west, a roadway (Second Line) to the north and undeveloped lands to the east. The site is currently utilized for a laydown area, except for the northeast portion of the site, which is vegetated with grass and trees. The site slopes moderately within the vegetated areas and gently within gravel surfaced areas, generally sloping downward from northeast to southwest.

Within the localized power block area, ground surface elevations range from approximately 99.0 m in the northeast (grassy area) to 88.5 m in southeast (laydown area). A forested slope with a rise of about 5 m to 6 m separates the grassy area from the laydown area. A roadway (Third Line) runs east-west through the site, bisecting the power block area, before turning to connect with Holt Road to the north.

Currently, no structures are present within the site with the exception of two small structures north of Third Line. Some drainage swales are also present within the laydown area. A steep bluff separates the DNNP site from Lake Ontario waters in the south.

3.0 STRATIGRAPHIC MODEL

3.1 General

Based on the results of the current Phase 1 geotechnical investigation and to align with the stratigraphic units indicated in the OPG Engineering Specifications, Table 3-1, below, lists the stratigraphic units (from surface to depth) used as the basis for the reporting of subsurface conditions in this report. Figures 2, 3 and 4 (following the text of this report) display section locations and interpreted subsurface cross-sections of the DNNP site.

Table 3-1: Stratigraphic Reporting Units

Unit No.	Description
1	Topsoil / Fill
2a	Surficial Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay
2b	Surficial Glaciolacustrine Deposits – Silty Clayey Sand to Silty Sand/Sandy Silt
3	Upper Till
4a	Intermediate Glaciolacustrine Deposits – Silty Sand to Sandy Silt
4b	Intermediate Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay
5	Lower Till
6a	Blue Mountain Formation Bedrock
6b	Lindsay Formation Bedrock
6c	Verulam Formation Bedrock

The following subsections of this report present a three-dimensional (3D) conceptual stratigraphic model and provide general descriptions of the soil and rock stratigraphy encountered in the Phase 1 geotechnical investigation. Appendix A provides the abbreviations and terminology for soil and rock descriptions.

3.2 Three-Dimensional Stratigraphic Model

A 3D conceptual stratigraphic model of the Phase 1 investigation area was produced using the commercial software program Earth Volumetric Studio (EVS) Pro, developed by C Tech Development Corporation. This software uses kriging routines to interpolate and extrapolate subsurface conditions between and beyond the borehole locations to replicate the stratigraphy in three dimensions, while also integrating geostatistical data presentation capabilities and the ability to produce cross-sections or fence diagrams along specified cut lines.

The 3D model is based on the results of the Phase 1 geotechnical investigation, selected bedrock data from previous investigations and LiDAR data provided by OPG and is enclosed as an electronic file transfer accompanying this report. The stratigraphy displayed in the 3D model is simplified from the detailed stratigraphic data presented in the borehole logs, based on our understanding of the site and the engineering behaviour of the various subsurface materials encountered at the site.

The 3D model can be rotated and tilted and viewed from any direction to illustrate areas of rapidly changing conditions or potential anomalies. A free viewer (the “Standalone 4DIM Player Installation”) can be downloaded at https://client.ctech.com/ and instructions for use are also enclosed.

The 3D model shows several views of interest, as follows:

1) All borehole/drillhole stratigraphy in soil and rock;

2) All borehole Standard Penetration Testing (SPT) ‘N’ values in soil;

3) All borehole SPT ‘N’ values in soil less than 50 blows per 0.3 m of penetration;

4) All drillhole Rock Quality Designation (RQD) values in rock;

5) All drillhole RQD values in rock less than 50%;

6) Piezometric surfaces from the January 5, 2022 monitoring event; and

7) Sections A-A’, B-B’, C-C’, D-D’, and E-E’ depicting the interpreted stratigraphy.

The above views can be accessed by toggling through the upper menu using the “play” bar in accordance with the enclosed instructions.

The 3D model is an integral part of and enclosure to this report following the appendices and included with the electronic submission. It is important to note that the 3D model provides a general overview of the subsurface conditions. The reader’s attention is drawn to the detailed discussion of subsurface data (Volume 1) and this geotechnical interpretation and design parameter report (Volume 2).

3.3 Soil Stratigraphy

3.3.1 General

The stratigraphic soil unit thicknesses encountered in the Phase 1 boreholes are summarized below in Table 3-2 and shown in section view on Figures 2 and 3. The detailed Record of Borehole and Record of Drillhole logs and soil laboratory testing results per borehole are available under separate cover (Appendix A of Volume 1 – Factual Geotechnical Data Report). For reference, particle size distribution and Atterberg limits results are also presented in Appendix B, grouped by stratigraphic soil unit.

Table 3-2: Summary of Stratigraphic Soil Units Encountered in Phase 1 Boreholes

Borehole ID	Ground Surface Elevation (m)	Subsurface Unit Thickness (m)				
		Unit 1	Units 2a & 2b	Unit 3	Units 4a & 4b	Unit 5
BH1	89.62	1.14	3.05	4.26	12.81, 0.53	1.22, 2.28
BH1S	89.53	1.22	1.93	4.17	13.22, 0.92	0.49, 2.89[(a)]
BH1SB	89.7	1.42	1.63	1.52[(a)]	–	–
BH2	89.41	2.13	4.58	3.35	10.74	4.03
BH3	89.89	0.69	5.94	3.43	13.78	1.6
BH4	89.64	3.28	6.09	–	14.32	1.76
BH5	88.97	3.28	6.09	3.05	5.99	6.63
BH6	85.25	1.37	–	8.76, 2.31, 2.36	2.27, 1.52, 2.59	1.35
BH7	88.1	2.13	3.05	6.48	8.15, 0.19	1.68, 2.32
BH8	87.48	1.30	1.59	6.79	7.92, 1.32	1.63, 2.74
BH8S	87.61	1.22	1.65	6.93	7.00, 1.52	2.71, 2.44[(a)]
BH8SB	87.63	1.22	1.52[(a)]	–	–	–
BH9	88.83	2.13	3.81	5.62	8.40, 2.39	1.48, 0.88
BH10	88.40	1.98	3.20	4.95	11.41	2.88
BH11	87.89	0.61	1.14	8.45	8.34, 1.73	1.50, 1.47
BH11S	87.96	1.22	1.04	8.87	7.01, 1.87	1.37, 1.61[(a)]
BH11SB	87.95	1.37	0.61	1.07[(a)]	–	–
BH12-3	87.44	0.76	1.62	8.39	6.22, 2.96	3.56
BH13	87.14	2.13	–	7.92	7.93, 1.45	2.90, 0.54

Borehole ID	Ground Surface Elevation (m)	Subsurface Unit Thickness (m)				
		Unit 1	Units 2a & 2b	Unit 3	Units 4a & 4b	Unit 5
BH14	87.61	0.69	0.68	6.35	14.48	1.36
BH15	87.37	1.37	–	7.85	7.77, 3.53	2.95
BH16	88.63	1.37	5.72	2.97	14.02	–
BH17	86.82	0.89	1.24	13.49	2.13, 2.30	2.11, 0.50
BH18	87.18	0.61	–	3.58, 5.10	0.89, 7.19, 1.37	2.44, 2.43
BH18S	87.32	1.27	0.17	4.86, 0.15, 2.35	0.15, 0.29, 7.59, 1.87	2.68, 2.55[(a)]
BH19	86.58	0.99	–	8.67	7.36	5.69
BH20	86.36	0.69	0.68	5.69, 2.29	0.86, 8.21, 0.99[(a)]	0.86
BH27	95.47	0.53	–	10.96	17.72	1.41[(a)]
BH28	95.35	1.07	–	9.04	17.60	3.68
BH28S	95.30	1.22	–	2.51, 6.09, 0.66, 0.27, 2.15, 0.61	0.54, 1.83, 0.29, 1.27, 0.54, 7.85, 1.83	0.57, 3.36[(a)]
BH29	87.27	2.13	0.77	8.69	8.45	2.92
BH30	86.55	2.13	–	10.37, 1.53	0.68, 5.33	2.17
BH50-3	90.20	1.60	0.53	6.86	15.50	1.68
BH51	99.06	0.70	0.70	7.22, 3.87	4.57, 12.17	4.41
BH52	97.26	1.37	0.58	9.55	14.48	5.31
BH53	96.07	1.14	–	13.11	11.89, 0.23	0.96, 3.81
BH54	96.67	0.70	–	6.30, 5.10	0.99, 14.65	4.82
BH55	95.28	1.40	–	7.81	15.44, 1.1 0	5.25
BH57	89.77	2.13	4.09	0.87	12.19, 0.86	3.71, 1.20[(a)]
BH58	95.23	0.61	–	10.21	17.71	2.30
BH59	89.94	1.57	1.68	5.32	15.18	2.35
BH60	90.17	2.13	0.77	5.33	12.57, 0.68	1.53, 2.29
BH61	89.78	2.13	3.36	5.33	10.59	4.19
BH62	88.88	2.40	4.89	3.05	10.92	3.35
BH63	87.87	3.28	–	6.09	8.92	5.38
BH65	89.32	2.36	4.91	1.80	11.81, 0.59	0.53, 3.55
BH66	89.49	2.13	4.58	1.91	14.54	2.61
BH66S	89.47	2.45	4.41	2.28	10.67, 1.52	1.22, 3.05[(a)]
BH66SB	89.41	3.53	3.79	1.52[(a)]	–	–

Borehole ID	Ground Surface Elevation (m)	Subsurface Unit Thickness (m)				
		Unit 1	Units 2a & 2b	Unit 3	Units 4a & 4b	Unit 5
BH67	88.52	3.28	3.81	3.81	10.61	2.81
BH68	88.79	1.75	4.88	6.10	7.32	4.79
BH69	87.54	2.14	–	9.53	5.23	6.40
BH70	96.40	1.14	–	7.29, 2.11	0.36, 14.63	5.07
BH70S	96.35	1.14	–	3.57, 5.20	1.06, 15.18	4.52[(a)]
BH71	88.32	1.83	2.97	6.68	7.80	4.90
BH72	96.65	2.13	–	9.53	14.48	5.97
BH73	87.96	2.28	1.01	8.24	9.98	2.57
BH75	86.53	0.61	1.52	9.18	5.63	5.34
BH76	86.12	1.37	–	3.96, 7.67	0.16, 6.78	2.42
BH77	87.80	1.37	1.53	8.66	10.69	1.94
BH78	86.82	1.07	–	9.06	7.62	5.32
BH83S	85.29	0.98	–	10.04, 1.37	1.02, 6.09	3.05[(a)]

(a) Borehole terminated within this soil unit.
Note: Subsurface unit thicknesses are combined for Units 2a and 2b and for Units 4a and 4b. Where multiple unit thicknesses are provided for a given unit in a borehole, the soil unit is interlayered with other unit(s).
– indicates soil unit not encountered in listed borehole.

3.3.2 Unit 1 – Topsoil / Fill

Topsoil and/or fill (Unit 1) consisting of poorly graded sand with gravel to sandy lean clay was encountered at ground surface at all borehole locations. Unit 1 varied in colour from brown to black to grey. This surficial unit extended to depths between about 0.5 m and 3.5 m below the existing ground surface. Cobbles and boulders were encountered within Unit 1 in BH11 and BH61. Rootlets and organic staining as well as shale bedrock fragments were commonly observed within this deposit.

The SPT results in Unit 1 produced ‘N’ values ranging from 1 to 98 blows per 0.3 m of penetration, indicating very loose to very dense degree of compactness.

3.3.3 Unit 2a – Surficial Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay

Deposits of sandy lean clay to lean clay (Unit 2a) were encountered below the topsoil/fill layer. Unit 2a was brown to grey in colour and consisted of silt, clay, fine to coarse sand and trace to some subrounded to subangular gravel. This unit ranged in thickness between about 0.2 m and 6.1 m and extended to depths between about 1.2 m and 8.1 m below the existing ground surface.

The results of SPT carried out within Unit 2a yielded SPT ‘N’ values ranging from 2 to 26 blows per 0.3 m of penetration, indicating a soft to very stiff consistency. In situ vane testing carried out within Unit 2a yielded undrained shear strength values of about 30 kPa to over 100 kPa, indicating a firm to very stiff consistency, but more typically firm to stiff. The results of Atterberg limits testing carried out on selected samples from Unit 2a indicated low to medium plasticity fines.

3.3.4 Unit 2b – Surficial Glaciolacustrine Deposits – Silty Clayey Sand to Silty Sand/Sandy Silt

Deposits of silty clayey sand with gravel to silty sand/sandy silt (Unit 2b) were encountered below Unit 2a. In some boreholes, Units 2a and 2b were observed to be interlayered. Unit 2b was brown to grey in colour and consisted of silt with some clay, fine to coarse sand and subrounded to angular, fine to coarse gravel. This unit ranged in thickness from about 0.2 m and 6.1 m and extended to depths between about 1.4 m and 9.4 m below the existing ground surface. Cobbles were encountered within Unit 2b in BH1S and BH66S.

SPT carried out within Unit 2b resulted in SPT 'N' values ranging from the static weight of the hammer to 18 blows per 0.3 m of penetration, indicating a very loose to compact state of packing. In situ vane testing carried out within Unit 2b yielded undrained shear strength values of about 30 kPa to over 100 kPa, indicating a firm to very stiff consistency, but more typically firm to stiff. The results of Atterberg limits testing carried out on selected samples from Unit 2b indicated non-plastic to low plasticity fines.

3.3.5 Unit 3 – Upper Till

Deposits of silty sand with gravel to sandy lean clay with gravel (Unit 3) were encountered below the surficial glaciolacustrine deposits (Units 2a and 2b). Unit 3 is described as a till layer generally consisting of a heterogeneous mixture of gravel, boulders, and cobbles in a matrix of silty sand. This deposit was brown to grey in colour and consisted of silt, clay, fine to coarse sand and subrounded to subangular to angular, fine to coarse gravel. Unit 3 ranged in thickness from about 0.9 m to 13.5 m and extended to depths between about 3.0 m and 18.6 m below the existing ground surface. Figure 5 (following the report text) provides elevation contours of the top of Unit 3 over the investigation area. At borehole locations BH1SB, BH11SB and BH66SB, drilling was terminated within Unit 3, so the full vertical extent of the unit is unknown at those locations.

The results of SPT carried out within Unit 3 yielded SPT 'N' values ranging from 5 to greater than 100 blows per 0.3 m of penetration, indicating a loose to very dense state of packing, but more typically very dense packing. The results of Atterberg limits testing carried out on selected samples from Unit 3 indicated non-plastic to low plasticity fines.

3.3.6 Unit 4a – Intermediate Glaciolacustrine Deposits – Silty Sand to Sandy Silt

Deposits of silty sand to sandy silt (Unit 4a) were encountered below the upper till layer (Unit 3). Unit 4a was brown to grey in colour and consisted of silt, clay, fine to coarse sand and subrounded to angular, fine to coarse gravel. Boulders and cobbles were also present within Unit 4a. This unit ranged in thickness between about 0.1 m and 10.7 m and extended to depths ranging from about 4.3 m to 29.2 m below the existing ground surface. Drilling was terminated within Unit 4a in BH20, so the full vertical extent of the unit is unknown at that location.

SPT results showed SPT 'N' values from 39 to greater than 100 blows per 0.3 m of penetration, indicating a dense to very dense state of packing, but typically very dense. The results of Atterberg limits testing carried out on selected samples from Unit 4a indicated non-plastic to low plasticity fines.

3.3.7 Unit 4b – Intermediate Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay

Deposits of sandy lean clay to lean clay (Unit 4b) were encountered below Unit 4a. In some boreholes, Units 4a and 4b were observed to be interlayered. Unit 4b was grey in colour and consisted of silt, clay, fine to coarse sand and trace to some subrounded to angular gravel. This unit ranged in thickness from about 0.1 m to 5.2 m and extended to depths ranging between about 16.8 m and 29.2 m below the existing ground surface.

The results of SPT carried out within Unit 4b produced SPT 'N' values ranging from 15 to greater than 100 blows per 0.3 m of penetration, indicating a very stiff to hard consistency. The results of Atterberg limits testing carried out on selected samples from Unit 4b indicated low to medium plasticity fines.

3.3.8 Unit 5 – Lower Till

Below the intermediate glaci-lacustrine deposits (Units 4a and 4b), deposits of silt with sand to lean clay (Unit 5) were encountered. Unit 5 is described as a lower till layer generally consisting of a heterogeneous mixture of gravel, boulders, and cobbles in a matrix of silty sand and silty clay. This deposit was grey in colour and consisted of silt, clay, fine to coarse sand and subrounded to angular, fine to coarse gravel. Unit 5 varied in thickness from about 0.5 m to 6.3 m and extended to depths ranging between about 19.2 m and 33.6 m below the existing ground surface. Unit 5 was not fully penetrated in BH1S, BH8S, BH11S, BH18S, BH28S, BH57, BH66S, BH70S and BH83S.

SPT results from Unit 5 showed SPT 'N' values ranging from 31 to greater than 100 blows per 0.3 m of penetration, indicating a dense to very dense state of packing, but more typically very dense. The results of Atterberg limits testing carried out on selected samples from Unit 5 indicated non-plastic to low plasticity fines.

3.4 Bedrock Stratigraphy

The bedrock underlying the site consisted of the Paleozoic sequence (Blue Mountain Formation, Lindsay Formation and Verulam Formation) which is typically subhorizontally bedded. The top of the bedrock surface is shown on the interpreted subsurface cross-sections on Figures 3 and 4 and on the plan of elevation contours on Figure 6 (following the text of this report). These figures are based on readily available top of rock information from boreholes drilled for the current drilling program and previous investigations of the site; data between boreholes has been interpolated.

The top of bedrock surface is undulating relatively locally and slopes gently to the south from an elevation of about 67 m near the northern extent of the site to an elevation of about 62 m near Lake Ontario. Over the majority of the site, the bedrock surface contact has an elevation of approximately 64 m. This bedrock surface is consistent with the mapped subhorizontal dip of the Paleozoic sequence observed within the vicinity of the project area.

Subsurface rock conditions may vary between and beyond the borehole/drillhole locations. It should be noted that the interpreted stratigraphy shown in the 3D model and in the sections on the figures is a simplification of the subsurface bedrock contacts. Variations in the stratigraphic boundaries between boreholes/drillholes will exist and are to be expected.

The Paleozoic sequence at the site is subdivided into 3 units as described below:

- Unit 6a – Blue Mountain Formation; moderately weathered to fresh, very thinly to medium bedded, dark grey to dark brownish grey, fine grained, faintly porous, slightly to moderately reactive to hydrogen chloride (HCl), weak to strong Shale with thin, grey, limestone interbeds;
- Unit 6b – Lindsay Formation; slightly weathered to fresh, very thinly to medium bedded, light grey to grey, fine to medium grained, faintly porous, slightly to moderately reactive to HCl, weak to medium strong to very strong Limestone with grey shale interbeds; and
- Unit 6c – Verulam Formation; fresh, very thinly to medium bedded, grey, fine to medium grained, faintly porous, moderately reactive to HCl, medium strong to very strong Limestone with dark grey, shale interbeds.

A summary of the elevations of top of bedrock and bedrock unit thicknesses is presented in Table 3-3 below.

Table 3-3: Summary of Stratigraphic Bedrock Units Encountered in Phase 1 Drillholes

Drillhole ID	Ground Surface Elevation (m)	Depth to Top of Bedrock (m)	Top of Bedrock Elevation (m)	Subsurface Unit Thickness (m)		
				Blue Mountain Formation	Lindsay Formation	Verulam Formation[a]
				Unit 6a	Unit 6b	Unit 6c
BH1	89.62	25.29	64.33	3.18	–[a]	–
BH2	89.41	24.83	64.58	3.75	–[a]	–
BH3	89.89	25.44	64.45	3.55	–[a]	–
BH4	89.64	25.45	64.19	3.39	61.14	–
BH5	88.97	25.07	63.90	2.96	–[a]	–
BH6	85.25	22.53	62.72	3.66	–[a]	–
BH7	88.10	24.00	64.10	3.21	–[a]	–
BH8	87.48	23.29	64.19	1.72	–[a]	–
BH9	88.83	24.71	64.12	3.41	61.51	–
BH10	88.40	24.42	63.98	3.33	–[a]	–
BH11	87.89	23.24	64.65	4.15	61.28	–
BH12	87.44	23.47	63.97	3.26	–[a]	–
BH13	87.14	22.87	64.27	4.44	–[a]	–
BH14	87.61	23.56	64.05	3.67	61.47	–
BH15	87.37	23.47	63.90	3.54	–[a]	–
BH16	88.63	24.08	64.55	3.78	60.61	–
BH17	86.82	22.66	64.16	3.75	–[a]	–
BH18	87.18	23.61	63.57	2.48	–[a]	–
BH19	86.58	22.71	63.87	3.35	–[a]	–
BH28	95.35	31.39	63.96	2.34	–[a]	–
BH29	87.27	22.96	64.31	3.67	–[a]	–
BH30	86.55	22.21	64.34	5.87	–[a]	–
BH50	90.20	26.17	64.03	2.45	61.60	–
BH51	99.06	33.64	65.42	1.61	–[a]	–
BH52	97.26	31.73	65.53	2.15	–[a]	–
BH53	96.07	31.14	64.93	2.21	–[a]	–
BH54	96.67	32.72	63.95	2.03	–[a]	–
BH55	95.28	31.00	64.28	2.25	–[a]	–
BH58	95.23	30.83	64.40	2.47	–[a]	–
BH59	89.94	26.10	63.84	2.26	–[a]	–
BH60	90.17	25.30	64.87	2.02	–[a]	–
BH61	89.78	25.60	64.18	2.75	–[a]	–
BH62	88.88	24.38	64.50	1.50	–[a]	–

Drillhole ID	Ground Surface Elevation (m)	Depth to Top of Bedrock (m)	Top of Bedrock Elevation (m)	Subsurface Unit Thickness (m)		
				Blue Mountain Formation	Lindsay Formation	Verulam Formation[a]
				Unit 6a	Unit 6b	Unit 6c
BH63	87.87	23.67	64.20	3.43	–[a]	–
BH65	89.32	25.55	63.77	2.77	61.93	–
BH66	89.49	25.77	63.72	2.64	–[a]	–
BH67	88.52	24.35	64.17	3.19	–[a]	–
BH68	88.79	24.84	63.95	3.64	–[a]	–
BH69	87.54	23.30	64.24	2.66	–[a]	–
BH70	96.40	30.60	65.80	2.30	–[a]	–
BH71	88.32	24.18	64.14	4.24	–[a]	–
BH72	96.65	32.17	64.48	1.49	–[a]	–
BH73	87.96	24.08	63.88	1.38	–[a]	–
BH75	86.53	22.53	64.00	3.63	–[a]	–
BH76	86.12	22.36	63.76	3.39	–[a]	–
BH77	87.80	24.19	63.61	1.71	–[a]	–
BH78	86.82	23.07	63.75	3.40	–[a]	–

(a) The full thicknesses of the Lindsay Formation and Verulam Formation were not determined in these boreholes.

3.5 Groundwater Depths and Elevations

3.5.1 Historical Data Review

Water Well Records

Water well records were obtained from the Ministry of the Environment, Conservation and Parks (MECP). Eight water well records were reported for wells in proximity to the Phase 1 investigation area. Of the eight well records, four were reported as abandoned 51-mm or 76-mm diameter monitoring wells/test holes for which little information is provided and those are not discussed further. One well was recorded as a water supply well (i.e., used for stock watering and therefore likely related to a former site use) and three as observation wells. Of the observation wells, two were completed in bedrock and one was completed in overburden. A summary of relevant information from the four water well records is presented below in Table 3-4, including the inferred stratigraphic units in which the wells were completed. The geodetic datum for the elevation data in the water well records was not specified, although they are generally assumed to be reported in metres above sea level. For the purposes of the following discussion, the reported elevation data were assumed to be comparable to the elevation data obtained from the field investigation presented in this report.

Table 3-4: Summary of MECP Water Well Record Information

Well Record No.	Construction Date (mm-yy)	Well Use	Well Status	Grade Elevation[(a)] at the Time of Construction (m)	Well Depth / Elevation[(a)] (m)	Stratigraphic Unit	Groundwater Depth / Elevation[(a)] (m)
7103807	Feb-08	MO	OTH	102.7	97.5 / 5.2	Unit 6 –Bedrock	–
7106419	May-08	OTH	OTH	103.0	27.4 / 75.6	Unit 4 – Intermediate Glaciolacustrine Deposits	–
1904004	Oct-74	ST	WS	94.5	38.4 / 56.1	Unit 6 –Bedrock	18.3 / 76.2
7103806	Jan-08	MO	OTH	100.0	34.4 / 65.6	Unit 6 –Bedrock	–

(a) Elevations in table referenced to metres above sea level.
MO = monitoring; ST = stock; OTH = other; WS = water supply; – = no data.

Of the four water well records, one historical groundwater depth of 18.3 m, in October 1974, was reported in the bedrock water supply well; this corresponds to an approximate elevation of 76.2 m. The historical groundwater elevation is lower but similar to the groundwater elevations measured in the bedrock as part of the subject geotechnical investigation (see Section 3.5.2 below).

Lake Ontario Stage Fluctuations

Information provided online from Fisheries and Oceans Canada (*Historical Monthly Mean Water Levels from the Coordinated Network for Lake Ontario*, obtained from tides.gc.ca, accessed March 2022) indicated that the stage of Lake Ontario over the period of 1918 to 2019 (all available data) ranged as follows:

Table 3-5: Water Levels from the Coordinated Network for Lake Ontario (1918-2019)

Description	Elevation (m IGLD)	Elevation (m CGVD28)
Average	75.10	75.17
Minimum	74.24	74.31
Maximum	75.91	75.98

IGLD = International Great Lakes Datum; CGVD28 = Canadian Geodetic Vertical Datum of 1928.

Over the monitoring period, the stage in Lake Ontario fluctuated by 1.67 m, with the highest stage being 0.81 m higher than average, and the lowest stage being 0.86 m lower than average.

3.5.2 Current Program

Groundwater depths and elevations from the Phase 1 geotechnical investigation are presented in Table H-1 of Appendix H, Volume 1 – Factual Geotechnical Data Report (Golder Report No. 21451329-001). A summary of the minimum and maximum groundwater depths and elevations by stratigraphic unit is presented in Table 3-6 for each of the six main monitoring events.

Table 3-6: Summary of Groundwater Depths and Elevations from Phase 1 Investigation

Stratigraphic Unit		Monitoring Date	Groundwater Depth (mbgs)		Groundwater Elevation (m)		n
No.	Description		Min	Max	Min	Max	
1, 1/3	Fill, Fill/Upper Till	16-Nov-21	0.33	1.77	85.80	87.07	2
		29-Nov-21	0.38	1.63	85.75	87.21	2
		5-Jan-22	0.37	1.25	85.76	87.60	2
		26-Jan-22	-	-	-	-	0
		7-Feb-22	0.66	1.59	85.47	87.25	2
		17-Feb-22	0.34	1.34	85.79	87.50	2
3	Upper Till	16-Nov-21	2.04	2.97	84.08	93.33	5
		29-Nov-21	2.00	2.79	84.12	93.28	5
		5-Jan-22	1.76	2.66	84.24	93.44	5
		26-Jan-22	2.28	3.16	83.86	92.27	5
		7-Feb-22	2.23	3.42	83.88	92.02	5
		17-Feb-22	2.02	3.22	84.04	92.22	5
4a	Intermediate Glaciolacustrine Deposits	16-Nov-21	1.91	5.71	82.03	88.20	5
		29-Nov-21	1.87	5.96	82.10	88.21	5
		5-Jan-22	1.80	5.52	82.24	88.29	5
		26-Jan-22	2.22	5.88	81.90	87.91	5
		7-Feb-22	2.22	5.86	81.90	87.89	5
		17-Feb-22	2.02	5.72	82.04	88.10	5
5	Lower Till	16-Nov-21	7.11	12.19	79.01	84.45	6
		29-Nov-21	7.07	12.10	79.03	84.54	6
		5-Jan-22	4.98	11.98	79.12	84.67	6
		26-Jan-22	3.94	8.36	78.83	84.41	4
		7-Feb-22	4.97	12.10	78.91	84.54	6
		17-Feb-22	3.74	11.90	79.02	84.74	6
6a, 6b	Shallow Bedrock	16-Nov-21	7.81	7.81	80.41	80.41	1
		29-Nov-21	7.75	10.58	77.09	80.48	3
		5-Jan-22	7.37	9.11	78.56	82.86	4
		26-Jan-22	7.90	9.18	78.49	80.33	2
		7-Feb-22	6.69	9.27	78.41	83.54	4
		17-Feb-22	6.69	9.15	78.52	83.54	4

mbgs = metres below ground surface; n = number of values.

The groundwater depth and elevation data represent the conditions on the selected dates they were measured, and seasonal and annual fluctuations should be anticipated.

Some of the data presented above in Table 3-6 may not represent static water level conditions due to well development activities on-going during the field program. Hydrographs of groundwater elevations at selected monitoring wells installed within the Upper Till (Unit 3), Intermediate Glaciolacustrine (Unit 4), Lower Till (Unit 5) and shallow Bedrock (Unit 6a) Units are presented as Figures H-1 to H-4, respectively, in Appendix H of Volume 1 – Factual Geotechnical Data Report. The influence of development activities on groundwater elevations is particularly evident on the Figure H-3 hydrograph for the lower till (Unit 5).

Groundwater elevation data and the inferred groundwater contours and groundwater flow directions from the January 5, 2022 monitoring event are presented on Figure 7 (Unit 3, upper till), Figure 8 (Unit 4a, intermediate glaciolacustrine deposits), Figure 9 (Unit 5, lower till) and Figure 10 (Units 6a and 6b, shallow bedrock) (figures following the report text). As shown on the figures, the groundwater flow direction in the upper and lower till (Units 3 and 5, respectively) is inferred to be toward the southwest, and in the intermediate glaciolacustrine deposits (Unit 4a) and shallow bedrock (Units 6a and 6b) to be toward the south-southeast. The contours are based on data from the new monitoring wells installed within the investigation area as part of Phase 1, which are limited in aerial extent, and have not been considered with contemporary groundwater elevation data from the existing monitoring well network at the site.

As noted previously in Table 3-5, the recorded stage elevation of Lake Ontario over the period of 1918 to 2019 ranged from elevations 74.31 m to 75.98 m, which is inferred to include stage elevation conditions under a wide range of climatic conditions, including dry periods and flooded conditions. All of the static groundwater elevations measured as part of this investigation, as summarized in Table 3-6, were at a higher elevation than the recorded lake levels, from which groundwater discharge to Lake Ontario is inferred.

Based on the groundwater elevations at the tri-level monitoring wells BH12 and BH50 and a nearby monitoring well installed in the shallow bedrock, as recorded during the six main monitoring events, the following summary of vertical gradients between the stratigraphic Unit 3 (Upper Till), Unit 4a (Intermediate Glaciolacustrine), Unit 5 (Lower Till) and Units 6a/6b (shallow Bedrock) is presented in the two following tables.

Table 3-7: Summary of Vertical Hydraulic Gradients, BH12 Area

Date	Groundwater Elevation (m)				Vertical Gradient					
	Unit 3	Unit 4a	Unit 5	Unit 6	Units 3 to 4a		Units 4a to 5		Units 5 to 6	
	BH12-1	BH12-2	BH12-3	BH14	m/m	Dir.	m/m	Dir.	m/m	Dir.
16-Nov-21	85.43	83.84	79.49	-	-0.25	Down	-0.70	Down	-	-
29-Nov-21	85.47	83.89	79.47	77.09	-0.25	Down	-0.71	Down	-0.28	Down
5-Jan-22	85.72	84.03	82.47	78.56	-0.27	Down	-0.25	Down	-0.46	Down
26-Jan-22	85.19	83.61	79.09	78.49	-0.25	Down	-0.73	Down	-0.07	Down
7-Feb-22	85.24	83.66	79.18	78.41	-0.25	Down	-0.72	Down	-0.09	Down
17-Feb-22	85.46	83.81	79.29	78.52	-0.26	Down	-0.73	Down	-0.09	Down

m/m = metres per metre; Dir. = direction.

Table 3-8: Summary of Vertical Hydraulic Gradients, BH50 Area

Date	Groundwater Elevation (m)				Vertical Gradient					
	Unit 3	Unit 4a	Unit 5	Unit 6	Units 3 to 4a		Units 4a to 5		Units 5 to 6	
	BH50-1	BH50-2	BH50-3	BH60	m/m	Dir.	m/m	Dir.	m/m	Dir.
16-Nov-21	88.05	88.20	80.28	-	0.01	Up	-0.79	Down	-	-
29-Nov-21	88.07	88.21	82.30	80.28	0.01	Up	-0.59	Down	-4.43	Down
5-Jan-22	88.22	88.29	82.63	82.86	0.01	Up	-0.56	Down	0.51	Up
26-Jan-22	87.77	87.91	-	-	0.01	Up	-	-	-	-
7-Feb-22	87.72	87.89	82.43	83.54	0.02	Up	-0.54	Down	2.43	Up
17-Feb-22	87.91	88.10	82.58	83.54	0.02	Up	-0.55	Down	2.11	Up

m/m = metres per metre; Dir. = direction.

As indicated above in Table 3-7 and Table 3-8, BH50 is located near the hydraulically upgradient end of the Phase 1 investigation area, and BH12 is located near the hydraulically downgradient end. At BH50, the vertical gradient between Unit 3 (upper till) and Unit 4a (intermediate glaciolacustrine deposits) is upward whereas the vertical gradient changes to downward at BH12. The vertical hydraulic gradient between the Unit 4a (intermediate glaciolacustrine deposits) and Unit 5 (lower till) is downward at both BH12 and BH50. At BH50, the vertical gradient between the Unit 5 (lower till) and Unit 6 (shallow bedrock) is typically upward whereas the vertical gradient between these units changes to downward at BH12.

3.6 Groundwater Quality

3.6.1 General

Groundwater samples were collected from existing and new monitoring wells and submitted for the analysis of total metals; dissolved metals (selected samples); anions and alkalinity; base neutrals and acids; benzene, toluene, ethylbenzene and xylenes (BTEX); petroleum hydrocarbons (PHCs); and radionuclides. The analytical data, along with the field parameter measurements, are presented in Tables I-1A to I-5 provided in Appendix I of Volume 1 – Factual Geotechnical Data Report (Golder Report No. 21451329-001), and the laboratory certificates of analysis are also provided in Appendix I of Volume 1 – Factual Geotechnical Data Report. As detailed in those tables, the groundwater quality results are compared to the Provincial Water Quality Objectives (PWQO) in Table 2 – *Table of PWQOs and Interim PWQOs* found in *Water Management Policies, Guidelines and Provincial Water Quality Objectives of the Ministry of Environment and Energy* (now the Ministry of the Environment, Conservation and Parks), July 1994, reprinted February 1999 (PIBS 3303E).

It should be noted that the concentrations of metals in discharged groundwater that may enter a surface water body should be obtained from unfiltered samples, consistent with the sampling method for surface water samples. However, the dissolution of suspended sediment in a groundwater sample may occur during sample acidification resulting in artificially elevated concentrations of metals. To reduce the inclusion of suspended sediment in the groundwater samples, the monitoring wells were first developed and then samples were obtained using a low-flow sampling method or bailer while monitoring field turbidity as described in Section 3.11.2 of Volume 1 – Factual Geotechnical Data Report.

A summary of the groundwater analytical results is provided in the following subsections, organized by stratigraphic unit.

3.6.2 Surficial Glaciolacustrine Deposits (Units 2a and/or 2b)

Groundwater samples from the surficial glaciolacustrine deposits (Units 2a and/or 2b) were obtained from one monitoring well, MW045-10. The concentrations of the following parameters were greater than the corresponding PWQO:

Metals

- Total Iron: In the sample from MW045-10 with a concentration of 2.2 mg/L vs. the PWQO of 0.3 mg/L.

Anions, Alkalinity and Field Parameters

No exceedances of the PWQO were identified for these parameters.

Base Neutral and Acids, Total Phenolics, Total PCBs

- Phenols: In the sample from MW045-10 with a concentration of 0.006 mg/L vs. the PWQO of 0.001 mg/L.

BTEX and Petroleum Hydrocarbons

No exceedances of the PWQO were identified for these parameters.

Radionuclides

No exceedances of the PWQO were identified for these parameters.

3.6.3 Upper Till (Unit 3)

Groundwater samples from the upper till (Unit 3) were obtained from four monitoring wells, BH17, MW046-6, MW062-14 and MW066-8. The concentrations of the following parameters were greater than the corresponding PWQO:

Metals

- Total Iron: In the samples from BH17 and MW062-14 ranging in concentration from 1.09 mg/L to 1.93 mg/L vs. the PWQO of 0.3 mg/L. It is noted that the concentration of dissolved iron in the field-filtered sample from MW062-14 met the PWQO. This suggests that the exceedances of the PWQO for total iron may be related to suspended sediment in the samples, and not dissolved iron in the groundwater.

Anions, Alkalinity and Field Parameters

No exceedances of the PWQO were identified for these parameters.

Base Neutral and Acids, Total Phenolics, Total PCBs

- Phenols: In all four samples from BH17, MW046-6, MW062-14 and MW066-8 ranging in concentration from 0.002 mg/L to 0.006 mg/L vs. the PWQO of 0.001 mg/L.

BTEX and Petroleum Hydrocarbons

- Toluene: In the sample from MW066-8 with a concentration of 0.99 µg/L vs. the PWQO of 0.8 µg/L.

Radionuclides

No exceedances of the PWQO were identified for these parameters.

3.6.4 Intermediate Glaciolacustrine Deposits (Unit 4a)

Groundwater samples from the intermediate glaciolacustrine deposits (Unit 4a) were obtained from five monitoring wells, BH12-2, BH50-2, MW061-20, MW065-25, and MW106-29. The concentrations of the following parameters were greater than the corresponding PWQO:

Metals

- Dissolved aluminum: In the sample from BH50-2 with a concentration of 0.102 mg/L vs. the PWQO of 0.075 mg/L. This exceedance is likely related to the dissolution of suspended clay minerals during sample acidification despite sample filtration.
- Total Cadmium: In the sample from MW061-20 with a concentration of 0.0004 mg/L vs. the PWQO of 0.0002 mg/L. The concentration of dissolved cadmium in the field-filtered sample from MW061-20 was reported below the detection limit. This suggests that the exceedance of the PWQO for total cadmium may be related to suspended sediment in the sample, and not dissolved cadmium in the groundwater.
- Total Cobalt: In the sample from MW106-29 with a concentration of 0.0023 mg/L vs. the PWQO of 0.0009 mg/L. The concentration of dissolved cobalt in the field-filtered sample from MW106-29 was reported below the detection limit. This suggests that the exceedance of the PWQO for total cobalt may be related to suspended sediment in the sample, and not dissolved cobalt in the groundwater.
- Total Iron: In all five samples from the Intermediate Glaciolacustrine Unit ranging in concentration from 0.409 mg/L to 4.50 mg/L vs. the PWQO of 0.3 mg/L. It is noted that the concentration of dissolved iron in the field-filtered sample from MW106-29 met the PWQO. Despite field filtering, the concentration of dissolved iron exceeded the PWQO of the field-filtered sample from MW061-20. This suggests that the iron concentration in the Intermediate Glaciolacustrine Unit in some locations may exceed the PWQO even if suspended sediment is removed due to dissolved phase iron in the groundwater.
- Total Phosphorus: In the sample from MW106-29 with a concentration of 0.54 mg/L vs. the PWQO of 0.02 mg/L (PWQO applicable to lake environments). The concentration of dissolved phosphorus in the field filtered sample from MW106-29 was reported below the detection limit. This suggests that the total phosphorus concentration may have been elevated by the dissolution of particulate phase phosphorus during sample acidification.

Anions, Alkalinity and Field Parameters

No exceedances of the PWQO were identified for these parameters.

Base Neutral and Acids, Total Phenolics, Total PCBs

- Phenols: In all five samples from the intermediate glaciolacustrine deposits (Unit 4a) ranging in concentration from 0.007 mg/L to 0.029 mg/L vs. the PWQO of 0.001 mg/L.

BTEX and Petroleum Hydrocarbons

No exceedances of the PWQO were identified for these parameters.

Radionuclides

No exceedances of the PWQO were identified for these parameters.

3.6.5 Lower Till (Unit 5)

A groundwater sample from the lower till (Unit 5) was obtained from one monitoring well, BH67. The concentrations of the following parameters were greater than the corresponding PWQO:

Metals

Total Phosphorus: In the sample from BH-67 of 0.14 mg/L vs. the PWQO of 0.02 mg/L (PWQO applicable to lake environments.

Anions, Alkalinity and Field Parameters

- Field pH: In the sample from BH67, with a field pH value of 9.46, was outside of the acceptable PWQO range of 6.5 to 8.5.

Base Neutral and Acids, Total Phenolics, Total PCBs

- Phenols: In the sample from BH67 with a concentration of 0.007 mg/L vs. the PWQO of 0.001 mg/L.

BTEX and Petroleum Hydrocarbons

No exceedances of the PWQO were identified for these parameters.

Radionuclides

No exceedances of the PWQO were identified for these parameters.

3.6.6 Bedrock (Unit 6a and/or 6b)

Groundwater samples from the bedrock (Units 6a and/or 6b) were obtained from three monitoring wells, BH71, MW044-34 and MW060-34. The concentrations of the following parameters were greater than the corresponding PWQO:

Metals

- Total Boron: In all three samples from the bedrock unit (Unit 6a and/or 6b) ranging in concentration from 0.21 mg/L to 0.74 mg/L vs. the PWQO of 0.2 mg/L. It is noted that the concentration of the dissolved boron in the field-filtered sample from MW044-34 also did not meet the PWQO, and had a similar concentration of 0.576 mg/L. This suggests that the total boron concentration is related to dissolved phase boron in the groundwater.
- Total Iron: In the samples from MW044-34 and MW060-34 ranging in concentration from 0.326 mg/L to 0.574 mg/L vs. the PWQO of 0.3 mg/L. It is noted that the concentration of dissolved iron in the field-filtered sample from MW044-34 met the PWQO. This suggests that the exceedances of the PWQO for total iron may be related to suspended sediment in the samples, and not dissolved iron in the groundwater.
- Dissolved Zinc: In the sample from MW044-34 with a concentration of 0.407 vs. the PWQO of 0.03 mg/L. The concentration of dissolved zinc at this location is anomalous as the concentration of total zinc was below the method detection limit (i.e., <0.02 mg/L). Confirmation sampling for zinc is recommended prior to making decisions on the basis of the dissolved zinc concentration at MW044-34 (e.g., in relation to potential pumped water treatment as part of a dewatering or discharge plan).

Anions, Alkalinity and Field Parameters

- Field pH: In the samples from MW060-34 and BH71, with field pH values of 6.40 and 9.37, respectively, were outside the acceptable PWQO range of 6.5 to 8.5.

Base Neutral and Acids, Total Phenolics, Total PCBs

- Phenols: In all three samples from the bedrock unit (Unit 6a and/or 6b) ranging in concentration from 0.005 mg/L to 0.015 mg/L vs. the PWQO of 0.001 mg/L.

BTEX and Petroleum Hydrocarbons

No exceedances of the PWQO were identified for these parameters.

Radionuclides

No exceedances of the PWQO were identified for these parameters.

4.0 INTERPRETATION OF ADVANCED IN SITU AND LABORATORY TESTING

4.1 General

The methodologies for the in situ and laboratory testing carried out during the Phase 1 geotechnical investigation are detailed in Volume 1 – Factual Geotechnical Data Report. The following subsections discuss our interpretations of the advanced in situ and laboratory testing methods used to derive selected soil and rock material parameters.

4.2 Cone Penetration Testing

4.2.1 General

Cone penetration testing (CPT) with dissipation testing was carried out at 22 locations during the Phase 1 geotechnical investigation. Details of the testing methodology, testing locations and raw data results are provided in Volume 1 – Factual Geotechnical Data Report. The raw data from the CPT soundings was interpreted using the software package CPeT-IT v.2.3.1.9 by GeoLogismiki. The following soil properties were interpreted based on the CPT data and accepted correlations from literature:

- Normalized cone resistance;
- Normalized friction ratio;
- Normalized pore pressure ratio;
- Normalized soil behaviour index and type;
- SPT 'N_{60}' value;
- Relative density;
- Hydraulic conductivity, based on normalized soil behaviour index;
- Overconsolidation ratio;
- In situ stress ratio (coefficient of lateral earth pressure at rest);
- Peak and remoulded undrained shear strengths;
- Undrained strength ratio;
- Drained friction angle;
- Small strain shear modulus; and

- Young's modulus, at 50% of peak strength.

An undrained shear strength cone factor for clays (N_{kt}) of 17 was used for interpretation, based on correlation with the field vane testing data (corrected for plasticity) from the Phase 1 investigation. Plots of the interpreted CPT data and details of the formulas used for the estimated soil properties are provided in Appendix C.

4.2.2 Pore Pressure Dissipation Testing

Eighty-one (81) pore pressure dissipation tests were completed as part of the Phase 1 CPT program. Where dissipation testing was performed in fine-grained material and at least 50% dissipation was achieved over the testing interval, the coefficient of horizontal consolidation was interpreted. Table 4-1, below, summarizes the results of the CPT dissipation testing, which was carried out exclusively in Unit 2a.

Table 4-1: Summary of Cone Penetration Testing Pore Pressure Dissipations, Unit 2a

CPT ID	Testing Depth (m)	Normalized Soil Behaviour Type at Testing Depth[(a)]	Unit 2a Soil Description from Corresponding Borehole Log[(b)]	Time to 50% Consolidation[(c)] (s)	Coefficient of Horizontal Consolidation[(d)(e)] (cm^2/s)
CPT2	2.25	4 – Clayey silt to silty clay	Lean Clay with Sand (CL)	47	2×10^{-1}
	2.58	4 – Clayey silt to silty clay		65	2×10^{-1}
	3.85	4 – Clayey silt to silty clay		100	1×10^{-1}
	5.15	1 – Sensitive fine grained		771	1×10^{-2}
CPT3	3.05	4 – Clayey silt to silty clay	Lean Clay with Sand (CL)	236	5×10^{-2}
	4.58	5 – Silty sand to sandy silt		383	3×10^{-2}
CPT5B	3.38	4 – Clayey silt to silty clay	Sandy Silty Clay (CL-ML)	154	7×10^{-2}
	4.85	4 – Clayey silt to silty clay		498	2×10^{-2}
	6.63	4 – Clayey silt to silty clay		77	1×10^{-1}
	7.83	4 – Clayey silt to silty clay		162	7×10^{-2}
CPT7	2.30	4 – Clayey silt to silty clay	Lean Clay (CL)	187	6×10^{-2}
	2.98	5 – Silty sand to sandy silt		153	7×10^{-2}
CPT11	1.30	5 – Silty sand to sandy silt	Lean Clay with Sand (CL)	1328	8×10^{-3}
CPT12	1.60	5 – Silty sand to sandy silt	Lean Clay with Sand (CL)	223	5×10^{-2}
CPT50	1.90	5 – Silty sand to sandy silt	Lean Clay with Sand (CL)	92	1×10^{-1}
CPT60	2.18	4 – Clayey silt to silty clay	Lean Clay with Sand (CL)	358	3×10^{-2}
CPT62	2.58	4 – Clayey silt to silty clay	Lean Clay with Sand (CL)	128	9×10^{-2}
CPT65	4.83	4 – Clayey silt to silty clay	Lean Clay with Sand (CL) to Lean Clay (CL)	748	1×10^{-2}

(a) Soil behaviour type from CPeT-IT interpretation (Appendix C).
(b) Soil description taken from borehole log with corresponding number (e.g., CPT2 and BH2) at approximate depth of dissipation testing. (See Volume 1 – Factual Geotechnical Data Report Appendix A for borehole logs.)
(c) Time to 50% consolidation from ConeTec Site Investigation Results (see Volume 1 – Factual Geotechnical Data Report Appendix C).
(d) Rigidity index of 90 estimated for Unit 2a from plasticity index and overconsolidation ratio (Keavey and Mitchell, 1986)[1].
(e) Coefficient of horizontal consolidation estimated as per Teh and Houlsby (1991)[2].

[1] Keavey, J. and Mitchell, J.K. (1986). Strength of fine-grained soils using the piezocone. Use of In-Situ Tests in Geotechnical Engineering, GSP 6, ASCE, 668-685

[2] Teh, C.I. and Houlsby, G.T. (1991). An analytical study of the cone penetration test in clay. Geotechnique **41**(1):17-34.

4.3 Pressuremeter/Dilatometer Testing

Pressuremeter testing (PMT) was completed in eight (8) boreholes over the site as part of the Phase 1 investigation. Details of the testing methodology, testing locations and raw data results are provided in Volume 1 – Factual Geotechnical Data Report. Based on the PMT results, soil material parameters were inferred, including stress ratio (coefficient of lateral earth pressure at rest, K_0), Young's modulus, and undrained and drained shear strength parameters. The inferred parameters from PMT in soil are presented in Appendix D.

Dilatometer testing was carried out in nine (9) drillholes over the site. Dilatometer testing results for rock are provided in Volume 1 – Factual Geotechnical Data Report.

4.4 Overcoring In Situ Stress Testing

4.4.1 General

The following section provides the interpretation of the in situ stress measurement data collected at boreholes BH66, BH59, BH7, BH10, BH13 and BH68. Forty-five (45) overcoring in situ stress tests were attempted during the field program and 36 valid tests were interpreted.

4.4.2 Evaluation of Stresses

Based on the deformations measured across the three pairs of buttons of the United States Bureau of Mines (USBM) borehole deformation gauge, the stresses on the plane perpendicular to the axis of the borehole are given by the following expressions (Obert and Duval, 1967)[3].

$$P = \frac{E}{6d(1-\upsilon^2)}\left(U_1 + U_2 + U_3 + \frac{1}{\sqrt{2}}[(U_1-U_2)^2 + (U_2-U_3)^2 + (U_3-U_1)^2]^{1/2}\right)$$

$$Q = \frac{E}{6d(1-\upsilon^2)}\left(U_1 + U_2 + U_3 - \frac{1}{\sqrt{2}}[(U_1-U_2)^2 + (U_2-U_3)^2 + (U_3-U_1)^2]^{1/2}\right)$$

where,

E	is the average deformation modulus
υ	is the Poisson's ratio
d	is the diameter of the pilot hole
U_1, U_2, U_3	are the measured changes in borehole diameter across three diameters at 60° rotation (i.e., the 3 sets of buttons on the USBM deformation gauge)
U	is positive for an increasing diameter
P	is the maximum stress perpendicular to borehole axis
Q	is the minimum stress perpendicular to borehole axis

The direction of P is given by:

$$\theta = \frac{1}{2}\tan^{-1}\left[\frac{\sqrt{3}(U_2-U_3)}{2U_1-U_2-U_3}\right]$$

[3] Obert, L., and Duvall, W.I. 1967. Rock Mechanics and the Design of Structures in Rocks. New York, NY: Wiley.

where,

θ is the angle to P measured counter-clockwise from the direction of the U_1 diameter.

The quadrant of θ may be determined as follows:

If $U_2 > U_3$ and $U_2 + U_3 < 2U_1$ then θ is between 0° and 45°
$U_2 > U_3$ and $U_2 + U_3 > 2U_1$ then θ is between 45° and 90°
$U_2 < U_3$ and $U_2 + U_3 > 2U_1$ then θ is between 90° and 135°
$U_2 < U_3$ and $U_2 + U_3 < 2U_1$ then θ is between 135° and 180°

The above equations are derived for plane strain conditions with zero axial strain ($\varepsilon_2 = 0$) along the borehole. If the effect of axial strain is to be taken into account, an estimate of the axial stress along the borehole is required.

The deformation modulus of the rock is evaluated from the results of the biaxial tests using the following expression and assuming isotropic elasticity:

$$E = \frac{4ab^2P_0}{(b^2 - a^2)U}$$

where,

E is the deformation modulus
a is the inner radius of the overcore
b is the outer radius of the overcore
P_o is the radial pressure on the outer surface of the overcore
U is the average diametral deformation of pilot hole in the overcore

4.5 Geophysical Testing

4.5.1 Vertical Seismic Profiling

The Vertical Seismic Profiling (VSP) method measures variations in compressional and shear wave velocities with increasing depth and can be used to infer rock and soil types, stratigraphy, and soil conditions. In the Phase 1 geotechnical investigation, a surface seismic source was used to generate seismic-waves and a GeoStuff downhole geophone receiver was used to measure seismic velocity at varying distances (depths) from the source.

The downhole geophone receiver measured the wave-train associated with the waves travelling from the source to the receiver. The seismic source was connected to and triggered a data recording system that recorded the response of the downhole geophone, thus measuring the travel time of the wave train between source and receiver. Measurements of the travel times of the generated compressional and shear waves allowed for in situ compression and shear wave velocity values to be determined.

The geophone was positioned at the bottom of the borehole and advanced 1 m upward for each subsequent test to create one-dimensional profiles of compression and shear wave velocities versus depth. The recorded data were subsequently analyzed by splitting the three recorded components (vertical, longitudinal, and transverse) into depth-wave trains. Compression and shear wave arrivals were then selected and best fit to a model to derive layer thicknesses and compression and shear wave velocities in the vicinity of the borehole. These velocities were then used to calculate Poisson's ratio, shear modulus, Young's modulus, and bulk modulus, as per Section 4.5.3, below. The interpreted VSP results are provided in Appendix F.

4.5.2 Full Waveform Sonic

The Mount Sopris QL40-FWS Full Waveform Sonic probe (FWS) utilizes a sonic transmitter and three receivers to measure the primary (compression) and secondary (shear) wave velocities of rock formations. The transmitter and receiver portions of the probe are isolated from each other with a flexible sonic isolator which prevents the transmitted sonic pulses from travelling through the probe. As the calculations for wave velocity require a consistent separation from the transmitter and receivers relative to the borehole wall, centralizers are required for this probe.

Compression and shear wave velocities from FWS were estimated in WellCAD by computing a semblance plot that evaluates the similarities in the full sonic waveforms across the array of receivers in the probe. Graphically, the FWS Semblance Plot is an image log where individual pixels are assigned a colour based on the amplitude of the semblance between the travel times recorded by each of the FWS receivers. The manually selected slowness curves were adjusted using the WellCAD extremum algorithm, and the logs were inverted to generate compression wave velocity and shear wave velocity logs.

The FWS image logs and curves are displayed in Appendix F. The FWS logs include the semblance plot image, the selected compression wave and shear wave slowness curves, the calculated compressive wave velocity and shear wave velocity curves, and calculated dynamic engineering properties (as per Section 4.5.3).

The semblance plot is overlaid with the selected compression wave and shear wave slowness curves, which correspond to the two separate peak values shown in the semblance plot image. The corresponding compression wave velocity and shear wave velocity curves are provided adjacent for comparison. The Poisson's ratio curve is displayed adjacent to the three overlain elastic constants curves: shear modulus, Young's modulus, and bulk modulus.

4.5.3 Engineering Properties

Values for Poisson's ratio (ν), shear modulus (G), Young's modulus (E) and bulk modulus (K) are calculated from compression wave and shear wave velocities as:

Poisson's ratio:
$$v = \frac{0.5\left(\frac{V_P}{V_S}\right)^2 - 1}{\left(\frac{V_P}{V_S}\right)^2 - 1}$$

Young's modulus:
$$E = \frac{V_P^2 \rho (1+v)(1-2v)}{(1-v)} = 2G(1+v)$$

Shear modulus:
$$G = \frac{E}{2(1+v)} = V_s^2 \rho$$

Bulk modulus:
$$K = \frac{E}{3(1-2v)} = \frac{V_P^2 \rho}{\frac{4}{3}G}$$

Where ρ is the bulk density (in Kg/m^3), V_P is the compression wave velocity (m/s) and V_s is the shear wave velocity (m/s).

4.6 Advanced Laboratory Testing of Soil

4.6.1 One-Dimensional Consolidation Testing

Laboratory one-dimensional consolidation testing was carried out as part of the Phase 1 geotechnical investigation. Details of the testing methodology and the raw data results are provided in Volume 1 – Factual Geotechnical Data Report. The following subsections describe the methods and assumptions used in the estimation of consolidation properties from the laboratory results.

It should be noted that some test results indicate that specimens may have been disturbed (although this was not necessarily evident at the time the sample was prepared for testing), and the tests carried out on disturbed specimens may not be representative of actual in situ conditions. Sample disturbance may be inferred from the characteristic shape of the consolidation curve. For example, in the semi-logarithmic plot of void ratio versus applied stress, a curve with a well-defined break between recompression and virgin compression may indicate a relatively “intact” specimen. A gradually rounded curve or a flattened curve between recompression and virgin compression typically indicates a disturbed specimen. The specimen volumetric strain, as defined below, may be considered as a general index of sample disturbance:

$$\varepsilon_{vo} = \frac{e_0 - e_1}{1 + e_0} \times 100$$

Where ε_{vo} is the volumetric strain at the estimated in situ vertical effective stress (%), e_0 is the initial void ratio determined in the laboratory, and e_1 is the void ratio at the estimated in situ vertical effective stress during consolidation testing. Table 4-3 presents the void ratios and initial volumetric strain estimates for the one-dimensional consolidation specimens.

Table 4-2: Summary of Void Ratios and Initial Volumetric Strain from One-Dimensional Consolidation Testing

Borehole ID	Sample ID	Avg. Sample Depth (m)	Strati-graphic Unit	Soil Description from Borehole Log[(a)]	Estimated In Situ Vertical Effective Stress[(b)] (kPa)	Initial Void Ratio	Void Ratio at Est. In Situ Vertical Effective Stress	Volumetric Strain at Est. In Situ Vertical Effective Stress
BH1	SA4-1	2.17	2a	Sandy Lean Clay (CL)	43	0.68	0.61	4.0%
BH2	SA5-1	3.42	2a	Lean Clay with Sand (CL)	59	0.60	0.58	1.5%
BH3	SA3-1	1.85	2a	Lean Clay with Sand (CL)	37	0.57	0.51	3.8%
BH3	SA5-1	3.21	2a	Lean Clay with Sand (CL)	57	0.69	0.62	4.1%
BH10	SA5-1	3.34	2a/2b	Lean Clay (CL) / Silty Clayey Sand with Gravel (SC-SM)	59	0.27	0.23	3.5%
BH18S	SA32	15.30	4b/4a	Lean Clay (CL) / Sandy Silt (SM)	180	0.57	0.47	6.6%
BH18S	SA40-1	18.44	5	Silty Clay (CL-ML)	212	0.25	0.21	2.9%

Borehole ID	Sample ID	Avg. Sample Depth (m)	Strati-graphic Unit	Soil Description from Borehole Log[(a)]	Estimated In Situ Vertical Effective Stress[(b)] (kPa)	Initial Void Ratio	Void Ratio at Est. In Situ Vertical Effective Stress	Volumetric Strain at Est. In Situ Vertical Effective Stress
BH18S	SA44-1	21.51	5	Sandy Silty Clay (CL-ML)	244	0.37	0.31	4.7%
BH28	SA18-1	24.98	4b	Lean Clay (CL)	279	0.58	0.52	4.1%
BH28S	SA37	20.46	4b/4a	Lean Clay (CL) / Silty Sand (SM) to Sandy Silt (ML)	233	0.60	0.49	6.4%
BH65	SA6-1	3.09	2a	Lean Clay with Sand (CL) to Lean Clay (CL)	56	0.63	0.57	3.9%
BH65	SA7-1	4.36	2a	Lean Clay with Sand (CL) to Lean Clay (CL)	69	0.76	0.71	2.6%
BH65	SA32-1	19.06	4b	Lean Clay (CL)	219	0.78	0.69	5.3%
BH65	SA34-1	20.46	4b	Lean Clay (CL)	233	0.78	0.62	9.3%
BH66S	SA44-1	23.18	5	Silty Clayey Sand with Gravel (SC-SM)	261	0.31	0.25	4.6%
BH66S	SA48	24.24	5	Silty Clayey Sand with Gravel (SC-SM)	272	0.30	0.22	6.1%
BH68	SA5-1	3.37	2a	Lean Clay with Sand (CL)	59	0.76	0.71	3.1%

(a) Soil description from borehole log at sample depth. (See Volume 1 – Factual Geotechnical Data Report (Golder Report No. 21451329- 001), Appendix A for borehole logs).
(b) In situ vertical effective stress estimated assuming unit weight of soil of 20 kN/m^3 and groundwater table at 2.5 m below ground surface.

Preconsolidation Pressure

Two graphical methods were used to estimate preconsolidation pressure: the Casagrande method and the “work” method. The Casagrande method for estimating the preconsolidation pressure is described in ASTM D2435. This method relies upon the presence of a well-defined break in the semi-logarithmic plot of void ratio versus applied stress (in the vicinity of the preconsolidation pressure). In practice, however, stress-strain curves from laboratory consolidation testing are often rounded (to some extent) due to sample disturbance. To address this limitation of the Casagrande method, instead of choosing a *point* of maximum curvature, a *zone* of maximum curvature was bounded by maximum and minimum stress points. The maximum and minimum points were then used to estimate boundary preconsolidation pressures and thus a range of possible pressure values.

The “work” method for estimating preconsolidation pressure given by Becker et al. (1987)[4] relates the energy used to compress clay samples to the stress applied. Specifically, this method fits two linear segments to the plot

[4] Becker DE, Crooks JHA, Been K, Jefferies MG. 1987. Work as a criterion for determining in situ and yield stresses in clays. Canadian Geotechnical Journal. **24**(4):549-564.

of strain energy density versus stress to represent the pre-yield and post-yield behavior of the soil. The “work” method, like the Casagrande method, can be somewhat subjective as it relies on linear interpolations of strain energy density and stress plots that are, in practice, sometimes curved.

For the interpretations presented herein, the pre-yield line was drawn by fitting through at least three data points showing reasonable linearity following initial loading. The post-yield line was similarly drawn by fitting to data that exhibited linearity following a clear break in the work stress curve (the yield zone).

If nonlinearities in post-yield data were observed, the data point with the largest stress was neglected. This method was adopted due to observations that post-yield lines constructed using the largest stress data points overestimated the preconsolidation pressure when compared with ranges obtained from the Casagrande method, and because of similar patterns noted by Becker et al. (1987) at high pressures. Maximum and minimum slope post-yield lines were drawn fitting to data further or closer from the yield zone respectively. From the Casagrande results, it was inferred which samples were normally consolidated or overconsolidated and care was taken in post-yield fits to only include data from beyond the calculated in situ effective stresses in these cases.

If the pre-yield line could not be explicitly determined, a minimum pre-yield line was created fitting to the first three data points and a maximum pre-yield line was fitted through additional points, as boundaries for estimating ranges of preconsolidation pressure. Table 4-3, below, summarizes the preconsolidation pressures and overconsolidation ratios estimated using the Casagrande and “work” methods for the one-dimensional consolidation testing undertaken as part of the Phase 1 investigation.

Coefficients of Consolidation, Volume Compressibility, and Hydraulic Conductivity

Coefficients of vertical consolidation, volume compressibility, and vertical hydraulic conductivity at the end of each consolidation loading step are provided in the laboratory reports in Appendix A of Volume 1 – Factual Geotechnical Data Report. These coefficients vary over the testing duration and are dependent on many factors including stress level, overconsolidation ratio, and strain rate. From the one-dimensional consolidation testing carried out as part of the Phase 1 investigation, the variability of these parameters spans roughly one to two orders of magnitude at low loads (< 50 kPa to 400 kPa) and tends to converge at higher loads.

Table 4-4 summarizes the coefficient of consolidation, volume compressibility, and hydraulic conductivity data determined from the one-dimensional consolidation testing. For reporting purposes, these coefficients are linearly interpolated between end of loading step data and are taken at a stress level of 100 kPa in excess of the estimated in situ vertical effective stress. Table 4-5 presents a summary of the compression index and compression ratio data determined from the one-dimensional consolidation testing.

Compression Index and Ratio

Table 4-5, below, summarizes the compression index and compression ratio data determined from the one-dimensional consolidation testing. The compression index was estimated from the slope of the virgin consolidation portion (steepest linear portion) of the semi-logarithmic stress-strain curve. The compression ratio was calculated from the compression index and the initial void ratio.

Table 4-3: Summary of Preconsolidation Pressure and Overconsolidation Ratio from One-Dimensional Consolidation Testing (Casagrande and Work Methods)

Borehole ID	Sample ID	Avg. Sample Depth (m)	Stratigraphic Unit	Soil Description from Borehole Log[a]	Estimated In Situ Vertical Effective Stress[b] (kPa)	Initial Void Ratio	Preconsolidation Pressure (kPa)				Overconsolidation Ratio			
							Casagrande Method		Work Method		Casagrande Method		Work Method	
							Min	Max	Min	Max	Min	Max	Min	Max
BH1	SA4-1	2.17	2a	Sandy Lean Clay (CL)	43	0.68	90	171	129	197	2.1	3.9	3.0	4.5
BH2	SA5-1	3.42	2a	Lean Clay with Sand (CL)	59	0.60	577	828	606	764	9.7	13.9	10.2	12.9
BH3	SA3-1	1.85	2a	Lean Clay with Sand (CL)	37	0.57	105	262	209	299	2.8	7.1	5.6	8.1
BH3	SA5-1	3.21	2a	Lean Clay with Sand (CL)	57	0.69	1062	1301	1167	1212	18.6	22.7	20.4	21.2
BH10	SA5-1	3.34	2a/2b	Lean Clay (CL) / Silty Clayey Sand with Gravel (SC-SM)	59	0.27	See Note Below[c]							
BH18S	SA32	15.30	4b/4a	Lean Clay (CL) / Sandy Silt (SM)	180	0.57	See Note Below[d]							
BH18S	SA40-1	18.44	5	Silty Clay (CL-ML)	212	0.25	221	537	256	511	1.0	2.5	1.2	2.4
BH18S	SA44-1	21.51	5	Sandy Silty Clay (CL-ML)	244	0.37	206	446	239	671	0.8	1.8	1.0	2.8
BH28	SA18-1	24.98	4b	Lean Clay (CL)	279	0.58	298	564	370	590	1.1	2.0	1.3	2.1
BH28S	SA37	20.46	4b/4a	Lean Clay (CL) / Silty Sand (SM) to Sandy Silt (ML)	233	0.60	See Note Below[d]							
BH65	SA6-1	3.09	2a	Lean Clay with Sand (CL) to Lean Clay (CL)	56	0.63	68	128	75	224	1.2	2.3	1.3	4.0

Borehole ID	Sample ID	Avg. Sample Depth (m)	Stratigraphic Unit	Soil Description from Borehole Log[a]	Estimated In Situ Vertical Effective Stress[b] (kPa)	Initial Void Ratio	Preconsolidation Pressure (kPa)				Overconsolidation Ratio			
							Casagrande Method		Work Method		Casagrande Method		Work Method	
							Min	Max	Min	Max	Min	Max	Min	Max
BH65	SA7-1	4.36	2a	Lean Clay with Sand (CL) to Lean Clay (CL)	69	0.76	249	375	207	339	3.6	5.4	3.0	4.9
BH65	SA32-1	19.06	4b	Lean Clay (CL)	219	0.78	337	603	471	687	1.5	2.8	2.2	3.1
BH65	SA34-1	20.46	4b	Lean Clay (CL)	233	0.78	See Note Below[d]							
BH66S	SA44-1	23.18	5	Silty Clayey Sand with Gravel (SC-SM)	261	0.31	See Note Below[e]							
BH66S	SA48	24.24	5	Silty Clayey Sand with Gravel (SC-SM)	272	0.30	See Note Below[d]							
BH68	SA5-1	3.37	2a	Lean Clay with Sand (CL)	59	0.76	142	225	156	329	2.4	3.8	2.7	5.6

(a) Soil description from borehole log at sample depth. (See Volume 1 – Factual Geotechnical Data Report Appendix A for borehole logs).
(b) In situ vertical effective stress estimated assuming unit weight of soil of 20 kN/m^3 and groundwater table at 2.5 m below ground surface.
(c) Initial void ratio indicates specimen likely comprises Unit 2b (coarse-grained material); consolidation interpretation not carried out.
(d) Specimen considered disturbed due to volumetric strain at estimated in situ vertical effective stress; consolidation interpretation not carried out.
(e) Specimen considered disturbed due to irregular shape of consolidation curve (see Volume 1 – Factual Geotechnical Data Report Appendix A for raw data results); consolidation interpretation not carried out.

Table 4-4: Summary of Coefficients of Consolidation, Volume Compressibility, and Hydraulic Conductivity from One-Dimensional Consolidation Testing

Borehole ID	Sample ID	Avg. Sample Depth (m)	Stratigraphic Unit	Soil Description from Borehole Log[a]	Estimated In Situ Vertical Effective Stress[b] (kPa)	Initial Void Ratio	Coefficient of Vertical Consolidation[c] (cm^2/s)	Coefficient of Volume Compressibility[c] (1/kPa)	Vertical Hydraulic Conductivity[c] (cm/s)
BH1	SA4-1	2.17	2a	Sandy Lean Clay (CL)	43	0.68	9.0E-04	2.9E-04	2.6E-08
BH2	SA5-1	3.42	2a	Lean Clay with Sand (CL)	59	0.60	4.2E-03	9.9E-05	4.1E-08
BH3	SA3-1	1.85	2a	Lean Clay with Sand (CL)	37	0.57	2.1E-03	3.2E-04	6.6E-08
BH3	SA5-1	3.21	2a	Lean Clay with Sand (CL)	57	0.69	2.1E-03	1.4E-04	2.8E-08
BH18S	SA40-1	18.44	5	Silty Clay (CL-ML)	212	0.25	1.13E-03	4.85E-05	5.4E-09
BH18S	SA44-1	21.51	5	Sandy Silty Clay (CL-ML)	244	0.37	1.42E-03	5.82E-05	8.1E-09
BH28	SA18-1	24.98	4b	Lean Clay (CL)	279	0.58	9.1E-04	8.0E-05	7.1E-09
BH65	SA6-1	3.09	2a	Lean Clay with Sand (CL) to Lean Clay (CL)	56	0.63	3.1E-03	3.5E-04	1.1E-07
BH65	SA7-1	4.36	2a	Lean Clay with Sand (CL) to Lean Clay (CL)	69	0.76	9.3E-04	1.9E-04	1.8E-08
BH65	SA32-1	19.06	4b	Lean Clay (CL)	219	0.78	2.0E-03	1.1E-04	2.2E-08
BH68	SA5-1	3.37	2a	Lean Clay with Sand (CL)	59	0.76	9.3E-04	2.4E-04	2.2E-08

(a) Soil description from borehole log at sample depth. (See Volume 1 – Factual Geotechnical Data Report Appendix A for borehole logs.)
(b) In situ vertical effective stress estimated assuming unit weight of soil of 20 kN/m^3 and groundwater table at 2.5 m below ground surface.
(c) Coefficients of vertical consolidation, volume compressibility, and vertical hydraulic conductivity are taken at a stress level of 100 kPa in excess of the estimated in situ vertical effective stress.
Note: Selected consolidation testing results have been excluded from interpretation (see Table 4-3 for details).

Table 4-5: Summary of Compression Index and Compression Ratio from One-Dimensional Consolidation Testing

Borehole ID	Sample ID	Avg. Sample Depth (m)	Stratigraphic Unit	Soil Description from Borehole Log[a]	Estimated In Situ Vertical Effective Stress[b] (kPa)	Initial Void Ratio	Compression Index	Compression Ratio
BH1	SA4-1	2.17	2a	Sandy Lean Clay (CL)	43	0.68	0.16	0.10
BH2	SA5-1	3.42	2a	Lean Clay with Sand (CL)	59	0.60	0.17	0.11
BH3	SA3-1	1.85	2a	Lean Clay with Sand (CL)	37	0.57	0.15	0.10
BH3	SA5-1	3.21	2a	Lean Clay with Sand (CL)	57	0.69	0.25	0.15
BH18S	SA40-1	18.44	5	Silty Clay (CL-ML)	212	0.25	0.06	0.05
BH18S	SA44-1	21.51	5	Sandy Silty Clay (CL-ML)	244	0.37	0.06	0.04
BH28	SA18-1	24.98	4b	Lean Clay (CL)	279	0.58	0.14	0.09
BH65	SA6-1	3.09	2a	Lean Clay with Sand (CL) to Lean Clay (CL)	56	0.63	0.18	0.11
BH65	SA7-1	4.36	2a	Lean Clay with Sand (CL) to Lean Clay (CL)	69	0.76	0.22	0.13
BH65	SA32-1	19.06	4b	Lean Clay (CL)	219	0.78	0.23	0.13
BH68	SA5-1	3.37	2a	Lean Clay with Sand (CL)	59	0.76	0.18	0.10

(a) Soil description from borehole log at sample depth. (See Volume 1 – Factual Geotechnical Data Report Appendix A for borehole logs.)
(b) In situ vertical effective stress estimated assuming unit weight of soil of 20 kN/m^3 and groundwater table at 2.5 m below ground surface.
Note: Select consolidation testing results have been excluded from interpretation (see Table 4-3 for details).

4.6.2 Direct Simple Shear Testing

Consolidated undrained direct simple shear (DSS) testing of intact cohesive specimens was carried out as part of the Phase 1 geotechnical investigation. Specimens were generally consolidated to the approximate in situ preconsolidation pressure and then unloaded to the approximate in situ vertical effective stress prior to the undrained shearing stage. This laboratory loading and unloading sequence was intended to allow specimens to develop at rest earth pressure (K_0) conditions within the confining rings/membrane. Additional details of the testing methodology and the raw data results are provided in Volume 1 – Factual Geotechnical Data Report.

Shear Strength Behaviour

As shown in Table 4-8, the laboratory undrained shear strength value for each tested specimen was taken as the corrected peak shear stress, and the undrained shear strength ratio was determined as the ratio of the undrained shear strength to the vertical effective stress at the beginning of the shearing stage.

Deformation Behaviour

The secant shear modulus was determined from the stress-strain results for each tested specimen. Appendix G provides plots of the secant shear modulus versus shear strain from the DSS testing.

Table 4-6: Summary of Undrained Shear Strength from Undrained Shearing of Intact Consolidated Direct Simple Shear Specimens

Borehole ID	Sample ID	Avg. Sample Depth (m)	Stratigraphic Unit	Soil Description from Borehole Log[a]	Maximum Vertical Effective Stress during Consolidation (kPa)	Vertical Effective Stress at Beginning of Shear (kPa)	Shear Strain at Peak Shear Stress (%)	Undrained Shear Strength (kPa)	Undrained Shear Strength Ratio[b]
BH1S	2-1	1.72	2a	Lean Clay with Sand (CL)	134	43	18	16	0.37
BH1S	14	8.82	4b	Lean Clay (CL)	342	129	16	90	0.7
BH1S	26	19.49	4b	Lean Clay (CL)	677	239	13	151	0.63
BH8S	2	1.64	2a	Lean Clay with Sand (CL)	134	34	20	47	1.4
BH8S	6	15.60	4a/4b	Silty Sand (SM)/ Lean Clay (CL)	569	216	17	125	0.58
BH8S	7-2	16.03	4b	Lean Clay (CL)	576	216	20	140	0.65
BH8S	18-3	18.37	5	Sandy Silty Clay (CL-ML)	1131	250	20	233	0.93
BH8S	20-2	19.35	5	Sandy Silty Clay (CL-ML)	1173	250	20	440	1.76
BH8S	20-3	19.39	5	Sandy Silty Clay (CL-ML)	1173	250	20	283	1.13
BH11S	1	1.48	2a	Lean Clay with Sand (CL)	119	38	8	34	0.9
BH11S	6	16.42	4b	Lean Clay (CL)	596	221	20	130	0.59
BH11S	20	19.39	5	Silt with Sand (ML)	1189	248	20	265	1.07
BH11S	23-1	22.03	5	Sandy Silt (ML)	1264	255	20	173	0.68
BH18S	37	16.86	5	Lean Clay (CL)/ Silty Clay (CL-ML)	1074	224	17	195	0.87

Borehole ID	Sample ID	Avg. Sample Depth (m)	Stratigraphic Unit	Soil Description from Borehole Log[a]	Maximum Vertical Effective Stress during Consolidation (kPa)	Vertical Effective Stress at Beginning of Shear (kPa)	Shear Strain at Peak Shear Stress (%)	Undrained Shear Strength (kPa)	Undrained Shear Strength Ratio[b]
BH18S	47	22.48	5	Sandy Silty Clay (CL-ML)	1264	288	20	340	1.18
BH28S	38	23.35	4b	Lean Clay (CL)	820	293	20	144	0.49
BH66S	3-2	3.01	2a	Lean Clay with Sand (CL)	296	59	8	61	1.04
BH66S	6	3.57	2a	Lean Clay with Sand (CL)	335	67	14	72	1.07
BH66S	7	4.14	2a	Lean Clay with Sand (CL)	285	71	7	64	0.9
BH66S	33	16.40	4b	Lean Clay (CL)	746	213	9	158	0.74
BH66S	34-1	17.71	4b	Lean Clay (CL)	639	229	20	192	0.84
BH66S	41-1	19.49	4b	Lean Clay (CL)	892	319	20	182	0.57
BH83S	6	16.71	4b	Sandy Lean Clay (CL)	622	210	20	147	0.7

(a) Soil description from borehole log at sample depth. (See Volume 1 – Factual Geotechnical Data Report (Golder Report No. 21451329-001), Appendix A for borehole logs.)
(b) Undrained Shear Strength Ratio taken as the ratio of the Undrained Shear Strength to the Effective Vertical Stress at the beginning of shear.

4.6.3 Consolidated Drained Triaxial Testing

Consolidated anisotropic drained (CAD) triaxial compression testing was completed on reconstituted granular soil specimens as part of the Phase 1 geotechnical investigation. Reconstituted specimens were prepared by moist tamping combined with the undercompaction method, where the initial layer is compacted to lower density than succeeding layers so that the final density of each specimen is approximately uniform. Specimens were anisotropically consolidated prior to the drained shearing stage. Additional details of the testing methodology and the raw data results are provided in Volume 1 – Factual Geotechnical Data Report.

Detailed interpretations of some CAD and CID laboratory results (specifically the tests required for others to determine the “plastic properties of soil) have not been provided since the applicable interpreted design values are highly dependent on the stress conditions and structural interactions inherent in the detailed design aspects of the project. As the project has not yet progressed to the detailed design stage, the detailed interpretations are best left to the specialist designers who best understand the intended use of those parameters and the conditions under which they are to be applied.

Shear Strength Behaviour

Drained shear strength parameters were determined from CAD triaxial testing by constructing effective stress Mohr-Coulomb failure envelopes based on results from three different specimens originating from the same stratigraphic unit in a single borehole. The drained shear strength parameter interpretations are provided in Appendix H. Failure envelopes were interpreted using the ‘p’ versus ‘q’ graphical representation of the Mohr-Coulomb failure criteria. The slope of the failure envelope was used to determine the drained friction angle, assuming a drained cohesion intercept of zero for reconstituted granular soil specimens. The ‘p’ versus ‘q’ method has advantages over the Mohr circle method when considering multiple specimens, as specimen failures can be represented by a set of points, allowing for a line of best fit to be used as an envelope. Resulting failure envelopes were also plotted with effective Mohr circles to show agreement. For interpretation purposes, it was assumed that specimen failure corresponded to the maximum principal effective stress difference attained.

Deformation Behaviour

The initial tangent modulus of elasticity (i.e., initial/small strain Young’s modulus) and secant modulus of elasticity at 50% of the vertical effective stress increase during shearing to failure were determined from the stress-strain results for each tested specimen. Appendix H provides the interpreted elastic moduli parameters from the CAD triaxial testing. Additionally, Poisson’s ratio was estimated by the initial linear portion of the volumetric strain versus vertical strain plot, and the dilation angle was estimated by the linear portion of the volumetric strain versus vertical strain plot following the point of failure. Table 4-7 provides the estimated values of Poisson’s ratio and dilation angle from CAD testing.

Table 4-7: Summary of Poisson's Ratio and Dilation Angle from Drained Shearing of Reconstituted Anisotropically Consolidated Triaxial Specimens

Borehole ID	Sample ID	Avg. Sample Depth (m)	Stratigraphic Unit	Soil Description from Borehole Log[(a)]	Effective Vertical Consolidation Stress (kPa)	End-of-Consolidation Ratio of Horizontal to Vertical Stress	Void Ratio Before Shear	Deviator Stress at Failure (kPa)	Vertical Strain at Failure (%)	Poisson's Ratio	Dilation Angle (degrees)
BH18S	SA5	2.90	3	Silty Sand with Gravel (SM)	83	0.6	0.33	130	5	0.31	3
BH18S	SA8	4.42	3	Silty Sand with Gravel (SM)	250	0.6	0.31	402	11	0.31	0
BH18S	SA11	5.34	3	Silty Sand with Gravel (SM)	498	0.6	0.31	872	5	0.32	0
BH18S	SA19	9.71	4a	Silty Sand (SM)	162	0.5	0.42	350	2	0.49	17
BH18S	SA22	10.82	4a	Silty Sand (SM)	162	0.5	0.54	365	2	0.42	22
BH18S	SA25	12.04	4a	Silty Sand (SM)	968	0.5	0.49	1723	5	0.42	9
BH28S	SA3	2.90	3	Silty Sand (SM)	88	0.7	0.31	232	3	0.48	0
BH28S	SA9	5.64	3	Silty Sand (SM)	528	0.7	0.30	1060	8	0.30	0
BH28S	SA15	11.08	4a	Silty Sand (SM)	171	0.7	0.62	439	3	0.35	16
BH28S	SA21	15.14	3	Sandy Silty Clay (CL-ML)	211	0.7	0.36	421	7	0.34	1
BH28S	SA28	18.13	4a	Silty Sand (SM)	252	0.6	0.48	818	3	0.38	18
BH28S	SA34	20.27	4a	Silty Sand (SM)	1488	0.6	0.36	3430	5	0.40	2

Borehole ID	Sample ID	Avg. Sample Depth (m)	Stratigraphic Unit	Soil Description from Borehole Log[(a)]	Effective Vertical Consolidation Stress (kPa)	End-of-Consolidation Ratio of Horizontal to Vertical Stress	Void Ratio Before Shear	Deviator Stress at Failure (kPa)	Vertical Strain at Failure (%)	Poisson's Ratio	Dilation Angle (degrees)
BH66S	SA9-1	4.79	2b	Silty Clayey Sand with Gravel (SC-SM)	89	0.5	0.51	129	8	0.40	0
BH66S	SA10-1	5.44	2b	Silty Clayey Sand with Gravel (SC-SM)	271	0.5	0.46	405	8	0.37	0
BH66S	SA14-1	7.15	3	Silty Sand with Gravel (SM)	114	0.6	0.43	141	9	0.36	0
BH66S	SA15-1	7.84	3	Silty Sand with Gravel (SM)	347	0.6	0.28	585	6	0.39	1
BH66S	SA16-1	8.99	3	Silty Sand with Gravel (SM)	691	0.6	0.29	1249	5	0.34	2
BH66S	SA18	9.96	4a	Silty Sand (SM)	166	0.6	0.41	434	2	0.44	25
BH66S	SA22	11.74	4a	Silty Sand (SM)	509	0.6	0.30	1092	4	0.48	0
BH66S	SA26	13.10	4a	Silty Sand (SM)	998	0.6	0.46	1874	4	0.37	5
BH66SB	SA10-1	6.86	2b	Silty Clayey Sand with Gravel (SC-SM)	542	0.5	0.39	746	7	0.40	0

(a) Soil description from borehole log at sample depth. (See Volume 1 – Factual Geotechnical Data Report Appendix A for borehole logs.)

4.6.4 Consolidated Undrained Triaxial Testing

Consolidated undrained triaxial compression testing was completed on intact cohesive soil specimens as part of the Phase 1 geotechnical investigation. Specimens were consolidated either anisotropically or under no lateral strain conditions (i.e., K_0-consolidation) prior to the undrained shearing stage. Additional details of the testing methodology and the raw data results are provided in Volume 1 – Factual Geotechnical Data Report.

Shear Strength Behaviour

Drained and undrained shear strength parameters were determined from Consolidated Anisotropic Undrained (CAU) triaxial testing and K_0-Consolidated Undrained (CK_0U) triaxial testing by constructing Mohr-Coulomb failure envelopes based on results from two to three different specimens originating from the same stratigraphic unit in a single borehole. The Mohr-Coulomb shear strength parameter interpretations are provided in Appendix I. Failure envelopes were interpreted using the ‘p’ versus ‘q’ graphical representation of the Mohr-Coulomb failure criteria and the plotted Mohr circles for both effective and total stress conditions. For interpretation purposes, it was assumed that specimen failure corresponded to the point of maximum obliquity (i.e., maximum effective stress ratio). The failure envelope was derived based on a best-fit line tangent to the Mohr circles produced at different stress intervals.

Additionally, as shown in Table 4-8 for CAU tests and in Table 4-9 for CK_0U tests, the laboratory undrained shear strength value for each tested specimen was determined as the product of half of the deviator stress at failure and the cosine of the drained friction angle (from the Mohr-Coulomb failure envelope). Where only a single test was available for a given stratigraphic unit and borehole, a failure envelope could not be interpreted. In the absence of a failure envelope, the undrained shear strength was conservatively estimated as the product of half of the deviator stress at failure and the cosine of the angle resulting from the tangential line extending from the origin to the effective stress Mohr circle.

Where specimens were consolidated under no lateral strain conditions, the coefficient of lateral earth pressure at rest (K_0) was estimated from the consolidation phase of the triaxial testing (see Table 4-10). It should be noted that due to specimen creep during consolidation, the reported stress ratio at the end of the consolidation stage may not be equivalent to the estimated coefficient of lateral earth pressure at rest.

Table 4-8: Summary of Undrained Shear Strength from Undrained Shearing of Intact Anisotropically Consolidated Triaxial Specimens

Borehole ID	Sample ID	Avg. Sample Depth (m)	Stratigraphic Unit	Soil Description from Borehole Log[(a)]	Effective Vertical Consolidation Stress (kPa)	End-of-Consolidation Ratio of Horizontal to Vertical Stress	Void Ratio Before Shear	Deviator Stress at Failure (kPa)	Vertical Strain at Failure (%)	Undrained Shear Strength (kPa)	Undrained Shear Strength Ratio[(b)]
BH1	SA4-3	2.09	2a	Sandy Lean Clay (CL)	234	1.35	0.66	254	3	108	0.46
BH2	SA5-3	3.24	2a	Lean Clay with Sand (CL)	1194	0.38	0.57	875	2	391	0.33
BH2	SA5-4	3.37	2a	Lean Clay with Sand (CL)	2015	0.45	0.60	1357	4	606	0.30
BH3	SA3-3	1.77	2a	Lean Clay with Sand (CL)	462	0.58	0.50	326	4	137	0.30
BH3	5-3	3.29	2a	Lean Clay with Sand (CL)	1008	0.43	0.60	804	2	402	0.40
BH7	SA6-2	3.85	2a	Lean Clay (CL)	808	0.62	0.22	1562	13	622	0.77
BH7	SA6-3	4.05	2a	Lean Clay (CL)	1596	0.63	0.17	1850	5	736	0.46
BH10	SA5-3	3.27	2a	Lean Clay (CL)	442	1.05	0.21	967	7	389	0.88
BH65	SA32-2	19.14	4b	Lean Clay (CL)	234	0.62	0.66	378	4	163	0.70
BH68	SA5-3	3.12	2a	Lean Clay with Sand (CL)	920	0.50	0.70	669	1	303	0.33

(a) Soil description from borehole log at sample depth. (See Volume 1 – Factual Geotechnical Data Report Appendix A for borehole logs)
(b) Undrained Shear Strength Ratio taken as the ratio of the Undrained Shear Strength to the Effective Vertical Consolidation Stress.

Table 4-9: Summary of Undrained Shear Strength from Undrained Shearing of Intact K_0-Consolidated Triaxial Specimens

Borehole ID	Sample ID	Avg. Sample Depth (m)	Stratigraphic Unit	Soil Description from Borehole Log[a]	Effective Vertical Consolidation Stress (kPa)	End-of-Consolidation Ratio of Horizontal to Vertical Stress[b]	Void Ratio Before Shear	Deviator Stress at Failure (kPa)	Vertical Strain at Failure (%)	Undrained Shear Strength (kPa)	Undrained Shear Strength Ratio[c]
BH1	SA4-2	1.95	2a	Sandy Lean Clay (CL)	42	1.34	0.67	135	11	57	1.35
BH1S	SA23	18.89	4b	Lean Clay (CL)	238	0.30	0.47	206	0	82	0.34
BH1S	SA30	20.77	5	Sandy Silty Clay (CL-ML)	273	2.93	0.24	1364	5	See Note Below[d]	
BH2	SA5-2	3.12	2a	Lean Clay with Sand (CL)	61	0.38	0.60	112	2	50	0.82
BH3	SA3-2	1.92	2a	Lean Clay with Sand (CL)	36	0.58	0.57	46	1	20	0.55
BH3	SA5-2	3.01	2a	Lean Clay with Sand (CL)	58	0.44	0.59	75	1	38	0.65
BH7	SA6-1	3.72	2a	Lean Clay (CL)	66	0.63	0.23	96	2	38	0.58
BH10	SA5-2	3.42	2a	Lean Clay (CL)	62	1.05	0.25	141	2	57	0.92
BH11S	SA9	17.32	4b	Lean Clay (CL)	219	0.74	0.56	275	4	115	0.53
BH18S	SA31	15.19	4b	Lean Clay (CL)	203	0.55	0.57	309	4	125	0.62
BH18S	SA39	18.05	5	Silty Clay (CL-ML)	236	0.66	0.30	321	2	131	0.55
BH18S	SA45	21.90	5	Sandy Silty Clay (CL-ML)	2529	0.46	0.37	3273	5	1342	0.53
BH28	SA18-2	24.91	4b	Lean Clay (CL)	311	1.09	0.61	360	4	154	0.50
BH28S	SA43-1	24.60	4b	Lean Clay (CL)	1609	1.08	0.67	1585	11	689	0.43
BH28S	SA49	26.18	5	Sandy Silty Clay (CL-ML)	324	0.30	0.61	560	2	222	0.68
BH28S	SA51-1	28.58	5	Sandy Silty Clay (CL-ML)	351	0.58	0.26	478	3	190	0.54

Borehole ID	Sample ID	Avg. Sample Depth (m)	Stratigraphic Unit	Soil Description from Borehole Log[a]	Effective Vertical Consolidation Stress (kPa)	End-of-Consolidation Ratio of Horizontal to Vertical Stress[b]	Void Ratio Before Shear	Deviator Stress at Failure (kPa)	Vertical Strain at Failure (%)	Undrained Shear Strength (kPa)	Undrained Shear Strength Ratio[c]
BH65	SA6-2	3.17	2a	Lean Clay with Sand (CL) to Lean Clay (CL)	60	0.41	0.63	108	1	50	0.83
BH65	SA7-2	4.28	2a	Lean Clay with Sand (CL) to Lean Clay (CL)	69	1.11	0.55	104	2	48	0.69
BH65	SA34-2	20.46	4b	Lean Clay (CL)	246	0.59	0.73	266	6	115	0.47
BH66S	SA42	22.66	5	Silty Clayey Sand with Gravel (SC-SM)	249	0.69	0.30	1043	5	441	1.77
BH66S	SA44-2	23.26	5	Silty Clayey Sand with Gravel (SC-SM)	293	0.58	0.28	365	2	154	0.52
BH68	SA5-2	3.24	2a	Lean Clay with Sand (CL)	61	0.51	0.75	80	1	36	0.59
BH83S	SA2	15.84	4b	Sandy Lean Clay (CL)	209	1.59	0.55	366	4	150	0.72
BH83S	SA15	20.59	5	Lean Clay with Sand (CL)	265	0.73	0.34	366	3	150	0.57

(a) Soil description from borehole log at sample depth. (See Volume 1 – Factual Geotechnical Data Report Appendix A for borehole logs.)
(b) The End-of-Consolidation Ratio of Horizontal to Vertical Stress may be affected by specimen creep and should not necessarily be considered equivalent to K_0.
(c) Undrained Shear Strength Ratio taken as the ratio of the Undrained Shear Strength to the Effective Vertical Consolidation Stress.
(d) Specimen considered disturbed due to irregularities in stress-strain response during both consolidation and shearing phases; shear strength interpretation not considered representative.

Table 4-10: Summary of Estimated Coefficient of Lateral Earth Pressure at Rest from Consolidation of Intact K_0-Consolidated Triaxial Specimens

Borehole ID	Sample ID	Avg. Sample Depth (m)	Stratigraphic Unit	Soil Description from Borehole Log[a]	Effective Vertical Consolidation Stress (kPa)	End-of-Consolidation Ratio of Horizontal to Vertical Stress[b]	Estimated Coefficient of Lateral Earth Pressure at Rest[c]
BH1	SA4-2	1.95	2a	Sandy Lean Clay (CL)	42	1.34	0.95
BH1S	SA23	18.89	4b	Lean Clay (CL)	238	0.30	0.43
BH1S	SA30	20.77	5	Sandy Silty Clay (CL-ML)	273	2.93	See Note Below[d]
BH2	SA5-2	3.12	2a	Lean Clay with Sand (CL)	61	0.38	0.45
BH3	SA3-2	1.92	2a	Lean Clay with Sand (CL)	36	0.58	0.54
BH3	SA5-2	3.01	2a	Lean Clay with Sand (CL)	58	0.44	0.54
BH7	SA6-1	3.72	2a	Lean Clay (CL)	66	0.63	0.58
BH10	SA5-2	3.42	2a	Lean Clay (CL)	62	1.05	0.60
BH11S	SA9	17.32	4b	Lean Clay (CL)	219	0.74	0.65
BH18S	SA31	15.19	4b	Lean Clay (CL)	203	0.55	0.90
BH18S	SA39	18.05	5	Silty Clay (CL-ML)	236	0.66	0.36
BH18S	SA45	21.90	5	Sandy Silty Clay (CL-ML)	2529	0.46	See Note Below[e]
BH28	SA18-2	24.91	4b	Lean Clay (CL)	311	1.09	1.15
BH28S	SA43-1	24.60	4b	Lean Clay (CL)	1609	1.08	See Note Below[e]
BH28S	SA49	26.18	5	Sandy Silty Clay (CL-ML)	324	0.30	0.65
BH28S	SA51-1	28.58	5	Sandy Silty Clay (CL-ML)	351	0.58	0.44
BH65	SA6-2	3.17	2a	Lean Clay with Sand (CL) to Lean Clay (CL)	60	0.41	0.41

Borehole ID	Sample ID	Avg. Sample Depth (m)	Stratigraphic Unit	Soil Description from Borehole Log[(a)]	Effective Vertical Consolidation Stress (kPa)	End-of-Consolidation Ratio of Horizontal to Vertical Stress[(b)]	Estimated Coefficient of Lateral Earth Pressure at Rest[(c)]
BH65	SA7-2	4.28	2a	Lean Clay with Sand (CL) to Lean Clay (CL)	69	1.11	0.91
BH65	SA34-2	20.46	4b	Lean Clay (CL)	246	0.59	0.73
BH66S	SA42	22.66	5	Silty Clayey Sand with Gravel (SC-SM)	249	0.69	0.69
BH66S	SA44-2	23.26	5	Silty Clayey Sand with Gravel (SC-SM)	293	0.58	0.58
BH68	SA5-2	3.24	2a	Lean Clay with Sand (CL)	61	0.51	0.49
BH83S	SA2	15.84	4b	Sandy Lean Clay (CL)	209	1.59	1.10
BH83S	SA15	20.59	5	Lean Clay with Sand (CL)	265	0.73	0.74

(a) Soil description from borehole log at sample depth. (See Volume 1 – Factual Geotechnical Data Report Appendix A for borehole logs.)
(b) The End-of-Consolidation Ratio of Horizontal to Vertical Stress may be affected by specimen creep and should not necessarily be considered equivalent to K_0.
(c) Coefficient of Lateral Earth Pressure at Rest estimated from K_0-consolidation phase of triaxial testing, excluding effects of specimen creep, where observed at the end of consolidation.
(d) Specimen considered disturbed due to irregularities in stress-strain response during both consolidation and shearing phases; shear strength interpretation not considered representative.
(e) Vertical effective consolidation stress in excess of estimated in situ conditions; coefficient of lateral earth pressure at rest not determined for this test.

4.6.5 Stress-Controlled Cyclic Direct Simple Shear Testing

Stress-controlled cyclic direct simple shear (CDSS) testing was completed on intact, fine-grained, cohesive soil specimens as part of the Phase 1 geotechnical investigation. Additional details of the testing methodology and the raw data results are provided in Volume 1 – Factual Geotechnical Data Report.

The interpreted results of the stress-controlled CDSS tests are provided in Appendix J, as semi-logarithmic plots of cyclic stress ratio (CSR) versus the number of cycles (N), grouped by stratigraphic unit. CSR values were calculated using the following equation, based on data provided in the associated laboratory reports:

$$CSR = \frac{\tau}{\sigma_c'}$$

Where τ = shear stress, and σ_c' = vertical effective consolidation stress.

A failure criterion of 3.75% or 5% single strain amplitude (the criteria for some tests were changed part way through the lab program) was considered for the stress-controlled tests (up to a maximum of N = 200 cycles). Where the single strain amplitude failure criterion was not achieved after N = 200 cycles, testing was terminated. Plots of Cycles 1 and 200 are provided in Appendix J, where available.

4.6.6 Stress-Controlled Cyclic Triaxial Compression Testing

Stress-controlled cyclic triaxial compression testing was completed on reconstituted granular soil specimens as part of the Phase 1 geotechnical investigation. Reconstituted specimens were prepared by moist tamping combined with the undercompaction method. Additional details of the testing methodology and the raw data results are provided in Volume 1 – Factual Geotechnical Data Report.

The raw data and interpreted results of the stress-controlled cyclic triaxial tests are provided in Appendix K, as semi-logarithmic plots of CSR versus N, grouped by stratigraphic unit. CSR values indicated were as reported by the testing laboratory. (i.e., These values were not independently interpreted.) The CSR for isotropically consolidated cyclic triaxial tests is defined as the maximum cyclic shear stress ($q_{cyc}/2$) divided by the isotropic consolidation stress (σ'_{3c}):

$$CSR = \frac{q_{cyc}}{2\sigma'_{3c}}$$

A failure criterion of 3.75% or 5% single strain amplitude (the criteria for some tests were changed part way through the lab program) was prescribed for the stress-controlled tests (up to a maximum of N = 200 cycles). Where the single strain amplitude failure criterion was not achieved after N = 200 cycles, testing was terminated.

4.6.7 Resonant Column and Strain-Controlled Cyclic Direct Simple Shear Testing

Resonant column and strain-controlled cyclic direct simple shear (CDSS) testing were completed on intact, fine-grained, cohesive soil specimens as part of the Phase 1 geotechnical investigation. Details of the testing methodology and the raw data results are provided in Volume 1 – Factual Geotechnical Data Report.

From the resonant column and strain-controlled CDSS results, plots of shear modulus and damping ratio versus shear strain were developed for each stratigraphic unit, as applicable. Appendix L provides semi-logarithmic plots of the normalized shear modulus versus shear strain, as well as semi-logarithmic plots of the damping ratio versus shear strain. Shear modulus values were normalized to the initial shear modulus value for each individual lab test carried out. The average shear modulus values for each stratigraphic unit and confining pressure, as applicable, are indicated on the corresponding plots in Appendix L.

From the strain-controlled CDSS results, the shear stress versus shear strain cycle plots for Cycle 1 and Cycle 15 of each test are provided in Appendix L. The shear stress, shear strain, and shear modulus values for Cycle 1 and Cycle 15 are also summarized on the corresponding plots. It may be noted that due to variations in shear strain, the shear strain value indicated for Cycle 15 (for a given test) represents an average of the shear strain values for Cycles 2 through 15 for the test.

4.6.8 Resonant Column and Torsional Shear Testing

Resonant column and torsional shear testing were completed on reconstituted granular soil specimens as part of the Phase 1 geotechnical investigation. Reconstituted specimens were prepared by moist tamping combined with the undercompaction method. Additional details of the testing methodology and the raw data results are provided in Volume 1 – Factual Geotechnical Data Report.

From the resonant column and torsional shear tests, plots for shear modulus and damping ratio versus shear strain were determined for each stratigraphic unit, as applicable. Appendix M provides semi-logarithmic plots of the normalized shear modulus versus shear strain, as well as semi-logarithmic plots of the damping ratio versus shear strain. Shear modulus values were normalized to the initial shear modulus value for each individual lab test carried out. The average shear modulus values for each stratigraphic unit and confining pressure, as applicable, are indicated on the corresponding plots in Appendix M.

From the torsional shear test results, the preliminary shear stress versus shear strain cycle plots for Cycle 1 and Cycle 15 of each test are provided in Appendix M. The shear stress, shear strain, and shear modulus values for Cycle 1 and Cycle 15 are also summarized on the corresponding plots. It may be noted that due to variations in shear strain, the shear strain value indicated for Cycle 15 (for a given test) represents an average of the shear strain values for Cycles 2 through 15 for the test.

4.7 Advanced Laboratory Testing of Rock

4.7.1 Triaxial Testing

Triaxial testing was completed on 2 samples from the Blue Mountain Formation and 22 samples from the Lindsay Formation. Constant strain rate (CSR) triaxial tests were performed to determine the elastic moduli and confined compressive strength. A load/unload/reload cycle was completed at the beginning of the tests to calculate two static-elastic constants (i.e., Young's modulus and Poisson's ratio) using the following mathematical equations:

$$(1)\quad E = \frac{\Delta\sigma}{\Delta\varepsilon 1}$$

$$(2)\quad \nu = -\frac{E}{\frac{\Delta\sigma}{\Delta\varepsilon 3}}$$

where $\Delta\sigma$ is the change in axial stress and $\Delta\varepsilon_1$ and $\Delta\varepsilon_3$ are the changes in axial and radial strain, respectively. Equation 1 and the denominator of Equation 2 represent the slopes of the stress versus axial strain and stress versus radial strain curves, respectively. The slopes of these curves were fit between approximately 20 and 80 percent of the reload. After the load/unload/reload cycle was performed, the axial stress was increased until reaching the ultimate strength of the sample.

4.7.2 Constant Force Direct Shear Creep Testing

The results of the constant force direct shear creep tests are presented in the Volume 1 – Factual Geotechnical Data Report, Appendix F. Each creep test consisted of 3 to 4 stages at a constant normal stress with increasing constant shear stress for each stage. The plots of the shear displacement rate vs time provide the creep rate in

mm/day for the test. The creep rate was calculated based on the average rate after the creep rate becomes more or less stable for each test stage.

4.7.3 Swell Testing

The effects of applied pressure on the swelling potential of the Blue Mountain Formation shale bedrock (Unit 6a) were examined by plotting the swelling strain rate (percent strain per log cycle of time) versus the logarithm (to the base of 10) of the applied pressures on the test samples for the free swell and semi-confined swell tests. The average strain rate over a single log cycle of time in days was then estimated from the plots as shown in Table 4-11. For the free swell tests, there is no applied pressure during the test, and for the null test, the strain is kept to a null value by increasing the applied pressure which is then reported as the null pressure.

Table 4-11: Rock Swelling Results for the Blue Mountain Formation

Direction	Sample	Test Type	Depth (mbgs)	Calcite Content	Applied Pressure (MPa)	Strain Rate (% per log cycle time)
Horizontal	FST-BH11-1-2	FS	24.75	3.4%	0.0	0.00
Horizontal	FST-BH11-2-3	FS	25.07	5.2%	0.0	0.00
Horizontal	FST-BH65-9-1	FS	26.59	44.2%	0.0	0.00
Horizontal	FST-BH65-10-4	FS	26.38	24.7%	0.0	0.00
Horizontal	SCSTH-BH11-1-1	SC	24.97	2.6%	0.5	0.00
Horizontal	SCSTH-BH11-2-3	SC	25.12	2.1%	0.1	0.00
Horizontal	SCTH-BH65-9-2	SC	26.47	20.9%	0.15	0.01
Horizontal	SCTH-BH65-10-4	SC	26.93	22.8%	0.08	0.01
Horizontal	NSTH-BH11-4-1	NS	24.26	3.6%	0.25	0.00
Horizontal	NSTH-BH11-3-2	NS	24.12	0.4%	0.14	0.00
Horizontal	NSTH-BH65-11-1	NS	27.62	33.3%	0.27	0.00
Horizontal	NSTH-BH71-2-1	NS	27.26	23.2%	0.25	0.00
Vertical	FST-BH11-1-2	FS	24.75	3.4%	0.0	0.00
Vertical	FST-BH11-2-3	FS	25.07	5.2%	0.0	0.00
Vertical	FST-BH65-9-1	FS	26.59	44.2%	0.0	0.00
Vertical	FST-BH65-10-4	FS	26.38	24.7%	0.0	0.00
Vertical	SCSTV-BH11-2-2	SC	25.04	4.7%	0.1	0.00
Vertical	SCSTV-BH11-1-4	SC	24.89	3.6%	0.05	0.00
Vertical	SCTV-BH65-9-1	SC	26.63	20.4%	0.15	0.01
Vertical	SCTV-BH65-9-2	SC	26.53	25.5%	0.08	0.00
Vertical	NSTV-BH11-2-1	NS	25.2	4.4%	0.17	0.00
Vertical	NSTV-BH65-10-1	NS	26.99	44.5%	0.15	0.00
Vertical	NSTV-BH65-10-2	NS	26.88	35.0%	0.20	0.00
Vertical	NSTV-BH-71-2-1	NS	27.15	25.7%	0.12	0.00

Note: FS – Free Swell; SC – Semiconfined; NS – Null Swell Test

5.0 GEOTECHNICAL DESIGN PARAMETERS

5.1 Geotechnical Variability and Uncertainty

Geotechnical variability and uncertainty are considerations in reliability-based design. Geotechnical variability is complex and results from several distinct sources of uncertainty, as depicted below on Figure 5-1 (adapted from Phoon and Kukhawy, 1999)[5]

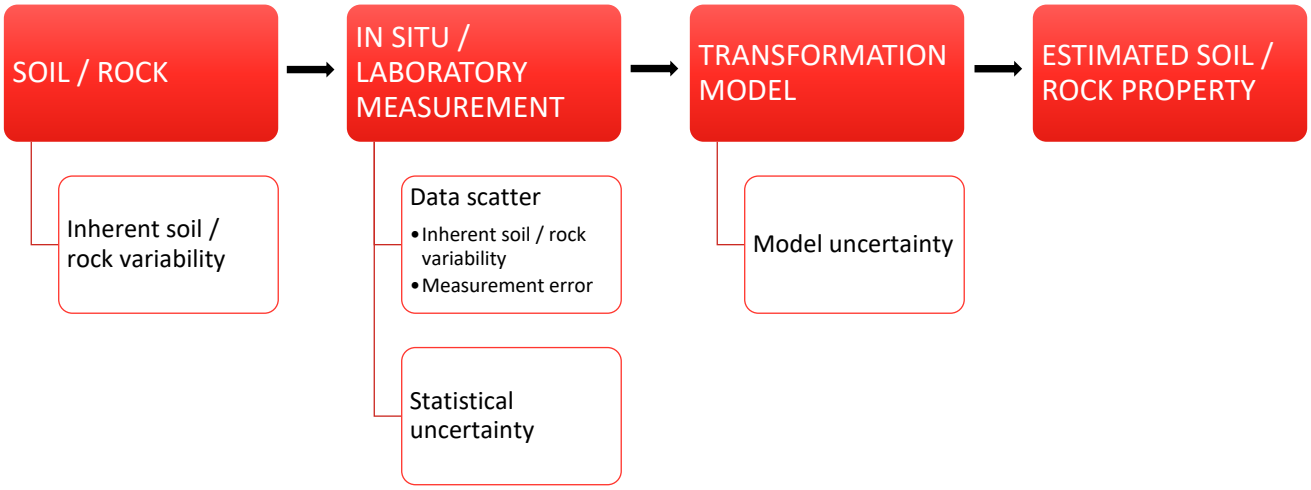

Figure 5-1: Overview of Geotechnical Variability and Uncertainty

Soil and rock are inherently variable materials, derived from, and continually influenced by, natural processes. At the DNNP site, the stratigraphic soil model describes complex inter-layered deposits of glacial origin (both glaciolacustrine deposits and glacial till). The glacial history of the region is recognized as contributing to the geotechnical variability of the site. Similar to the soil units, the bedrock at the site is comprised of sedimentary formations which displayed significant variability due to planes of weakness from shale interbeds.

When sampling the soil and rock there can be sampling bias that is introduced in the sample selection process. In general, for the DNNP project samples were selected based on predetermined testing requirements for each borehole and samples were selected from a variety of depths within each borehole. In some cases, such as the shale from the Blue Mountain Formation, it is not often possible to test the weaker rock as samples of this material cannot be properly prepared for testing without breaking apart (typically along weaker bedding planes). In these cases, sensitivity analysis and engineering judgement are required during design to account for the fact that the range in the data may not capture the minimum values.

When in situ and laboratory methods are utilized to measure soil and rock attributes, the inherent variability along with measurement error typically lead to data scatter. Measurement error may result from equipment errors and procedural or operator errors. Measurement error is minimized through equipment calibration, standardized procedures, laboratory accreditation, etc. The relevant equipment and procedural details for this project are summarized in Volume 1 – Factual Geotechnical Data Report.

[5] Phoon, K.-K. and Kulhawy, F.H. (1999). Characterization of geotechnical variability. Can. Geotech. J. **36**: 612-724.

In situ and laboratory methods are also subject to statistical uncertainty, which may be reduced by increasing the sampling frequency. Further, certain in situ and laboratory measurements are transformed for design purposes, through empirical or other correlation methods (another source of uncertainty). In some cases, there may be an insufficient number of data points to derive a representative understanding of the true statistical variability.

In the context of the present geotechnical investigation, geotechnical variability and uncertainty are addressed by a two-pronged approach:

8) Reduction in uncertainty through use of reliable, calibrated equipment, precision in measurement and testing procedures and sufficient quantity of sampling/testing. (See Volume 1 – Factual Geotechnical Data Report for details).

9) Consideration of total variability associated with each geotechnical property/parameter, including evaluation of statistical parameters (minimum, maximum, mean, standard deviation) and identification of sources of uncertainty particular to each property/parameter.

The following subsections present the geotechnical design parameters for soil and rock based on the Phase 1 geotechnical investigation and discuss the main sources of geotechnical uncertainty affecting these parameters.

5.2 Soil Parameters

5.2.1 Basic Material Characteristics

Based on the results of the Phase 1 geotechnical investigation, summaries of the water content, particle size distribution, Atterberg limits, organic content, specific gravity, and unit weight results from laboratory testing are presented by stratigraphic unit in Tables 5-1 to 5-7, below. Particle size distribution and Atterberg limits results are also presented in Appendix B, grouped by stratigraphic soil unit. Plots of the unit weight and energy corrected SPT ‘N’ values (i.e., ‘N_{60}’ values) with depth, as determined by laboratory and in situ testing, are presented by stratigraphic unit (excluding Unit 1) in Appendix N.

From Tables 5-1 to 5-7 and the plots in Appendix B, the water content, particle size distribution, Atterberg limits, organic content, and specific gravity show reasonable agreement within the respective stratigraphic units. Variation of particle size distribution and organic content are observed in Unit 1 (fill/topsoil), which may be expected in fill materials. Unit 4a (intermediate glaciolacustrine deposits) also exhibits variation in the particle size distribution, as several gradations are noticeably coarser. The present data set indicates that such variation in gradation of Unit 4a is localized (not representative of the overall unit).

The unit weight values for each stratigraphic unit are determined by the following approaches:

- Direct measurement of unit weight in the laboratory;
- Calculation from measurement of specific gravity and water content in the laboratory, assuming fully saturated conditions; and,
- Inference from CPT cone tip pressure and sleeve friction ratio.

As shown in the relevant plots in Appendix N, the different approaches for determining the soil unit weight yield varying results. This variation is attributed to the inherent assumptions and limitations of each approach and as such, judgement should be used in considering these data. These limitations include the following:

- Direct measurement of bulk unit weight in the laboratory is sensitive to the inclusion of gravel in the specimen soil matrix. Large gravel particles within a specimen may yield greater unit weight values in the laboratory than would be considered representative of in situ conditions.
- Calculation of the saturated unit weight based on the laboratory water content relies on a representative water content value. The laboratory-measured water content of coarse-grained material tends to underrepresent the moisture content in situ (resulting in greater calculated unit weights).
- Inferring the unit weight from CPT may allow for general observations of soil properties, but direct application of values by this inferred method is not recommended.

Table 5-1: Summary of Soils Laboratory Index Testing, Unit 1

Stratigraphic Unit	Statistical Parameter	Laboratory Testing Results										
		Water Content (%)	Particle Size Distribution				Atterberg Limits		Organic Content (%)	Specific Gravity	Unit Weight[(a)] (kN/m^3)	
			Gravel (%)	Sand (%)	Silt-Sized (%)	Clay-Sized (%)	Liquid Limit	Plasticity Index			Dry	Bulk
Unit 1 – Topsoil/Fill	Minimum	0.7	1	19	8	2	25	11	0.4	–	16.9	17.9
	Maximum	33.9	51	56	56	29	26	12	7.0	–	21.9	24.0
	Mean	9.0	19	41	30	10	26	12	1.7	–	19.0	21.0
	Std Dev	6.8	13	11	14	7	1	1	1.8	–	1.9	2.1
	No. Tests	74	12				2		13	0	6	6

(a) Bulk unit weight measured directly in the laboratory. Dry unit weight calculated from bulk unit weight and laboratory water content.
– indicates no data.

Table 5-2: Summary of Soils Laboratory Index Testing, Unit 2a

Stratigraphic Unit	Statistical Parameter	Laboratory Testing Results										
		Water Content (%)	Particle Size Distribution				Atterberg Limits		Organic Content (%)	Specific Gravity	Unit Weight[(a)] (kN/m^3)	
			Gravel (%)	Sand (%)	Silt-Sized (%)	Clay-Sized (%)	Liquid Limit	Plasticity Index			Dry	Bulk
Unit 2a – Surficial Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay	Minimum	7.6	0	4	37	14	14	5	–	2.68	16.1	19.6
	Maximum	41.6	13	39	67	51	41	24	–	2.74	17.7	21.5
	Mean	21.2	4	19	50	28	31	16	–	2.72	16.7	20.2
	Std Dev	6.7	4	9	8	10	7	5	–	0.02	0.7	0.9
	No. Tests	70	21				33		0	6	4	4

(a) Bulk unit weight measured directly in the laboratory. Dry unit weight calculated from bulk unit weight and laboratory water content.
– indicates no data.

Table 5-3: Summary of Soils Laboratory Index Testing, Unit 2b

Stratigraphic Unit	Statistical Parameter	Laboratory Testing Results										
		Water Content (%)	Particle Size Distribution				Atterberg Limits[a]		Organic Content (%)	Specific Gravity	Unit Weight (kN/m^3)	
			Gravel (%)	Sand (%)	Silt-Sized (%)	Clay-Sized (%)	Liquid Limit	Plasticity Index			Dry	Bulk
Unit 2b – Surficial Glaciolacustrine Deposits – Silty Clayey Sand to Silty Sand/ Sandy Silt	Minimum	6.2	5	35	26	8	11	1	–	2.71	–	–
	Maximum	30.7	30	46	42	15	14	5	–	2.74	–	–
	Mean	10.4	13	41	35	11	13	3	–	2.73	–	–
	Std Dev	3.7	8	4	4	2	1	1	–	0.02	–	–
	No. Tests	41	16				13		0	2	–	–

(a) For Unit 2b, two (2) out of 15 tested samples were reported by the laboratory as non-plastic.
– indicates no data.

Table 5-4: Summary of Soils Laboratory Index Testing, Unit 3

Stratigraphic Unit	Statistical Parameter	Laboratory Testing Results										
		Water Content (%)	Particle Size Distribution				Atterberg Limits[a]		Organic Content (%)	Specific Gravity	Unit Weight)[b] (kN/m^3)	
			Gravel (%)	Sand (%)	Silt-Sized (%)	Clay-Sized (%)	Liquid Limit	Plasticity Index			Dry	Bulk
Unit 3 – Upper Till	Minimum	0.9	0	7	23	6	11	1	–	2.70	17.6	19.0
	Maximum	16.9	36	51	62	35	29	15	–	2.73	25.5	27.7
	Mean	7.8	14	39	38	10	14	4	–	2.71	22.6	24.3
	Std Dev	2.3	8	8	7	5	4	3	–	0.01	1.8	2.0
	No. Tests	342	84				38		0	9	26	26

(a) For Unit 3, eight (8) out of 46 tested samples were reported by the laboratory as non-plastic.
(b) Bulk unit weight measured directly in the laboratory. Dry unit weight calculated from bulk unit weight and laboratory water content.
– indicates no data.

Table 5-5: Summary of Soils Laboratory Index Testing, Unit 4a

Stratigraphic Unit	Statistical Parameter	Laboratory Testing Results										
		Water Content (%)	Particle Size Distribution				Atterberg Limits[a]		Organic Content (%)	Specific Gravity	Unit Weight[b] (kN/m^3)	
			Gravel (%)	Sand (%)	Silt-Sized (%)	Clay-Sized (%)	Liquid Limit	Plasticity Index			Dry	Bulk
Unit 4a – Intermediate Glaciolacustrine Deposits – Silty Sand to Sandy Silt	Minimum	1.9	0	1	3	0	15	1	–	2.70	14.6	17.1
	Maximum	58.5	67	86	87	24	19	3	–	2.73	23.2	25.7
	Mean	16.1	4	47	46	4	18	2	–	2.71	19.1	22.1
	Std Dev	4.2	9	21	20	5	2	1	–	0.01	2.0	2.1
	No. Tests	296	75				6		0	9	27	27

(a) For Unit 4a, five (5) out of 11 tested samples were reported by the laboratory as non-plastic.
(b) Bulk unit weight measured directly in the laboratory. Dry unit weight calculated from bulk unit weight and laboratory water content.
– indicates no data.

Table 5-6: Summary of Soils Laboratory Index Testing, Unit 4b

Stratigraphic Unit	Statistical Parameter	Laboratory Testing Results										
		Water Content (%)	Particle Size Distribution				Atterberg Limits		Organic Content (%)	Specific Gravity	Unit Weight[a] (kN/m^3)	
			Gravel (%)	Sand (%)	Silt-Sized (%)	Clay-Sized (%)	Liquid Limit	Plasticity Index			Dry	Bulk
Unit 4b – Intermediate Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay	Minimum	8.1	0	1	40	7	15	3	–	2.71	16.5	20.3
	Maximum	28.3	9	26	89	58	38	22	–	2.75	22.0	26.7
	Mean	19.3	1	6	56	36	27	13	–	2.73	18.6	22.2
	Std Dev	3.6	2	5	11	13	6	5	–	0.01	2.0	2.2
	No. Tests	188	56				73		0	6	11	11

(a) Bulk unit weight measured directly in the laboratory. Dry unit weight calculated from bulk unit weight and laboratory water content.
– indicates no data.

Table 5-7: Summary of Soils Laboratory Index Testing, Unit 5

Stratigraphic Unit	Statistical Parameter	Water Content (%)	Laboratory Testing Results									
			Particle Size Distribution				Atterberg Limits[a]		Organic Content (%)	Specific Gravity	Bulk Unit Weight[b] (kN/m^3)	
			Gravel (%)	Sand (%)	Silt-Sized (%)	Clay-Sized (%)	Liquid Limit	Plasticity Index			Dry	Bulk
Unit 5 – Lower Till	Minimum	0.4	0	8	12	2	13	2	–	2.70	17.1	20.3
	Maximum	24.3	41	42	74	43	25	13	–	2.73	23.9	26.8
	Mean	10.6	7	26	51	17	16	5	–	2.71	21.3	23.7
	Std Dev	3.7	7	8	12	7	2	2	–	0.01	1.8	1.8
	No. Tests	160	54				47		0	4	14	14

(a) For Unit 5, three (3) out of 50 tested samples were reported by the laboratory as non-plastic.
(b) Bulk unit weight measured directly in the laboratory. Dry unit weight calculated from bulk unit weight and laboratory water content.
– Indicates no data.

5.2.2 Hydraulic and Volume Change Behaviour

Hydraulic Parameters

The hydraulic parameters of the soils encountered in the Phase 1 geotechnical investigation were characterized using the following methodologies:

- Laboratory determination of vertical hydraulic conductivity by one-dimensional consolidation testing on intact Shelby tube and sonic soil core samples;
- Laboratory determination of vertical hydraulic conductivity by flexible wall permeameter testing on intact sonic soil core samples;
- In situ determination of horizontal hydraulic conductivity by porewater pressure dissipation testing (during CPT);
- In situ determination of bulk hydraulic conductivity by single well response testing (rising head and falling head tests);
- Laboratory determination of reconstituted/remoulded hydraulic conductivity by flexible or rigid wall permeameter testing on reconstituted/remoulded sonic soil core samples; and
- Inference of horizontal hydraulic conductivity from CPT sounding data based on soil behaviour type.

Based on the results of the Phase 1 geotechnical investigation, summaries of the hydraulic conductivity values (vertical, horizontal, reconstituted/remoulded, and bulk) estimated from laboratory and in situ testing are presented for Units 2a, 3, 4a, 4b and 5 in Table 5-8 through Table 5-12. Appendix N includes plots of hydraulic conductivity (determined by various methods) with depth for each stratigraphic unit.

Note that no direct measurements of hydraulic behaviour were obtained in Unit 2b.

Table 5-8: Summary of Hydraulic Conductivity from Laboratory and In Situ Testing, Unit 2a

Stratigraphic Unit	Statistical Parameter	Hydraulic Conductivity (cm/s)				
		Vertical[(a)], from one-dimensional consolidation testing	**Vertical,** from permeameter testing	**Horizontal**[(b)], from CPT dissipation testing	**Bulk,** from single-well response testing	**Reconstituted/ Remoulded**, from permeameter testing
Unit 2a – Surficial Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay	Minimum	2×10^{-8}	1×10^{-7}	2×10^{-7}	–	–
	Maximum	1×10^{-7}		5×10^{-6}	–	–
	Geometric Mean	4×10^{-8}		1×10^{-6}	–	–
	Std Dev	4×10^{-8}	–	2×10^{-6}	–	–
	No. Tests	7	1	18	0	0

Std Dev = standard deviation (from geometric mean); – = no data.
(a) Vertical hydraulic conductivity from one-dimensional consolidation testing taken at a stress level of 100 kPa in excess of the estimated in situ vertical effective stress for each test specimen.
(b) Horizontal hydraulic conductivity from CPT porewater pressure dissipation testing calculated using the coefficient of volume compressibility estimated from laboratory consolidation testing.

Table 5-9: Summary of Hydraulic Conductivity from Laboratory and In Situ Testing, Unit 3

Stratigraphic Unit	Statistical Parameter	Hydraulic Conductivity (cm/s)				
		Vertical, from one-dimensional consolidation testing	**Vertical,** from permeameter testing	**Horizontal,** from CPT dissipation testing	**Bulk,** from single-well response testing	**Reconstituted/ Remoulded**[(a)], from permeameter testing
Unit 3 – Upper Till	Minimum	–	–	–	1×10^{-6}	9×10^{-8}
	Maximum	–	–	–	2×10^{-4}	
	Geometric Mean	–	–	–	7×10^{-6}	
	Std Dev	–	–	–	7×10^{-5}	–
	No. Tests	0	0	0	10	1

Std Dev = standard deviation (from geometric mean); – = no data.
(a) Laboratory specimen reconstituted/remoulded to approximate dry density of 23 kN/m^3 and approximate water content of 7%.

Table 5-10: Summary of Hydraulic Conductivity from Laboratory and In Situ Testing, Unit 4a

Stratigraphic Unit	Statistical Parameter	Hydraulic Conductivity (cm/s)				
		Vertical, from one-dimensional consolidation testing	**Vertical,** from permeameter testing	**Horizontal,** from CPT dissipation testing	**Bulk,** from single-well response testing	**Reconstituted/ Remoulded**[(a)], from permeameter testing
Unit 4a – Intermediate Glaciolacustrine Deposits – Silty Sand to Sandy Silt	Minimum	–	–	–	9×10^{-5}	1×10^{-3}
	Maximum	–	–	–	4×10^{-4}	2×10^{-3}
	Geometric Mean	–	–	–	2×10^{-4}	2×10^{-3}
	Std Dev	–	–	–	1×10^{-4}	9×10^{-4}
	No. Tests	0	0	0	6	2

Std Dev = standard deviation (from geometric mean); – = no data.
(a) Laboratory specimens reconstituted/remoulded to approximate dry density of 17 kN/m^3 and approximate water content of 20%.

Table 5-11: Summary of Hydraulic Conductivity from Laboratory and In Situ Testing, Unit 4b

Stratigraphic Unit	Statistical Parameter	Hydraulic Conductivity (cm/s)				
		Vertical[(a)], from one-dimensional consolidation testing	**Vertical,** from permeameter testing	**Horizontal,** from CPT dissipation testing	**Bulk,** from single-well response testing	**Reconstituted/ Remoulded**, from permeameter testing
Unit 4b – Intermediate Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay	Minimum	7×10^{-9}	5×10^{-8}	–	–	–
	Maximum	2×10^{-8}		–	–	–
	Geometric Mean	1×10^{-8}		–	–	–
	Std Dev	4×10^{-8} [(b)]	–	–	–	–
	No. Tests	2	1	0	0	0

Std Dev = standard deviation (from geometric mean); – = no data.
(a) Vertical hydraulic conductivity from one-dimensional consolidation testing taken at a stress level of 100 kPa in excess of the estimated in situ vertical effective stress for each test specimen.
(b) Due to only 2 data points, the standard deviation may not be statistically valid.

Table 5-12: Summary of Hydraulic Conductivity from Laboratory and In Situ Testing, Unit 5

Stratigraphic Unit	Statistical Parameter	Hydraulic Conductivity (cm/s)				
		Vertical[(a)], from one-dimensional consolidation testing	**Vertical,** from permeameter testing	**Horizontal,** from CPT dissipation testing	**Bulk,** from single-well response testing	**Reconstituted/ Remoulded**[(b)], from permeameter testing
Unit 5 – Lower Till	Minimum	5×10^{-9}	1×10^{-8}	–	3×10^{-7}	1×10^{-8}
	Maximum	8×10^{-9}		–	1×10^{-4}	
	Geometric Mean	7×10^{-9}		–	2×10^{-5}	
	Std Dev	2×10^{-8} [(c)]	–	–	5×10^{-5}	–
	No. Tests	2	1	0	12	1

Std Dev = standard deviation (from geometric mean); – = no data.
(a) Vertical hydraulic conductivity from one-dimensional consolidation testing taken at a stress level of 100 kPa in excess of the estimated in situ vertical effective stress for each test specimen.
(b) Laboratory specimen reconstituted/remoulded to approximate dry density of 21 kN/m^3 and approximate water content of 7%.
(c) Due to only 2 data points, the standard deviation may not be statistically valid.

The following provides a discussion of the hydraulic conductivity results from the various test methods utilized for the subsurface investigation. The hydraulic conductivity results relate to the specific soil sample and borehole depth or screened interval that was tested, and results will vary between and beyond the tested depths and locations. The following general discussion is provided:

- Differences between vertical and horizontal hydraulic conductivity are expected in glaciolacustrine units which are generally deposited in thin horizontal or sub-horizontal layers of varying grain size distribution (e.g., layers of sand, silt, and clay). This typically results in vertical hydraulic conductivity that is usually one or more orders of magnitude lower than horizontal hydraulic conductivity. Variability is also expected in the matrix of glacial till deposits which can contain zones of differing grain size distribution (e.g., zones with relatively fewer fines), and also lenses or pockets of coarser- or finer-grained soils.
- Within the same unit, hydraulic conductivity can vary laterally and vertically in response to the variability of grain size distribution within the unit, especially the fines content. Hydraulic conductivity also typically decreases with depth in the near-surface environment due to soil structure and secondary permeability caused by frost action, fractures, joints, roots and root holes and other near-surface processes.
- Differences in laboratory test results are expected to vary depending on the method used for the permeability test. Laboratory tests of sonic soil cores oriented in the permeameter as they were oriented in situ will estimate vertical hydraulic conductivity, while the remoulding or reconstituting of soil samples in the lab deteriorates or removes the native soil fabric and its orientation, soil structure, and secondary permeability, which typically decreases hydraulic conductivity. Laboratory test results are highly dependent on the remoulded/reconstituted density that is achieved (i.e., hydraulic conductivity decreases with the amount of compaction/compression that is achieved). Fine-grained soils tend to be more affected by remoulding than coarse-grained soils, particularly those that are free-draining (i.e., contain 4% or less fines). Also, the re-saturation of remoulded/reconstituted soil samples can result in entrapped air in the void spaces between soil grains, blocking the flow of the permeant water, and resulting in a reduction in hydraulic conductivity on the order of half an order of magnitude.

The following discussion is provided for the results presented in the tables above for each stratigraphic unit:

Unit 2a – Surficial Glaciolacustrine Deposits

The estimated minimum, maximum and geometric mean vertical hydraulic conductivity values were about one to one and a half orders of magnitude lower than the corresponding horizontal hydraulic conductivity values, which is reasonable for glaciolacustrine deposits. The vertical hydraulic conductivity values estimated by the laboratory and one-dimensional consolidation testing methods are within an order of magnitude and show good correlation.

Unit 3 – Upper Till

The estimated bulk hydraulic conductivity of the Upper Till (Unit 3) ranged by two orders of magnitude and is within the range of values expected for glacial till. These results are reasonable given the likely variability in grain size distribution of the till matrix and variability in the degree of secondary permeability at the tested locations. The reconstituted/remoulded hydraulic conductivity result from the laboratory is about two orders of magnitude lower than the geometric mean bulk hydraulic conductivity, which is reasonable given the reconstituting/remoulding process for a fine-grained soil material.

Unit 4a – Intermediate Glaciolacustrine

The estimated bulk hydraulic conductivity values for the Intermediate Glaciolacustrine silty sand to sandy silt deposits (Unit 4a) were within one order of magnitude and show good correlation. The reconstituted hydraulic conductivity value is approximately one order of magnitude higher than estimated from the single-well response tests and is reasonably attributed to the soil sample having fewer fines than the zones that were screened in the monitoring wells.

Unit 4b – Intermediate Glaciolacustrine

The estimated vertical hydraulic conductivity value for the Intermediate Glaciolacustrine clay deposits (Unit 4b) using the laboratory permeameter was about half an order of magnitude higher than the geometric mean of the one-dimensional consolidation test results which shows reasonable correlation.

Unit 5 – Lower Till

The estimated bulk hydraulic conductivity values for the Lower Till varied by about three orders of magnitude. The higher hydraulic conductivity values may suggest the hydraulic response of sandy zones or layers within, above or below the till, but within the screened interval of the tested monitoring wells. For example, the higher hydraulic conductivity ($1x10^{-4}$ cm/s) estimated at BH-78 may relate to the 0.7-m thick wet zone (e.g., potentially containing few fines) identified within the screened interval. The geometric mean and minimum bulk hydraulic conductivity values are reasonable for glacial till. The reconstituted/remoulded hydraulic conductivity result from the laboratory is about one order of magnitude lower than the minimum bulk hydraulic conductivity value, which is reasonable given the remolding process for a fine-grained soil material. The reconstituted/remoulded hydraulic conductivity result from the laboratory is similar to the vertical hydraulic conductivity test results from the laboratory and within half an order of magnitude of the geometric mean vertical hydraulic conductivity value estimated by the one-dimensional consolidation testing method, both of which are reasonable given the remoulding process for fine-grained soil material.

Consolidation Parameters

Summaries of the consolidation parameters from laboratory testing are presented for Unit 2a, Unit 4b, and Unit 5 in Table 5-13, Table 5-14, and Table 5-15 respectively. Plots of the coefficient of consolidation and overconsolidation ratio with depth, as determined by laboratory and in situ testing, are presented for Unit 2a, Unit 4b, and Unit 5 in Appendix N.

Table 5-13: Summary of Consolidation Parameters from Laboratory Testing, Unit 2a

Stratigraphic Unit	Statistical Parameter	Overconsolidation Ratio[a]		Coefficient of Vertical Consolidation[b] (cm^2/s)	Compression Ratio	Compression Index
		Casagrande Method	Work Method			
Unit 2a – Surficial Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay	Minimum	1.8	2.7	9.0×10^{-4}	0.15	0.10
	Maximum	20.6	20.8	4.2×10^{-3}	0.25	0.15
	Mean[c]	7.1	7.7	1.7×10^{-3}	0.19	0.11
	Std Dev	6.8	6.5	1.9×10^{-3}	0.04	0.02
	No. Tests	7				

(a) Summary considers average overconsolidation ratio value determined by a given method for each interpreted test specimen.
(b) Coefficient of vertical consolidation taken at a stress level of 100 kPa in excess of the estimated in situ vertical effective stress for each interpreted test specimen
(c) Geometric mean provided for coefficient of vertical consolidation; arithmetic mean provided for all other parameters.
Std Dev = standard deviation (from arithmetic or geometric mean).

Table 5-14: Summary of Consolidation Parameters from Laboratory Testing, Unit 4b

Stratigraphic Unit	Statistical Parameter	Overconsolidation Ratio[a]		Coefficient of Vertical Consolidation[b] (cm^2/s)	Compression Ratio	Compression Index
		Casagrande Method	Work Method			
Unit 4b – Intermediate Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay	Minimum	1.5	1.7	9.1×10^{-4}	0.14	0.09
	Maximum	2.1	2.6	2.0×10^{-3}	0.23	0.13
	Mean[c]	1.8	2.2	1.3×10^{-3}	0.19	0.11
	Std Dev	0.4	0.7	4.1×10^{-3}	0.06	0.03
	No. Tests	2				

(a) Summary considers average overconsolidation ratio value determined by a given method for each interpreted test specimen.
(b) Coefficient of vertical consolidation taken at a stress level of 100 kPa in excess of the estimated in situ vertical effective stress for each interpreted test specimen.
(c) Geometric mean provided for coefficient of vertical consolidation; arithmetic mean provided for all other parameters. Std Dev = standard deviation (from arithmetic or geometric mean).

Table 5-15: Summary of Consolidation Parameters from Laboratory Testing, Unit 5

Stratigraphic Unit	Statistical Parameter	Overconsolidation Ratio[a]		Coefficient of Vertical Consolidation[b] (cm^2/s)	Compression Ratio	Compression Index
		Casagrande Method	Work Method			
Unit 5 – Lower Till	Minimum	1.3	1.8	1.1×10^{-3}	0.06	0.04
	Maximum	1.8	1.9	1.4×10^{-3}	0.06	0.05
	Mean[c]	1.6	1.8	1.3×10^{-3}	0.06	0.05
	Std Dev[d]	0.3	0.0	3.8×10^{-3}	0.00	0.00
	No. Tests	2				

(a) Summary considers average overconsolidation ratio value determined by a given method for each interpreted test specimen.
(b) Coefficient of vertical consolidation taken at a stress level of 100 kPa in excess of the estimated in situ vertical effective stress for each interpreted test specimen.
(c) Geometric mean provided for coefficient of vertical consolidation; arithmetic mean provided for all other parameters. Std Dev = standard deviation (from arithmetic or geometric mean).
(d) It should be noted that, although theoretically valid, statistical data may not be truly representative of a larger sample population when only two data points are available for analysis, particularly when the resultant yields a standard deviation of zero.

Coefficient of Lateral Earth Pressure at Rest

Based on the results of the Phase 1 geotechnical investigation, the coefficient of lateral earth pressure at rest (K_0) as determined by laboratory and in situ testing is presented by stratigraphic unit in Table 5-16 through Table 5-21. Plots of K_0 with depth are also presented in Appendix N, by stratigraphic soil unit (excluding Unit 1).

Table 5-16: Summary of Coefficient of Lateral Earth Pressure at Rest from Laboratory and In Situ Testing, Unit 2a

Stratigraphic Unit	Statistical Parameter	Coefficient of Lateral Earth Pressure at Rest	
		From Triaxial Compression Testing[(a)]	From Pressuremeter Testing
Unit 2a – Surficial Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay	Minimum	0.41	0.65
	Maximum	0.95	0.68
	Mean	0.61	0.67
	Std Dev	0.19	0.02
	No. Tests	9	2

Std Dev = standard deviation; – = no data.
(a) Coefficient of lateral earth pressure at rest interpreted from consolidated undrained triaxial testing, where specimen consolidated to approximate in situ vertical effective stress under no lateral strain conditions (i.e., K_0-consolidation). Effects of specimen creep, if observed at the end of consolidation, were excluded from determination of K_0.

Table 5-17: Summary of Coefficient of Lateral Earth Pressure at Rest from Laboratory and In Situ Testing, Unit 2b

Stratigraphic Unit	Statistical Parameter	Coefficient of Lateral Earth Pressure at Rest	
		From Triaxial Compression Testing	From Pressuremeter Testing
Unit 2b – Surficial Glaciolacustrine Deposits – Silty Clayey Sand to Silty Sand/ Sandy Silt	Minimum	–	0.49
	Maximum	–	0.91
	Mean	–	0.73
	Std Dev	–	0.22
	No. Tests	0	3

Std Dev = standard deviation; – = no data.

Table 5-18: Summary of Coefficient of Lateral Earth Pressure at Rest from Laboratory and In Situ Testing, Unit 3

Stratigraphic Unit	Statistical Parameter	Coefficient of Lateral Earth Pressure at Rest	
		From Triaxial Compression Testing	From Pressuremeter Testing
Unit 3 – Upper Till	Minimum	–	0.53
	Maximum	–	1.02
	Mean	–	0.69
	Std Dev	–	0.16
	No. Tests	0	11

Std Dev = standard deviation; – = no data.

Table 5-19: Summary of Coefficient of Lateral Earth Pressure at Rest from Laboratory and In Situ Testing, Unit 4a

Stratigraphic Unit	Statistical Parameter	Coefficient of Lateral Earth Pressure at Rest	
		From Triaxial Compression Testing	From Pressuremeter Testing
Unit 4a – Intermediate Glaciolacustrine Deposits – Silty Sand to Sandy Silt	Minimum	–	0.42
	Maximum	–	0.73
	Mean	–	0.57
	Std Dev	–	0.09
	No. Tests	0	17

Std Dev = standard deviation; – = no data.

Table 5-20: Summary of Coefficient of Lateral Earth Pressure at Rest from Laboratory and In Situ Testing, Unit 4b

Stratigraphic Unit	Statistical Parameter	Coefficient of Lateral Earth Pressure at Rest	
		From Triaxial Compression Testing[(a)]	From Pressuremeter Testing
Unit 4b – Intermediate Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay	Minimum	0.43	0.34
	Maximum	1.15	0.70
	Mean	0.83	0.53
	Std Dev	0.28	0.13
	No. Tests	6	7

Std Dev = standard deviation; – = no data.
(a) Coefficient of lateral earth pressure at rest interpreted from consolidated undrained triaxial testing, where specimen consolidated to approximate in situ vertical effective stress under no lateral strain conditions (i.e., K_0-consolidation). Effects of specimen creep, if observed at the end of consolidation, were excluded from determination of K_0.

Table 5-21: Summary of Coefficient of Lateral Earth Pressure at Rest from Laboratory and In Situ Testing, Unit 5

Stratigraphic Unit	Statistical Parameter	Coefficient of Lateral Earth Pressure at Rest	
		From Triaxial Compression Testing[(a)]	From Pressuremeter Testing
Unit 5 – Lower Till	Minimum	0.39	0.39
	Maximum	0.74	0.58
	Mean	0.58	0.49
	Std Dev	0.15	0.07
	No. Tests	6	10

Std Dev = standard deviation; – = no data.
(a) Coefficient of lateral earth pressure at rest interpreted from consolidated undrained triaxial testing, where specimen consolidated to approximate in situ vertical effective stress under no lateral strain conditions (i.e., K_0-consolidation). Effects of specimen creep, if observed at the end of consolidation, were excluded from determination of K_0.

Effective Friction Angle

Based on the results of the Phase 1 geotechnical investigation, the effective friction angle (Φ'), as determined by laboratory and in situ testing, is presented by stratigraphic unit in Table 5-22 through Table 5-27. Plots of effective friction angle with depth (as well as effective friction angles obtained from CPT soundings which terminated upon reaching or slightly penetrating Unit 3) are also presented in Appendix N, by stratigraphic soil unit (excluding Unit1).

Table 5-22: Summary of Effective Friction Angle from Laboratory and In Situ Testing, Unit 2a

Stratigraphic Unit	Statistical Parameter	Effective Friction Angle	
		From Triaxial Compression Testing[(a)]	From Pressuremeter Testing
Unit 2a – Surficial Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay	Minimum	25	-
	Maximum	37	-
	Mean	32	-
	Std Dev	3.89	-
	No. Tests	9	0

Std Dev = standard deviation; – = no data.
(a) Effective Friction Angle interpreted from a set of two to three consolidated undrained triaxial tests, where specimen consolidated to approximate in situ vertical effective stress under no lateral strain conditions (i.e., K_0-consolidation) or consolidated drained triaxial testing, where the specimen consolidated anisotropically to the approximate in situ vertical effective stress.

Table 5-23: Summary of Effective Friction Angle from Laboratory and In Situ Testing, Unit 2b

Stratigraphic Unit	Statistical Parameter	Effective Friction Angle	
		From Triaxial Compression Testing[(a)]	From Pressuremeter Testing
Unit 2b – Surficial Glaciolacustrine Deposits – Silty Clayey Sand to Silty Sand/ Sandy Silt	Minimum	–	29
	Maximum	–	41[(b)]
	Mean	–	34
	Std Dev	–	4.04
	No. Tests	0	6

Std Dev = standard deviation; – = no data.
(a) Effective Friction Angle interpreted from a set of two to three consolidated undrained triaxial testing, where specimen consolidated to approximate in situ vertical effective stress under no lateral strain conditions (i.e., K_0-consolidation) or consolidated drained triaxial testing, where the specimen consolidated anisotropically to the approximate in situ vertical effective stress.
(b) Pressuremeter probe likely straddled Unit 2b and Unit 3 at some locations.

Table 5-24: Summary of Effective Friction Angle from Laboratory and In Situ Testing , Unit 3

Stratigraphic Unit	Statistical Parameter	Effective Friction Angle	
		From Triaxial Compression Testing	From Pressuremeter Testing
Unit 3 – Upper Till	Minimum	36	31
	Maximum	38	48
	Mean	37	41
	Std Dev	1.15	4.66
	No. Tests	3	12

Std Dev = standard deviation; – = no data.
(a) Effective Friction Angle interpreted from a set of two to three consolidated undrained triaxial testing, where specimen consolidated to approximate in situ vertical effective stress under no lateral strain conditions (i.e., K_0-consolidation) or consolidated drained triaxial testing, where the specimen consolidated anisotropically to the approximate in situ vertical effective stress.

Table 5-25: Summary of Effective Friction Angle from Laboratory and In Situ Testing, Unit 4a

Stratigraphic Unit	Statistical Parameter	Effective Friction Angle	
		From Triaxial Compression Testing	From Pressuremeter Testing
Unit 4a – Intermediate Glaciolacustrine Deposits – Silty Sand to Sandy Silt	Minimum	39	35
	Maximum	41	45
	Mean	40	39
	Std Dev	1	2.85
	No. Tests	3	16

Std Dev = standard deviation; – = no data.
(a) Effective Friction Angle interpreted from a set of two to three consolidated undrained triaxial testing, where specimen consolidated to approximate in situ vertical effective stress under no lateral strain conditions (i.e., K_0-consolidation) or consolidated drained triaxial testing, where the specimen consolidated anisotropically to the approximate in situ vertical effective stress.

Table 5-26: Summary of Effective Friction Angle from Laboratory and In Situ Testing, Unit 4b

Stratigraphic Unit	Statistical Parameter	Effective Friction Angle	
		From Triaxial Compression Testing[(a)]	From Pressuremeter Testing
Unit 4b – Intermediate Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay	Minimum	30	29
	Maximum		42
	Mean		34
	Std Dev	-	4.53
	No. Tests	1[(a)]	8

Std Dev = standard deviation; – = no data.
(a) Effective Friction Angle interpreted from a set of two consolidated undrained triaxial tests on Unit 4b, where specimen consolidated to approximate in situ vertical effective stress under no lateral strain conditions (i.e., K_0-consolidation) yielded an effective friction angle of 30°.

Table 5-27: Summary of Coefficient of Effective Friction Angle from Laboratory and In Situ Testing, Unit 5

Stratigraphic Unit	Statistical Parameter	Effective Friction Angle	
		From Triaxial Compression Testing[(a)]	From Pressuremeter Testing
Unit 5 – Lower Till	Minimum	32	26
	Maximum	38	36
	Mean	35	31
	Std Dev	3	3.23
	No. Tests	3	10

Std Dev = standard deviation; – = no data.
(a) Effective Friction Angle interpreted from a set of two to three consolidated undrained triaxial testing, where specimen consolidated to approximate in situ vertical effective stress under no lateral strain conditions (i.e., K_0-consolidation) or consolidated drained triaxial testing, where the specimen consolidated anisotropically to the approximate in situ vertical effective stress.

5.2.3 Shear Strength and Deformation Behaviour

Based on the results of the Phase 1 geotechnical investigation, shear strength and deformation parameters are summarized, as follows:

- Undrained shear strength, as determined by various laboratory and in situ testing methods, is plotted with depth in Appendix N for Unit 2a, Unit 4b, and Unit 5;
- Undrained shear strength ratio, determined from triaxial compression testing and direct simple shear testing, is provided in Table 5-28 for Unit 2a, in Table 5-29 for Unit 4b and in Table 5-30, for Unit 5;
- Effective friction angle and effective cohesion intercept from triaxial compression testing, inferred from pressuremeter testing, and inferred from CPT (where data available), are plotted with depth in Appendix N for Unit 2a, Unit 4b, and Unit 5;
- Effective friction angle (assuming cohesion intercept of zero) from triaxial compression testing, inferred from pressuremeter testing, and inferred from CPT (where data available), is plotted with depth in Appendix N for Unit 2b, Unit 3, and Unit 4a;
- Elastic moduli for different strain levels, as determined by various laboratory and in situ testing methods (and published correlations), are plotted with depth in Appendix N for each stratigraphic soil unit (excluding Unit 1); and,
- Initial tangent elastic modulus from triaxial compression testing and Young's modulus from pressuremeter testing are provided Appendix N for all stratigraphic soil units (excluding Unit 1).

The shear strength and deformation parameters presented herein are considered reasonable in magnitude and variability for the subsurface conditions encountered in the Phase 1 investigation. The following should be considered when selecting strength and deformation material parameters for use in design:

- The glacially-derived subsurface materials at site (particularly the tills and lower glaciolacustrine materials) are highly variable, ranging from fine-grained to coarse-grained material, and ranging from non-cohesive to cohesive behaviour. While geotechnical strength and deformation parameters are commonly understood

within the framework of either undrained or drained conditions, it should be recognized that the in situ materials at the site may not be expected to behave conformably as either undrained or drained.

- Sampling of stiff to hard cohesive materials was generally by sonic coring. While this sampling method may produce “intact” samples, such samples cannot be considered “undisturbed.” More or less disturbance is typically observed depending on the specific drilling conditions and characteristics of the material encountered. Sonic core samples from Units 4b and 5 were typically observed to be more susceptible to sample disturbance than sonic core samples from the other subsurface soil units.
- Consolidated anisotropic drained triaxial laboratory specimens were reconstituted and consolidated to the approximate in situ density and vertical effective stress. However, these reconstituted specimens do not replicate the soil particle fabric and stress history present in situ. Testing results on reconstituted specimens may not be representative of in situ material behaviour.
- Intact laboratory specimens were selected to obtain a reasonable representation of the range of subsurface conditions encountered. However, there remains a potential for sample bias to occur. Intact laboratory specimens selected for testing may be inherently biased towards samples exhibiting greater cohesion and samples excluding larger particles present in situ (e.g., oversized gravels). (i.e., It is more likely that finer-grained, more cohesive materials would provide intact specimens suitable for testing.) Similarly, reconstituted laboratory specimens may be biased towards excluding larger particles.
- Stress-strain modulus values correlated from undrained shear strength and/or SPT N values (from Bowles, 1997)[6] are provided on the plots in Appendix N. These correlated values may be considered as an indicators of material behaviour, but they are not intended to be used directly in design.

Table 5-28: Summary of Undrained Shear Strength Ratio from Laboratory Testing, Unit 2a

Stratigraphic Unit	Statistical Parameter	Undrained Shear Strength Ratio (kPa)	
		From Triaxial Compression Testing[(a)]	From Direct Simple Shear Testing[(b)]
Unit 2a – Surficial Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay	Minimum	0.55	0.37
	Maximum	1.35	1.40
	Mean	0.78	0.95
	Std Dev	0.25	0.34
	No. Tests	9	6

(a) Undrained shear strength ratio interpreted from consolidated undrained triaxial testing representative of in situ conditions (i.e., where specimen consolidated to approximate in situ vertical effective stress, typically under K_0-conditions.)
(b) Undrained shear strength interpreted from direct simple shear testing representative of in situ conditions (i.e., where specimen consolidated to approximate in situ preconsolidation pressure, then unloaded to approximate in situ vertical effective stress for shearing stage.
Std Dev = standard deviation;
– = no data.

[6] Bowles, J.E. 1997. Foundation Analysis and Design. Fifth ed. McGraw-Hill.

Table 5-29: Summary of Undrained Shear Strength Ratio from Laboratory Testing, Unit 4b

Stratigraphic Unit	Statistical Parameter	Undrained Shear Strength Ratio (kPa)	
		From Triaxial Compression Testing[(a)]	From Direct Simple Shear Testing[(b)]
Unit 4b – Intermediate Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay	Minimum	0.43	0.49
	Maximum	0.88	0.84
	Mean	0.61	0.65
	Std Dev	0.17	0.11
	No. Tests	7	9

(a) Undrained shear strength ratio interpreted from consolidated undrained triaxial testing representative of in situ conditions (i.e., where specimen consolidated to approximate in situ vertical effective stress, typically under K_0-conditions.)
(b) Undrained shear strength interpreted from direct simple shear testing representative of in situ conditions (i.e., where specimen consolidated to approximate in situ preconsolidation pressure, then unloaded to approximate in situ vertical effective stress for shearing stage.
Std Dev = standard deviation; – = no data.

Table 5-30: Summary of Undrained Shear Strength Ratio from Laboratory Testing, Unit 5

Stratigraphic Unit	Statistical Parameter	Undrained Shear Strength Ratio (kPa)	
		From Triaxial Compression Testing[(a)]	From Direct Simple Shear Testing[(b)]
Unit 5 – Lower Till	Minimum	0.52	0.59
	Maximum	1.77	1.76
	Mean	0.77	1.01
	Std Dev	0.49	0.34
	No. Tests	6	9

(a) Undrained shear strength ratio interpreted from consolidated undrained triaxial testing representative of in situ conditions (i.e., where specimen consolidated to approximate in situ vertical effective stress, typically under K_0-conditions.)
(b) Undrained shear strength interpreted from direct simple shear testing representative of in situ conditions (i.e., where specimen consolidated to approximate in situ preconsolidation pressure, then unloaded to approximate in situ vertical effective stress for shearing stage.
Std Dev = standard deviation; – = no data.

Table 5-31: Summary of Elastic Modulus from Laboratory and In Situ Testing, Unit 2a

Stratigraphic Unit	Statistical Parameter	Elastic Modulus (E), (MPa)	
		Initial Tangent E, from Triaxial Compression Testing	Young's Modulus, from Pressuremeter Testing
Unit 2a – Surficial Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay	Minimum	–	13
	Maximum	–	49
	Mean	–	31
	Std Dev	–	25
	No. Tests	0	2

Std Dev = standard deviation; – = no data.

Table 5-32: Summary of Elastic Modulus from Laboratory and In Situ Testing, Unit 2b

Stratigraphic Unit	Statistical Parameter	Elastic Modulus (E), (MPa)	
		Initial Tangent E, from Triaxial Compression Testing[(a)]	Young's Modulus, from Pressuremeter Testing
Unit 2b – Surficial Glaciolacustrine Deposits – Silty Clayey Sand to Silty Sand/ Sandy Silt	Minimum	69	42
	Maximum		80
	Mean		57
	Std Dev	–	20
	No. Tests	1	3

(a) Initial tangent elastic modulus interpreted from consolidated anisotropic drained triaxial testing of reconstituted specimen, representative of in situ conditions (i.e., where specimen consolidated to approximate in situ vertical effective stress.)

Std Dev = standard deviation; – = no data.

Table 5-33: Summary of Elastic Modulus from Laboratory and In Situ Testing, Unit 3

Stratigraphic Unit	Statistical Parameter	Elastic Modulus (E), (MPa)	
		Initial Tangent E, from Triaxial Compression Testing[(a)]	Young's Modulus, from Pressuremeter Testing
Unit 3 – Upper Till	Minimum	16	31
	Maximum	180	613
	Mean	91	282
	Std Dev	67	195
	No. Tests	4	10

(a) Initial tangent elastic modulus interpreted from consolidated anisotropic drained triaxial testing of reconstituted specimen, representative of in situ conditions (i.e., where specimen consolidated to approximate in situ vertical effective stress.)
Std Dev = standard deviation; – = no data.

Table 5-34: Summary of Elastic Modulus from Laboratory and In Situ Testing, Unit 4a

Stratigraphic Unit	Statistical Parameter	Elastic Modulus (E), (MPa)	
		Initial Tangent E, from Triaxial Compression Testing[(a)]	Young's Modulus, from Pressuremeter Testing
Unit 4a – Intermediate Glaciolacustrine Deposits – Silty Sand to Sandy Silt	Minimum	76	52
	Maximum	153	600
	Mean	115	287
	Std Dev	33	136
	No. Tests	5	17

(a) Initial tangent elastic modulus interpreted from consolidated anisotropic drained triaxial testing of reconstituted specimen, representative of in situ conditions (i.e., where specimen consolidated to approximate in situ vertical effective stress.)
Std Dev = standard deviation; – = no data.

Table 5-35: Summary of Elastic Modulus from Laboratory and In Situ Testing, Unit 4b

Stratigraphic Unit	Statistical Parameter	Elastic Modulus (E), (MPa)	
		Initial Tangent E, from Triaxial Compression Testing	Young's Modulus, from Pressuremeter Testing
Unit 4b – Intermediate Glaciolacustrine Deposits – Sandy Lean Clay to Lean Clay	Minimum	–	136
	Maximum	–	413
	Mean	–	259
	Std Dev	–	107
	No. Tests	0	7

Std Dev = standard deviation; – = no data.

Table 5-36: Summary of Elastic Modulus from Laboratory and In Situ Testing, Unit 5

Stratigraphic Unit	Statistical Parameter	Elastic Modulus (E), (MPa)	
		Initial Tangent E, from Triaxial Compression Testing	Young's Modulus, from Pressuremeter Testing
Unit 5 – Lower Till	Minimum	–	110
	Maximum	–	330
	Mean	–	218
	Std Dev	–	67
	No. Tests	0	10

Std Dev = standard deviation; – = no data.

5.2.4 Dynamic Behaviour

The dynamic material parameters in soil from geophysical testing completed as part of the Phase 1 investigation are summarized below in Table 5-37 to Table 5-41. The velocities generally increase with depth through the soil layer as seen in Figure 5-2, below. The dynamic properties through the soil have been calculated in 1 m intervals for each borehole and are shown in Appendix F.

The variability for VSP will be affected by the surface conditions at the time of data acquisition. If the seismic source is hitting a wet or dry surface, rock, compact soil, or soft soil will all have an effect on the data. Variability will also arise from the first arrival picking of the seismic data which would as a result effect the velocity values.

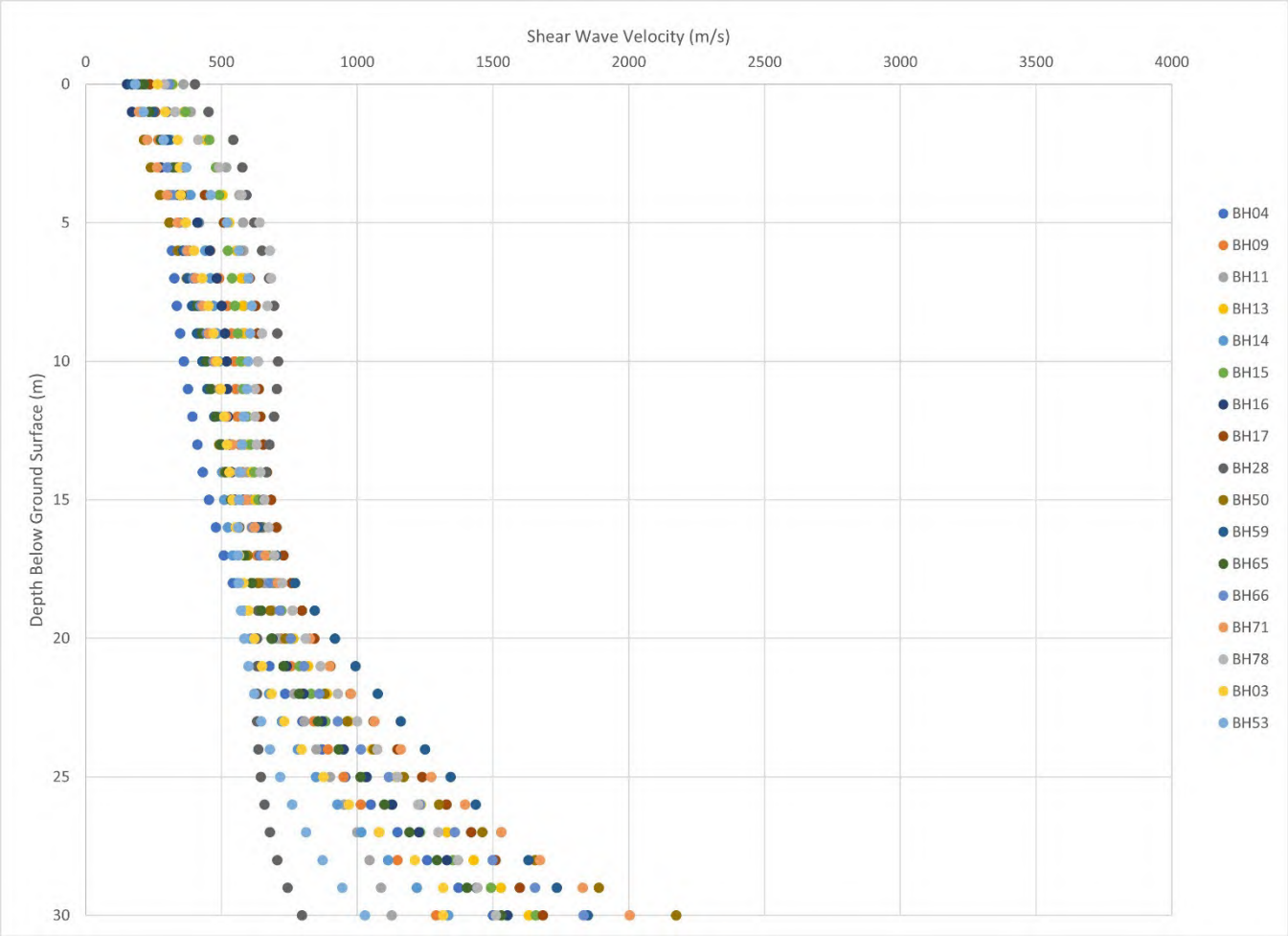

Figure 5-2: VSP Measured Shear Wave Velocities

Table 5-37: Summary of Shear and Compression Wave Velocities from Geophysical Testing, by Stratigraphic Soil Unit

Subsurface Unit	Shear Wave Velocity (m/s)				Compression Wave Velocity (m/s)			
	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev
Unit 1 – Topsoil/Fill	152	443	266	72	370	1,400	607	135
Unit 2a – Surficial Glaciolacustrine Deposits	215	451	304	67	560	2,200	1,087	335
Unit 2b – Surficial Glaciolacustrine Deposits	255	483	351	59	800	2,200	1,769	394
Unit 3 – Upper Till	240	705	489	86	700	2,400	1,845	237
Unit 4a – Intermediate Glaciolacustrine Deposits	362	1,078	659	151	1,600	2,400	2,107	148
Unit 4b – Intermediate Glaciolacustrine Deposits	440	994	656	109	1,800	2,400	2,118	138
Unit 5 – Lower Till	683	1,344	875	150	2,000	3,400	2,470	381

Table 5-38: Summary of Poisson's Ratio from Geophysical Testing, by Stratigraphic Soil Unit

Subsurface Unit	Poisson's Ratio			
	Minimum	Maximum	Mean	Std Dev
Unit 1 – Topsoil/Fill	0.03	0.45	0.37	0.11
Unit 2a – Surficial Glaciolacustrine Deposits	0.15	0.48	0.43	0.10
Unit 2b – Surficial Glaciolacustrine Deposits	0.45	0.49	0.48	0.01
Unit 3 – Upper Till	0.42	0.48	0.46	0.02
Unit 4a – Intermediate Glaciolacustrine Deposits	0.30	0.48	0.44	0.04
Unit 4b – Intermediate Glaciolacustrine Deposits	0.37	0.47	0.44	0.02
Unit 5 – Lower Till	0.24	0.47	0.42	0.04

Table 5-39: Summary of Dynamic Shear Modulus from Geophysical Testing, by Stratigraphic Soil Unit

Subsurface Unit	Dynamic Shear Modulus (MPa)			
	Minimum	Maximum	Mean	Std Dev
Unit 1 – Topsoil/Fill	56	346	163	87
Unit 2a – Surficial Glaciolacustrine Deposits	94	415	198	90
Unit 2b – Surficial Glaciolacustrine Deposits	181	450	298	99
Unit 3 – Upper Till	265	878	577	194
Unit 4a – Intermediate Glaciolacustrine Deposits	454	2,607	1,025	508
Unit 4b – Intermediate Glaciolacustrine Deposits	432	1,808	947	316
Unit 5 – Lower Till	1,133	3,670	1,848	667

Table 5-40: Summary of Dynamic Young's Modulus from Geophysical Testing, by Stratigraphic Soil Unit

Subsurface Unit	Dynamic Young's Modulus (MPa)			
	Minimum	Maximum	Mean	Std Dev
Unit 1 – Topsoil/Fill	163	847	422	200
Unit 2a – Surficial Glaciolacustrine Deposits	277	950	550	206
Unit 2b – Surficial Glaciolacustrine Deposits	525	1,331	879	294
Unit 3 – Upper Till	783	2,489	1,678	549
Unit 4a – Intermediate Glaciolacustrine Deposits	1,338	6,752	2,915	1,318
Unit 4b – Intermediate Glaciolacustrine Deposits	1,272	4,941	2,719	858
Unit 5 – Lower Till	3,273	10,435	5,217	1,782

Table 5-41: Summary of Dynamic Bulk Modulus from Geophysical Testing, by Stratigraphic Soil Unit

Subsurface Unit	Dynamic Bulk Modulus (MPa)			
	Minimum	Maximum	Mean	Std Dev
Unit 1 – Topsoil/Fill	177	1,398	612	349
Unit 2a – Surficial Glaciolacustrine Deposits	446	6,271	2,374	1,654
Unit 2b – Surficial Glaciolacustrine Deposits	1,658	10,750	7,304	2,782
Unit 3 – Upper Till	4,066	10,472	7,340	2,015
Unit 4a – Intermediate Glaciolacustrine Deposits	5,497	10,914	8,636	1,431
Unit 4b – Intermediate Glaciolacustrine Deposits	6,038	10,869	8,386	1,309
Unit 5 – Lower Till	5,093	22,215	12,180	4,352

5.3 Bedrock Parameters

5.3.1 Basic Material Characteristics

Bulk Density

Based on the results of the Phase 1 geotechnical investigation presented in Volume 1 – Factual Geotechnical Data Report, summaries of the bulk density results from laboratory testing (UCS and triaxial testing) are presented by stratigraphic unit in Table 5-42.

Table 5-42: Summary of Bulk Density Test Results by Stratigraphic Rock Unit

Stratigraphic Unit	Bulk Density (kg/m^3)			
	Min	Max	Mean	Std Dev
Unit 6a – Blue Mountain Formation	2543	2681	2641	38.6
Unit 6b – Lindsay Formation	2650	2695	2681	13.5
Unit 6c – Verulam Formation	2657	2726	2679	19.5

Note: Std Dev = Standard Deviation; Mean values are arithmetic.

Rock Quality Designation

The rock quality designation (RQD) values of the bedrock units at the DNNP site are generally high to very high. The Blue Mountain Formation is more weathered and has lower average RQD values compared to the other rock units. Table 5-43 summarizes the range and average RQD values for the borehole logging conducted during the investigation.

Table 5-43: Summary of Rock Quality Designation Summary, by Stratigraphic Rock Unit

Stratigraphic Unit	Minimum (%)	Maximum (%)	Mean (%)
Unit 6a – Blue Mountain	0	100	85
Unit 6b – Lindsay	76	100	100
Unit 6c – Verulam	91	100	100

Note: Mean values are arithmetic.

Slake Durability

Slake durability testing was conducted on the Blue Mountain Formation shale and the results are summarized in Table 5-44. The percent retained (slake durability index) after two wetting/drying cycles is shown in the table.

Table 5-44: Summary of Slake Durability Results, Blue Mountain Shale (Unit 6a)

Moisture Content (%)			Slake Durability Index, I_{d1}			Slake Durability Index , I_{d2}			No. Tests
Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	
0.80	1.62	1.08	99.39	99.67	99.57	98.92	99.43	99.30	12

Note: Mean values are arithmetic.

Bedrock Discontinuity

Structural data was collected in the boreholes using both the acoustic and optical televiewer surveys in each borehole. A total of eleven (11) boreholes were surveyed, resulting in 5,353 measured features. The televiewer data provides information on the dip and dip direction of borehole features within the surveyed hole, as well as the type of feature encountered. Types of features logged included Bedding, Broken Zones, Contacts, Induced Fractures, Filled Joints, Major Open Joints, Minor Open Joints, and Partially Open Joints. The structural data from the borehole televiewer surveys have been plotted as a stereographic projections (stereoplots) as shown in Appendix O. Based on the contoured stereoplots the rock mass structure from all the formations presented on the site (Blue Mountain, Lindsay, and Verulam) is dominated by near horizontal discontinuities (bedding and low angle joints). Approximately 98% of all measured features dip less than 20º. In order for the less prominent inclined joints to be more visible on the stereoplots, all bedding features and discontinuities dipping less than 35º were removed. As seen on the contoured stereoplot, a total of ten features (filled joints and partially open joints) dipping more than 35º were isolated from all the measured data. The limited amount of data for the inclined joints (i.e., joints with dip greater than 35º) is considered insufficient for proper contour plots which are intended to show all of the major joint sets present at the site and as such the results should be considered preliminary until more structural data on the inclined joints can be obtained. From the limited data obtained to date, one major sub-vertical joint set dipping south with the orientations between approximately 190º and 206º can be noted. Note that joint set dipping north with the orientations between approximately 7º and 10º appears to be a subset. Other joint sets as seen on the contoured stereoplots have inclination between approximately 38º and 49º and are dipping south and southwest to west respectively with orientations between approximately 160º and 195º and between approximately 243º and 270º respectively. Refer to Appendix O for more detailed presentation of stereographic projections of all televiewer data measured per each formation, and presentation of all joints dipping more than 35º per formation.

5.3.2 Hydraulic and Volume Change Behavior

Single-Well Response Testing

Single well response testing was carried out at the current monitoring well locations to estimate the hydraulic conductivity of the bedrock adjacent to the screened intervals. Individual test results are presented in Volume 1 – Factual Geotechnical Data Report. The data are summarized by stratigraphic unit in Table 5-45.

Table 5-45: Summary of Single Well Response Testing in Bedrock

Stratigraphic Unit		Estimated Hydraulic Conductivity from Single Well Response Testing (m/s)			
Unit No.	Description	Minimum	Maximum	Geomean	No. Tests
6a, 6b	Bedrock	1×10^{-10}	6×10^{-6}	2×10^{-8}	8

Each hydraulic conductivity estimate represents the bulk hydraulic conductivity of the bedrock within the screened interval of the monitoring well being tested, and the results are considered to be reasonable for the rock types that were tested. Further, acceptable consistency with the results estimated by the packer testing method (see below) is identified. As shown in Table 6-83, Summary of Hydraulic Conductivity Testing provided in Section 6.15.1 of Volume 1 – Factual Geotechnical Data Report, there was also acceptable consistency between the two single-well response test results at each monitoring well location.

Packer Testing

Packer testing was carried out during the field investigation to estimate the hydraulic conductivities of the rock formations. Individual test results are presented in Volume 1 – Factual Geotechnical Data Report. The data are summarized by stratigraphic unit in Table 5-46.

Table 5-46: Summary of Packer Testing in Bedrock, by Stratigraphic Rock Unit

Stratigraphic Unit	Estimated Hydraulic Conductivity from Packer Testing (m/s)		
	Minimum	Maximum	Mean
Unit 6a – Blue Mountain	2×10^{-9}	4×10^{-6}	5×10^{-7}
Unit 6b – Lindsay	5×10^{-11}	1×10^{-6}	7×10^{-8}
Unit 6c – Verulam	1×10^{-10}	9×10^{-8}	2×10^{-8}

Variability of Hydraulic Conductivity

The hydraulic conductivity estimates for the bedrock varied by four orders of magnitude. For these test results, the degree to which primary (e.g., bedding planes) and secondary (e.g., joints and fractures) permeability, and the width and extent of those joint surfaces, intersect the screened interval is expected to be the most significant influence on the hydraulic conductivity estimated at each monitoring well location.

5.3.3 Strength and Deformation Behaviour – Intact Rock

Uniaxial Compressive Strength

Rock samples from the formations observed during the drilling program were tested in the laboratory to determine the Uniaxial Compressive Strength (UCS). Twenty (20) samples from each formation were selected for UCS testing.

Table 5-47 presents the range, mean and standard deviation of the evaluated rock parameters from UCS laboratory testing.

Table 5-47: Uniaxial Compressive Strength from Laboratory Testing, by Stratigraphic Rock Unit

Stratigraphic Unit	Lithology	No. of Samples	Uniaxial Compressive Strength (MPa)			
			Min	Max	Mean	Std Dev
Unit 6a – Blue Mountain Formation	Shale	5	68.1	94.6	79.7	9.7
	Shale/Limestone	15	80.8	138.8	106.2	17.9
	Limestone	0	-	-	-	-
Unit 6b – Lindsay Formation	Shale	0	-	-	-	-
	Shale/Limestone	7	47.8	87.0	66.2	15.1
	Limestone	13	50.6	113.9	80.2	17.5
Unit 6c – Verulam Formation	Shale	1	43.7	43.7	N/A	N/A
	Shale/Limestone	16	13.6	76.0	39.0	17.8
	Limestone	3	42.1	111.5	82.0	35.9

Note: Std Dev = Standard Deviation; Mean values are arithmetic.

From the results, the Lindsay and Verulam limestone samples have similar strengths while the interbedded shale/limestone samples from these formations show variable strengths which reflects the varying amounts of shale and limestone in the samples. The Blue Mountain Formation shale samples had average strengths that were similar to the limestone of the Lindsay and Verulam Formations with a slightly lower maximum value. The interbedded samples from the Blue Mountain Formation show higher strengths than the other formations likely indicating a higher limestone strength.

Young's Modulus and Poisson's Ratio

Young's modulus and Poisson's ratio were evaluated from UCS and triaxial testing. Table 5-48 summarizes the deformation properties (Young's modulus and Poisson's ratio) by stratigraphic unit.

Table 5-48: Deformation Properties from Laboratory Testing, by Stratigraphic Rock Unit

Stratigraphic Unit	Lithology	No. of Samples	Young's Modulus (GPa)				Poisson's Ratio			
			Min	Max	Mean	Std Dev	Min	Max	Mean	Std Dev
Unit 6a – Blue Mountain Formation	Shale	3	17.5	21.6	19.0	2.3	0.28	0.36	0.32	0.04
	Shale/Limestone	9	17.1	49.3	29.1	9.9	0.17	0.44	0.28	0.09
	Limestone	0	-	-	-	-	-	-	-	-
Unit 6b – Lindsay Formation	Shale	0	-	-	-	-	-	-	-	-
	Shale/Limestone	29	22.1	72.3	46.2	12.3	0.15	0.43	0.22	0.06
	Limestone	13	26.7	49.1	33.5	7.4	0.28	0.50	0.36	0.06
Unit 6c – Verulam Formation	Shale	1	(-)	(-)	17.1	-	(-)	(-)	0.21	-
	Shale/Limestone	8	8.3	43.8	22.3	14.0	0.09	0.45	0.29	0.11
	Limestone	1	(-)	(-)	54.8	-	(-)	(-)	0.25	-

Note: (-) Minimum and Maximum values not applicable, only one sample available. Mean values are arithmetic.

5.3.4 Strength and Deformation Behaviour – Rock Mass

Shear Strength

The results for the direct shear tests on bedding and inclined joints are presented in Volume 1 – Factual Geotechnical Data Report. Table 5-49 below summarizes the interpreted friction angle for each rock formation from the tests assuming no cohesion along the open joints and using a best fit trendline on a plot of normal stress and peak shear stress.

Table 5-49: Interpreted Friction Angle for Bedding and Inclined Joints by Bedrock Formation

Stratigraphic Unit	Formation	Joint Type	Friction Angle[(a)] (degrees)
Unit 6a	Blue Mountain	Bedding	35
		Inclined Joint	37
Unit 6b	Lindsay	Bedding	43
		Inclined Joint	47
Unit 6c	Verulam	Bedding	33
		Inclined Joint	(-)

Note: Friction angle is calculated assuming no cohesion across the rock joints.
(-) No direct shear tests were carried out on inclined joints in the Verulam formation.

Normal and Shear Joint Stiffness

The shear stiffness was calculated from the direct shear tests using the shear load versus shear displacement plots. Table 5-50 presents the shear stiffness values for each bedrock formation obtained from the both the direct shear and the direct shear creep testing.

Table 5-50: Summary of Joint Shear Stiffness by Bedrock Formation

Stratigraphic Unit	Joint Type	Shear Stiffness (MPa/mm)			No. of Tests
		Minimum	Maximum	Overall Average	
Unit 6a - Blue Mountain	Bedding	0.21	6.77	2.46	6
	Inclined	1.00	13.88	8.69	2
Unit 6b - Lindsay	Bedding	0.07	9.17	1.90	7
	Inclined	2.24	12.34	5.72	2
Unit 6c - Verulam	Bedding	0.12	1.75	1.05	6
	Inclined	(-)	(-)	(-)	0

Note: Where slope of stress/displacement curve changed within a test, multiple slopes (i.e. stiffness values) were determined.
Overall average values were obtained by determining the best overall slope fit for each test.
No tests were completed on inclined joints in the Verulam formation.

The normal stiffness was calculated from the direct shear creep tests using the normal load versus normal displacement plots. Table 5-51 presents the normal stiffness values for each bedrock formation.

Table 5-51: Summary of Joint Normal Stiffness by Bedrock Formation

Stratigraphic Unit	Joint Type	Normal Stiffness (MPa/mm)			No. of Tests
		Minimum	Maximum	Overall Average	
Unit 6a - Blue Mountain	Bedding	7.85	23.35	10.37	2
	Inclined	9.19	45.61	14.22	2
Unit 6b - Lindsay	Bedding	3.42	45.74	14.72	2
	Inclined	6.01	30.30	11.66	2

Note: Where slope of stress/displacement curve changed within a test, multiple slopes (i.e. stiffness values) were determined.
Overall average values were obtained by determining the best overall slope fit for each test.
No tests were carried out within the Verulam formation.

Geological Strength Index

An assessment of the overall rock mass quality was completed for the boreholes using the Geological Strength Index (GSI). Initially GSI was assessed for each of the borehole runs using RMR (Bieniawski, 1976) [7] assuming it is analogous to GSI over the range of values encountered when the groundwater term is set to dry conditions. The following presents the results of the assessment of GSI per drill run interval. Note that a typical drill run interval was 1.5 m.

The GSI values were determined for each drillhole run using the RMR76 (Bieniawski, 1976) [6] classification system as follows:

RMR76 = P1 + P2 + P3 + P4 + P5

Where: P1 is the strength of intact rock material (rating = 0 to 15);
P2 is the drill core quality, Rock Quality Designation, RQD (rating = 3 to 20);
P3 is the spacing of discontinuities (rating = 5 to 30);
P4 is the condition of discontinuities (rating = 0 to 25); and,
P5 is the groundwater (rating = 0 to 10).

For the GSI calculations, a groundwater rating for dry conditions has been assumed according to standard practice.

The GSI values were grouped into five rock mass classifications, and these are presented in Table 5-52, below.

Table 5-52: Geological Strength Index Classification

GSI Class	Description	GSI
Class I	Very Good	>80
Class II	Good	60<GSI<80
Class III	Fair	40<GSI<60
Class IV	Poor	20<GSI<40
Class V	Very Poor	<20

Table 5-53, below, presents a summary of the GSI values for each rock unit. Most of the bedrock at the DNNP site is considered good rock.

Table 5-53: Geological Strength Index Summary Based on RMR76 Directly, by Stratigraphic Rock Unit

Stratigraphic Unit	Minimum GSI	Maximum GSI	Mean GSI	Std Dev
Unit 6a – Blue Mountain Formation	45	85	67	8
Unit 6b – Lindsay Formation	55	92	81	6
Unit 6c – Verulam Formation	63	84	81	5

Note: Std Dev = Standard Deviation; Mean values are arithmetic.

[7] Bieniawski, Z.T. 1976. Rock mass Classification in Rock Engineering. In *Exploration for Rock Engineering, proc. of the symp.*, (ed. Z.T. Bieniawski) **1**, 97-106. Cape Town: Balkema.

The GSI was also assessed using the following equation from Hoek et al., 2013[8]:

GSI = 2xJcon$_{76}$ + RQD/2

where:
Jcon$_{76}$ is the Joint Condition rating from the RMR 1976
RQD is the Rock Quality Designation

The results, which are presented below in Table 5-54, are somewhat similar to the results in Table 5-53 with the average values typically lower for the GSI values determined directly from RMR$_{76}$.

Table 5-54: Geological Strength Index Summary Based on Jcon and RQD, by Stratigraphic Rock Unit

Stratigraphic Unit	Min GSI	Max GSI	Mean GSI	Std Dev
Unit 6a – Blue Mountain Formation	32	100	81	12
Unit 6b – Lindsay Formation	48	100	95	7
Unit 6c – Verulam Formation	66	100	96	6

Note: Std Dev = Standard Deviation; Mean values are arithmetic.

Rock Mass Strength and Rock Mass Elastic Modulus

The Hoek-Brown mb, s and a parameters were calculated using the RSData (Rocscience, 2021) [9] software using the triaxial test results from the rock samples. Curve fitting of triaxial laboratory data was completed using selected triaxial samples and the unconfined compressive strengths. Some of the outliers were removed from the data set used for curve fitting to derive the Hoek-Brown parameters in order to obtain reasonable results.

The intact rock strength and elastic modulus values can be adjusted to rock mass values using the Geological Strength Index (GSI) values shown in Table 5-53 and the following equations (Hoek, Carranza-Torres and Corkum, 2002) [10]:

Rock Mass Uniaxial Compressive Strength:

$$\sigma_c = \sigma_{ci} \cdot s^a$$

Where:

$$s = exp\left(\frac{GSI - 100}{9 - 3D}\right)$$

and

$$a = \frac{1}{2} + \frac{1}{6}\left(e^{-GSI/15} - e^{-20/3}\right)$$

[8] Hoek, E.; Carter, T.G.; Diederichs, M.S. Quantification of the Geological Strength Index Chart. In Proceedings of the 47th US Rock Mechanics/Geomechanics Symposium ARMA, San Francisco, CA, USA, 23-26 June 2013; pp.13-672

[9] RSData Manual (2021). Manual for the RSData program – version 1, prepared by Rocscience Inc.

[10] Hoek, E., Carranza-Torres, C. and Corkum, B. 2002. Hoek-Brown Failure Criterion – 2002 Edition. 5th North American Rock Mechanics Symposium and 17th Tunneling Association of Canada Conference: NARMS-TAC, 2002, pp. 267-271.

D is a disturbance factor ranging from 0 for TBM tunnels to 1.0 for very poor blasting. Note the disturbed zone around the excavation should be modelled separately using the appropriate disturbance factor.

Rock Mass Tensile Strength:

$$\sigma_t = \frac{s\sigma_{ci}}{m_b}$$

Where:

$$m_b = m_i \cdot exp\left(\frac{GSI - 100}{28 - 14D}\right)$$

Rock Mass Modulus (after Hoek and Diederichs, 2005):

$$E_{rm} = E_i\left(0.02 + \frac{1 - D/2}{1 + e^{((60+15D-GSI)/11)}}\right)$$

The rock mass strength and rock mass modulus design values for each GSI rock class are summarized below in Table 5-55. The rock mass modulus used for design depends on the scale of the application (i.e. the rock mass modulus values will very from the intact values to the rock mass modulus values derived from GSI which is more suitable for large-scale applications). Engineering judgement should be used when selecting a suitable rock mass modulus for design. For rock samples of poor quality, the mean value minus the standard deviation has been used as a lower bound for the intact UCS and modulus. The results are summarized Table 5-55.

Table 5-55: Rock Mass Properties Summary, by Stratigraphic Rock Unit

Stratigraphic Unit	Intact Rock Properties				Rock Mass Properties							
	Mean Intact Strength (MPa)	Mean Intact Modulus (GPa)	σ_{ci} (MPa)	m_i	Geological Strength Index (GSI) Range	Mean GSI	mb	s	a	Rock Mass Strength from GSI (MPa)	Rock Mass Modulus from GSI (GPa)	Rock Mass Modulus from Rock Pressuremeter Tests (GPa)
Unit 6a – Blue Mountain Formation	100	26.6	103.8	12.8	45-85	67	3.952	0.0256	0.502	16.5	17.9	5.91
Unit 6b – Lindsay Formation	75	43.4	82.5	20.0	55-92	81	10.15	0.121	0.501	28.7	38.7	9.75
Unit 6c – Verulam Formation	46	25.0	46[1]	20.0[1]	63-84	81	10.15	0.121	0.501	16.0	22.3	12.29

Note: 1) No triaxial data for the Verulam Formation, therefore σ_{ci} and m_i are assumed.
2) σ_{ci} is the unconfined compressive strength intercept for the generalized Hoek Brown failure envelope.

5.3.5 Shear Creep Rate

The results for the constant force direct shear creep tests are summarized below in Table 5-56 and Table 5-57.

Table 5-56: Summary of Shear Creep Rates for Unit 6a Blue Mountain Formation

Sample ID	Joint Type	Stage	Average Normal Stress (MPa)	Average Shear Stress (MPa)	Creep Rate (mm/day)
BH5-RS-CR-01	Bedding Joint	1	0.77	0.21	0.00316
		2	0.79	0.39	0.00517
		3	0.80	0.66	0.00809
BH5-RS-CR-02	Inclined Joint	1	0.83	0.22	0.00204
		2	0.83	0.45	0.00391
		3	0.87	0.68	0.00579
BH12-RS-CR-04	Inclined Joint	1	0.84	0.21	0.01787
		2	0.82	0.31	0.01818
		3	0.86	0.43	0.03537
BH66-RS-CR-01	Bedding Joint	1	0.40	0.09	0.00558
		2	0.41	0.21	0.00634
		3	0.42	0.31	0.01045

Table 5-57: Summary of Shear Creep Rates for Unit 6b Lindsay Formation

Sample ID	Joint Type	Stage	Average Normal Stress (MPa)	Average Shear Stress (MPa)	Creep Rate (mm/day)
BH12-RS-CR-01	Inclined Joint	1	0.71	0.16	0.00240
		2	0.73	0.34	0.00455
		3	0.74	0.49	0.00672
BH12-RS-CR-03	Inclined Joint	1	0.40	0.10	0.00011
		2	0.41	0.23	0.00352
		3	0.42	0.33	0.00379
BH71-RS-CR-02	Bedding Joint	1	0.41	0.11	0.00549
		2	0.41	0.25	0.01343
		3	0.41	0.34	0.02707
BH78-RS-CR-01	Bedding Joint	1	0.79	0.12	0.00250
		2	0.80	0.30	0.00560
		3	0.81	0.44	0.00753

5.3.6 In Situ Stresses

The in situ horizontal stresses were measured in six (6) boreholes within an area which measures approximately 48 m by 174 m in plan and extends to an elevation of 25.78 m, for the purposes of characterizing the stress regime within the test site. Figure 13 in Appendix E shows a combined plot of all the measured maximum horizontal stresses (P) and minimum horizontal stresses (Q) with elevation. With the exception of the tests carried out in BH13 below 43 m in elevation, the horizontal stress regime within this block is fairly uniform between 60 m and 30 m in elevation with P values ranging from approximately 9 MPa to 15 MPa. Test results in BH13 show a trend of increasing P values with depth below 40 m in elevation. The minimum horizontal stresses (Q) between 60 m and 20 m in elevation are fairly uniform, ranging from 5 MPa to 12 MPa.

Figure E-14 in Appendix E shows a combined plot of all of the measured biaxial modulus (E) values with elevation. The E values range from 35 GPa to 58 GPa. The range of E values is generally consistent with the natural variation of the rock and is fairly typical of the biaxial modulus values for fresh and medium strong limestones. A summary of the in situ stress measurements is presented below in Table 5-58.

The measured directions of the maximum horizontal stresses are generally oriented within the first (NE) quadrant (azimuths from 0 to 90 degrees) with a few exceptions where the directions are oriented within the second (SE) quadrant (azimuth 90 to 180 degrees).

Table 5-58: Summary of In Situ Stress Measurements Test Results

Depth (mbgs)	P			Q			E			Azimuth of P		
	(MPa)			(MPa)			(GPa)			(°)		
Elev. (m)	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean
32.02 – 61.36	8.03	23.36	11.38	3.89	12.3	7.67	34.95	58.75	48.31	3.3	163.1	68.89
-57.98 – -20.38												

Note: Mean values are arithmetic.

For the sake of comparison, the in situ horizontal stresses (P and Q) and biaxial modulus (E) values measured at the site of the intake tunnel located in the existing Darlington Nuclear Power Station (Lo and Lukajic,1984)[11] are summarized below:

- Between 80 m and 40 m in elevation in the Lindsay Formation, the maximum horizontal stresses (P) range from 10 MPa to 14 MPa whereas the minimum horizontal stresses (Q) range from 5 MPa to 8 MPa.
- Below 40 m in elevation (from 40 m to -100 m), the in situ stresses are fairly uniform with an average P value of 14 MPa and an average Q value of 8 MPa.
- Between 85 and 20 m in elevation, the biaxial modulus (E) values range from 32 GPa to 63 GPa.

[11] Lo, K.Y., Lukajic, B., 1984. Predicted and Measured Stresses and Displacements Around the Darlington Intake Tunnel. Can. Geotech. J. 21, 147-165.

It may be noted that the in situ horizontal stresses and biaxial modulus values obtained from the current overcoring test program carried out at the site are consistent with the set of historical stress data obtained in the same rock formation at comparable depths at the site of the existing Darlington Power Station.

For design purposes, the in situ stress values presented below in Table 5-59 are recommended for the bedrock. The in situ stress in the rock is defined by the constant locked-in stress plus the stress gradient value calculated based on the depth from ground surface (i.e., σ_h = *Locked-in Constant* + 2 x σ_v, where σ_v is the vertical lithostatic stress).

Table 5-59: Summary of Recommended Design In Situ Stress Values

Vertical Stress	Locked-in Near Surface Major Horizontal Stress (P)	Locked-in Near Surface Minor Horizontal Stress (Q)	Horizontal to Vertical Ratio
Lithostatic	7 MPa	5 MPa	2

5.3.7 Rock Swelling Pressures

The results for the swell testing on the Blue Mountain Formation shale are presented in Volume 1 – Factual Geotechnical Data Report and are summarized above in Section 4.7.3.

The swelling characteristics of the Blue Mountain shale, as determined from the laboratory swell tests, will need to be taken into consideration in the design of the underground structures located within this rock formation including any concrete structures and any tunnel linings that are in contact with the shale bedrock. For any structures, such as the tunnel linings or foundation walls, which are directly in contact with the rock, the time-dependent deformation (swelling) of the rock will cause pressure to build up with time at the rock-structure interface. The magnitude of the pressure will depend on the rigidity of the structure, the timing of the construction, the swelling characteristics of the rock, the initial in situ stresses in the rock formation and the design life of the structure. The design of the final structures will need to be based on a rock/structure interaction analysis over the design life of the structure, taking into consideration the structure type (thickness, stiffness etc.) and the rock characteristics (swell rates). Depending on the results, it may be necessary to incorporate a compressible material between the structure and the rock. The structural foundation walls should be checked for all loading cases.

The interpreted swell test results are shown below on Figure 5-3 Figure 5-4 for vertical and horizontal samples, respectively. In generating these plots, the applied pressure for the free swell tests was taken as 0.0001 MPa. The swelling potentials and the applied pressures typically approximate a linear relationship in a semi-log plot. The results indicate that the samples did not swell under the free swell conditions but did show some very small swelling potential for the semi-confined and null tests in some cases. The results for the Blue Mountain shale (Unit 6a) do not show the linear relationship on the semi-log plot that is typical for other Southern Ontario shales; however, if the free swell results are ignored, a best fit linear relationship on the semi-log plot can be assumed for design as shown below as a dashed line. It should be noted that the calcite content, which tends to inhibit the swelling potential of the shale, is considered very high for some of the test samples (i.e., 20.4% to 44.2% for BH65, and 23.2% to 25.7% for BH71) and this could in part explain the atypical results.

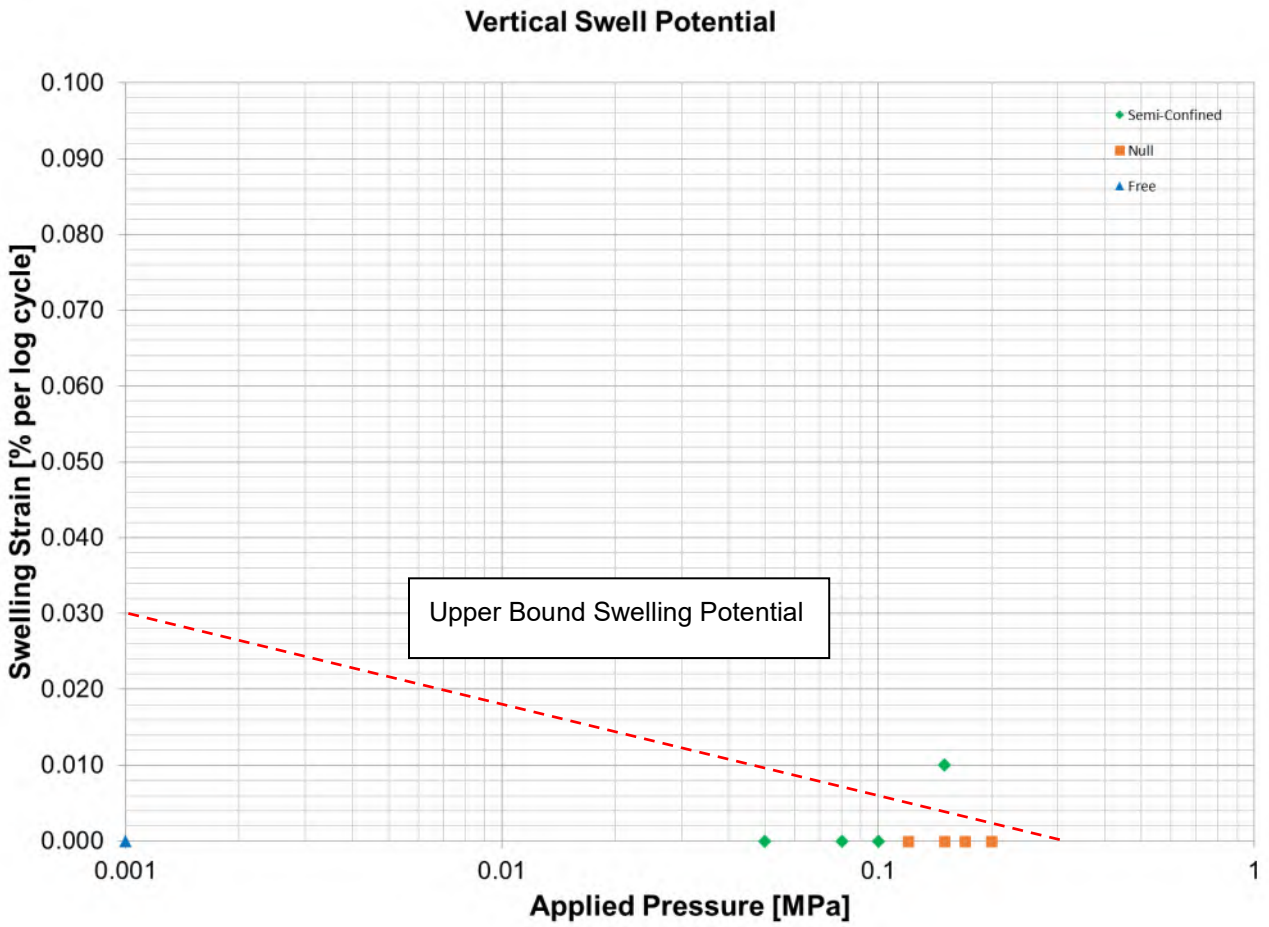

Figure 5-3: Vertical Swell Testing Results for Blue Mountain Shale (Unit 6a)

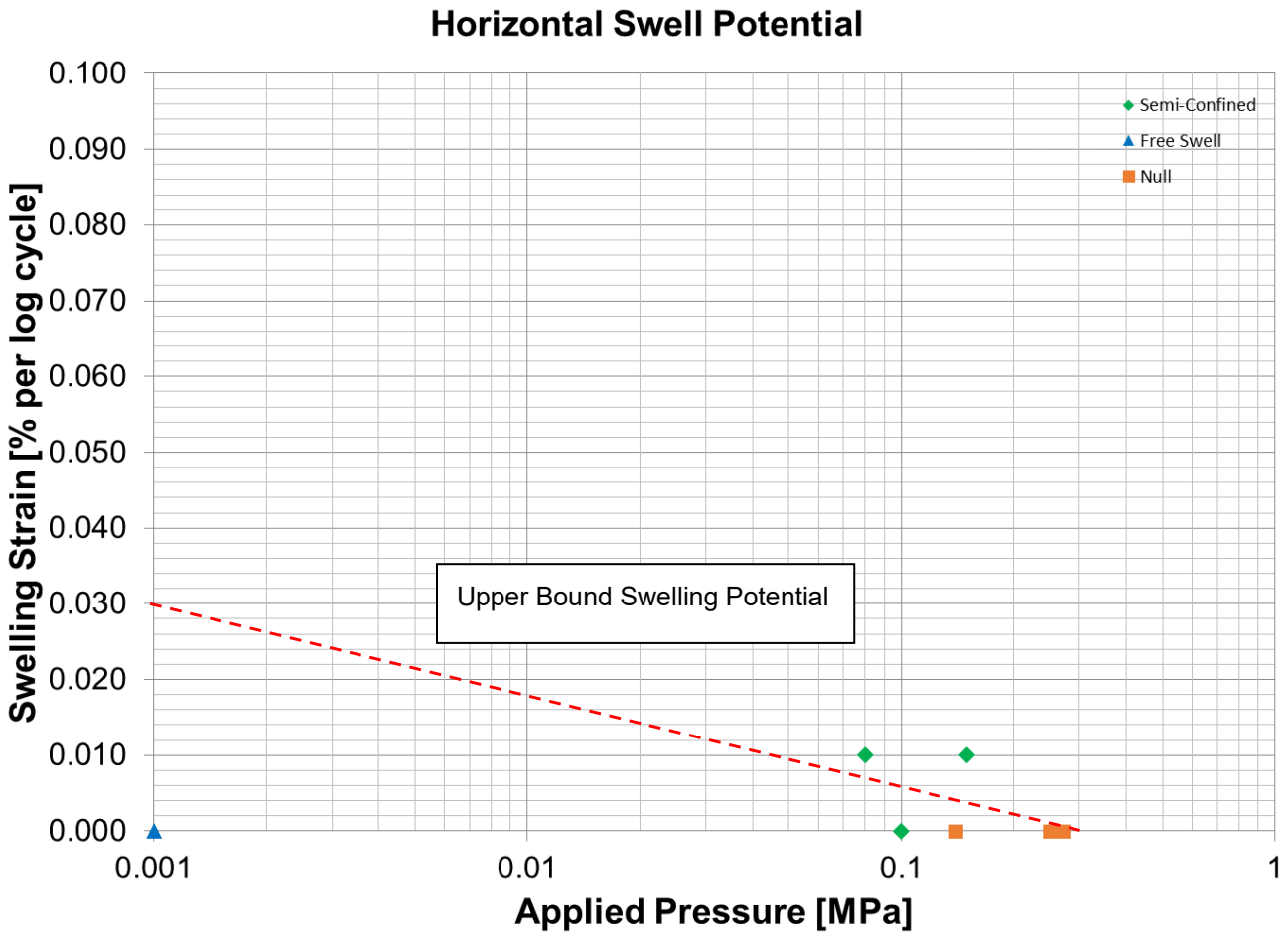

Figure 5-4: Horizontal Swell Testing Results for Blue Mountain Shale (Unit 6a)

5.3.8 Dynamic Behaviour

The results of the dynamic parameters in bedrock from geophysical testing are summarized below in Tables 5-60 to 5-64, which are based on the full waveform sonic probe measurements and the average bulk density measurements of each formation, as summarized above. The velocities remain consistent throughout the rock with some variation in the transition zone from soil to rock. There is also an area of higher velocity at 80-90m that is seen across all boreholes. The velocities are seen in Figure 5-5 and Figure 5-6.

The uncertainty reported in the seismic velocities measured with the FWS probe is considered to be ±5% of the reported velocity values presented in the tables below. The average Poisson's ratio, dynamic shear modulus, dynamic Young's modulus, and dynamic bulk modulus were calculated for each lithology group in each of the 17 boreholes. The min, max, and average values displayed in Tables 5-60 to 5-64 are the average of those values.

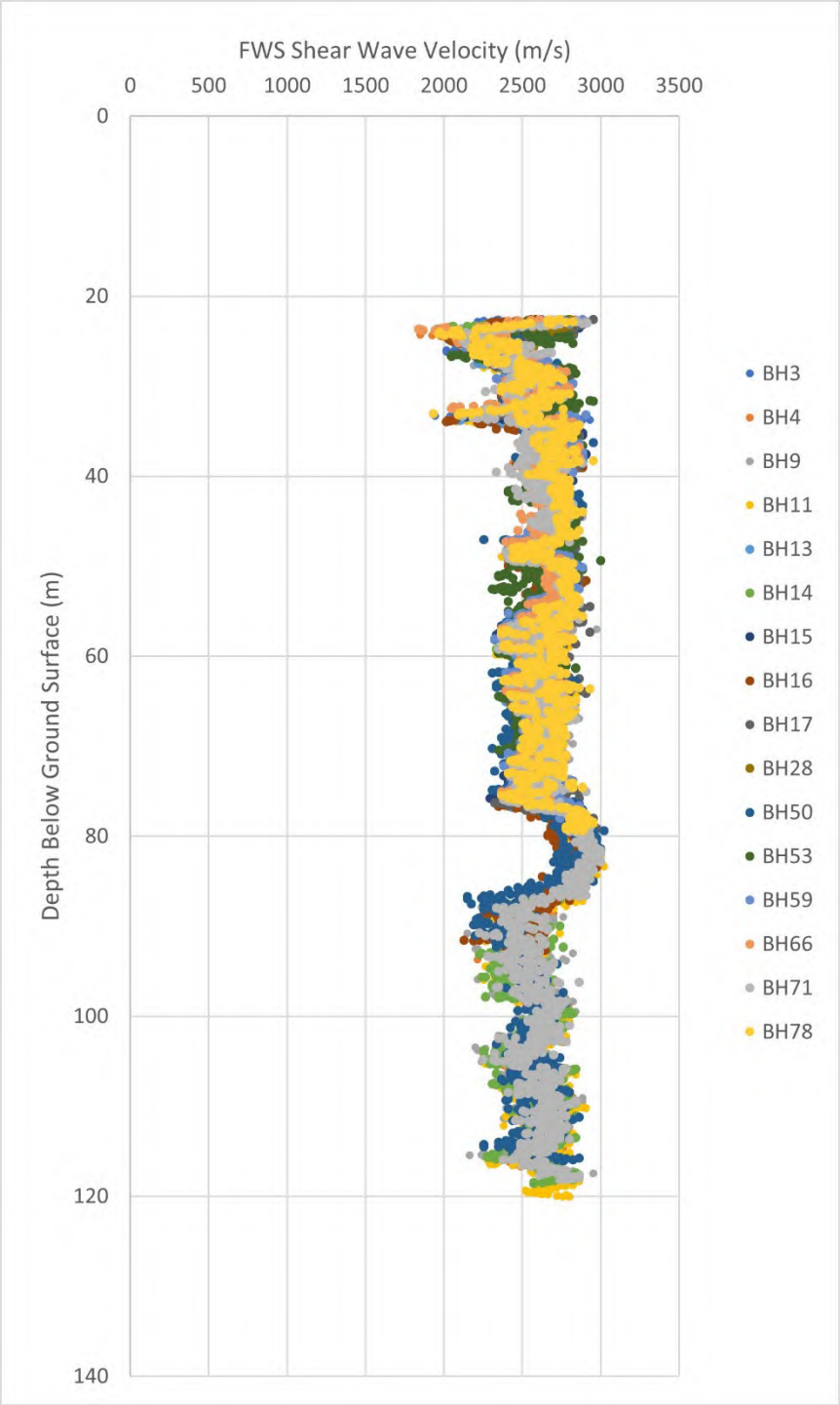

Figure 5-5: Shear Wave Velocity Measured with FWS

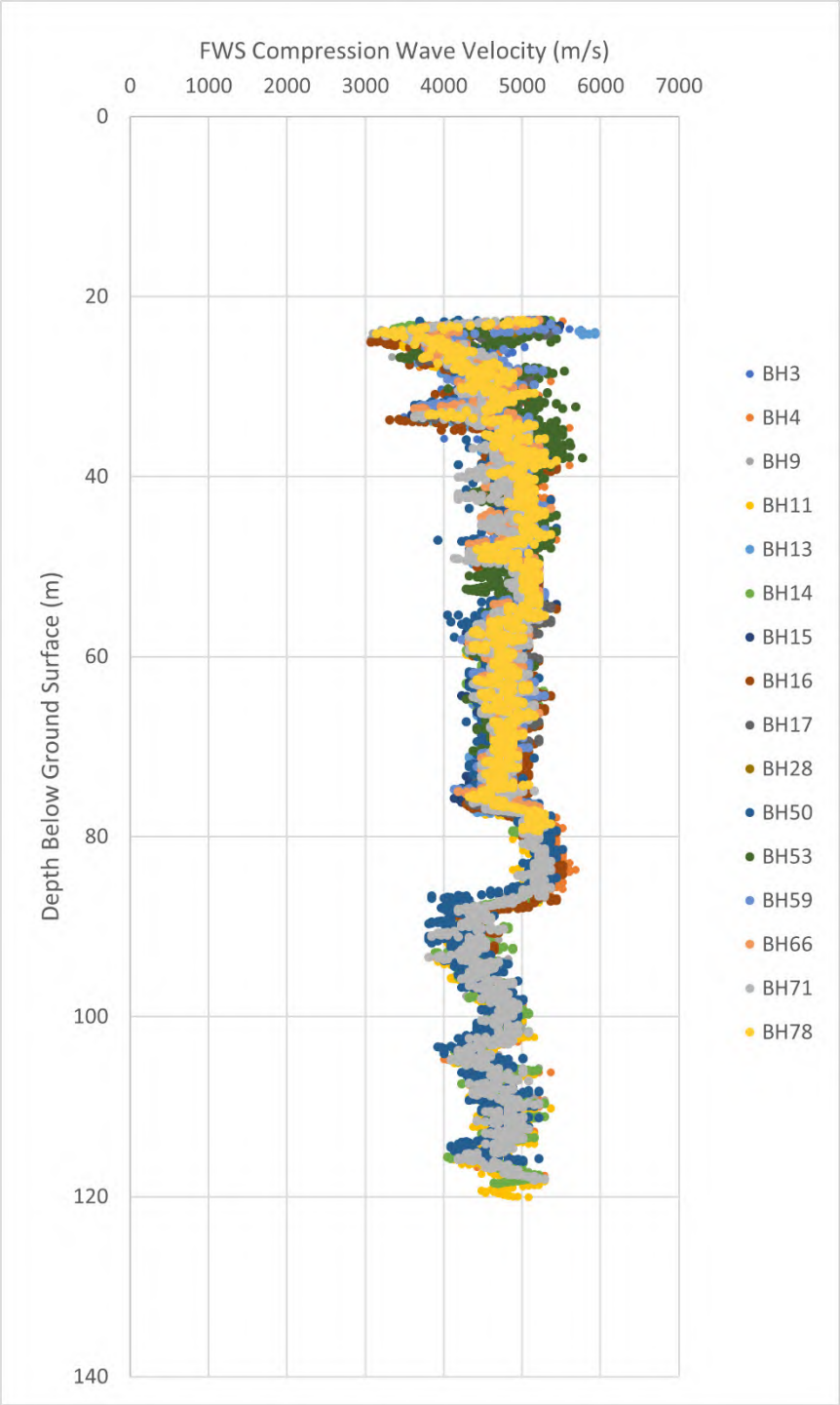

Figure 5-6: Compression Wave Velocity Measured with FWS

Table 5-60: Summary of Shear and Compression Wave Velocities from Geophysical Testing, by Stratigraphic Rock Unit

Stratigraphic Unit	Shear Wave Velocity (m/s)				Compression Wave Velocity (m/s)			
	Minimum	Maximum	Mean	Std Dev	Minimum	Maximum	Mean	Std Dev
Unit 2a – Blue Mountain Formation	1,841	2,953	2,405	127	3,073	5,935	4,283	344
Unit 2b – Lindsay Formation	1,934	3,024	2,640	41	3,202	5,773	4,792	88
Unit 2c – Verulam Formation	2,128	2,801	2,559	39	3,772	5,443	4,570	48

Table 5-61: Summary of Poisson's Ratio from Geophysical Testing, by Stratigraphic Rock Unit

Stratigraphic Unit	Poisson's Ratio			
	Minimum	Maximum	Mean	Std Dev
Unit 2a – Blue Mountain Formation	0.20	0.38	0.26	0.04
Unit 2b – Lindsay Formation	0.27	0.30	0.28	0.01
Unit 2c – Verulam Formation	0.26	0.28	0.27	0.01

Table 5-62: Summary of Dynamic Shear Modulus from Geophysical Testing, by Stratigraphic Rock Unit

Stratigraphic Unit	Dynamic Shear Modulus (MPa)			
	Minimum	Maximum	Mean	Std Dev
Unit 2a – Blue Mountain Formation	12,772	18,186	15,320	1,618
Unit 2b – Lindsay Formation	17,099	19,458	18,696	578
Unit 2c – Verulam Formation	16,534	18,041	17,544	528

Table 5-63: Summary of Dynamic Young's Modulus from Geophysical Testing, by Stratigraphic Rock Unit

Stratigraphic Unit	Dynamic Young's Modulus (MPa)			
	Minimum	Maximum	Mean	Std Dev
Unit 2a – Blue Mountain Formation	34,068	45,959	38,674	4,135
Unit 2b – Lindsay Formation	43,539	49,978	47,931	1,472
Unit 2c – Verulam Formation	42,363	45,762	44,614	1,180

Table 5-64: Summary of Dynamic Bulk Modulus from Geophysical Testing, by Stratigraphic Rock Unit

Stratigraphic Unit	Dynamic Bulk Modulus (MPa)			
	Minimum	Maximum	Mean	Std Dev
Unit 2a – Blue Mountain Formation	20,463	47,300	28,318	7,290
Unit 2b – Lindsay Formation	31,985	39,773	36,666	1,697
Unit 2c – Verulam Formation	31,261	33,563	32,573	824

6.0 GEOHAZARD CONSIDERATIONS

6.1 Natural Gas

Methane and hydrogen sulphide gas are known to be present in the bedrock and in the soils of Southern Ontario, typically in granular layers or rock capped by cohesive tills.

Methane gas was encountered in some of the boreholes advanced at the site (refer to Volume 1 – Factual Geotechnical Data Report.

Methane forms an explosive mixture with air and is a potential hazard for excavation and construction work and it should be assumed that it will be encountered in the bedrock and soil at this site. Changes in groundwater pressure which may be caused by dewatering or seepage into excavations/underground spaces can lead to migration/release of gaseous or dissolved methane. Therefore, the absence of methane detection in a particular area should not be construed to indicate that there is no risk of the presence of methane in the future or in other site areas.

6.2 Karst Cavities

No evidence of significant karst cavities was encountered in the geotechnical boreholes. Some zones of lost core were encountered in the boreholes generally within 40 m of the ground surface and ranging from 5 cm to 66 cm in height, but no noticeable drop in the drilling rods was noted and therefore these are thought to be associated with zones of weaker material that had been washed out by the core drilling.

In addition, the previous geophysical reports associated with this site indicate that no significant depressions or changes in bedrock, that may be indicative of large karst, large voids or faults were noted in the nine seismic refraction lines at the site.

After a review of the previous surface geophysical data as well as the numerous boreholes drilled in 2021 for the power block, we confirm that the data supports the absence of karst features at this site.

7.0 SITE SEISMIC CLASSIFICATION AND CONSIDERATIONS

7.1 Seismic Setting and Paleoseismicity

7.1.1 Seismic Source Zones

Eastern Canada lacks evidence for major historical earthquakes because it is located within the stable continental region (SCR) of the North American tectonic plate. Nevertheless, a number of seismic source regions have been defined from the historical and instrumental record of earthquake epicentres and magnitudes. These source zones are used to define areas where earthquakes might be expected in the future, particularly when undertaking

probabilistic seismic hazard analysis (PSHA) for the development of national seismic hazard maps and site-specific earthquake hazard assessments for critical structures.

The Darlington site falls within the regional Southern Great Lakes Seismic Zone (SGLSZ) as defined by the Geological Survey of Canada. The SGLSZ is one of a number of seismic zones within the SCR of the North American tectonic plate. The SGLSZ is defined over a large area that extends from Windsor to east of Kingston and into the United States to the south. The SGLSZ is characterized by relatively low to moderate rates of instrumental seismicity, with only 2 to 3 magnitude (M) 2.5 or larger earthquakes recorded in the last 30 years. Historical records for earthquakes with epicentres located within the SGLSZ includes three moderate (i.e., about M 5) events: 1929 in Attica, New York, 1986 near Cleveland, Ohio, and 1998 near the Pennsylvania/Ohio border.

Wallach et. al. (1998)[12] identified three linear zones of earthquakes in this part of southeast Canada and within the wider SGLSZ. These zones are based on underlying geophysical anomalies with the basement rocks of this part of the North American plate. Mohajer (1993)[13] also argued for a linear seismic zone and Jacobi and Fountain (1993)[14] identified a basement fault system as potential earthquake sources in the region surrounding the Darlington site. . These sources are the Niagara-Pickering linear zone, the Georgian Bay linear zone, the Hamilton-Lake Erie lineament, the Hamilton-Presqu'ile Fault, and the Clarendon-Linden Fault System.

The Niagara-Pickering linear zone trends north-northeasterly, extending from Balsam Lake to the north and Pickering to the west of the Darlington site. Wallach et. al. (1998) defines the Niagara-Pickering linear zone by north-northeast trending topographical lineaments, linear magnetic anomalies, mesoscopic-scale faults, and some macroscopic-scale faults.

Wallach et. al (1998) identifies the Georgian Bay linear zone from Bouguer gravity anomalies and normal faults observed in the rocks within the Rouge River valley. The Georgian Bay zone has a north-northwest trending lineament, crossing just north of Lake Ontario to the west of Pickering and north into Georgian Bay.

Wallach et al. (1998) argues for the existence of the Hamilton-Lake Erie lineament based on mapping a range of mapped small-scale faults. The lineament has a north-northeasterly trend that is subparallel and west of the Niagara-Pickering linear zone. These two zones diverge south of Lake Ontario.

Mohajer (1993) identified the Hamilton-Presqu'ile Fault as another potential earthquake source within the SGLSZ. The Hamilton-Presqu'ile Fault is sub-parallel to the long axis of Lake Ontario. Mohajer (1993) cites a 40 m offset of Paleozoic-age strata as evidence of the fault. He argues that several microearthquakes could have been located on or close to the Hamilton-Presqu'ile Fault at the western end of Lake Ontario.

To the south of the SGLSZ, Jacobi and Fountain (1993) have argued that the Clarendon-Linden Fault System could be a potential source of future large earthquakes. The Clarendon-Linden Fault System strikes north-northeast and crosses Lake Ontario to the east of the Darlington site from Clarendon, New York to Prince Edward County, Ontario. Jacobi and Fountain (1993) consider that stress release on the Clarendon-Linden Fault System

[12] Wallach, J.L., Mohajer, A.A., and Thomas, R.L. 1998. *Linear zones, seismicity, and the possibility of a major earthquake in the intraplate western Lake Ontario area of eastern North America.* Canadian Journal of Earth Sciences 35: 762-786.

[13] Mohajer, A.A. 1993. *Seismicity and Seismotectonics of the Western Lake Ontario Region*. Géographie physique et Quaternaire 47 (3): 353-362.

[14] Jacobi, R. and Fountain, J. 1993. *The Southern Extension and Reactivations of the Clarendon-Linden Fault System*. Géographie physique et Quaternaire 47 (3): 285-302.

as the likely source of instrumentally recorded earthquakes with body-wave (m_b)magnitudes ranging from m_b 2.8 to m_b 4.8 between 1955 and 1971, and the 1928 m_b 5.2 Attica earthquake.

7.1.2 Paleoseismicity

The definition of the source zones described above is based on alignments of geophysical anomalies, limited numbers of instrumental and historical earthquakes, and structural geological observations in near surface rocks. At present, there is no known evidence of larger, pre-historic earthquakes that have resulted in surface fault rupture because such earthquakes have not occurred, or the evidence for surface rupture or coseismic damage is not preserved, or the studies needed to identify past large earthquakes is insufficient to recognize these events. Given the relatively stable geological setting of the region surrounding the Darlington site, the recency of the post-glacial landscape that might preserve past large earthquake effects, it is expected that evidence for large earthquakes, if they have occurred, would be difficult to identify.

Golder's review of available paleoseismic information confirms the lack of historical evidence for surface rupture within the Darlington site, including and absence of faults within the boreholes as logged during the current investigation.

7.2 Design PGA, Magnitude, and Importance Level

In accordance with the report titled *Update of the OPG Darlington Site Probabilistic Seismic Hazard Assessment for the Darlington Risk Assessment (DARA)* numbered K-620117-REPT-0001 R03 and dated June 3, 2021 by Kinectrics, for the 10,000-year return period earthquake a Peak Ground Acceleration (PGA) of 0.168g and an earthquake Magnitude of 7.05 was considered for design. It should be noted that the indicated PGA value of 0.168g is applicable at the ground surface and the PGA value will differ at greater founding depths; this should be taken into consideration when evaluating seismic conditions for final design.

Seismic analysis was carried out for the following structures as outlined below in Table 7-1.

Table 7-1: Summary of Structures for Seismic Design

Structure	Foundation Elevation (masl)	Foundation Depth Below Site Grade (m)	Seismic Importance Level
Reactor Building	52.8	35.2	High
Turbine Building	87.0	1.0	Moderate
Radioactive Waste Building	86.8	1.2	Moderate
Control Building	87.5	0.5	Moderate
TB Facility Annex	87.5	0.5	Moderate
Dry Cask Storage	TBD	TBD	Moderate
Administration Building	TBD	TBD	Low

7.3 Seismic Liquefaction

Liquefaction is a phenomenon whereby seismically-induced shaking generates shear stresses within the soil under undrained conditions. These stresses tend to densify the soil (i.e., leading to potentially large surface settlements) and under undrained conditions generate excess pore pressures. The excess pore pressures also

lead to sudden temporary losses in strength. Where existing static shear stresses are present, the loss of strength can lead to significant lateral movements (i.e., analogous to a slope failure) often referred to as “lateral spreading” or under certain conditions even catastrophic failure of the slope often referred to as “flow slides”. Lateral spreading and flow slides often accompany liquefaction along rivers and other shorelines.

The liquefaction susceptibility of granular soils was evaluated by comparing the penetration resistance required to trigger liquefaction with the available penetration resistance. Liquefaction is predicted to occur when the available penetration resistance is less than the resistance required. The susceptibility of the cohesive soils to cyclic mobility was also assessed.

The methodology used to assess liquefaction potential at the site is consistent with the approach outlined in the Canadian Highway Bridge Design Code (CHBDC) and by Idriss and Boulanger (2008). It involves comparing the cyclic shear stresses applied to the soil by the design earthquake, represented as the cyclic stress ratio (CSR), to the cyclic shear strength, represented as the cyclic resistance ratio (CRR) provided by the soil.

The CRR values with depth were calculated using the borehole and CPT data collected as part of the investigation. Although groundwater levels of 0.3 to 2 mbgs were encountered in the upper soil units as outlined in Section 3.5.2, the groundwater level was considered to be at ground level (i.e., 0 mbgs) during the design earthquake event for the preliminary liquefaction analyses. The results of the initial preliminary liquefaction analyses, using the “simplified” method of estimating the CSR profile based on the 10,000-year design earthquake event outlined in Section 7.1, indicated that layers within the upper clayey, sandy, and silty deposits (i.e., Units 2a and 2b) are potentially liquefiable during the 10,000-year design earthquake event. However, it is also understood that the upper 8 metres of soil will be removed from beneath the Turbine, Radioactive Waste, Control, and TB Facility Annex buildings and replaced with compacted fill material, which will result in the removal of the identified liquefiable soils from beneath these structures. Based on this understanding, the soils at this site may be considered to be non-liquefiable for design under the 10,000-year design earthquake for the Reactor, Turbine, Radioactive Waste, Control, and TB Facility Annex buildings. Seismic settlements are considered to be minimal. This should be confirmed at a further design stage for these structures, and for the Dry Cask Storage and Administration buildings once further foundation and soil excavation information is available.

7.4 Seismic Site Class Determination

It is understood that the seismic design of the nuclear safety structures will be carried out per nuclear standards (e.g., CSA N289). The average shear wave velocities for the upper 30 m of soil and bedrock beneath the building foundations (i.e., Vs_{30}) and corresponding design Site Class are summarized below in Table 7-2.

Table 7-2: Summary Average Shear Wave Velocities for the Upper 30 m Beneath Foundations for Structures

Structure	Vs_{30} (m/s)
Reactor Building	2421
Turbine Building	566
Radioactive Waste Building	632
Control Building	709
TB Facility Annex	618

We would note that the Vs_{30} values presented above are based on the materials extending beneath the founding elevations of the indicated facilities as currently understood. The ultimate designer should carefully evaluate and apply the values as applicable to the actual embedment depths as the design progresses.

The site classification for seismic site response for structures being designed under the 2020 National Building Code of Canada (NBCC) can be determined based on Section 4.4.8.1 of the Code and the results of the geotechnical investigation, including shear wave velocity measurements from geophysical testing. For preliminary design, structures founded at or below about Elevation 87 masl may be designed using a Site Class C designation. Structures founded at or within 3 m of the underlying bedrock may be designed using a Site Class A designation. These should be confirmed for detailed design of any such structures. These seismic Site Class designations also assume that structures founded on or within 3 m of bedrock will be seismically isolated from any adjacent structures founded on overburden.

8.0 FOUNDATION AND CONSTRUCTION CONSIDERATIONS

8.1 General

The onshore power block will include construction of the main power block buildings, located inside the containment area, as well as an administrative building and a dry cask storage building located outside of the containment area, as summarized in Table 8-1 below. The locations of the above-noted structures are shown on Figures 1 and 2.

Table 8-1: Summary of Buildings and Proposed Foundation Details

Location	Structure	Structure Components	Footprint Dimensions[(a)] (m)	Proposed Foundation Elevations
Inside Containment Area	Power Block Building	Reactor Building	34.4 dia.	53.0 m
		Turbine Building	70 x 60	77.0 m and 83.0 m
		Radwaste Building	35.4 x 36.6	77.0 m and 83.0 m
		Control Building	34 x 60	77.0 m and 83.0 m
		Facility Annex	140 x 9	77.0 m and 83.0 m
Outside Containment Area	Dry Cask Storage Building		55 x 25	78.0 to 86.5
	Administrative Building		65 x 28	78.0 to 86.5

The proposed finished grade at the proposed structures is about Elevation 88 m. It is understood that the proposed structures are to be founded on raft foundations, excluding the administrative building which will be founded on shallow spread / strip footings.

It is understood that consideration is being given to sub-excavating the existing soils below the building footprints to about Elevation 80.0 m, and then re-engineering/conditioning the soils to be put back in place. The excavation for the reactor building, which is to extend into bedrock, will require the use of temporary protection systems such as a secant wall system with tie-back anchors.

8.2 Design Frost Penetration

Raft foundations, spread/strip footings, pile caps (if required), and site servicing should be provided with a minimum of 1.3 m of conventional soil cover for frost protection, in accordance with OPSD 3090.101 *(Foundation Frost Penetration Depths for Southern Ontario)*. If adequate soil cover cannot be provided, rigid polystyrene insulation could be installed to compensate for the lack of soil cover and provide protection from frost penetration.

8.3 Below Grade Walls

The design of permanent below-grade foundation walls for the reactor building should take into account the horizontal soil loads, potential hydrostatic pressure as well as surcharge loads that may occur during or after construction. Permanent below-grade foundation walls are considered to be rigid structures and should be designed to resist at-rest lateral earth pressures plus hydrostatic groundwater pressures, calculated as follows:

$$p = K_0 (\gamma h + q)$$

where:

- p = lateral earth pressure acting depth z, kPa
- K_0 = at rest earth pressure coefficient, use 0.5
- γ = unit weight of retained soil, a value of 21 kN/m^3 may be assumed
- h = depth to point of interest in soil, m
- q = equivalent value of surcharge on the ground surface, kPa

Hydrostatic pressures acting behind the walls should be included in calculating the lateral earth pressures unless the walls are designed to be permanently drained. Based on the primarily dense to very dense till soils at the site, a design groundwater level at Elevation 88.0 m is considered reasonable for design.

For all below grade walls, properly filtered perimeter drains leading to a frost-free permanent outlet or a direct outlet to a sewer line should be provided at the foundation level, unless the structure is fully waterproofed/sealed.

8.4 Site Grading and Fill Requirements

In general, the final site grading within the onshore power block area will be within +/- 2 m of the existing site grades. All topsoil, existing fill, organic soils, or other loose / soft / deleterious soils must be completely removed from within the zone of influence of the proposed foundations (taken as 1 m laterally outside the proposed foundations, then outward and downward at an inclination of 1 Horizontal to 1 Vertical). Site grading should be carried out in general accordance with OPSS 206 (*Grading*).

As noted in Section 8.1 above, it is understood that consideration is being given to sub-excavating the existing soils below the building footprints to about Elevation 80.0 m, and then re-engineering/conditioning the soils to be put back in place. Should this be the preferred design option, once excavated, the exposed subgrade should be inspected by qualified geotechnical personnel and proof-rolled (where feasible), in general accordance with OPSS 902 (*Excavating and Backfilling – Structures)*. Any softened/loosened or poorly performing areas of the subgrade soils should be sub-excavated and replaced with engineered fill as directed by qualified geotechnical personnel.

The anticipated soils to be sub-excavated from within the foundations zone of influence include topsoil / fill, surficial glaciolacustrine deposits comprised of sandy lean clay to lean clay, silty clayey sand to silty sand / sandy silt, and till, as shown on Figure 4. It is understood that the re-engineering of the sub-excavated soils is to be designed by others. The environmental suitability of the sub-excavated soils should also be considered.

In the absence of a detailed design, it is not possible to provide a comprehensive appraisal of suitable ground improvement options that may be available to facilitate foundation construction at the site. As such, the following is presented for information only.

Based on the expected extent of the structure footprint and the groundwater conditions at the site, it is considered that full excavation, soil conditioning/amendment and total replacement by the improved material is likely not a viable option at the site. In addition to the large footprint required to manage this option, water management, shoring requirements and other aspects would need to be considered. As such, it is our recommendation not to disturb the competent till strata through excavation at this time. More feasible options include either a piled solution or an in situ approach for reconditioning / stabilizing soil to provide a competent foundation base. While installation of a deep piled solution has the potential to provide better performance than an enhanced soil approach, it is understood that financial considerations may render this prohibitive.

Options that are available for ground improvement to support foundation design should take into consideration guidance outlined in *International Atomic Energy Agency (IAEA) Safety Guide No. NS-G-3.6 - Geotechnical Aspects of Site Evaluation and Foundations for Nuclear Power Plants*, and may include modification of the mechanical behaviour of the foundation material (such as by soil compaction) or the use of an added material to improve the static and/or dynamic soil behaviour. Soil densification, solidification by cement or permanent dewatering are options that can be considered. One approach that may be applicable to enhance the engineering properties of soils, is the use of Cutter Soil Mixing (CSM) to mechanically mix the in situ soils with a binder slurry, typically comprising cement. CSM is a specialized deep mixing technique that can be utilized in almost any soil

type to create strengthened and stiffened soilcrete elements, with typical panel depths in the order of 25 to 35 m. The process is typically contingent on soil type, strength, water content, plasticity, and texture.

As outlined in IAEA Safety Guide No. NS-G-3.6, in order to fully determine requirements for improvement of soil conditions, in addition to the work already completed by Golder to determine the existing in situ profile, and following selection of an appropriate technology by which improvements in the foundation soils are to be made, the following tasks should be performed:

- Determination of the required profile for foundation material;
- Carrying out a field testing programme to verify the effectiveness of the proposed ground improvement methods;
- Once approach is verified, preparation of performance-based specifications for field operations;
- At the completion of the improvement programme, carrying out an investigation to determine whether the specifications were met; and
- Incorporation of any improvement in foundation material into the design profiles used in the assessments.

Ultimately, the requirement for ground improvement and / or soil reconditioning will be based on the final foundation design.

8.5 Temporary Excavations

The anticipated soils to be excavated at the site include topsoil / fill, glaciolacustrine deposits comprised of sandy lean clay to lean clay, silty clayey sand to silty sand / sandy silt, till, as shown on Figure 4. Further, excavations for the reactor building will extend into bedrock of the Blue Mountain formation and Lindsay formation. Temporary excavations should be observed and reviewed during construction to confirm that the soil, bedrock, and groundwater conditions are as anticipated.

The excavations should be carried out in accordance with the guidelines outlined in the Occupational Health and Safety Act (OHSA) for Construction Activities (Ontario Regulation 213). The existing topsoil / fill and surficial glaciolacustrine deposits are classified as Type 3 soils above the groundwater level and Type 4 soils below the groundwater level. The upper till deposit is classified as a Type 2 soil above the groundwater level and a Type 3 soil below the groundwater level. According to the OHSA, temporary excavations within Type 2 and 3 soils should be made with side slopes inclined at 1H:1V or flatter and temporary excavations within Type 4 soils should be made with side slopes inclined at 3H:1V or flatter. Depending on the time of year and, based on the variable nature of fill and native soils, localized flattening of temporary excavations may be required in some areas during construction.

Temporary shaft excavations extending into the bedrock may be carried out with vertical sidewalls. However, the competency of the bedrock to stand vertically will need to be assessed on site during excavation and will need to be monitored on a continual basis. The highly to moderately weathered bedrock may require shotcrete to ensure stability and to protect the rock from ravelling. The slightly weathered to fresh bedrock can be supported with pattern rock bolts and wire mesh or shotcrete. Drain holes installed on a regular pattern should be provided if a shotcrete facing is installed to protect the bedrock.

Excavated material must be stockpiled at a distance away from the excavation equal to or greater than the depth of the open cut excavation. Where sufficient space is not available to stockpile the excavated material at the site, off-site staging of the excavated material intended for reuse would need to be arranged. Care must also be taken

during excavation to ensure that adequate support is provided for any existing structures, roadways and underground services located adjacent to the excavations.

The temporary excavations should be carried out in general accordance with OPSS.PROV 902 (*Excavating and Backfilling - Structures*).

8.6 Temporary Protection Systems

To facilitate construction of the reactor building, which is to be founded on bedrock, and where the side slopes of excavations are required to be steepened to limit the extent of the excavation, some form of temporary excavation support will be required. The selection and design of the temporary protection system will be the responsibility of the contractor. Secant piles, diaphragm walls, or soldier pile and lagging systems are considered feasible at this site. However, we would note that soldier pile and lagging systems do not provide a groundwater cut-off and extensive groundwater control methods would be required. The secant piles or soldier piles would have to be advanced/driven to sufficient depth to provide the necessary passive resistance for the retained soil height, including any surcharge loads behind the protection system within at least a 1H:1V zone relative to the base of the excavation. Lateral support to the secant piles or soldier piles could be provided in the form of struts, rakers and/or tie back anchors.

If conventional solider pile and lagging, secant walls or diaphragm walls are considered as temporary support systems in the overburden for the circular shafts, then, difficulties penetrating through the till soils should be anticipated given that cobbles and boulders are known to be present in such glacial till soils in this region and were encountered throughout the drilling operations at this site. Groundwater seepage will also need to be considered and it is recommended that a watertight protection system be used to control and reduce impacts to the surrounding groundwater level.

The temporary protection system should be designed and constructed in accordance with OPSS.PROV 539 (*Temporary Protection Systems*).

The system must be designed to accommodate the loads applied from earth pressures, water pressures and surcharge pressures from area, line or point loads, as well as the effects of sloping ground behind the system. The loading from construction equipment as well as any material stockpiles within a distance defined by a 1 horizontal to 1 vertical line drawn from the bottom of the excavation to the existing ground surface should be included as a surcharge in the design of the temporary protection system.

8.7 Groundwater and Surface Water Control

Considering sub-excavation within the power block area (excluding the reactor building) will extend to about Elevation 80 m and the groundwater level within the power block area was measured to be up to about Elevation 90 m, it is anticipated that excavations will extend up to about 8 m below the groundwater level. Therefore, dewatering will be required to allow for construction (i.e., excavations, placement of engineered fill and compaction) in dry conditions, or a groundwater cut-off system employed.

Although dewatering operations are considered temporary works and therefore the responsibility of the Contractor, it is anticipated that proactive dewatering in the form of well points or eductor systems to lower the groundwater level to about 1 m below the base of subexcavation will be required prior to excavation / subexcavation operations. Dewatering operations should be carried out in accordance with OPSS.PROV 902 *(Excavation and Backfilling – Structures),* and OPSS.PROV 517 (*Dewatering*).

Water takings in excess of 50,000 L/day are regulated by the Ministry of the Environment, Conservation and Parks (MECP). Certain takings of groundwater and stormwater for construction dewatering purposes with a combined total less than 400,000 L/day qualify for self-registration on the MECP's Environmental Activity and Sector Registry (EASR). Registration on the EASR replaces the need to obtain a Permit to Take Water (PTTW) for water taking and a Section 53 approval for discharge of water to the environment. A "Water Taking Plan" and a "Discharge Plan" are required by the MECP if water is taken in accordance with an EASR. In all cases, discharge must be in accordance with a Discharge Plan (to be developed by a qualified professional). The Contractor is typically responsible for obtaining any required discharge approvals and EASR registration. A Category 3 PTTW would be required for water takings in excess of 400,000 L/day.

Surface water should be directed away from the excavations at all times. Any existing drainage paths / ditches will need to be diverted around the proposed excavation footprint to reduce surface infiltration / seepage.

8.8 Corrosion Potential

Selected soil samples from boreholes BH3, BH51, BH62, and BH78 were submitted to AGAT Laboratories (AGAT) for basic chemical analysis related to potential sulphate attack on buried concrete elements. The concentration of sulphate provides an indication of the degree of sulphate attack that is expected for concrete in contact with soil and groundwater at the site. The sulphate results were compared with Table 3 of Canadian Standards Association Standard A23.1-19 (CSA A23.1) and generally indicate a low degree of sulphate attack potential on concrete structures at of the locations of all tested samples. Therefore, concrete made with Type GU Portland cement is considered acceptable for all substructures.

Selected soil samples from boreholes BH3, BH51, BH62, and BH78 were also submitted to AGAT for basic chemical analysis related to potential corrosion of buried ferrous elements. The pH, resistivity and chloride concentrations provide an indication of the degree of corrosiveness of the subsurface environment. Generally, the results indicate a high potential for corrosion of exposed ferrous metal within the study area, which should be taken into consideration in the design of substructures.

8.9 Inspections and Monitoring

During construction, full time inspections and in-situ materials testing should be carried out by Golder to confirm that the conditions exposed are consistent with those encountered in the boreholes and to monitor conformance to the pertinent project specifications. Materials testing should be carried out in CCIL and CSA certified laboratories, respectively.

IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

Standard of Care: Golder Associates Ltd. (Golder) has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the engineering and science professions currently practising under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed or implied is made.

Basis and Use of the Report: This report has been prepared for the specific site, design objective, development and purpose described to Golder by the Client. The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location. Any change of site conditions, purpose, development plans or if the project is not initiated within eighteen months of the date of the report may alter the validity of the report. Golder cannot be responsible for use of this report, or portions thereof, unless Golder is requested to review and, if necessary, revise the report.

The information, recommendations and opinions expressed in this report are for the sole benefit of the Client. No other party may use or rely on this report or any portion thereof without Golder's express written consent. If the report was prepared to be included for a specific permit application process, then upon the reasonable request of the client, Golder may authorize in writing the use of this report by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process. Any other use of this report by others is prohibited and is without responsibility to Golder. The report, all plans, data, drawings and other documents as well as all electronic media prepared by Golder are considered its professional work product and shall remain the copyright property of Golder, who authorizes only the Client and Approved Users to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. The Client and Approved Users may not give, lend, sell, or otherwise make available the report or any portion thereof to any other party without the express written permission of Golder. The Client acknowledges that electronic media is susceptible to unauthorized modification, deterioration and incompatibility and therefore the Client can not rely upon the electronic media versions of Golder's report or other work products.

The report is of a summary nature and is not intended to stand alone without reference to the instructions given to Golder by the Client, communications between Golder and the Client, and to any other reports prepared by Golder for the Client relative to the specific site described in the report. In order to properly understand the suggestions, recommendations and opinions expressed in this report, reference must be made to the whole of the report. Golder can not be responsible for use of portions of the report without reference to the entire report.

Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the Client in the design of the specific project. The extent and detail of investigations, including the number of test holes, necessary to determine all of the relevant conditions which may affect construction costs would normally be greater than has been carried out for design purposes. Contractors bidding on, or undertaking the work, should rely on their own investigations, as well as their own interpretations of the factual data presented in the report, as to how subsurface conditions may affect their work, including but not limited to proposed construction techniques, schedule, safety and equipment capabilities.

Soil, Rock and Ground Water Conditions: Classification and identification of soils, rocks, and geologic units have been based on commonly accepted methods employed in the practice of geotechnical engineering and related disciplines. Classification and identification of the type and condition of these materials or units involves judgment, and boundaries between different soil, rock or geologic types or units may be transitional rather than abrupt. Accordingly, Golder does not warrant or guarantee the exactness of the descriptions.

Special risks occur whenever engineering or related disciplines are applied to identify subsurface conditions and even a comprehensive investigation, sampling and testing program may fail to detect all or certain subsurface conditions. The environmental, geologic, geotechnical, geochemical and hydrogeologic conditions that Golder interprets to exist between and beyond sampling points may differ from those that actually exist. In addition to soil variability, fill of variable physical and chemical composition can be present over portions of the site or on adjacent properties. The professional services retained for this project include only the geotechnical aspects of the subsurface conditions at the site, unless otherwise specifically stated and identified in the report. The presence or implication(s) of possible surface and/or subsurface contamination resulting from previous activities or uses of the site and/or resulting from the introduction onto the site of materials from off-site sources are outside the terms of reference for this project and have not been investigated or addressed.

Soil and groundwater conditions shown in the factual data and described in the report are the observed conditions at the time of their determination or measurement. Unless otherwise noted, those conditions form the basis of the recommendations in the report. Groundwater conditions may vary between and beyond reported locations and can be affected by annual, seasonal and meteorological conditions. The condition of the soil, rock and groundwater may be significantly altered by construction activities (traffic, excavation, groundwater level lowering, pile driving, blasting, etc.) on the site or on adjacent sites. Excavation may expose the soils to changes due to wetting, drying or frost. Unless otherwise indicated the soil must be protected from these changes during construction.

Sample Disposal: Golder will dispose of all uncontaminated soil and/or rock samples 90 days following issue of this report or, upon written request of the Client, will store uncontaminated samples and materials at the Client's expense. In the event that actual contaminated soils, fills or groundwater are encountered or are inferred to be present, all contaminated samples shall remain the property and responsibility of the Client for proper disposal.

Follow-Up and Construction Services: All details of the design were not known at the time of submission of Golder's report. Golder should be retained to review the final design, project plans and documents prior to construction, to confirm that they are consistent with the intent of Golder's report.

During construction, Golder should be retained to perform sufficient and timely observations of encountered conditions to confirm and document that the subsurface conditions do not materially differ from those interpreted conditions considered in the preparation of Golder's report and to confirm and document that construction activities do not adversely affect the suggestions, recommendations and opinions contained in Golder's report. Adequate field review, observation and testing during construction are necessary for Golder to be able to provide letters of assurance, in accordance with the requirements of many regulatory authorities. In cases where this recommendation is not followed, Golder's responsibility is limited to interpreting accurately the information encountered at the borehole locations, at the time of their initial determination or measurement during the preparation of the Report.

Changed Conditions and Drainage: Where conditions encountered at the site differ significantly from those anticipated in this report, either due to natural variability of subsurface conditions or construction activities, it is a condition of this report that Golder be notified of any changes and be provided with an opportunity to review or revise the recommendations within this report. Recognition of changed soil and rock conditions requires experience and it is recommended that Golder be employed to visit the site with sufficient frequency to detect if conditions have changed significantly.

Drainage of subsurface water is commonly required either for temporary or permanent installations for the project. Improper design or construction of drainage or dewatering can have serious consequences. Golder takes no responsibility for the effects of drainage unless specifically involved in the detailed design and construction monitoring of the system.

Signature Page

Golder Associates Ltd.



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Senior Geotechnical Engineer

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Principal Senior Rock Mechanics Engineer

SLB/SEMP/MAS/ljv

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LEGEND

- BOREHOLE LOCATION[2]
- MONITORING WELL (SINGLE WELL)
- MONITORING WELL (NEST OF THREE WELLS)
- CONE PENETRATION TEST (CPT)
- SONIC DRILLING
- EXISTING MONITORING WELL (WATER QUALITY SAMPLING)
- PLAN
- CONTOUR - 1 METRE INTERVAL
- CROSS-SECTION
- PROPOSED NUCLEAR PLANT AND ANCILLARY BUILDINGS



0 50 100 150 200

1:3,000 METRES

NOTE(S)

1. LOCATIONS ARE APPROXIMATE.
2. BH83 NOT INCLUDED IN PHASE 1.
3. THE ELEVATIONS ARE REFERENCED TO GSC BENCHMARK NO. 0011910U178 HAVING AN ELEVATION OF 90.025M (REFERENCING CGVD 1928:1978).

REFERENCE(S)

1. BASE IMAGE - SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 CSRS COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
E.S. FOX LIMITED NUCLEAR SERVICES

PROJECT
GEOTECHNICAL INVESTIGATION (PHASE 1) - DARLINGTON NEW NUCLEAR PROJECT, BOWMANVILLE, ONTARIO

TITLE
SECTION LOCATION PLAN (PHASE 1)

CONSULTANT
wsp GOLDER

YYYY-MM-DD	2022-07-29
DESIGNED	CGE
PREPARED	CGE
REVIEWED	CK
APPROVED	---

PROJECT NO.	CONTROL	REV.	FIGURE
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LEGEND

- BOREHOLE LOCATION[2]
- MONITORING WELL (SINGLE WELL)
- MONITORING WELL (NEST OF THREE WELLS)
- CONE PENETRATION TEST (CPT)
- SONIC DRILLING
- EXISTING MONITORING WELL (WATER QUALITY SAMPLING)
- PLAN
- CONTOUR - 1 METRE INTERVAL
- CROSS-SECTION
- PROPOSED NUCLEAR PLANT AND ANCILLARY BUILDINGS



0 50 100 150 200

1:3,000 METRES

NOTE(S)

1. LOCATIONS ARE APPROXIMATE.
2. BH83 NOT INCLUDED IN PHASE 1.
3. THE ELEVATIONS ARE REFERENCED TO GSC BENCHMARK NO. 0011910U178 HAVING AN ELEVATION OF 90.025M (REFERENCING CGVD 1928:1978).

REFERENCE(S)

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SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 CSRS COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
E.S. FOX LIMITED NUCLEAR SERVICES

PROJECT
GEOTECHNICAL INVESTIGATION (PHASE 1) - DARLINGTON NEW NUCLEAR PROJECT, BOWMANVILLE, ONTARIO

TITLE
SECTION LOCATION PLAN (PHASE 1)

CONSULTANT
wsp GOLDER

YYYY-MM-DD	2022-07-29
DESIGNED	CGE
PREPARED	CGE
REVIEWED	CK
APPROVED	---

PROJECT NO.	CONTROL	REV.	FIGURE
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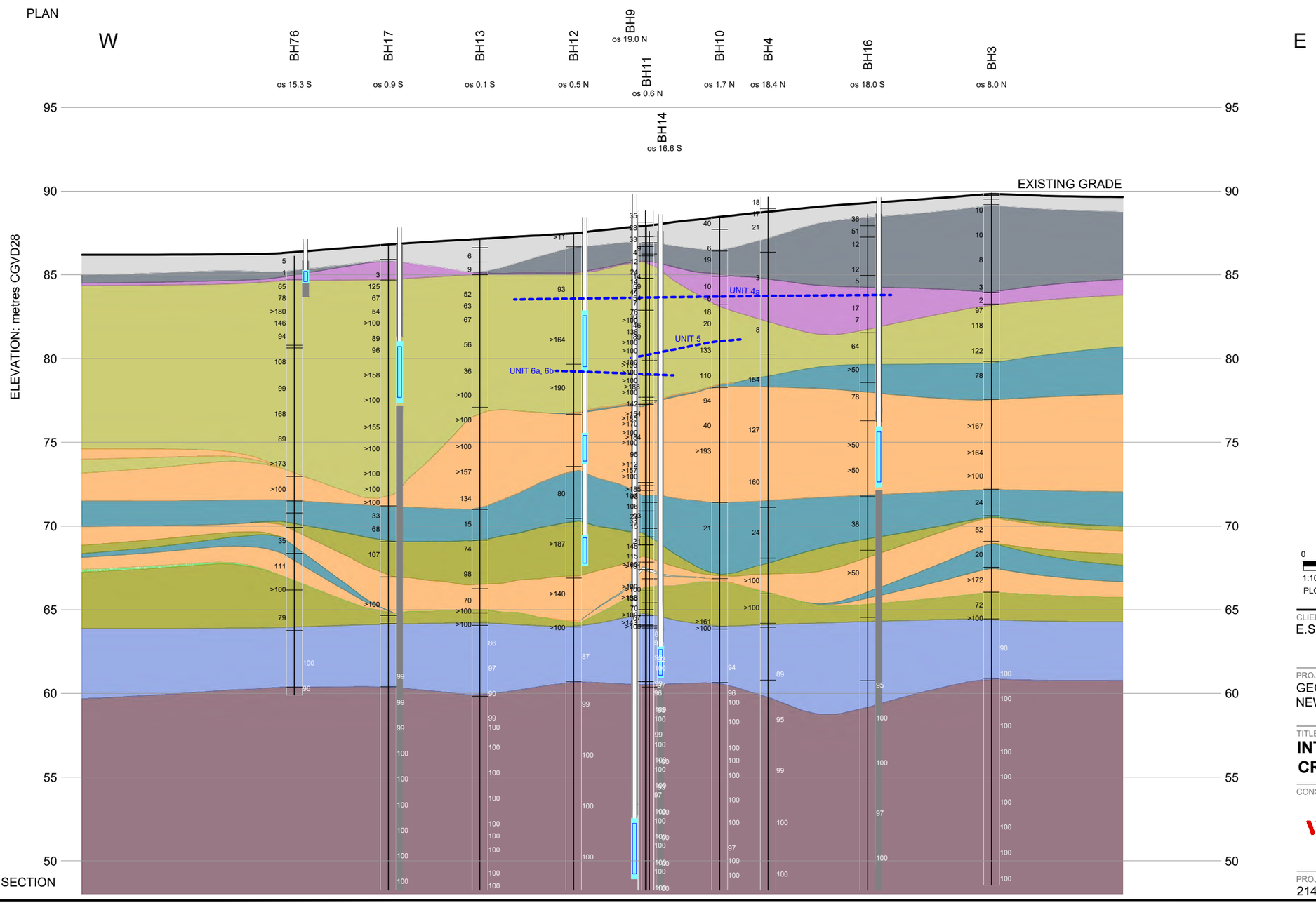
PLAN



UNIT 1
TOPSOIL / FILL

UNIT 2a
SURFICIAL GLACIOLACUSTRINE DEPOSITS
SANDY LEAN CLAY TO LEAN CLAY

UNIT 2b
SURFICIAL GLACIOLACUSTRINE DEPOSITS
SILTY CLAYEY SAND TO SILTY SAND/SANDY SILT

UNIT 3
UPPER TILL

UNIT 4a
INTERMEDIATE GLACIOLACUSTRINE DEPOSITS
SILTY SAND TO SANDY SILT

UNIT 4b
INTERMEDIATE GLACIOLACUSTRINE DEPOSITS
SANDY LEAN CLAY TO LEAN CLAY

UNIT 5
LOWER TILL

UNIT 6a
BLUE MOUNTAIN FORMATION
BEDROCK

UNIT 6b
LINDSAY FORMATION
BEDROCK

SECTION WELL SYMBOLS

BH1 BOREHOLE ID

RECORDED STATIC WATER LEVEL (5 JANUARY 2022)

PIEZOMETRIC SURFACE WITH UNIT ID

SCREEN

>167 N' VALUE (OVERBURDEN UNITS)

90 RQD (BEDROCK UNITS)

NOTES

TO BE READ IN CONJUNCTION WITH REPORTING WITHIN WHICH ILLUSTRATION IS BOUND.

BOUNDARIES BETWEEN SOIL AND ROCK STRATA REPRESENT A SIMPLIFIED STRATIGRAPHIC MODEL, INFERRED FROM THE RESULTS OF THE PHASE 1 GEOTECHNICAL INVESTIGATION.

THE UNITS DESCRIBED ARE GENERALIZED TO MATERIAL SOIL TYPES.

0 20 40 60 m

1:1000

PLOTTED 11X17" TABLOID

PROJECTION IS UTM NAD 83 ZONE 17

CLIENT
E.S. FOX LIMITED NUCLEAR SERVICES

PROJECT
GEOTECHNICAL INVESTIGATION (PHASE 1) - DARLINGTON NEW NUCLEAR PROJECT, BOWMANVILLE, ONTARIO

TITLE
INTERPRETED SUBSURFACE CROSS-SECTION 1-1'

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-07-29
DESIGNED	SYC
PREPARED	
REVIEWED	SB
APPROVED	SP

PROJECT NO.	CONTROL	REV.	FIGURE
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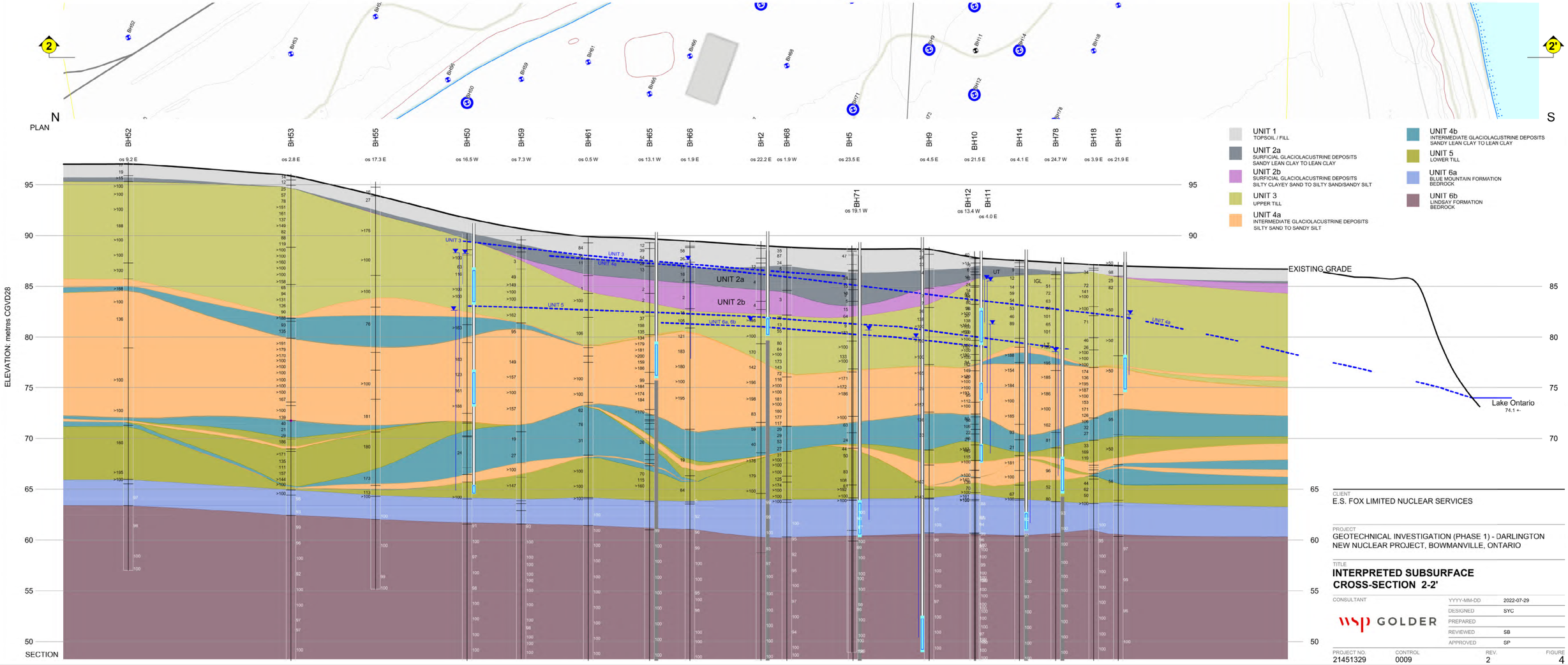


CLIENT
E.S. FOX LIMITED NUCLEAR SERVICES

PROJECT
GEOTECHNICAL INVESTIGATION (PHASE 1) - DARLINGTON NEW NUCLEAR PROJECT, BOWMANVILLE, ONTARIO

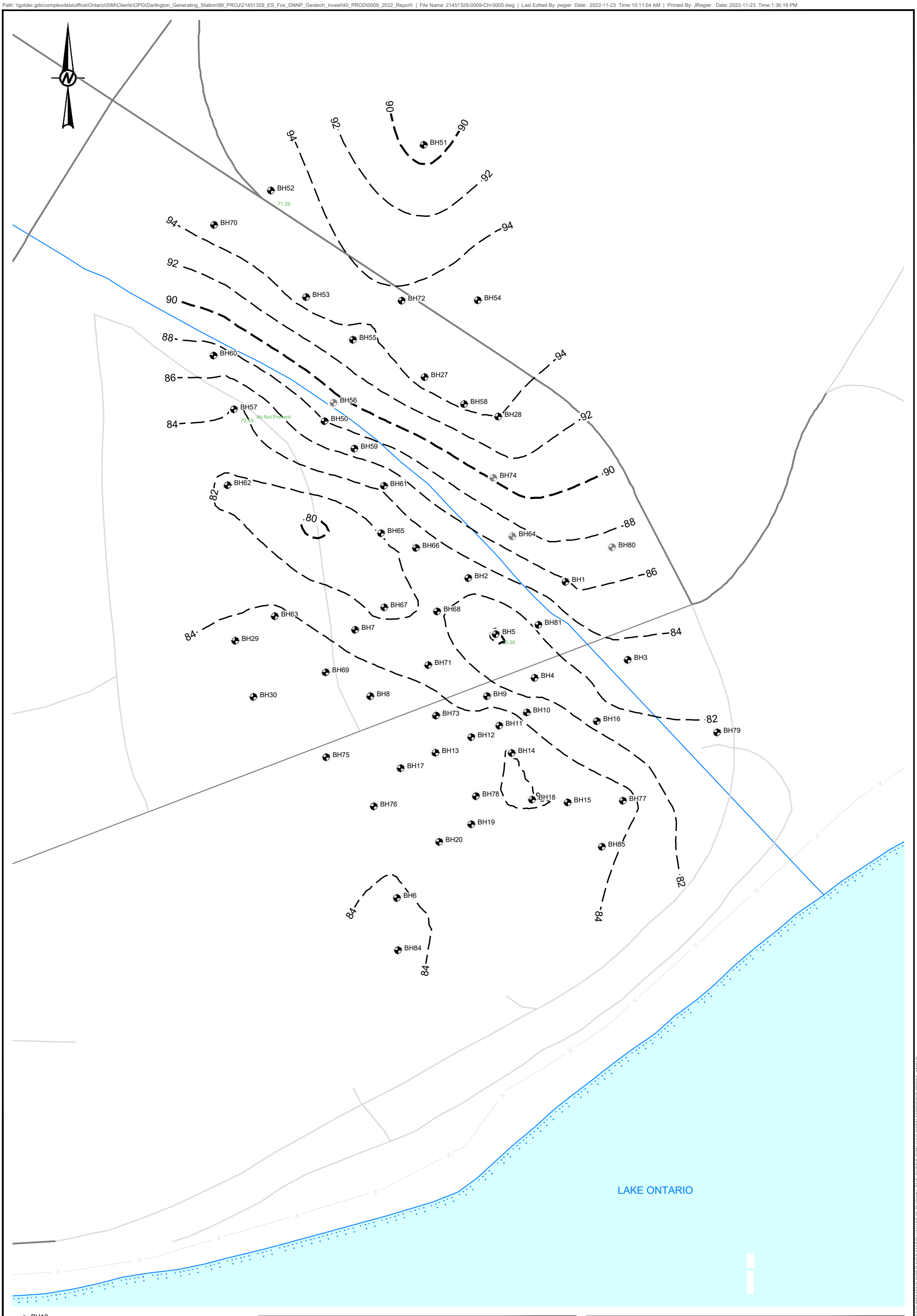
TITLE
INTERPRETED SUBSURFACE CROSS-SECTION 2-2'

CONSULTANT
GOLDER

YYYY-MM-DD	2022-07-29
DESIGNED	SYC
PREPARED	
REVIEWED	SB
APPROVED	SP

PROJECT NO.	CONTROL	REV.	FIGURE
21451329	0009	2	4

25 mm
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



BH12 BOREHOLE

TOP OF UPPER TILL (UNIT 3) CONTOUR (masl)

0 40 80 120 m

1:2000

PROJECTION IS UTM NAD 83 ZONE 17, (masl) ELEVATION CGVD 28

CLIENT
E.S. FOX LIMITED NUCLEAR SERVICES

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-07-29
DESIGNED	SYC
PREPARED	
REVIEWED	SB
APPROVED	SP

PROJECT
GEOTECHNICAL INVESTIGATION (PHASE 1) - DARLINGTON NEW NUCLEAR PROJECT, BOWMANVILLE, ONTARIO

TITLE
INTERPRETED TOP OF UPPER TILL (UNIT 3) ELEVATION CONTOURS

PROJECT NO.	CONTROL	REV.	FIGURE
21451329	0009	2	5

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25 mm
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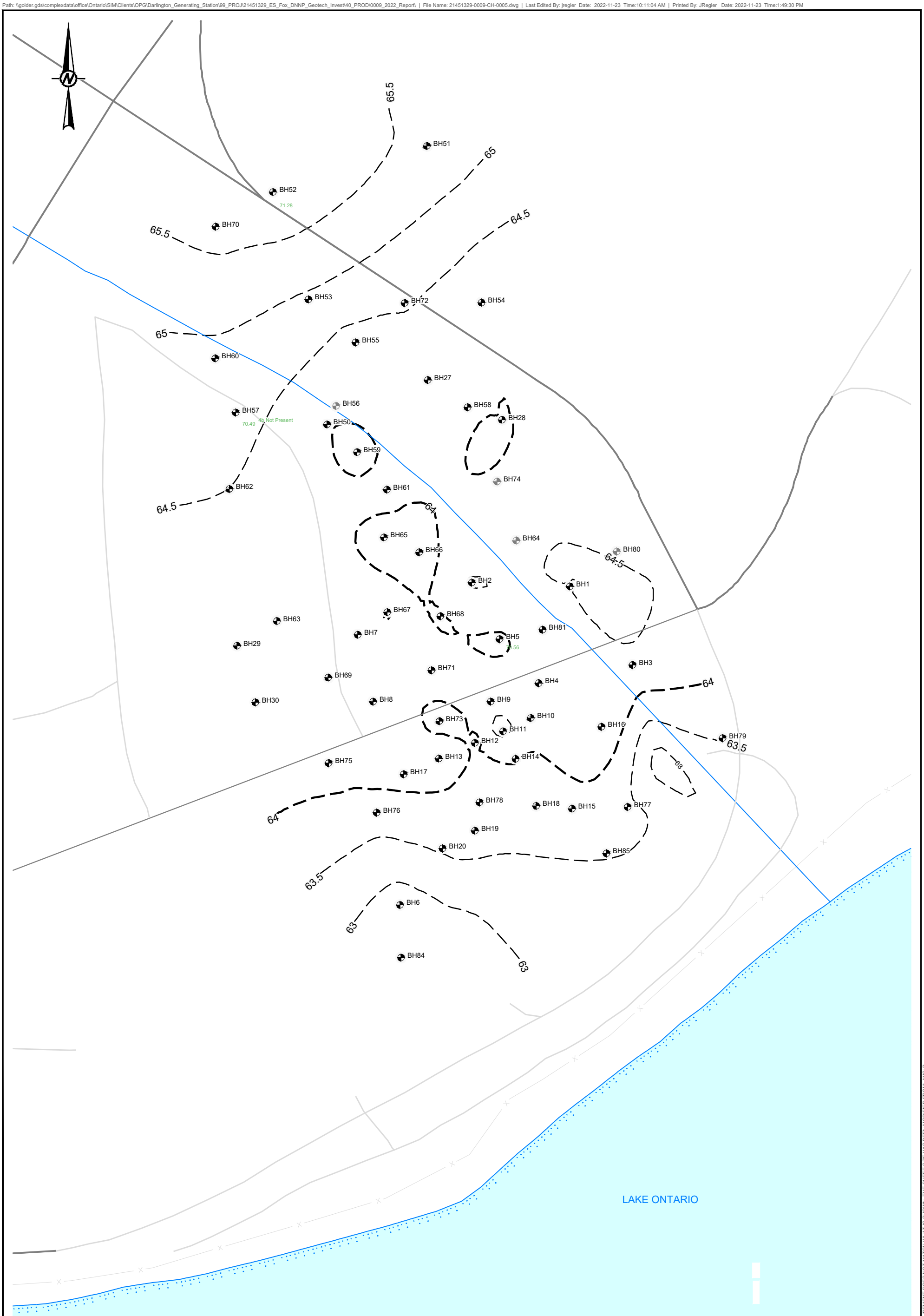

BH12 BOREHOLE

TOP OF BLUE MOUNTAIN FORMATION (masl)

0 40 80 120 m

1:2000

PROJECTION IS UTM NAD 83 ZONE 17, (masl) ELEVATION CGVD 28

CLIENT
E.S. FOX LIMITED NUCLEAR SERVICES

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-07-29
DESIGNED	SYC
PREPARED	
REVIEWED	SB
APPROVED	SP

PROJECT
GEOTECHNICAL INVESTIGATION (PHASE 1) - DARLINGTON NEW NUCLEAR PROJECT, BOWMANVILLE, ONTARIO

TITLE
INTERPRETED TOP OF BLUE MOUNTAIN FORMATION (UNIT 6a) ELEVATION CONTOURS

PROJECT NO.	CONTROL	REV.	FIGURE
21451329	0009	2	6

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
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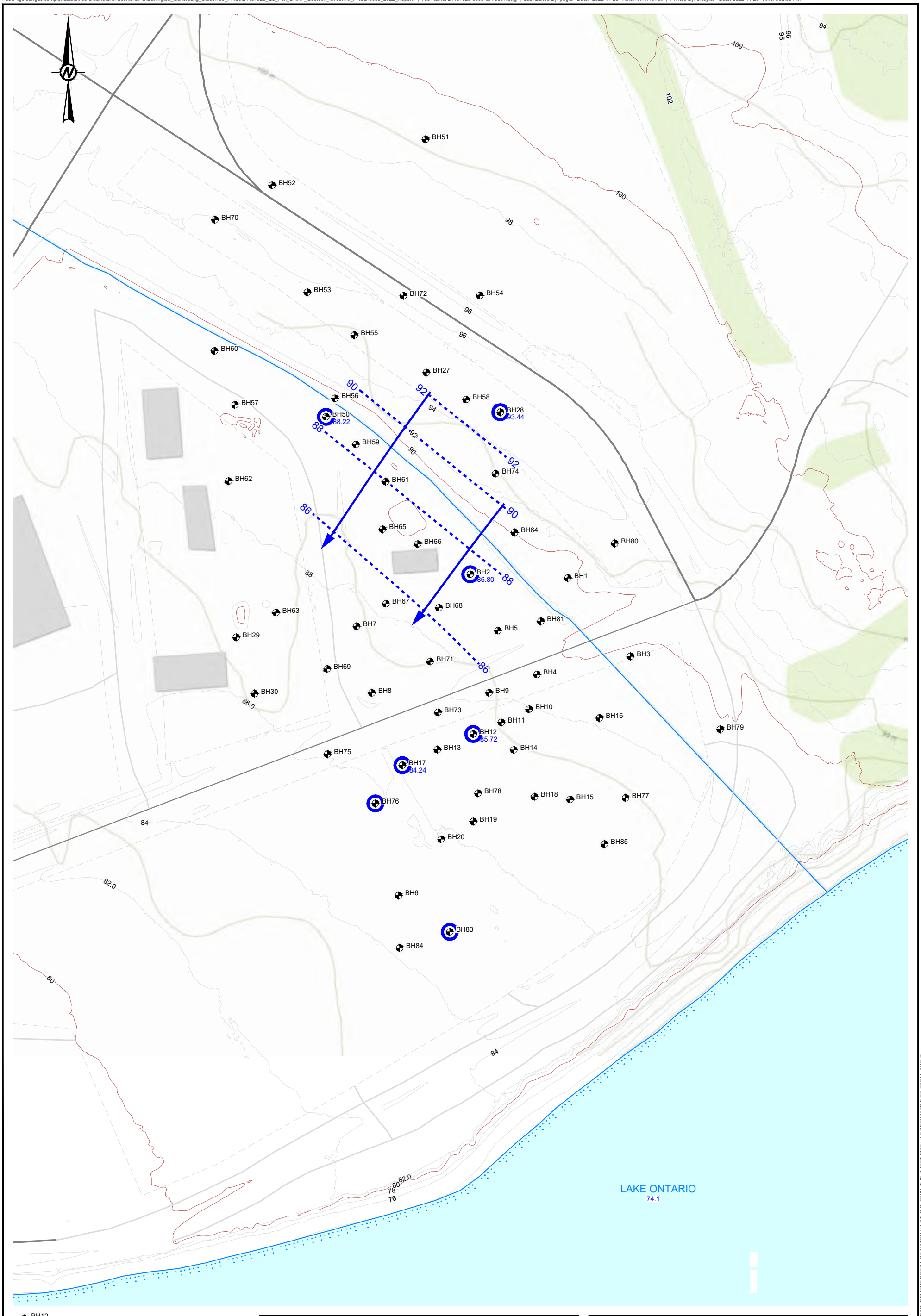

BH12 BOREHOLE

BH12 UPPER TILL MONITORING WELL

89.75 STATIC WATER LEVEL, JANUARY 5, 2022

UPPER TILL (UNIT 3) GROUNDWATER CONTOUR (masl)

INFERRED DIRECTION OF GROUNDWATER FLOW

0 40 80 120 m

1:2000

PROJECTION IS UTM NAD 83 ZONE 17, (masl) ELEVATION CGVD 28

CLIENT
E.S. FOX LIMITED NUCLEAR SERVICES

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-07-29
DESIGNED	SYC
PREPARED	
REVIEWED	SB
APPROVED	SP

PROJECT
GEOTECHNICAL INVESTIGATION (PHASE 1) - DARLINGTON NEW NUCLEAR PROJECT, BOWMANVILLE, ONTARIO

TITLE
UNIT 3 / WATER TABLE GROUNDWATER FLOW 5 JANUARY 2022

PROJECT NO.	CONTROL	REV.	FIGURE
21451329	0009	2	7

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

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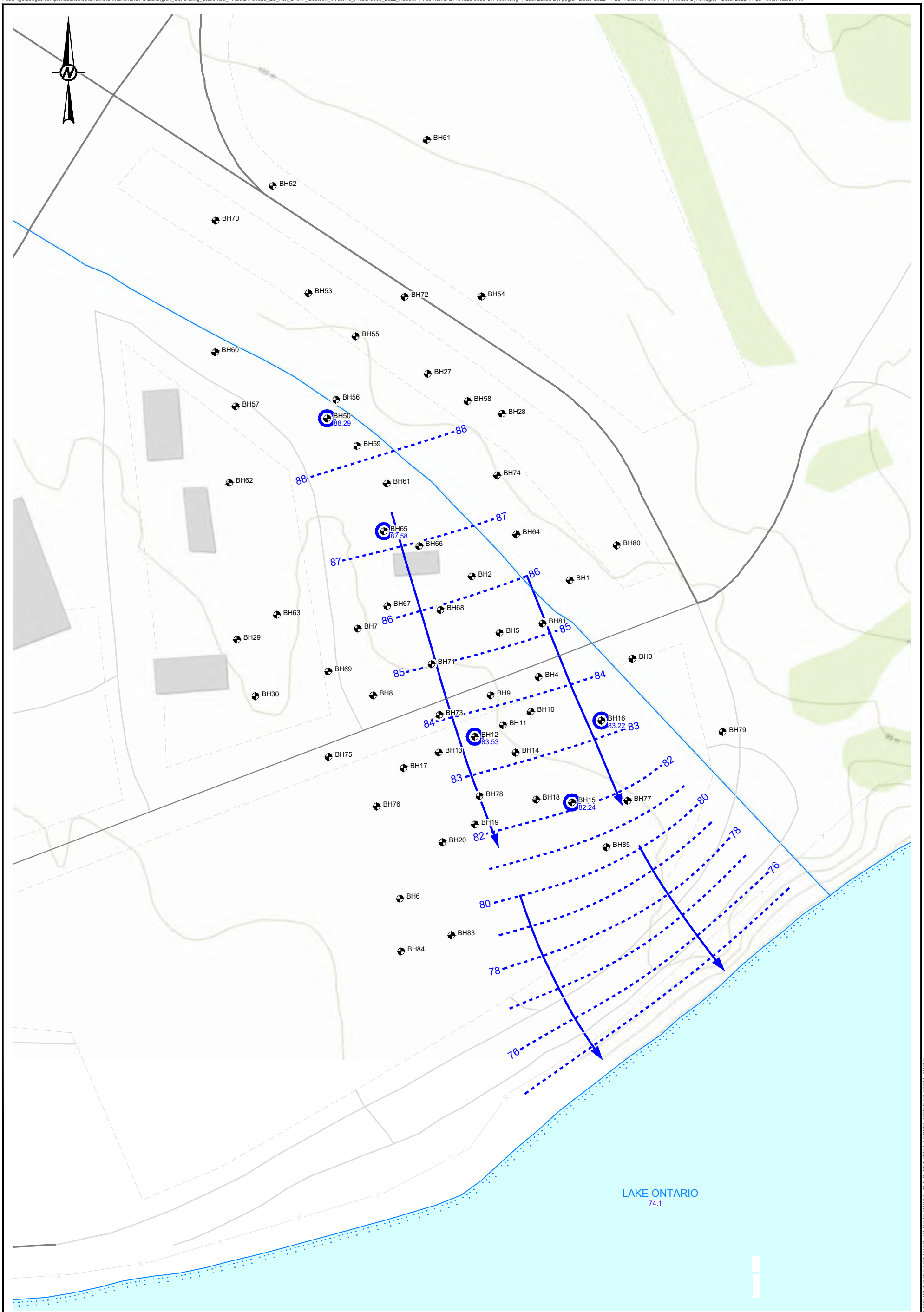

BH12 BOREHOLE

BH12 INTERMEDIATE GLACIAL LOCUSTRINE MONITORING WELL

89.75 STATIC WATER LEVEL, JANUARY 5th, 2022

IGL (UNIT 4a) GROUNDWATER CONTOUR (masl)

INFERRED DIRECTION OF GROUNDWATER FLOW

0 40 80 120 m

1:2000

PROJECTION IS UTM NAD 83 ZONE 17, (masl) ELEVATION CGVD 28

CLIENT
E.S. FOX LIMITED NUCLEAR SERVICES

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-07-29
DESIGNED	SYC
PREPARED	
REVIEWED	SB
APPROVED	SP

PROJECT
GEOTECHNICAL INVESTIGATION (PHASE 1) - DARLINGTON NEW NUCLEAR PROJECT, BOWMANVILLE, ONTARIO

TITLE
UNIT 4a GROUNDWATER FLOW 5 JANUARY 2022

PROJECT NO.	CONTROL	REV.	FIGURE
21451329	0009	2	8

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25 mm
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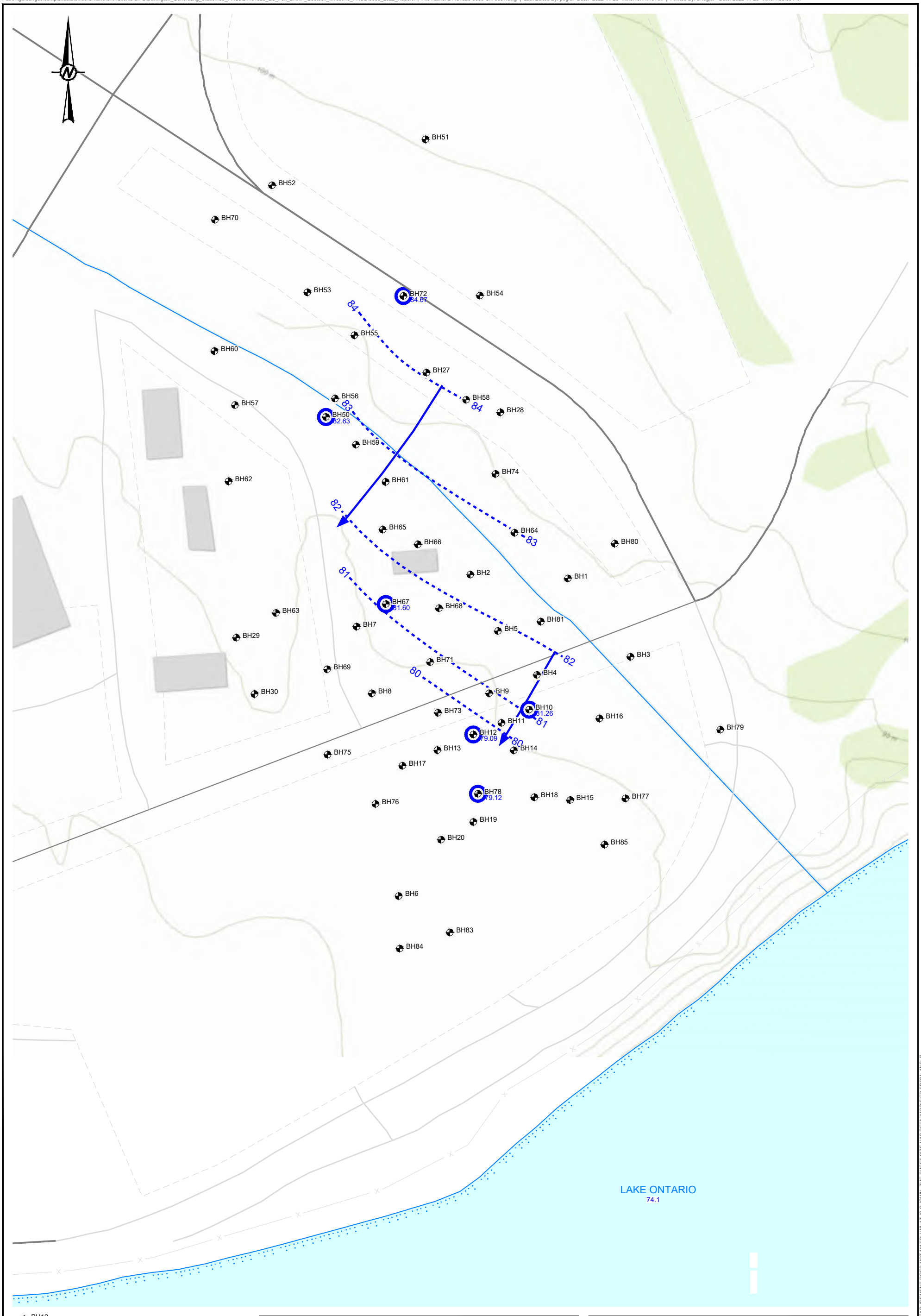


BH12 BOREHOLE

BH12 LOWER TILL MONITORING WELL

89.75 STATIC WATER LEVEL, JANUARY 5th, 2022

LOWER TILL (UNIT 5) GROUNDWATER CONTOUR (masl)

INFERRED DIRECTION OF GROUNDWATER FLOW

0 40 80 120 m

1:2000

PROJECTION IS UTM NAD 83 ZONE 17, (masl) ELEVATION CGVD 28

CLIENT
E.S. FOX LIMITED NUCLEAR SERVICES

CONSULTANT
WSP GOLDER

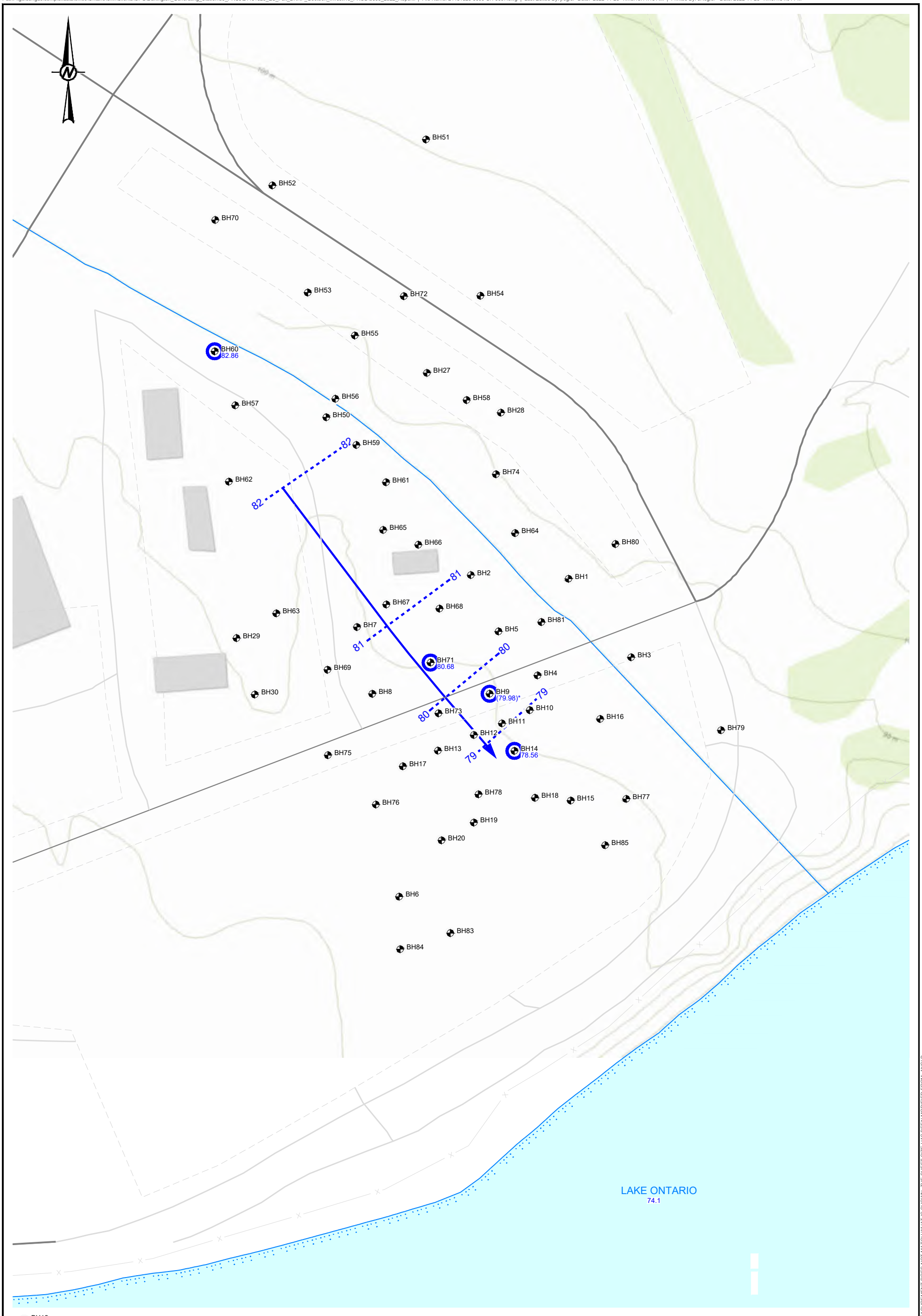
YYYY-MM-DD	2022-07-29
DESIGNED	SYC
PREPARED	
REVIEWED	SB
APPROVED	SP

PROJECT
GEOTECHNICAL INVESTIGATION (PHASE 1) - DARLINGTON NEW NUCLEAR PROJECT, BOWMANVILLE, ONTARIO

TITLE
UNIT 5 GROUNDWATER FLOW 5 JANUARY 2022

PROJECT NO.	CONTROL	REV.	FIGURE
21451329	0009	2	9

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25 mm
0



BH12 BOREHOLE

BH12 BEDROCK MONITORING WELL

89.75 STATIC WATER LEVEL, JANUARY 5th, 2022

BEDROCK GROUNDWATER CONTOUR (masl)
* Deep Bedrock, not used for interpolation

INFERRED DIRECTION OF GROUNDWATER FLOW

0 40 80 120 m

1:2000

PROJECTION IS UTM NAD 83 ZONE 17, (masl) ELEVATION CGVD 28

CLIENT
E.S. FOX LIMITED NUCLEAR SERVICES

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-07-29
DESIGNED	SYC
PREPARED	
REVIEWED	SB
APPROVED	SP

PROJECT
GEOTECHNICAL INVESTIGATION (PHASE 1) - DARLINGTON NEW NUCLEAR PROJECT, BOWMANVILLE, ONTARIO

TITLE
UNITS 6a, 6b GROUNDWATER FLOW 5 JANUARY 2022

PROJECT NO.	CONTROL	REV.	FIGURE
21451329	0009	2	10

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

APPENDIX A

Symbols, Abbreviations and Terminology for Soil and Rock Description

LIST OF SYMBOLS

Unless otherwise stated, the symbols employed in the report are as follows:

I. GENERAL

π	3.1416
ln x	natural logarithm of x
$\log_{10}$	x or log x, logarithm of x to base 10
g	acceleration due to gravity
t	time

II. STRESS AND STRAIN

γ	shear strain
Δ	change in, e.g. in stress: $\Delta\sigma$
ε	linear strain
ε_v	volumetric strain
η	coefficient of viscosity
υ	Poisson's ratio
σ	total stress
σ'	effective stress ($\sigma' = \sigma - u$)
σ'_{vo}	initial effective overburden stress
$\sigma_1, \sigma_2, \sigma_3$	principal stress (major, intermediate, minor)
σ_{oct}	mean stress or octahedral stress $= (\sigma_1 + \sigma_2 + \sigma_3)/3$
τ	shear stress
u	porewater pressure
E	modulus of deformation
G	shear modulus of deformation
K	bulk modulus of compressibility

III. SOIL PROPERTIES

(a) Index Properties

$\rho(\gamma)$	bulk density (bulk unit weight)*
$\rho_d(\gamma_d)$	dry density (dry unit weight)
$\rho_w(\gamma_w)$	density (unit weight) of water
$\rho_s(\gamma_s)$	density (unit weight) of solid particles
γ'	unit weight of submerged soil ($\gamma' = \gamma - \gamma_w$)
D_R	relative density (specific gravity) of solid particles ($D_R = \rho_s / \rho_w$) (formerly G_s)
e	void ratio
n	porosity
S	degree of saturation

* Density symbol is ρ. Unit weight symbol is γ where $\gamma = \rho g$ (i.e. mass density multiplied by acceleration due to gravity)

(a) Index Properties (continued)

w	water content
w_l or LL	liquid limit
w_p or PL	plastic limit
I_p or PI	plasticity index = $(w_l - w_p)$
NP	non-plastic
w_s	shrinkage limit
I_L	liquidity index = $(w - w_p) / I_p$
I_C	consistency index = $(w_l - w) / I_p$
e_{max}	void ratio in loosest state
e_{min}	void ratio in densest state
I_D	density index = $(e_{max} - e) / (e_{max} - e_{min})$ (formerly relative density)

(b) Hydraulic Properties

h	hydraulic head or potential
q	rate of flow
v	velocity of flow
i	hydraulic gradient
k	hydraulic conductivity (coefficient of permeability)
j	seepage force per unit volume

(c) Consolidation (one-dimensional)

C_c	compression index (normally consolidated range)
C_r	recompression index (over-consolidated range)
C_s	swelling index
C_α	secondary compression index
m_v	coefficient of volume change
c_v	coefficient of consolidation (vertical direction)
c_h	coefficient of consolidation (horizontal direction)
T_v	time factor (vertical direction)
U	degree of consolidation
σ'_p	pre-consolidation stress
OCR	over-consolidation ratio = σ'_p / σ'_{vo}

(d) Shear Strength

τ_p, τ_r	peak and residual shear strength
ϕ'	effective angle of internal friction
δ	angle of interface friction
μ	coefficient of friction = tan δ
c'	effective cohesion
c_u, s_u	undrained shear strength ($\phi = 0$ analysis)
p	mean total stress $(\sigma_1 + \sigma_3)/2$
p′	mean effective stress $(\sigma'_1 + \sigma'_3)/2$
q	$(\sigma_1 - \sigma_3)/2$ or $(\sigma'_1 - \sigma'_3)/2$
q_u	compressive strength $(\sigma_1 - \sigma_3)$
S_t	sensitivity

Notes: 1 $\tau = c' + \sigma' \tan \phi'$

2 shear strength = (compressive strength)/2

LITHOLOGICAL AND GEOTECHNICAL ROCK DESCRIPTION TERMINOLOGY

BEDDING THICKNESS

Description	Bedding Plane Spacing
Very thickly bedded	Greater than 2 m
Thickly bedded	0.6 m to 2 m
Medium bedded	0.2 m to 0.6 m
Thinly bedded	60 mm to 0.2 m
Very thinly bedded	20 mm to 60 mm
Laminated	6 mm to 20 mm
Thinly laminated	Less than 6 mm

JOINT OR FOLIATION SPACING

Description	Spacing
Very wide	Greater than 3 m
Wide	1 m to 3 m
Moderately close	0.3 m to 1 m
Close	50 mm to 300 mm
Very close	Less than 50 mm

GRAIN SIZE

Term	Size*
Very Coarse Grained	Greater than 60 mm
Coarse Grained	2 mm to 60 mm
Medium Grained	60 microns to 2 mm
Fine Grained	2 microns to 60 microns
Very Fine Grained	Less than 2 microns

Note: * Grains greater than 60 microns diameter are visible to the naked eye.

CORE CONDITION

Total Core Recovery (TCR)

The percentage of solid drill core recovered regardless of quality or length, measured relative to the length of the total core run.

Solid Core Recovery (SCR)

The percentage of solid drill core, regardless of length, recovered at full diameter, measured relative to the length of the total core run.

Rock Quality Designation (RQD)

The percentage of solid drill core, greater than 100 mm length, recovered at full diameter, measured relative to the length of the total core run. RQD varied from 0% for completely broken core to 100% for core in solid sticks.

DISCONTINUITY DATA

Fracture Index

A count of the number of discontinuities (physical separations) in the rock core, including both naturally occurring fractures and mechanically induced breaks caused by drilling.

Dip with Respect to Core Axis

The angle of the discontinuity relative to the axis (length) of the core. In a vertical borehole a discontinuity with a 90° angle is horizontal.

Description and Notes

An abbreviation description of the discontinuities, whether naturally occurring separations such as fractures, bedding planes and foliation planes or mechanically induced features caused by drilling such as ground or shattered core and mechanically separated bedding or foliation surfaces. Additional information concerning the nature of fracture surfaces and infillings are also noted.

Abbreviations

JN	Joint	K	Slickensided
FLT	Fault	PO	Polished
SH	Shear	SM	Smooth
VN	Vein	RO	Rough
FR	Fracture	VR	Very Rough
BD	Bedding	SO	Staining Only
FO	Foliation	SA	Slightly Altered
CO	Contact	PC	Partially Coated
PL	Planar	CC	Completely Coated
CU	Curved	IN	Infilled
UN	Undulating	Cl	Clay
IR	Irregular	Sa	Sand
		Si	Silt

FIELD ESTIMATION OF ROCK STRENGTH

Grade	Description	Field Identification	Approx. Range of UCS (MPa)
R0	Extremely Weak Rock	Indented by thumbnail	0.25 - 1
R1	Very Weak Rock	Material can be peeled or shaped with a knife. Crumbles under firm blows from geological hammer.	1 - 5
R2	Weak Rock	Knife cuts material but too hard to shape into triaxial specimens or material can be peeled with a knife with difficulty. Shallow (<5mm) indentations made by firm blows from pick of a geological hammer.	5 - 25
R3	Moderately Strong Rock	Cannot be peeled or scraped with a knife. Hand held specimens can be fractured with single firm blow of geological hammer.	25 - 50
R4	Strong Rock	Handheld specimen requires more than one blow of geological hammer to fracture.	50 - 100
R5	Very Strong Rock	Handheld specimen requires many blows of geological hammer to fracture.	100 - 250
R6	Extremely Strong Rock	Specimen can only be chipped under repeated hammer blows, rings when hit.	> 250

Notes:

1) Handheld specimens should have height approximately 2 times the diameter.

2) Materials having a uniaxial compressive strength of less than approximately 0.5 MPa and cohesionless materials should be classified using soil classification systems.

3) Rocks with a uniaxial compressive strength below 25 MPa (i.e. below R2) are likely to yield highly ambiguous results under point load testing.

Reference:

Brown, 1981. "Suggested Methods for Rock Characterization Testing and Monitoring", International Society for Rock Mechanics.

Hoek, E., Kaiser, P.K., Bawden, W.F., 1995. "Support of Underground Excavations in Hard Rock", Balkema, Rotterdam.

FIELD ESTIMATION OF ROCK WEATHERING

Term	Symbol	Description	Discoloration Extent	Fracture Condition	Surface Characteristics
Residual soil	W6	All rock material is converted to soil. The mass structure and material fabric are destroyed. There is a large change in volume, but the soil has not been significantly transported.	Throughout	N/A	Resembles soil
Completely weathered	W5	100% of rock material is decomposed and/or disintegrated to soil. The original mass structure is still largely intact.	Throughout	Filled with alteration minerals	Resembles soil
Highly weathered	W4	More than 50% of the rock material is decomposed and/or disintegrated to a soil. Fresh or discoloured rock is present either as a discontinuous framework or as corestones.	Throughout	Filled with alteration minerals	Friable and possibly pitted
Moderately weathered	W3	Less than 50% of the rock material is decomposed and/or disintegrated to a soil. Fresh or discoloured rock is present either as a discontinuous framework or as corestones. Visible texture of the host rock still preserved. Surface planes are weathered (oxidized or carbonate filling) even when breaking the “intact rock”.	>20% of fracture spacing on both sides of fracture	Discoloured, may contain thick filling	Partial to complete discoloration, not friable except poorly cemented rocks
Slightly weathered	W2	Discoloration indicates weathering of rock material on discontinuity surfaces (usually oxidized). Less than 5% of rock mass altered.	<20% of fracture spacing on both sides of fracture	Discoloured, may contain thin filling	Partial discoloration
Fresh	W1	No visible sign of rock material weathering.	None	Closed or discoloured	Unchanged

Reference:

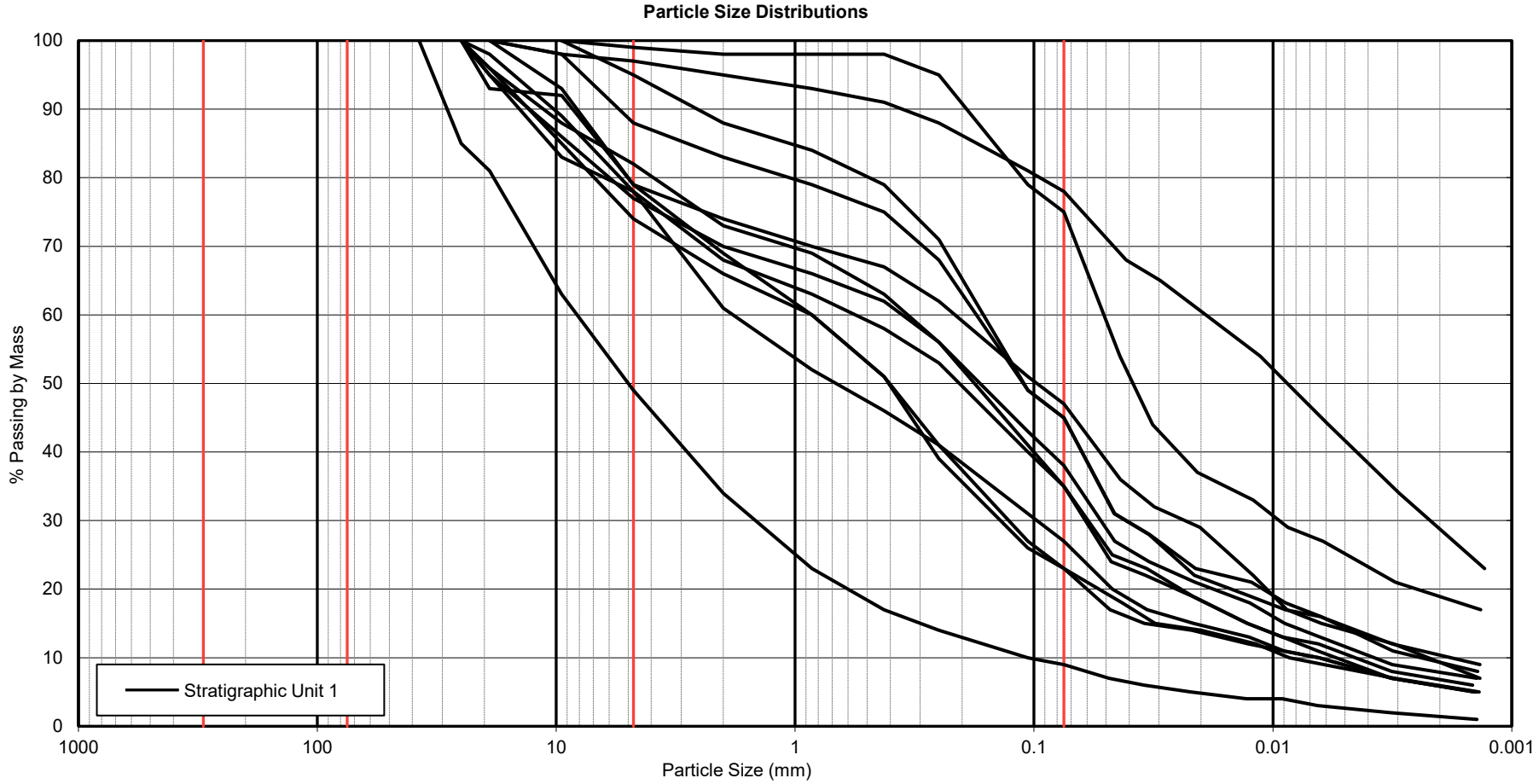
Brown, 1981. "Suggested Methods for Rock Characterization Testing and Monitoring", International Society for Rock Mechanics.

APPENDIX B

Particle Size Distributions and Atterberg Limits Charts, by Stratigraphic Unit

Particle Size Distributions
Stratigraphic Unit 1
Topsoil / Fill

Project No.:	21451329	**Testing Method(s):**	ASTM D6913 and ASTM D422 (Method B)
Project:	Onshore Geotechnical Investigation, Darlington DNNP	**Note(s):**	Particle size distributions for each tested sample are provided in Golder Report No. 21451329-001.
Client:	E.S. Fox Limited Nuclear Services		



BOULDERS	COBBLES	GRAVEL		SAND			FINES (Silt, Clay)
		Coarse	Fine	Coarse	Medium	Fine	

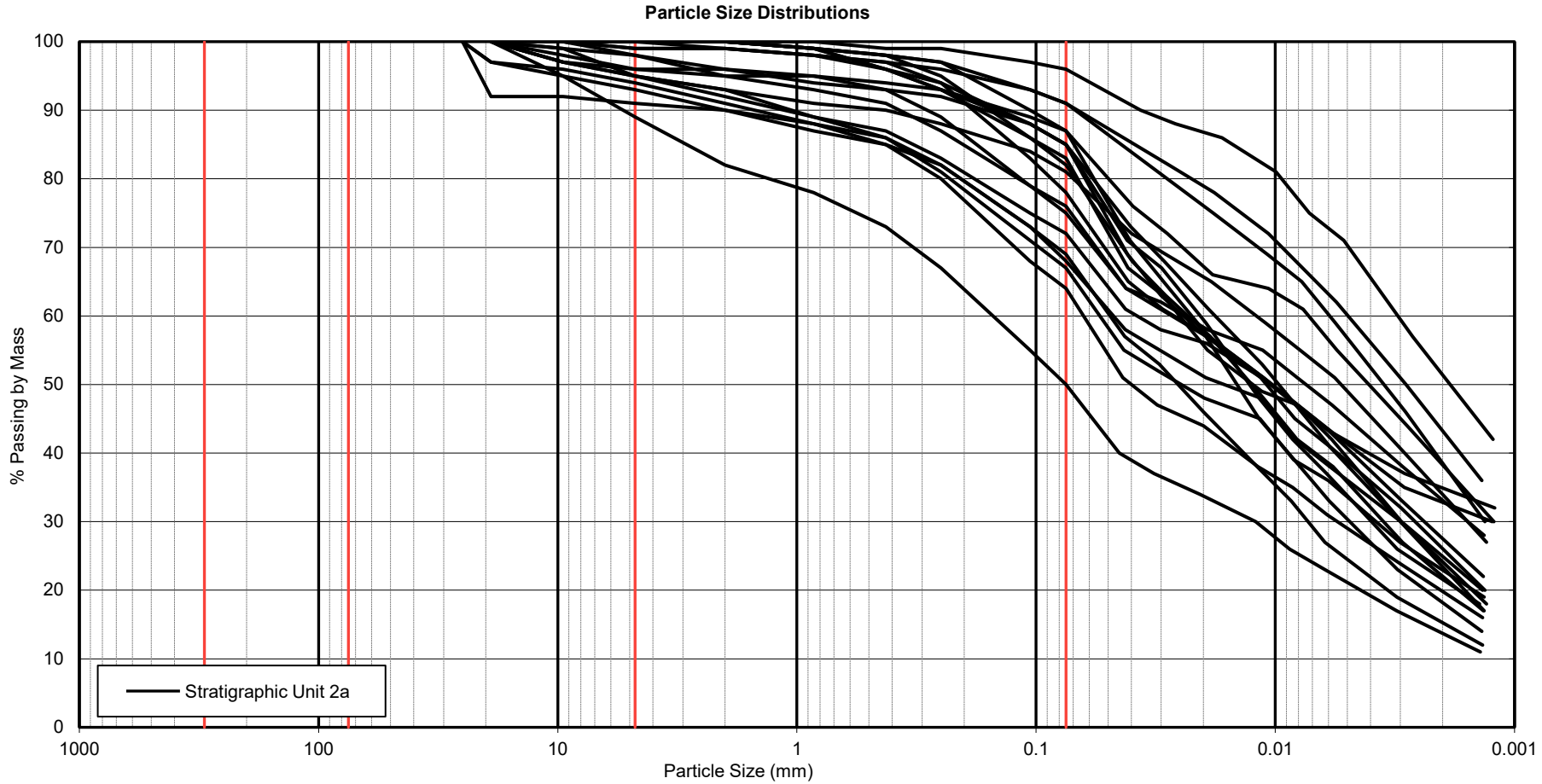
PREPARED BY: PAK DATE: 2022/03/25 CHECKED BY: KG DATE: 2022/04/06

Golder Associates Ltd.
100 Scotia Court, Whitby, ON, L1N 8Y6, Canada
Tel: 905-723-2727 www.golder.com

Particle Size Distributions
Stratigraphic Unit 2a

Surficial Glacio-Lacustrine Deposits - Sandy Lean Clay to Lean Clay

Project No.:	21451329	**Testing Method(s):**	ASTM D6913 and ASTM D422 (Method B)
Project:	Onshore Geotechnical Investigation, Darlington DNNP	**Note(s):**	Particle size distributions for each tested sample are provided in Golder Report No. 21451329-001.
Client:	E.S. Fox Limited Nuclear Services		



PREPARED BY: PAK DATE: 2022/03/25 CHECKED BY: KG DATE: 2022/04/06

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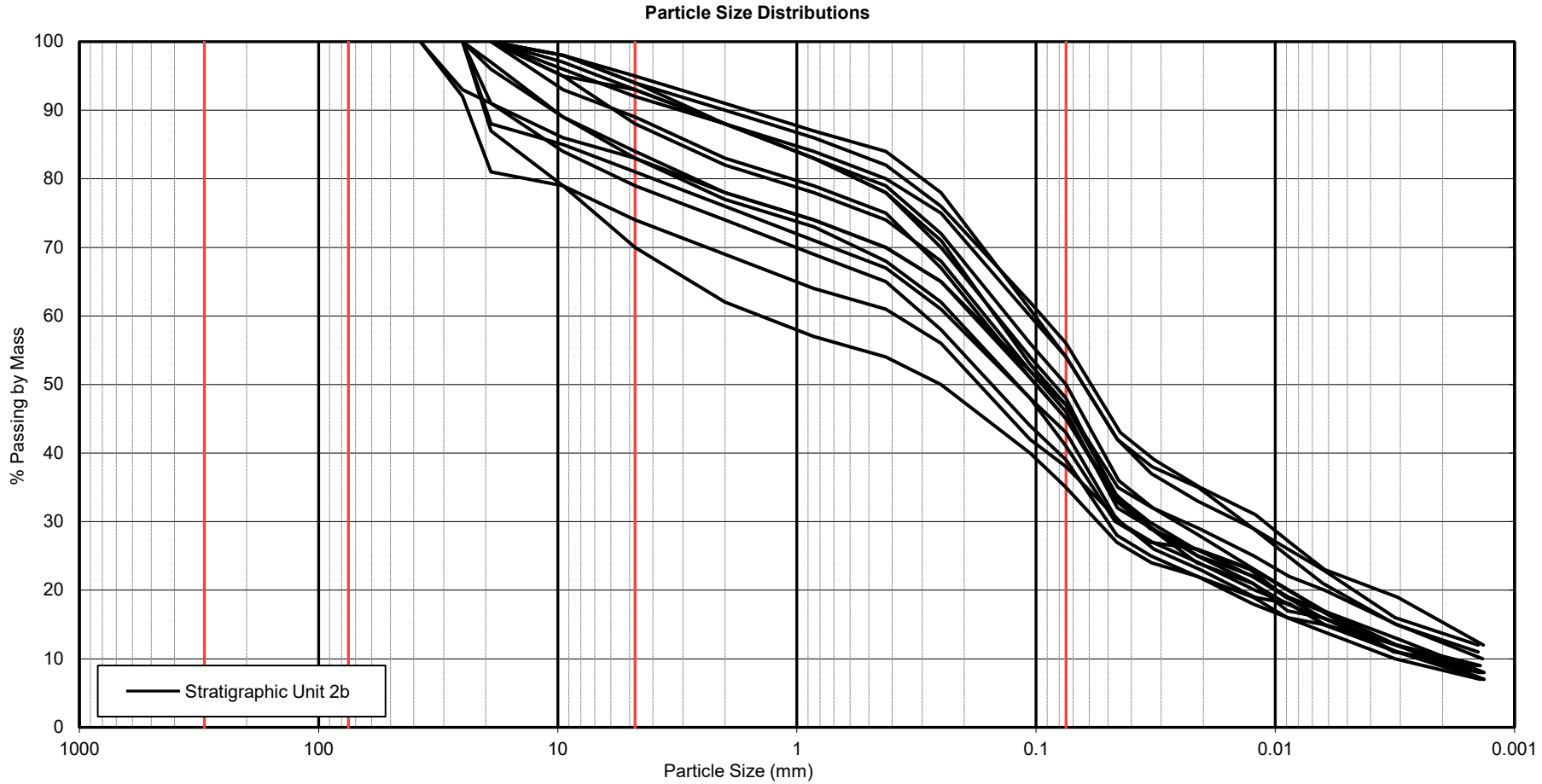
Tel: 905-723-2727 www.golder.com

Particle Size Distributions
Stratigraphic Unit 2b

Surficial Glacio-Lacustrine Deposits - Silty Clayey Sand to Silty Sand/Sandy Silt

Project No.:	21451329	**Testing Method(s):**	ASTM D6913 and ASTM D422 (Method B)
Project:	Onshore Geotechnical Investigation, Darlington DNNP	**Note(s):**	Particle size distributions for each tested sample are provided in Golder Report No. 21451329-001.
Client:	E.S. Fox Limited Nuclear Services		



PREPARED BY: PAK DATE: 2022/03/25 CHECKED BY: KG DATE: 2022/04/06

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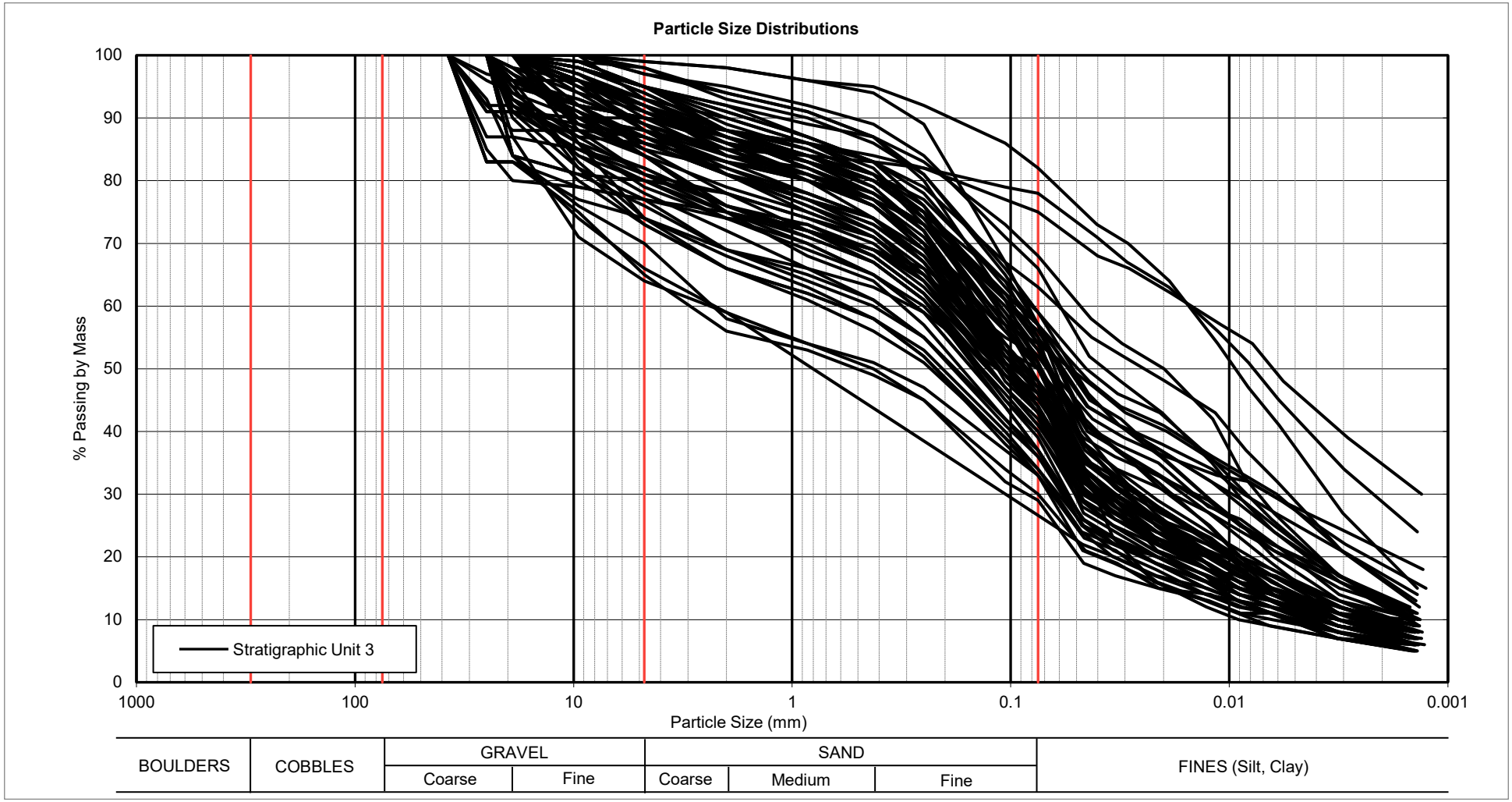
Tel: 905-723-2727 www.golder.com

Particle Size Distributions
Stratigraphic Unit 3
Upper Till

Project No.:	21451329	**Testing Method(s):**	ASTM D6913 and ASTM D422 (Method B)
Project:	Onshore Geotechnical Investigation, Darlington DNNP	**Note(s):**	Particle size distributions for each tested sample are provided in Golder Report No. 21451329-001.
Client:	E.S. Fox Limited Nuclear Services		



PREPARED BY: PAK DATE: 2022/03/25 CHECKED BY: KG DATE: 2022/04/06

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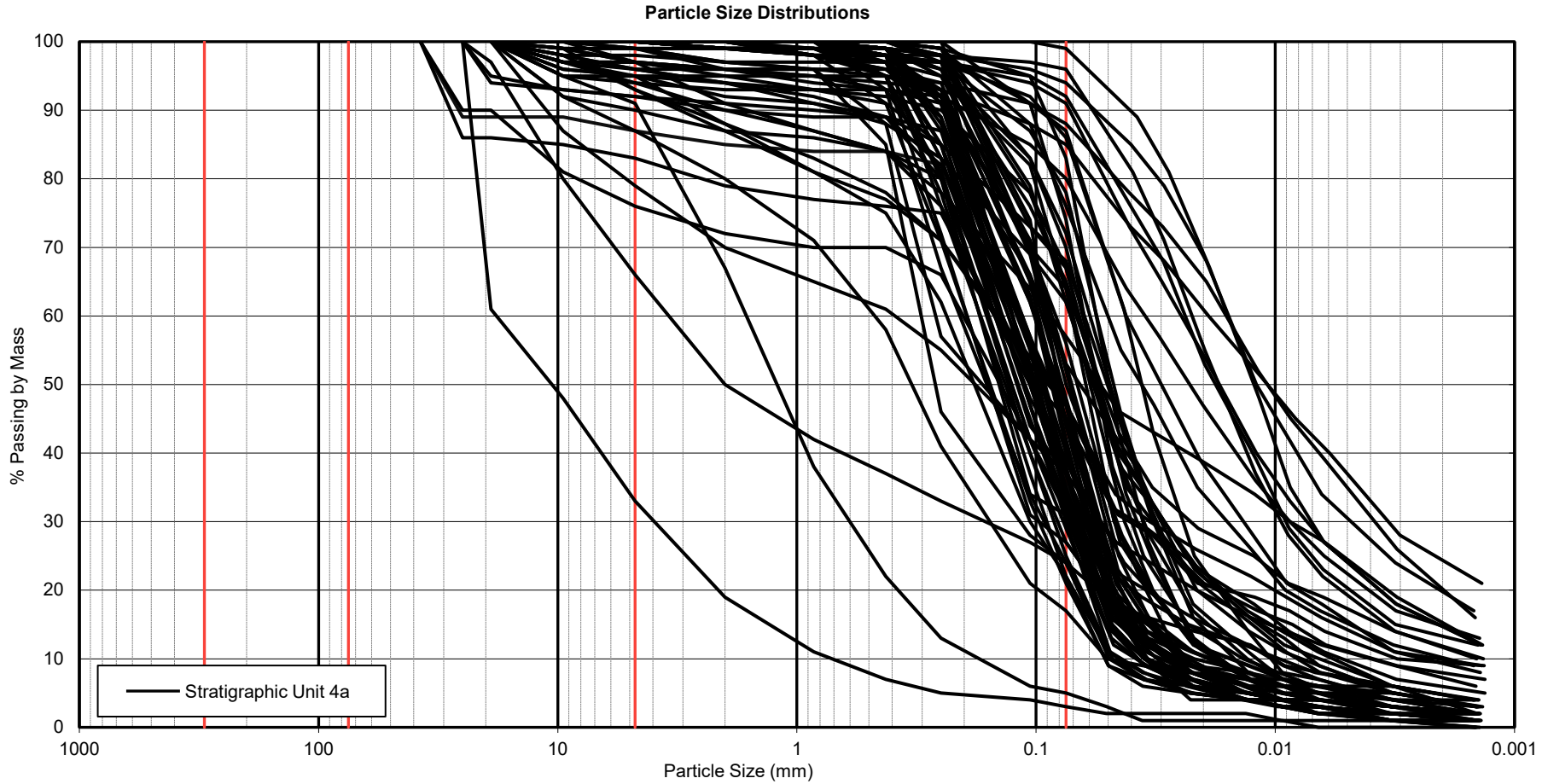
Particle Size Distributions
Stratigraphic Unit 4a

Intermediate Glacio-Lacustrine Deposits - Silty Sand to Sandy Silt

Project No.:	21451329	**Testing Method(s):**	ASTM D6913 and ASTM D422 (Method B)
Project:	Onshore Geotechnical Investigation, Darlington DNNP	**Note(s):**	Particle size distributions for each tested sample are provided in Golder Report No. 21451329-001.
Client:	E.S. Fox Limited Nuclear Services		



BOULDERS	COBBLES	GRAVEL		SAND			FINES (Silt, Clay)
		Coarse	Fine	Coarse	Medium	Fine	

PREPARED BY: PAK DATE: 2022/03/25 CHECKED BY: KG DATE: 2022/04/06

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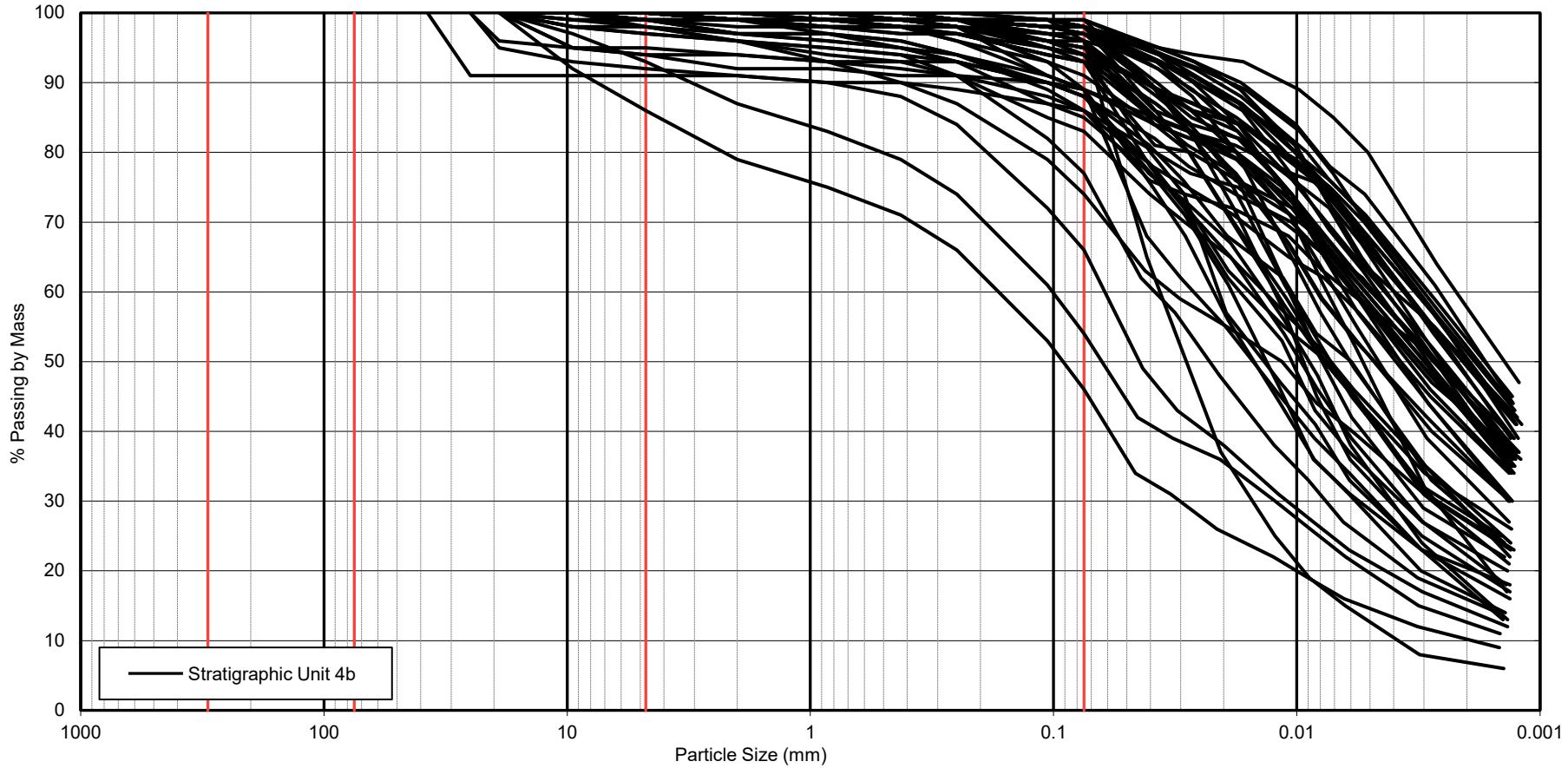
Particle Size Distributions
Stratigraphic Unit 4b

Intermediate Glacio-Lacustrine Deposits - Sandy Lean Clay to Lean Clay

Project No.:	21451329	**Testing Method(s):**	ASTM D6913 and ASTM D422 (Method B)
Project:	Onshore Geotechnical Investigation, Darlington DNNP	**Note(s):**	Particle size distributions for each tested sample are provided in Golder Report No. 21451329-001.
Client:	E.S. Fox Limited Nuclear Services		

Particle Size Distributions (Overlay)



BOULDERS	COBBLES	GRAVEL		SAND			FINES (Silt, Clay)
		Coarse	Fine	Coarse	Medium	Fine	

PREPARED BY: PAK DATE: 2022/03/25 CHECKED BY: KG DATE: 2022/04/06

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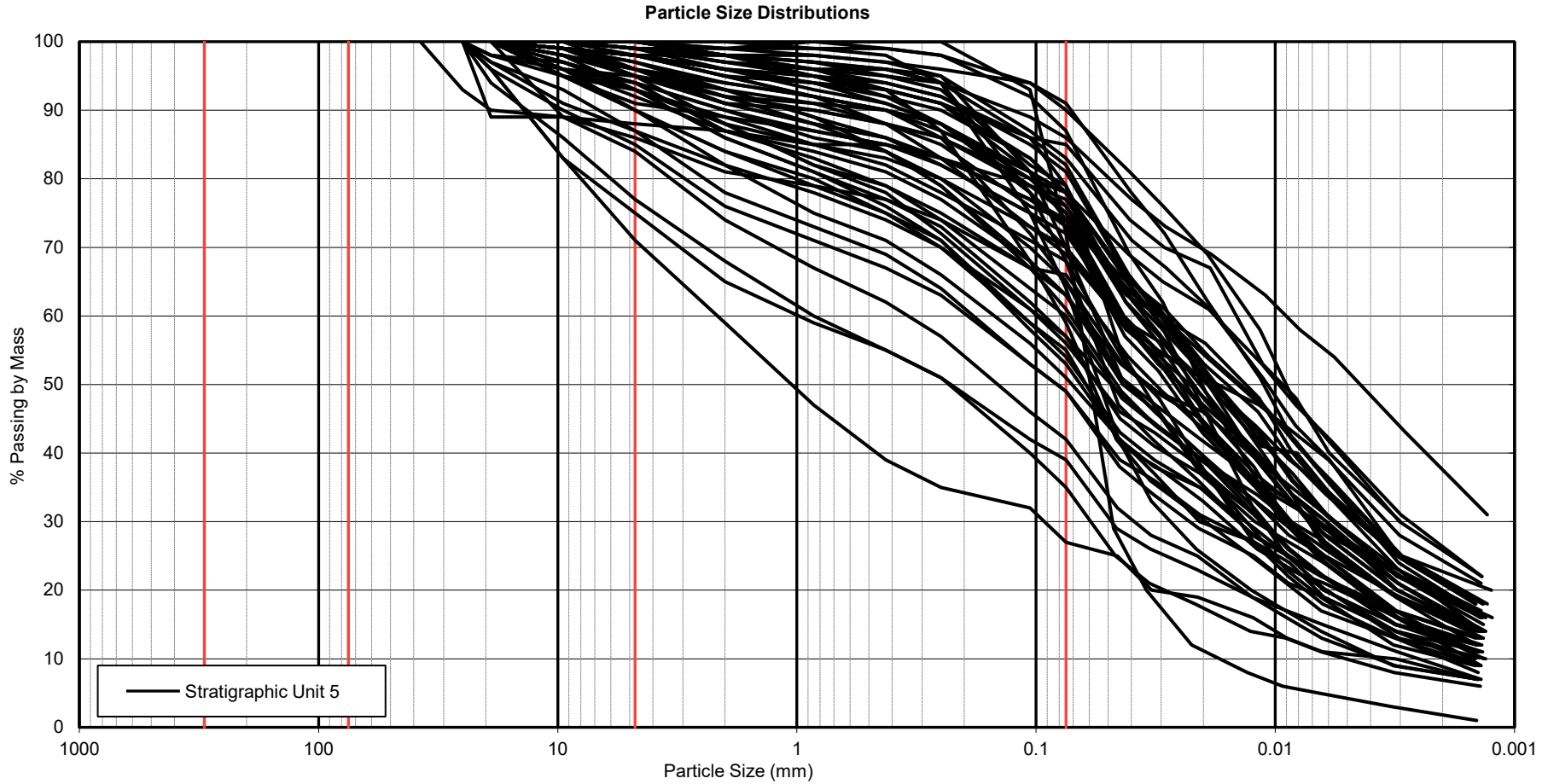
Particle Size Distributions
Stratigraphic Unit 5

Lower Till

Project No.:	21451329	**Testing Method(s):**	ASTM D6913 and ASTM D422 (Method B)
Project:	Onshore Geotechnical Investigation, Darlington DNNP	**Note(s):**	Particle size distributions for each tested sample are provided in Golder Report No. 21451329-001.
Client:	E.S. Fox Limited Nuclear Services		



PREPARED BY: PAK DATE: 2022/03/25 CHECKED BY: KG DATE: 2022/04/06

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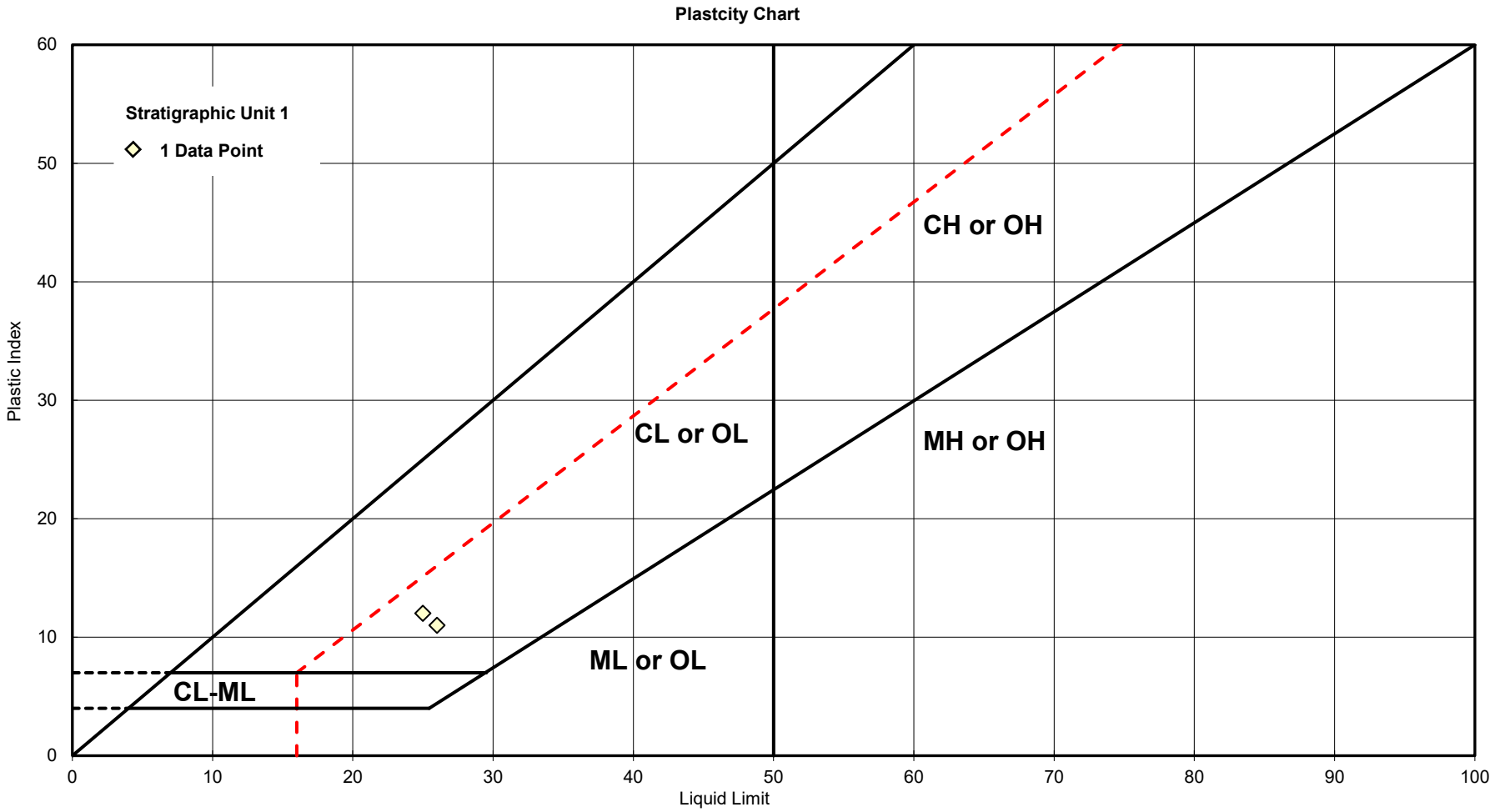
Plasticity Chart
Stratigraphic Unit 1
Topsoil / Fill

Project No.:	21451329	**Testing Method(s):**	ASTM D4318 (Method A)
Project:	Onshore Geotechnical Investigation, Darlington DNNP	**Note(s):**	Atterberg limits for each tested sample are provided in Golder Report No. 21451329-001.
Client:	E.S. Fox Limited Nuclear Services		



PREPARED BY: KG DATE:2022/03/24 CHECKED BY: PAK DATE: 2022/03/25

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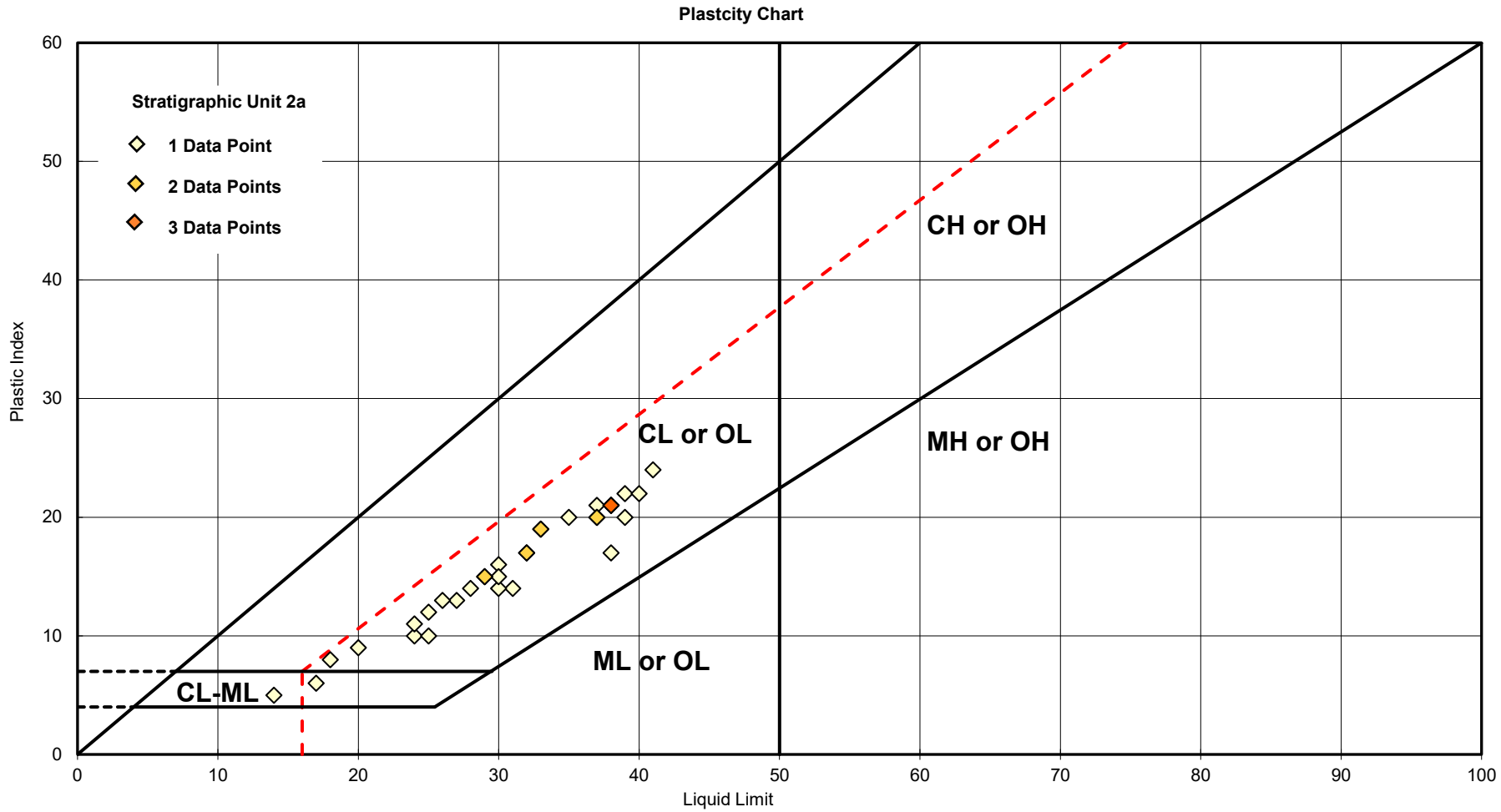
Plasticity Chart
Stratigraphic Unit 2a

Surficial Glacio-Lacustrine Deposits - Sandy Lean Clay to Lean Clay

Project No.:	21451329	**Testing Method(s):**	ASTM D4318 (Method A)
Project:	Onshore Geotechnical Investigation, Darlington DNNP	**Note(s):**	Atterberg limits for each tested sample are provided in Golder Report No. 21451329-001.
Client:	E.S. Fox Limited Nuclear Services		



PREPARED BY: KG DATE:2022/03/24 CHECKED BY: PAK DATE: 2022/03/25

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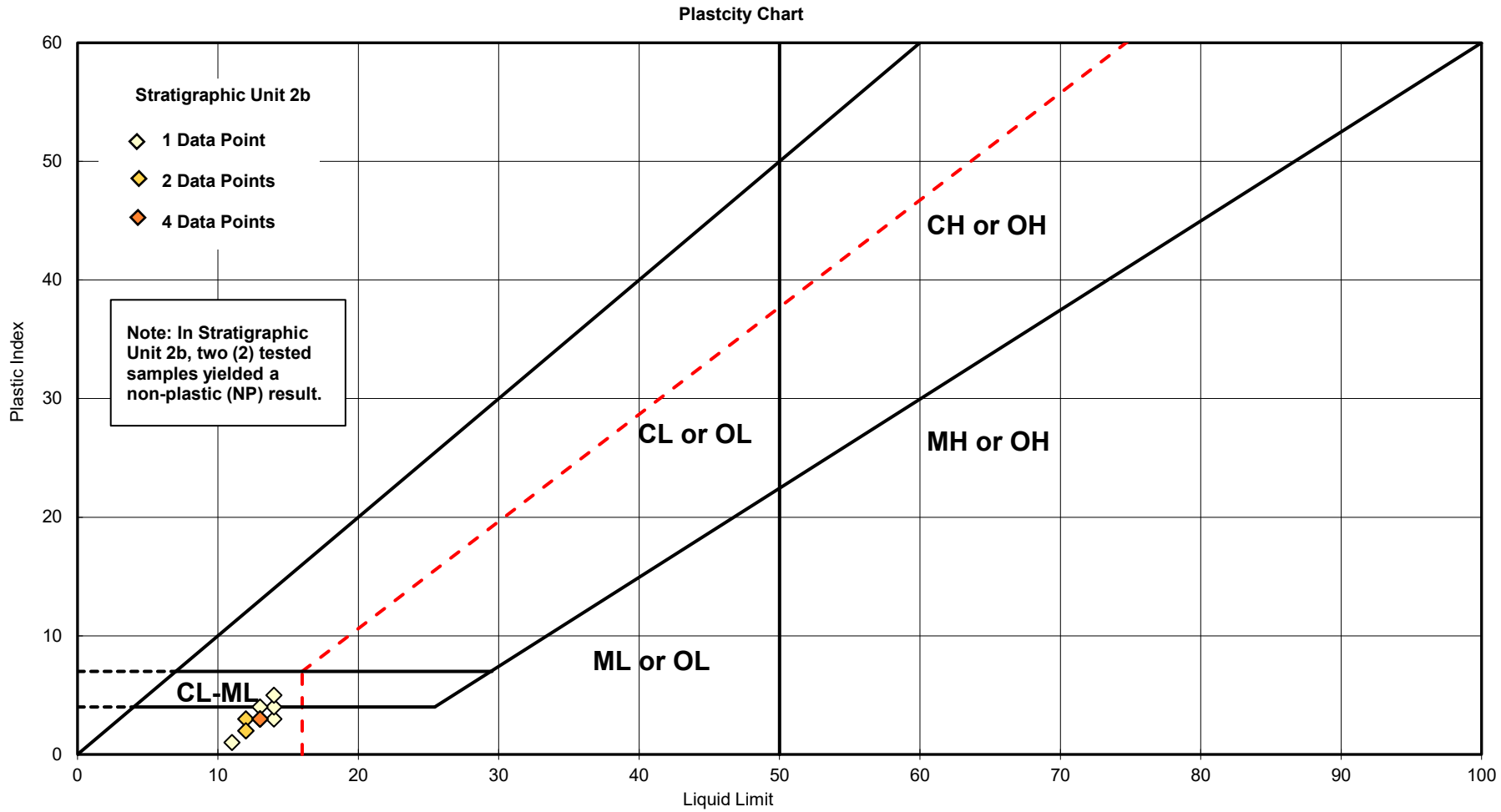
Plasticity Chart
Stratigraphic Unit 2b

Surficial Glacio-Lacustrine Deposits - Silty Clayey Sand to Silty Sand/Sandy Silt

Project No.:	21451329	**Testing Method(s):**	ASTM D4318 (Method A)
Project:	Onshore Geotechnical Investigation, Darlington DNNP	**Note(s):**	Atterberg limits for each tested sample are provided in Golder Report No. 21451329-001.
Client:	E.S. Fox Limited Nuclear Services		



PREPARED BY: KG DATE:2022/03/24 CHECKED BY: PAK DATE: 2022/03/25

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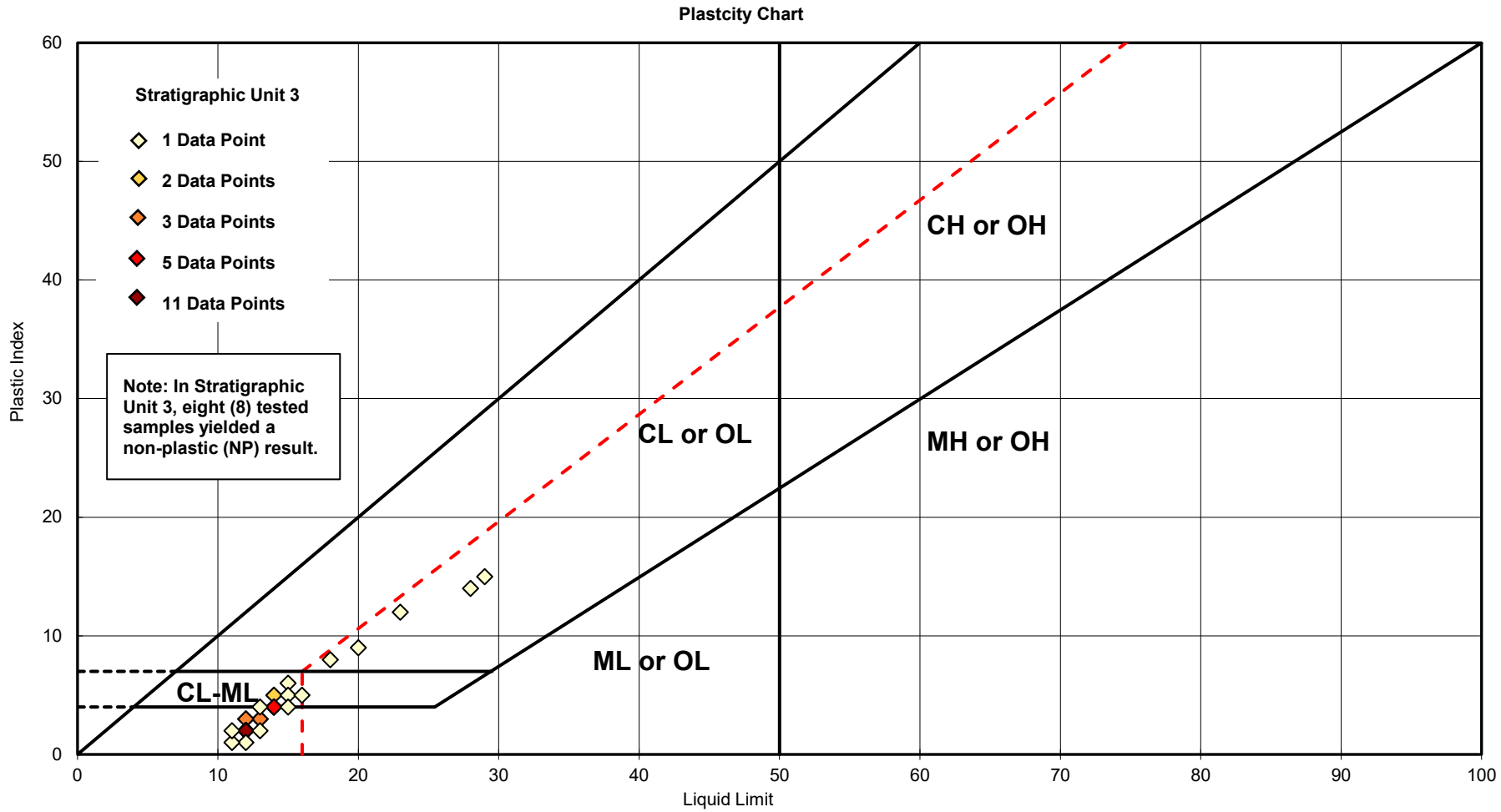
Plasticity Chart
Stratigraphic Unit 3
Upper Till

Project No.:	21451329	**Testing Method(s):**	ASTM D4318 (Method A)
Project:	Onshore Geotechnical Investigation, Darlington DNNP	**Note(s):**	Atterberg limits for each tested sample are provided in Golder Report No. 21451329-001.
Client:	E.S. Fox Limited Nuclear Services		



PREPARED BY: KG DATE:2022/03/24 CHECKED BY: PAK DATE: 2022/03/25

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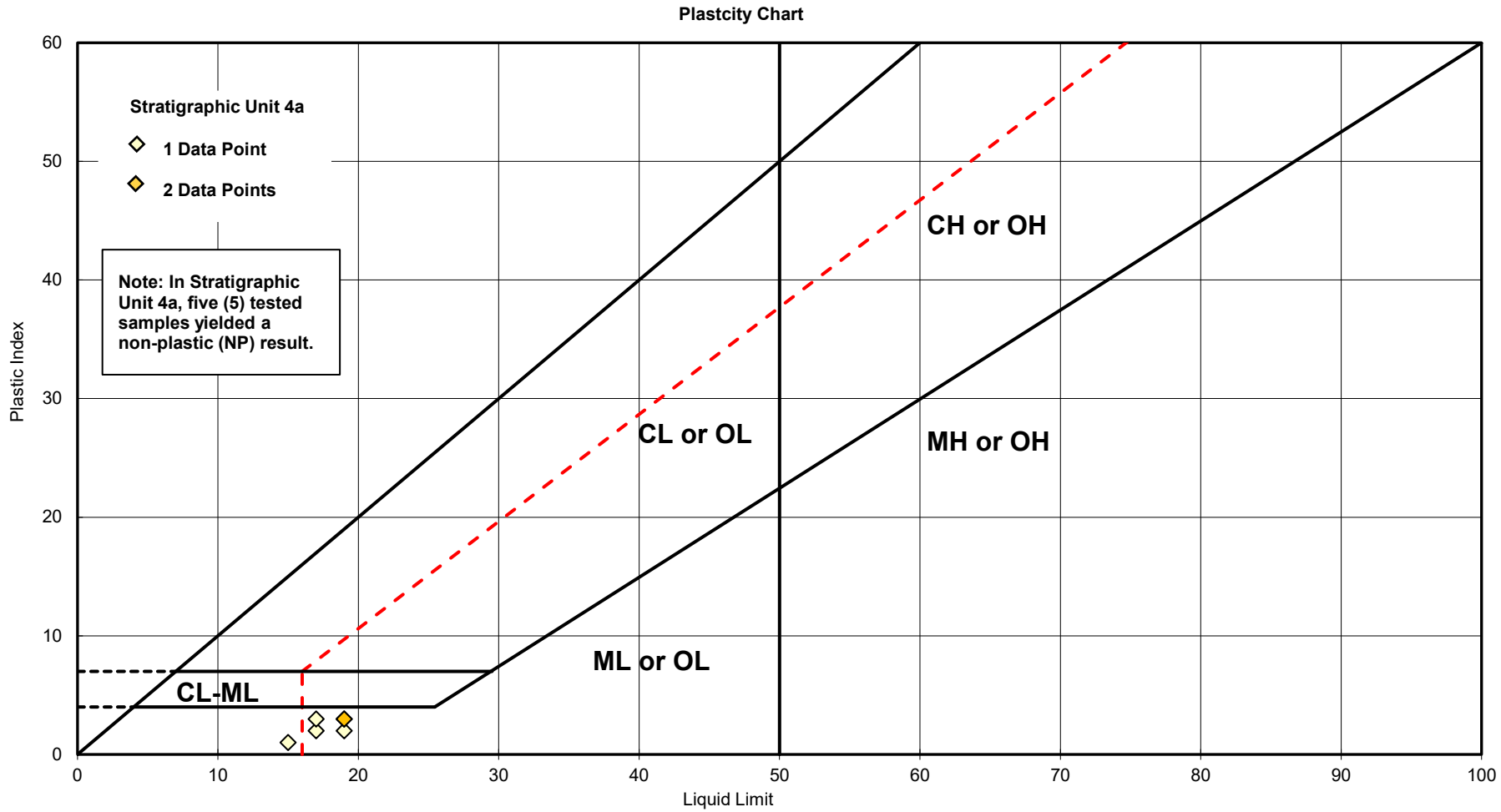
Plasticity Chart
Stratigraphic Unit 4a

Intermediate Glacio-Lacustrine Deposits - Silty Sand to Sandy Silt

Project No.:	21451329	**Testing Method(s):**	ASTM D4318 (Method A)
Project:	Onshore Geotechnical Investigation, Darlington DNNP	**Note(s):**	Atterberg limits for each tested sample are provided in Golder Report No. 21451329-001.
Client:	E.S. Fox Limited Nuclear Services		



PREPARED BY: KG DATE:2022/03/24 CHECKED BY: PAK DATE: 2022/03/25

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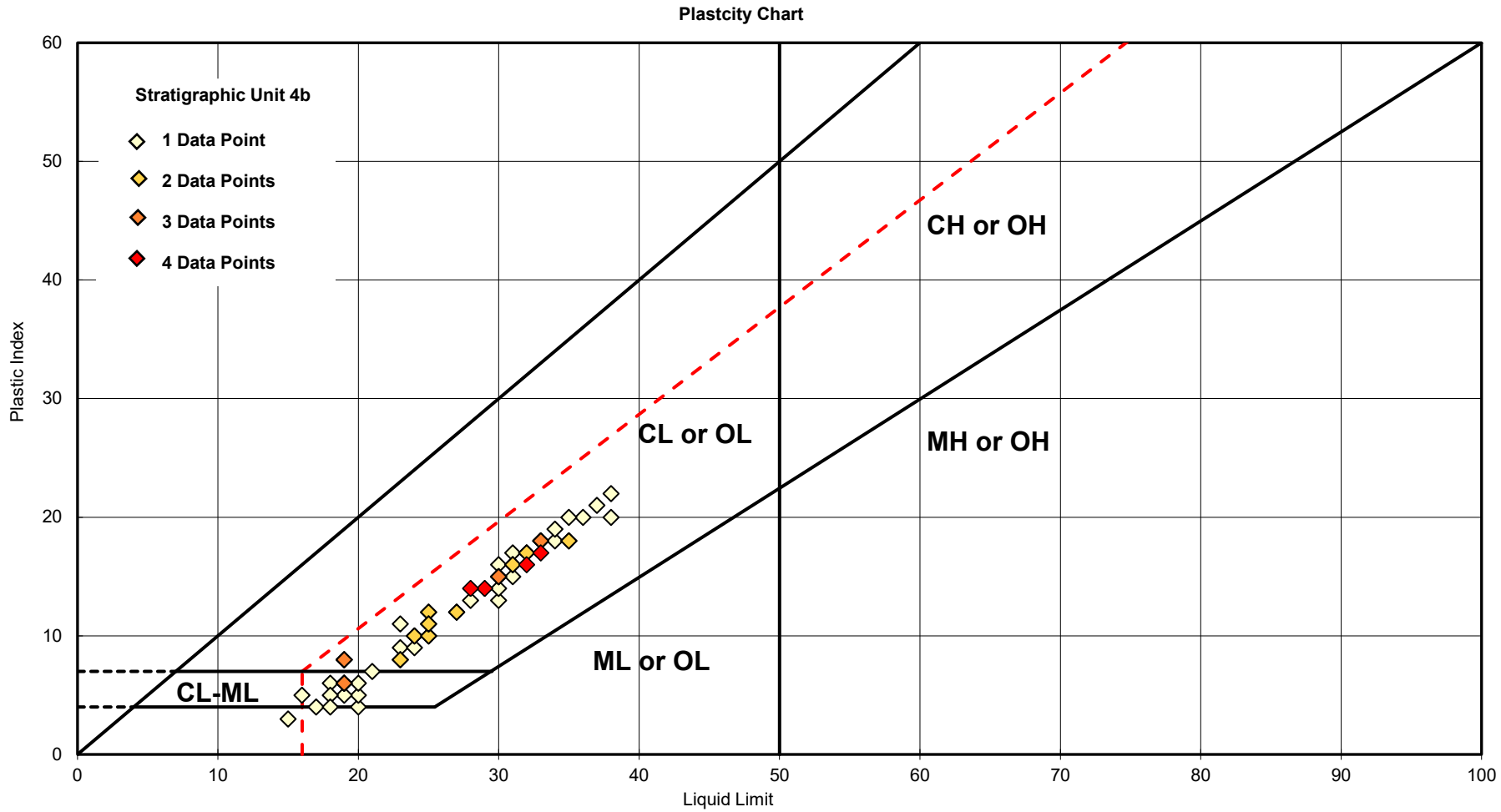
Plasticity Chart
Stratigraphic Unit 4b

Intermediate Glacio-Lacustrine Deposits - Sandy Lean Clay to Lean Clay

Project No.:	21451329	**Testing Method(s):**	ASTM D4318 (Method A)
Project:	Onshore Geotechnical Investigation, Darlington DNNP	**Note(s):**	Atterberg limits for each tested sample are provided in Golder Report No. 21451329-001.
Client:	E.S. Fox Limited Nuclear Services		



PREPARED BY: KG DATE:2022/03/24 CHECKED BY: PAK DATE: 2022/03/25

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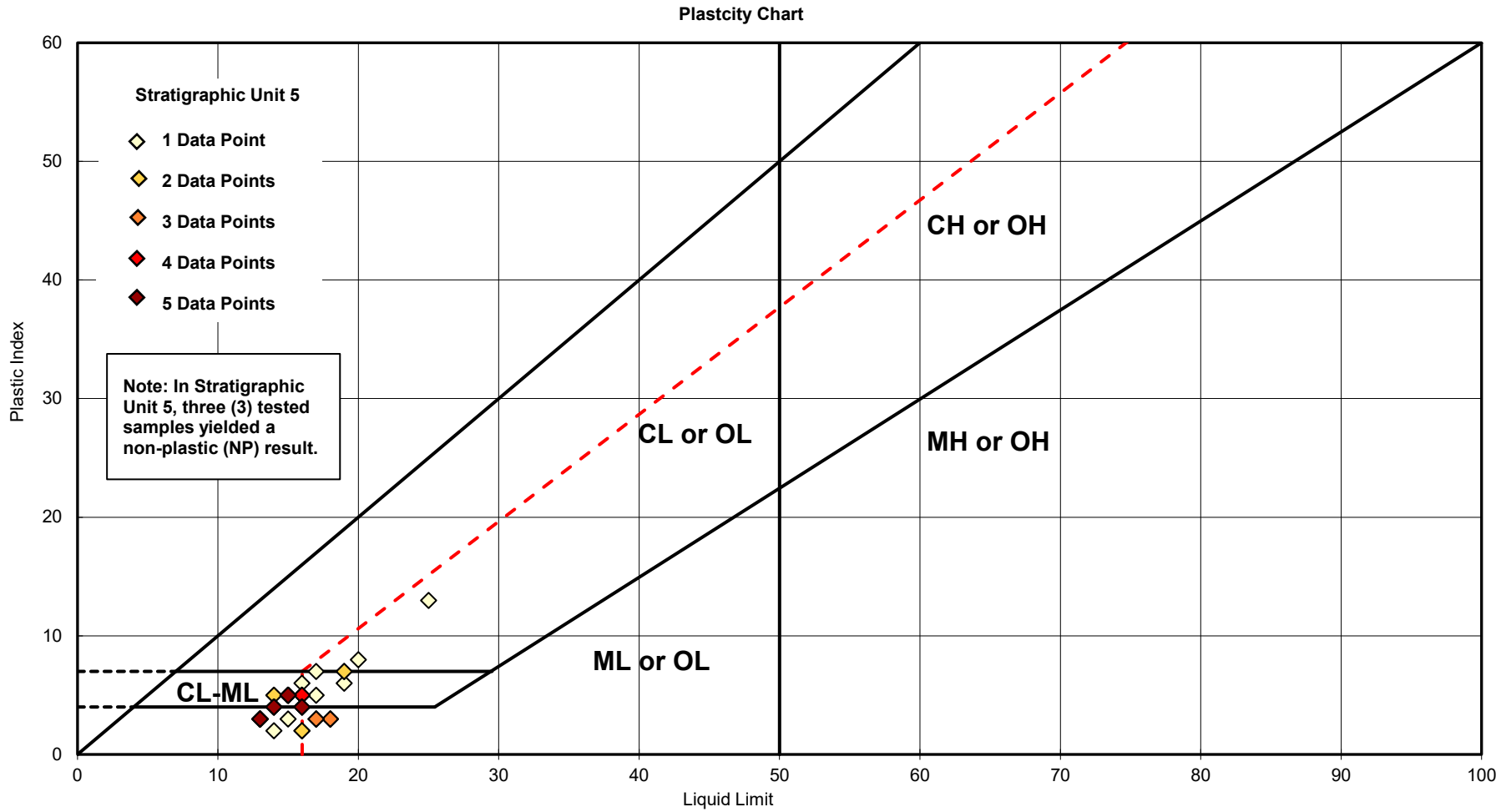
Plasticity Chart
Stratigraphic Unit 5
Lower Till

Project No.:	21451329	**Testing Method(s):**	ASTM D4318 (Method A)
Project:	Onshore Geotechnical Investigation, Darlington DNNP	**Note(s):**	Atterberg limits for each tested sample are provided in Golder Report No. 21451329-001.
Client:	E.S. Fox Limited Nuclear Services		



PREPARED BY: KG DATE:2022/03/24 CHECKED BY: PAK DATE: 2022/03/25

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APPENDIX C

Cone Penetration Testing Interpretations

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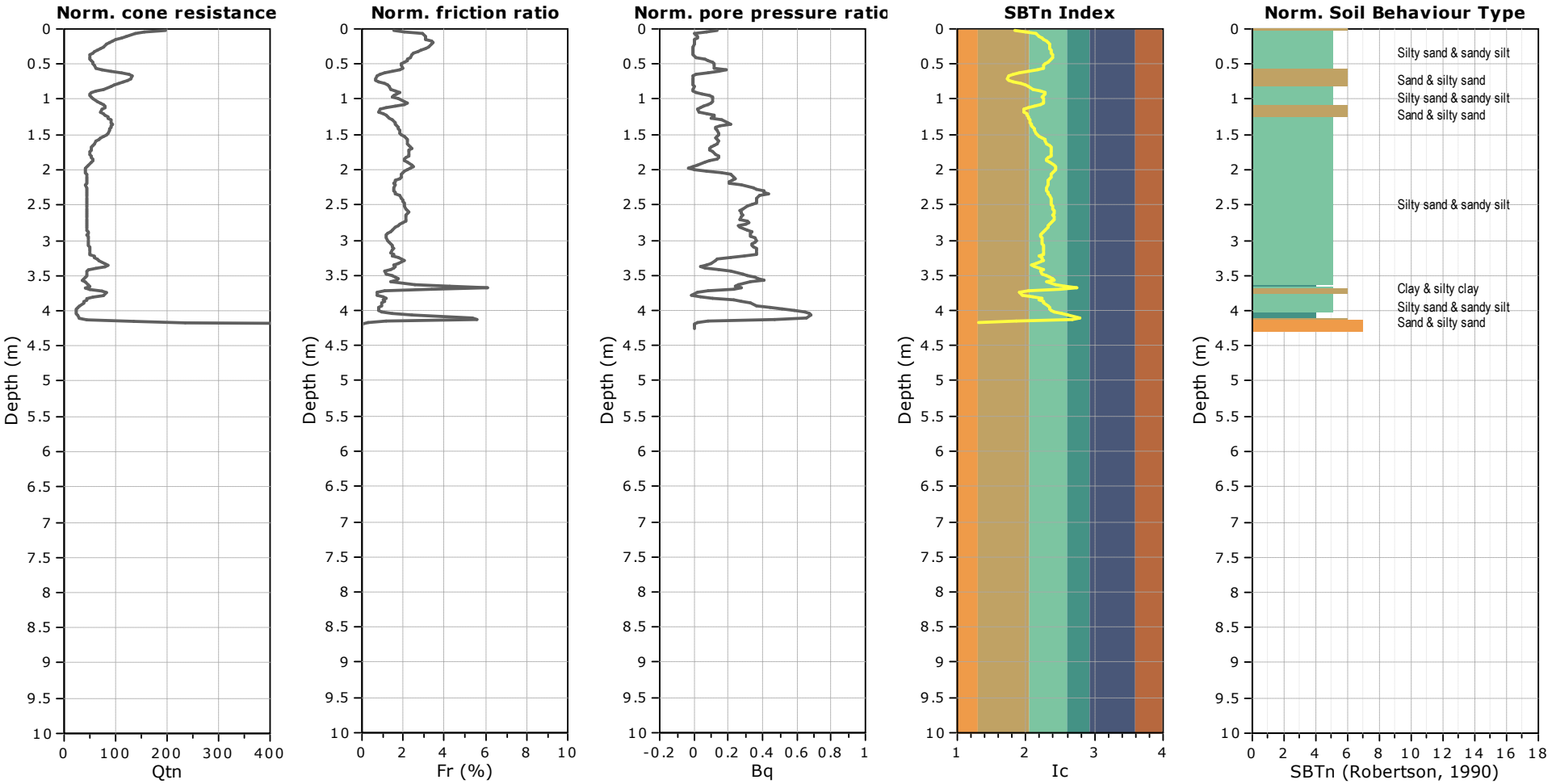
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT1
Total depth: 4.25 m, Date: 2021-11-04
Surface Elevation: 89.44 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

- 1. Sensitive fine grained
- 2. Organic material
- 3. Clay to silty clay
- 4. Clayey silt to silty clay
- 5. Silty sand to sandy silt
- 6. Clean sand to silty sand
- 7. Gravely sand to sand
- 8. Very stiff sand to clayey sand
- 9. Very stiff fine grained

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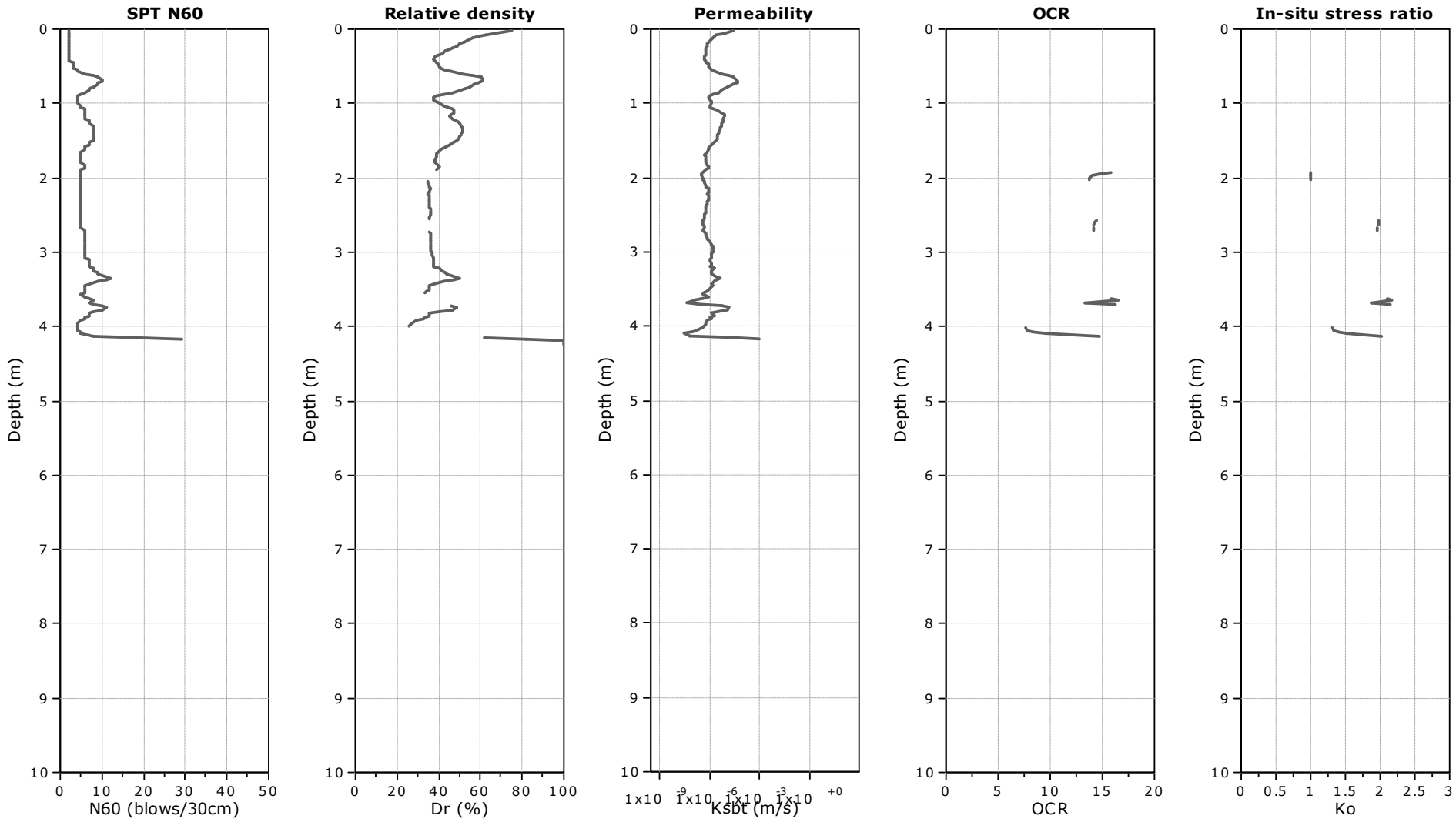
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT1
Total depth: 4.25 m, Date: 2021-11-04
Surface Elevation: 89.44 m
Cone Operator: ConeTec Investigations Ltd.



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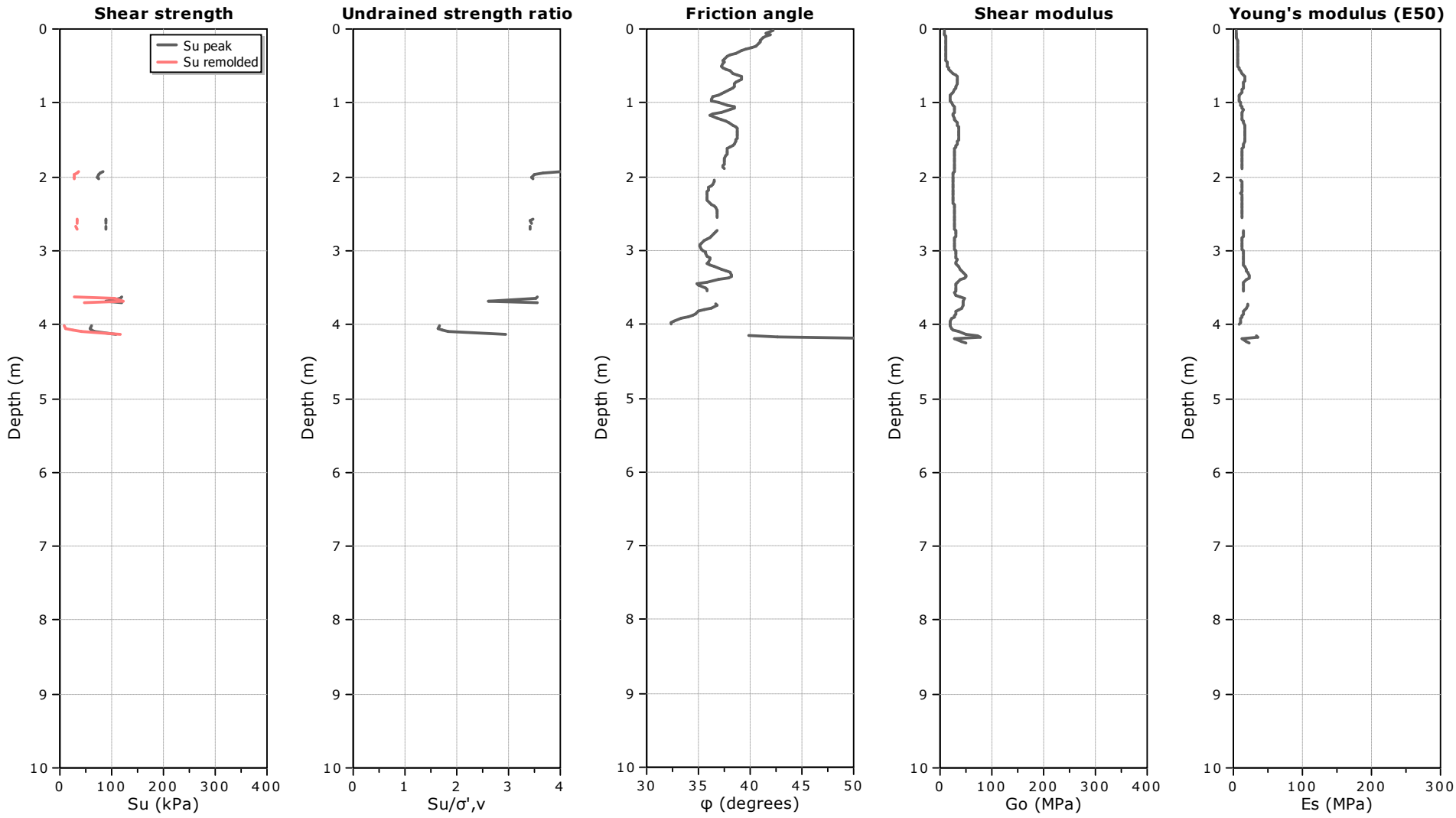
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT1
Total depth: 4.25 m, Date: 2021-11-04
Surface Elevation: 89.44 m
Cone Operator: ConeTec Investigations Ltd.



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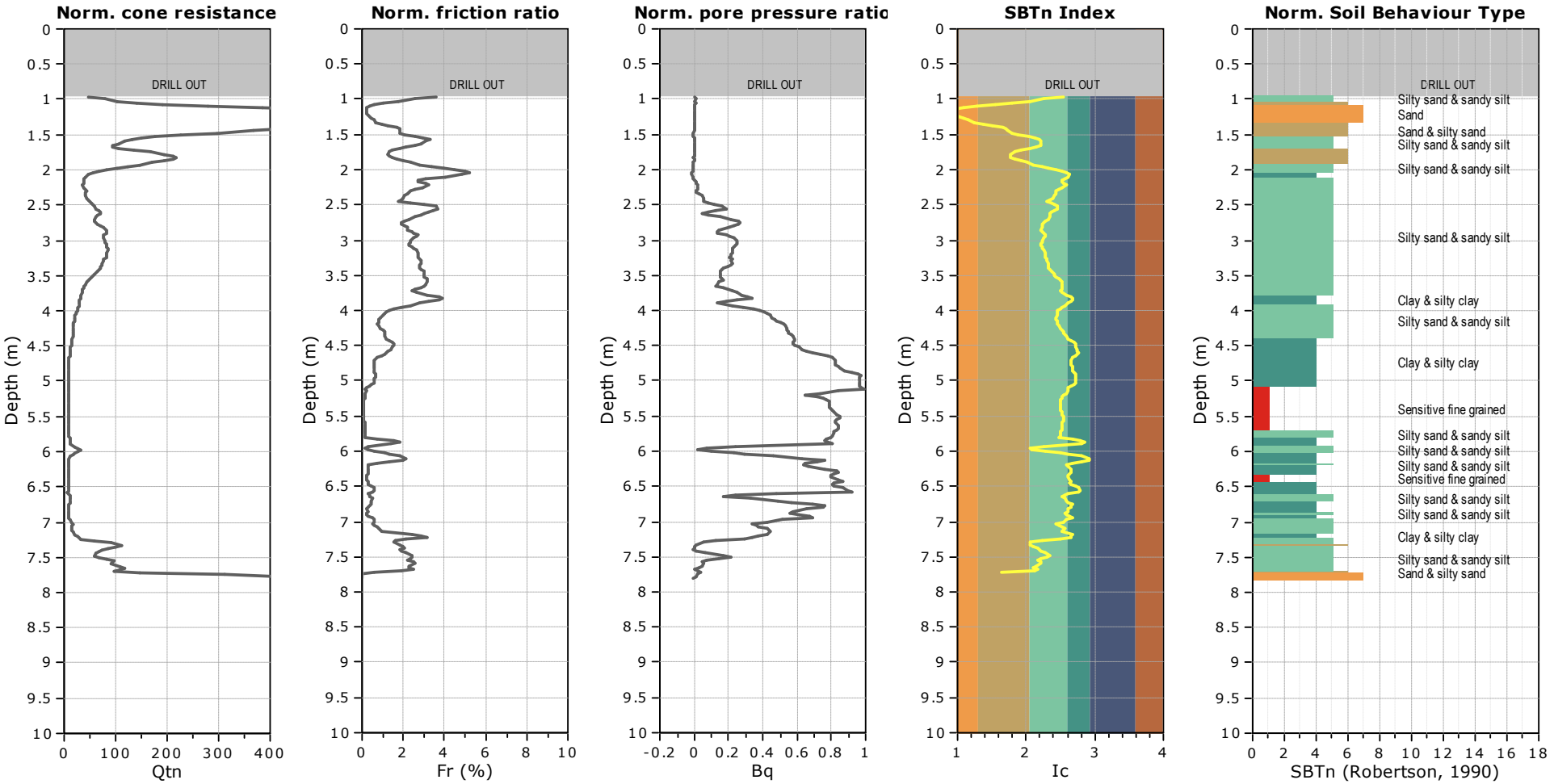
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT2
Total depth: 7.80 m, Date: 2021-09-27
Surface Elevation: 89.39 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

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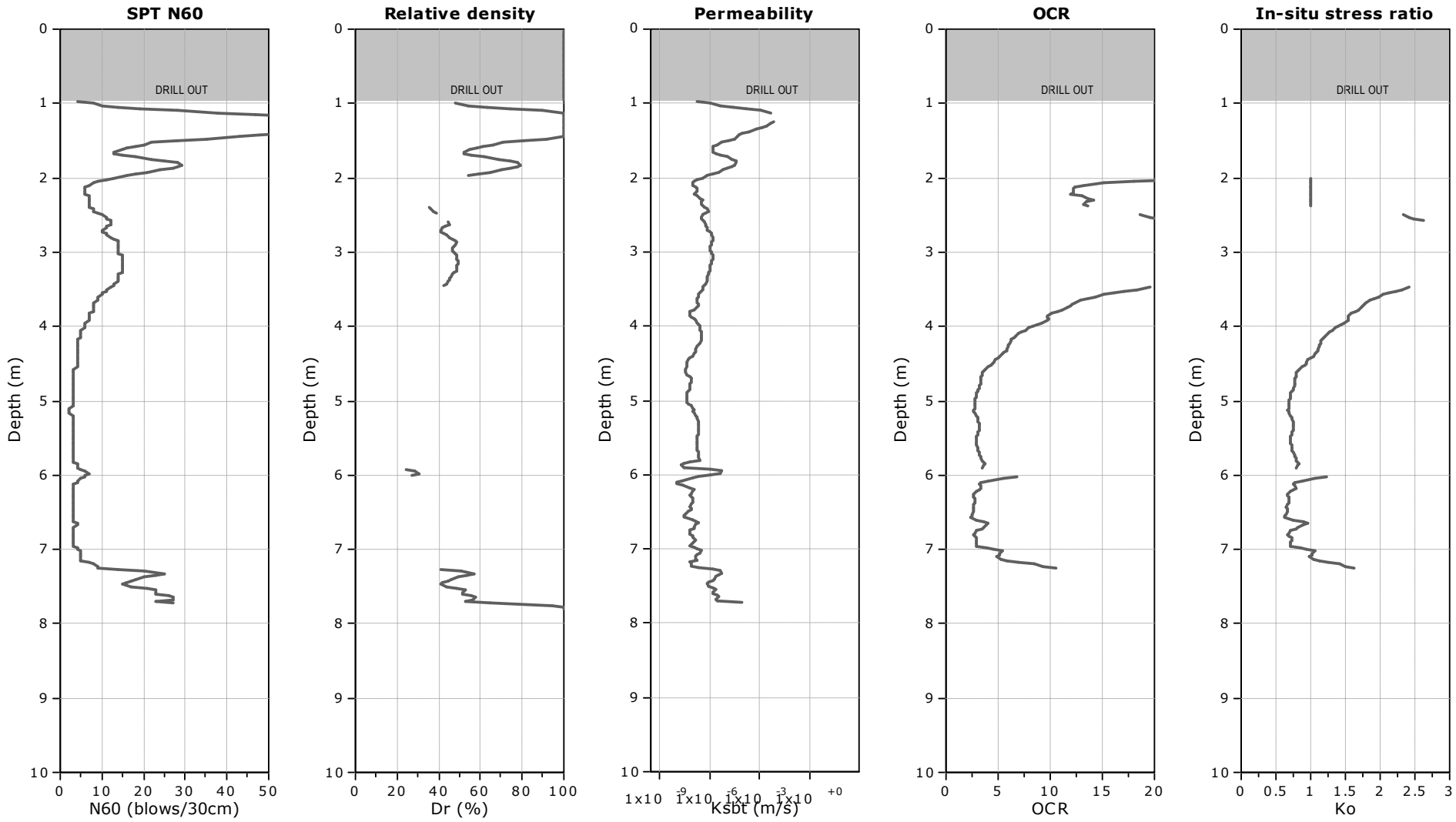
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT2
Total depth: 7.80 m, Date: 2021-09-27
Surface Elevation: 89.39 m
Cone Operator: ConeTec Investigations Ltd.



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Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

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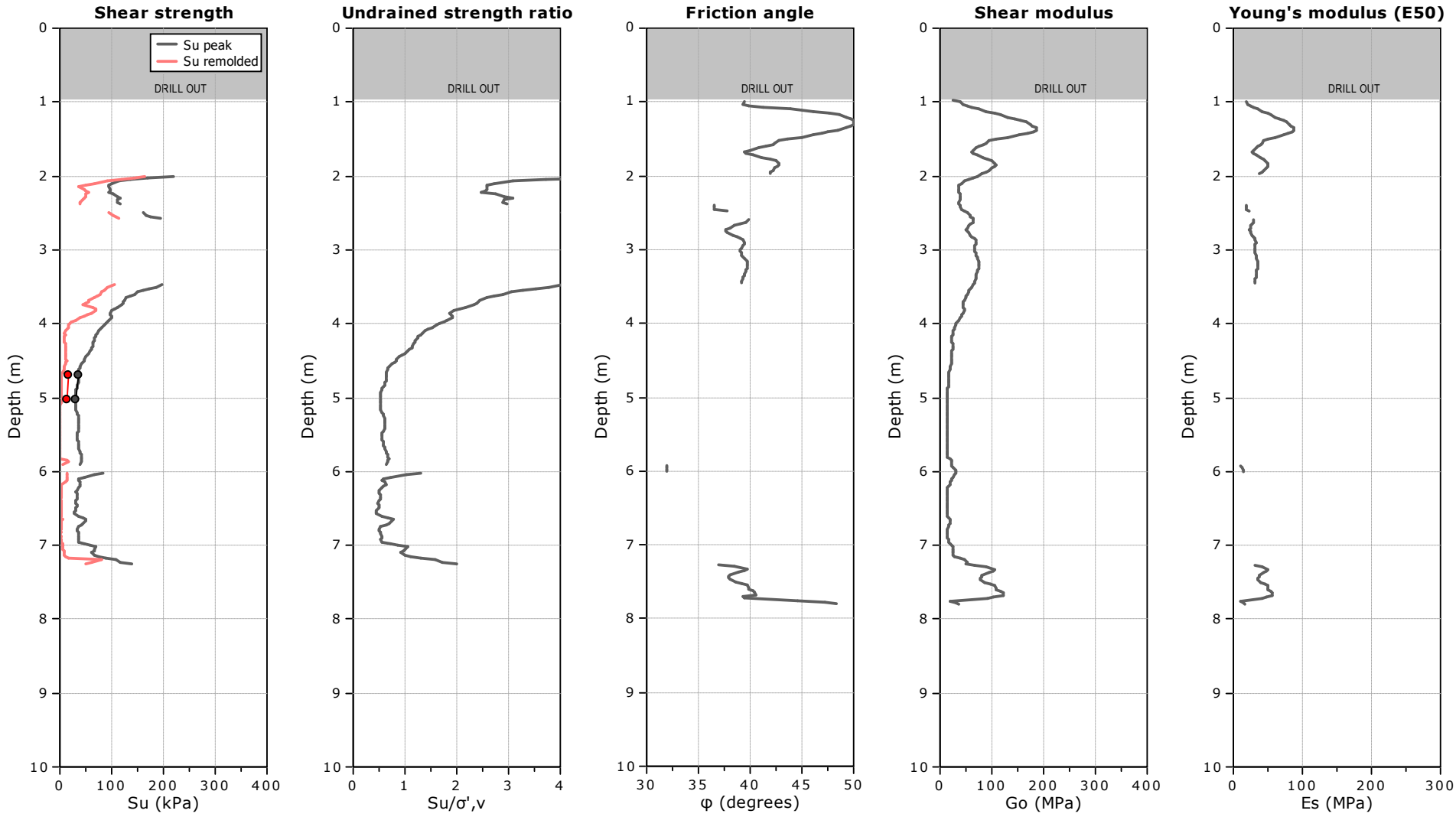

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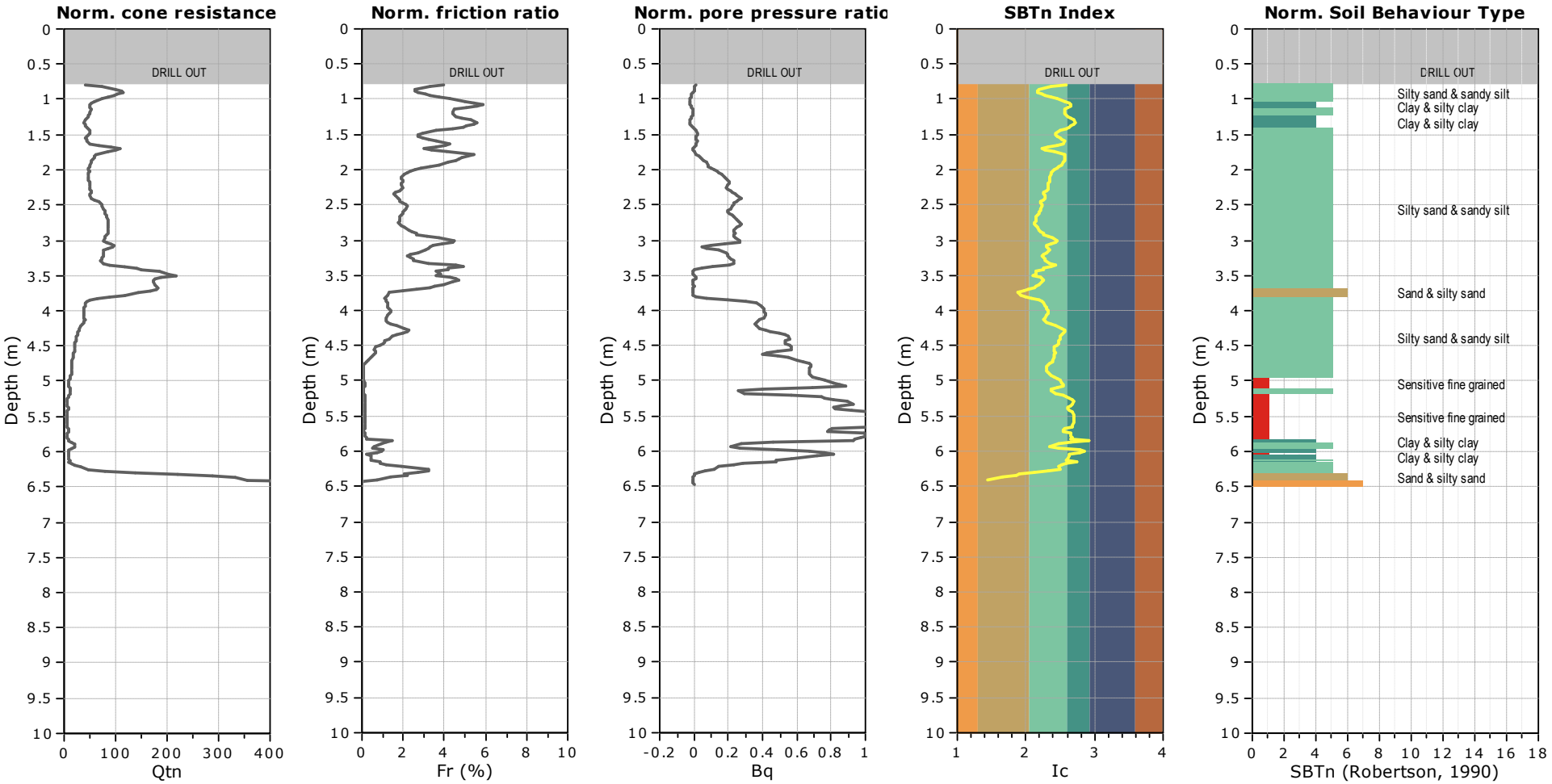
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT3
Total depth: 6.47 m, Date: 2021-09-24
Surface Elevation: 89.90 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

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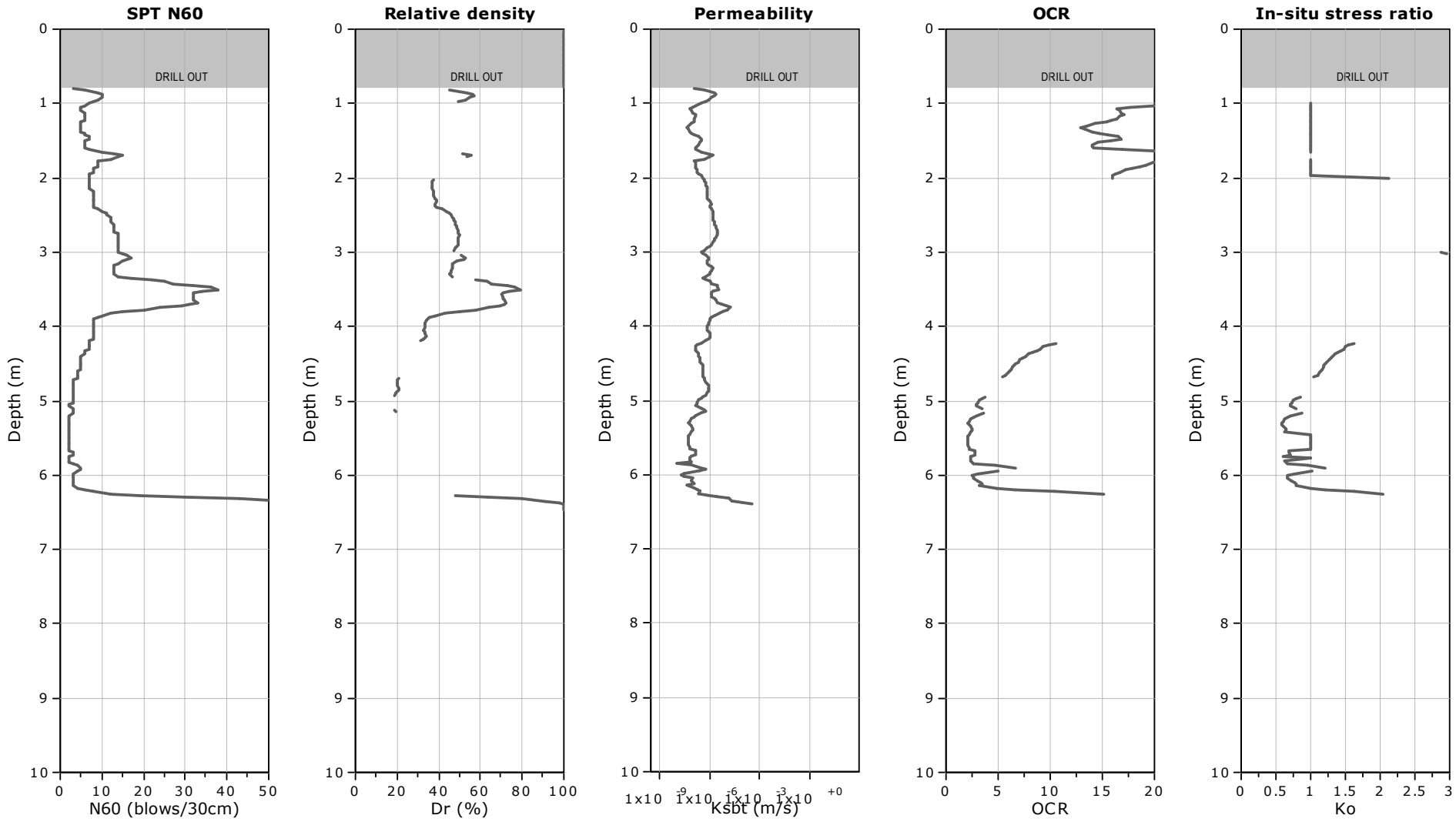
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT3
Total depth: 6.47 m, Date: 2021-09-24
Surface Elevation: 89.90 m
Cone Operator: ConeTec Investigations Ltd.



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Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT3
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Surface Elevation: 89.90 m
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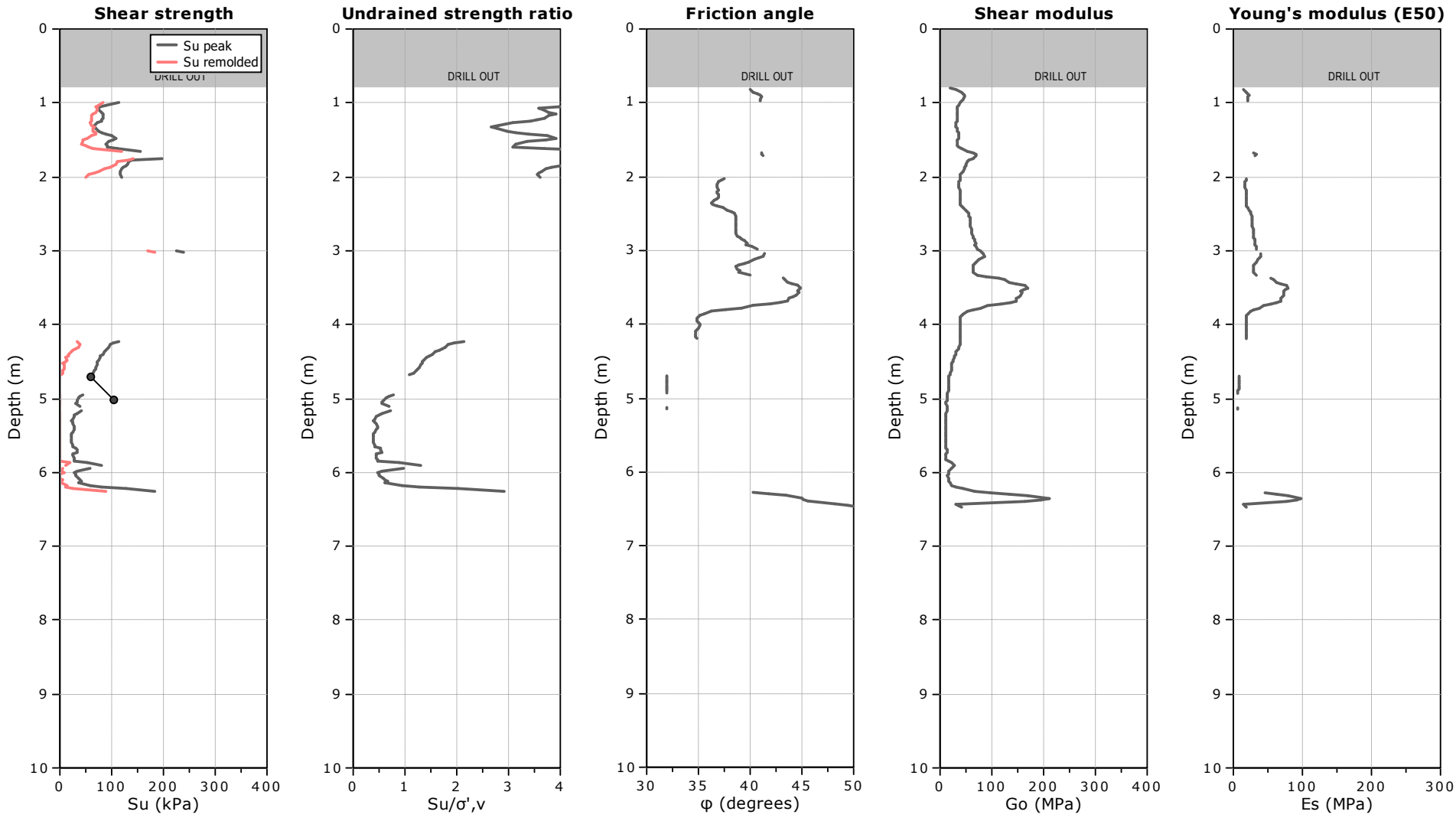

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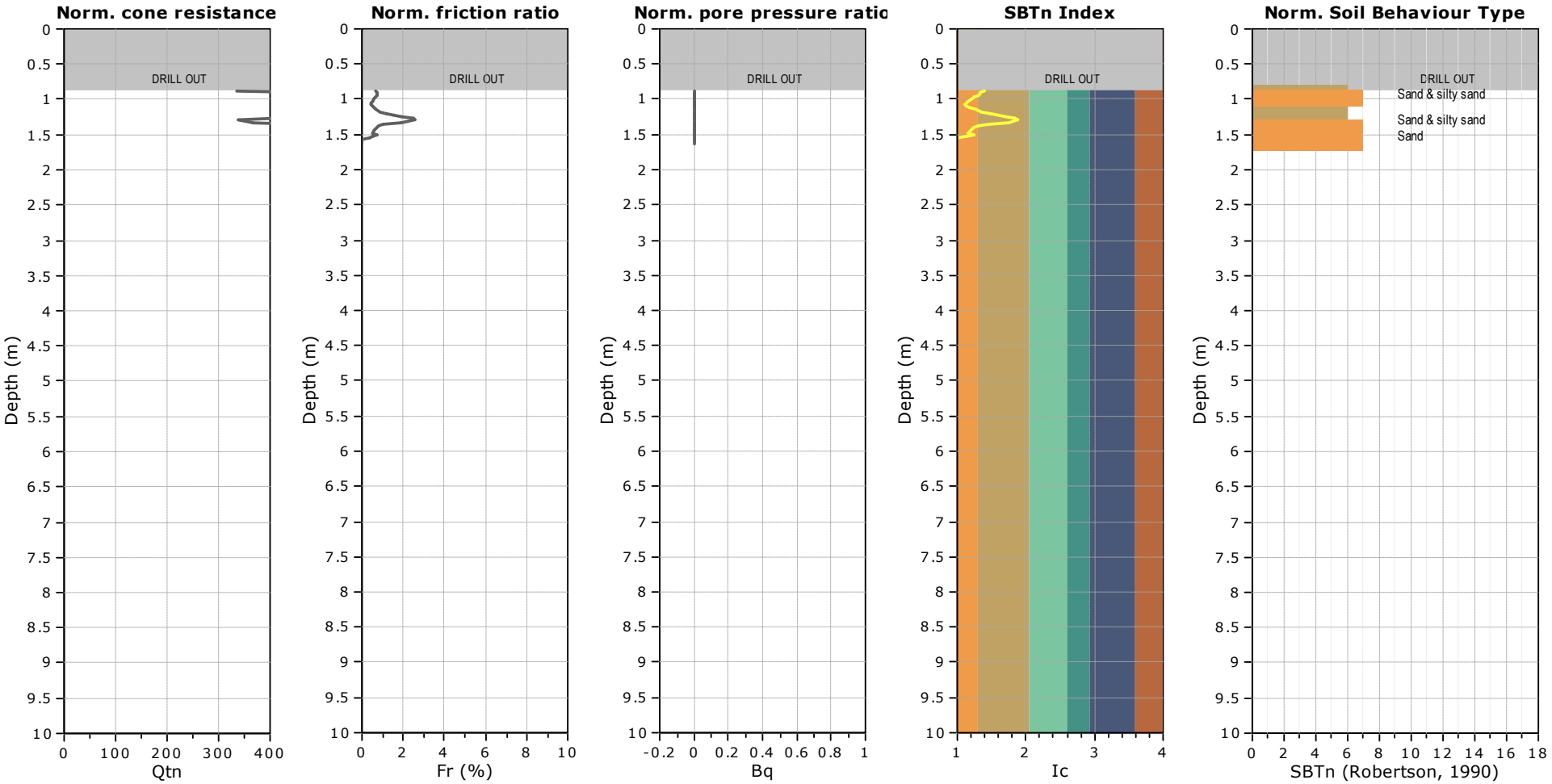
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT5
Total depth: 1.63 m, Date: 2021-09-27
Surface Elevation: 89.02 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

- 1. Sensitive fine grained
- 2. Organic material
- 3. Clay to silty clay
- 4. Clayey silt to silty clay
- 5. Silty sand to sandy silt
- 6. Clean sand to silty sand
- 7. Gravely sand to sand
- 8. Very stiff sand to clayey sand
- 9. Very stiff fine grained

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Project: **21451329 - Darlington New Nuclear Project**

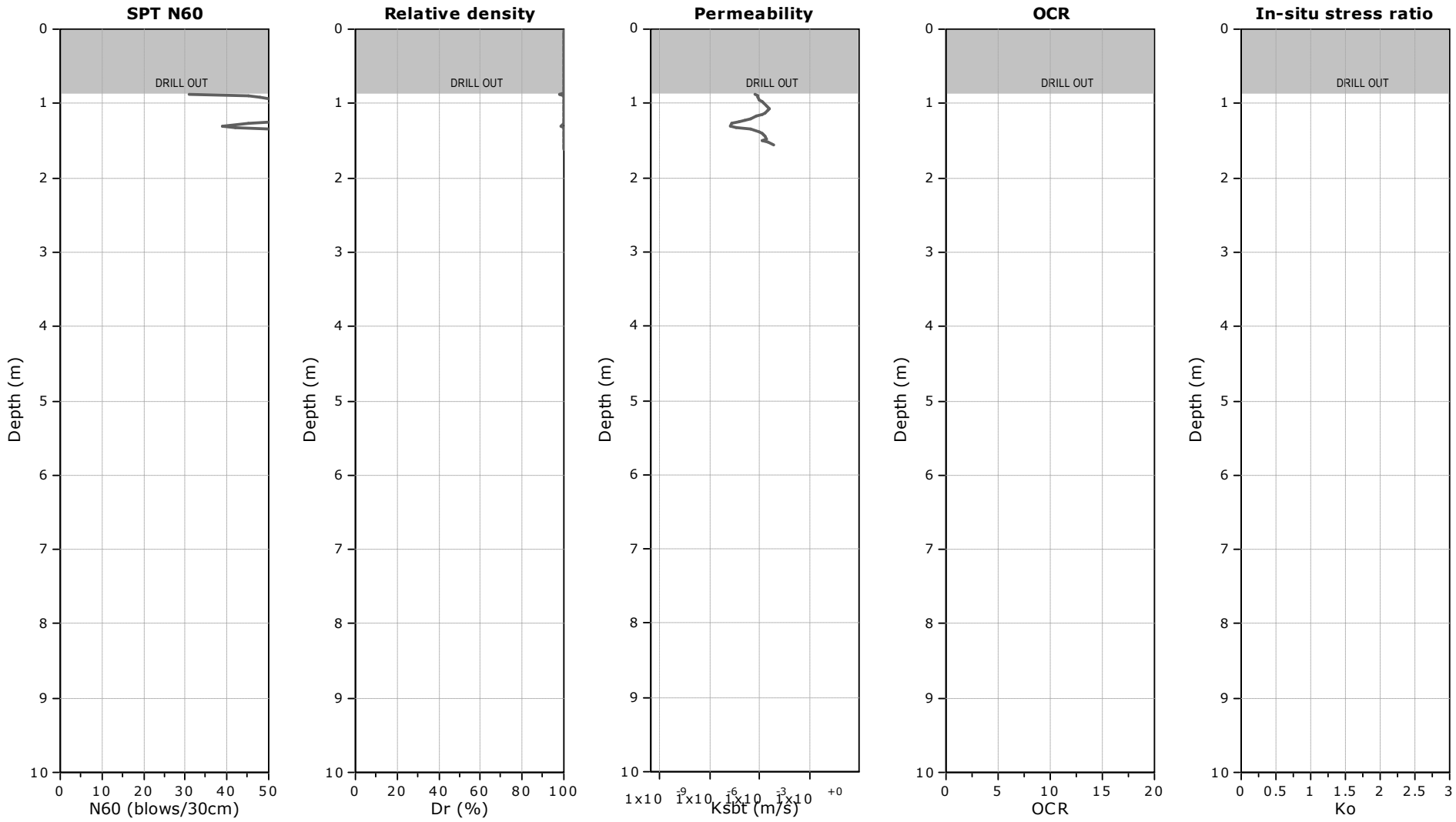
Location: **Bowmanville, Ontario**

CPT5

Total depth: 1.63 m, Date: 2021-09-27

Surface Elevation: 89.02 m

Cone Operator: ConeTec Investigations Ltd.



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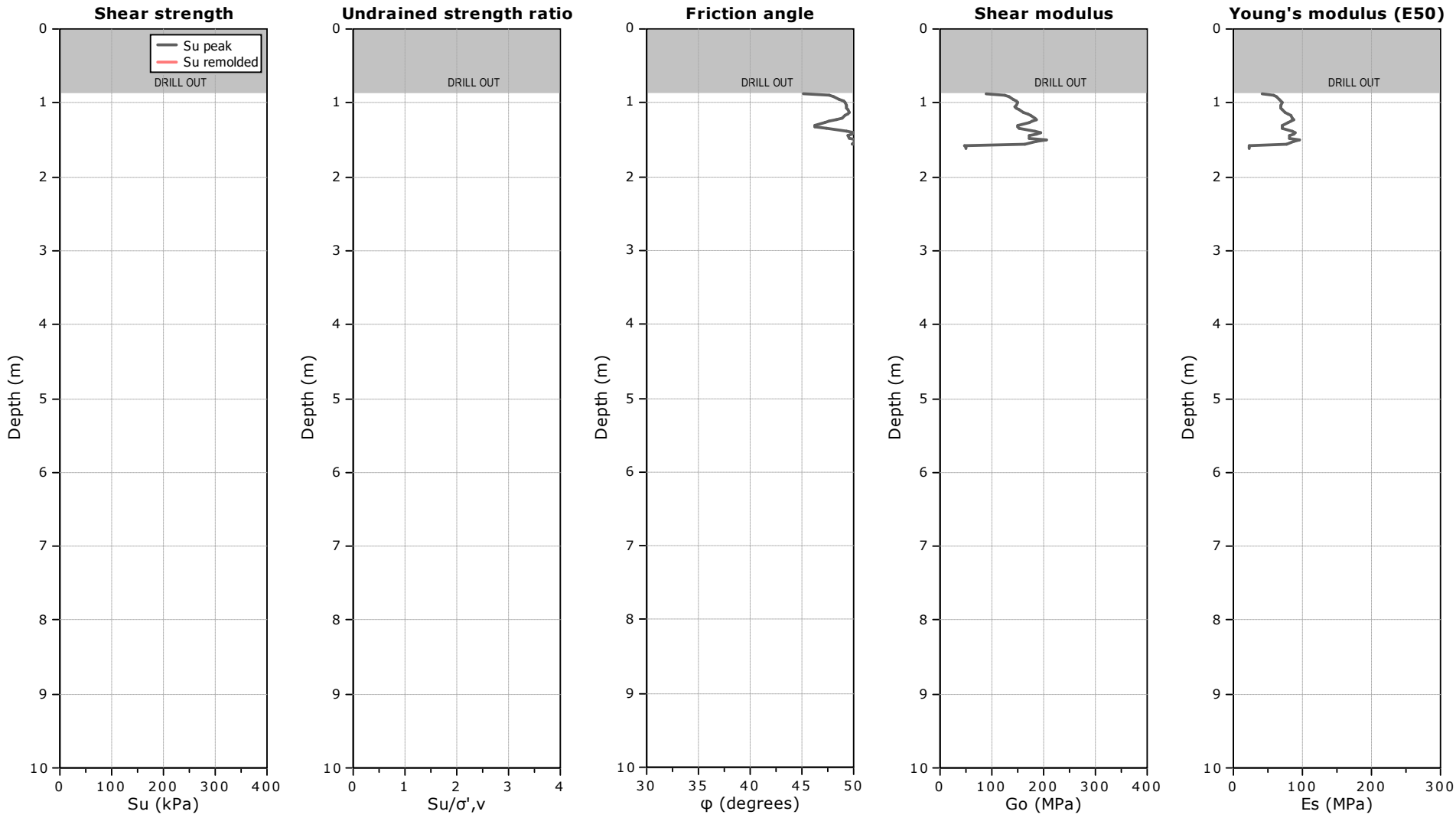
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT5
Total depth: 1.63 m, Date: 2021-09-27
Surface Elevation: 89.02 m
Cone Operator: ConeTec Investigations Ltd.



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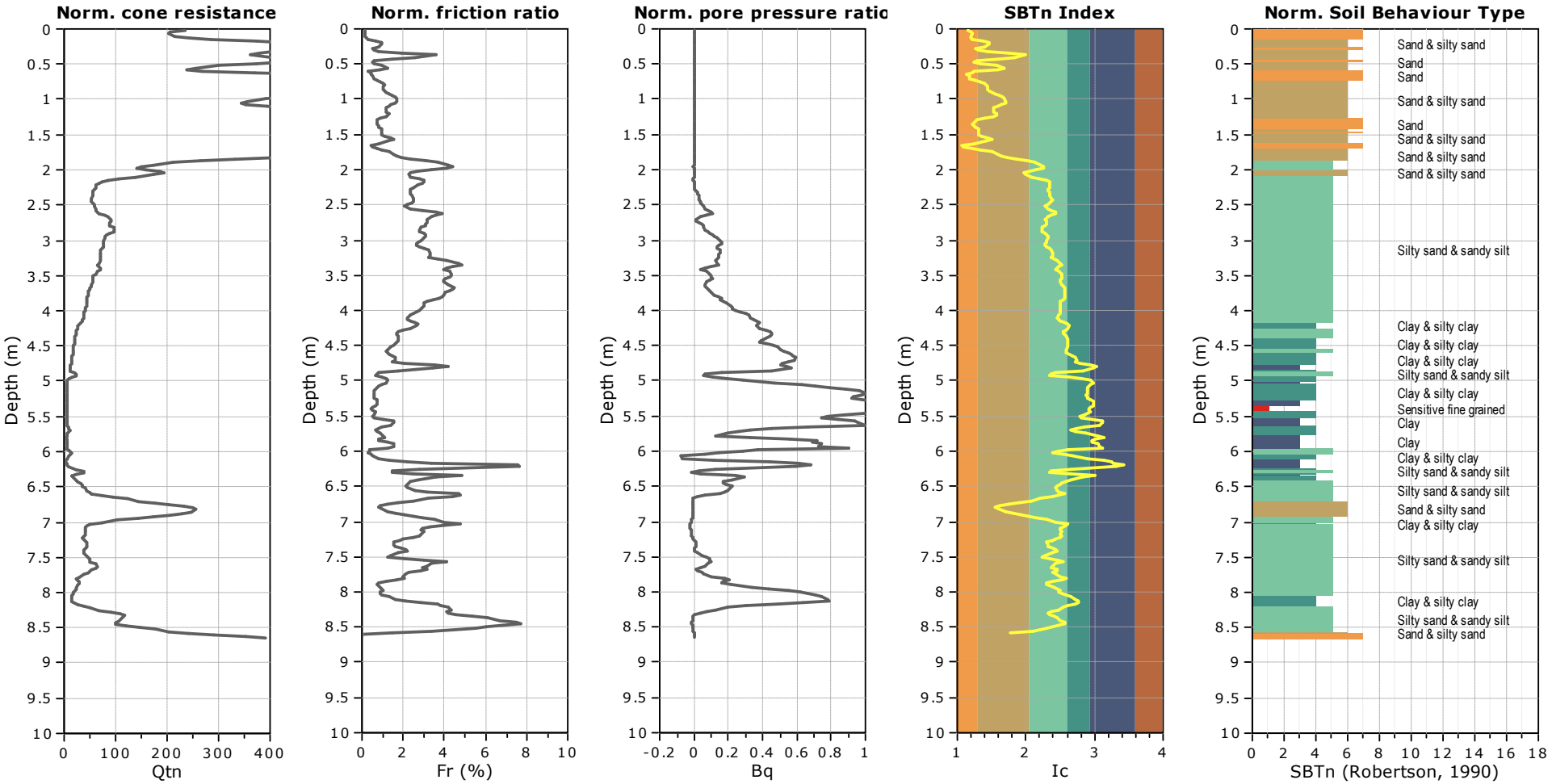
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT5B
Total depth: 8.65 m, Date: 2021-09-27
Surface Elevation: 88.97 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

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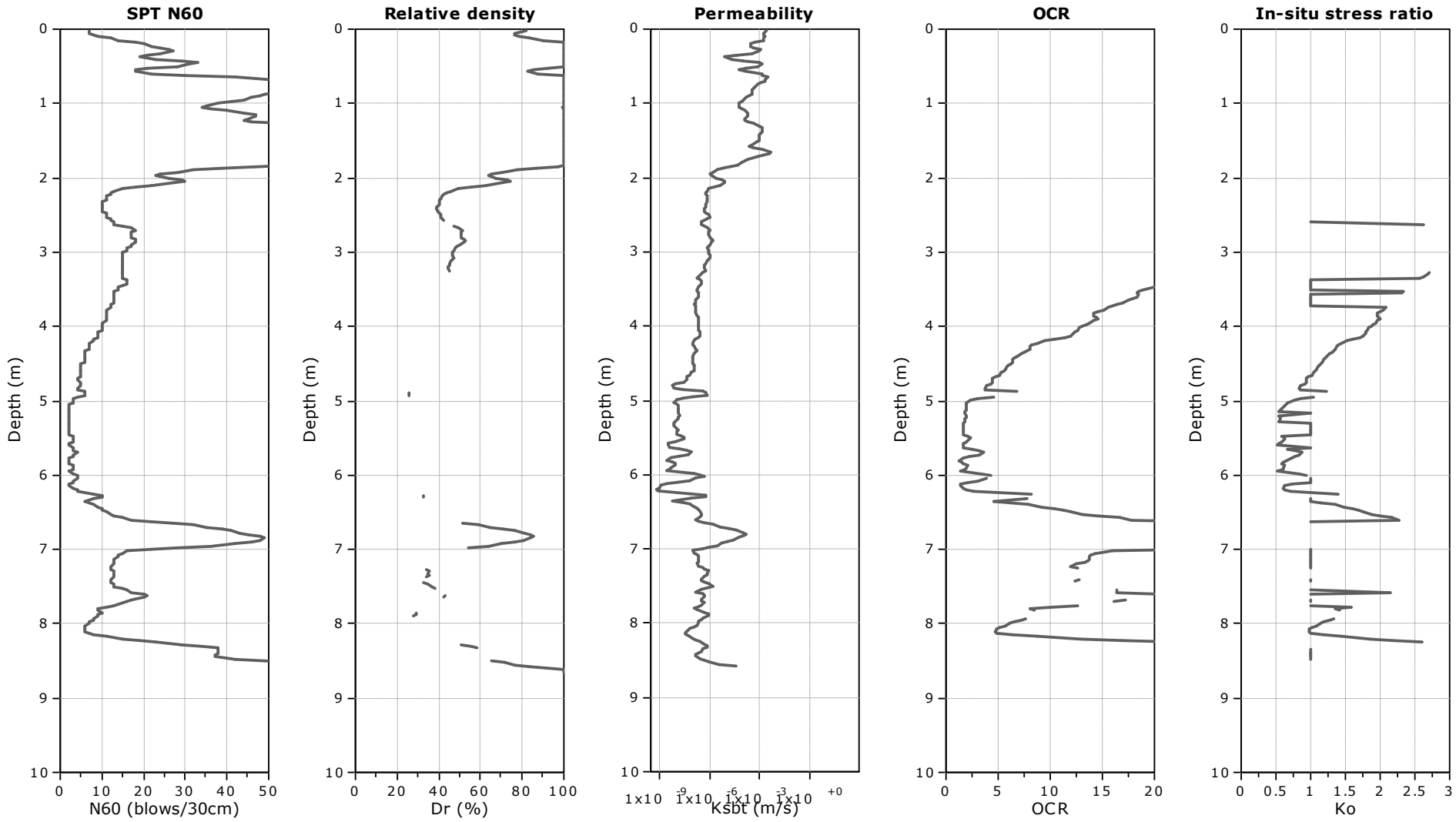
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT5B
Total depth: 8.65 m, Date: 2021-09-27
Surface Elevation: 88.97 m
Cone Operator: ConeTec Investigations Ltd.



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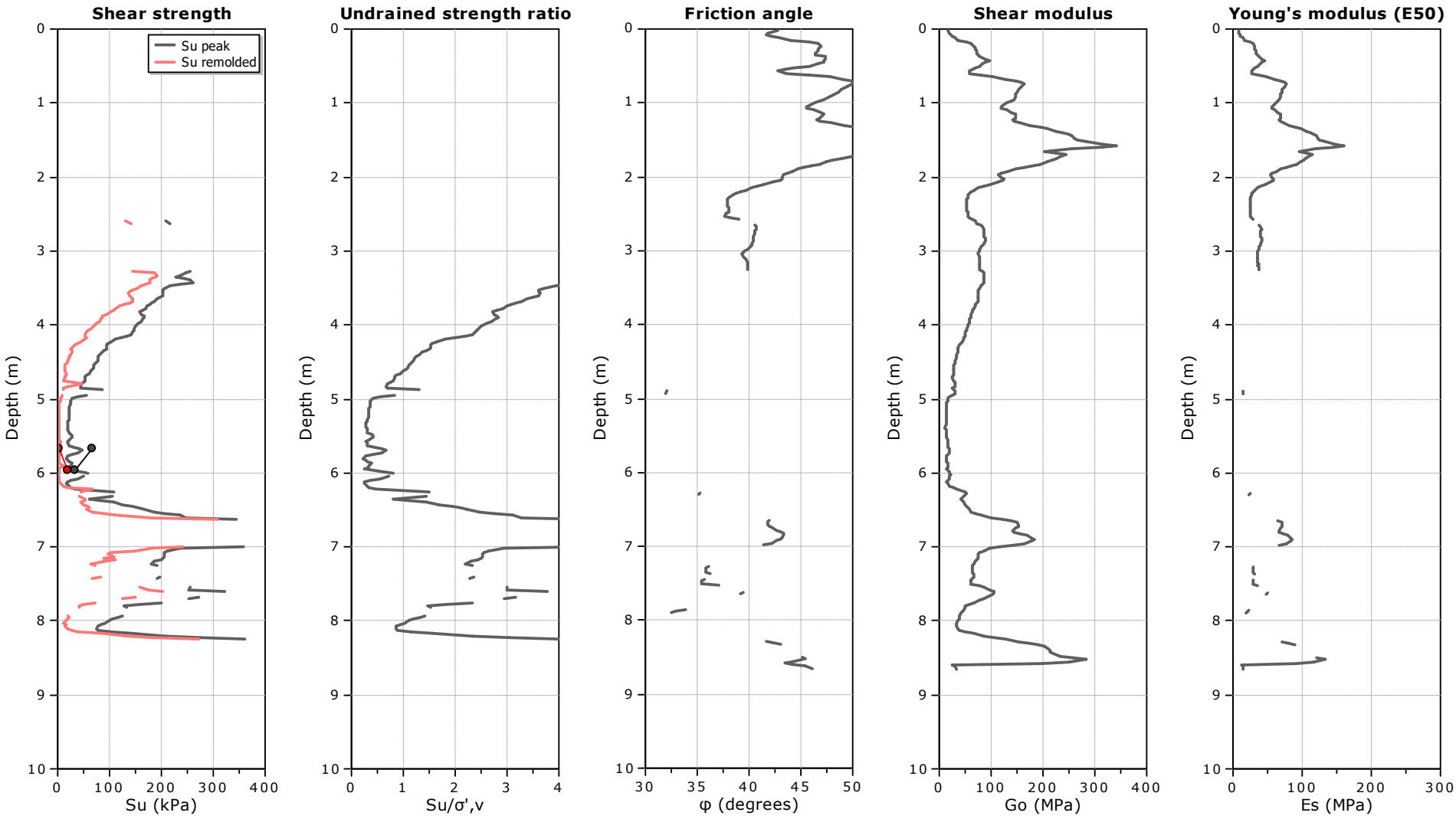
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT5B
Total depth: 8.65 m, Date: 2021-09-27
Surface Elevation: 88.97 m
Cone Operator: ConeTec Investigations Ltd.



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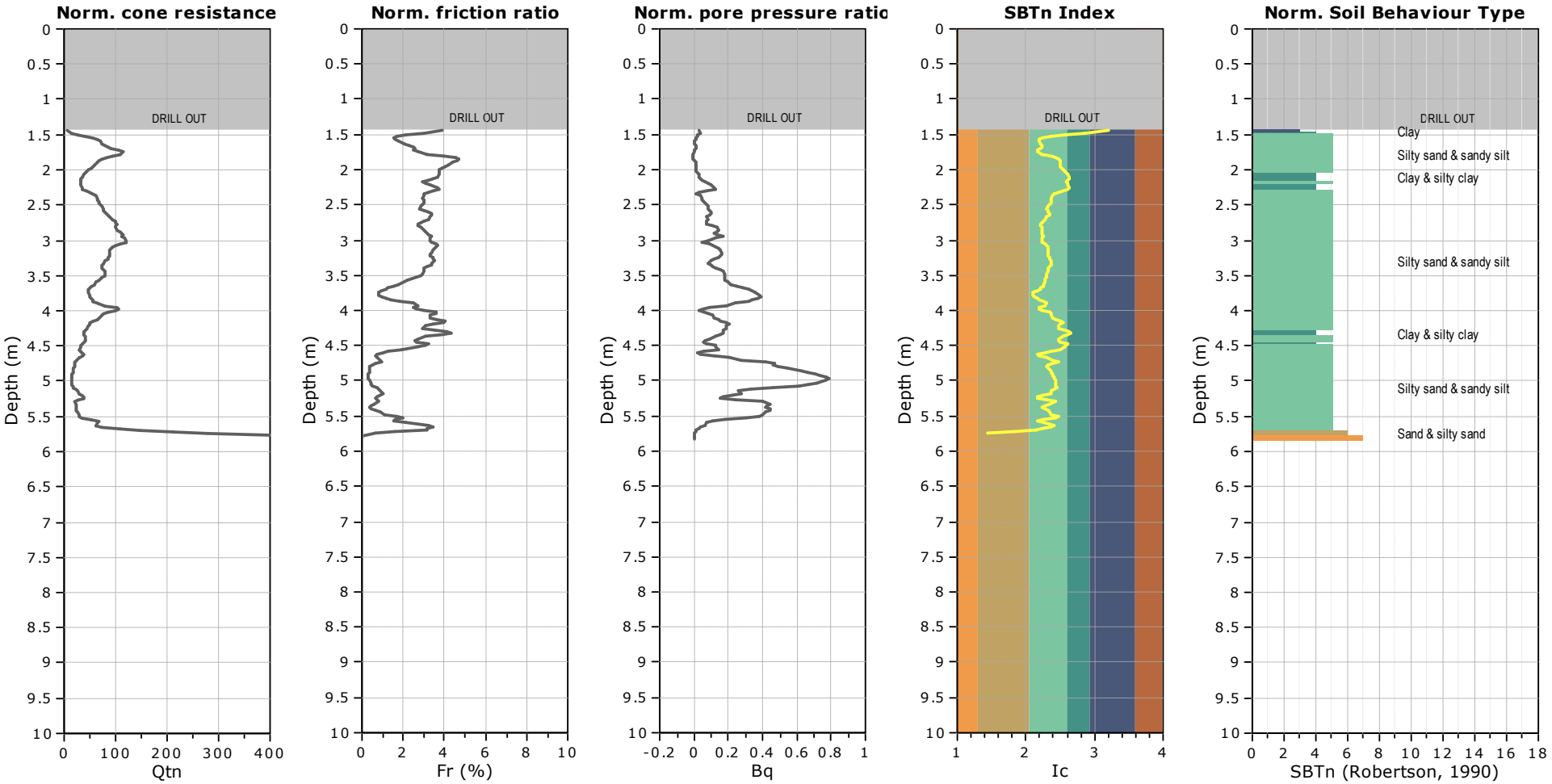
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT7
Total depth: 5.83 m, Date: 2021-09-27
Surface Elevation: 88.16 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

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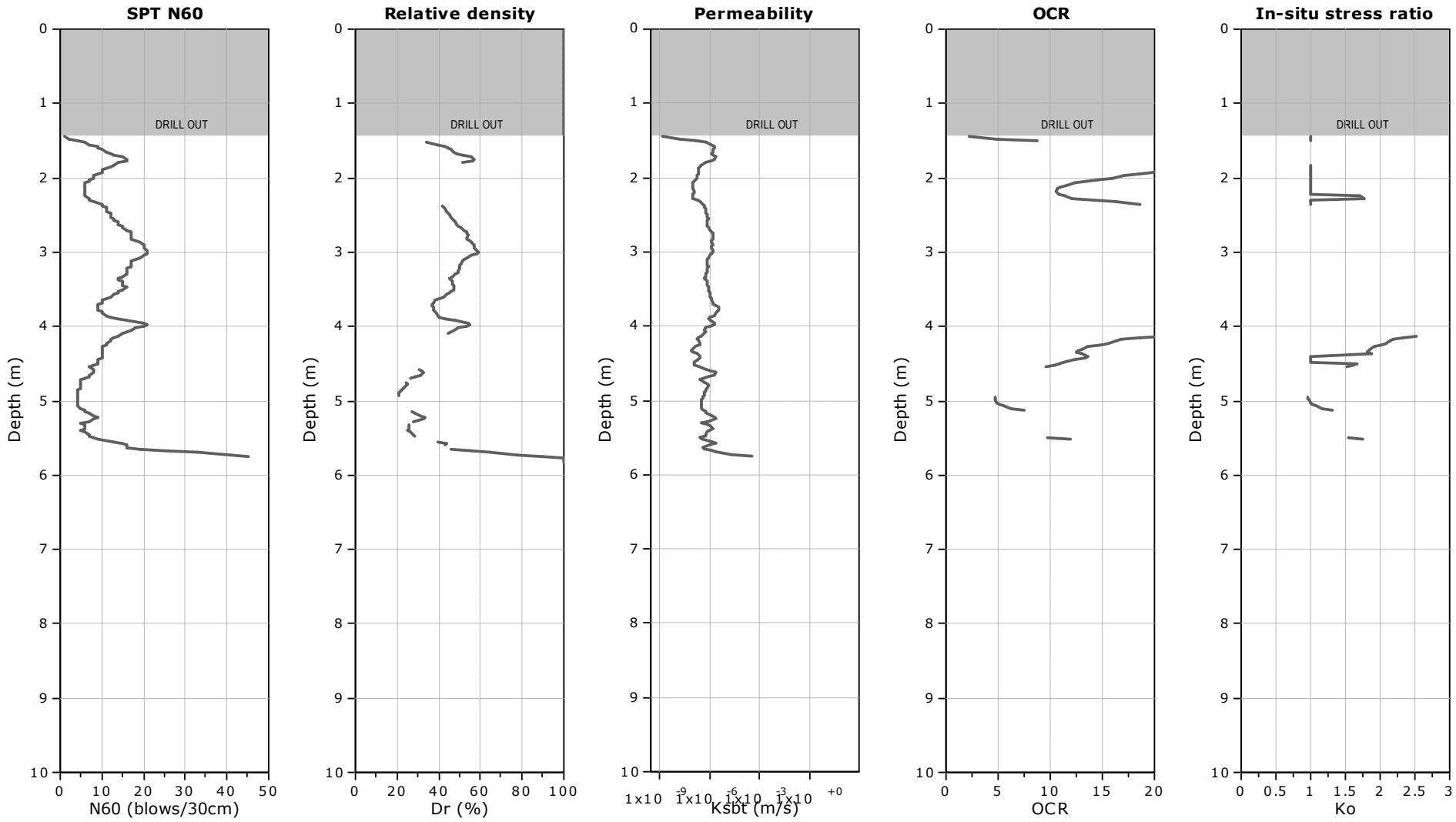
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT7
Total depth: 5.83 m, Date: 2021-09-27
Surface Elevation: 88.16 m
Cone Operator: ConeTec Investigations Ltd.



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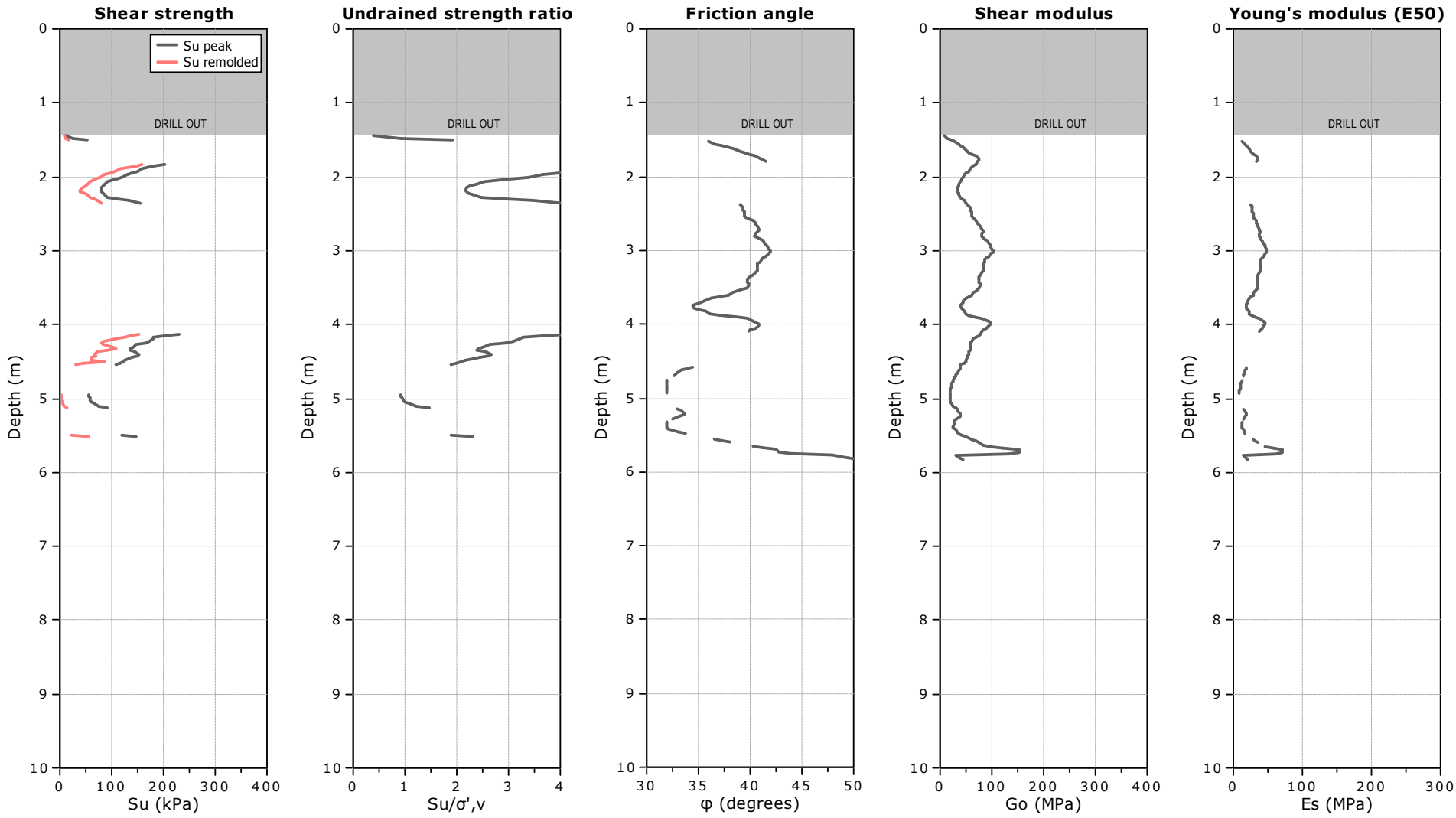
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT7
Total depth: 5.83 m, Date: 2021-09-27
Surface Elevation: 88.16 m
Cone Operator: ConeTec Investigations Ltd.



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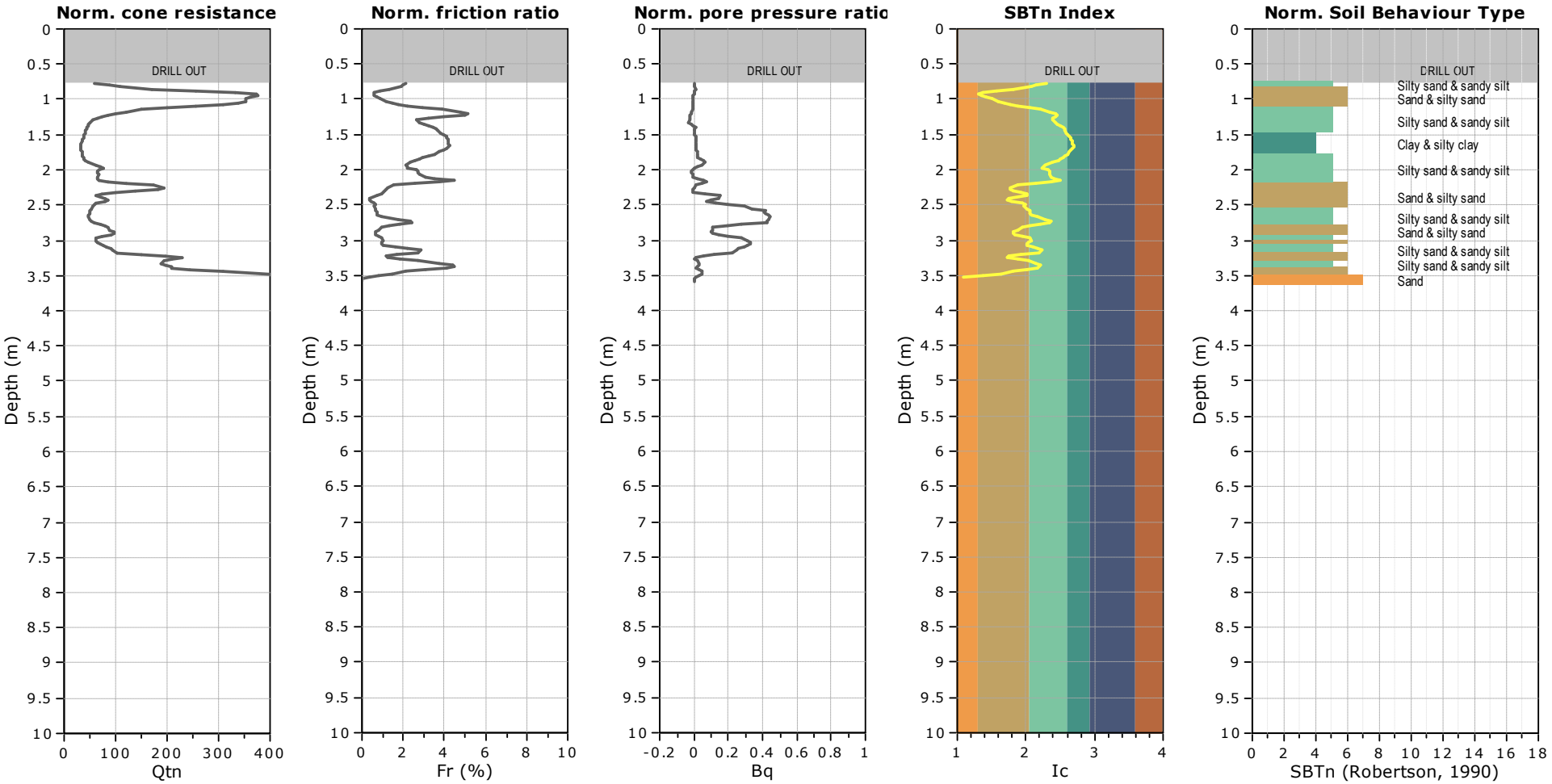
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT8
Total depth: 3.60 m, Date: 2021-09-27
Surface Elevation: 87.60 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

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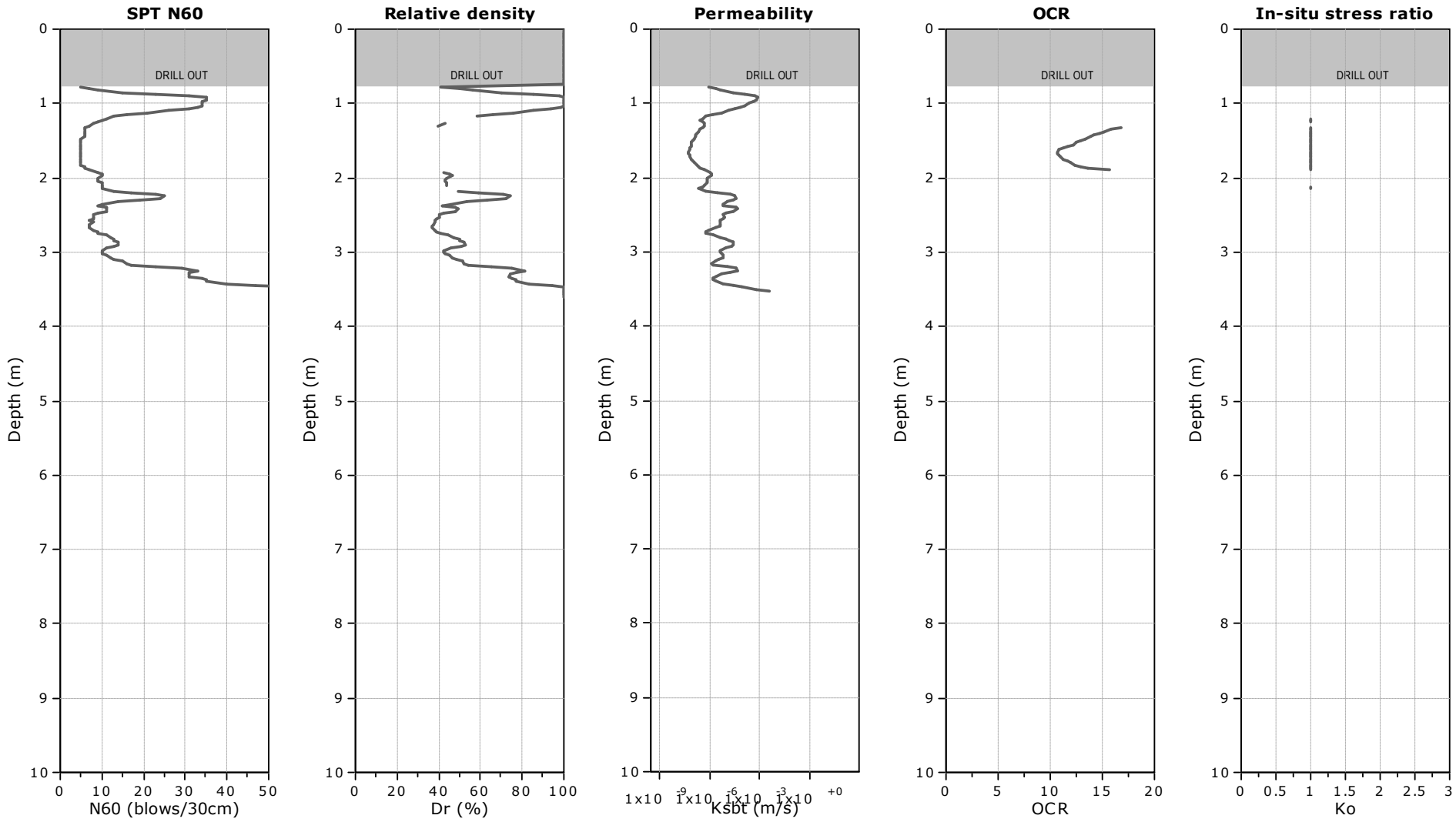
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT8
Total depth: 3.60 m, Date: 2021-09-27
Surface Elevation: 87.60 m
Cone Operator: ConeTec Investigations Ltd.



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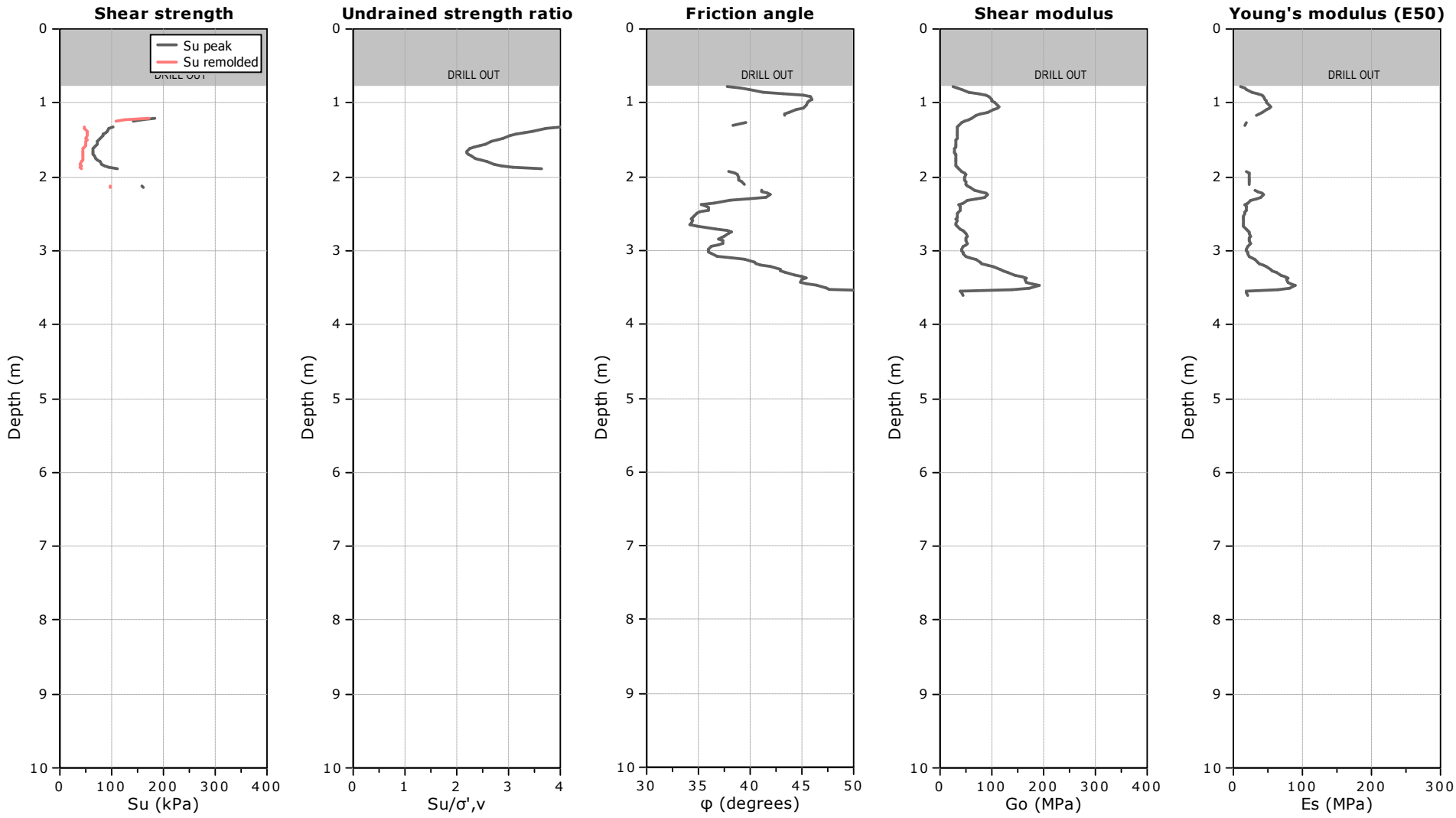
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT8
Total depth: 3.60 m, Date: 2021-09-27
Surface Elevation: 87.60 m
Cone Operator: ConeTec Investigations Ltd.



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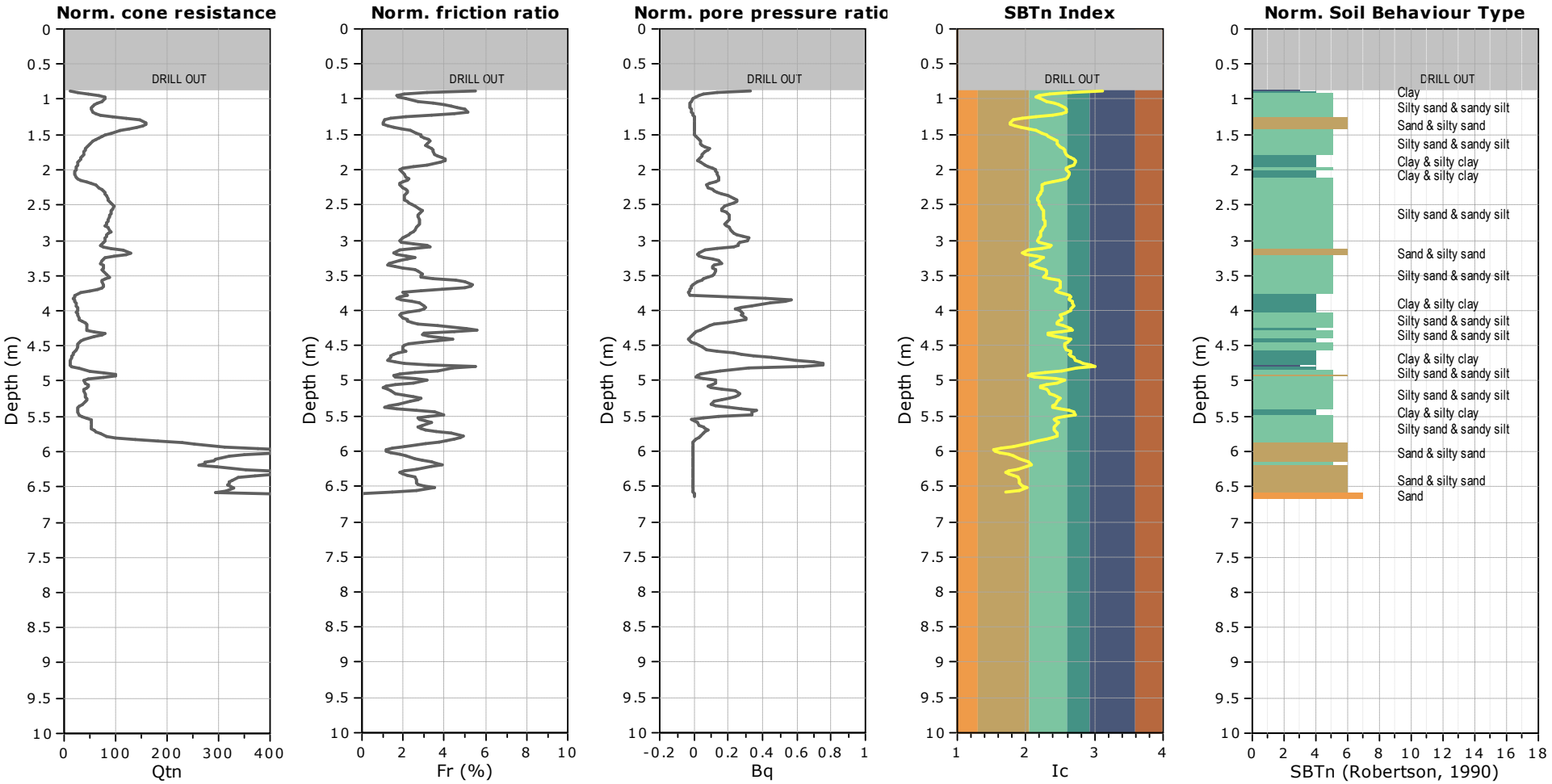
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT10
Total depth: 6.65 m, Date: 2021-09-23
Surface Elevation: 88.42 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

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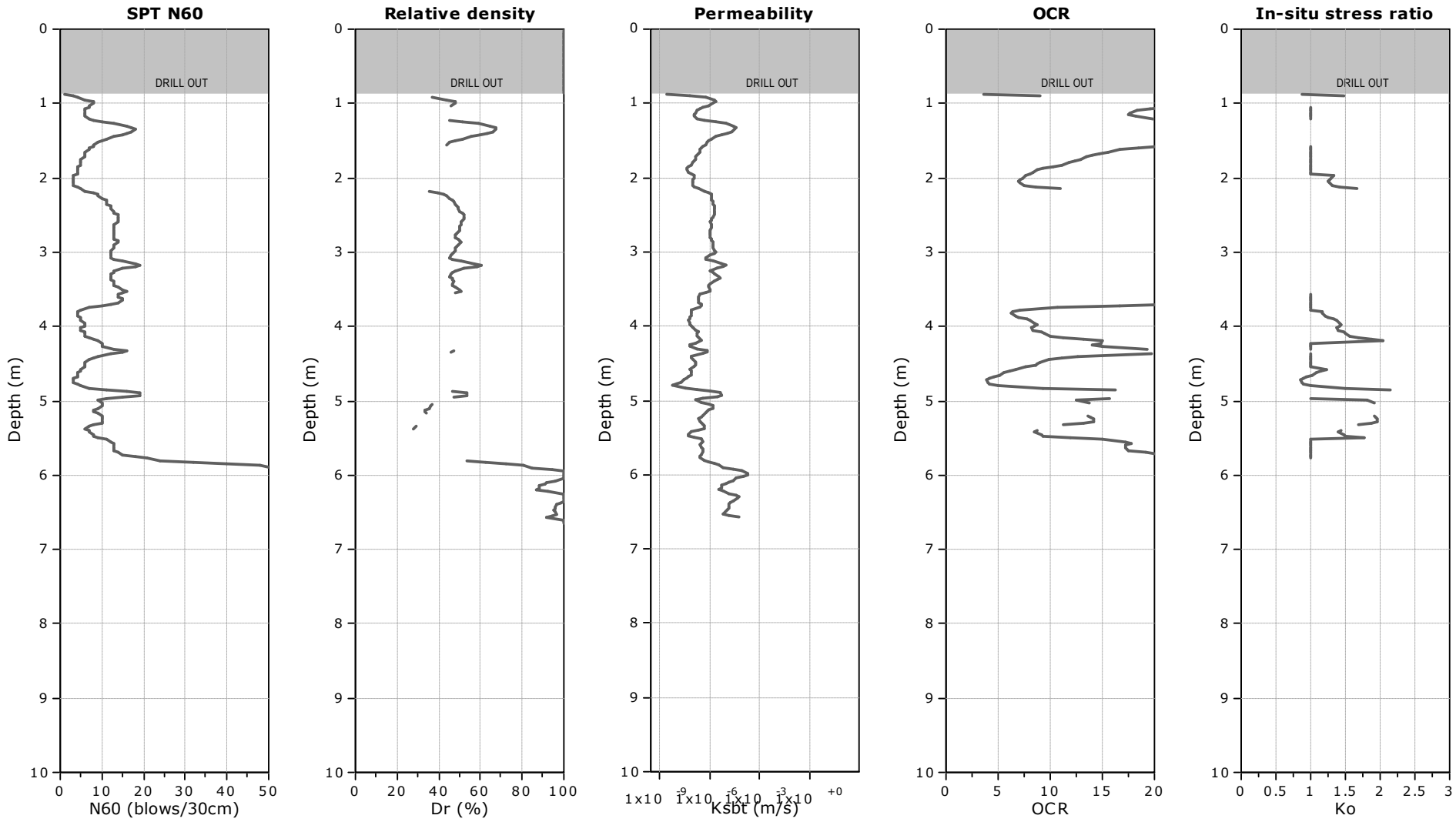
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT10
Total depth: 6.65 m, Date: 2021-09-23
Surface Elevation: 88.42 m
Cone Operator: ConeTec Investigations Ltd.



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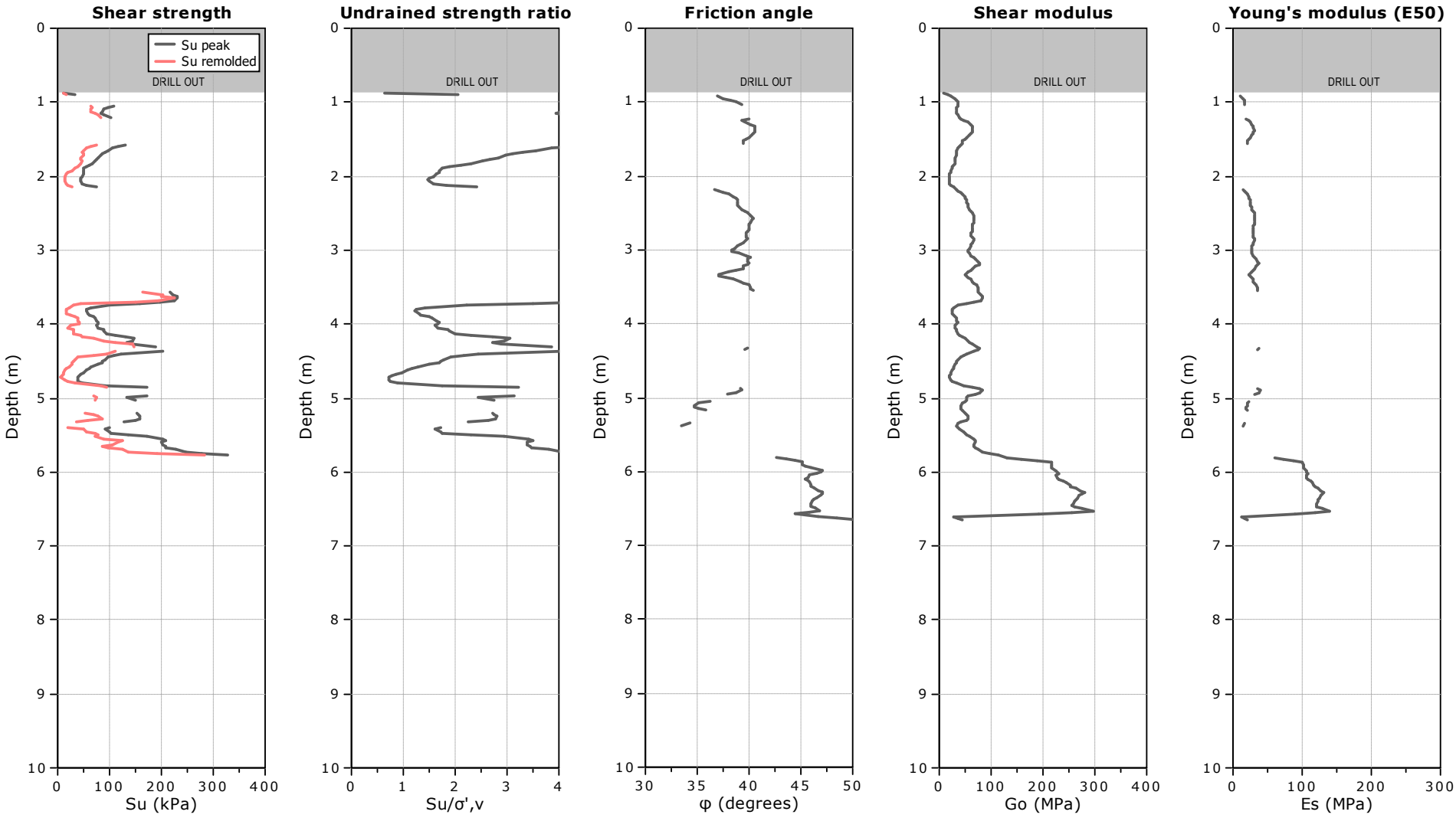
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT10
Total depth: 6.65 m, Date: 2021-09-23
Surface Elevation: 88.42 m
Cone Operator: ConeTec Investigations Ltd.



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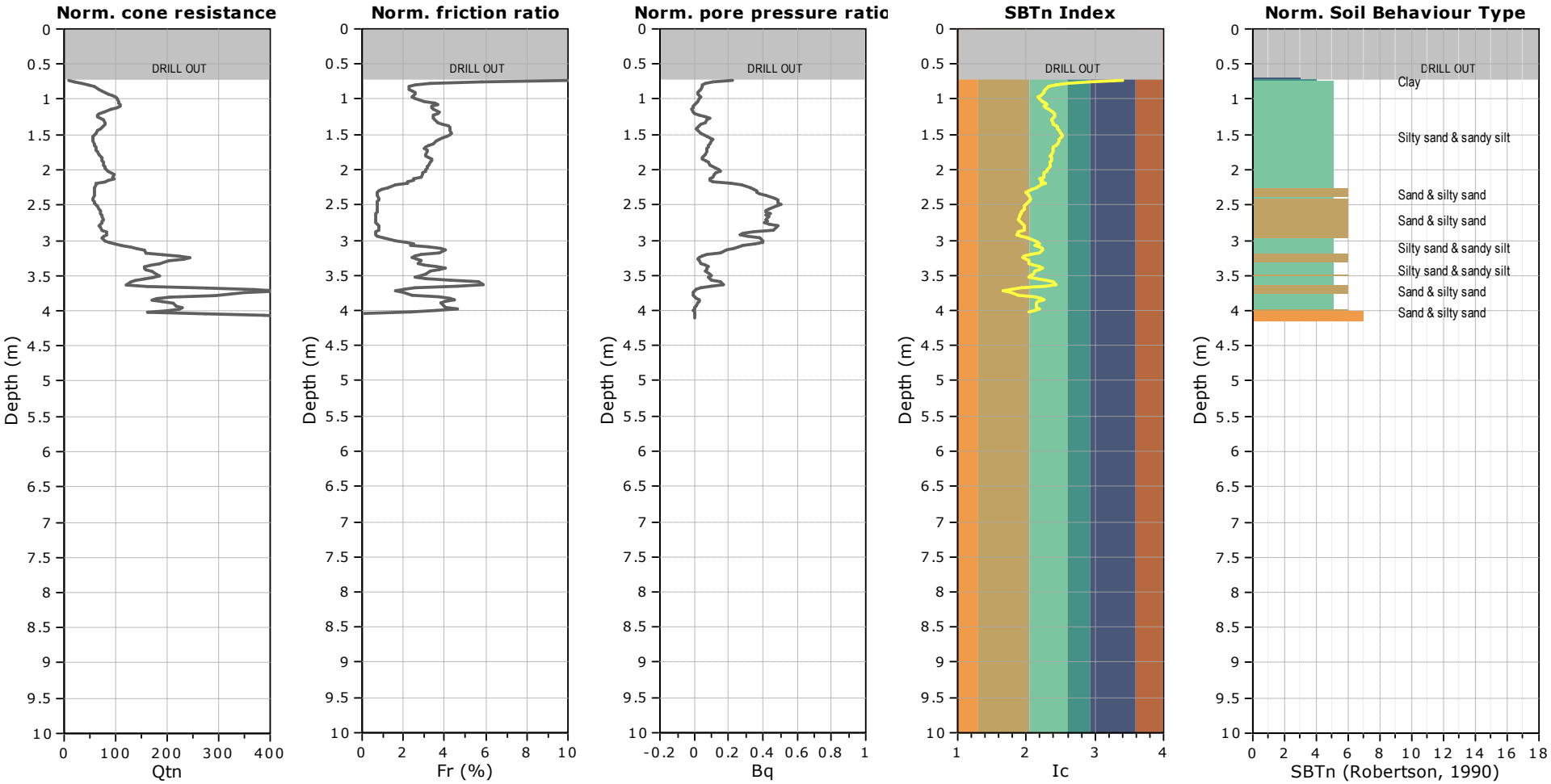
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT11
Total depth: 4.10 m, Date: 2021-09-24
Surface Elevation: 87.93 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

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Project: **21451329 - Darlington New Nuclear Project**

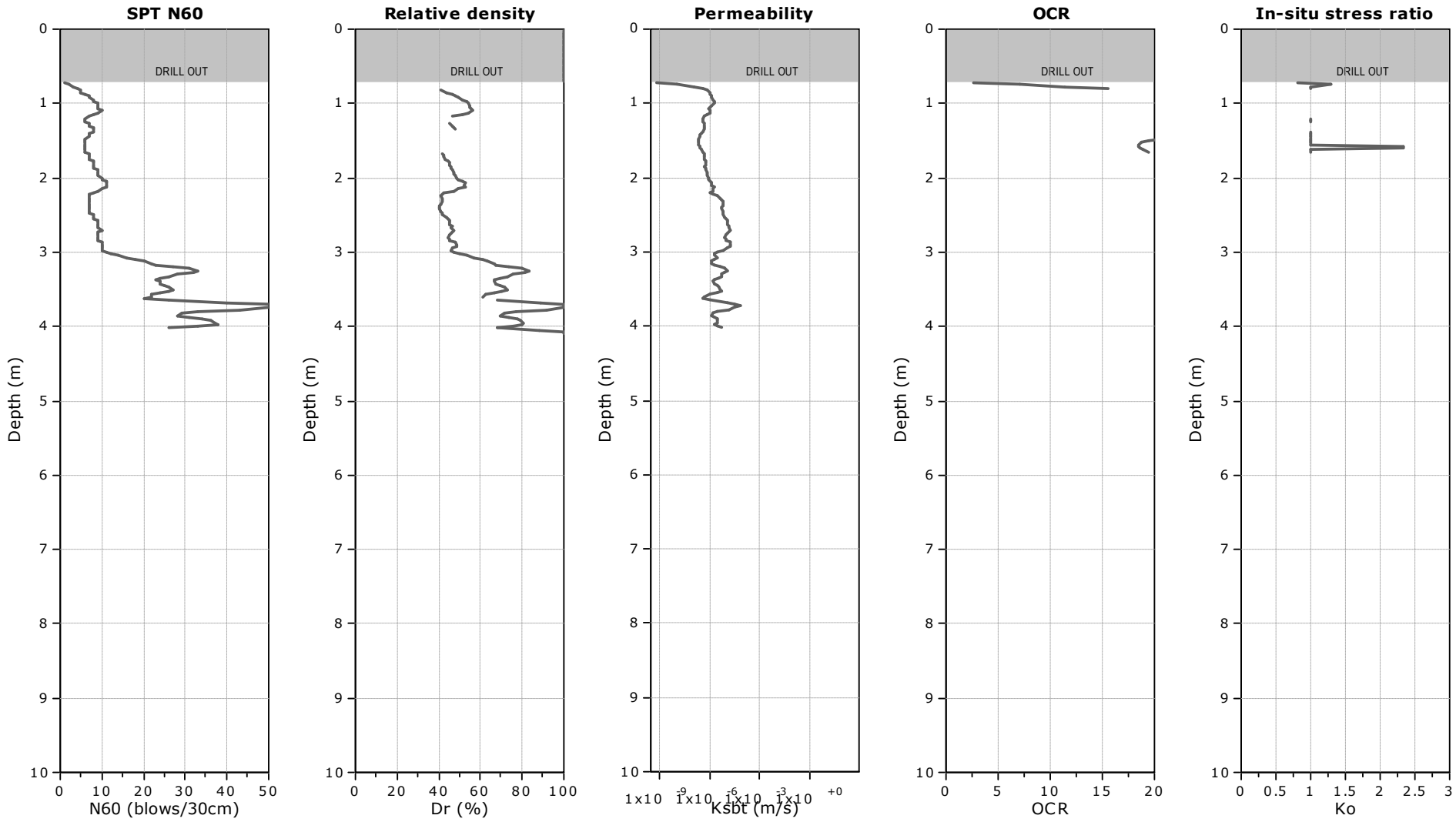
Location: **Bowmanville, Ontario**

CPT11

Total depth: 4.10 m, Date: 2021-09-24

Surface Elevation: 87.93 m

Cone Operator: ConeTec Investigations Ltd.



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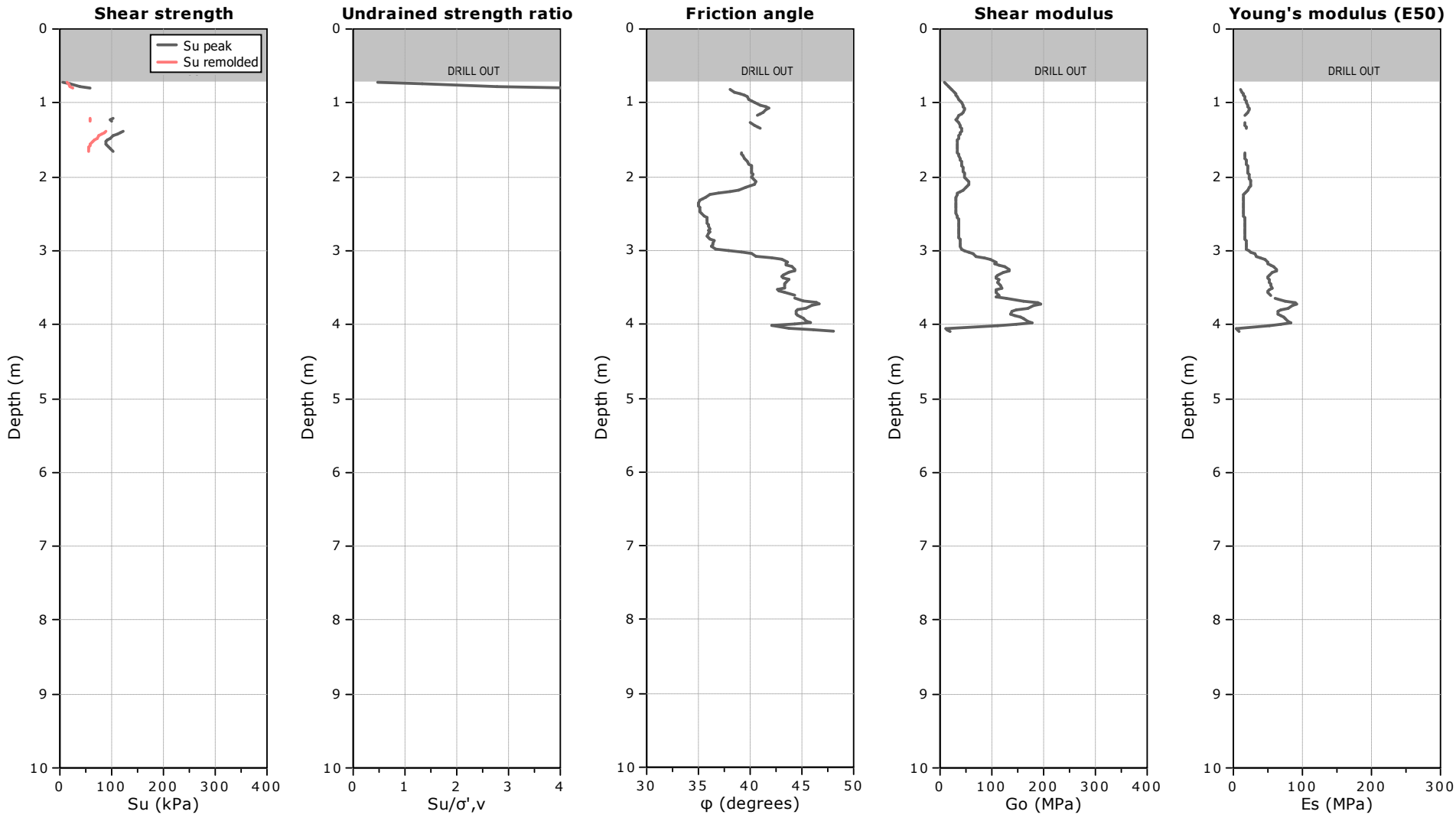
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT11
Total depth: 4.10 m, Date: 2021-09-24
Surface Elevation: 87.93 m
Cone Operator: ConeTec Investigations Ltd.



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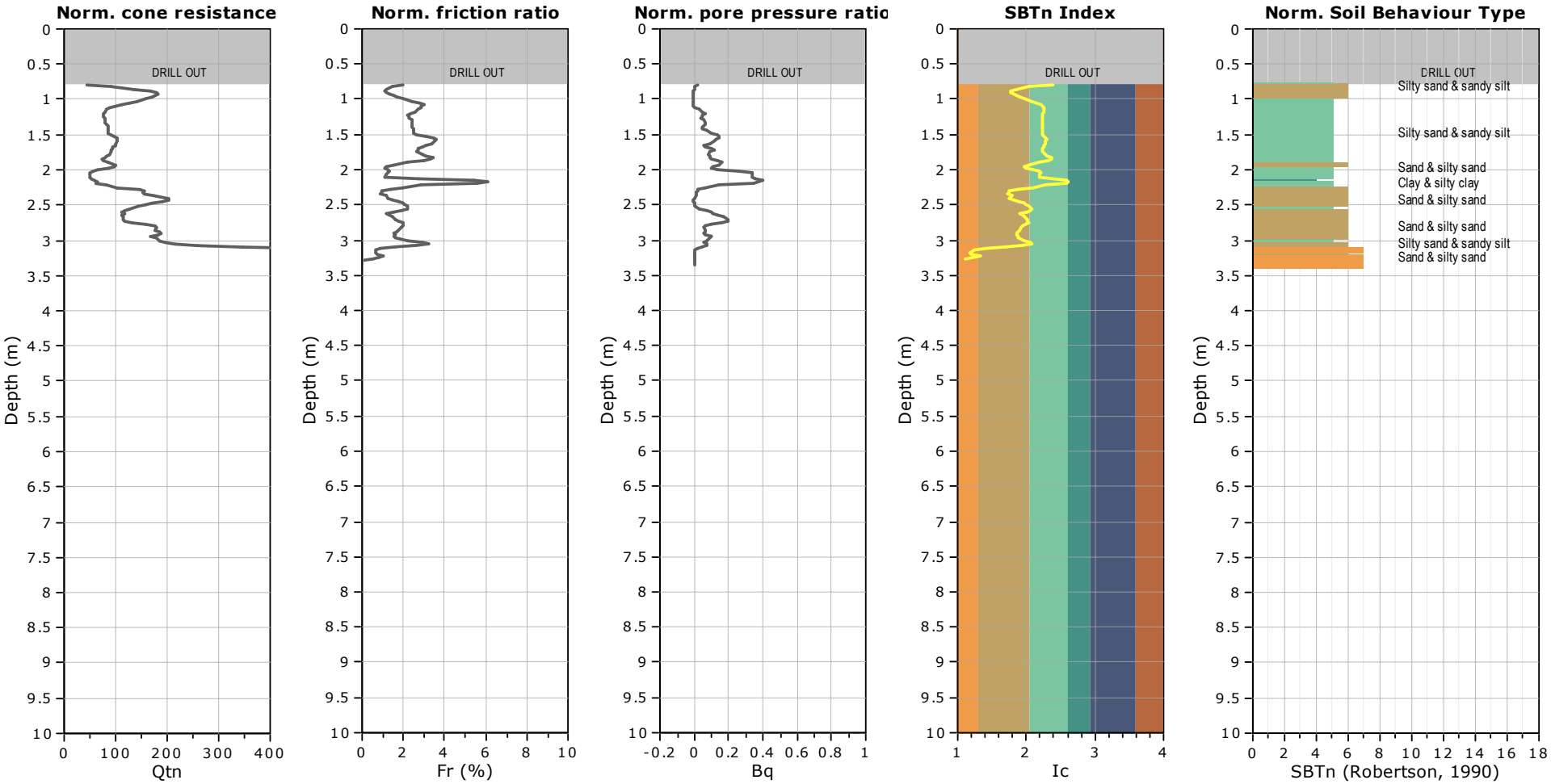
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT12
Total depth: 3.35 m, Date: 2021-09-24
Surface Elevation: 87.45 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

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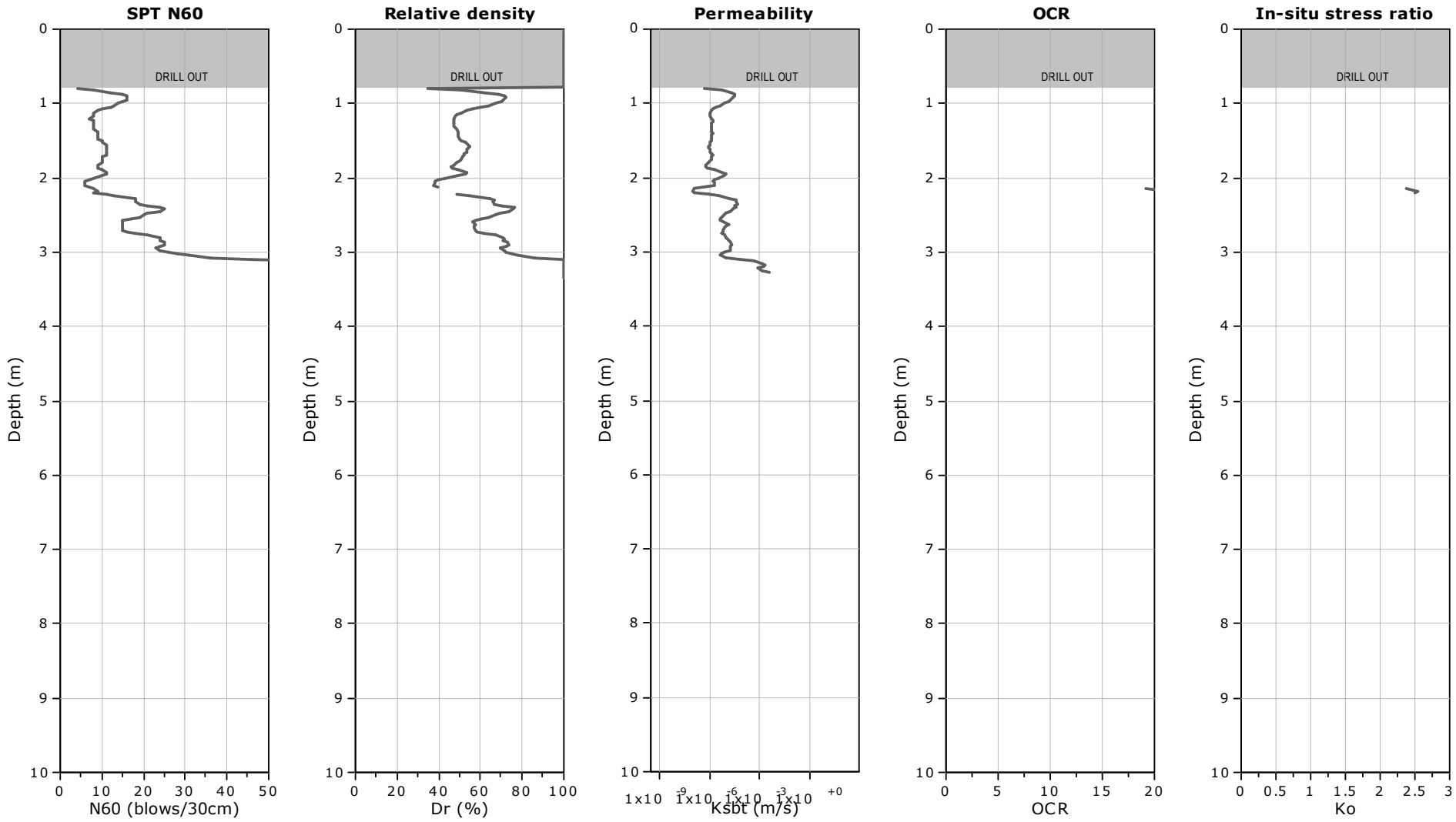
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT12
Total depth: 3.35 m, Date: 2021-09-24
Surface Elevation: 87.45 m
Cone Operator: ConeTec Investigations Ltd.



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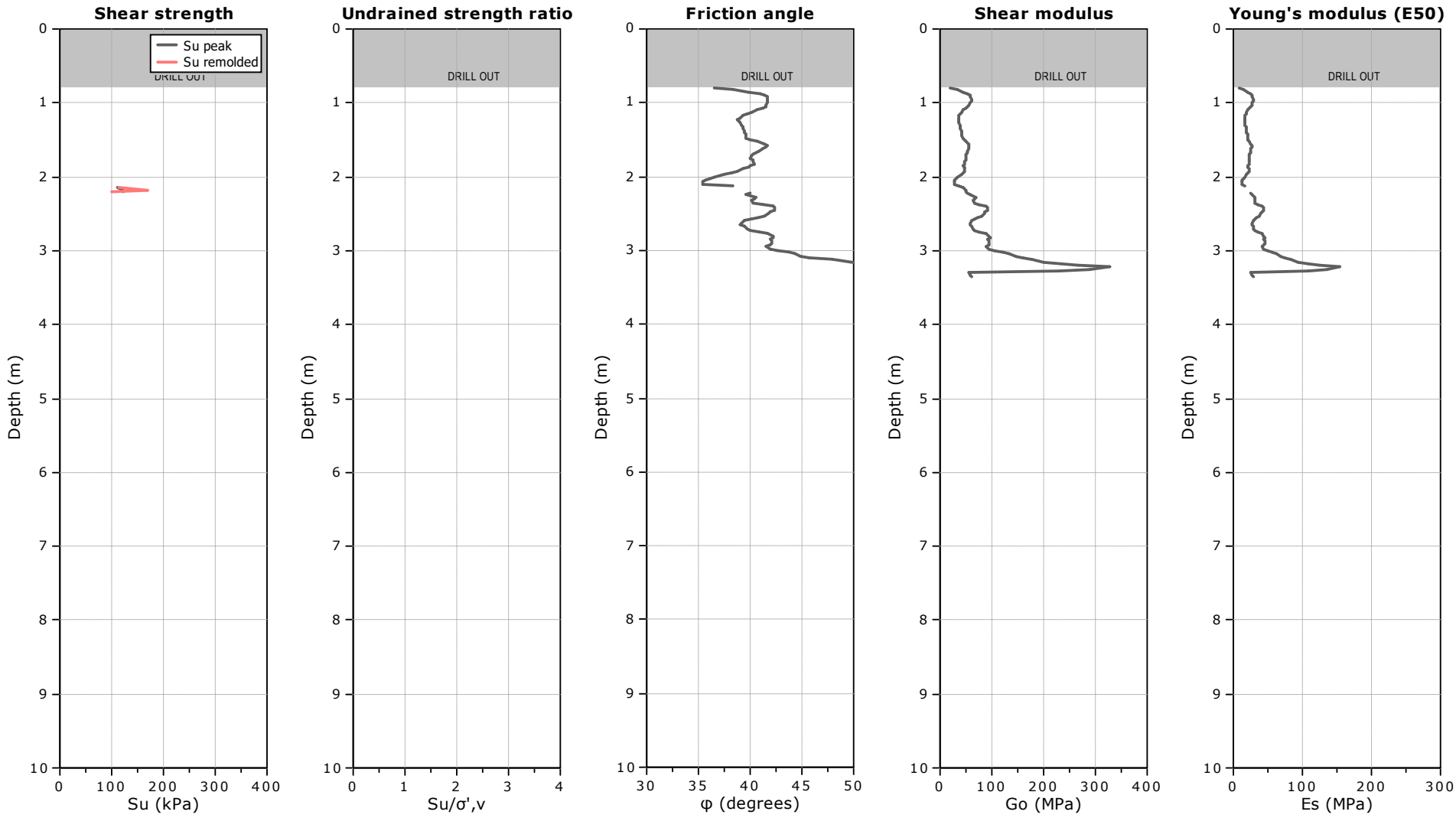
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT12
Total depth: 3.35 m, Date: 2021-09-24
Surface Elevation: 87.45 m
Cone Operator: ConeTec Investigations Ltd.



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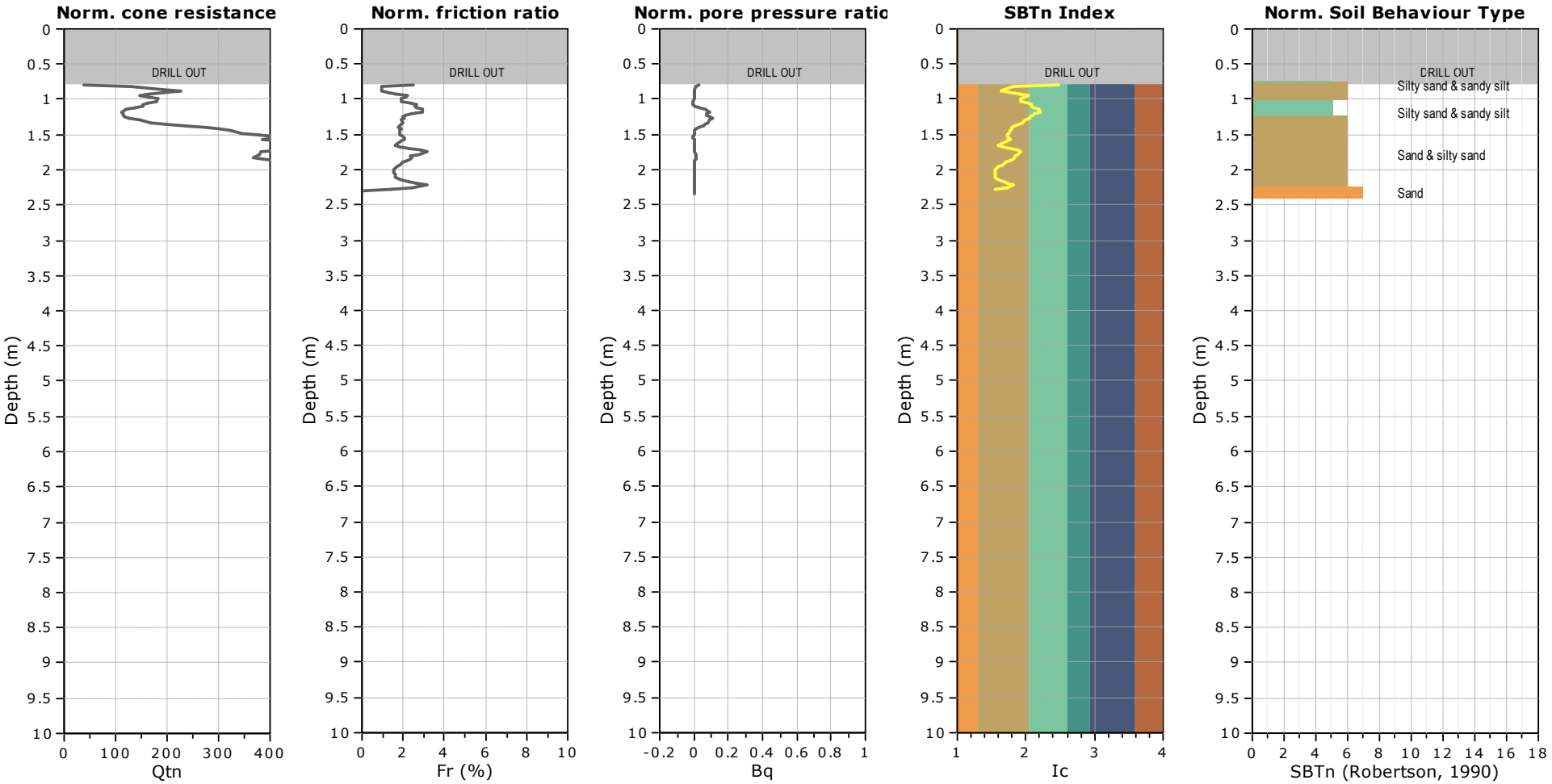
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT18
Total depth: 2.35 m, Date: 2021-09-24
Surface Elevation: 87.15 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

- 1. Sensitive fine grained
- 2. Organic material
- 3. Clay to silty clay
- 4. Clayey silt to silty clay
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- 6. Clean sand to silty sand
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- 8. Very stiff sand to clayey sand
- 9. Very stiff fine grained

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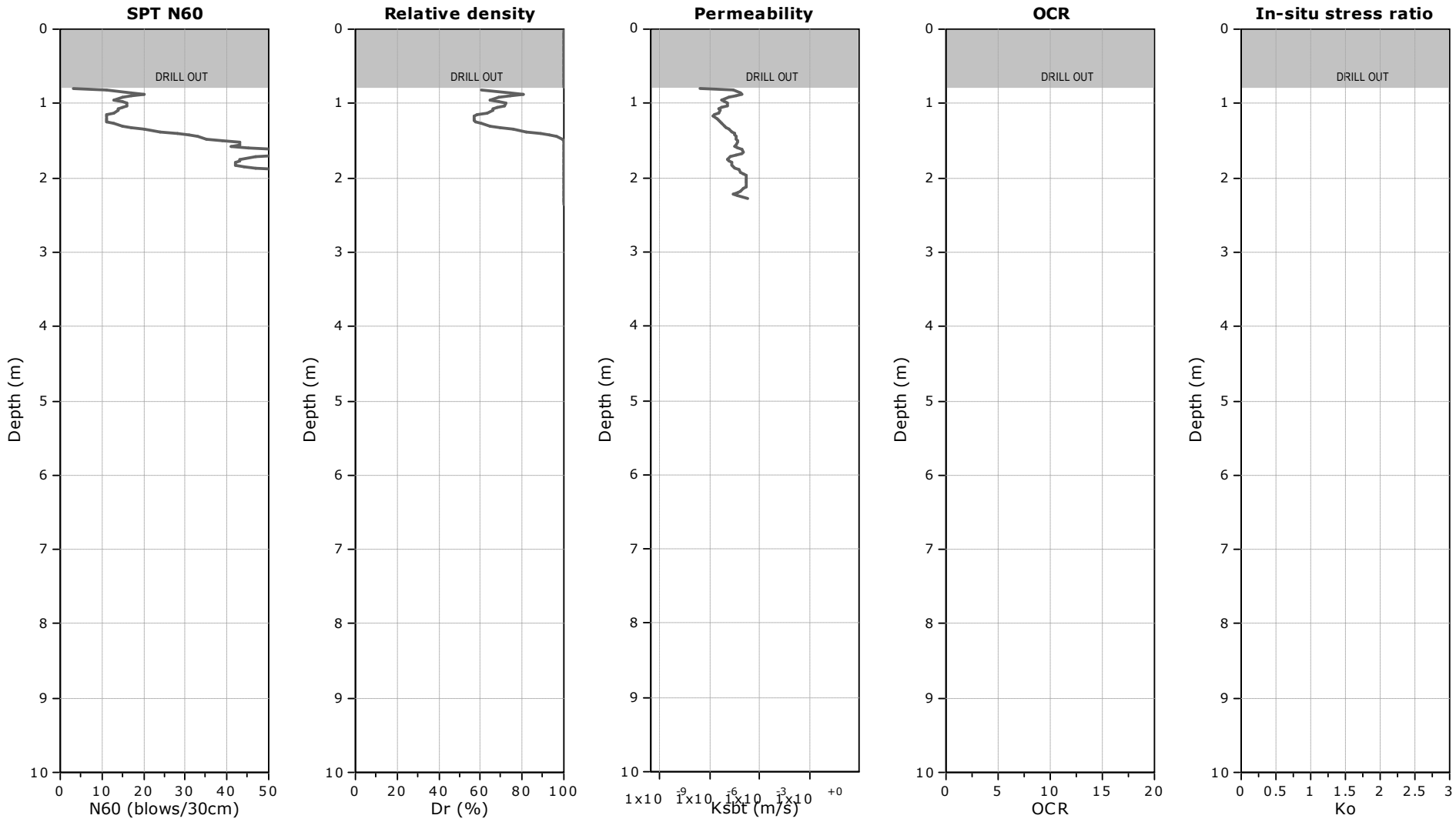
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT18
Total depth: 2.35 m, Date: 2021-09-24
Surface Elevation: 87.15 m
Cone Operator: ConeTec Investigations Ltd.



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Project: **21451329 - Darlington New Nuclear Project**
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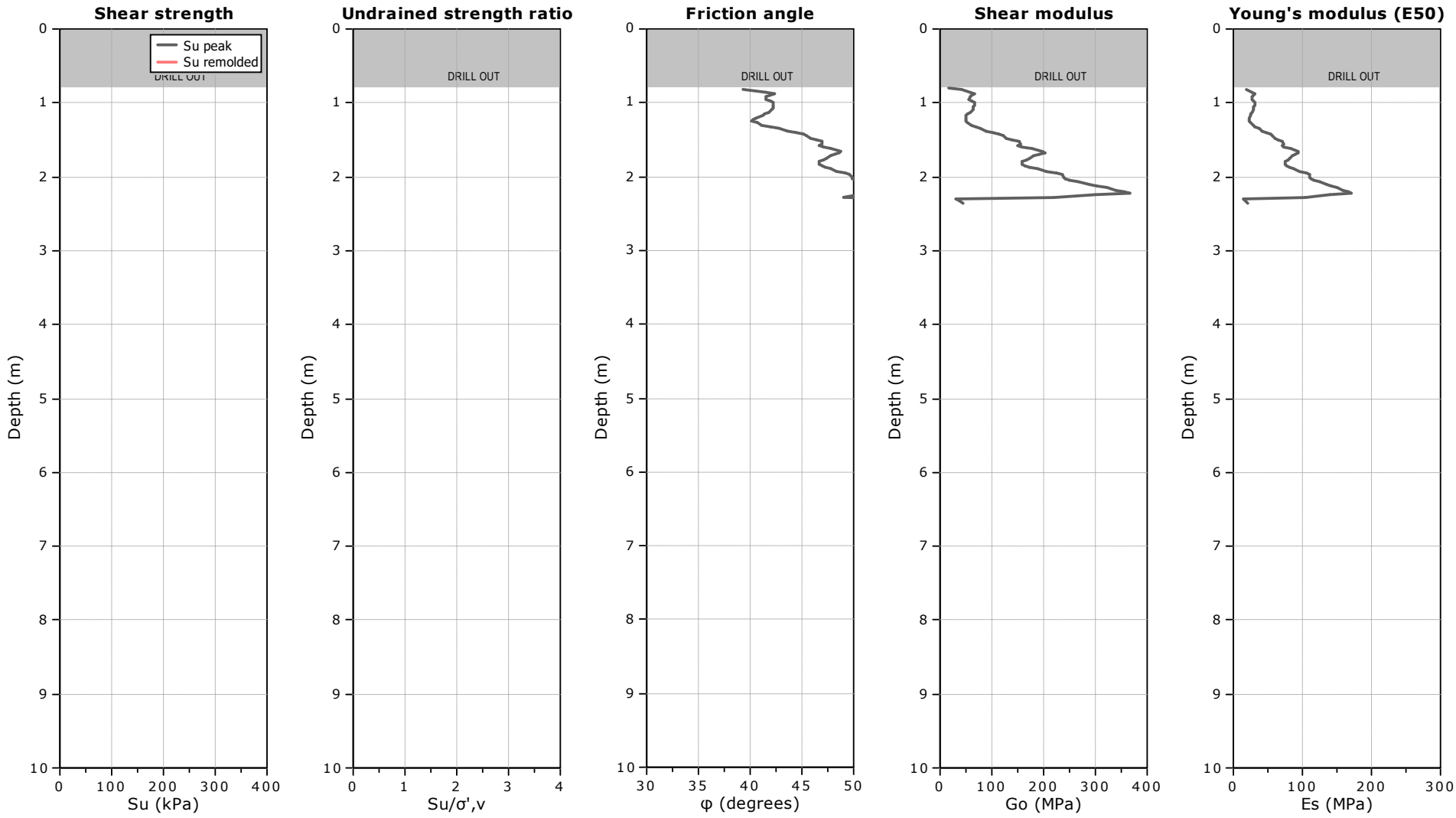
CPT18
Total depth: 2.35 m, Date: 2021-09-24
Surface Elevation: 87.15 m
Cone Operator: ConeTec Investigations Ltd.



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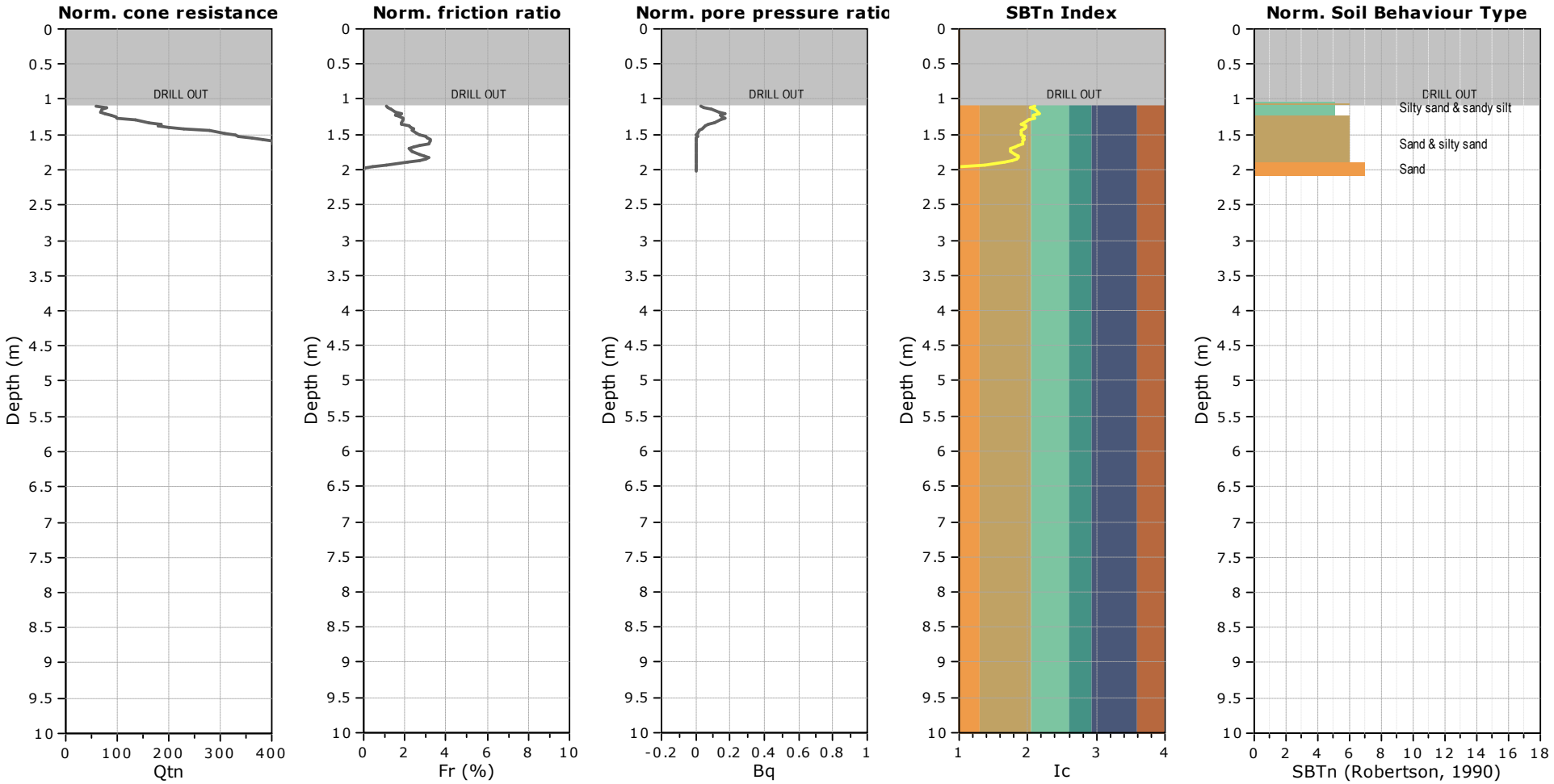
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT19
Total depth: 2.02 m, Date: 2021-09-23
Surface Elevation: 86.63 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
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5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

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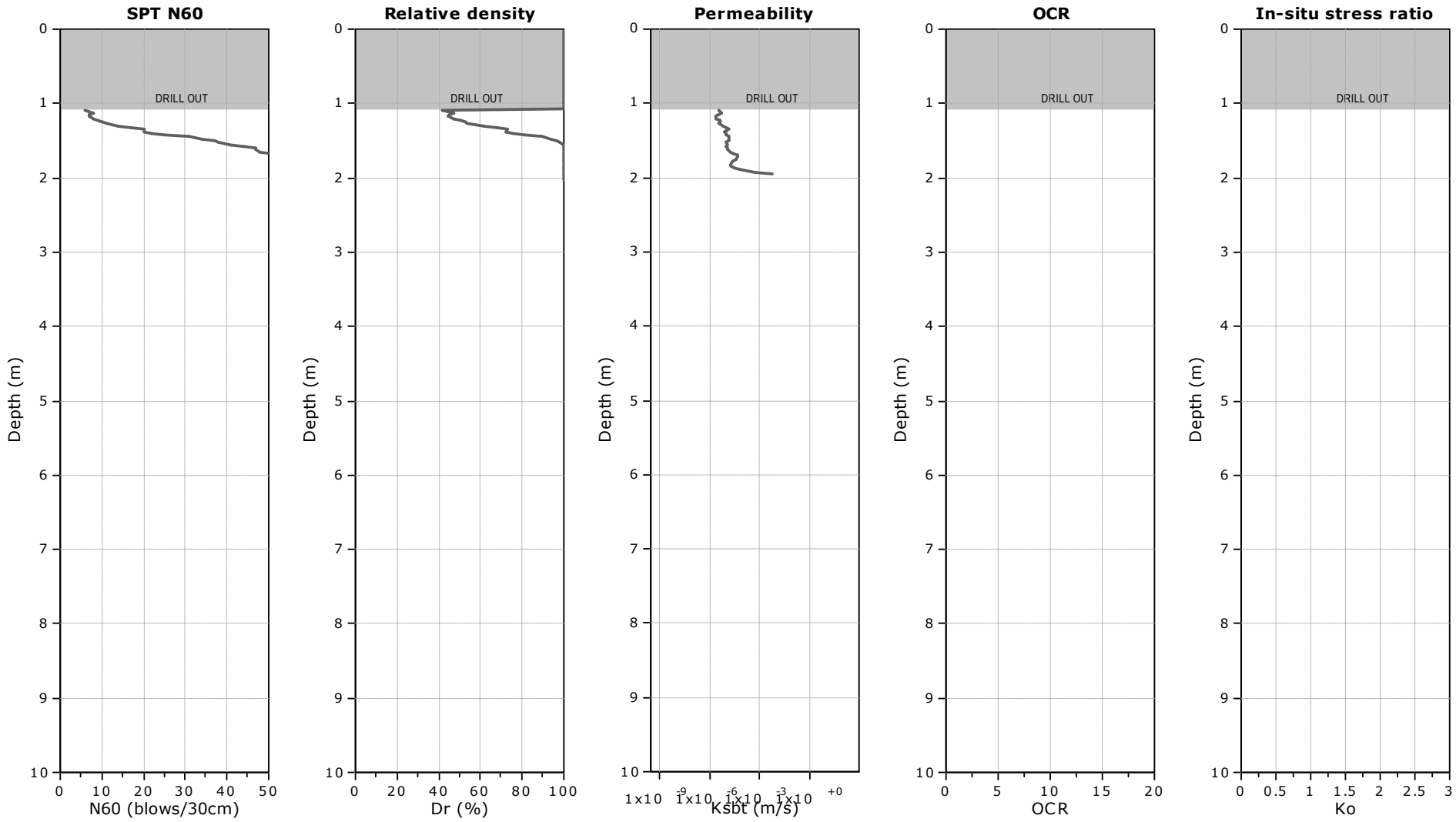
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT19
Total depth: 2.02 m, Date: 2021-09-23
Surface Elevation: 86.63 m
Cone Operator: ConeTec Investigations Ltd.



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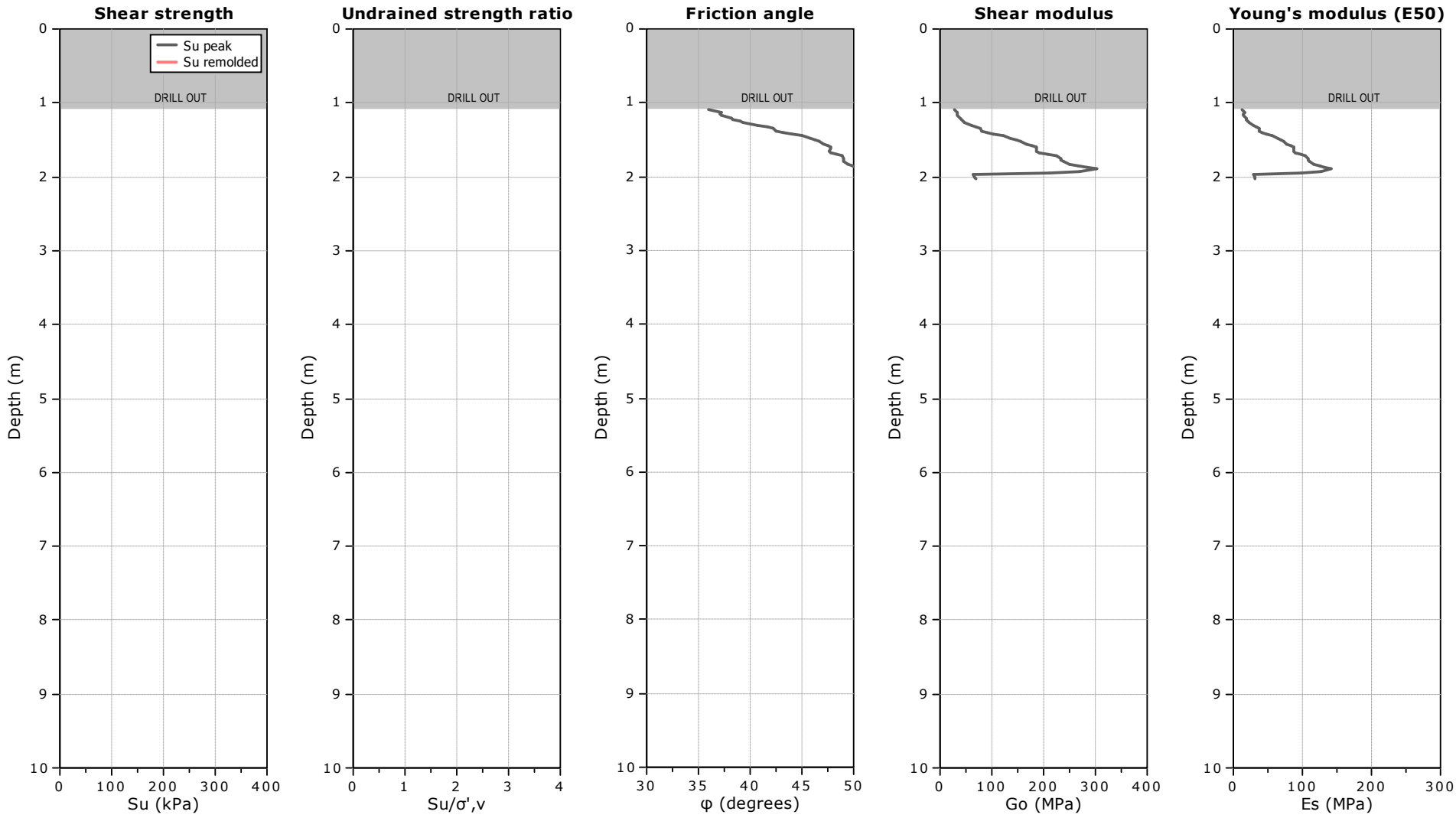
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT19
Total depth: 2.02 m, Date: 2021-09-23
Surface Elevation: 86.63 m
Cone Operator: ConeTec Investigations Ltd.



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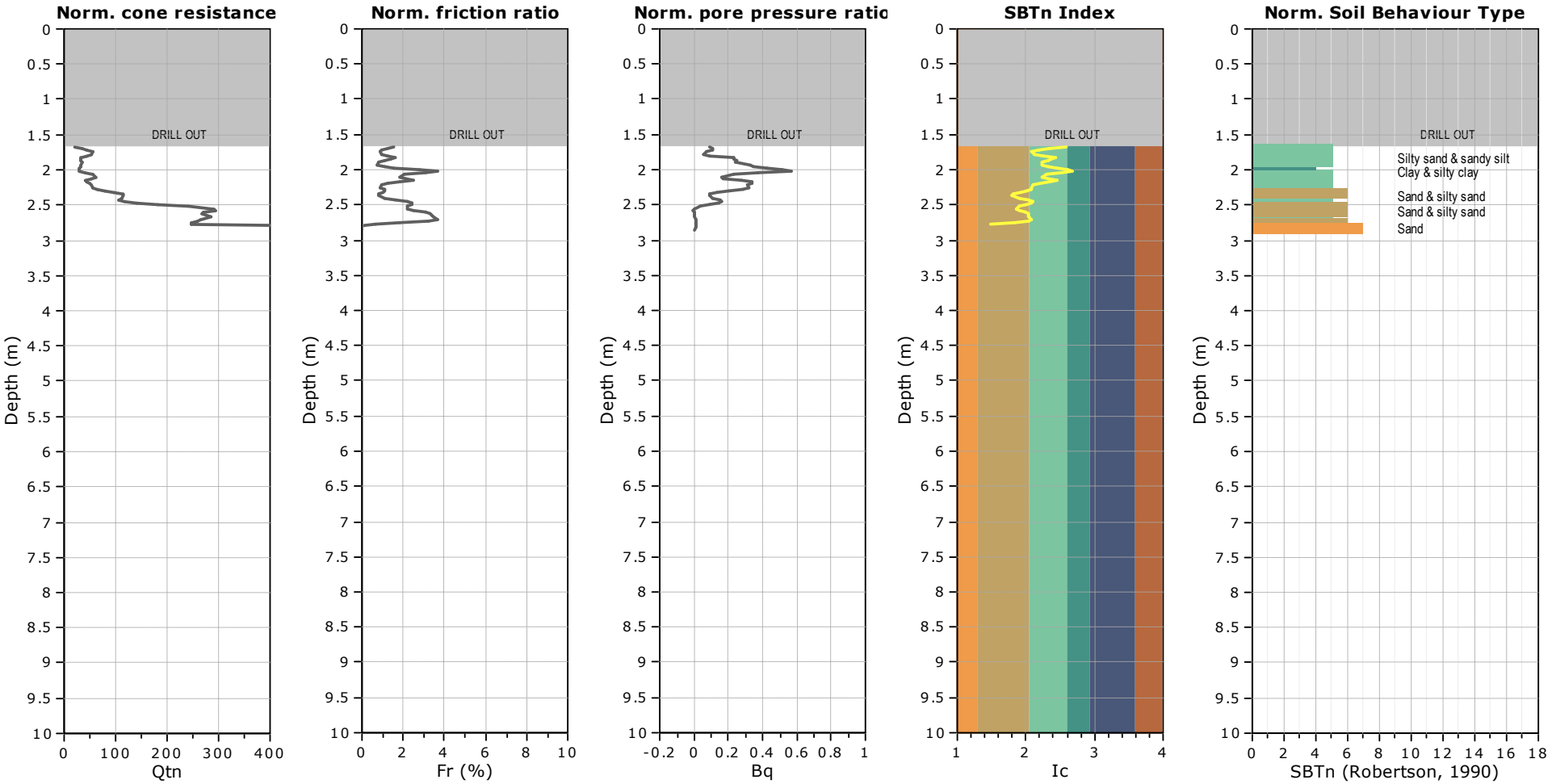
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT30
Total depth: 2.85 m, Date: 2021-09-28
Surface Elevation: 86.56 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

- 1. Sensitive fine grained
- 2. Organic material
- 3. Clay to silty clay
- 4. Clayey silt to silty clay
- 5. Silty sand to sandy silt
- 6. Clean sand to silty sand
- 7. Gravely sand to sand
- 8. Very stiff sand to clayey sand
- 9. Very stiff fine grained

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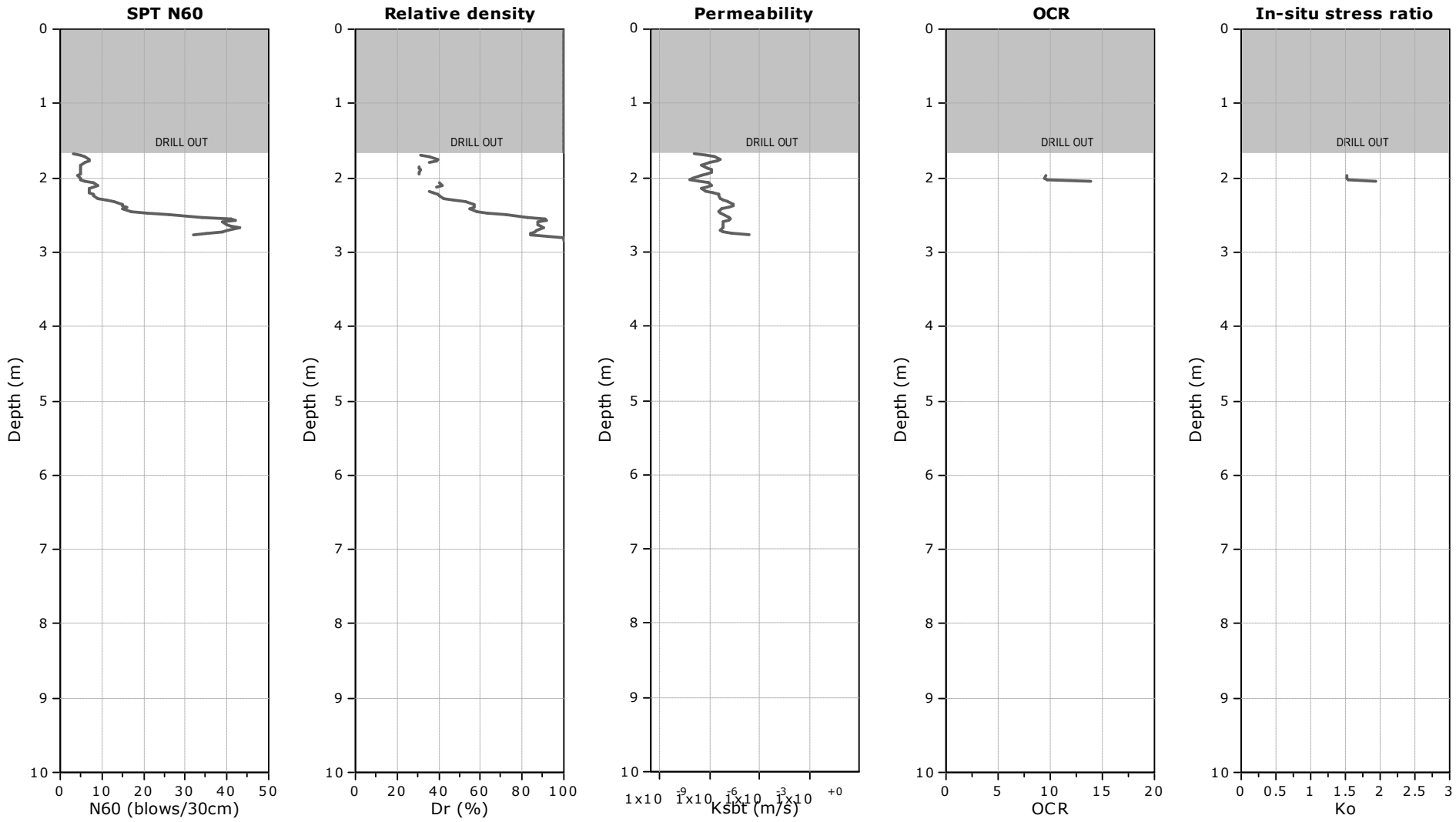
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT30
Total depth: 2.85 m, Date: 2021-09-28
Surface Elevation: 86.56 m
Cone Operator: ConeTec Investigations Ltd.



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Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

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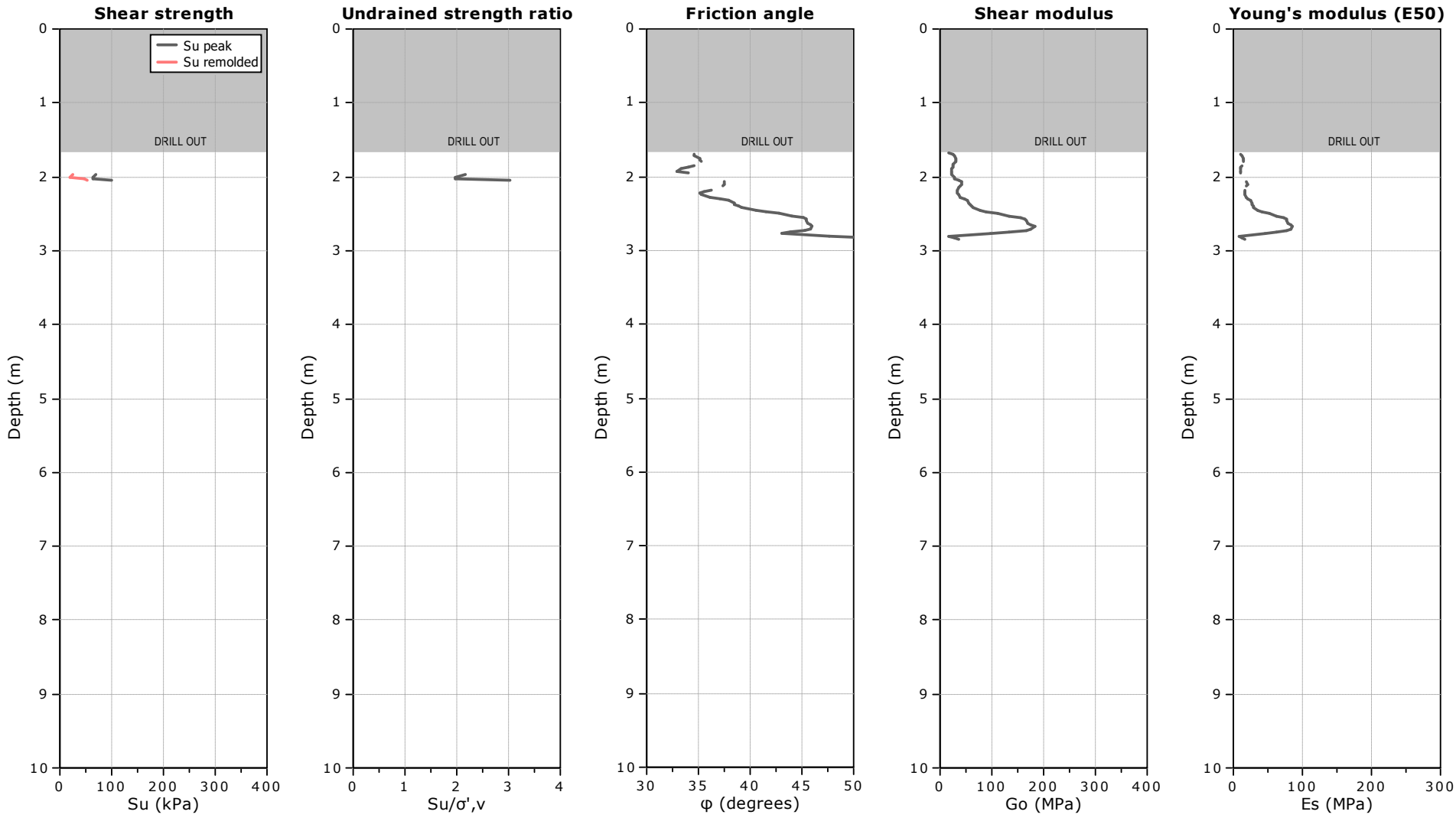
Surface Elevation: 86.56 m
Cone Operator: ConeTec Investigations Ltd.



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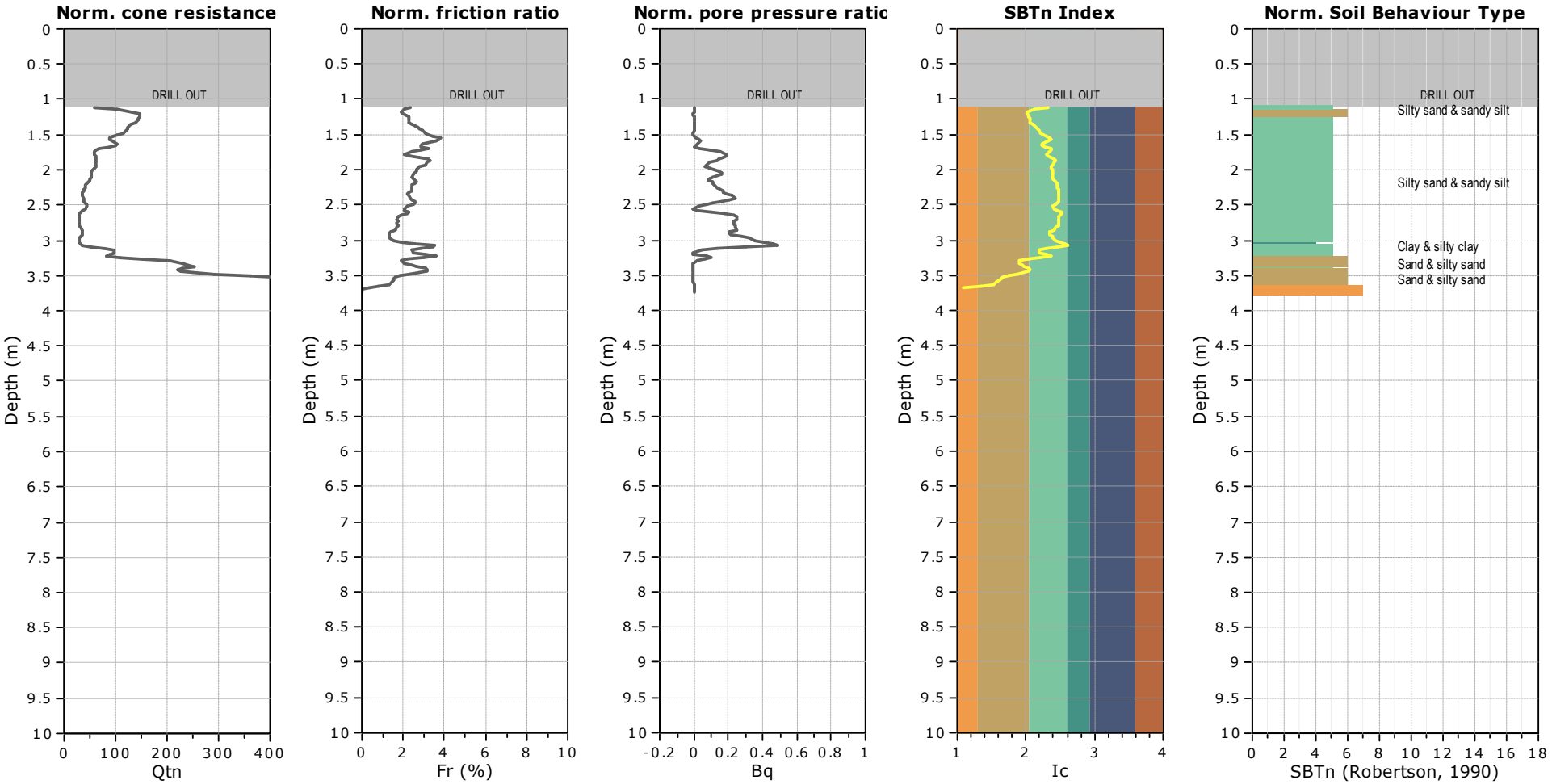
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT50
Total depth: 3.75 m, Date: 2021-09-27
Surface Elevation: 90.18 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

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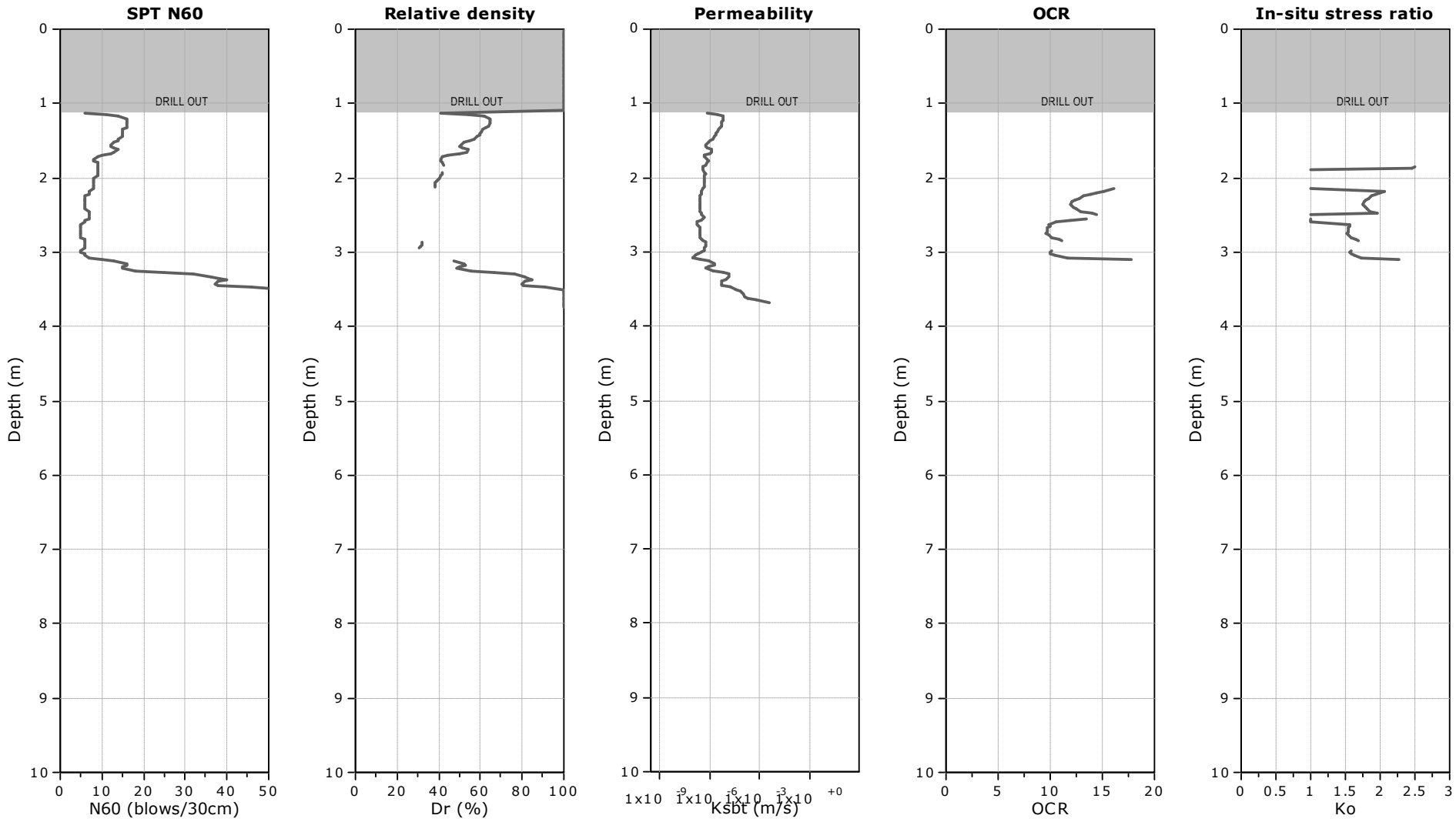
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT50
Total depth: 3.75 m, Date: 2021-09-27
Surface Elevation: 90.18 m
Cone Operator: ConeTec Investigations Ltd.



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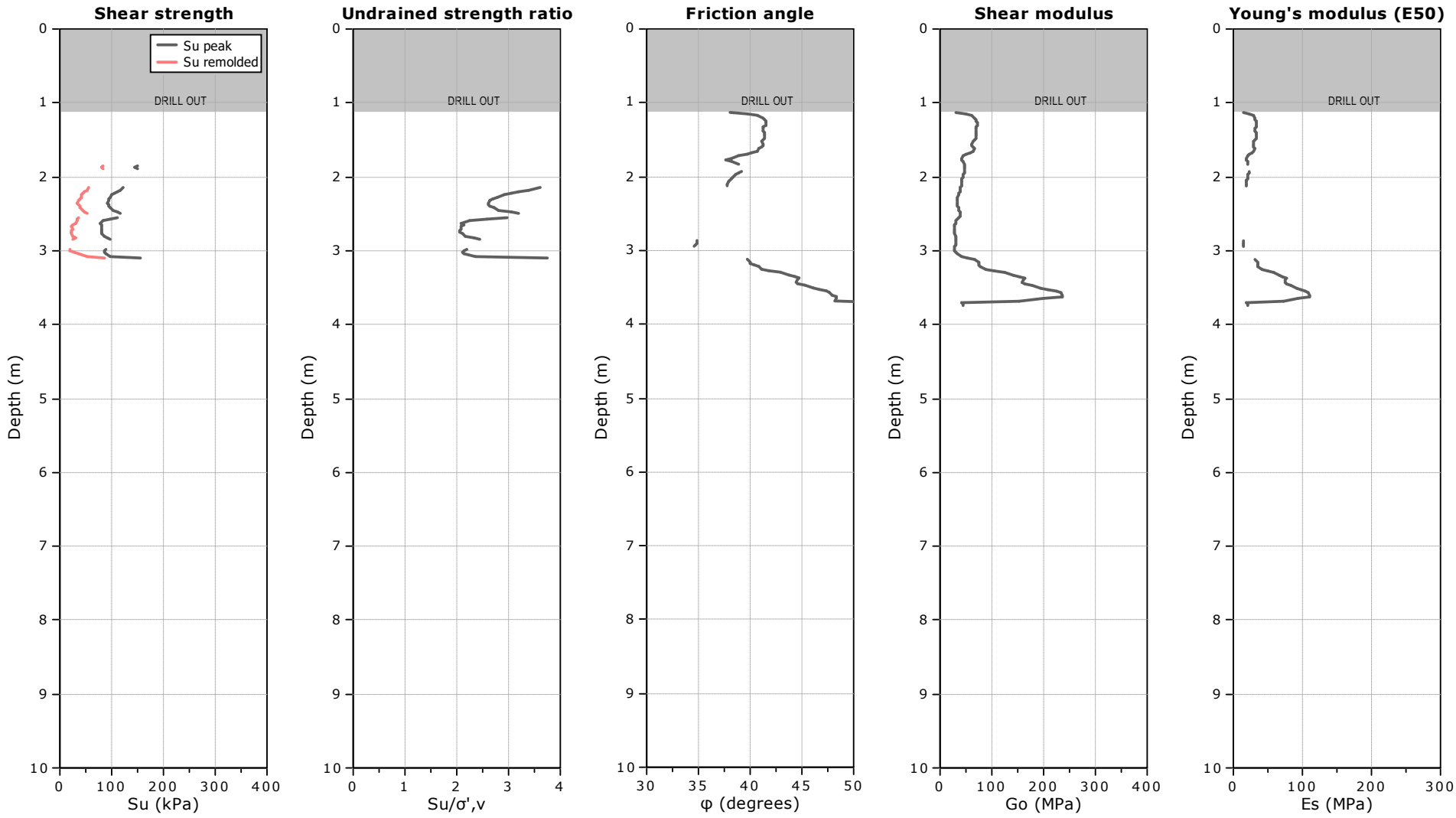
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT50
Total depth: 3.75 m, Date: 2021-09-27
Surface Elevation: 90.18 m
Cone Operator: ConeTec Investigations Ltd.



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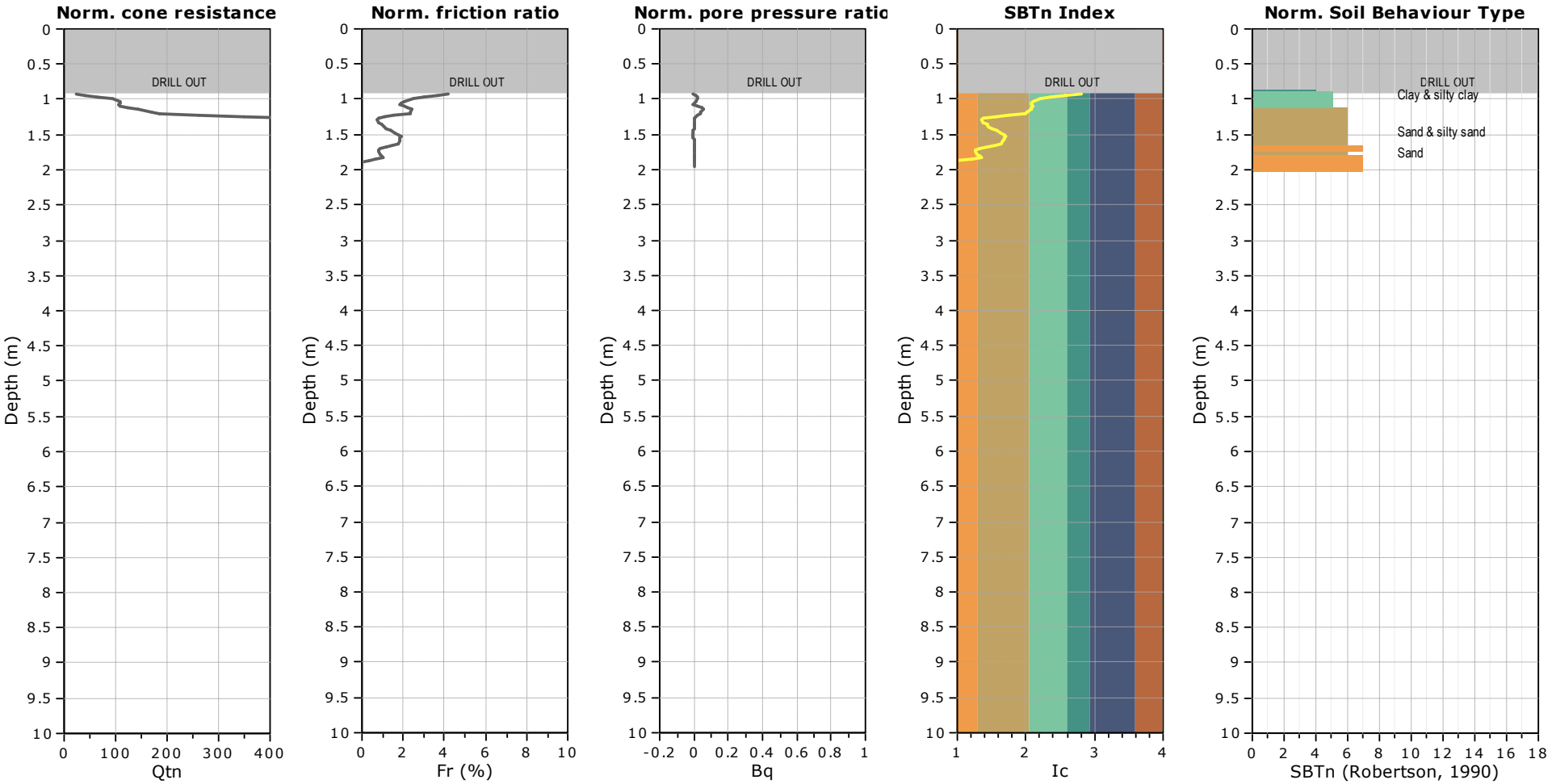
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT53
Total depth: 1.95 m, Date: 2021-09-28
Surface Elevation: 96.20 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

- 1. Sensitive fine grained
- 2. Organic material
- 3. Clay to silty clay
- 4. Clayey silt to silty clay
- 5. Silty sand to sandy silt
- 6. Clean sand to silty sand
- 7. Gravely sand to sand
- 8. Very stiff sand to clayey sand
- 9. Very stiff fine grained

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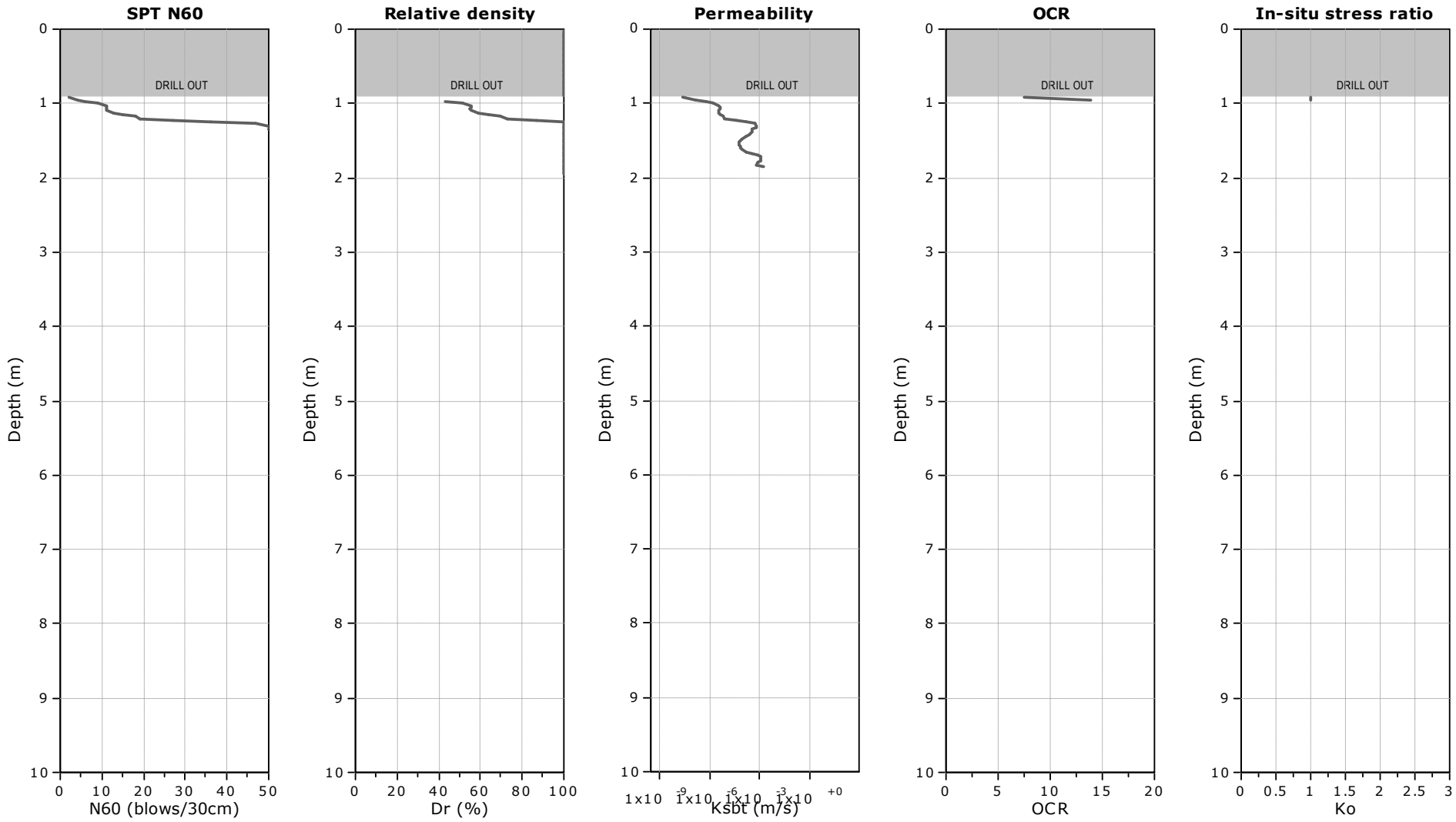
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT53
Total depth: 1.95 m, Date: 2021-09-28
Surface Elevation: 96.20 m
Cone Operator: ConeTec Investigations Ltd.



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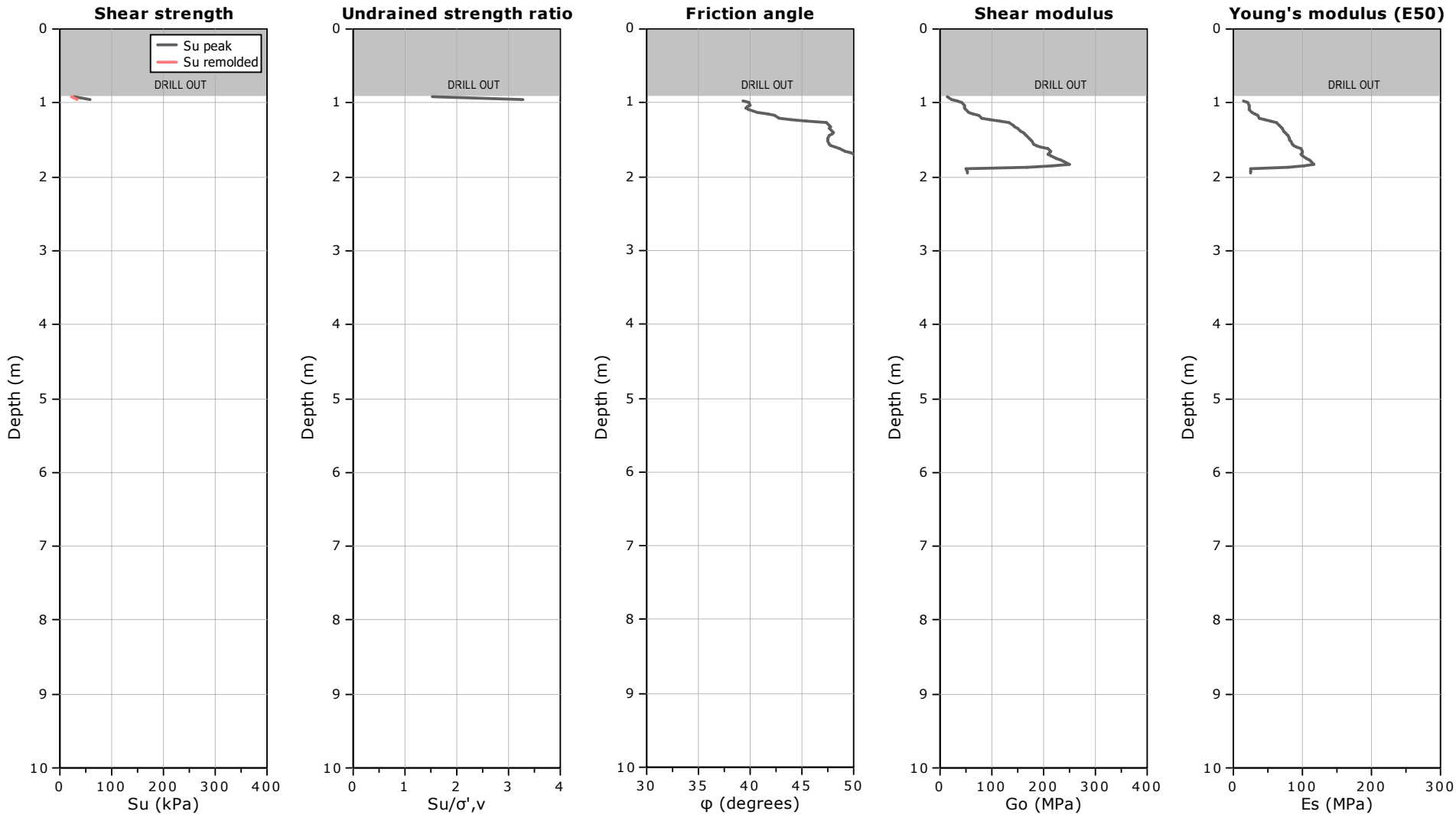
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT53
Total depth: 1.95 m, Date: 2021-09-28
Surface Elevation: 96.20 m
Cone Operator: ConeTec Investigations Ltd.



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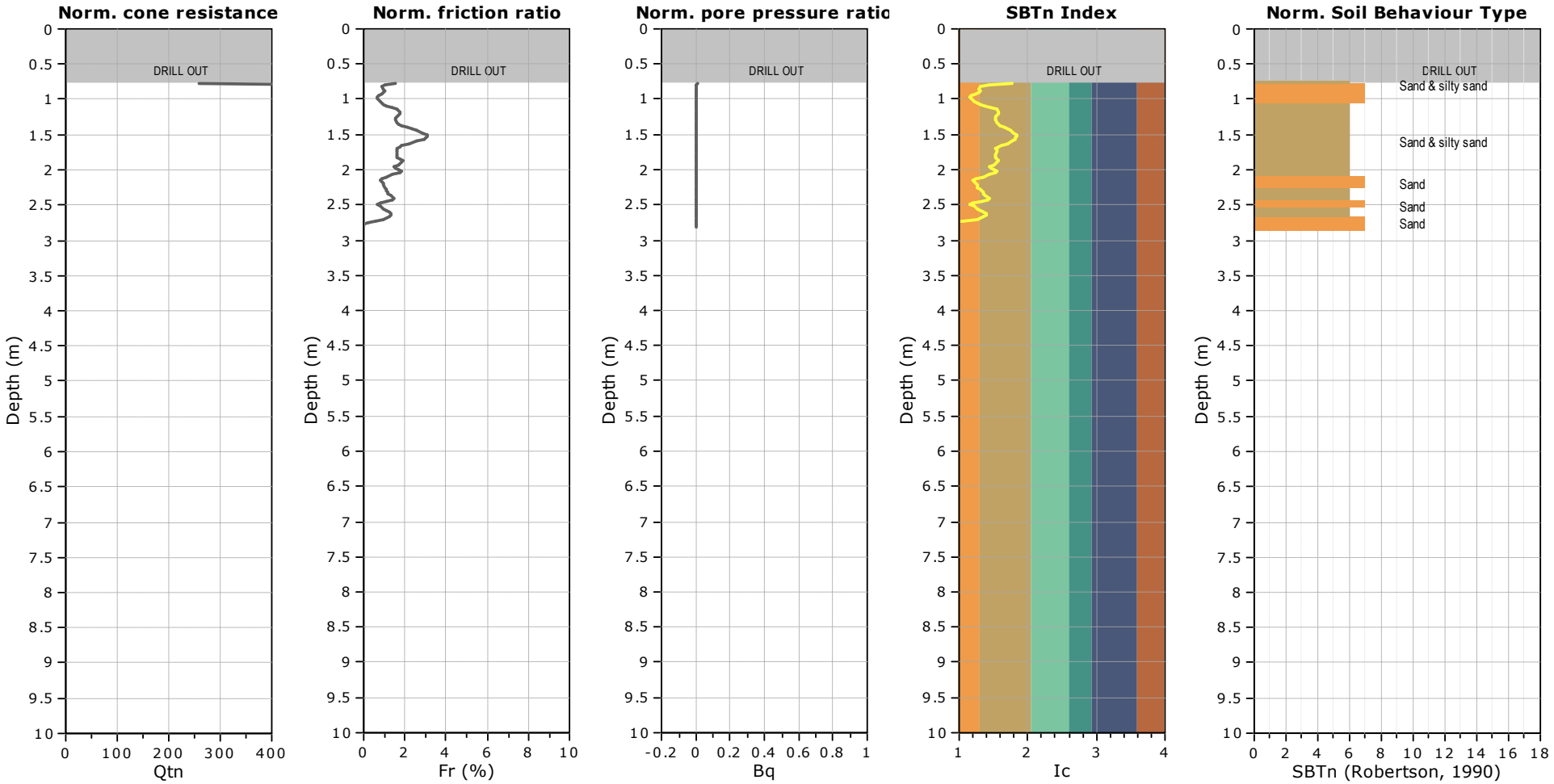
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT54
Total depth: 2.83 m, Date: 2021-09-28
Surface Elevation: 96.77 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

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3. Clay to silty clay
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5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
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9. Very stiff fine grained

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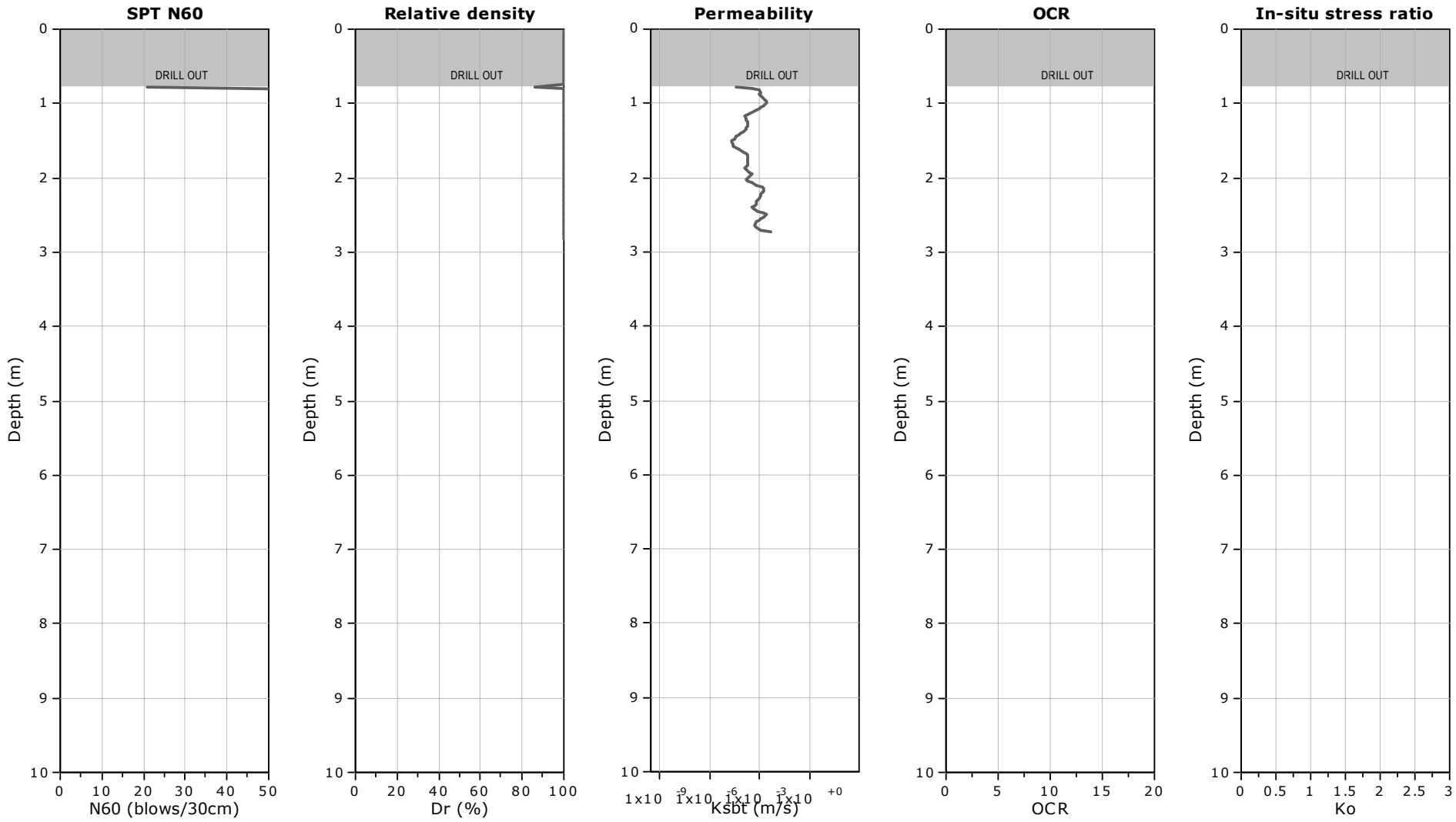
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT54
Total depth: 2.83 m, Date: 2021-09-28
Surface Elevation: 96.77 m
Cone Operator: ConeTec Investigations Ltd.



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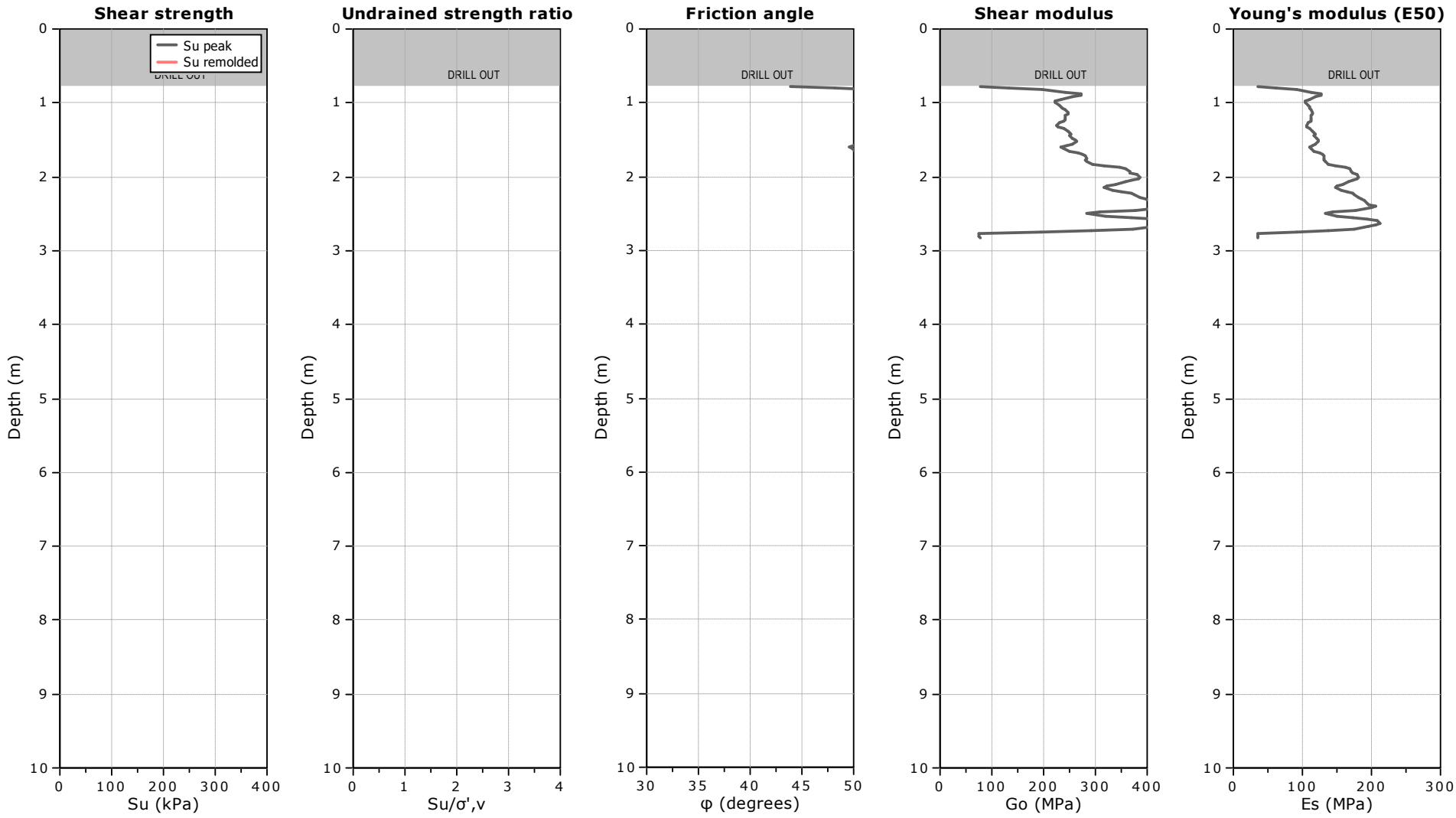
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT54
Total depth: 2.83 m, Date: 2021-09-28
Surface Elevation: 96.77 m
Cone Operator: ConeTec Investigations Ltd.



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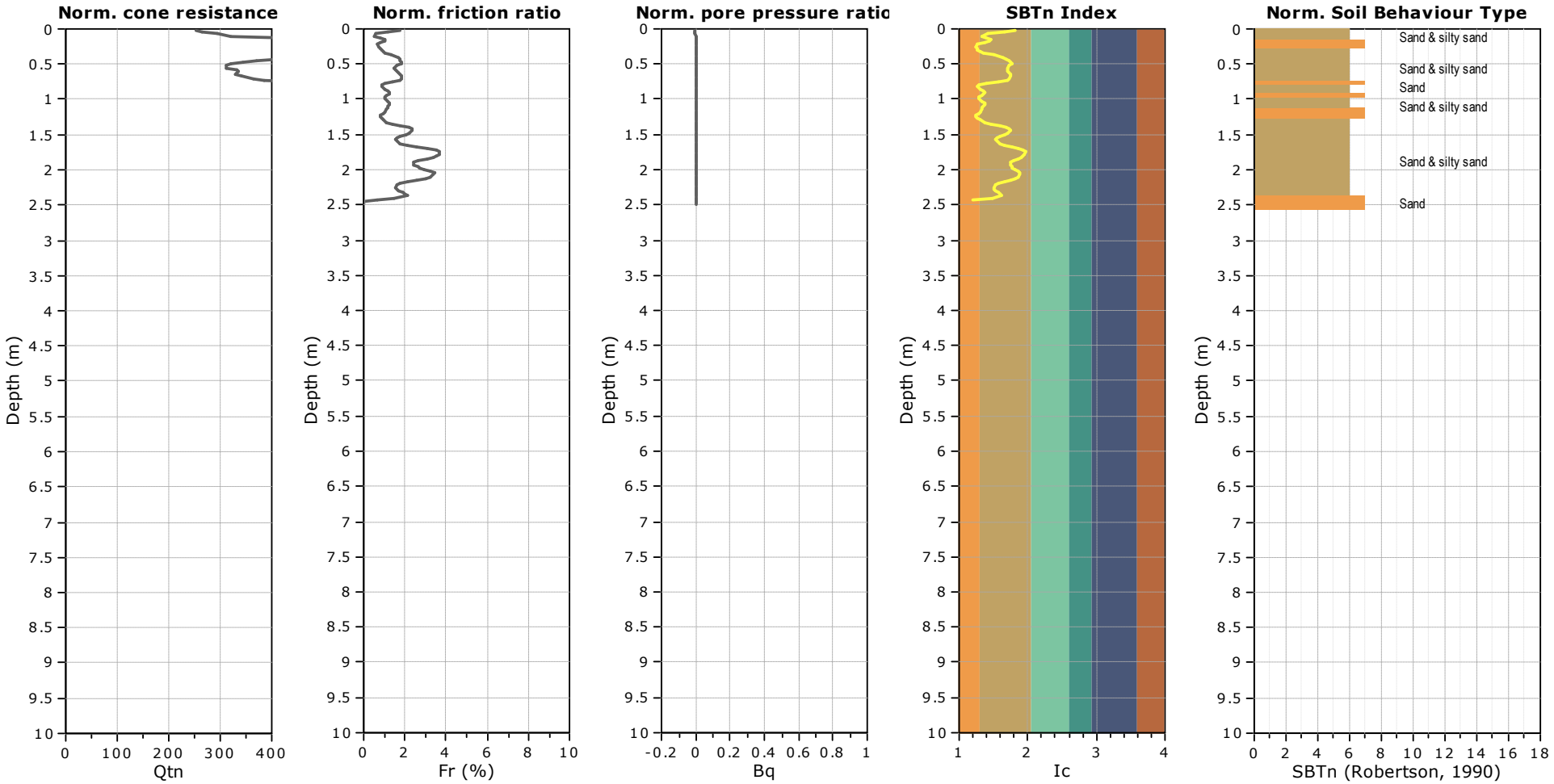
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT54B
Total depth: 2.50 m, Date: 2021-09-28
Surface Elevation: 96.80 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

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5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
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Project: **21451329 - Darlington New Nuclear Project**

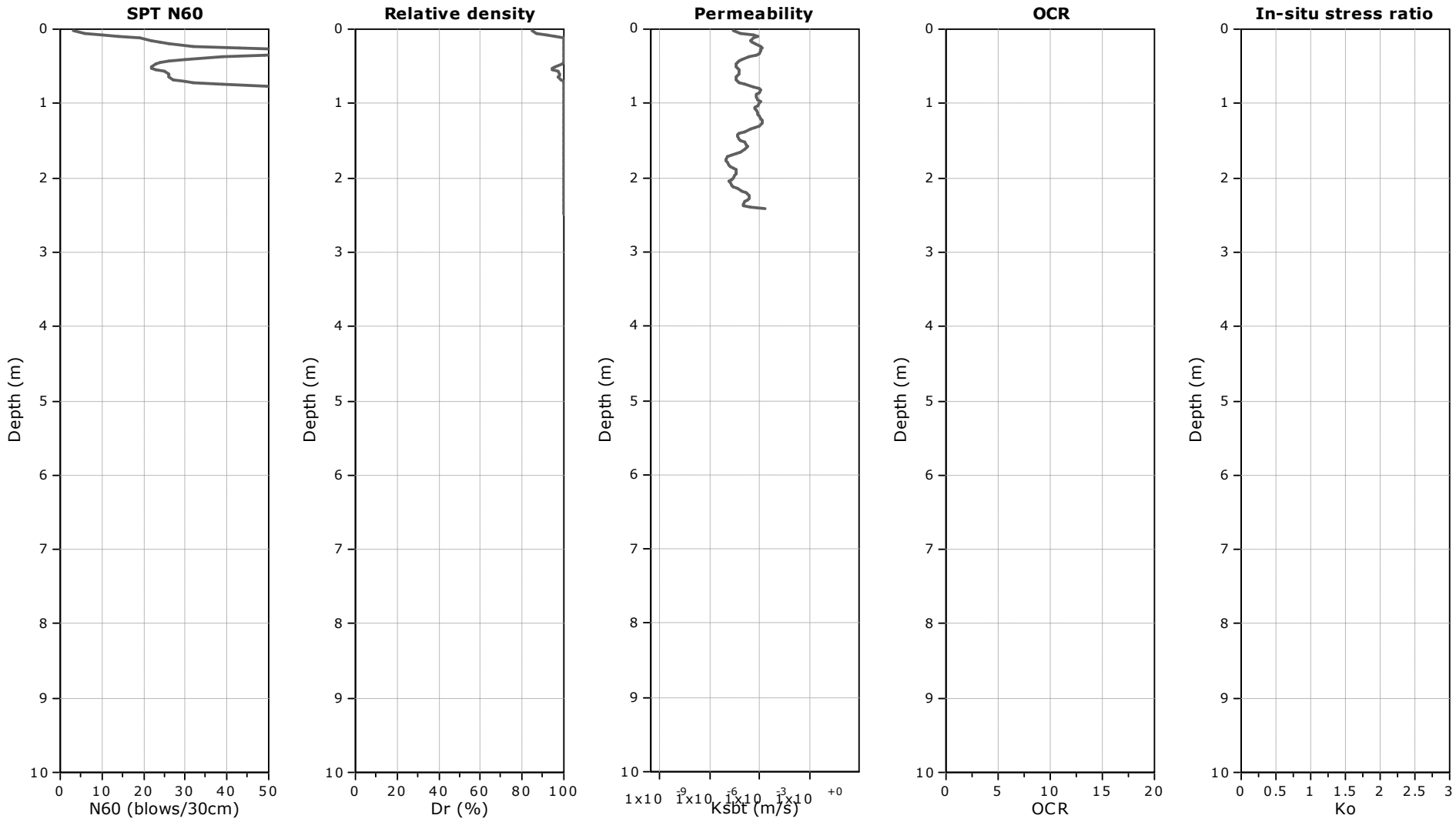
Location: **Bowmanville, Ontario**

CPT54B

Total depth: 2.50 m, Date: 2021-09-28

Surface Elevation: 96.80 m

Cone Operator: ConeTec Investigations Ltd.



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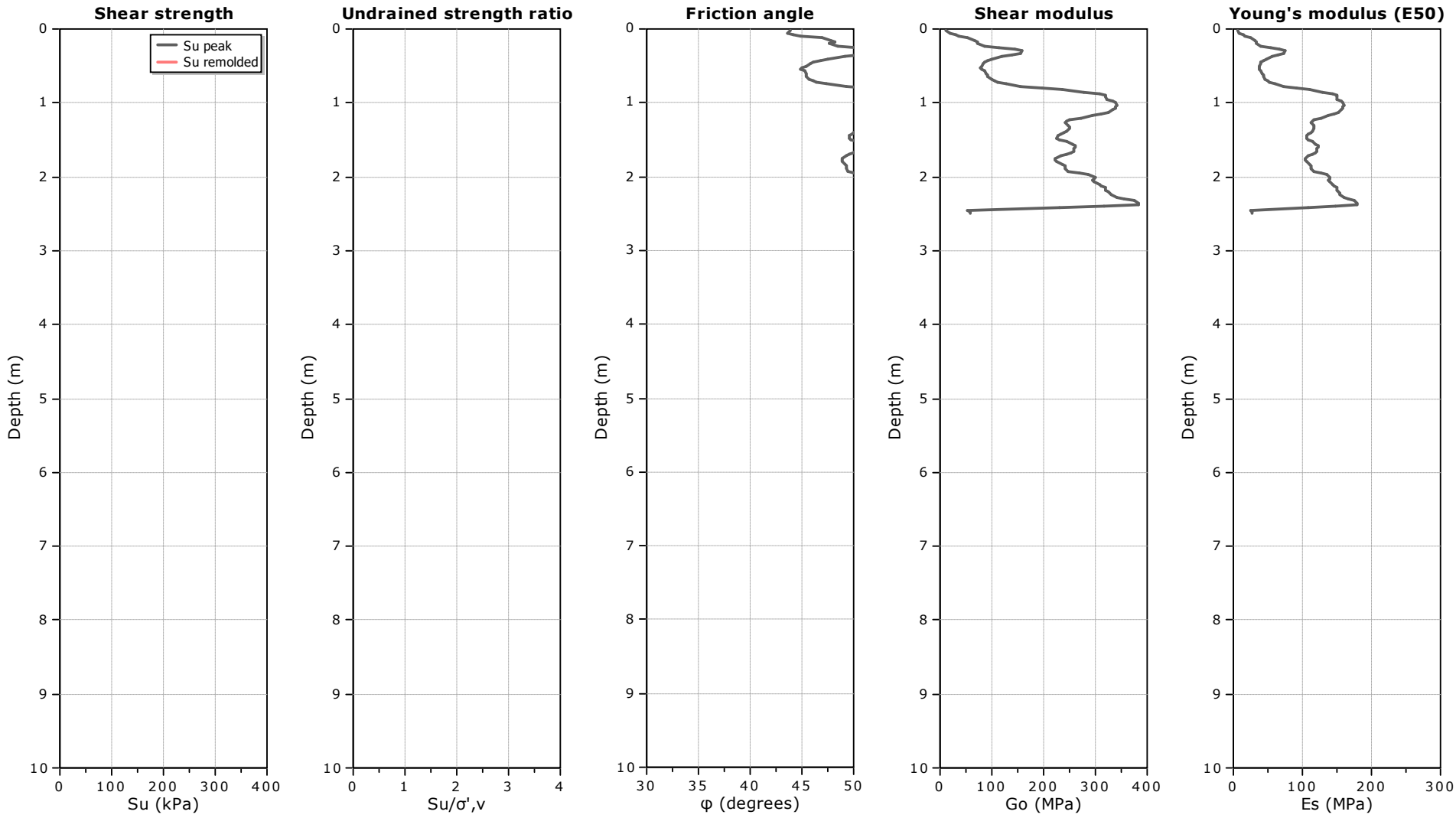
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT54B
Total depth: 2.50 m, Date: 2021-09-28
Surface Elevation: 96.80 m
Cone Operator: ConeTec Investigations Ltd.



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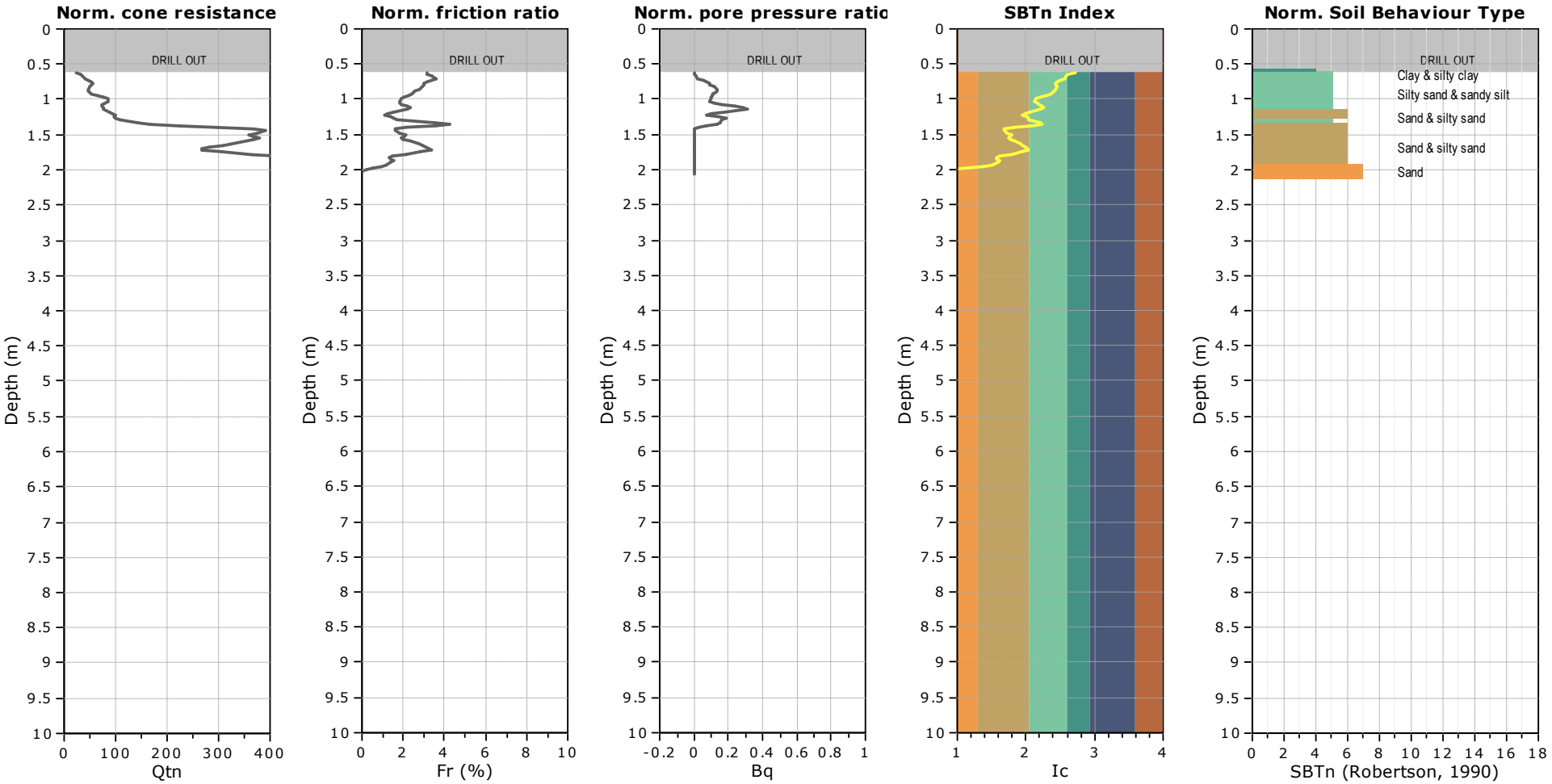
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT58
Total depth: 2.08 m, Date: 2021-09-28
Surface Elevation: 95.24 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

- 1. Sensitive fine grained
- 2. Organic material
- 3. Clay to silty clay
- 4. Clayey silt to silty clay
- 5. Silty sand to sandy silt
- 6. Clean sand to silty sand
- 7. Gravely sand to sand
- 8. Very stiff sand to clayey sand
- 9. Very stiff fine grained

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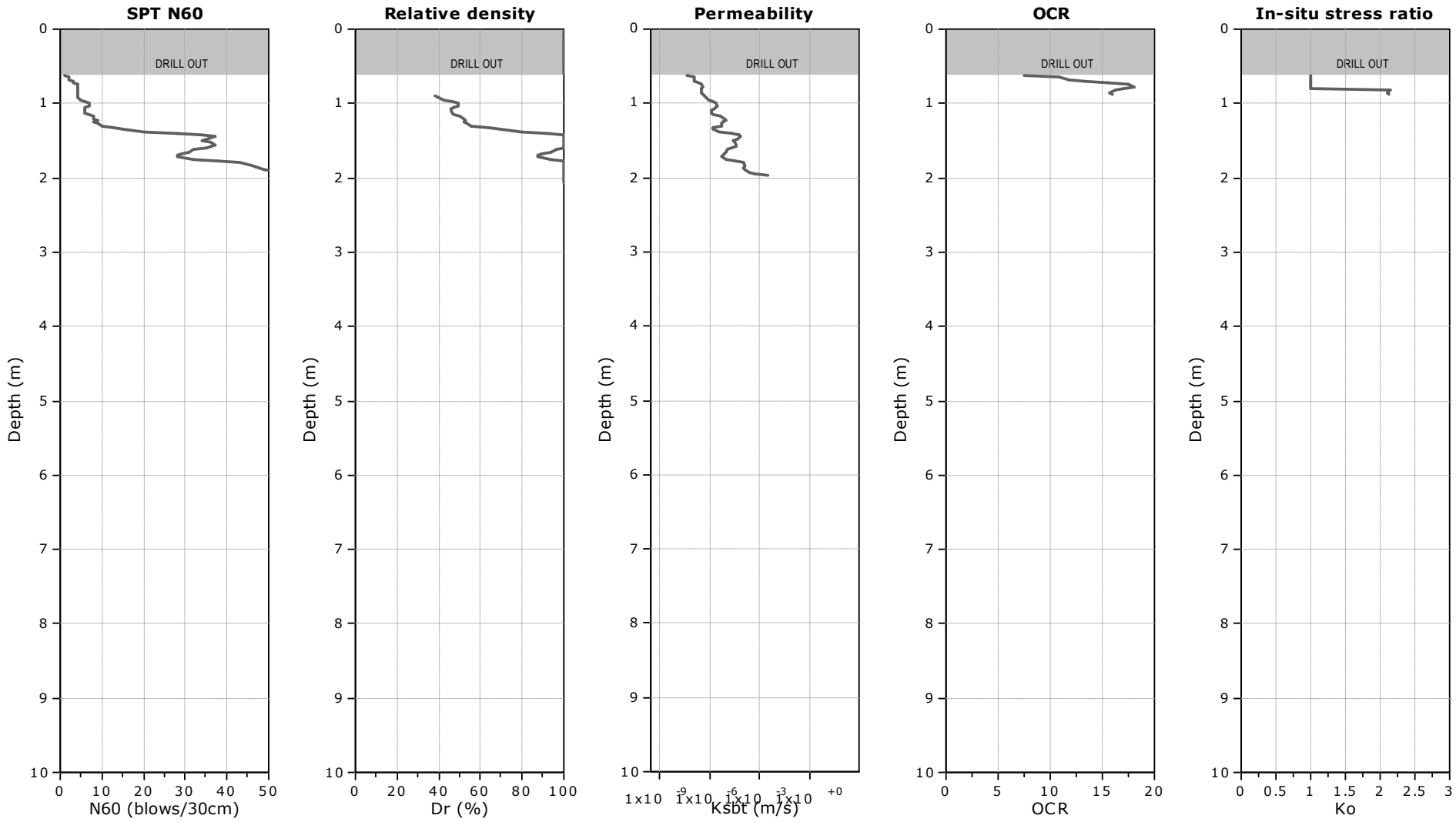
Total depth: 2.08 m, Date: 2021-09-28
Surface Elevation: 95.24 m
Cone Operator: ConeTec Investigations Ltd.



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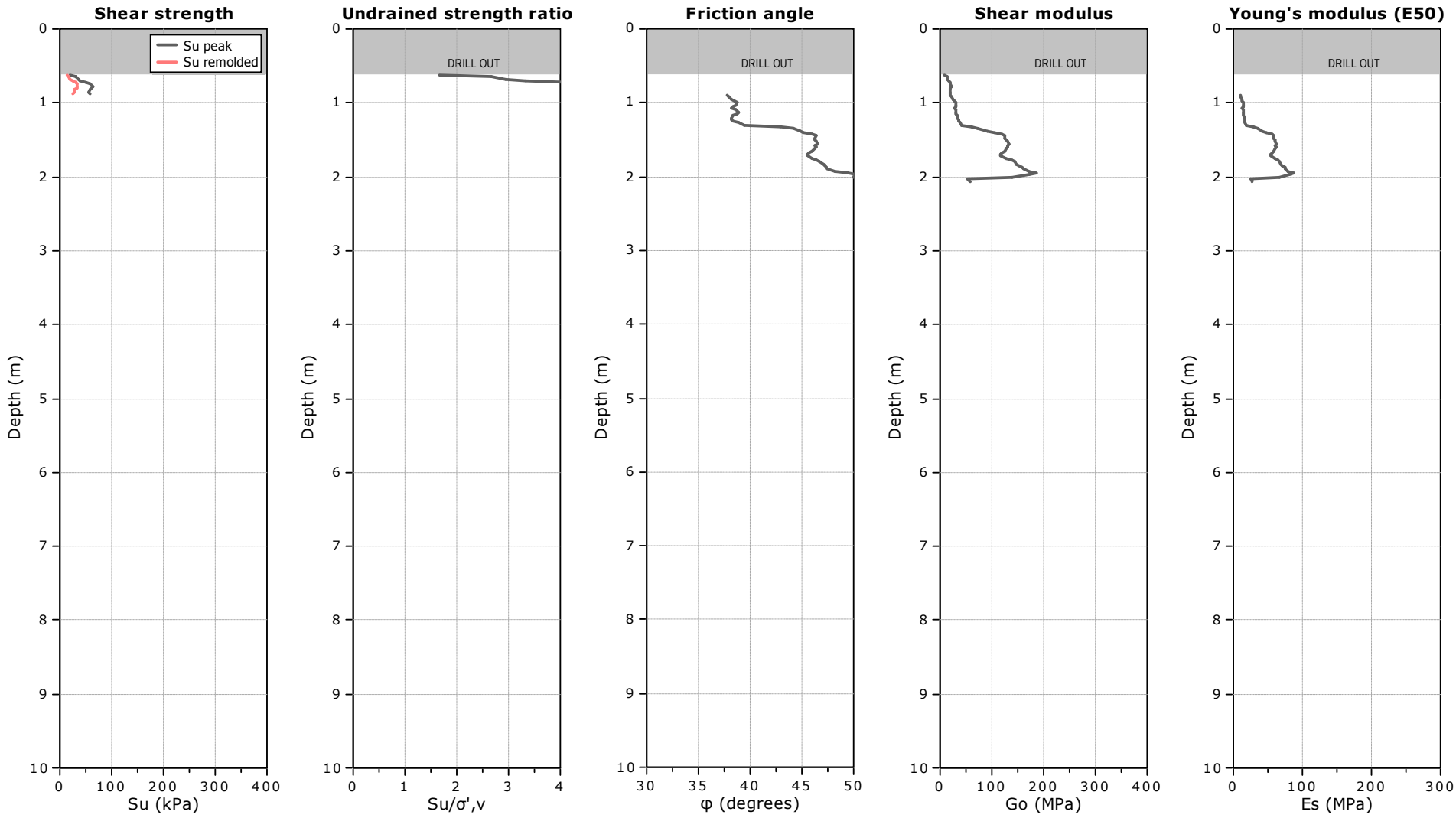
Surface Elevation: 95.24 m
Cone Operator: ConeTec Investigations Ltd.



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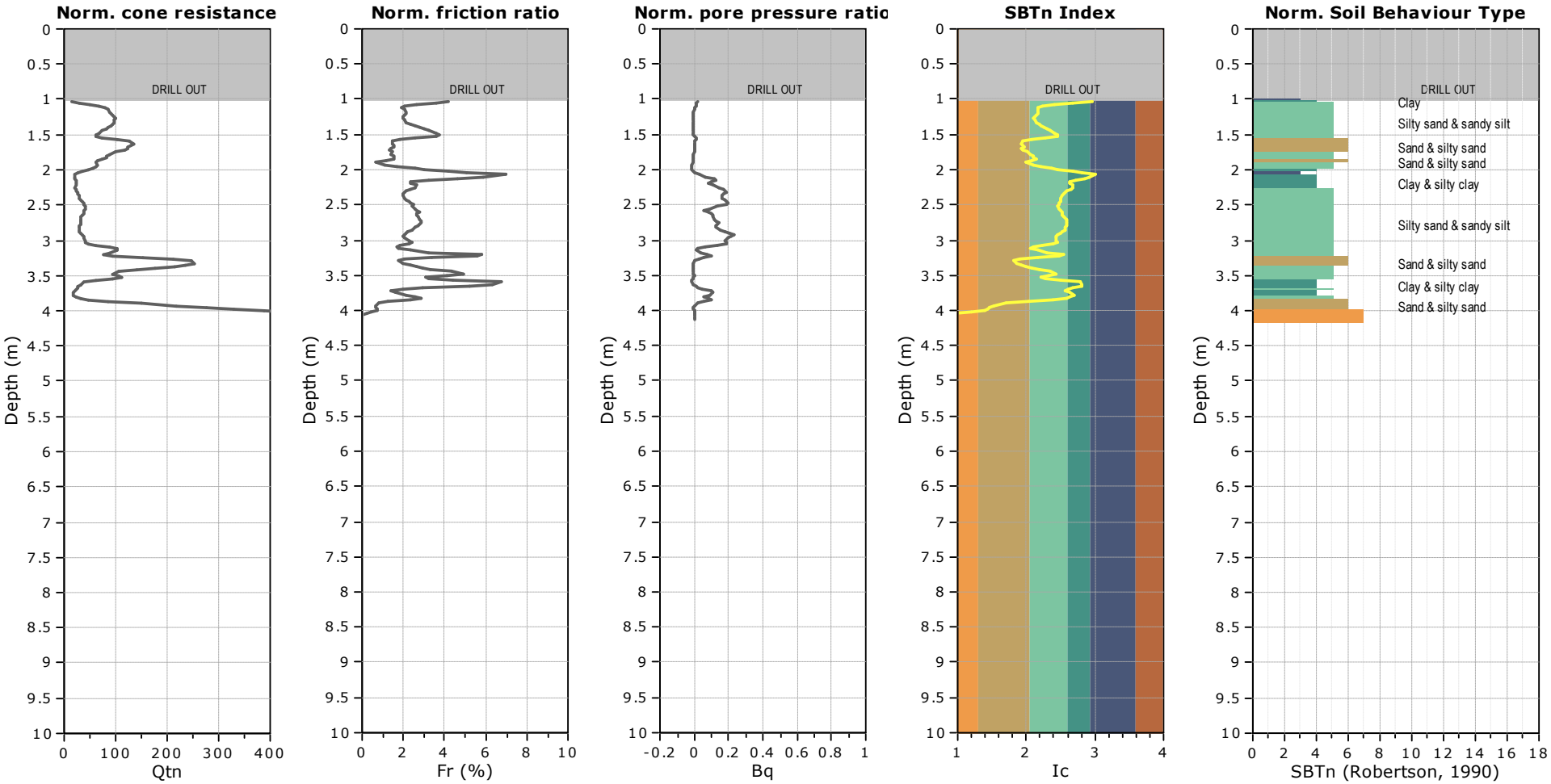
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT60
Total depth: 4.13 m, Date: 2021-09-28
Surface Elevation: 90.09 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
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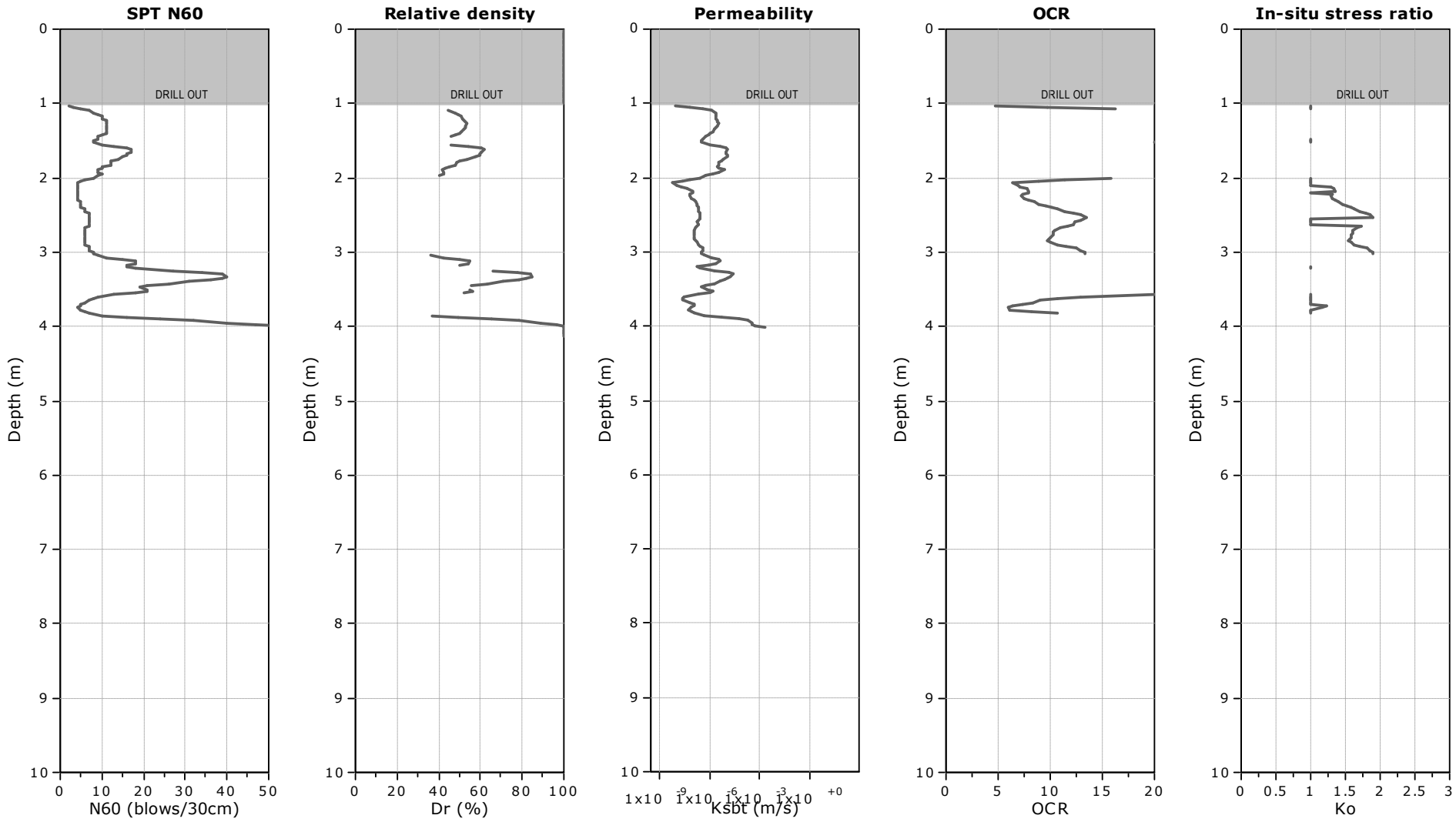
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT60
Total depth: 4.13 m, Date: 2021-09-28
Surface Elevation: 90.09 m
Cone Operator: ConeTec Investigations Ltd.



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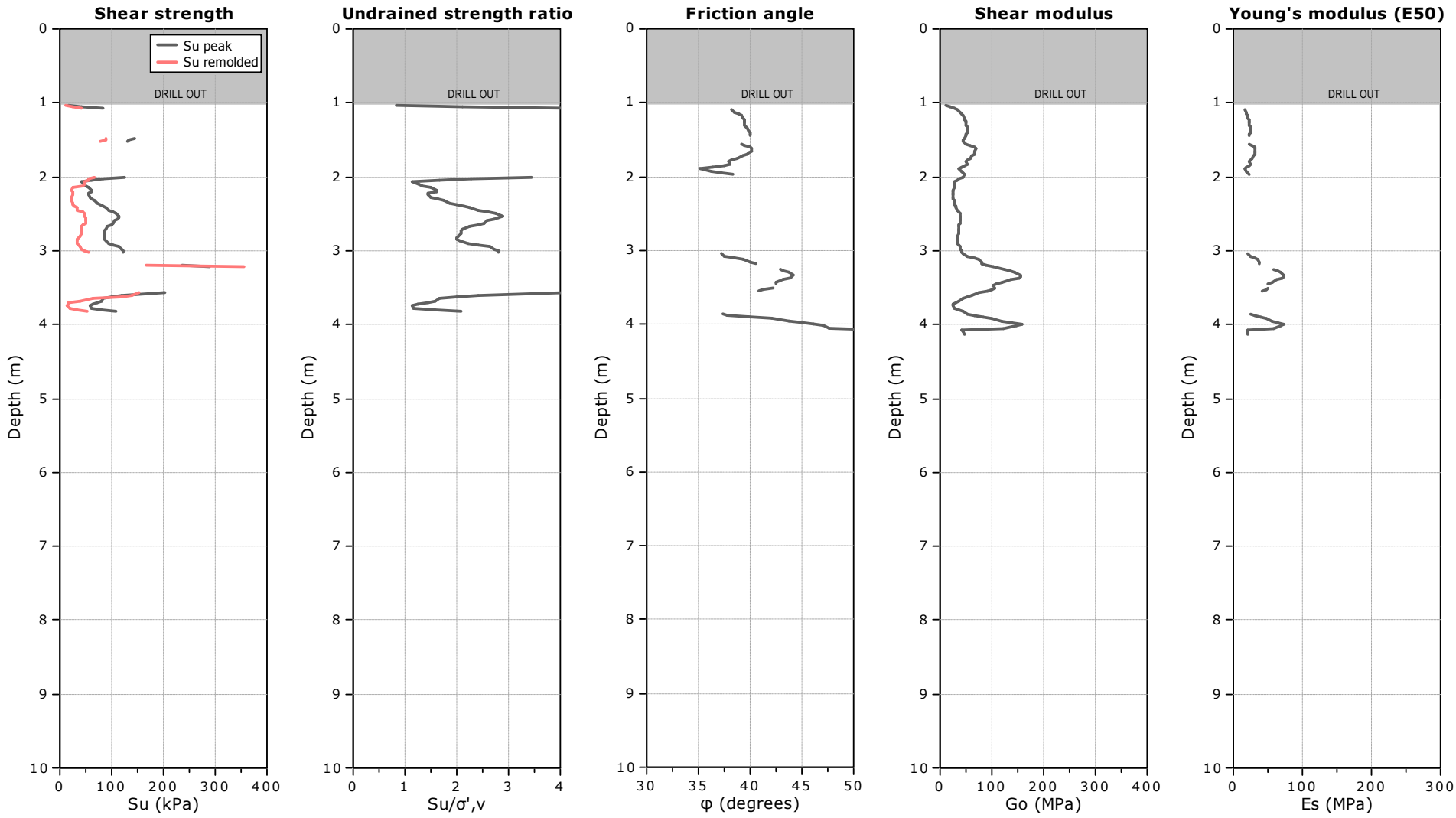
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT60
Total depth: 4.13 m, Date: 2021-09-28
Surface Elevation: 90.09 m
Cone Operator: ConeTec Investigations Ltd.



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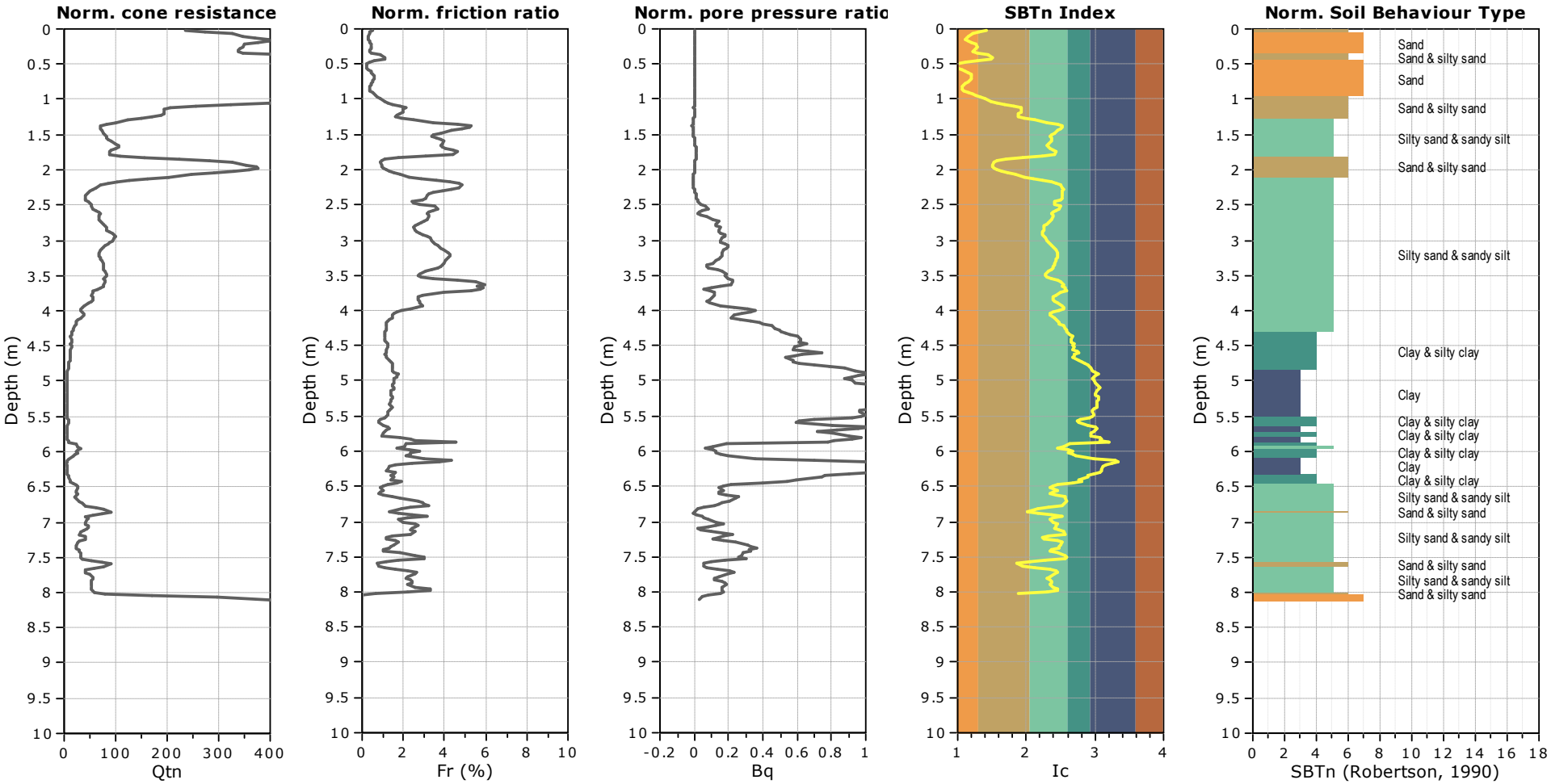
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT62
Total depth: 8.10 m, Date: 2021-09-28
Surface Elevation: 88.92 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
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3. Clay to silty clay
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5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
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9. Very stiff fine grained

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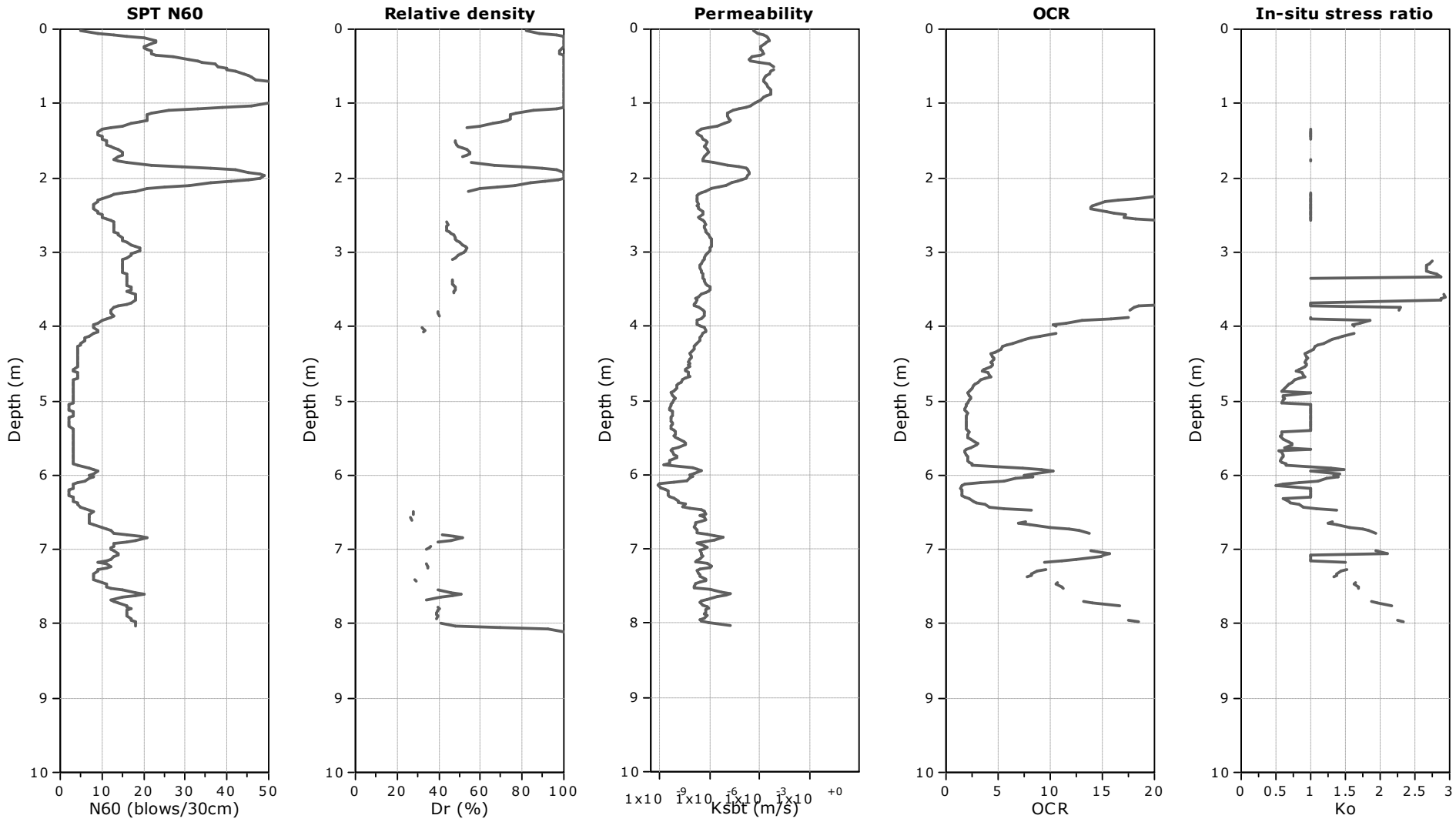

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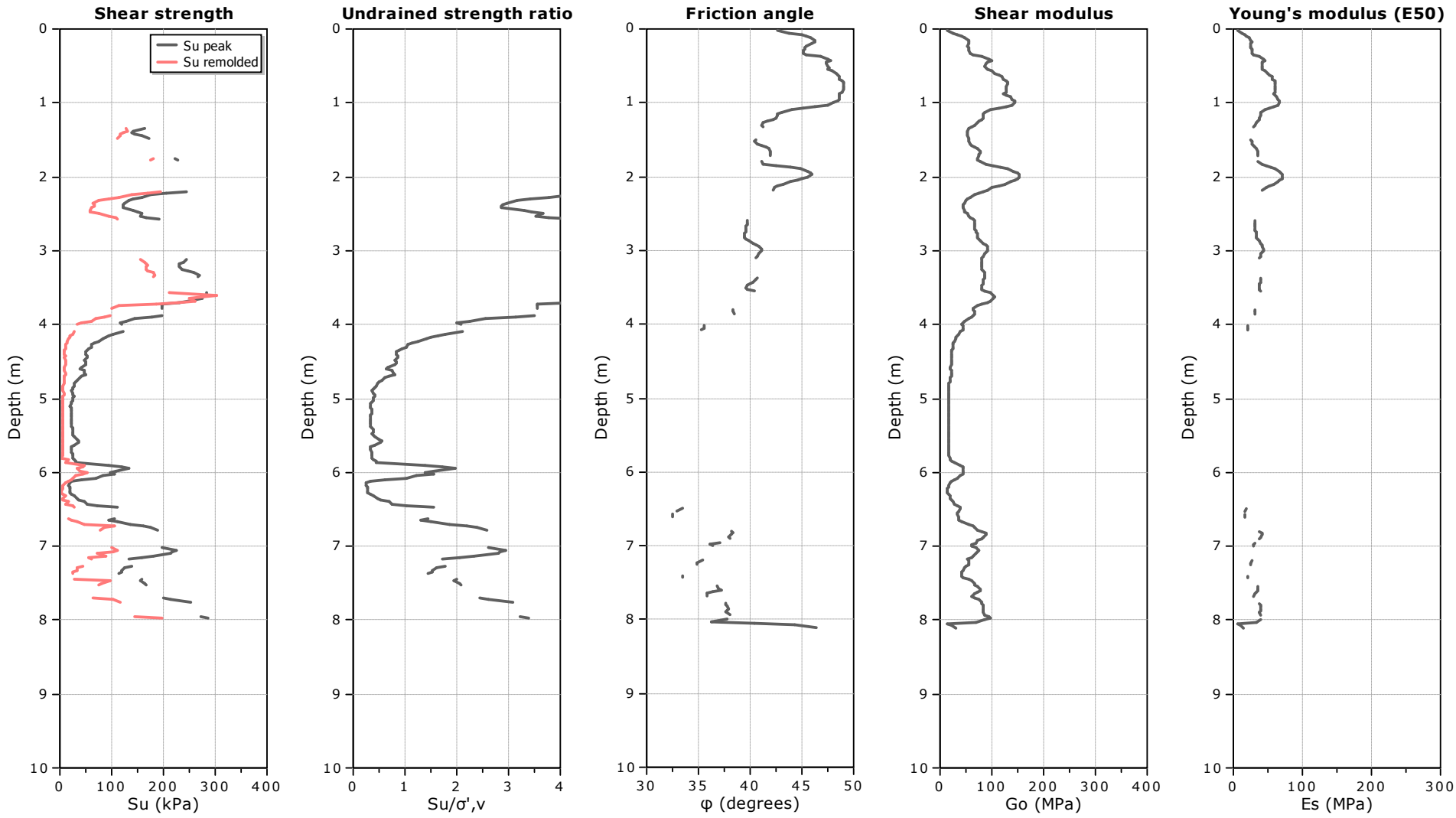

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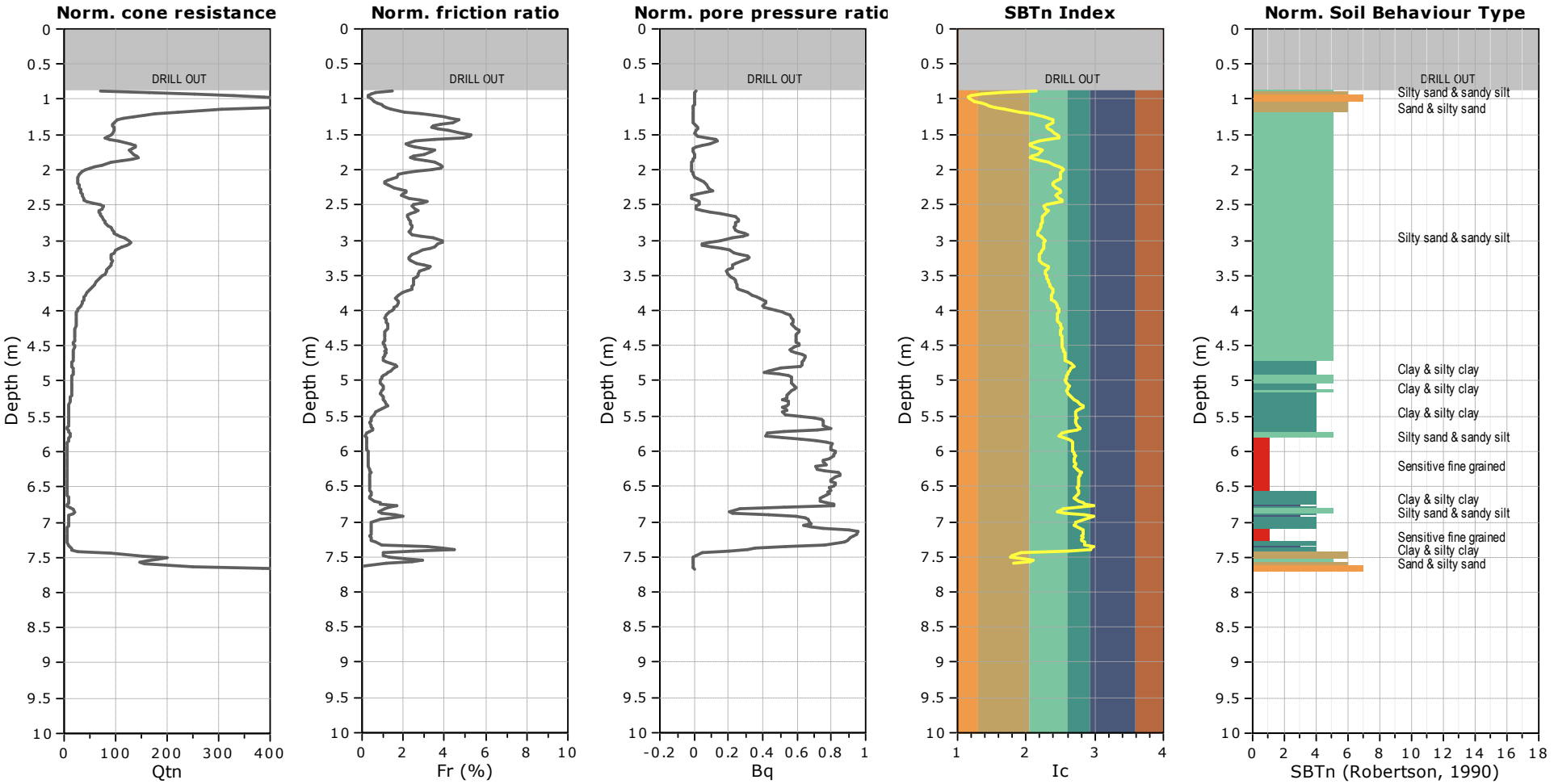
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT65
Total depth: 7.67 m, Date: 2021-09-27
Surface Elevation: 89.29 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
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9. Very stiff fine grained

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Project: **21451329 - Darlington New Nuclear Project**
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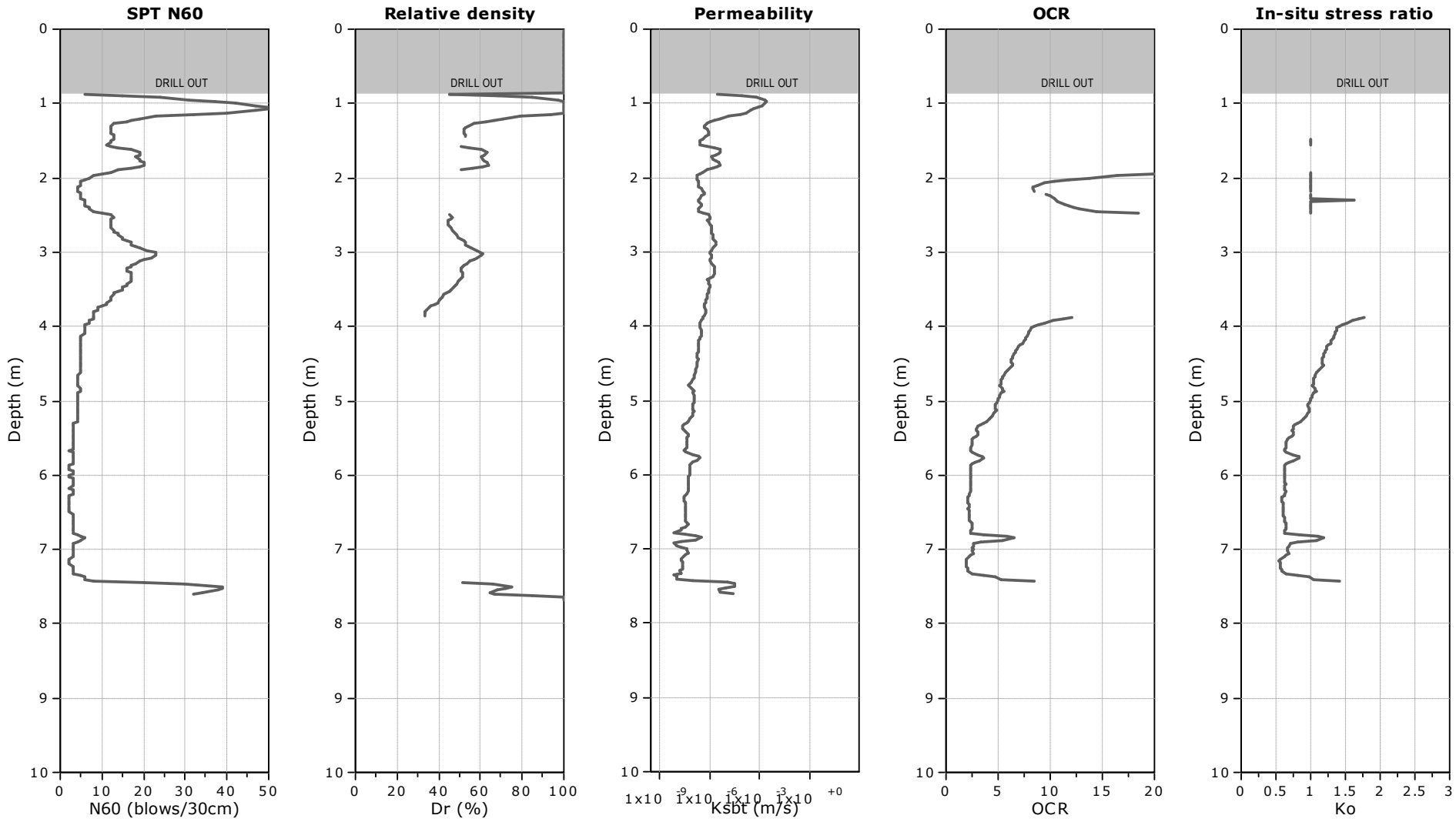

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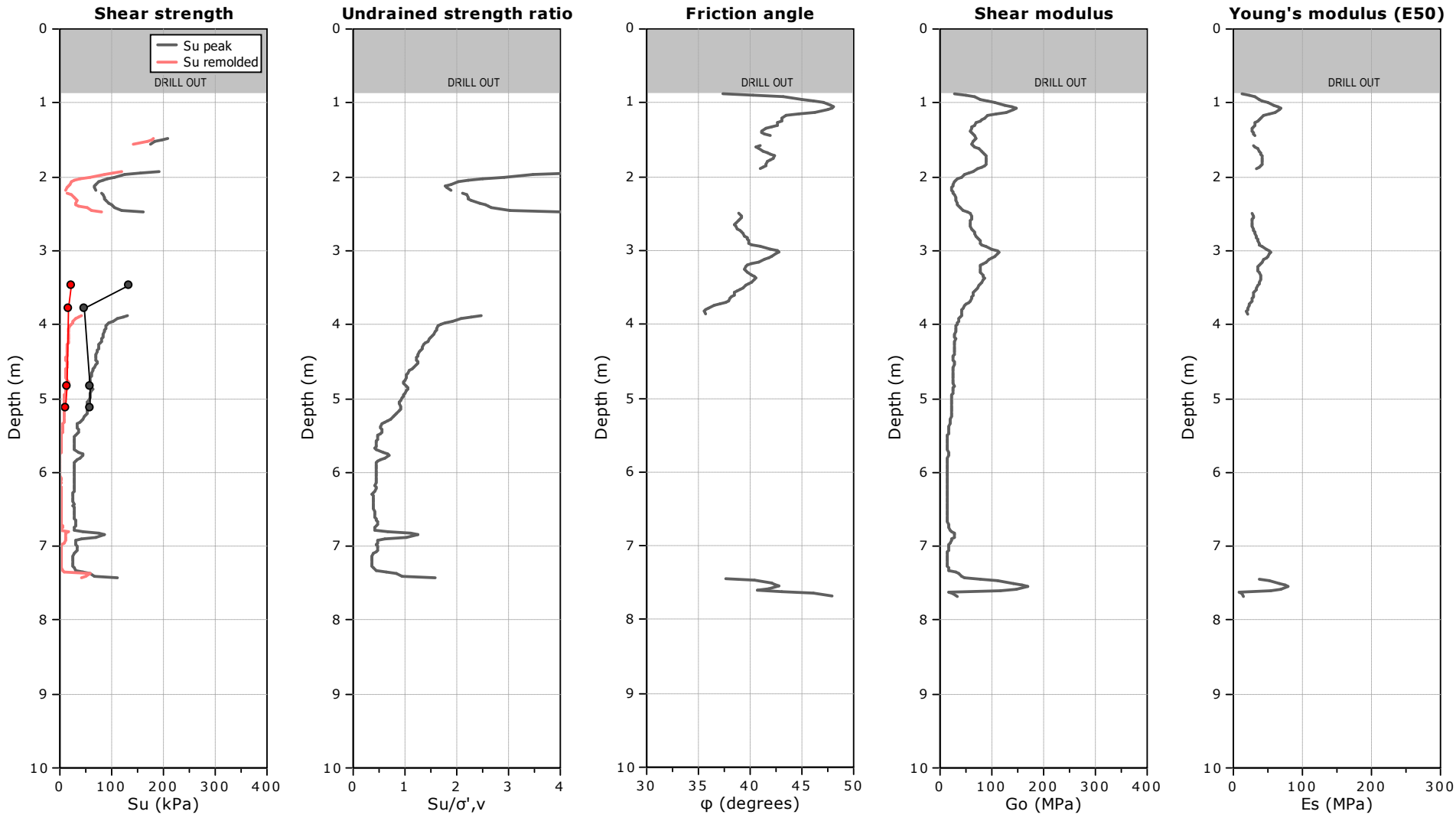

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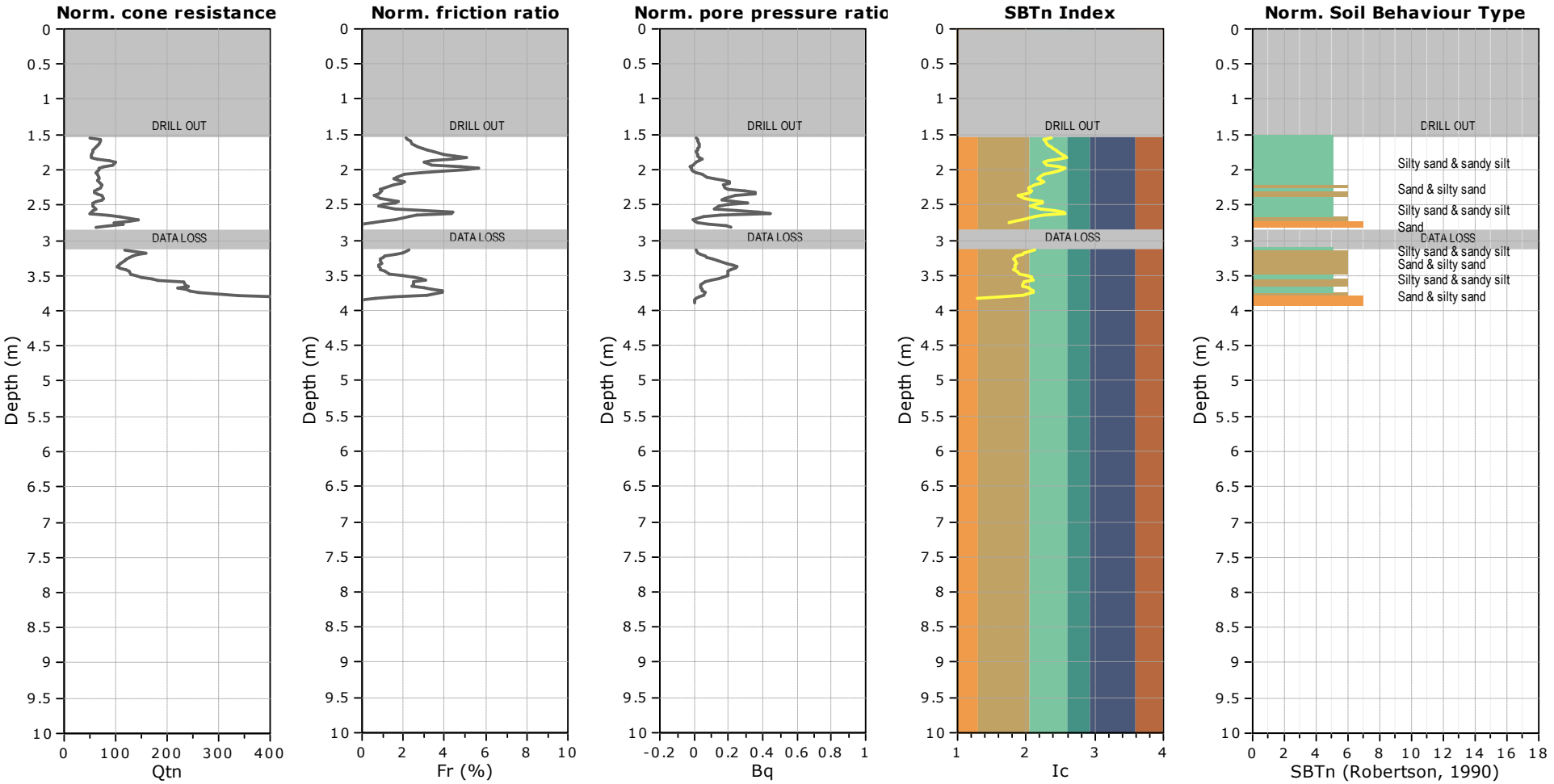
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT73
Total depth: 3.90 m, Date: 2021-09-24
Surface Elevation: 88.09 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

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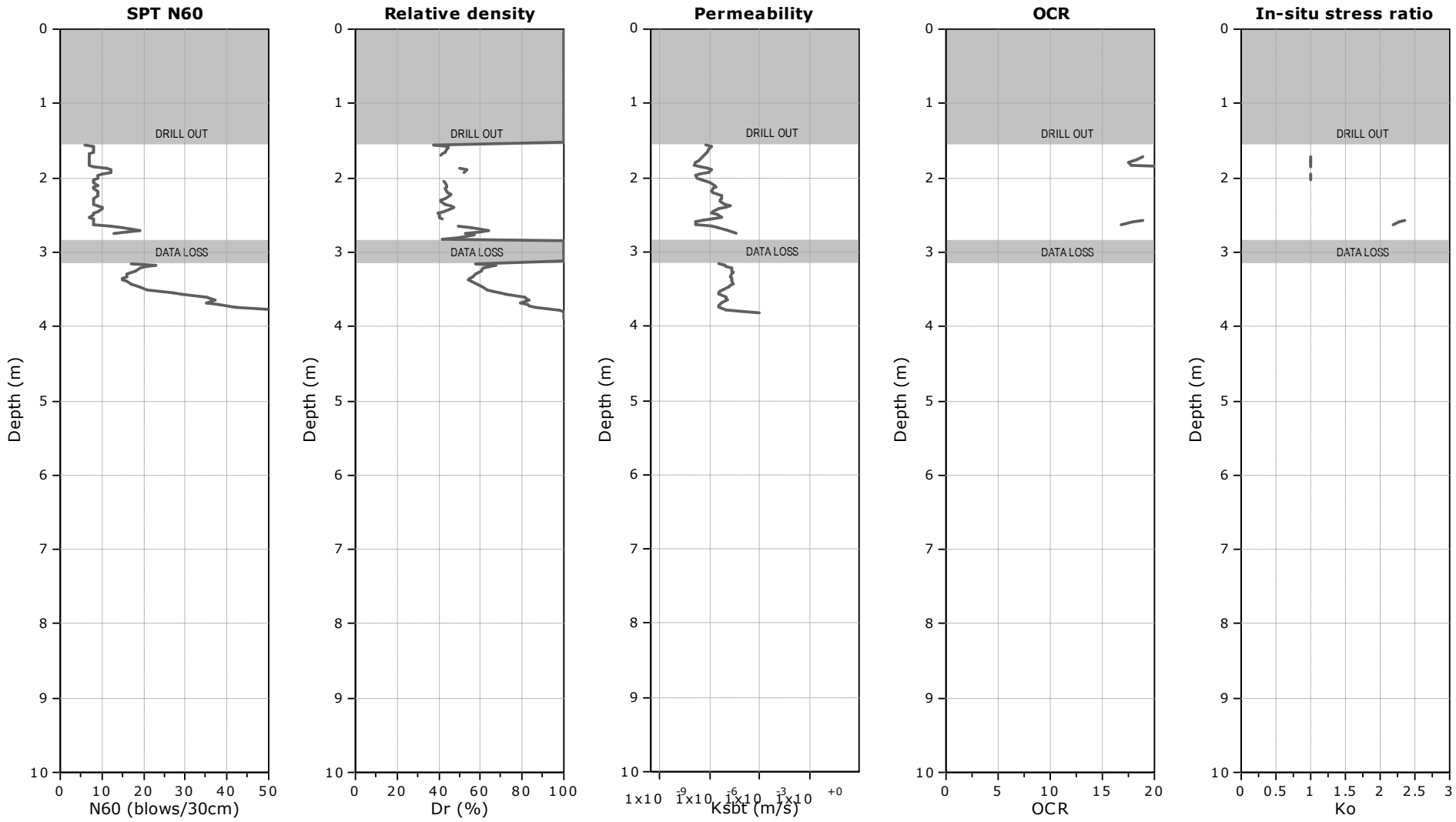
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT73
Total depth: 3.90 m, Date: 2021-09-24
Surface Elevation: 88.09 m
Cone Operator: ConeTec Investigations Ltd.



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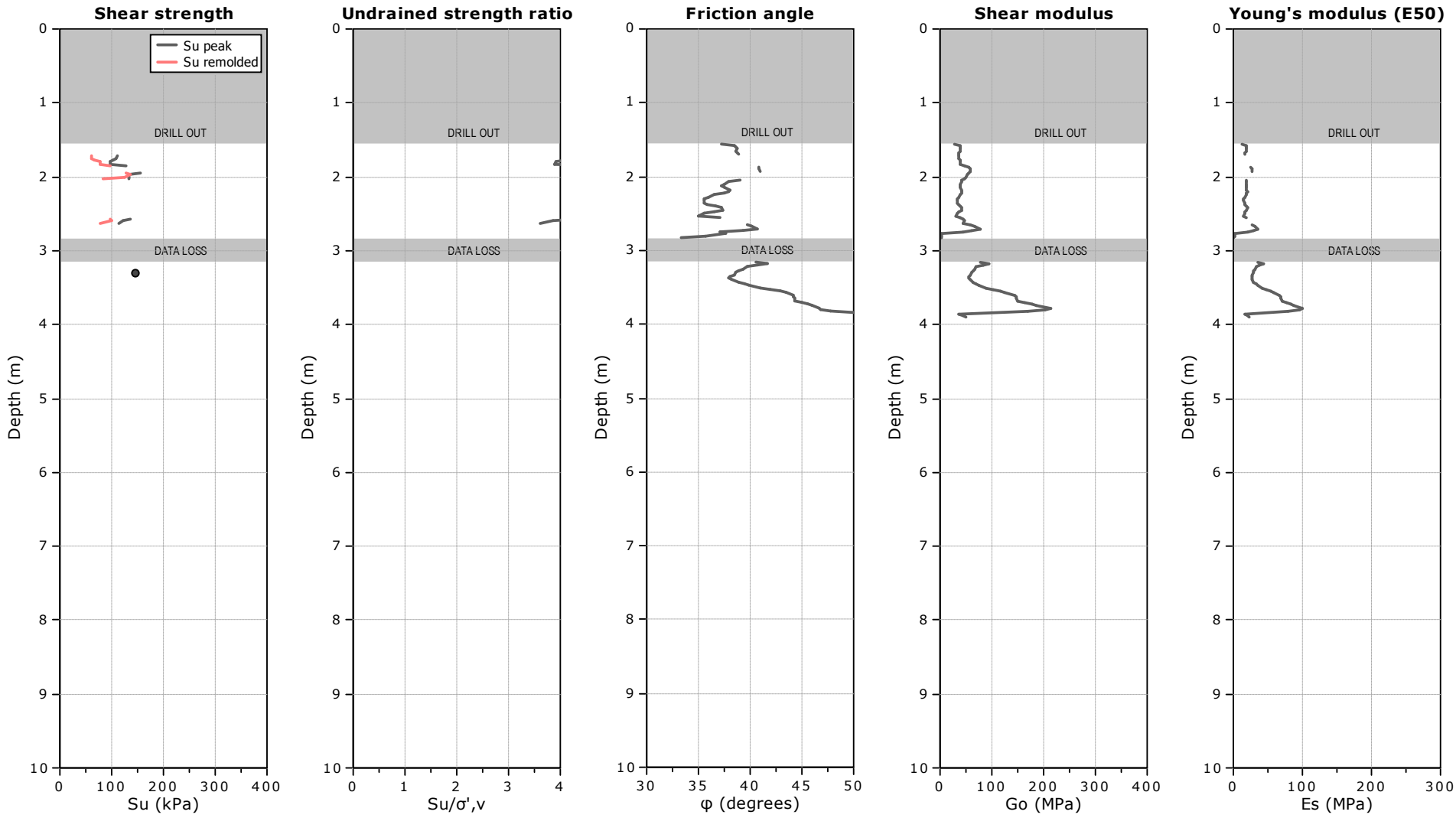
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT73
Total depth: 3.90 m, Date: 2021-09-24
Surface Elevation: 88.09 m
Cone Operator: ConeTec Investigations Ltd.



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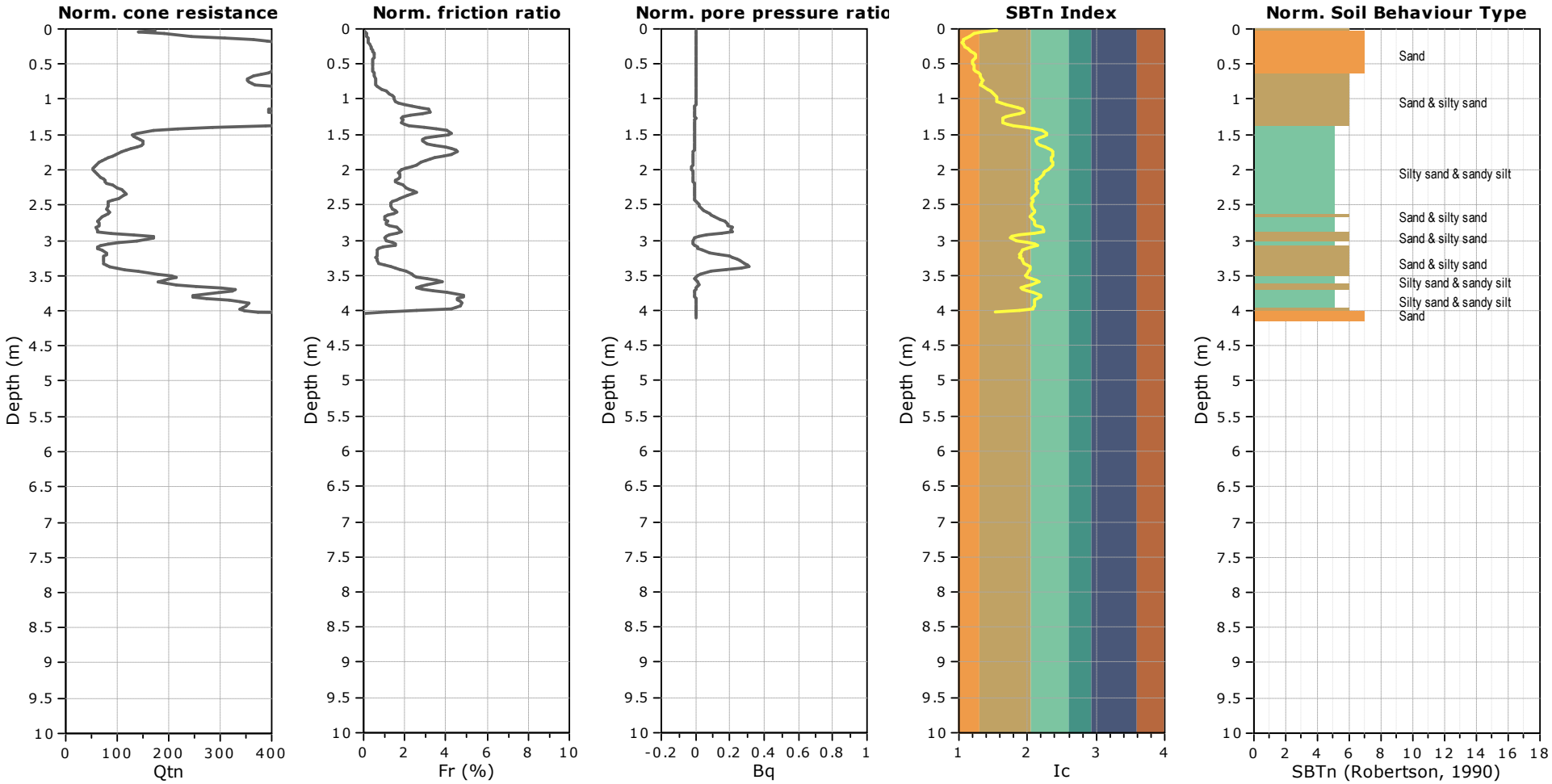
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT73B
Total depth: 4.10 m, Date: 2021-09-24
Surface Elevation: 88.08 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

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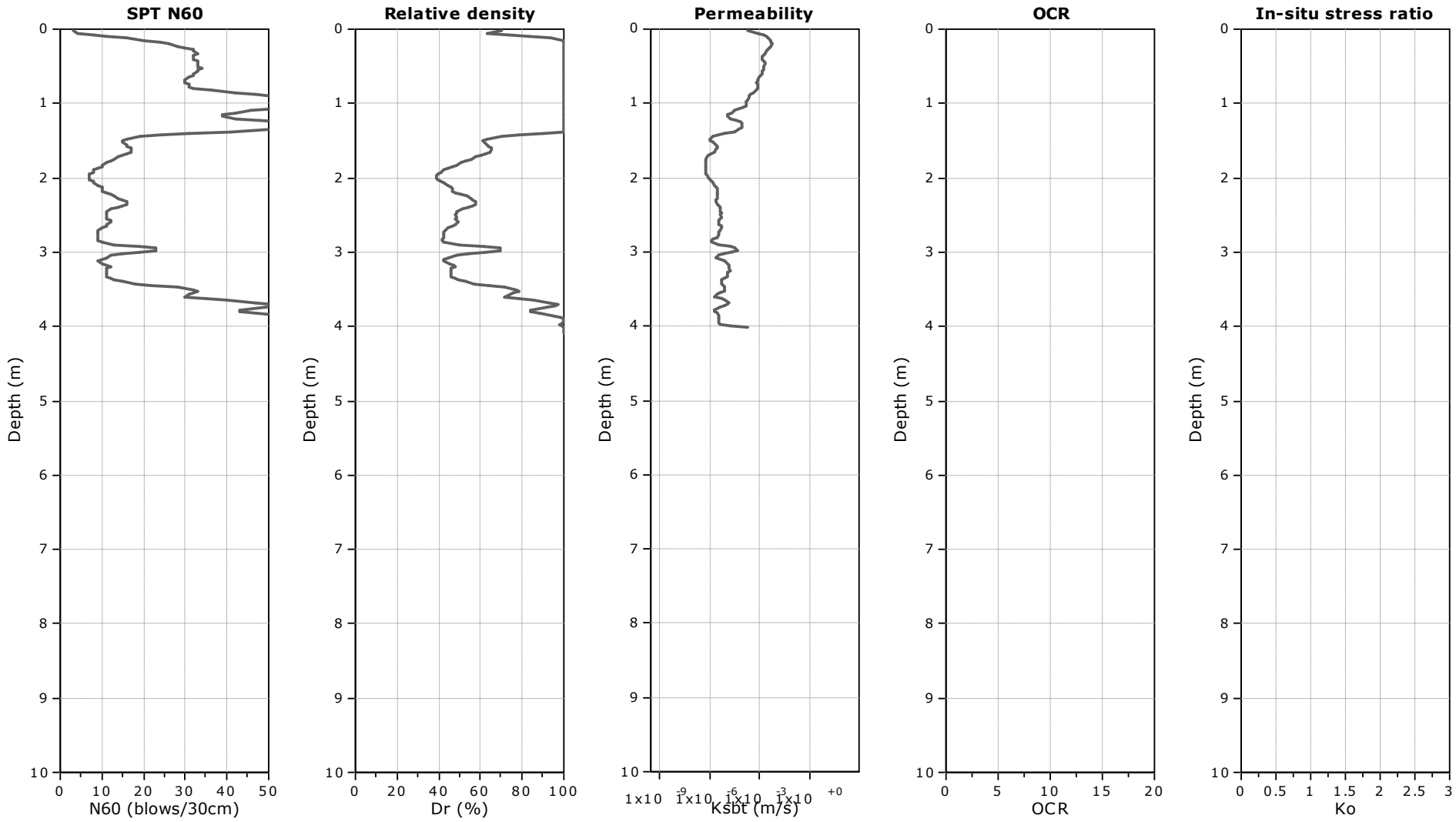
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT73B
Total depth: 4.10 m, Date: 2021-09-24
Surface Elevation: 88.08 m
Cone Operator: ConeTec Investigations Ltd.



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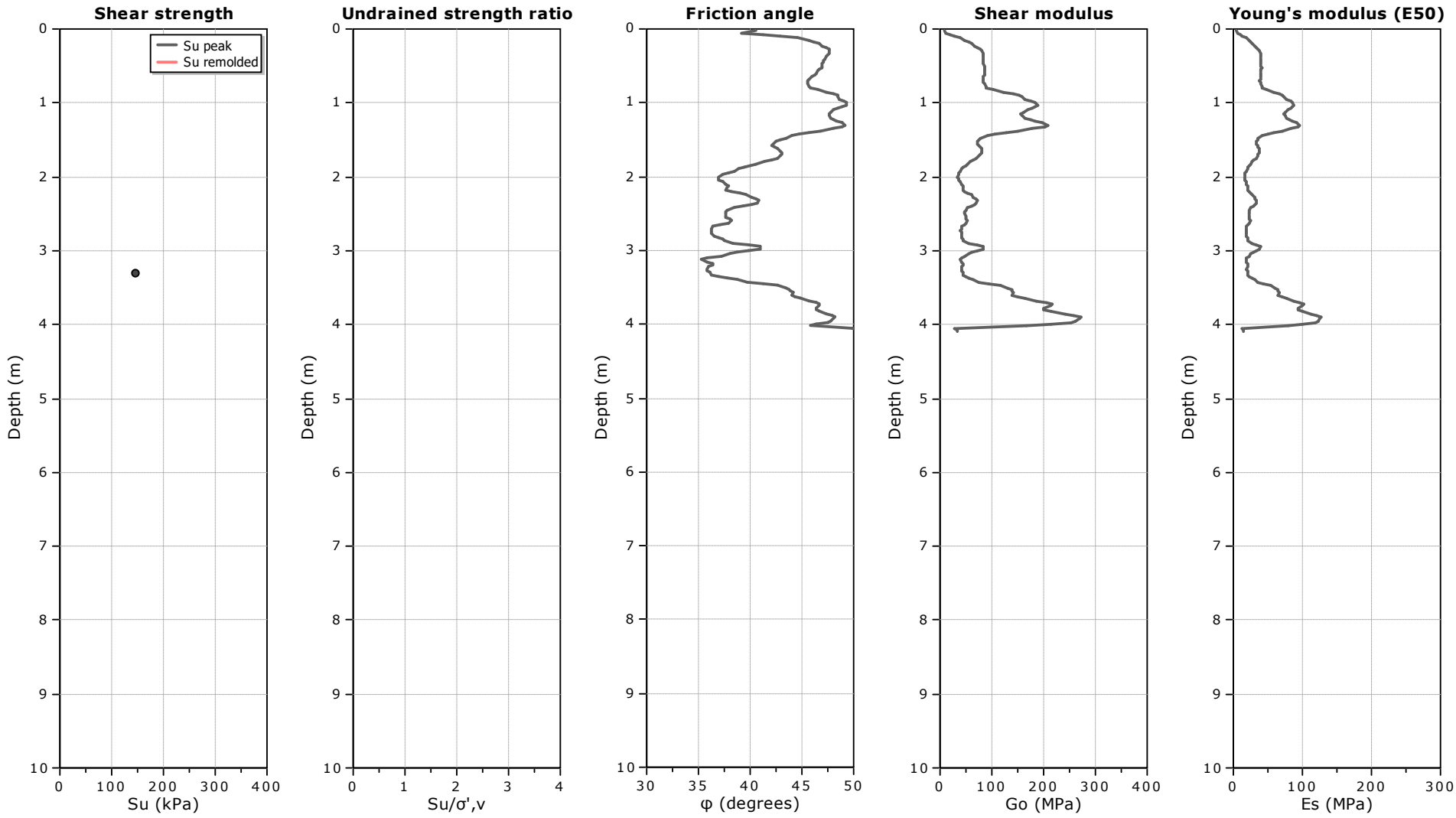
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT73B
Total depth: 4.10 m, Date: 2021-09-24
Surface Elevation: 88.08 m
Cone Operator: ConeTec Investigations Ltd.



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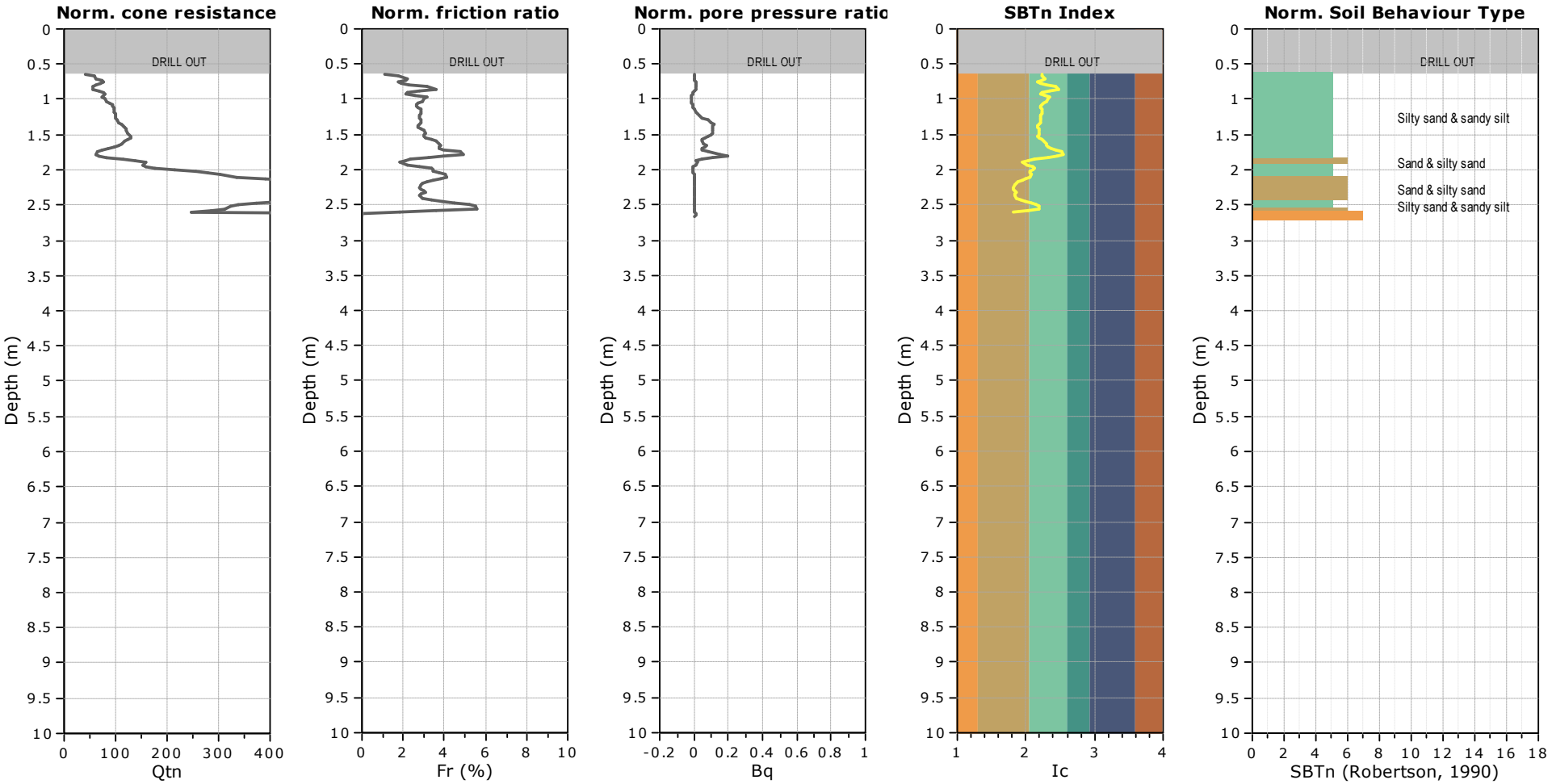
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT75
Total depth: 2.67 m, Date: 2021-09-24
Surface Elevation: 86.59 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

1. Sensitive fine grained
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3. Clay to silty clay
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5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
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9. Very stiff fine grained

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Total depth: 2.67 m, Date: 2021-09-24
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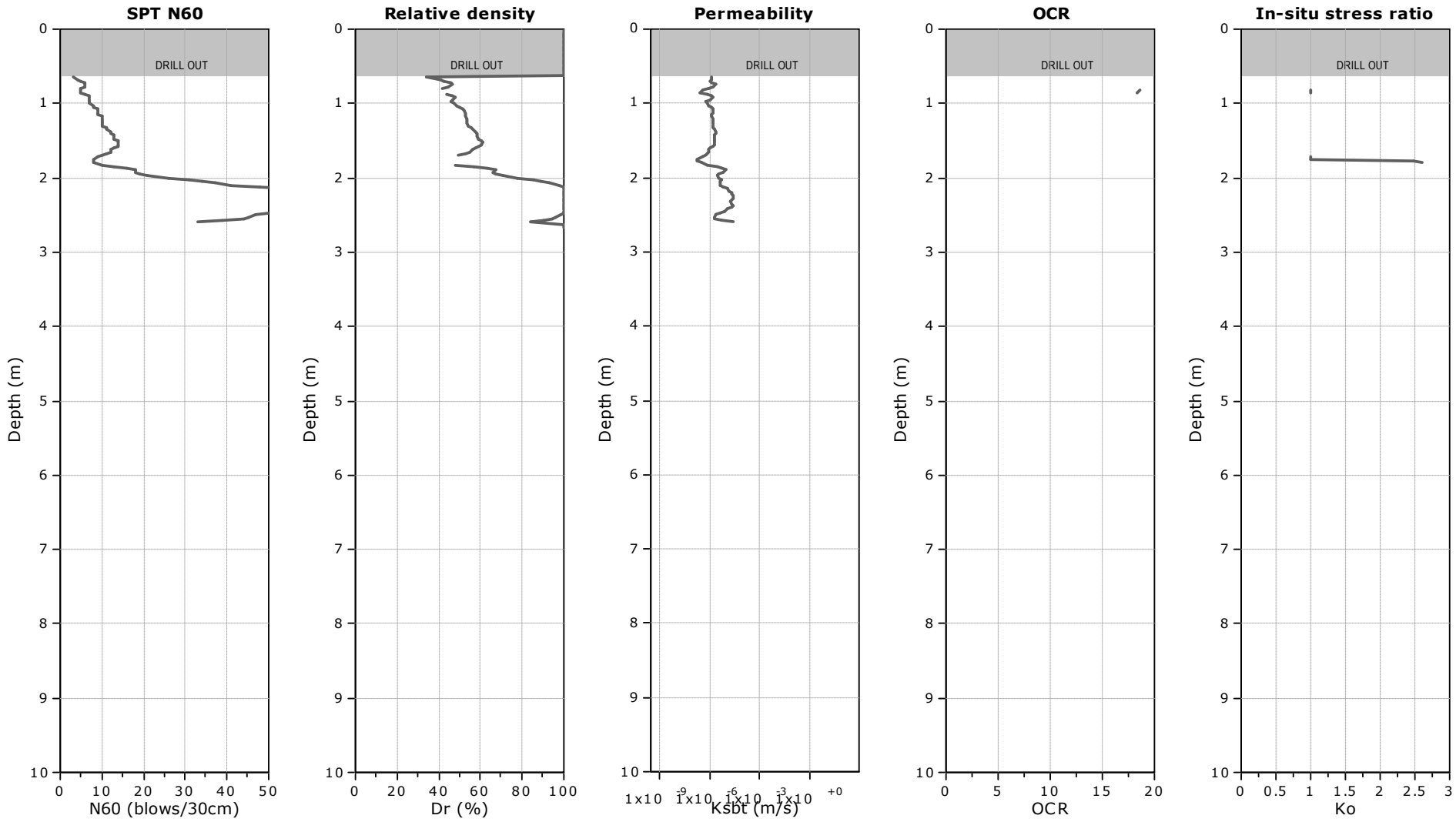
Cone Operator: ConeTec Investigations Ltd.



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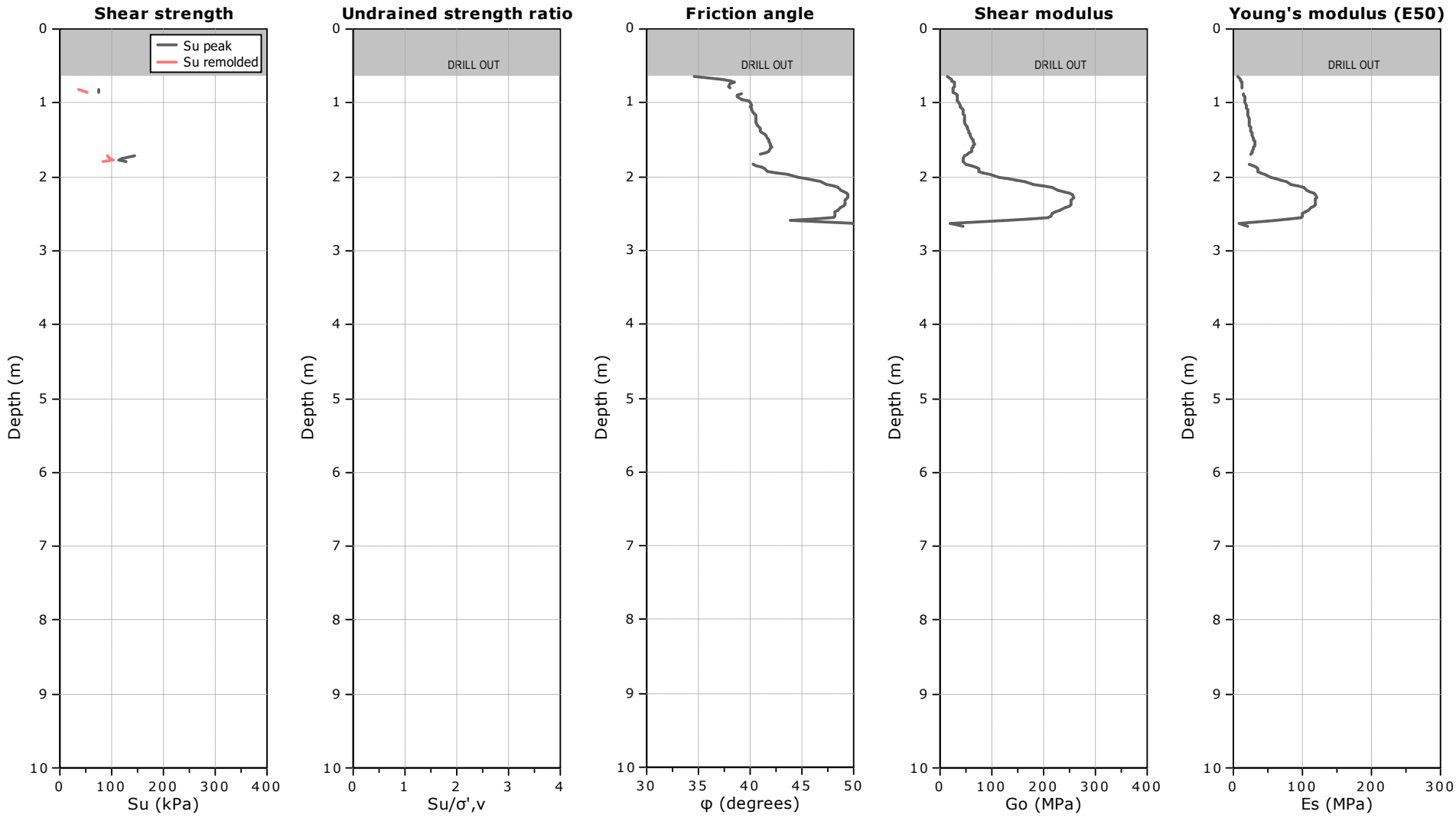

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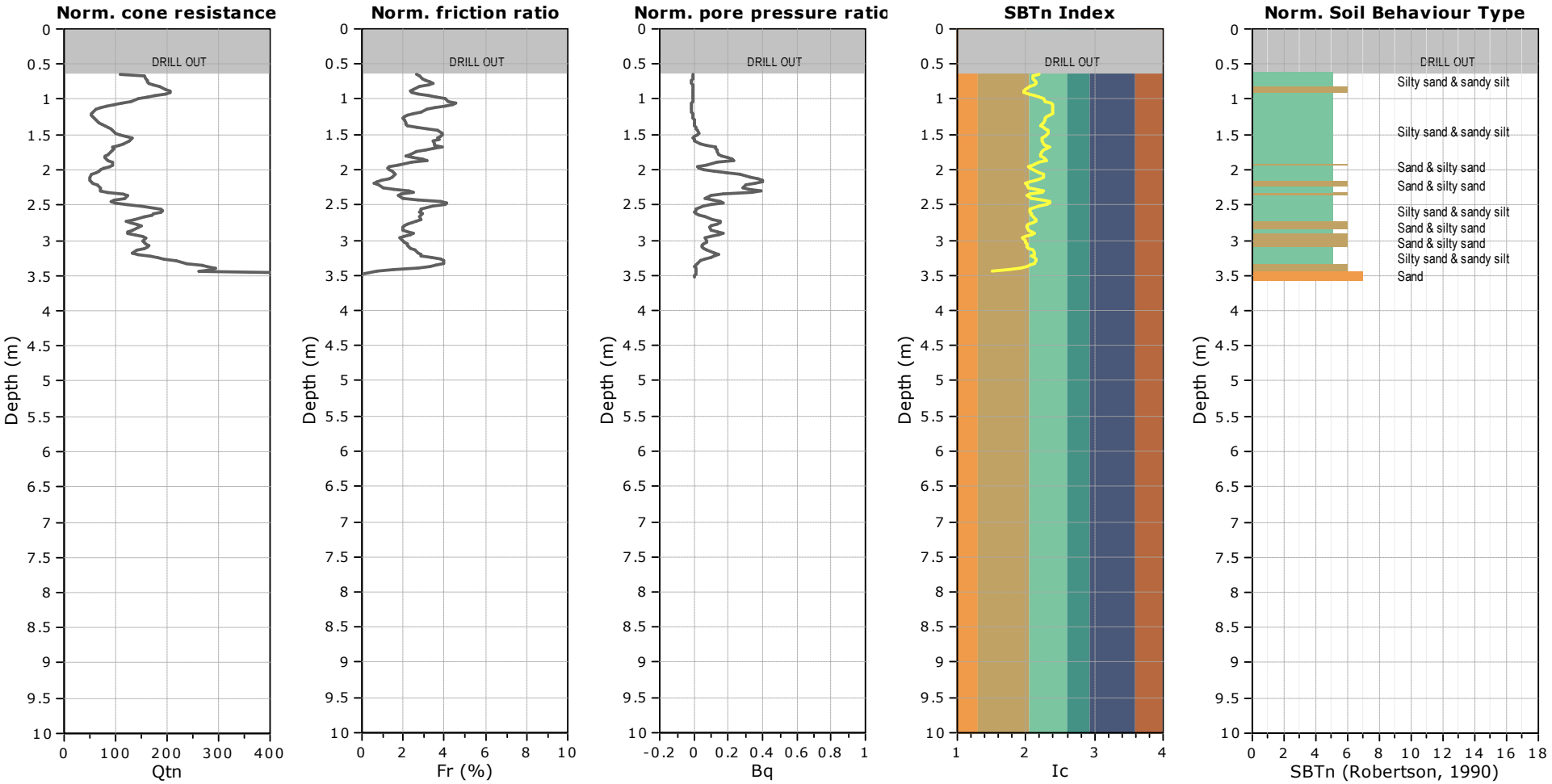
Project: **21451329 - Darlington New Nuclear Project**
Location: **Bowmanville, Ontario**

CPT77
Total depth: 3.52 m, Date: 2021-09-23
Surface Elevation: 87.88 m
Cone Operator: ConeTec Investigations Ltd.



SBTn legend

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Surface Elevation: 87.88 m
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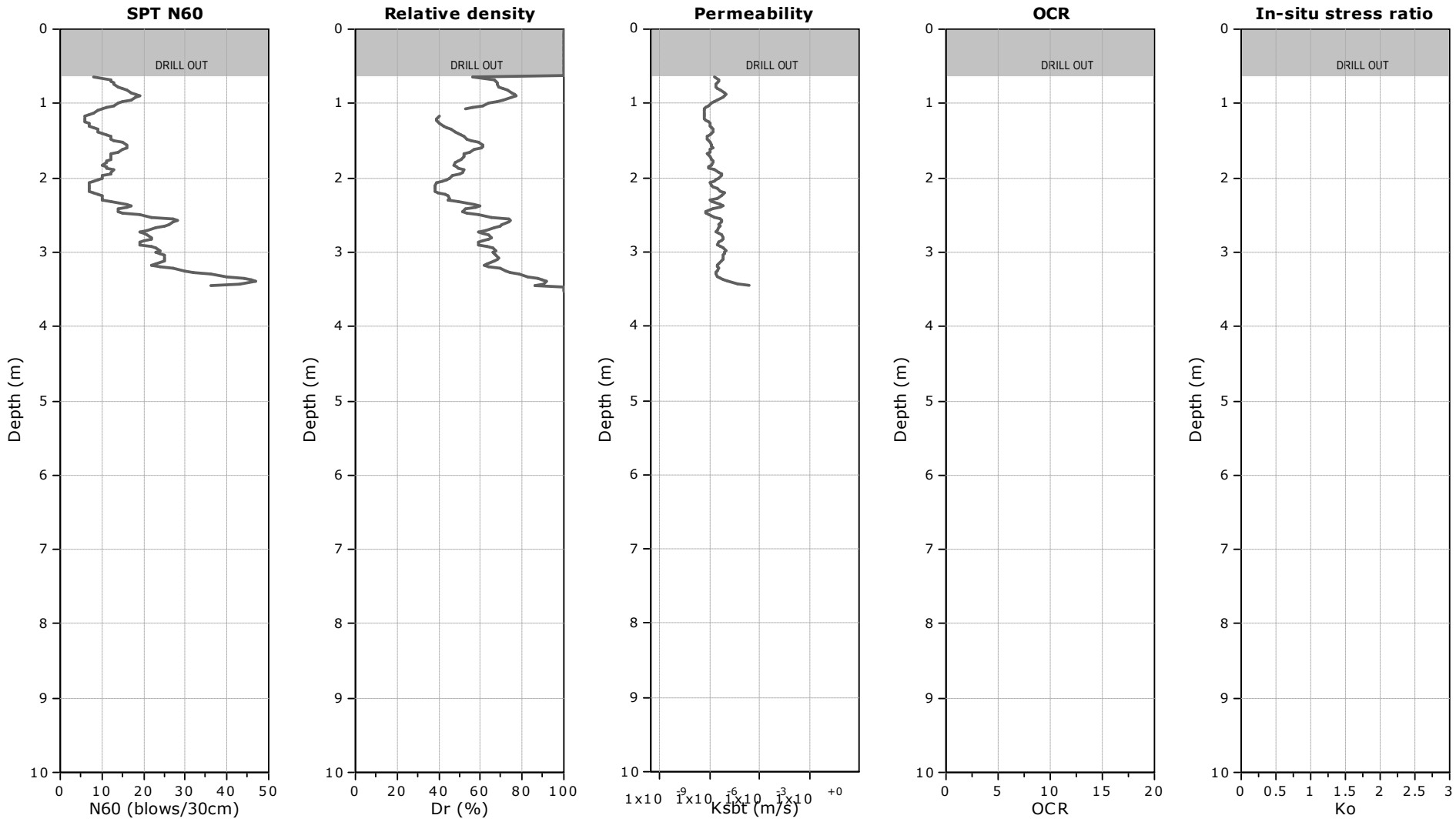

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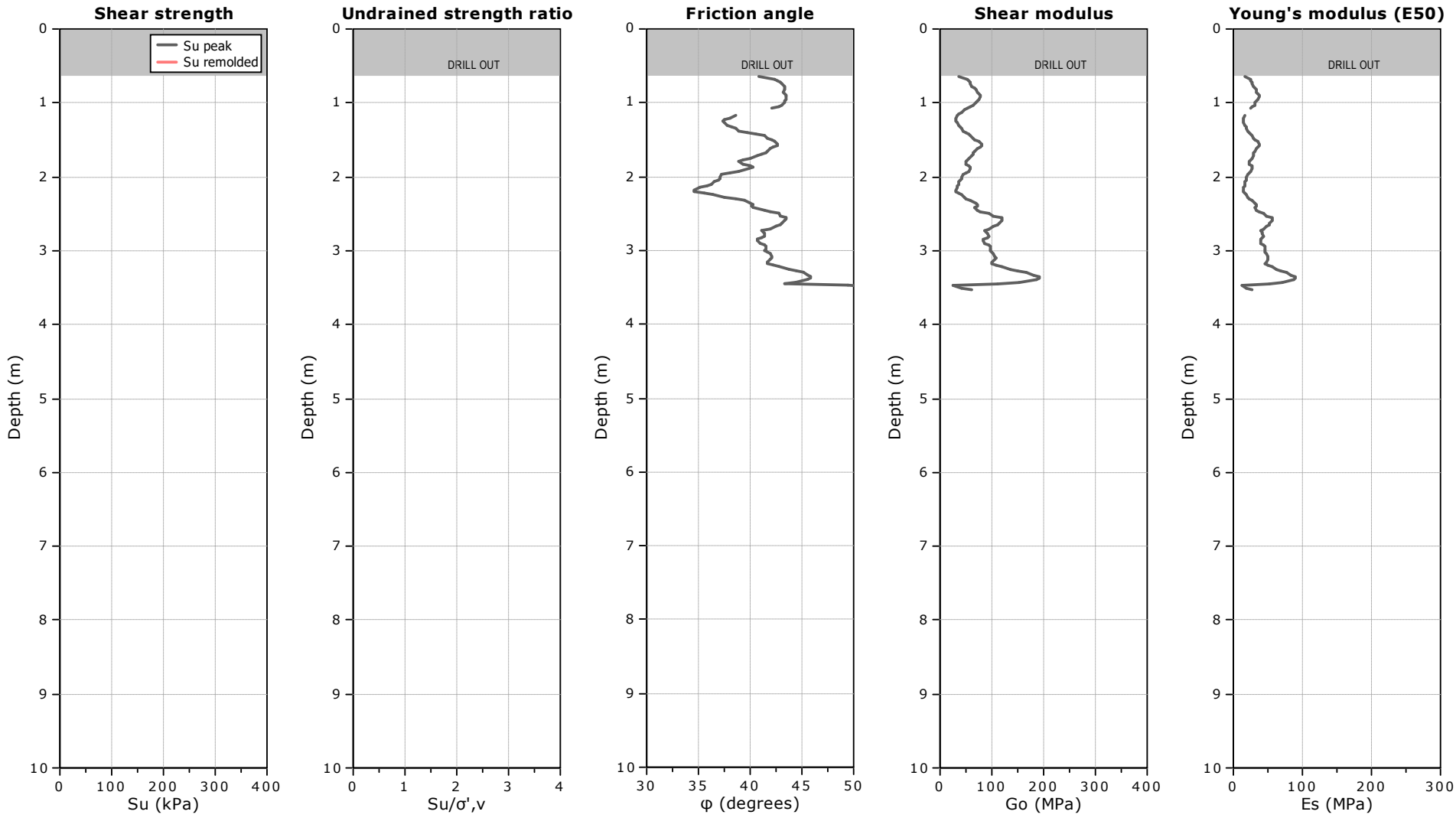

Presented below is a list of formulas used for the estimation of various soil properties. The formulas are presented in SI unit system and assume that all components are expressed in the same units.

:: Unit Weight, g (kN/m³) ::

$$g = g_w \cdot \left(0.27 \cdot \log(R_f) + 0.36 \cdot \log(\frac{q_t}{p_a}) + 1.236 \right)$$

where g_w = water unit weight

:: Corrected SPT blow count, N_{60} (blows per 30 cm) ::

$$N_{60} = \left(\frac{q_c}{P_a} \right) \cdot \frac{1}{10^{1.1268 - 0.2817 \cdot I_c}}$$

:: Relative Density, Dr (%) ::

$$100 \cdot \sqrt{\frac{Q_{tn}}{350}}$$

(applicable only to $I_c < 2.4$)

:: Permeability, Ksbt (m/s) ::

$I_c < 3.27$ and $I_c > 1.00$ then $Ksbt = 10^{0.952 - 3.04 \cdot I_c}$

$I_c \leq 4.00$ and $I_c > 3.27$ then $Kbst = 10^{4.52 - 1.37 \cdot I_c}$

:: Overconsolidation Ratio, OCR ::

$$k_{OCR} = 0.33$$

$$OCR = k_{OCR} \cdot Q_{tn}$$

(applicable only to $I_c > 2.4$)

:: In situ Stress Ratio, Ko ::

$$K_O = (1 - \sin\varphi') \cdot OCR^{\sin\varphi'}$$

(applicable only to $I_c > 2.4$)

:: Undrained peak shear strength, Su (kPa) ::

$N_{kt} = 17$ (from field vane testing, corrected for plasticity)

$$S_u = \frac{(q_t - \sigma_v)}{N_{kt}}$$

(applicable only to $I_c > 2.4$)

:: Remolded undrained shear strength, Su(rem) (kPa) ::

$$S_{u(rem)} = f_s$$

(applicable only to $I_c > 2.4$)

:: Drained Friction Angle, φ (°) ::

$$\varphi = 32 + 15.94 \cdot \log(Q_{tn,cs}) - 26.88$$

(applicable only to $I_c < 2.4$)

:: Small strain shear Modulus, Go (MPa) ::

$$G_0 = (q_t - \sigma_v) \cdot 0.0188 \cdot 10^{0.55 \cdot I_c + 1.68}$$

:: Young's Modulus, Es (MPa) ::

$$(q_t - \sigma_v) \cdot 0.015 \cdot 10^{0.55 \cdot I_c + 1.68}$$

(applicable only to $I_c < 2.4$)

References

• Robertson, P.K., Cabal K.L., Guide to Cone Penetration Testing for Geotechnical Engineering, Gregg Drilling & Testing, Inc., 5th Edition, November 2012

• Robertson, P.K., Interpretation of Cone Penetration Tests - a unified approach., Can. Geotech. J. 46(11): 1337–1355 (2009)

APPENDIX D

Pressuremeter Testing Interpretations

In-Situ Pressuremeter Testing **Project No. IDG 210614**

DNNP Project, Bowmanville, Ontario

Borehole Nos. BH-4, 5, 12, 15, 19, 55, 63, and 67-PMT

Supplementary Data – PMT Inferred Parameters

June 30, 2022

Prepared for:

Ms. Sarah Poot, P.Eng.
Golder Associates Ltd.
6925 Century Avenue, Suite #100
Mississauga, Ontario
L5N 7K2

In-Depth Geotechnical Inc.
20 Ravenscliffe Avenue
Hamilton, Ontario
L8P 3M4
Phone: (905) 541 9937
Fax: (877) 624 0140

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2. Pressuremeter Test Results – Inferred Parameters 3
3. Closure 19

Appendix Two Pressuremeter Data Interpretation (duplicated) Two-1

1. Introduction

In-Depth Geotechnical Inc. was retained by Golder Associates Ltd. to conduct Pressuremeter testing in relation to their Geotechnical Investigation for the Darlington New Nuclear Plant Project, in Bowmanville, Ontario.

A factual data PMT Report was presented, dated on April 30, 2022. That report summarized pressuremeter test results in terms of *a)* initial horizontal stresses; *b)* Pressuremeter Moduli; *c)* Unload-Reload moduli; *d)* Yield Pressure; and *e)* Limit Pressure parameters. Those parameters were measured from the Pressure-Volume plots of the corrected field data.

At the request of Golder, this supplementary report presents the inferred soil properties using methods of interpretation accepted by the in-situ testing community. For the purposes of support, Appendix Two, *"Pressuremeter Data Interpretation"* has been attached, as a duplicate, to this Supplementary Report. The same Appendix Two was part and form of the original Factual Data PMT report. Furthermore, the Reader should refer to the Factual Data Report for further details of PMT testing results.

Pressuremeter testing was performed at eight boreholes. The summarized details of tested boreholes are as follow:

Borehole Number	Ground Elevation masl	Number of Tests	Date of Testing (D/M/Y)
BH 4	89.64	6	19-20-21 /07/2021
BH 5	88.97	7	26-27-30 /08/2021
BH 12	87.44	7	27-28 /09/2021 and 12-13 /10/2021
BH 15	87.37	7	24-25-28 /06/2021
BH 19	86.58	5	29-30 /07/2021 and 3-12 /08/2021
BH 55	95.28	9	29-30 /09/2021
BH 63	87.87	6	13-14 /09/2021
BH 67	88.52	6	1-20-23 /08/2021

Ground elevation are presented as provide by Golder Representatives. ***Number of Tests*** indicates the number of completed PMT tests, as not all attempts were successful.

Pre-boring pressuremeter testing was completed using a TEXAM unit. The testing procedure was in general accordance with Procedure B, volume-controlled loading, as outlined in the ASTM D 4719-00 Standard Test Method for Pre-bored Pressuremeter Testing of Soils. The testing equipment was calibrated for pressure and volume losses as indicated in the above-mentioned standard. The Records of Calibration for the PMT probes utilized in this job are attached on Appendix Three. The control unit was de-aired prior to every test. Also, checks were completed to ensure that the probe, tubing, and control unit assembly were fully saturated, and that the probe membrane was leakage-free at high pressures.

2. Pressuremeter Test Results – Inferred Parameters

2.1 Soil Parameters Inferred from PMT test

A general guideline to interpret and infer soil properties based on available PMT test data is attached to Appendix Two. This guideline suggests accepted current procedures to estimate or infer shear strength, deformation properties, and other related soil parameters. These inferred properties are summarized in Table Nos. 2*a*, 2*b*, 2c, 2*d*, 2*e*, 2*f*, 2*g*, and 2*h*, below.

It is recognized that the values of in-situ total horizontal stresses, σ_{h0}, presented in this report correspond to best possible estimates. These estimates were obtained using the *corrected pressure* versus *1/Volume* method, and are used in this report to infer values of the at-rest stress ratio k_0. The following subsurface soil conditions were assumed to apply:

- Ground Surface and Ground Water elevations: as indicated on the Table Nos. 2*a*, to 2*g*, listed in the pages below.
- Average wet and saturated unit weights: γ_{wet} = 20 kN/m^3 and γ_{sat} = 21 kN/m^3
- Total horizontal stresses taken as direct values of p_0 (PMT test results).

It is considered that stresses within the soil mass are defined by geostatic conditions, that is to say:

1. No surcharges are applied on the surface (structural loads from existing buildings nearby are negligible),
2. Static groundwater conditions (no seepage occurs),
3. Surface topography is horizontal (no slopes or excavations), and
4. Total vertical stresses are defined by the *wet* (unsaturated soils) and *saturated* (submerged soils) unit weights, γ_{wet} and γ_{sat}, respectively.

Using the *Pressiorama* and the associated *Pressiorama Cyclique Charts* inferred values of Young's Moduli (E_Y), Classification Index (I_c), and drained friction angle (ϕ') are also shown in Table No. 2.

Table No. 2*a* PMT-Inferred Parameters BH 04-PMT

PMT Test No.	z depth [m]	z_w water [m]	Hydrostatic Pressure [kPa]	Total Stresses Vertical [kPa]	Total Stresses Horizontal [kPa]	Effective Stresses Vertical [kPa]	Effective Stresses Horizontal [kPa]	**Stress Ratio** k_0	**Young's Modulus** α Menard's Parameter	**Young's Modulus** E_Y [MPa]	**Shear Strength** Undrained Cohesive Behavior c_u [kPa]	**Shear Strength** Drained Cohesionless Behavior ϕ' [degrees]	**Classification Index** I_c
1	4.39	-5.55	0	88	80	88	80	**0.91**	0.55	50	171	32	2.65
2	7.09	-2.85	0	142	110	142	110	**0.78**	0.43	42	193	33	2.67
3	9.68	-0.26	0	194	142	194	142	**0.73**	0.42	52	230	32	2.67
4	13.54	3.60	35	276	160	241	125	**0.52**	0.37	113	374	36	2.89
5	19.63	9.69	95	407	238	312	143	**0.46**	0.63	196	415	32	2.64
6	22.71	12.77	125	473	278	348	153	**0.44**	0.42	404	756	37	2.99

Notes

1. Ground surface elevation (m) 89.64 | Water elevation (m) 79.70 | Water depth (m) 9.94

2. Wet unit weight of soil 20.0 [kN/m^3] | Saturated unit weight of soil 21.5 [kN/m^3]

3. Observations on Shear Strength Parameters (SSP):
   SSP are considered either for Undrained Conditions (Short Term) or Drained Conditions (Long Term). These two conditions are mutually exclusive.
   Undrained Conditions imply cohesion is c_u , and $\phi = 0$. ***Drained Conditions*** imply negligible cohesion or $c' = 0$, and $\phi = \phi'$
   Based on the Classification Index I_C (Soil Behavior Type), the suggested values of the SSP are highlighted in green (Thick box border)

4. The Classification Index parameter, I_C, is indicative of the soil type of behavior. It does not exactly relate to the Soil Classification types as those obtained via Grain-Size Distribution analyses. I_C varies from 1.0 to 4.5, from soft clays (cohesive) to dense coarse sands (frictional), correspondingly.

Table No. 2*b* PMT-Inferred Parameters BH 05-PMT

PMT Test No.	z depth [m]	z_w water [m]	Hydrostatic Pressure [kPa]	Total Stresses Vertical [kPa]	Total Stresses Horizontal [kPa]	Effective Stresses Vertical [kPa]	Effective Stresses Horizontal [kPa]	**Stress Ratio** k_0	**Young's Modulus** α Menard's Parameter	**Young's Modulus** E_Y [MPa]	**Shear Strength** Undrained Cohesive Behavior c_u [kPa]	**Shear Strength** Drained Cohesionless Behavior ϕ' [degrees]	**Classification Index** I_c
1	4.06	-5.21	0	81	55	81	55	**0.68**	0.52	13	81	29	2.45
2	6.73	-2.54	0	135	88	135	88	**0.65**	0.40	49	202	34	2.79
3	9.88	0.61	6	199	130	193	124	**0.64**	0.47	256	471	38	3.00
4	13.31	4.04	40	272	182	233	142	**0.61**	0.40	239	542	38	3.00
5	16.36	7.09	70	338	227	268	157	**0.59**	0.42	269	592	37	2.95
6	19.36	10.09	99	402	273	303	174	**0.57**	0.56	178	434	32	2.65
7	22.05	12.78	125	460	318	335	193	**0.58**	0.61	262	526	32	2.66

Notes

1. Ground surface elevation (m) 88.97 | Water elevation (m) 79.70 | Water depth (m) 9.27
2. Wet unit weight of soil 20.0 [kN/m^3] | Saturated unit weight of soil 21.5 [kN/m^3]
3. Observations on Shear Strength Parameters (SSP):
   SSP are considered either for Undrained Conditions (Short Term) or Drained Conditions (Long Term). These two conditions are mutually exclusive.
   Undrained Conditions imply cohesion is c_u, and $\phi = 0$. ***Drained Conditions*** imply negligible cohesion or $c' = 0$, and $\phi = \phi'$
   Based on the Classification Index I_C (Soil Behavior Type), the suggested values of the SSP are highlighted in green (Thick box border)
4. The Classification Index parameter, I_C, is indicative of the soil type of behavior. It does not exactly relate to the Soil Classification types as those obtained via Grain-Size Distribution analyses. I_C varies from 1.0 to 4.5, from soft clays (cohesive) to dense coarse sands (frictional), correspondingly.

Table No. 2*c* PMT-Inferred Parameters BH12-PMT

PMT Test No.	z depth [m]	z_w water [m]	Hydrostatic Pressure [kPa]	Total Stresses Vertical [kPa]	Total Stresses Horizontal [kPa]	Effective Stresses Vertical [kPa]	Effective Stresses Horizontal [kPa]	**Stress Ratio** k_0	**Young's Modulus** α Menard's Parameter	**Young's Modulus** E_Y [MPa]	**Shear Strength** Undrained Cohesive Behavior c_u [kPa]	**Shear Strength** Drained Cohesionless Behavior ϕ' [degrees]	**Classification Index** I_c
1	1.80	-5.94	0	36	31	36	31	**0.86**	0.34	50	171	40	3.13
2	5.23	-2.51	0	105	64	105	64	**0.61**	0.39	222	403	41	3.24
3	8.41	0.67	7	169	110	163	103	**0.64**	0.29	588	870	46	3.50
4	11.96	4.22	41	246	132	204	91	**0.44**	0.34	275	579	41	3.19
5	15.04	7.30	72	312	154	240	82	**0.34**	0.32	361	705	42	3.24
6	17.93	10.19	100	374	206	274	106	**0.39**	0.82	200	355	30	2.55
7	20.98	13.24	130	439	242	310	112	**0.36**	0.42	265	596	37	2.93

Notes

1. Ground surface elevation (m) 87.44 | Water elevation (m) 79.70 | Water depth (m) 7.74
2. Wet unit weight of soil 20.0 [kN/m^3] | Saturated unit weight of soil 21.5 [kN/m^3]
3. Observations on Shear Strength Parameters (SSP):
   SSP are considered either for Undrained Conditions (Short Term) or Drained Conditions (Long Term). These two conditions are mutually exclusive.
   Undrained Conditions imply cohesion is c_u, and $\phi = 0$. ***Drained Conditions*** imply negligible cohesion or $c' = 0$, and $\phi = \phi'$
   Based on the Classification Index I_C (Soil Behavior Type), the suggested values of the SSP are highlighted in green (Thick box border)
4. The Classification Index parameter, I_C, is indicative of the soil type of behavior. It does not exactly relate to the Soil Classification types as those obtained via Grain-Size Distribution analyses. I_C varies from 1.0 to 4.5, from soft clays (cohesive) to dense coarse sands (frictional), correspondingly.

Table No. 2*d* PMT-Inferred Parameters BH15-PMT

PMT Test No.	z depth [m]	z_w water [m]	Hydrostatic Pressure [kPa]	Total Stresses Vertical [kPa]	Total Stresses Horizontal [kPa]	Effective Stresses Vertical [kPa]	Effective Stresses Horizontal [kPa]	**Stress Ratio** k_0	**Young's Modulus** α Menard's Parameter	E_Y [MPa]	**Shear Strength** Undrained Cohesive Behavior c_u [kPa]	**Shear Strength** Drained Cohesionless Behavior ϕ' [degrees]	**Classification Index** I_c
1	3.91	-1.47	0	78	59	78	59	**0.75**	0.28	186	431	44	3.40
2	7.01	1.63	16	143	87	127	71	**0.56**	0.28	268	562	44	3.38
3	10.26	4.88	48	213	127	165	79	**0.48**	0.30	600	900	45	3.45
4	14.99	9.61	94	314	195	220	101	**0.46**	0.40	228	535	37	2.96
5	17.78	12.40	122	374	236	253	114	**0.45**	0.68	170	372	31	2.57
6	20.83	15.45	152	440	286	288	134	**0.47**	0.44	277	618	36	2.87
7	23.93	18.55	182	506	344	325	162	**0.50**	0.55	413	710	34	2.81

Notes

1. Ground surface elevation (m) 87.37 | Water elevation (m) 81.99 | Water depth (m) 5.38

2. Wet unit weight of soil 20.0 [kN/m^3] | Saturated unit weight of soil 21.5 [kN/m^3]

3. Observations on Shear Strength Parameters (SSP):
   SSP are considered either for Undrained Conditions (Short Term) or Drained Conditions (Long Term). These two conditions are mutually exclusive.
   Undrained Conditions imply cohesion is c_u , and $\phi = 0$. ***Drained Conditions*** imply negligible cohesion or $c' = 0$, and $\phi = \phi'$
   Based on the Classification Index I_C (Soil Behavior Type), the suggested values of the SSP are highlighted in green (Thick box border)

4. The Classification Index parameter, I_C, is indicative of the soil type of behavior. It does not exactly relate to the Soil Classification types as those obtained via Grain-Size Distribution analyses. I_C varies from 1.0 to 4.5, from soft clays (cohesive) to dense coarse sands (frictional), correspondingly.

Table No. 2*e* PMT-Inferred Parameters BH19-PMT

PMT Test No.	z depth [m]	z_w water [m]	Hydrostatic Pressure [kPa]	Total Stresses Vertical [kPa]	Total Stresses Horizontal [kPa]	Effective Stresses Vertical [kPa]	Effective Stresses Horizontal [kPa]	**Stress Ratio** k_0	**Young's Modulus** α Menard's Parameter	E_Y [MPa]	**Shear Strength** Undrained Cohesive Behavior c_u [kPa]	**Shear Strength** Drained Cohesionless Behavior ϕ' [degrees]	**Classification Index** I_c
1	6.76	-0.89	0	135	122	135	122	**0.90**	0.29	283	618	43	3.29
2	10.87	3.22	32	222	153	191	121	**0.64**	0.36	384	692	41	3.21
3	14.83	7.18	70	307	202	237	132	**0.56**	0.42	258	562	37	2.96
4	17.83	10.18	100	372	237	272	137	**0.50**	0.78	144	320	29	2.46
5	20.78	13.13	129	435	258	307	129	**0.42**	0.94	110	260	26	2.28

Notes

1. Ground surface elevation (m) 86.58 | Water elevation (m) 78.93 | Water depth (m) 7.65
2. Wet unit weight of soil 20.0 [kN/m^3] | Saturated unit weight of soil 21.5 [kN/m^3]
3. Observations on Shear Strength Parameters (SSP):
   SSP are considered either for Undrained Conditions (Short Term) or Drained Conditions (Long Term). These two conditions are mutually exclusive.
   Undrained Conditions imply cohesion is c_u, and $\phi = 0$. ***Drained Conditions*** imply negligible cohesion or $c' = 0$, and $\phi = \phi'$
   Based on the Classification Index I_C (Soil Behavior Type), the suggested values of the SSP are highlighted in green (Thick box border)
4. The Classification Index parameter, I_C, is indicative of the soil type of behavior. It does not exactly relate to the Soil Classification types as those obtained via Grain-Size Distribution analyses. I_C varies from 1.0 to 4.5, from soft clays (cohesive) to dense coarse sands (frictional), correspondingly.

Table No. 2*f* PMT-Inferred Parameters BH55-PMT

PMT Test No.	z depth [m]	z_w water [m]	Hydrostatic Pressure [kPa]	Total Stresses Vertical [kPa]	Total Stresses Horizontal [kPa]	Effective Stresses Vertical [kPa]	Effective Stresses Horizontal [kPa]	**Stress Ratio k_0**	**Young's Modulus** α Menard's Parameter	**Young's Modulus** E_Y [MPa]	**Shear Strength** Undrained Cohesive Behavior c_u [kPa]	**Shear Strength** Drained Cohesionless Behavior ϕ' [degrees]	**Classification Index I_c**
1	3.58	-7.23	0	72	73	72	73	**1.02**	0.26	613	845	48	3.66
2	6.63	-4.18	0	133	104	133	104	**0.78**	0.30	333	635	43	3.36
3	9.70	-1.11	0	194	140	194	140	**0.72**	0.32	471	796	43	3.34
4	12.90	2.09	20	261	190	241	170	**0.70**	0.34	328	690	40	3.14
5	15.85	5.04	49	325	234	275	185	**0.67**	0.60	209	440	33	2.69
6	19.36	8.55	84	400	283	316	199	**0.63**	0.44	323	666	36	2.91
7	22.33	11.52	113	464	260	351	147	**0.42**	0.45	279	602	36	2.89
8	25.45	14.64	144	531	309	387	165	**0.43**	0.87	189	371	28	2.41
9	27.91	17.10	168	584	361	416	193	**0.46**	0.42	330	737	36	2.89

Notes

1. Ground surface elevation (m) 95.28 | Water elevation (m) 84.47 | Water depth (m) 10.81

2. Wet unit weight of soil 20.0 [kN/m^3] | Saturated unit weight of soil 21.5 [kN/m^3]

3. Observations on Shear Strength Parameters (SSP):
   SSP are considered either for Undrained Conditions (Short Term) or Drained Conditions (Long Term). These two conditions are mutually exclusive.
   Undrained Conditions imply cohesion is c_u, and $\phi = 0$. ***Drained Conditions*** imply negligible cohesion or $c' = 0$, and $\phi = \phi'$
   Based on the Classification Index I_C (Soil Behavior Type), the suggested values of the SSP are highlighted in green (Thick box border)

4. The Classification Index parameter, I_C, is indicative of the soil type of behavior. It does not exactly relate to the Soil Classification types as those obtained via Grain-Size Distribution analyses. I_C varies from 1.0 to 4.5, from soft clays (cohesive) to dense coarse sands (frictional), correspondingly.

Table No. 2*g* PMT-Inferred Parameters BH63-PMT

PMT Test No.	z depth [m]	z_w water [m]	Hydrostatic Pressure [kPa]	Total Stresses Vertical [kPa]	Total Stresses Horizontal [kPa]	Effective Stresses Vertical [kPa]	Effective Stresses Horizontal [kPa]	**Stress Ratio** k_0	**Young's Modulus** α Menard's Parameter	E_Y [MPa]	**Shear Strength** Undrained Cohesive Behavior c_u [kPa]	**Shear Strength** Drained Cohesionless Behavior ϕ' [degrees]	**Classification Index** I_c
1	3.58	-2.93	0	72	38	72	38	**0.53**	0.29	36	167	39	3.10
2	6.63	0.12	1	133	81	132	80	**0.61**	n/a	n/a	n/a	n/a	n/a
3	9.63	3.12	31	197	124	167	93	**0.56**	0.40	86	293	35	2.84
4	16.26	9.75	96	340	223	244	127	**0.52**	0.38	225	563	37	2.96
5	19.30	12.79	125	405	277	280	152	**0.54**	0.67	226	450	31	2.61
6	22.10	15.59	153	465	321	313	168	**0.54**	0.57	267	549	33	2.70

Notes

1. Ground surface elevation (m) 87.87 | Water elevation (m) 81.36 | Water depth (m) 6.51
2. Wet unit weight of soil 20.0 [kN/m^3] | Saturated unit weight of soil 21.5 [kN/m^3]
3. Observations on Shear Strength Parameters (SSP):
   SSP are considered either for Undrained Conditions (Short Term) or Drained Conditions (Long Term). These two conditions are mutually exclusive.
   Undrained Conditions imply cohesion is c_u , and $\phi = 0$. ***Drained Conditions*** imply negligible cohesion or $c' = 0$, and $\phi = \phi'$
   Based on the Classification Index I_C (Soil Behavior Type), the suggested values of the SSP are highlighted in green (Thick box border)
4. The Classification Index parameter, I_C, is indicative of the soil type of behavior. It does not exactly relate to the Soil Classification types as those obtained via Grain-Size Distribution analyses. I_C varies from 1.0 to 4.5, from soft clays (cohesive) to dense coarse sands (frictional), correspondingly.

Table No. 2*h* PMT-Inferred Parameters BH67-PMT

PMT Test No.	z depth [m]	z_w water [m]	Hydrostatic Pressure [kPa]	Total Stresses Vertical [kPa]	Total Stresses Horizontal [kPa]	Effective Stresses Vertical [kPa]	Effective Stresses Horizontal [kPa]	**Stress Ratio** k_0	**Young's Modulus** α Menard's Parameter	E_Y [MPa]	**Shear Strength** Undrained Cohesive Behavior c_u [kPa]	**Shear Strength** Drained Cohesionless Behavior ϕ' [degrees]	**Classification Index** I_c
1	3.66	-3.50	0	73	36	73	36	**0.49**	0.33	80	227	41	3.21
2	8.23	1.07	10	166	98	156	88	**0.56**	0.48	31	152	31	2.56
3	11.38	4.22	41	234	153	193	112	**0.58**	0.36	354	659	41	3.18
4	14.73	7.57	74	306	216	232	142	**0.61**	0.40	244	567	37	2.96
5	17.83	10.67	105	373	263	268	158	**0.59**	0.73	136	329	29	2.45
6	20.50	13.34	131	430	323	299	192	**0.64**	0.36	295	731	37	2.97

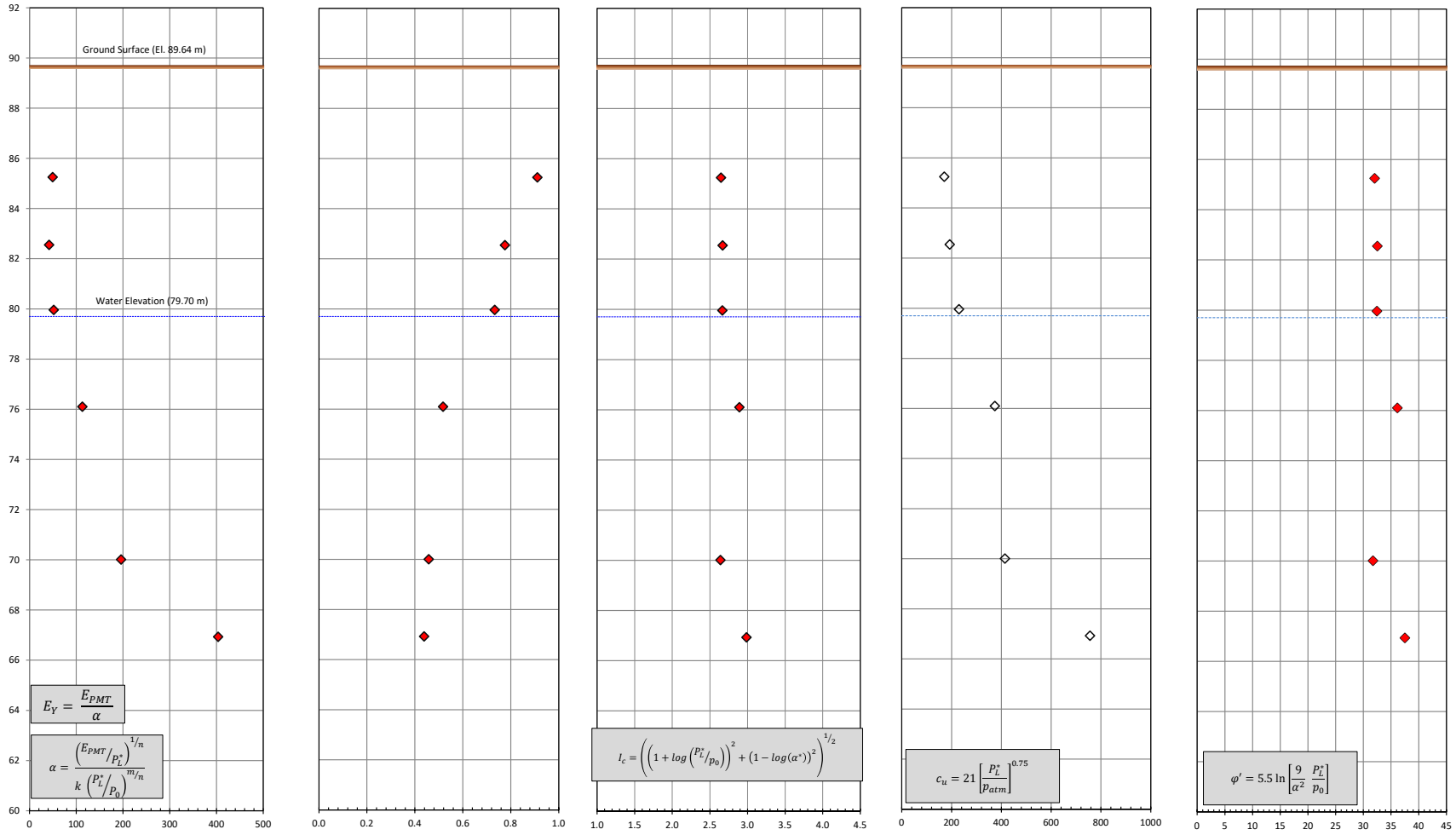
Notes

1. Ground surface elevation (m) 88.52 | Water elevation (m) 81.36 | Water depth (m) 7.16

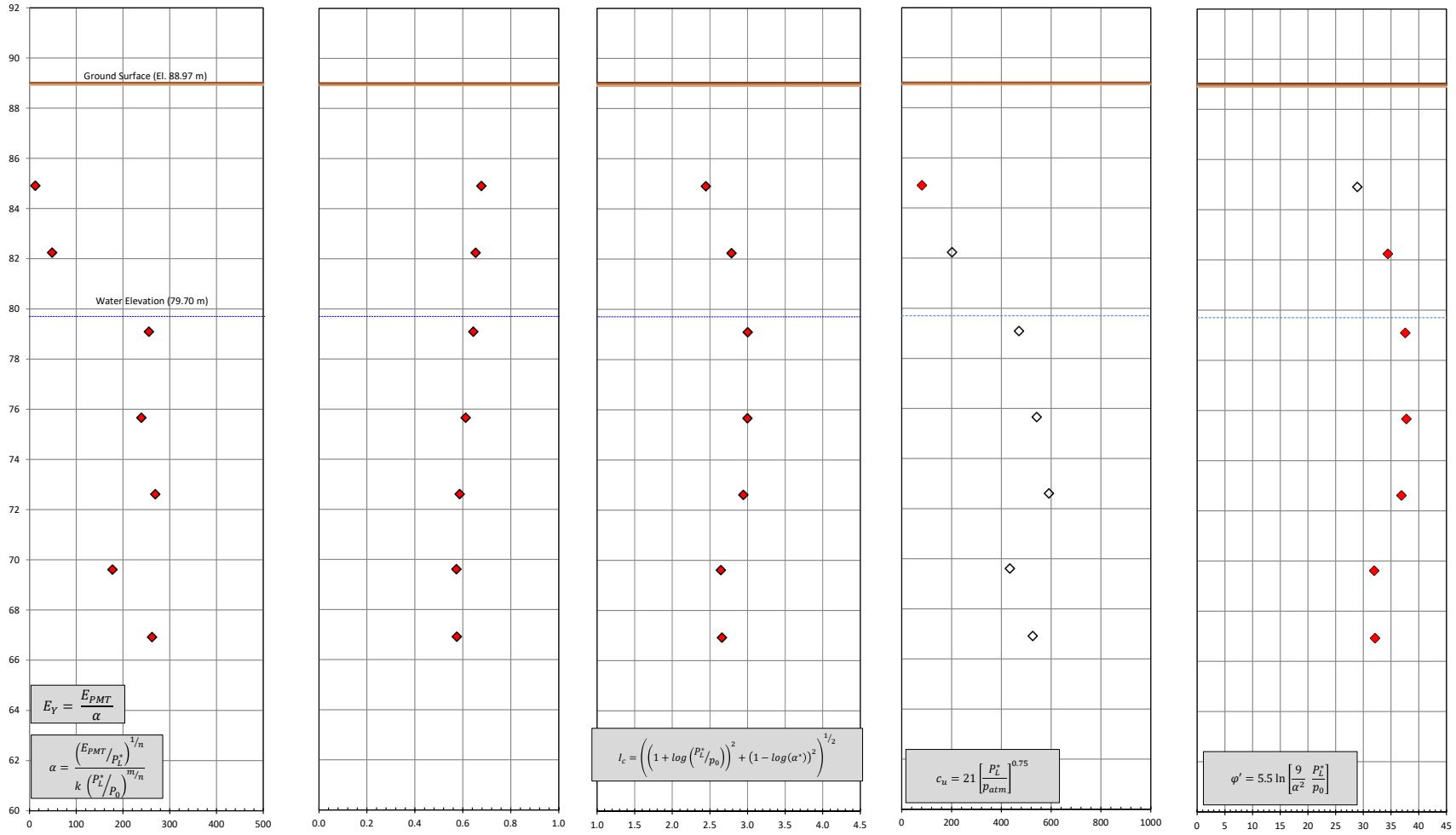
2. Wet unit weight of soil 20.0 [kN/m^3] | Saturated unit weight of soil 21.5 [kN/m^3]

3. Observations on Shear Strength Parameters (SSP):
   SSP are considered either for Undrained Conditions (Short Term) or Drained Conditions (Long Term). These two conditions are mutually exclusive.
   Undrained Conditions imply cohesion is c_u , and $\phi = 0$. ***Drained Conditions*** imply negligible cohesion or $c' = 0$, and $\phi = \phi'$
   Based on the Classification Index I_C (Soil Behavior Type), the suggested values of the SSP are highlighted in green (Thick box border)

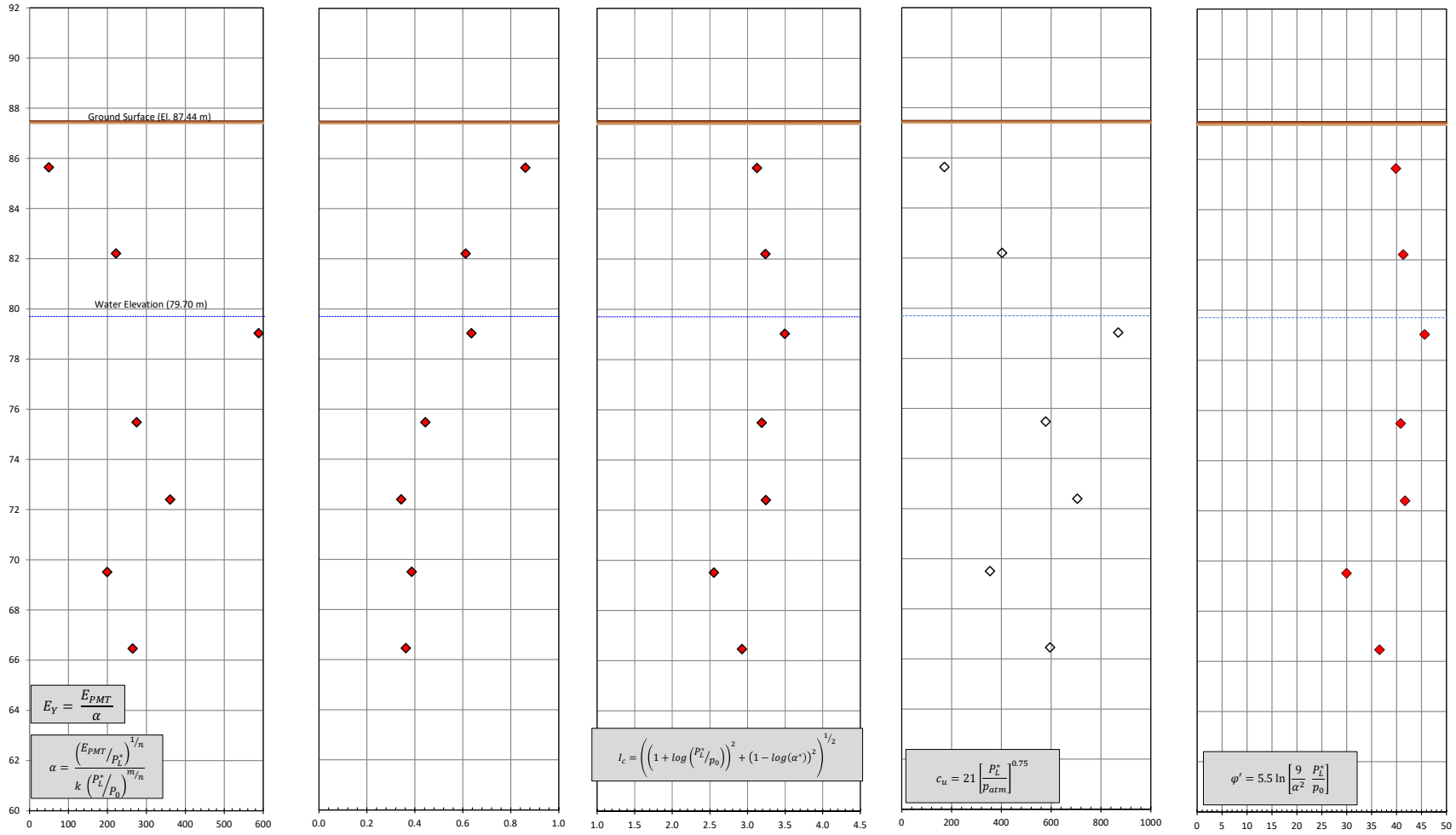
4. The Classification Index parameter, I_C, is indicative of the soil type of behavior. It does not exactly relate to the Soil Classification types as those obtained via Grain-Size Distribution analyses. I_C varies from 1.0 to 4.5, from soft clays (cohesive) to dense coarse sands (frictional), correspondingly.



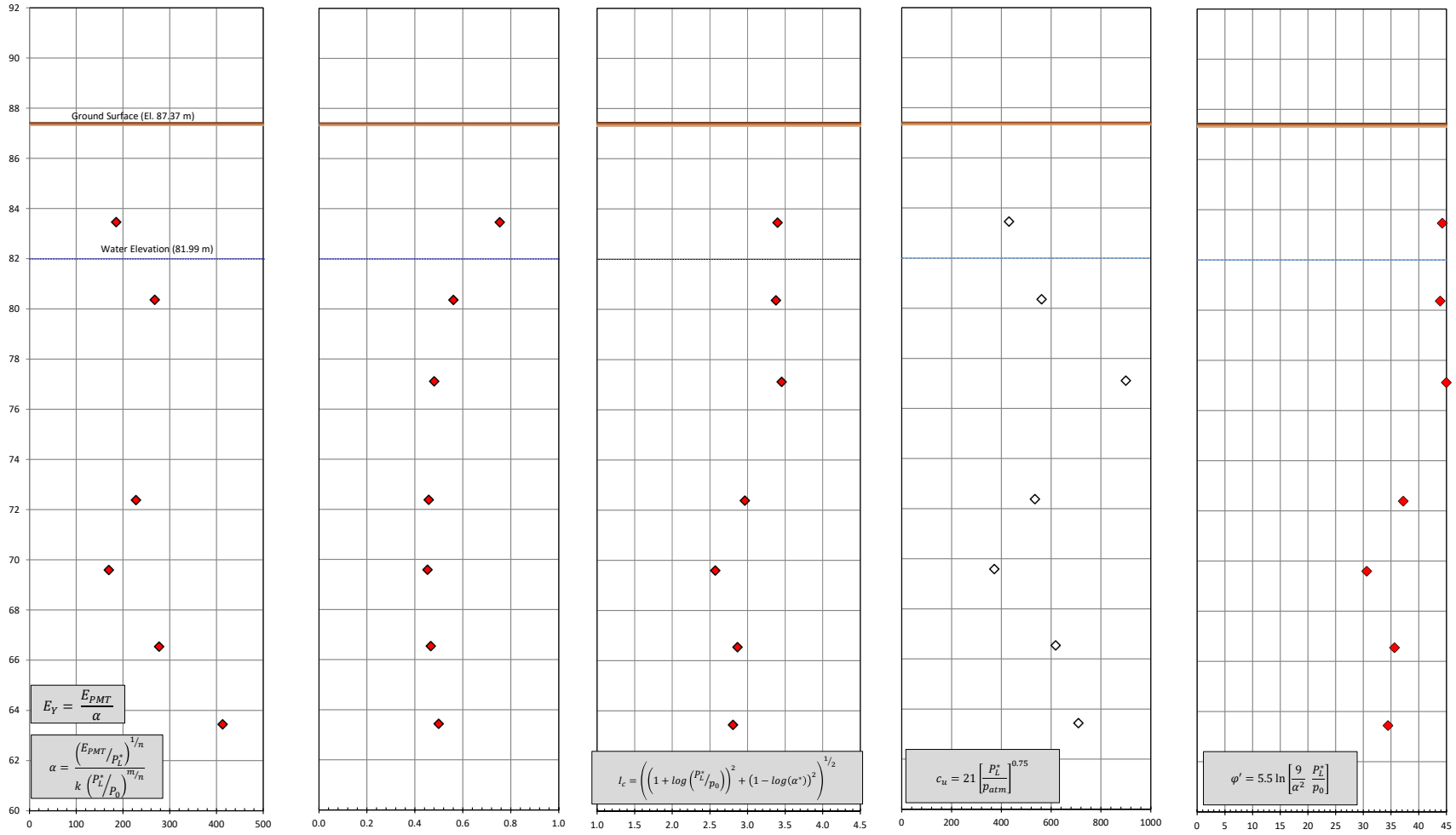
Darlington New Nuclear Plant, Bowmanville	**BH 04-PMT**	
PMT - Inferred Soil Parameters		
Date: June 30, 2022	Project No.: IDG 210614	



Darlington New Nuclear Plant, Bowmanville	**BH 05-PMT**	
PMT - Inferred Soil Parameters		
Date: June 30, 2022	Project No.: IDG 210614	



Darlington New Nuclear Plant, Bowmanville	**BH12-PMT**	
PMT - Inferred Soil Parameters		
Date: June 30, 2022	Project No.: IDG 210614	



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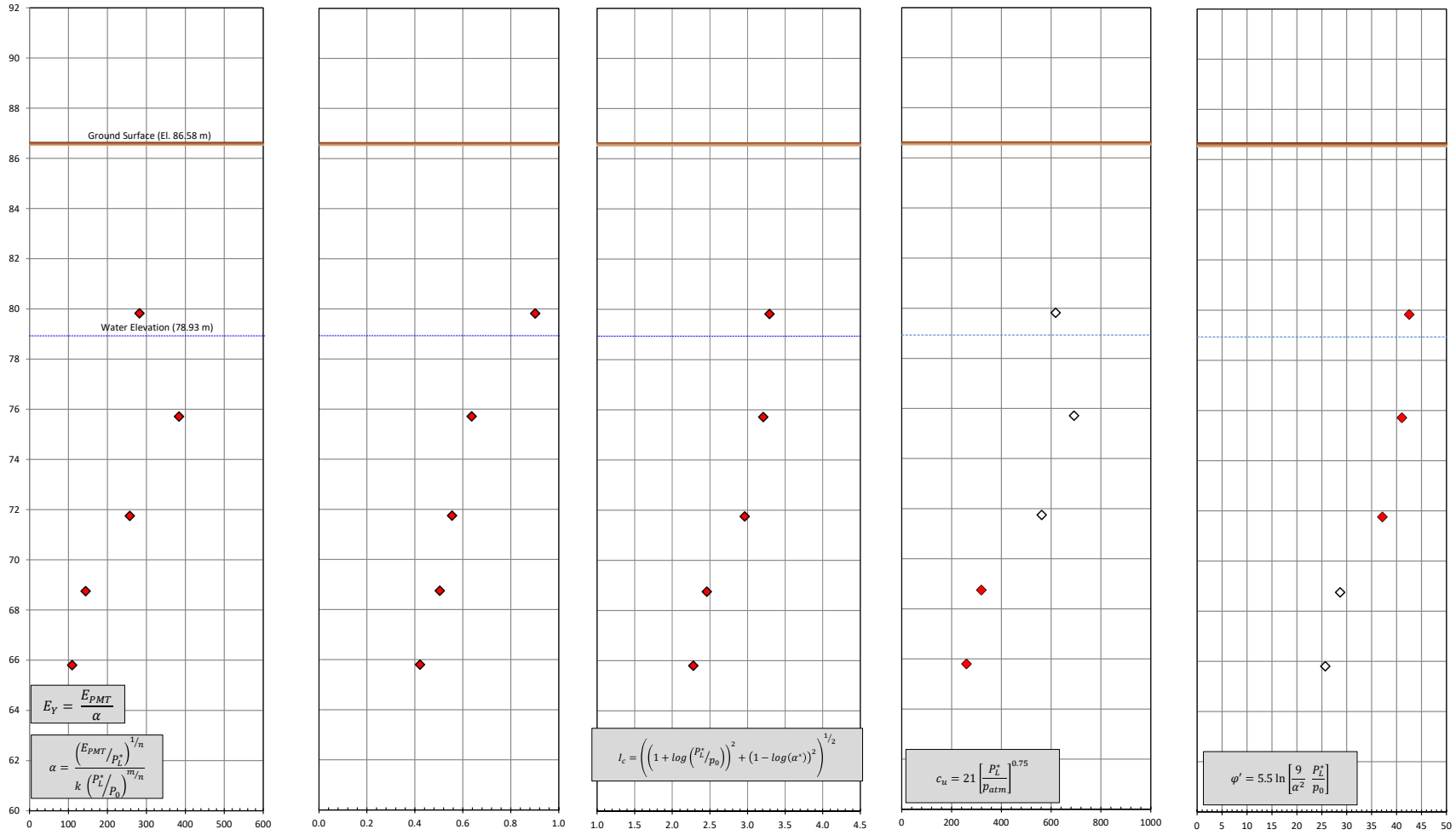
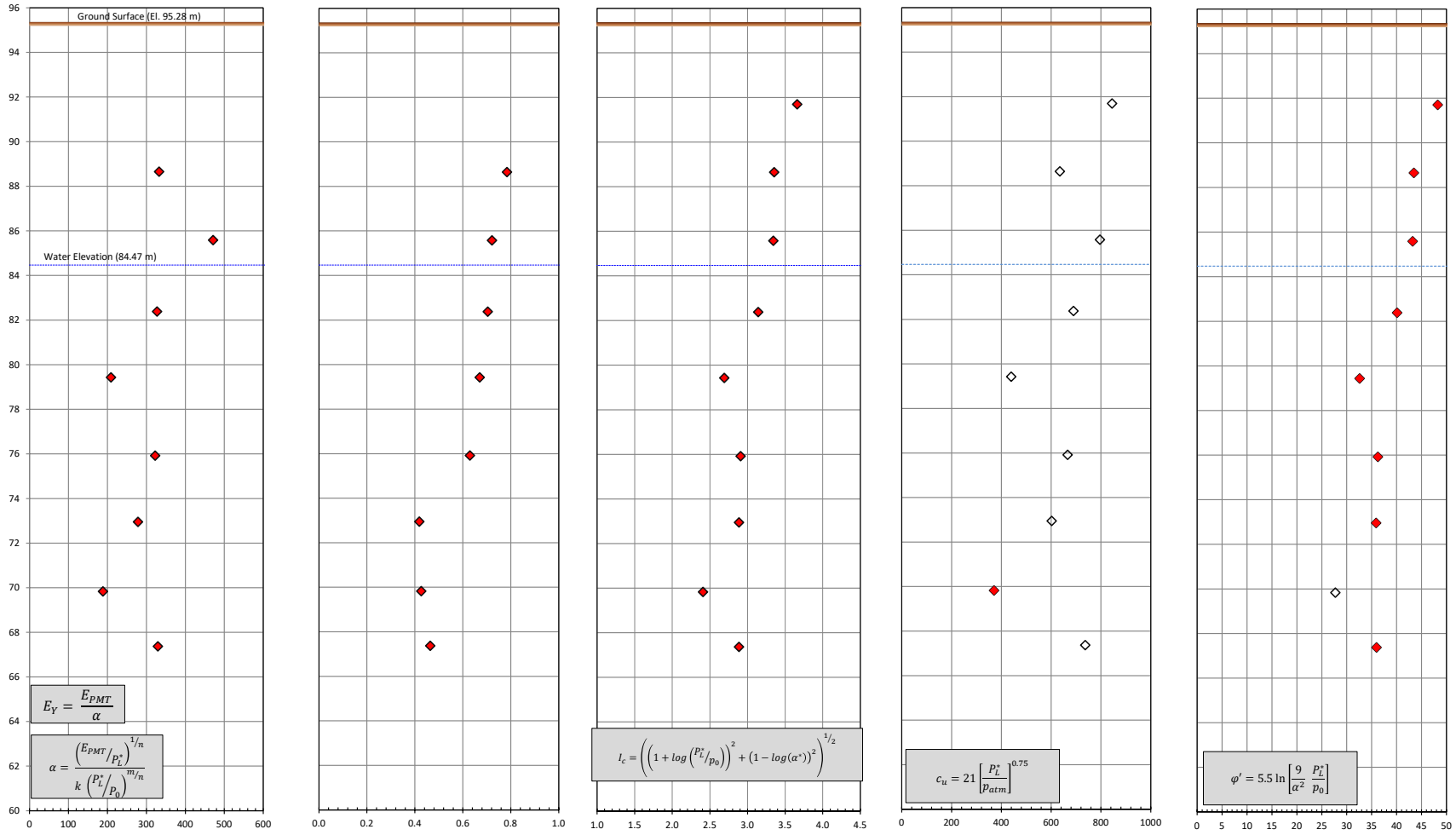


Darlington New Nuclear Plant, Bowmanville	**BH19-PMT**	
PMT - Inferred Soil Parameters		
Date: June 30, 2022	Project No.: IDG 210614	



E_Y [MPa]
Young's Modulus

n = 2
m = 0.5
k = 3.5

k_0
At-Rest Stress Ratio

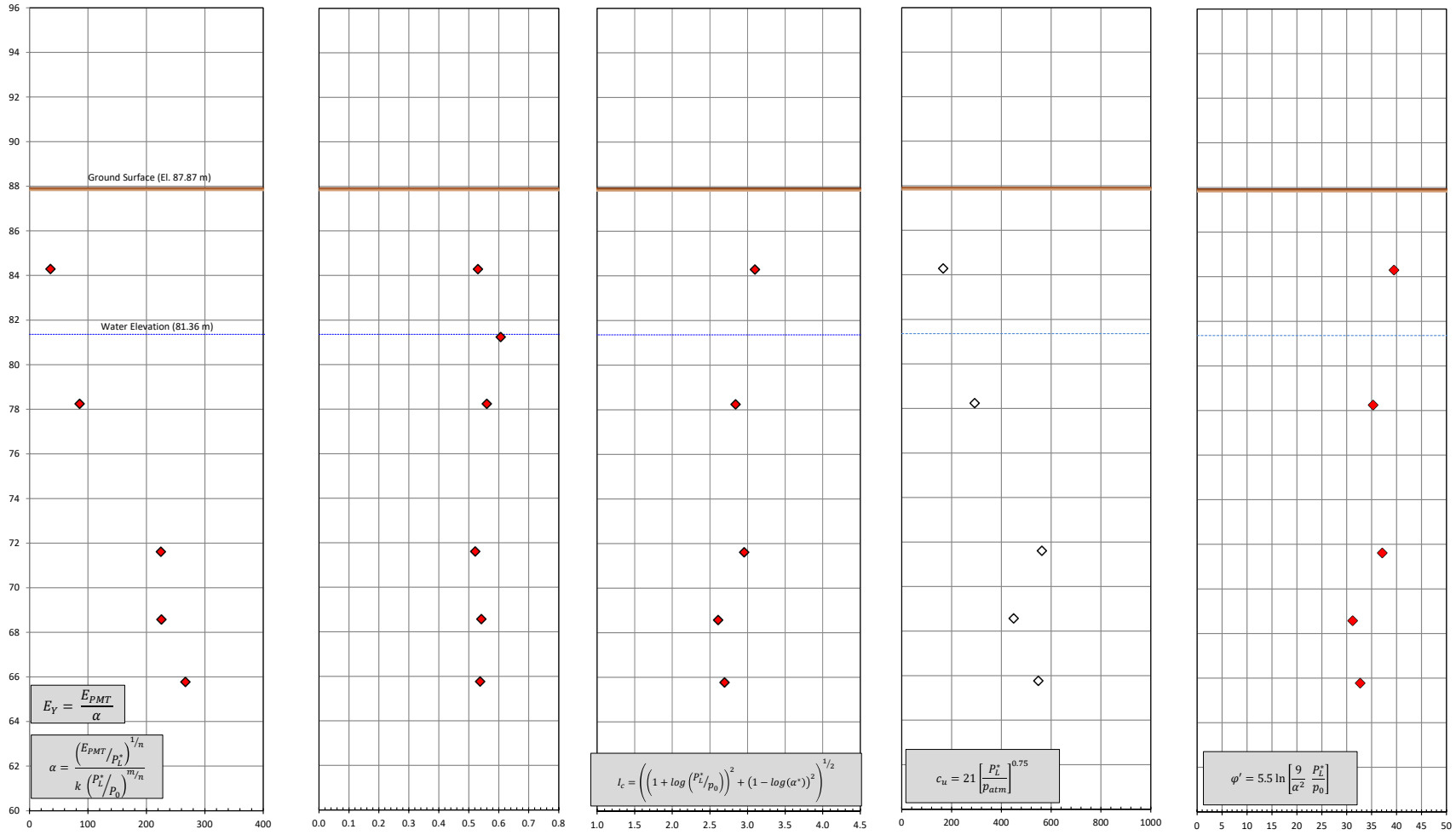
Classification Index I_c

1.0 - 1.5	Clays
1.5 - 2.5	Clay-Silt mixes
2.5 - 3.0	Silts
3.0 - 3.5	Sands
3.5 -4.0	Gravels
4.0 - 4.5	Weathered Rocks

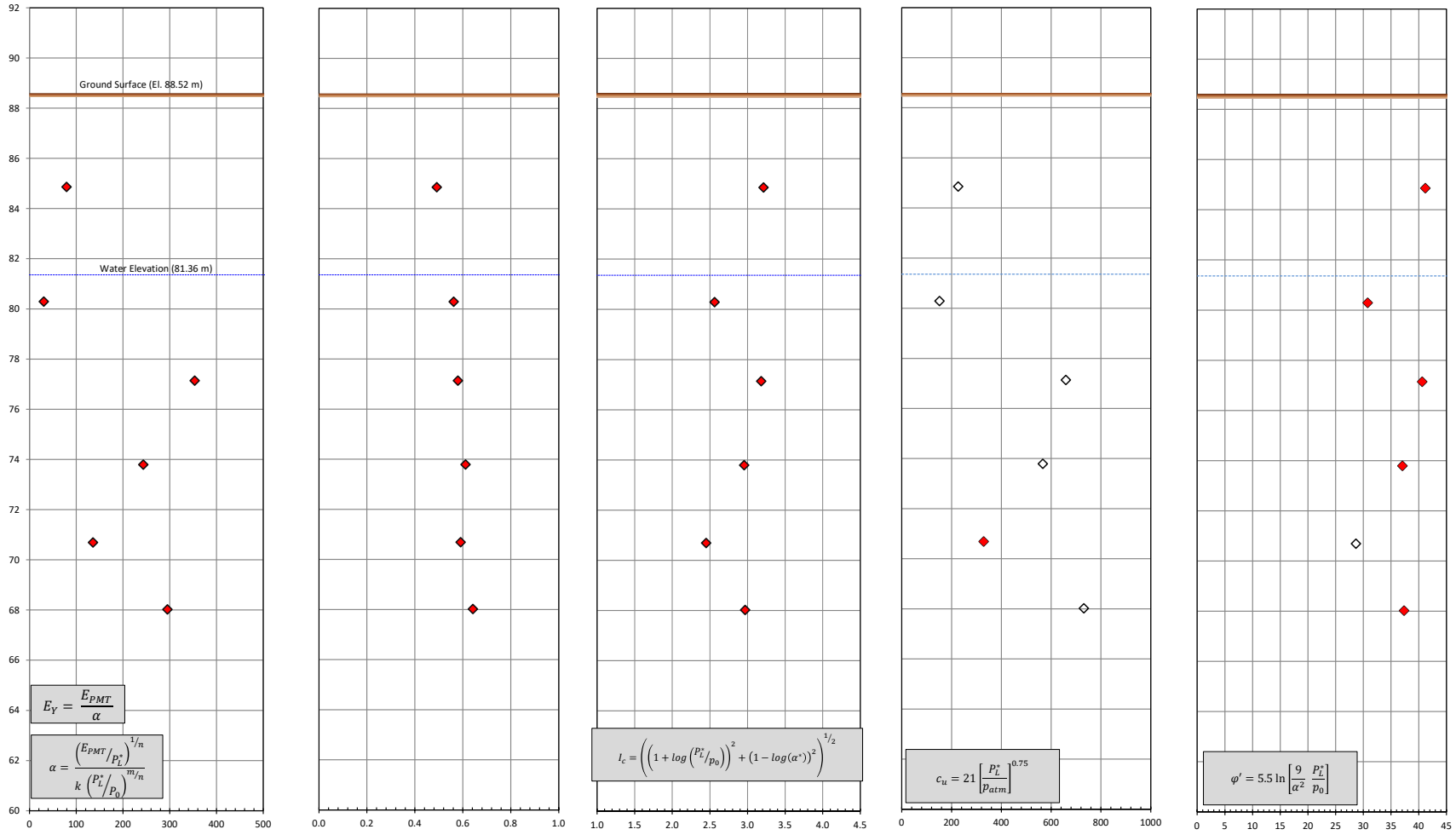
c_u [kPa]
Undrained Cohesion

ϕ' [degrees]
Drained Friction Angle

Darlington New Nuclear Plant, Bowmanville	**BH55-PMT**	In-Depth Geotechnical Inc.
PMT - Inferred Soil Parameters		
Date: June 30, 2022	Project No.: IDG 210614	



Darlington New Nuclear Plant, Bowmanville	**BH63-PMT**	
PMT - Inferred Soil Parameters		
Date: June 30, 2022	Project No.: IDG 210614	



Darlington New Nuclear Plant, Bowmanville	**BH67-PMT**	
PMT - Inferred Soil Parameters		
Date: June 30, 2022	Project No.: IDG 210614	

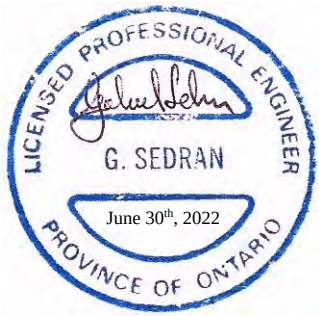
3. Closure

The soils inferred parameters presented in this report is based on in-situ PMT testing and interpretation procedures. It should be noted that soil conditions may vary within the site and interpreted data may not be entirely representative of conditions at locations away from the tested borings. Therefore, care should be exercised when extrapolating or inferring subsoil conditions away from the borehole location.

We trust that the present report fulfills your requirements. Should you have any question, please feel free to contact the undersigned.

Sincerely,

In-Depth Geotechnical Inc.



Gabriel Sedran, P.Eng., Ph.D.
President

Appendix Two **(Duplicated)**

Pressuremeter Data Interpretation

Interpretation of Pressuremeter Test Results

Prebored pressuremeter test results are expressed in terms of applied pressure versus radial strain. Both pressure and strain measurements must be corrected for pressure and volume loses using the corresponding probe and system calibration curves.

The typical pressure versus radial strain curve features up to four distinctive portions which characterize the stress-strain behaviour of the soil, namely:

a) The linear pseudo-elastic stress-strain portion of the deformation curve;
b) The departure from linear elastic conditions starting at the yield pressure p_y;
c) The unload-reload portion of the test (usually two cycles are performed); and
d) The development of soil failure, which is represented by the net limit pressure p^*_L.

Based on these test features the following soil parameters are determined or estimated:

1. **Contact Pressure p_o**:

When using the prebored TEXAM unit, the initial contact pressure is taken as the pressure at the intersection of the two lines representing the pseudo elastic and the initial expansion portions of the pressure vs. 1/V plot, as shown in the PMT data sheets, in Appendix One.

2. **Pressuremeter modulus E_{PMT}**:

The pressuremeter modulus is represented by the slope of the pressure versus radial strain curve along its linear portion, and may be calculated as follows:

$$E_{PMT} = (1+\upsilon)(p_2-p_1)\frac{\left(1+\left(\frac{\Delta R}{R_o}\right)_2\right)^2+\left(1+\left(\frac{\Delta R}{R_o}\right)_1\right)^2}{\left(1+\left(\frac{\Delta R}{R_o}\right)_2\right)^2-\left(1+\left(\frac{\Delta R}{R_o}\right)_1\right)^2}$$

where the sub-indices 1 and 2 indicate the beginning and the end of the linear portion of the curve, respectively. These two points are shown in pressuremeter curves with two red oversized circles. For the self-boring probe, the linear portion of the stress-strain response occurs between the very first data point (zero volume increase) and the subsequent two or three data points.

In this determination a value of the Poisson's ratio, typically $\nu = 0.33$ for most soils, must be assumed. For saturated clays a value of $\nu = 0.45$ is suggested.

3. **Yield Pressure** p_y:

The yield pressure indicates the end of the linear pseudo-elastic deformations and the onset of plasticity. This yield pressure is useful in indicating beyond which pressure significant creep deformations may occur.

4. **Unload-Reload Moduli** E_{Unload} and E_{Reload}

The unload and reload moduli are represented by the slope of the unload-reload loop, and they may be used to determine elastic soil deformations upon unloading or reloading conditions such as those typically encountered during excavations.

5. **Net Limit Pressure** p^*_L:

The net limit pressure is a measure of the strength of the soil (either under undrained conditions for cohesive soils, or drained conditions for non-cohesive soils). This parameter is defined as the pressure reached when the soil cavity has been extended to twice its original soil cavity volume V_c (minus the initial total contact pressure p_o).

The limit pressure is not always attained during testing. In such cases, the value of p_L is inferred by plotting pressure versus 1/V for the plastic phase of the deformations. This method of inferring p_L, known as the "upside down curve" method, is described in "*The Pressuremeter and Foundation Engineering*" textbook, by F. Baguelin, J.F. Jezequel, and D.H. Shields, published in 1978 by Trans Tech Publications, Section: Methods of extrapolating pressuremeter curves to p_L. See also ASTM D4719-00, Section 10.6.

It should be noted that radial strains are calculated from the volume of fluid (typically tap water) injected into the probe. In this regard, the radial strains shown in the results are related to the probe expansion, not the cavity's expansion. The cavity initial volume, V_c, is calculate by adding the probe initial volume, V_0, to the volume of water injected into the probe at the initial contact pressure p_0.

6. Some Additional PMT-based Parameters

In addition, two useful ratios, (E_{PMT} / p^*_L) and (p^*_L / p_y), may be used as a general guideline for soil identification, as follows:

for sands $7 < E_{PMT} / p^*_L < 12$

for clays $12 < E_{PMT} / p^*_L$

Many PMT tests completed in the glacial tills present in the geology of the Golden Shoe area (Ontario) registered much higher values than those listed above. In many cases, values for E_{PMT} / p^*_L in excess of 30 have been recorded.

The E_{PMT} / p^*_L value is known as the *mechanical ratio*, and it indicates whether a soil mass behaves in a ductile (high value) or brittle (low value) manner after yield stresses have been reached. This ration It is the PMT equivalent of the soil mechanic's Rigidity Index, e.g., G/σ_{max}.

Inferred Soil Parameters

7. Young's Modulus E_Y

The Pressuremeter modulus E_{PMT} corresponds to large strains, namely for radial strains in the 2 to 5 % range, and it is therefore considered to be a relatively low value of the elastic modulus. In practice, the Young's modulus E can be inferred from Pressuremeter testing using the empirical Menard α factor:

$E_Y = E_{PMT} / \alpha$

Typical values of the Menard α factor are suggested in the following Table:

Soil type	Peat		Clay		Silt		Sand		Sand and gravel	
	E/p_L^*	α	E/p_L^*	α	E/p_L^*	α	E/p_L^*	α	E/p_L^*	α
Over consolidated		1	> 16	1	> 14	2/3	> 12	1/2	> 10	1/3
Normally consolidated	For all values	1	9-16	2/3	8-14	1/2	7-12	1/3	6-10	1/4
Weathered and/or remoulded		1	7-9	1/2		1/2		1/3		1/4
Rock	Extremely fractured				Other				Slightly fractured or extremely weathered	
	α = 1/3				α = 1/2				α = 2/3	

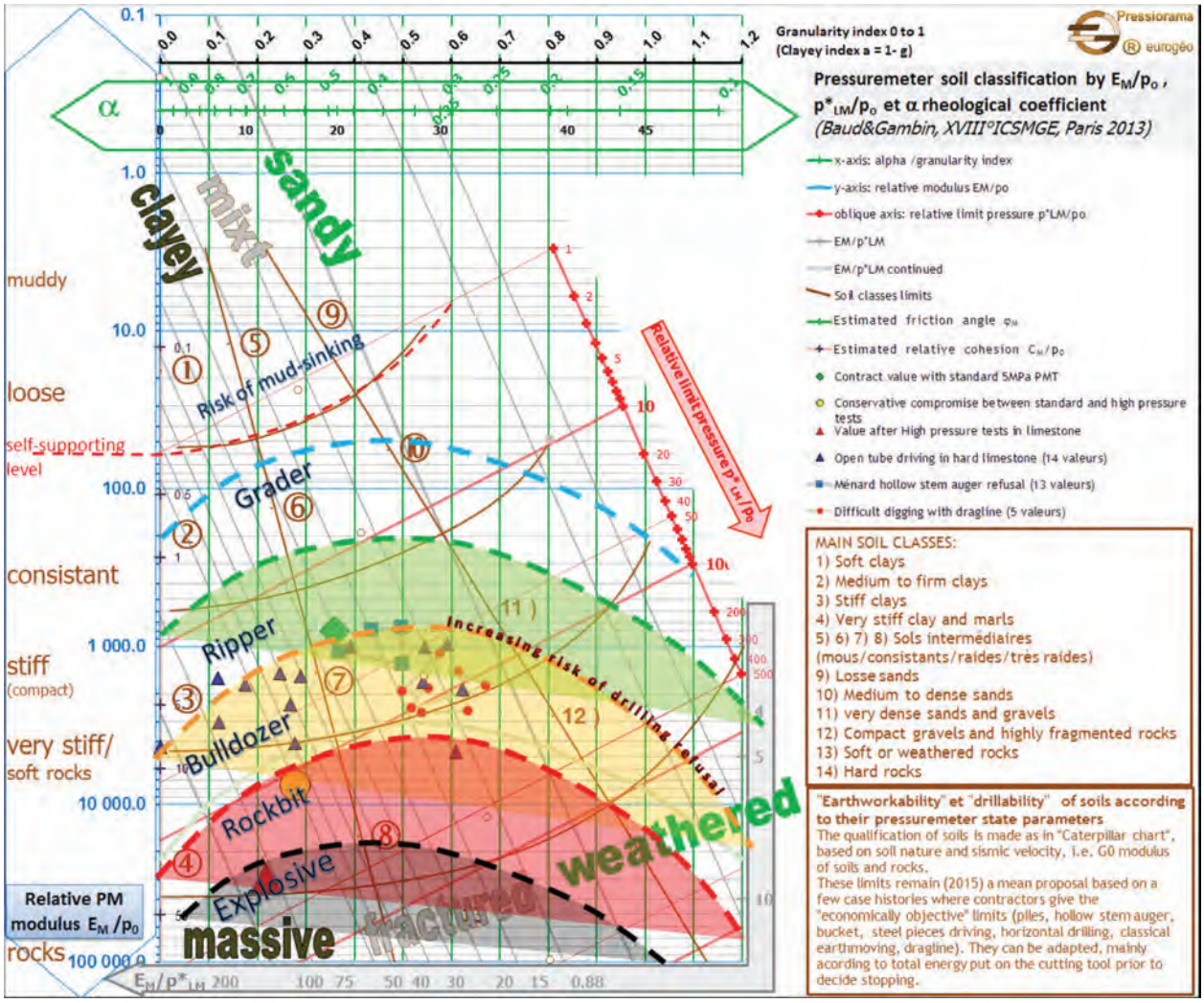
(from 'The Pressuremeter', J.L. Briaud. Balkema, 1992)

Alternatively, better-defined values of the Menard α parameter can be obtained using the following expression, as introduced by J.P. Baud

$$\alpha = \frac{\left(E_{PMT}/P_L^*\right)^{1/n}}{k_E \left(\frac{P_L^*}{p_0}\right)^{m/n}}$$

With $n = 2$; $m = 0.5$; and $k_E = 3.5$.

This expression is based on empirical correlations and may also be visualized in the Pressiorama Chart illustrated in the next page:



Baud J.P., and Gambin M. 2013. *"Détermination du coefficient rhéologique α de Ménard dans le diagramme Pressiorama"*. Proceedings of the 18th International Conference on Soil Mechanics and Geotechnical Engineering. Paris, 2013, Parallel Session ISP 6, International Symposium on the Pressuremeter.

8. Undrained Shear Strength for Cohesive Soil Materials

The undrained shear strength of cohesive soils, c_u or S_u, may be estimated as:

$$\frac{S_u}{p_a} = 0.21\left(\frac{p_L^*}{p_a}\right)^{0.75}$$

where p_a represents a reference pressure (i.e., atmospheric pressure = 100 kPa), after J.L. Briaud ('The Pressuremeter', Balkema, 1992).

9. Drained Friction Angle for Cohesionless Soil Materials

The drained friction angle of cohesionless soils (for $c' = 0$) may be estimated using the empirical correlations illustrated in the graph shown below. This approach is outlined by Baguelin et.al., in *"The Pressuremeter and Foundation Engineering"* (F. Baguelin; J.F. Jézéquel; and D.H. Shields. TransTech Publications. 1978), and it requires some knowledge on the state or conditions of the cohesionless material. This approach only provides a likely range of friction angles for recorded values of the limit pressure.

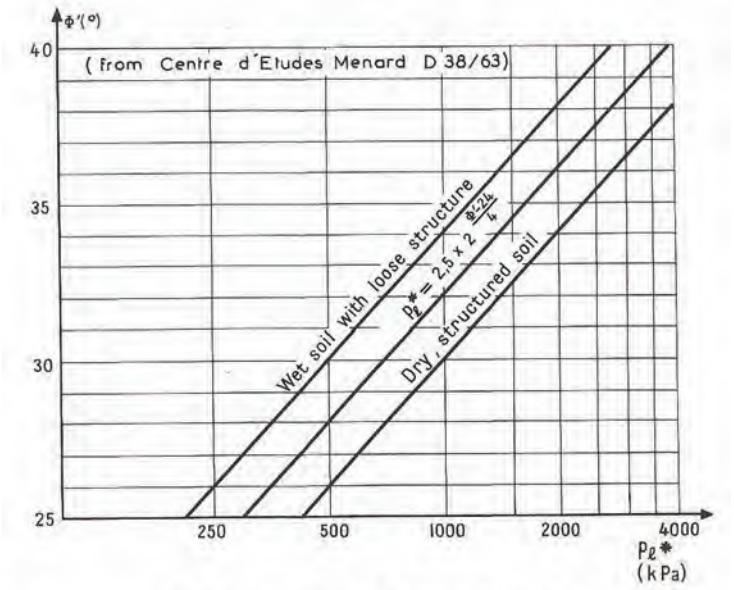


Fig. 6-86: MÉNARD's graph to determine Φ' from p_1^*.

Also alternatively, values of the drained friction angle ϕ' can be inferred using the modified Pressiorama Chart (*Pressiorama Cyclique, in French*) as introduced by Baud.

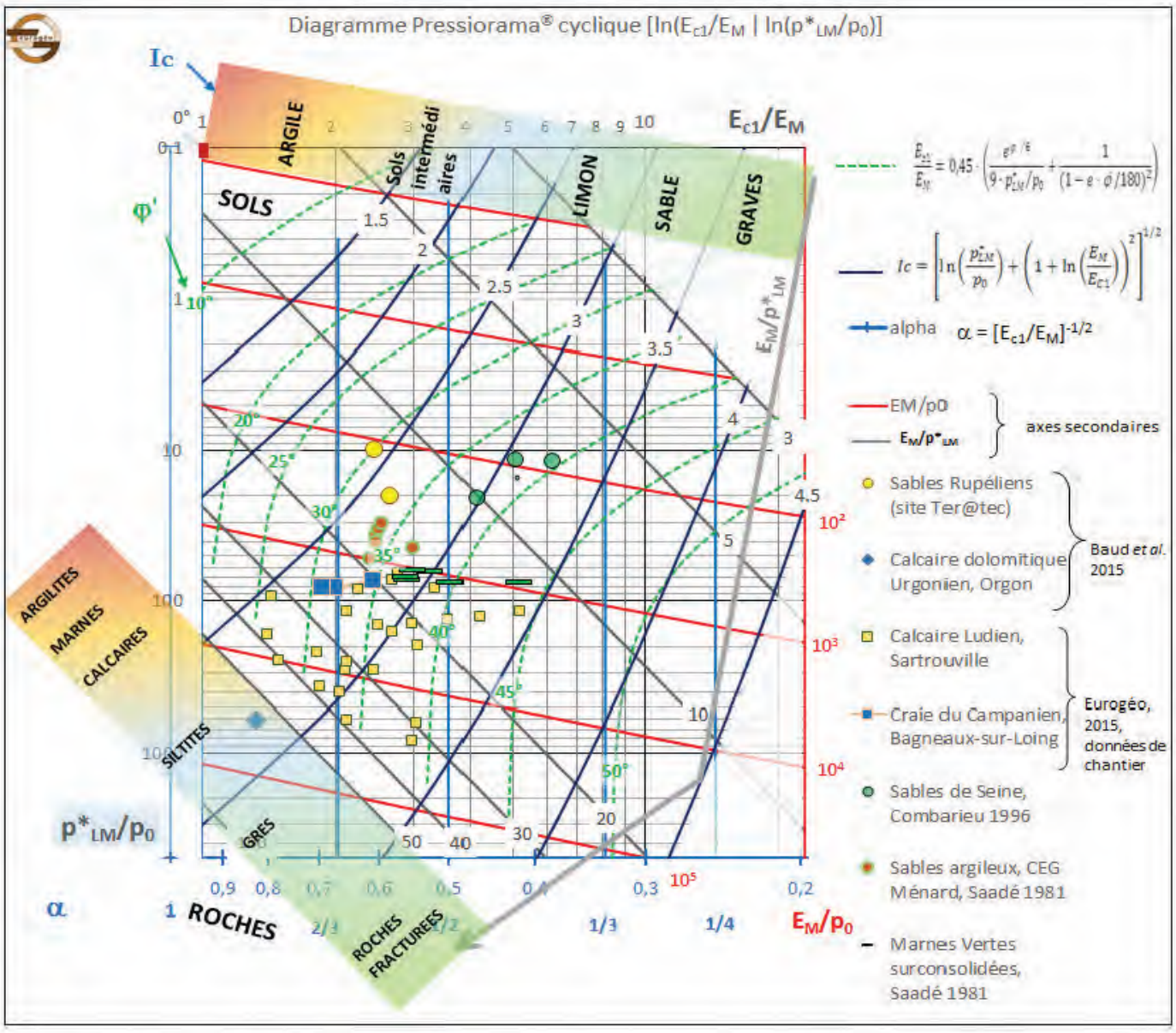


Figure 3. Diagramme Pressiorama® cyclique [ln(Ec1/EM | ln(p*LM/p0].

The values of ϕ' plotted in the modified Pressiorama Chart are calculated with the following expression:

$$\phi' = 5.5\ ln\left(\frac{9}{\alpha^2}\ \frac{P_L^*}{p_0}\right)$$

with values of α calculated/inferred from the modified Pressiorama Chart.

Where this expression provides values of effective friction angle greater than a 45°, a maximum value of 45° should be assumed.

This expression was presented by J.P. Baud, in his publication *"Apport de L'Essai Cyclique a la Classification Pressiométrique des Sols et des Roches"*, Journées Nationales de Geotechnique et de Géologie de l'Ingénieur, Nancy, 2016.

Shear strength parameters suggested in Table No. 3, are based on the guidelines provided by the *Pressiorama* and *Cyclique Pressiorama* charts. It should be noted that these guidelines are subject to changes, or improvements, as the correlations between pressuremeter parameters E_M, p'_L, and p_0 are being adjusted by ever increasing amount of field data. As such, care should be used when using these suggested parameters.

10. Soil Classification Index

Based on PMT testing procedures, soil behavior may be characterized as cohesive or frictional (cohesionless). Using the modified Pressiorama Chart, a Soil Classification Index, namely I_c, can be inferred with the following expression:

$$I_c = \left[\left(1 + log\left(P_L^*/p_0\right)\right)^2 + \left(1 - log(\alpha)\right)^2\right]^{½}$$

A minimum value of 1 would correspond to a cohesive soil, near its state of liquefaction. Whereas, a value of 4.5 would correspond to coarse gravel materials. A value of I_c = 2.7 would apply to a material which behaves mechanically as part frictional (drained for long-term loading conditions) and part cohesive (undrained for the short-term loading conditions). In general, Soil Type Behaviors corresponding to values of the Classification Index I_C are listed as:

1.0 to 1.5	Clays
1.5 to 2.5	Clay-Silt mixes
2.5 to 3.0	Silts
3.0 to 3.5	Sands
3.5 to 4.0	Gravels, and
4.0 to 4.5	Weathered Rocks

APPENDIX E

Overcoring In Situ Stress Testing Interpretations

IN SITU STRESS MEASUREMENTS

1.0 INTRODUCTION

The following document provides a summary of the in-situ stress measurement data collected at boreholes BH66, BH59, BH7, BH10, BH13 and BH68 as part of the geotechnical investigation for the Darlington New Nuclear Project at Darlington, Ontario.

1.1 Evaluation of Stresses from Overcoring Stress Data

Based on the deformations measured across the three pairs of buttons of the USBM borehole deformation gauge described in Steps 3 to 4 above, the stresses on the plane perpendicular to the axis of the borehole are given by the following expressions (Obert and Duval, 1967).

$$P = \frac{E}{6d(1-\upsilon^2)}\left(U_1 + U_2 + U_3 + \frac{1}{\sqrt{2}}[(U_1-U_2)^2 + (U_2-U_3)^2 + (U_3-U_1)^2]^{1/2}\right)$$

$$Q = \frac{E}{6d(1-\upsilon^2)}\left(U_1 + U_2 + U_3 - \frac{1}{\sqrt{2}}[(U_1-U_2)^2 + (U_2-U_3)^2 + (U_3-U_1)^2]^{1/2}\right)$$

where,

E	is the average deformation modulus
ν	is the Poisson's ratio
d	is the diameter of the pilot hole
U_1, U_2, U_3	are the measured changes in borehole diameter across three diameters at 60° rotation (i.e. the 3 sets of buttons on the USBM deformation gauge).
U	is positive for an increasing diameter
P	is the maximum stress perpendicular to borehole axis
Q	is the minimum stress perpendicular to borehole axis

The direction of P is given by:

$$\theta = \frac{1}{2}\tan^{-1}\left[\frac{\sqrt{3}(U_2-U_3)}{2U_1-U_2-U_3}\right]$$

where,

θ is the angle to P measured counter clockwise from the direction of the U_1 diameter.

The quadrant of θ may be determined as follows:

If	$U_2 > U_3$ and $U_2 + U_3 < 2U_1$	then θ is between 0° and 45°
	$U_2 > U_3$ and $U_2 + U_3 > 2U_1$	then θ is between 45° and 90°
	$U_2 < U_3$ and $U_2 + U_3 > 2U_1$	then θ is between 90° and 135°
	$U_2 < U_3$ and $U_2 + U_3 < 2U_1$	then θ is between 135° and 180°

The above equations are derived for plane strain conditions with zero axial strain ($\varepsilon_2 = 0$) along the borehole. If the effect of axial strain is to be taken into account, an estimate of the axial stress along the borehole is required.

The deformation modulus of the rock is evaluated from the results of the biaxial tests using the following expression and assuming isotropic elasticity:

$$E = \frac{4ab^2P_0}{(b^2 - a^2)U}$$

where,

E is the deformation modulus
a is the inner radius of the overcore
b is the outer radius of the overcore
P_o is the radial pressure on the outer surface of the overcore
U is the average diametral deformation of pilot hole in the overcore

1.2 Results of Measurements

All the in-situ stress measurements were carried out within the Lindsay Formation which is a fresh and medium strong to very strong limestone with thin wavy shaly interbeds throughout. In general, due to the relatively competent nature of the limestone in this formation, a high average success rate of 80% was achieved in the overcoring tests. Unsuccessful tests generally resulted from occasional breakages of the rock along the shaly interbeds during overcoring. The depths of the overcoring tests range from 32.02 m to 61.36 m from ground surface (elevation from 57.98 m to 25.78 m). The deepest test (at 61.36 m depth or 25.78 m elevation) was achieved in BH13.

In BH7, pockets of methane gas were encountered during testing between around 40 m to 50 m depth (elevation 48 m to 38 m). These occurrences severely hindered the overcore testing and made it difficult to successfully complete some of the tests. As a result, only 5 interpretable tests were achieved out of 8 attempts in BH7. In order to comply with the requirements of the overcoring testing program which stipulate that 6 interpretable tests are to be achieved in each borehole, an addition interpretable test was completed in BH68, which is located approximately 48 m from BH7, to cover the shortfall in BH7.

Table E-1 summarizes results of the interpretable tests achieved in each of the boreholes. It includes the borehole and test numbers, deformations measured in the EX pilot holes during overcoring as interpreted from the overcoring stress relief plots, the measured horizontal elastic modulus (E) values, and the maximum (P) and the minimum (Q) horizontal stresses interpreted from the test data. The horizontal elastic modulus (E) used for the interpretations were measured from biaxial tests on the overcore samples recovered from the boreholes after overcoring. Where overcore samples could not be recovered due to core breakages during overcoring or core retrieval, E values from other close-by tests were used as indicated. Where overcoring tests were not successful but overcore samples were recovered for biaxial tests, the E values measured from the biaxial tests were also listed with the overcoring test number indicated.

The results obtained in each borehole are presented and discussed below in chronological order of the testing programs conducted in the boreholes:

BH66 (Tests between 54.47 m and 40.57 m elevation)

The maximum horizontal stresses (P) in this hole range from 8.11 MPa to 12.03 MPa and the minimum horizontal stresses (Q) range from 3.89 MPa and 10.18 MPa, showing a fairly uniform stress distribution with depth. Figure E- 1 shows a plot of the in situ horizontal stresses (P and Q) with elevation in this borehole.

The biaxial modulus (E) values of the rock range from 46.21 GPa to 53.17 GPa. All the overcore samples recovered from the test locations were intact. The range of the E values is consistent with the natural variations of the rock. Figure E- 2 shows a plot of the biaxial modulus values with elevation in this borehole.

BH59 (Tests between 57.98 m and 45.73 m elevation)

The maximum horizontal stresses (P) in this hole range from 8.03 MPa to 12.91 MPa and the minimum horizontal stresses (Q) range from 5.07 MPa and 8.77 MPa, showing a fairly uniform stress distribution with depth. Figure E- 3 shows a plot of the in situ horizontal stresses (P and Q) with elevation in this borehole.

The biaxial modulus (E) values of the rock range from 36.63 GPa to 41.32 GPa. Only four (4) overcore samples were recovered from this hole for biaxial tests and all the overcore samples were intact. The range of the E values shows fairly uniform modulus values with depth and is consistent with the natural variations of the rock. Figure E- 4 shows a plot of the biaxial modulus values with elevation in this borehole.

BH7 (Tests between 52.90 m and 33.40 m elevation)

The maximum horizontal stresses (P) in this hole range from 9.59 MPa to 13.70 MPa and the minimum horizontal stresses (Q) range from 6.01 MPa and 9.95 MPa, showing a fairly uniform stress distribution with depth. Despite the presence of gas pockets in this hole between 40 m and 50 m elevation, consistent test results were obtained in the successful tests. Figure E- 5 shows a plot of the in situ horizontal stresses (P and Q) with elevation in this borehole.

The biaxial modulus (E) values of the rock range from 41.78 GPa to 53.16 GPa. All the overcore samples recovered from the test locations were intact. The range of the E values shows that the modulus value at a higher elevation (52.9 m elevation) is lower than those at lower elevations of between 50 and 35 m elevation. Figure E- 6 shows a plot of the biaxial modulus values with elevation in this borehole.

BH10 (Tests between 56.37 m and 33.76 m elevation)

The maximum horizontal stresses (P) in this hole range from 9.41 MPa to 13.63 MPa and the minimum horizontal stresses (Q) range from 6.06 MPa and 10.16 MPa, showing a fairly uniform stress distribution with depth. Figure E- 7 shows a plot of the in situ horizontal stresses (P and Q) with elevation in this borehole.

The biaxial modulus (E) values of the rock range from 44.31 GPa to 58.75 GPa. All the overcore samples recovered from the test locations were intact. The range of the E values is consistent with the natural variations of the rock. Figure E- 8 shows a plot of the biaxial modulus values with elevation in this borehole.

BH13 (Tests between 51.86 m and 20.38 m elevation)

The maximum horizontal stresses (P) in this hole range from 10.38 MPa to 23.36 MPa and the minimum horizontal stresses (Q) range from 8.67 MPa and 12.30 MPa, showing a fairly definitive increase in maximum horizontal stress (P) with depth. This is the borehole where the deepest test (at 20.38 m elevation) was carried out. The minimum horizontal stresses (Q) however show a fairly uniform distribution with depth. Figure E- 9 shows a plot of the in situ horizontal stresses (P and Q) with elevation in this borehole.

The biaxial modulus (E) values of the rock range from 49.16 GPa to 55.53 GPa. All the overcore samples recovered from the test locations were intact. The range of the E values are consistent with the natural variations of the rock. Figure E- 10 shows a plot of the biaxial modulus values with elevation in this borehole.

BH68 (Tests between 49.04 m and 29.47 m elevation)

The maximum horizontal stresses (P) in this hole range from 9.05 MPa to 12.89 MPa and the minimum horizontal stresses (Q) range from 5.02 MPa and 9.54 MPa, showing a fairly uniform stress distribution with depth. Figure E- 11 shows a plot of the in situ horizontal stresses (P and Q) with elevation in this borehole.

The biaxial modulus (E) values of the rock range from 34.95 GPa to 54.59 GPa. All the overcore samples recovered from the test locations were intact. The range of the E values shows a wider variation of the modulus values. However, this range is still considered to be consistent with the natural variations of the rock. Figure E- 12 shows a plot of the biaxial modulus values with elevation in this borehole.

2.0 OVERALL SUMMARY

The in situ horizontal stresses were measured in six (6) boreholes within an area which measures approximately 48 m by 174 m on plan and extends to an elevation of 25.78 m, for the purposes of characterizing the stress regime within the test site. Figure E- 13 shows a combined plot of all the measured maximum horizontal stresses (P) and minimum horizontal stresses (Q) with elevation. With the exceptions of the tests carried out in BH13 below 43 m elevation, the horizontal stress regime within this block is fairly uniform between 60 m and 30 m elevation with P values ranging from approximately 9 MPa to 15 MPa. Test results in BH13 shows a trend of increasing P values with depth below 40 m elevation. The minimum horizontal stresses (Q) between 60 m and 20 m elevation are fairly uniform, ranging from 5 MPa to 12 MPa.

Figure E- 14 shows a combined plot of all the measured biaxial modulus (E) values with elevation. The E values range from 35 GPa to 58 GPa. The range of E values is generally consistent with the natural variation of the rock and is fairly typical of the biaxial modulus values for fresh and medium strong limestones.

The measured directions of the maximum horizontal stresses are generally oriented within the first (NE) quadrant (azimuths from 0 to 90 degrees) with a few exceptions where the directions are oriented within the second (SE) quadrant (azimuth 90 to 180 degrees).

For the sake of comparison, the in situ horizontal stresses (P and Q) and biaxial modulus (E) values measured at the site of the intake tunnel located in the existing Darlington Nuclear Power Station (Lo and Lukajic,1984) are summarized below:

- Between 80 m and 40 m elevation in the Lindsay Formation, the maximum horizontal stresses (P) range from 10 MPa to 14 MPa whereas the minimum horizontal stresses (Q) range from 5 MPa to 8 MPa.
- Below 40 m elevation (from 40 m to -100 m), the in situ stresses are fairly uniform with an average P value of 14 MPa and an average Q value of 8 MPa.
- Between 85 to 20 m elevation, the biaxial modulus (E) values range from 32 GPa to 63 GPa.

It may be noted that the in situ horizontal stresses and biaxial modulus values obtained from the current overcoring test program carried out at the site of the proposed New Darlington Station are consistent with the set

of historic stress data obtained in the same rock formation at comparable depths at the site of the existing Darlington Power Station.

Table E-1: Summary of In Situ Stress Measurement Test Results

Borehole	Test No.	Depth (mbgs)	U_1		U_2		U_3		P	Q	E	Azimuth of P	Remarks
		Elev.(m)	(μin)	(μm)	(μin)	(μm)	(μin)	(μm)	(MPa)	(MPa)	(GPa)	(°)	
BH-66	1	35.02 (54.47)	493	12.52	311	7.89	408	10.36	8.11	6.24	53.17	73.9	
	4	42.9 (46.59)	757	19.22	394	10.00	314	7.97	10.68	6.03	51.19	94.9	
	5	44.39 (45.10)	572	14.52	320	8.12	466	11.83	9.09	6.56	51.72	72.4	
	6	45.9 (43.59)	588	14.93	277	7.03	538	13.66	9.46	6.23	50.22	64.3	
	7	47.45 (42.04)	765	19.43	193	4.90	308	7.82	9.40	3.89	47.14	84.5	
	8	48.92 (40.57)	675	17.14	645	16.38	837	21.25	12.03	10.18	46.21	34.1	
BH-59	1	32.02 (57.98)	861	21.86	861	21.86	545	13.84	12.91	8.77	38.93*	162.5	E* from Test 2
	2	33.57 (56.43)	346	8.78	346	8.78	437	11.32	11.80	5.07	38.93	142.1	
	3	38.2 (51.8)	809	20.5	809	20.5	777	19.73	9.72	8.12	36.63	50.9	
	4	39.75 (50.25)	539	13.70	539	13.69	280	7.11	8.81	5.32	41.32	163.1	
	5	42.82 (47.18)	513	13.03	513	13.03	393	9.98	9.20	6.18	41.32*	154.2	E* from Test 4
	6	44.27 (45.73)	557	14.14	557	14.14	377	9.57	8.03	5.63	37.25	161.3	

Borehole	Test No.	Depth (mbgs) Elev.(m)	U_1		U_2		U_3		P	Q	E	Azimuth of P	Remarks
			(µin)	(µm)	(µin)	(µm)	(µin)	(µm)	(MPa)	(MPa)	(GPa)	(°)	
BH-07	1	35.02 (52.9)	434	11.02	734	18.64	629	15.97	9.59	7.13	41.78	82.9	
	2	38.19 (49.91)	456	11.58	820	20.82	809	20.55	13.70	9.68	50.36	92.3	
	5	50.28 (37.82)	518	13.15	667	16.94	273	6.93	9.73	6.01	48.48	43.9	
	7	53.2 (34.9)	510	12.95	735	18.66	629	15.98	12.25	9.95	53.16	78.9	
	8	54.7 (33.4)	515	13.08	746	18.94	375	9.52	11.61	7.76	53.16*	52.0	E* from Test 7
BH-10	1	32.03 (56.37)	591	15.01	550	13.97	861	21.86	13.63	10.16	53.33	37.5	
	3	38.02 (50.38)	541	13.74	283	7.19	388	9.85	9.41	6.46	58.75	82.0	
	4	42.55 (45.85)	-	-	-	-	-	-	-	-	56.7	-	Biaxial Test Only
	5	44.10 (44.30)	546	13.86	346	8.78	786	19.96	10.17	6.40	44.31	47.5	
	6	44.60 (43.80)	663	16.84	293	7.44	504	12.80	9.49	6.06	47.78	76.7	
	7	51.59 (36.81)	-	-	-	-	-	-	-	-	55.07	-	Biaxial Test Only
	8	53.20 (35.2)	440	11.17	404	10.26	835	21.20	11.15	6.73	47.79	36.2	
	9	54.64 (33.76)	340	8.63	553	14.04	548	13.92	10.05	7.48	54.59	3.3	

Borehole	Test No.	Depth (mbgs) Elev.(m)	U_1		U_2		U_3		P	Q	E	Azimuth of P	Remarks
			(µin)	(µm)	(µin)	(µm)	(µin)	(µm)	(MPa)	(MPa)	(GPa)	(°)	
BH-13	1	35.28 (51.86)	648	16.45	576	14.63	473	12.01	10.38	8.67	50.39	112.1	
	2	38.20 (48.94)	1000	25.40	598	15.18	617	15.67	14.43	10.08	49.67	92.7	
	3	42.81 (44.33)	302	7.67	626	15.90	645	16.38	13.23	11.25	53.02	91.2	
	4	47.39 (40.75)	998	25.35	591	15.01	591	15.01	16.00	10.96	55.53	94.0	
	5	51.99 (35.15)	1020	25.90	572	14.52	1257	31.93	18.90	12.3	49.16	54.1	
	6	61.36 (20.38)	809	20.54	368	9.35	1584	65.63	23.36	10.34	54.81	44.5	
BH-68	1	39.75 (49.04)	588	14.93	453	11.51	715	18.16	10.41	8.03	47.11	30.4	
	2	44.31 (44.48)	347	8.81	408	10.36	680	17.27	9.05	5.86	46.65	10.1	
	3	48.78 (40.01)	675	17.15	796	20.21	1106	28.09	12.89	9.54	39.06	7.1	
	4	53.34 (35.45)	244	6.19	420	10.67	717	18.21	9.32	5.02	46.63	4.2	
	5	56.38 (32.41)	392	9.96	288	7.32	782	19.86	11.63	6.15	54.59	20.7	
	6	57.88 (30.91)	605	15.56	635	16.13	790	20.07	10.65	8.98	43.4	10.6	
	7	59.32 (29.47)	632	16.05	605	15.36	941	23.9	9.74	7.23	34.95	17.1	

Borehole	Test No.	Depth (mbgs)	U_1		U_2		U_3		P	Q	E	Azimuth of P	Remarks
		Elev.(m)	(μin)	(μm)	(μin)	(μm)	(μin)	(μm)	(MPa)	(MPa)	(GPa)	(°)	
BH-66	1	35.02 (54.47)	493	12.52	311	7.89	408	10.36	8.11	6.24	53.17	73.9	
	4	42.9 (46.59)	757	19.22	394	10.00	314	7.97	10.68	6.03	51.19	94.9	
	5	44.39 (45.10)	572	14.52	320	8.12	466	11.83	9.09	6.56	51.72	72.4	
	6	45.9 (43.59)	588	14.93	277	7.03	538	13.66	9.46	6.23	50.22	64.3	
	7	47.45 (42.04)	765	19.43	193	4.90	308	7.82	9.40	3.89	47.14	84.5	
	8	48.92 (40.57)	675	17.14	645	16.38	837	21.25	12.03	10.18	46.21	34.1	
BH-59	1	32.02 (57.98)	861	21.86	861	21.86	545	13.84	12.91	8.77	38.93*	162.5	E* from Test 2
	2	33.57 (56.43)	346	8.78	346	8.78	437	11.32	11.80	5.07	38.93	142.1	
	3	38.2 (51.8)	809	20.5	809	20.5	777	19.73	9.72	8.12	36.63	50.9	
	4	39.75 (50.25)	539	13.70	539	13.69	280	7.11	8.81	5.32	41.32	163.1	
	5	42.82 (47.18)	513	13.03	513	13.03	393	9.98	9.20	6.18	41.32*	154.2	E* from Test 4
	6	44.27 (45.73)	557	14.14	557	14.14	377	9.57	8.03	5.63	37.25	161.3	

Borehole	Test No.	Depth (mbgs) Elev.(m)	U_1		U_2		U_3		P	Q	E	Azimuth of P	Remarks
			(µin)	(µm)	(µin)	(µm)	(µin)	(µm)	(MPa)	(MPa)	(GPa)	(°)	
BH-07	1	35.02 (52.9)	434	11.02	734	18.64	629	15.97	9.59	7.13	41.78	82.9	
	2	38.19 (49.91)	456	11.58	820	20.82	809	20.55	13.70	9.68	50.36	92.3	
	5	50.28 (37.82)	518	13.15	667	16.94	273	6.93	9.73	6.01	48.48	43.9	
	7	53.2 (34.9)	510	12.95	735	18.66	629	15.98	12.25	9.95	53.16	78.9	
	8	54.7 (33.4)	515	13.08	746	18.94	375	9.52	11.61	7.76	53.16*	52.0	E* from Test 7
BH-10	1	32.03 (56.37)	591	15.01	550	13.97	861	21.86	13.63	10.16	53.33	37.5	
	3	38.02 (50.38)	541	13.74	283	7.19	388	9.85	9.41	6.46	58.75	82.0	
	4	42.55 (45.85)	-	-	-	-	-	-	-	-	56.7	-	Biaxial Test Only
	5	44.10 (44.30)	546	13.86	346	8.78	786	19.96	10.17	6.40	44.31	47.5	
	6	44.60 (43.80)	663	16.84	293	7.44	504	12.80	9.49	6.06	47.78	76.7	
	7	51.59 (36.81)	-	-	-	-	-	-	-	-	55.07	-	Biaxial Test Only
	8	53.20 (35.2)	440	11.17	404	10.26	835	21.20	11.15	6.73	47.79	36.2	
	9	54.64 (33.76)	340	8.63	553	14.04	548	13.92	10.05	7.48	54.59	3.3	

Borehole	Test No.	Depth (mbgs) Elev.(m)	U_1		U_2		U_3		P	Q	E	Azimuth of P	Remarks
			(µin)	(µm)	(µin)	(µm)	(µin)	(µm)	(MPa)	(MPa)	(GPa)	(°)	
BH-13	1	35.28 (51.86)	648	16.45	576	14.63	473	12.01	10.38	8.67	50.39	112.1	
	2	38.20 (48.94)	1000	25.40	598	15.18	617	15.67	14.43	10.08	49.67	92.7	
	3	42.81 (44.33)	302	7.67	626	15.90	645	16.38	13.23	11.25	53.02	91.2	
	4	47.39 (40.75)	998	25.35	591	15.01	591	15.01	16.00	10.96	55.53	94.0	
	5	51.99 (35.15)	1020	25.90	572	14.52	1257	31.93	18.90	12.3	49.16	54.1	
	6	61.36 (20.38)	809	20.54	368	9.35	1584	65.63	23.36	10.34	54.81	44.5	
BH-68	1	39.75 (49.04)	588	14.93	453	11.51	715	18.16	10.41	8.03	47.11	30.4	
	2	44.31 (44.48)	347	8.81	408	10.36	680	17.27	9.05	5.86	46.65	10.1	
	3	48.78 (40.01)	675	17.15	796	20.21	1106	28.09	12.89	9.54	39.06	7.1	
	4	53.34 (35.45)	244	6.19	420	10.67	717	18.21	9.32	5.02	46.63	4.2	
	5	56.38 (32.41)	392	9.96	288	7.32	782	19.86	11.63	6.15	54.59	20.7	
	6	57.88 (30.91)	605	15.56	635	16.13	790	20.07	10.65	8.98	43.4	10.6	
	7	59.32 (29.47)	632	16.05	605	15.36	941	23.9	9.74	7.23	34.95	17.1	

Borehole	Test No.	Depth (mbgs)	U_1		U_2		U_3		P	Q	E	Azimuth of P	Remarks
		Elev.(m)	(μin)	(μm)	(μin)	(μm)	(μin)	(μm)	(MPa)	(MPa)	(GPa)	(°)	
BH-66	1	35.02 (54.47)	493	12.52	311	7.89	408	10.36	8.11	6.24	53.17	73.9	
	4	42.9 (46.59)	757	19.22	394	10.00	314	7.97	10.68	6.03	51.19	94.9	
	5	44.39 (45.10)	572	14.52	320	8.12	466	11.83	9.09	6.56	51.72	72.4	
	6	45.9 (43.59)	588	14.93	277	7.03	538	13.66	9.46	6.23	50.22	64.3	
	7	47.45 (42.04)	765	19.43	193	4.90	308	7.82	9.40	3.89	47.14	84.5	
	8	48.92 (40.57)	675	17.14	645	16.38	837	21.25	12.03	10.18	46.21	34.1	
BH-59	1	32.02 (57.98)	861	21.86	861	21.86	545	13.84	12.91	8.77	38.93*	162.5	E* from Test 2
	2	33.57 (56.43)	346	8.78	346	8.78	437	11.32	11.80	5.07	38.93	142.1	
	3	38.2 (51.8)	809	20.5	809	20.5	777	19.73	9.72	8.12	36.63	50.9	
	4	39.75 (50.25)	539	13.70	539	13.69	280	7.11	8.81	5.32	41.32	163.1	
	5	42.82 (47.18)	513	13.03	513	13.03	393	9.98	9.20	6.18	41.32*	154.2	E* from Test 4
	6	44.27 (45.73)	557	14.14	557	14.14	377	9.57	8.03	5.63	37.25	161.3	

Borehole	Test No.	Depth (mbgs) Elev.(m)	U_1		U_2		U_3		P	Q	E	Azimuth of P	Remarks
			(µin)	(µm)	(µin)	(µm)	(µin)	(µm)	(MPa)	(MPa)	(GPa)	(°)	
BH-07	1	35.02 (52.9)	434	11.02	734	18.64	629	15.97	9.59	7.13	41.78	82.9	
	2	38.19 (49.91)	456	11.58	820	20.82	809	20.55	13.70	9.68	50.36	92.3	
	5	50.28 (37.82)	518	13.15	667	16.94	273	6.93	9.73	6.01	48.48	43.9	
	7	53.2 (34.9)	510	12.95	735	18.66	629	15.98	12.25	9.95	53.16	78.9	
	8	54.7 (33.4)	515	13.08	746	18.94	375	9.52	11.61	7.76	53.16*	52.0	E* from Test 7
BH-10	1	32.03 (56.37)	591	15.01	550	13.97	861	21.86	13.63	10.16	53.33	37.5	
	3	38.02 (50.38)	541	13.74	283	7.19	388	9.85	9.41	6.46	58.75	82.0	
	4	42.55 (45.85)	-	-	-	-	-	-	-	-	56.7	-	Biaxial Test Only
	5	44.10 (44.30)	546	13.86	346	8.78	786	19.96	10.17	6.40	44.31	47.5	
	6	44.60 (43.80)	663	16.84	293	7.44	504	12.80	9.49	6.06	47.78	76.7	
	7	51.59 (36.81)	-	-	-	-	-	-	-	-	55.07	-	Biaxial Test Only
	8	53.20 (35.2)	440	11.17	404	10.26	835	21.20	11.15	6.73	47.79	36.2	
	9	54.64 (33.76)	340	8.63	553	14.04	548	13.92	10.05	7.48	54.59	3.3	

Borehole	Test No.	Depth (mbgs) Elev.(m)	U_1		U_2		U_3		P	Q	E	Azimuth of P	Remarks
			(µin)	(µm)	(µin)	(µm)	(µin)	(µm)	(MPa)	(MPa)	(GPa)	(°)	
BH-13	1	35.28 (51.86)	648	16.45	576	14.63	473	12.01	10.38	8.67	50.39	112.1	
	2	38.20 (48.94)	1000	25.40	598	15.18	617	15.67	14.43	10.08	49.67	92.7	
	3	42.81 (44.33)	302	7.67	626	15.90	645	16.38	13.23	11.25	53.02	91.2	
	4	47.39 (40.75)	998	25.35	591	15.01	591	15.01	16.00	10.96	55.53	94.0	
	5	51.99 (35.15)	1020	25.90	572	14.52	1257	31.93	18.90	12.3	49.16	54.1	
	6	61.36 (20.38)	809	20.54	368	9.35	1584	65.63	23.36	10.34	54.81	44.5	
BH-68	1	39.75 (49.04)	588	14.93	453	11.51	715	18.16	10.41	8.03	47.11	30.4	
	2	44.31 (44.48)	347	8.81	408	10.36	680	17.27	9.05	5.86	46.65	10.1	
	3	48.78 (40.01)	675	17.15	796	20.21	1106	28.09	12.89	9.54	39.06	7.1	
	4	53.34 (35.45)	244	6.19	420	10.67	717	18.21	9.32	5.02	46.63	4.2	
	5	56.38 (32.41)	392	9.96	288	7.32	782	19.86	11.63	6.15	54.59	20.7	
	6	57.88 (30.91)	605	15.56	635	16.13	790	20.07	10.65	8.98	43.4	10.6	
	7	59.32 (29.47)	632	16.05	605	15.36	941	23.9	9.74	7.23	34.95	17.1	

Notes:

Only results of interpretable tests shown. Gas pockets encountered during overcoring of Tests 3 and 4 in BH-7.

U_1, U_2, and U_3 are measured diametral deformations (in microinches and in micrometer) of the EX pilot hole during overcoring. These values are interpreted from the recorded USBM gauge readings.

P = Maximum Horizontal Stress (Major Principal Horizontal Stress).

Q = Minimum Horizontal Stress (Minor Principal Horizontal Stress).

E = Horizontal Deformation Modulus determined from biaxial tests on overcore samples unless otherwise stated.

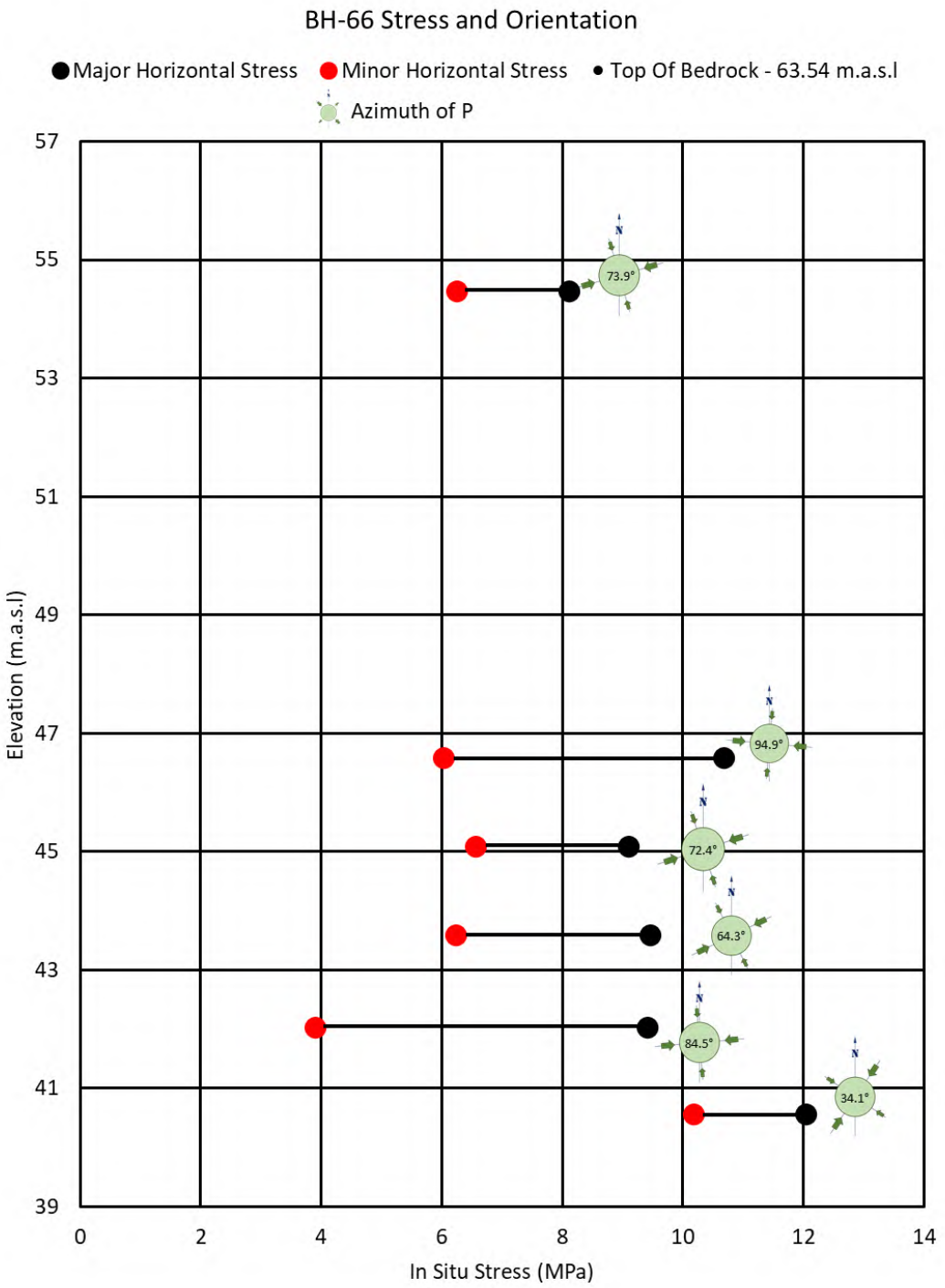


Figure E-1: Maximum (P) and minimum horizontal stresses (Q) for the interpretable tests

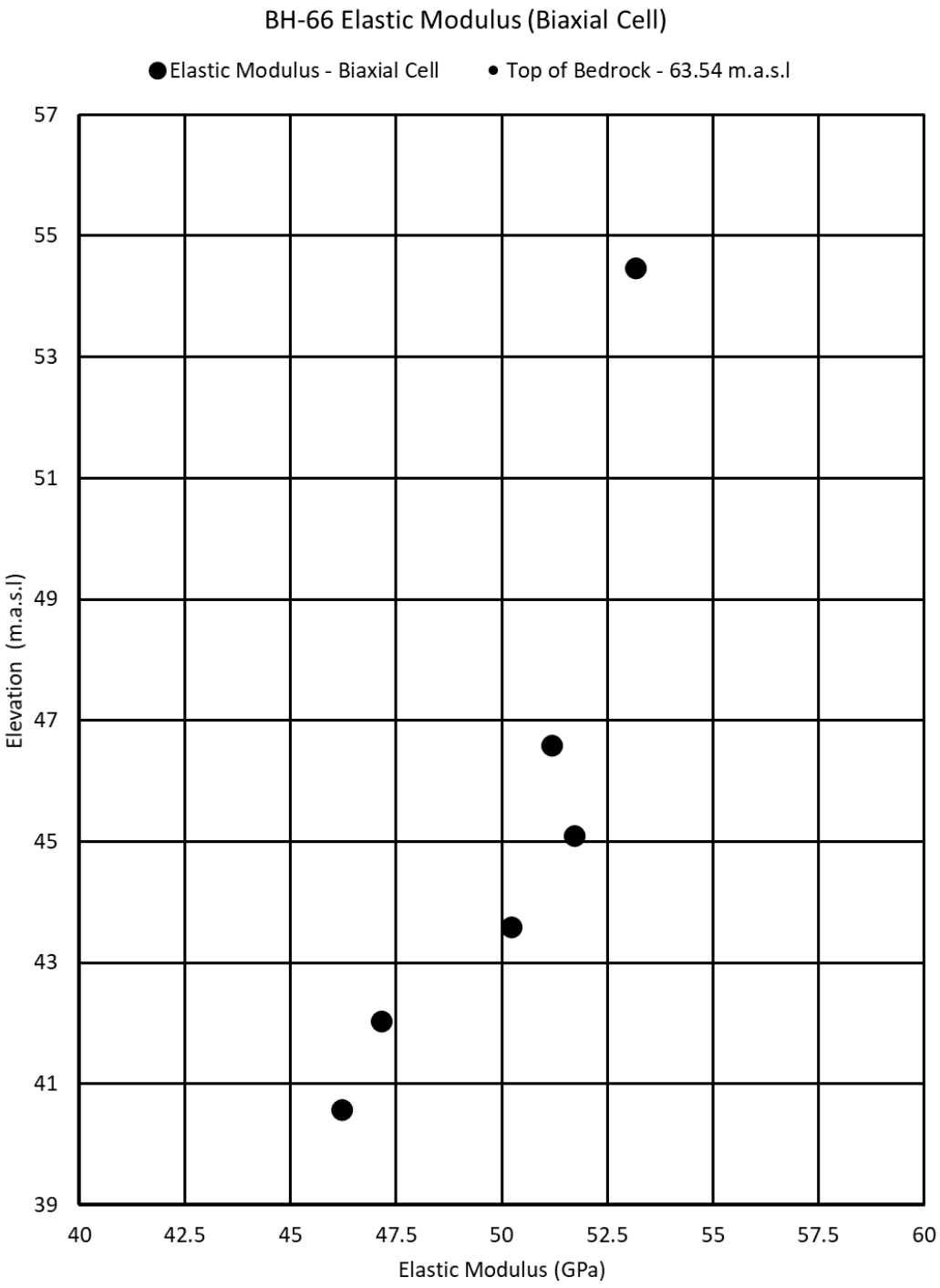


Figure E-2: Horizontal elastic modulus (*E*) of the rock measured from the biaxial tests

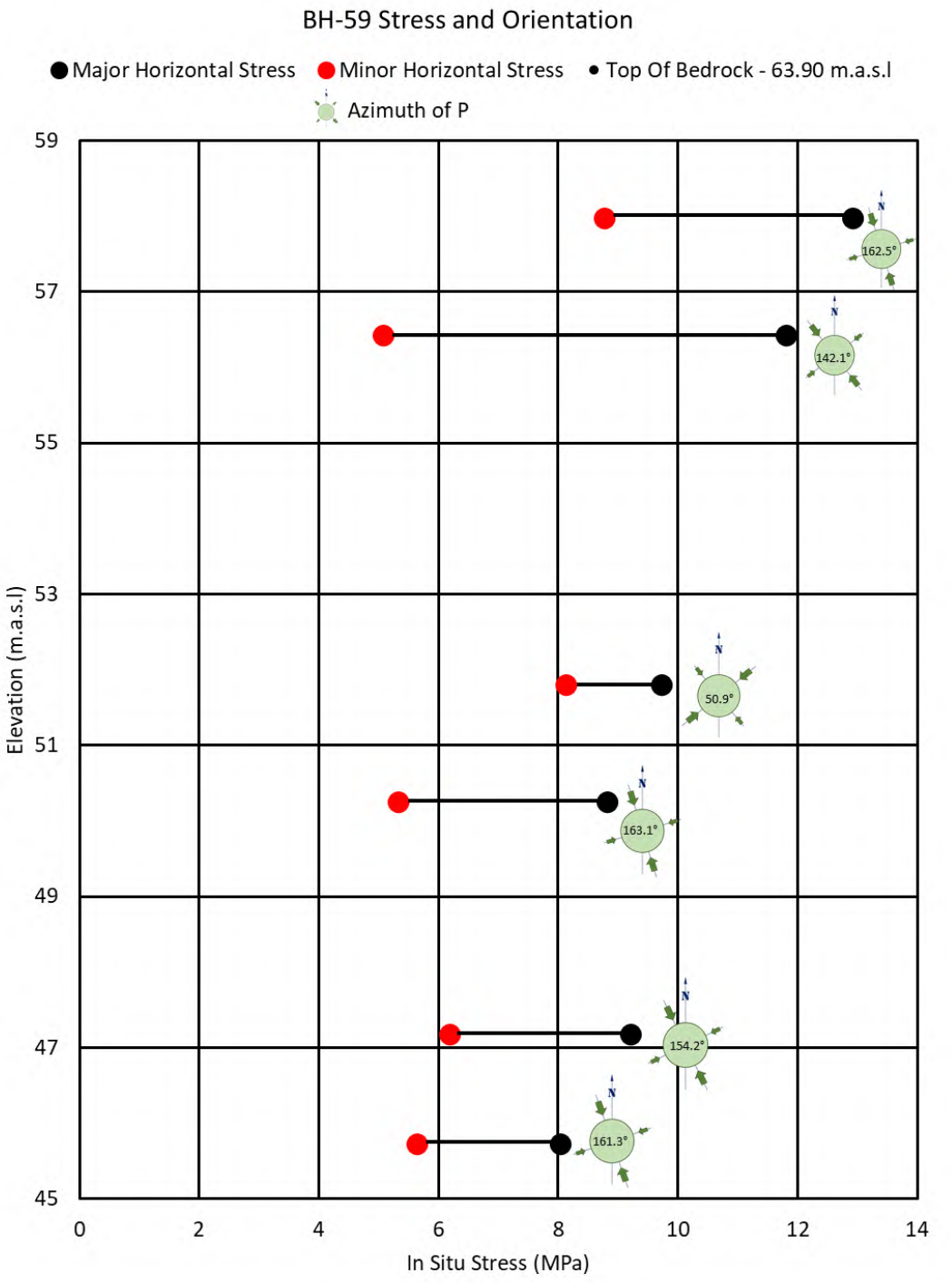


Figure E-3: Maximum (P) and minimum horizontal stresses (Q) for the interpretable tests

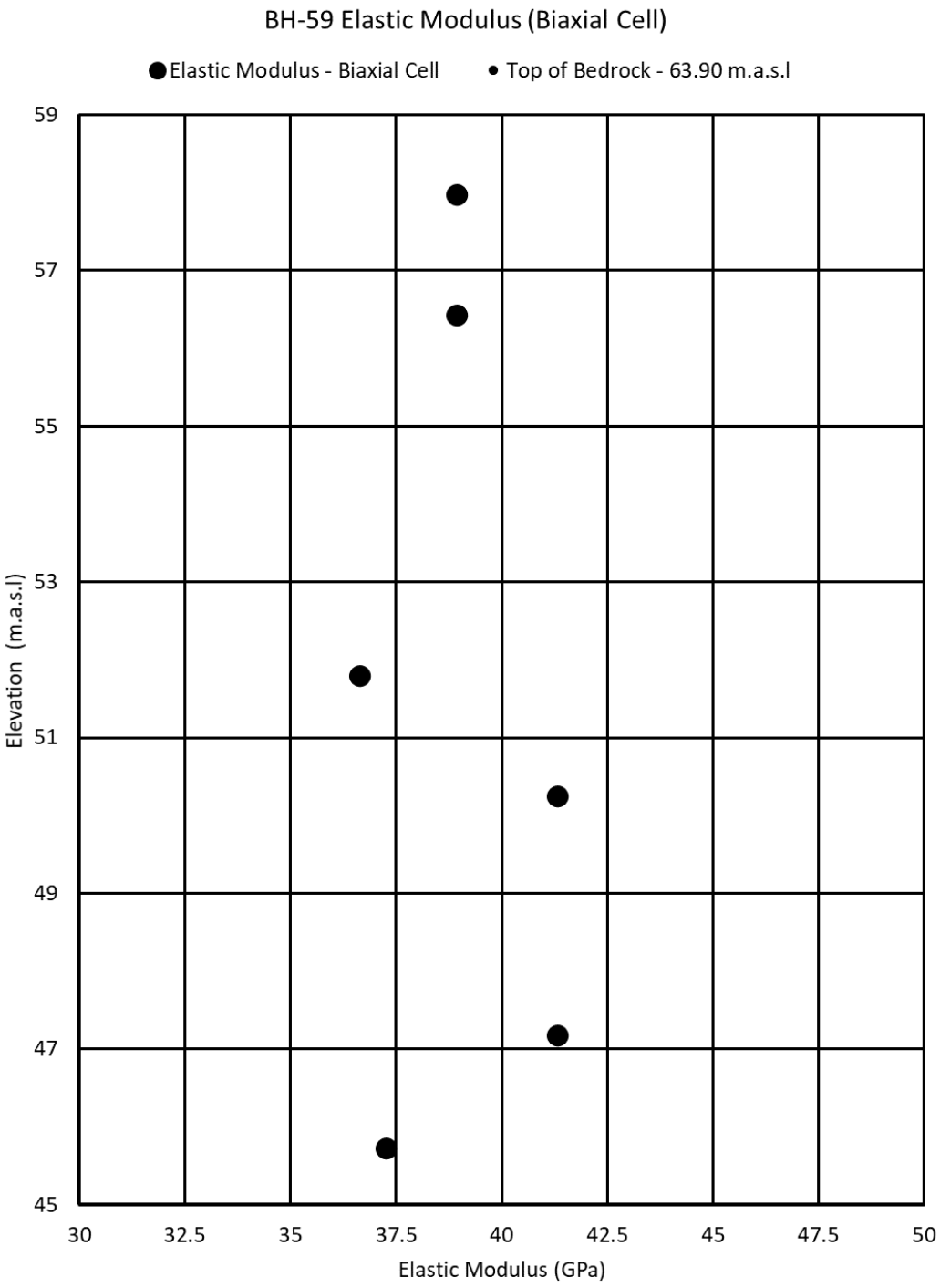


Figure E-4: Horizontal elastic modulus (*E*) of the rock measured from the biaxial tests

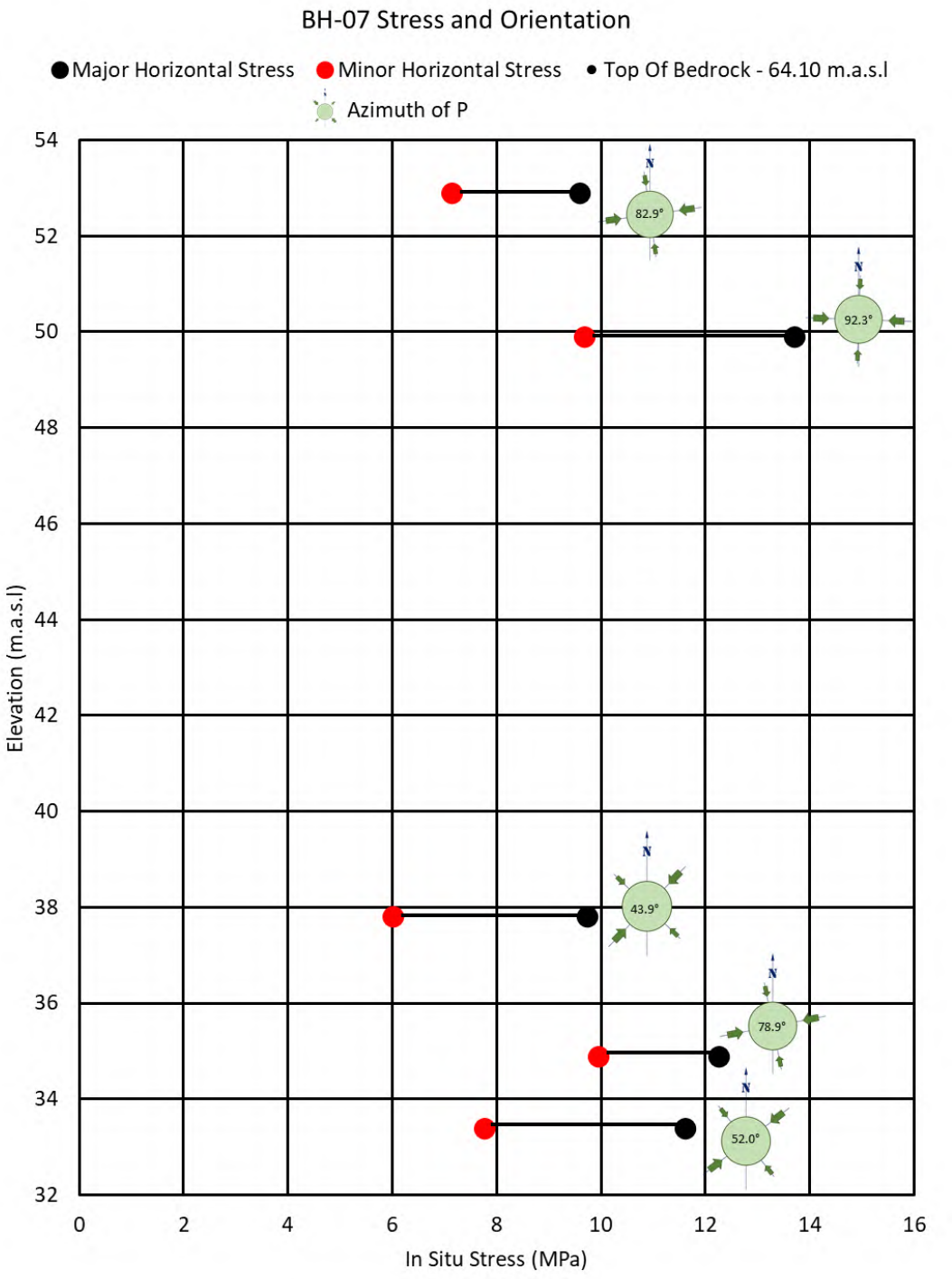


Figure E-5: Maximum (P) and minimum horizontal stresses (Q) for the interpretable tests

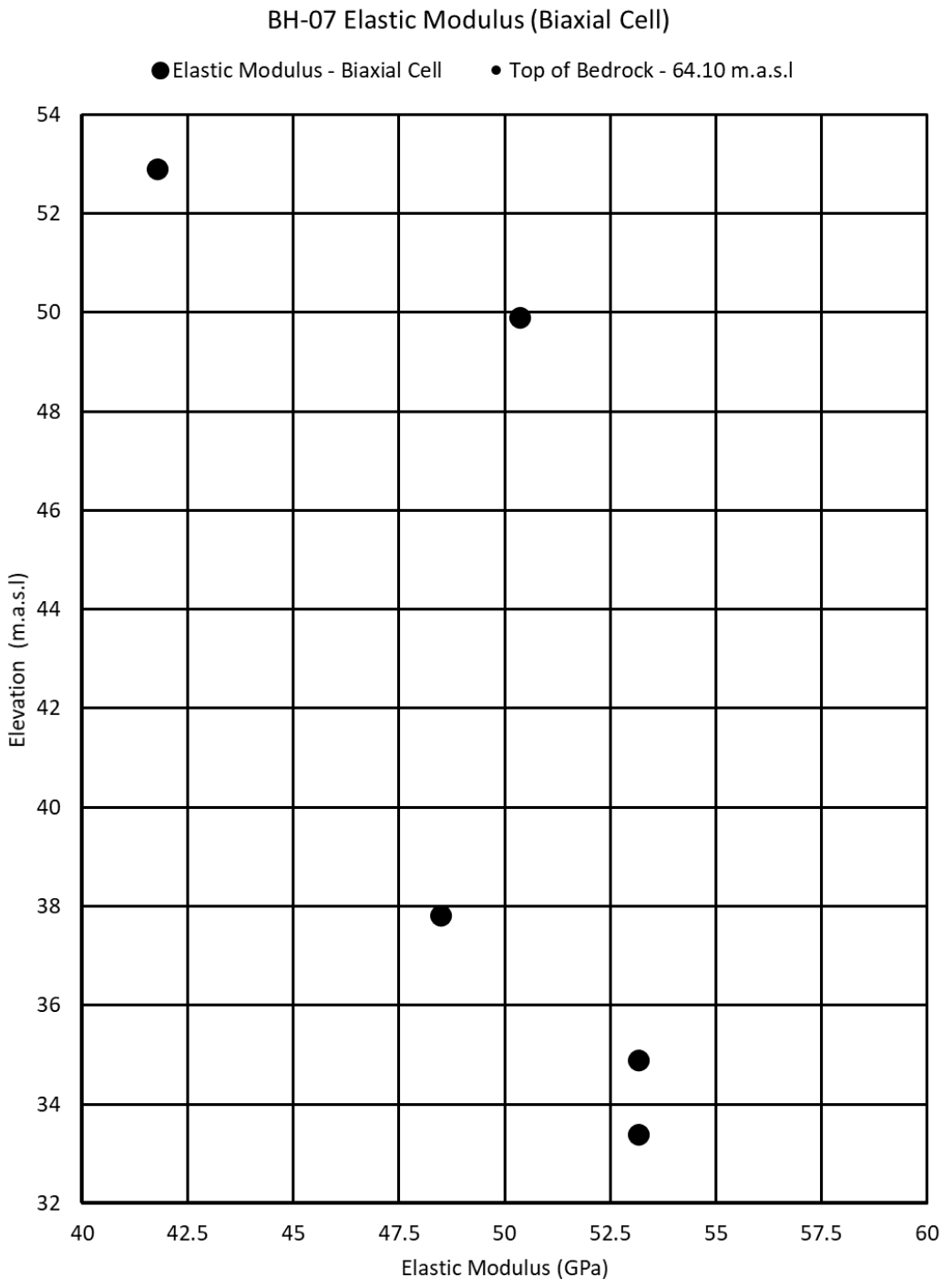


Figure E-6: Horizontal elastic modulus (*E*) of the rock measured from the biaxial tests

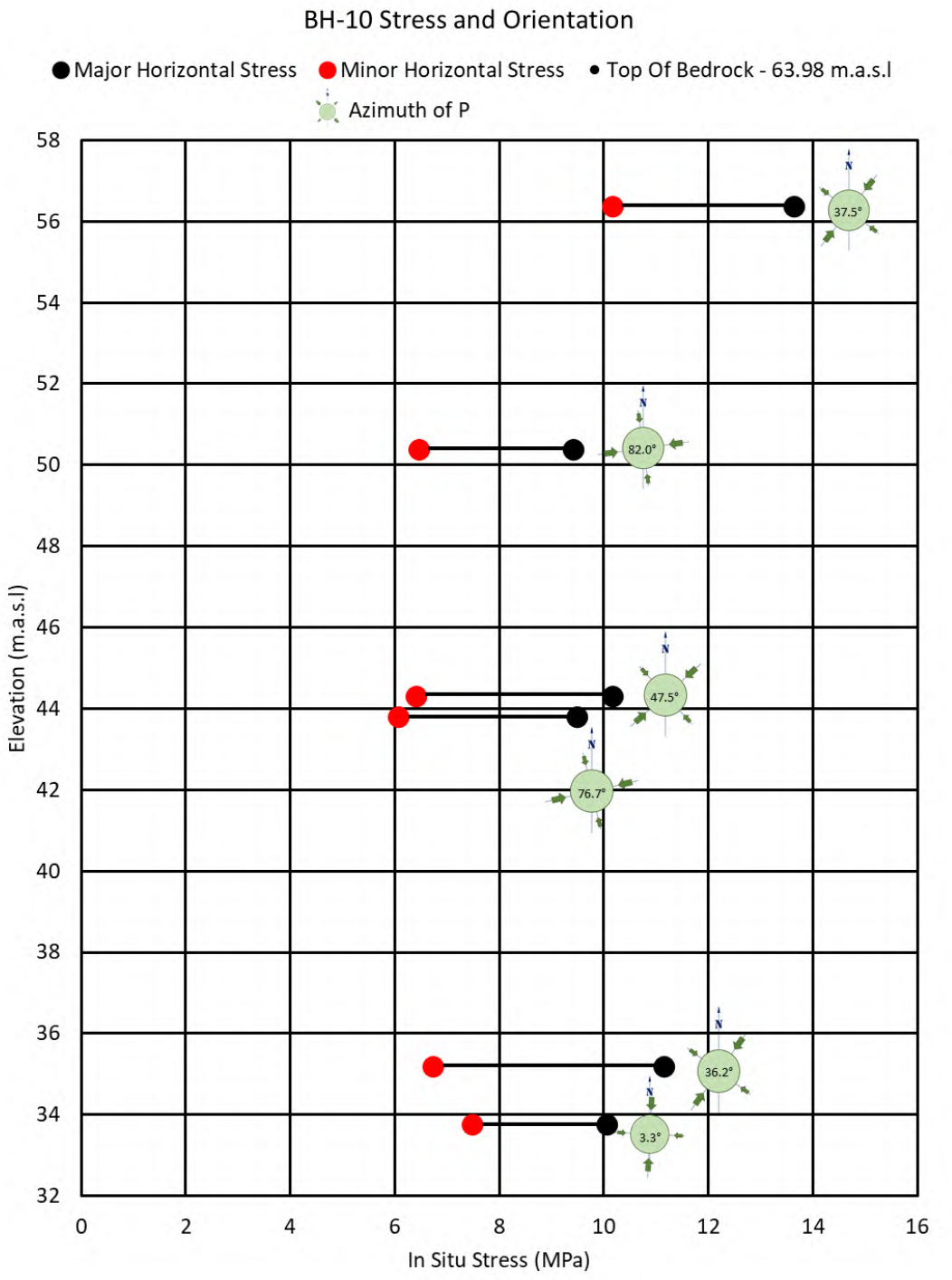


Figure E-7: Maximum (P) and minimum horizontal stresses (Q) for the interpretable tests

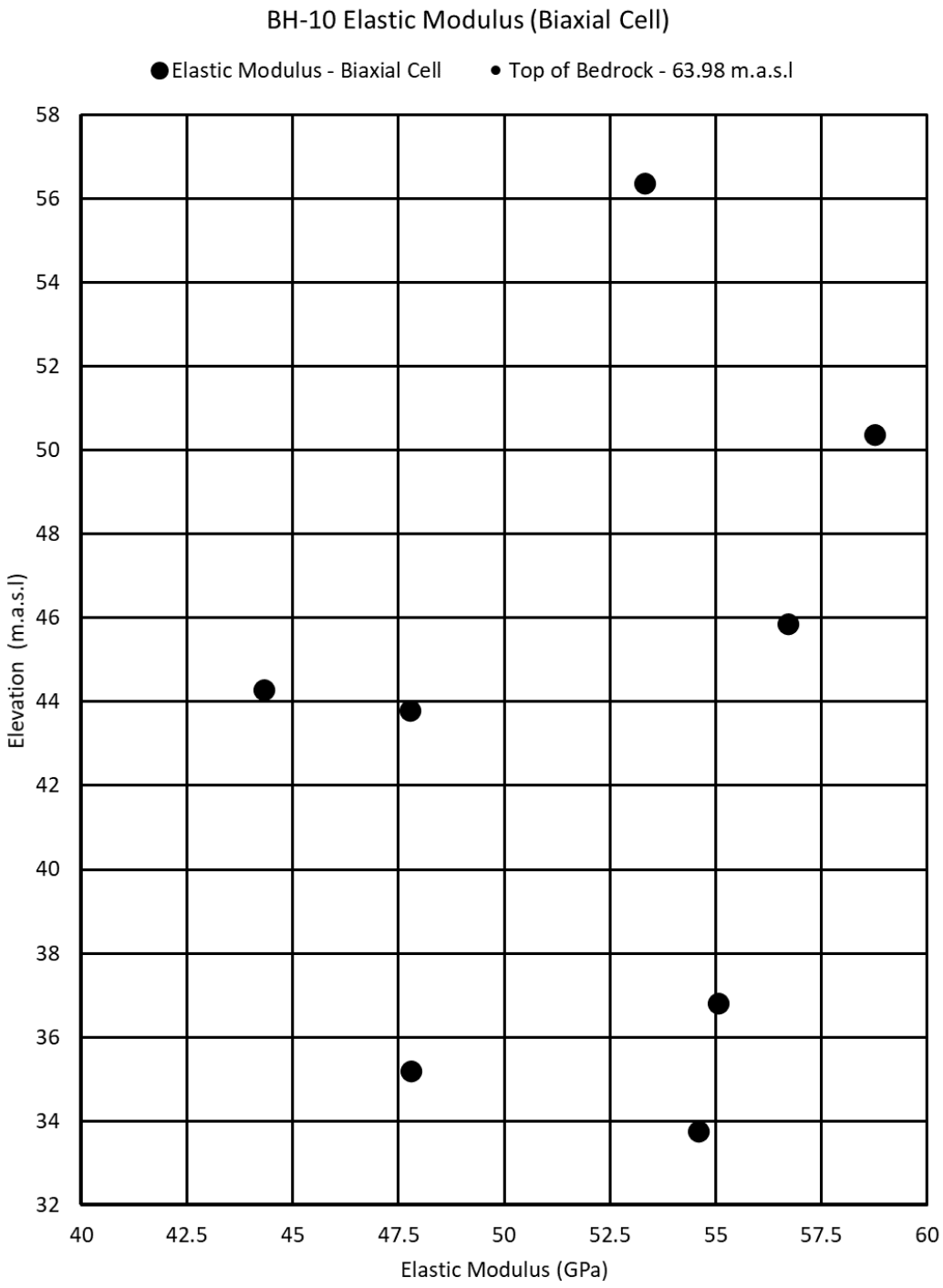


Figure E-8: Horizontal elastic modulus (*E*) of the rock measured from the biaxial tests

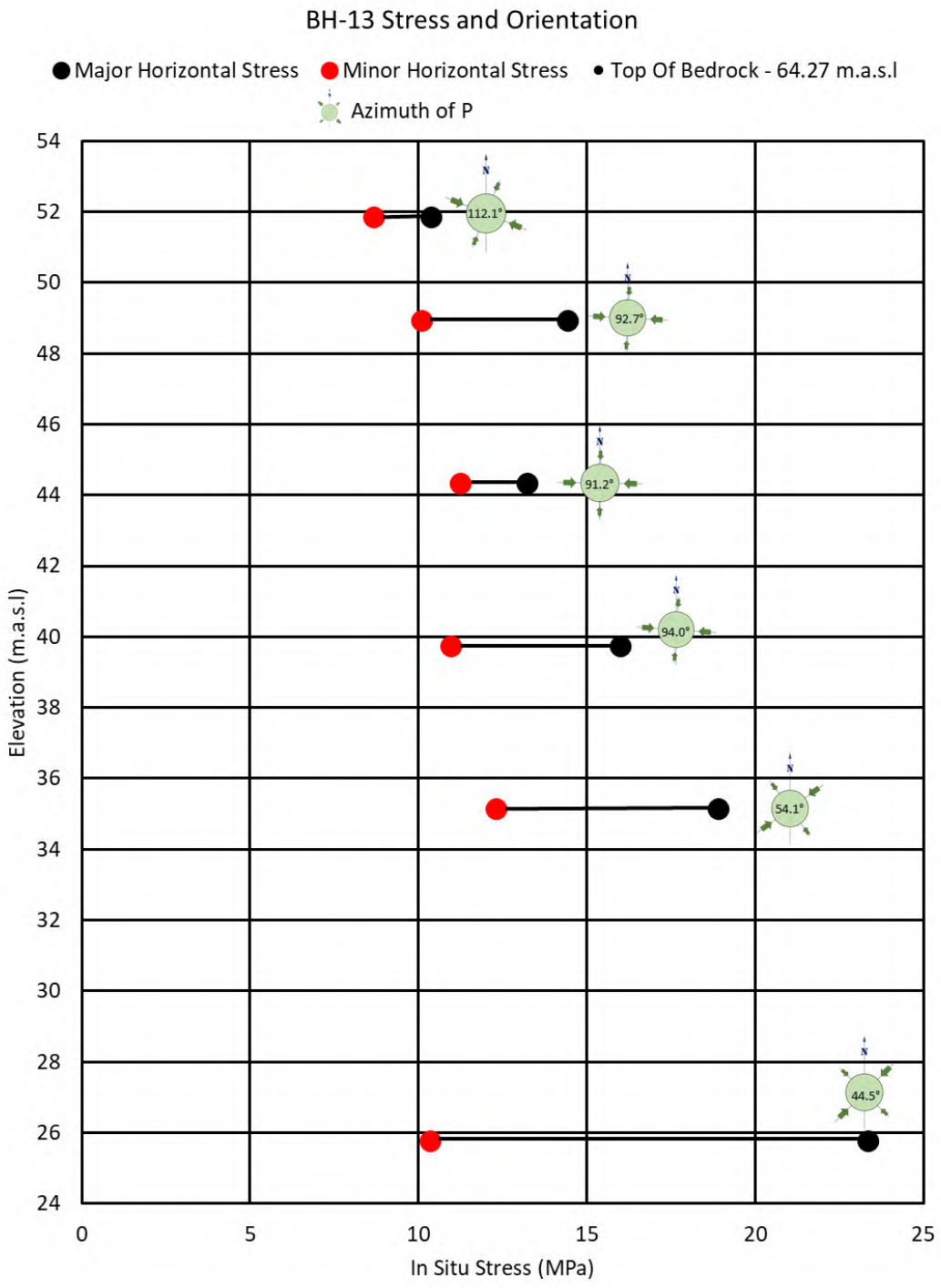


Figure E-9: Maximum (P) and minimum horizontal stresses (Q) for the interpretable tests

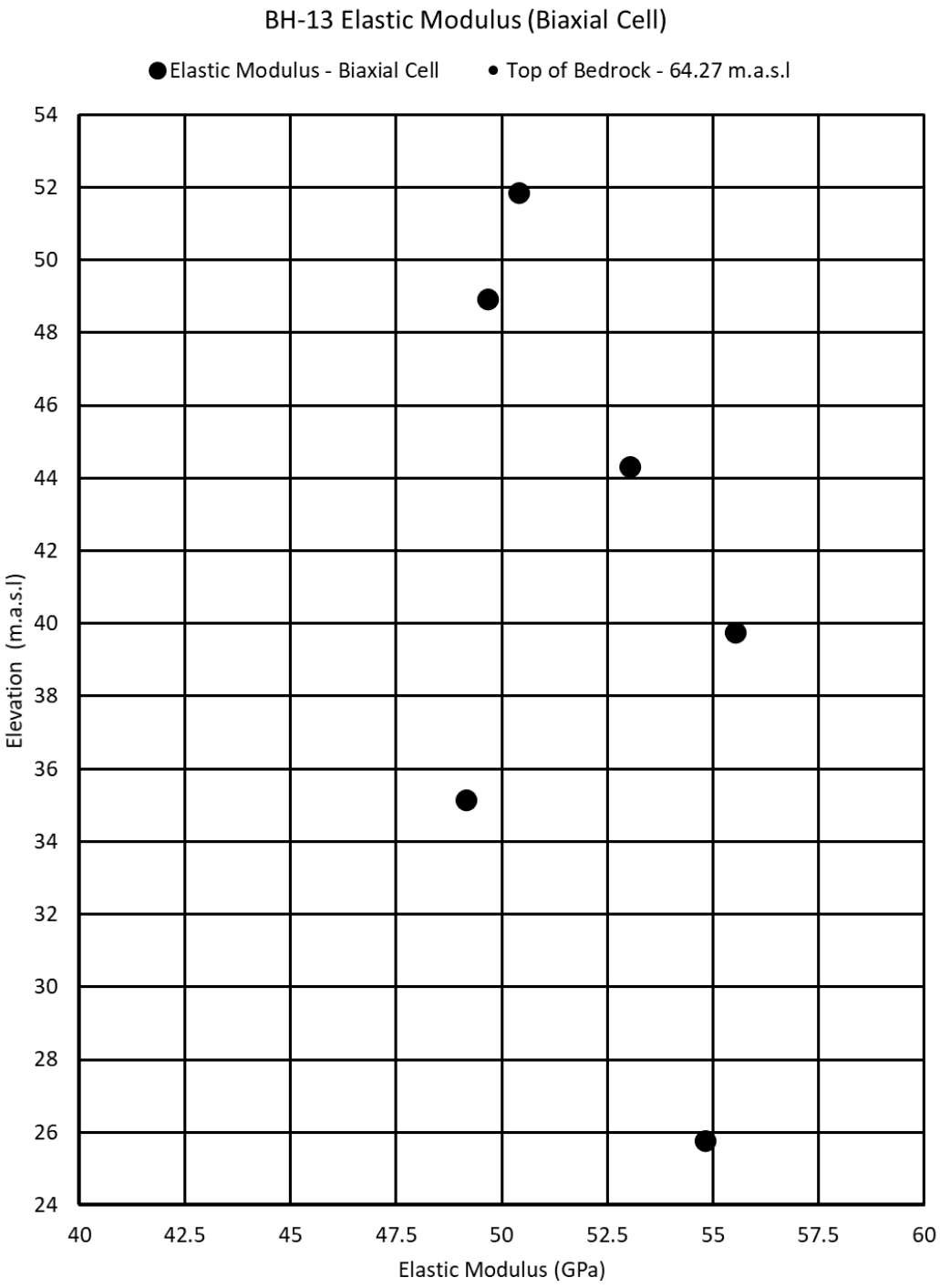


Figure E- 10: Horizontal elastic modulus (*E*) of the rock measured from the biaxial tests

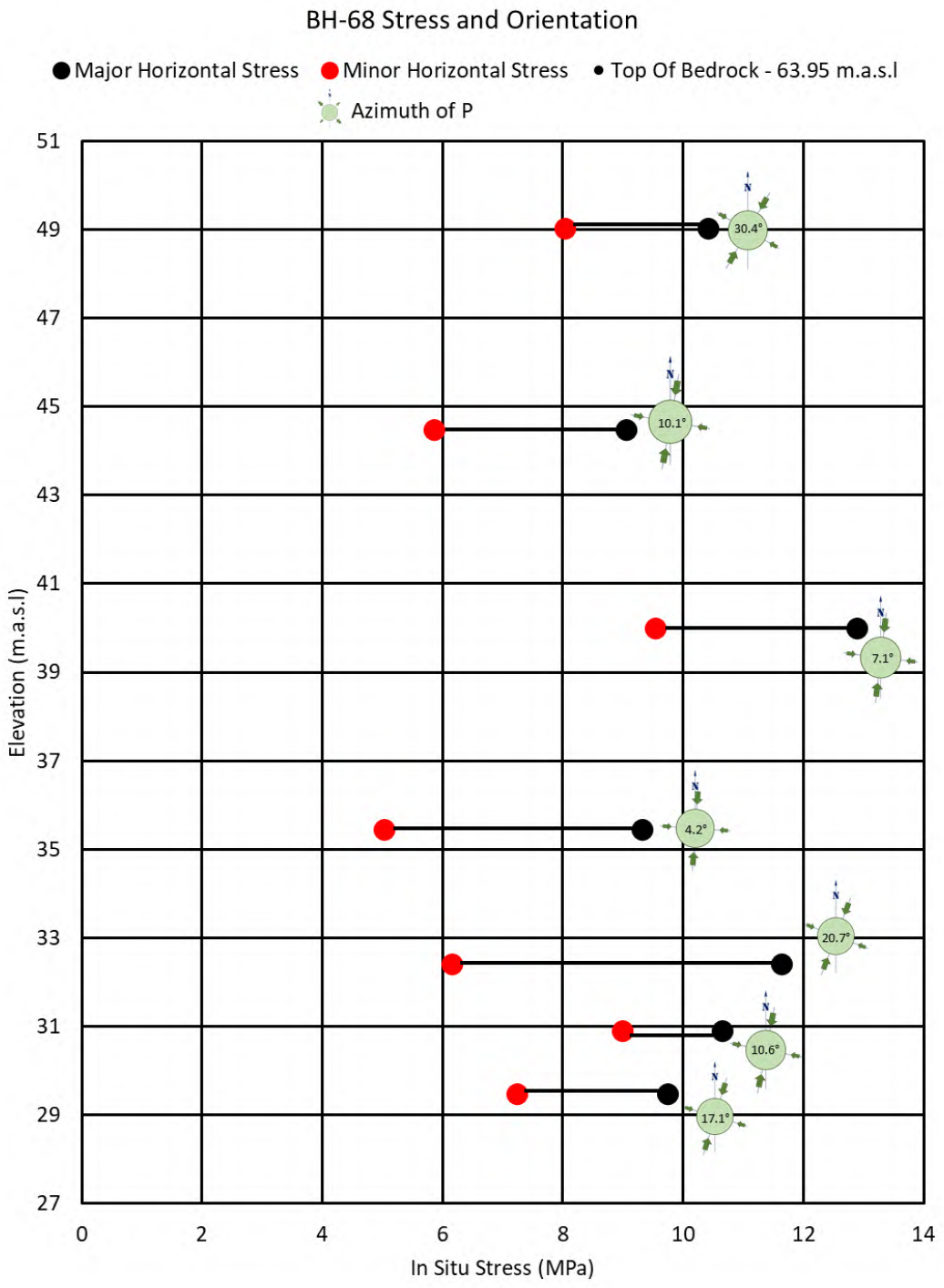


Figure E-11: Maximum (P) and minimum horizontal stresses (Q) for the interpretable tests

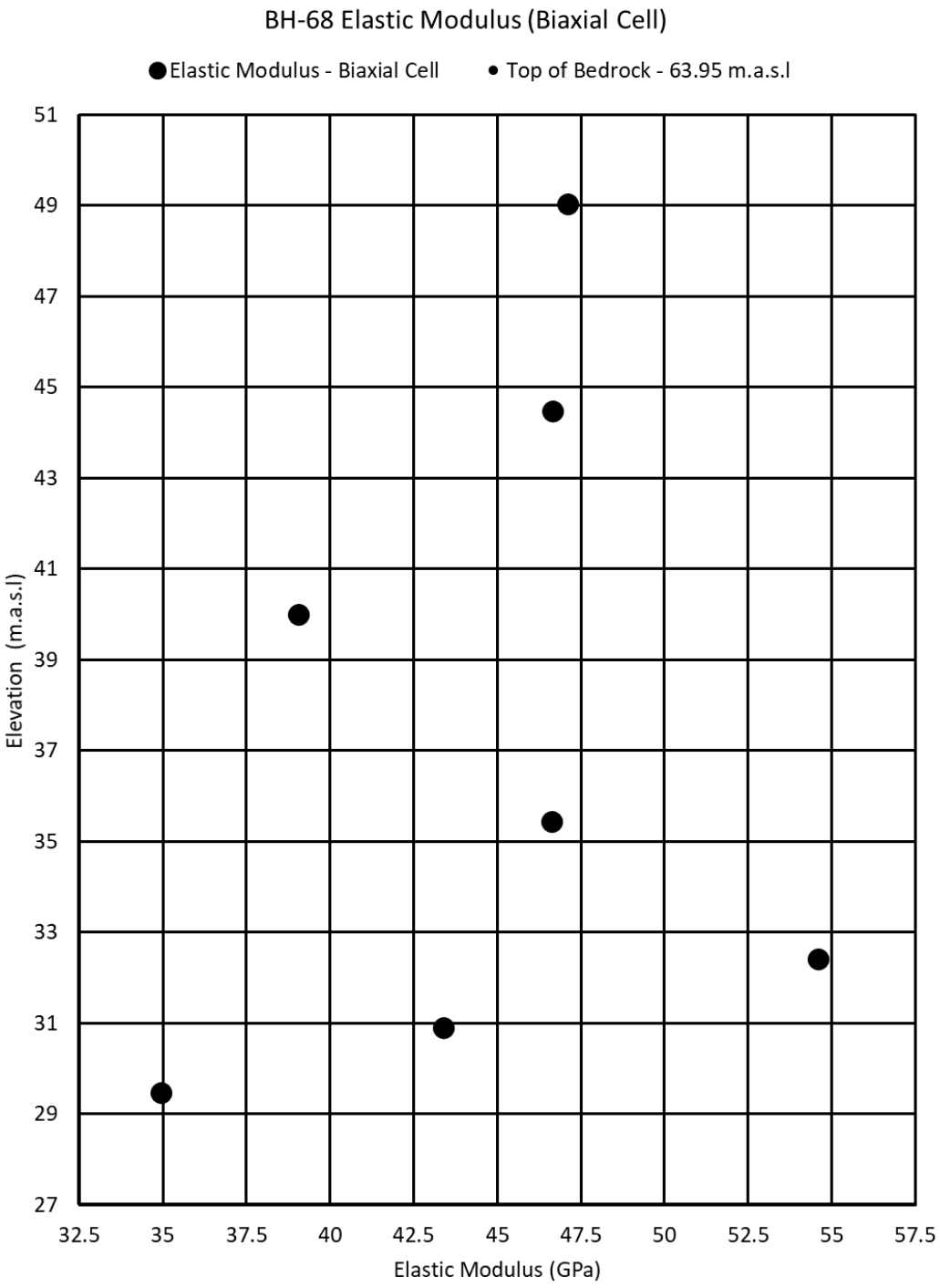


Figure E-12: Horizontal elastic modulus (*E*) of the rock measured from the biaxial tests

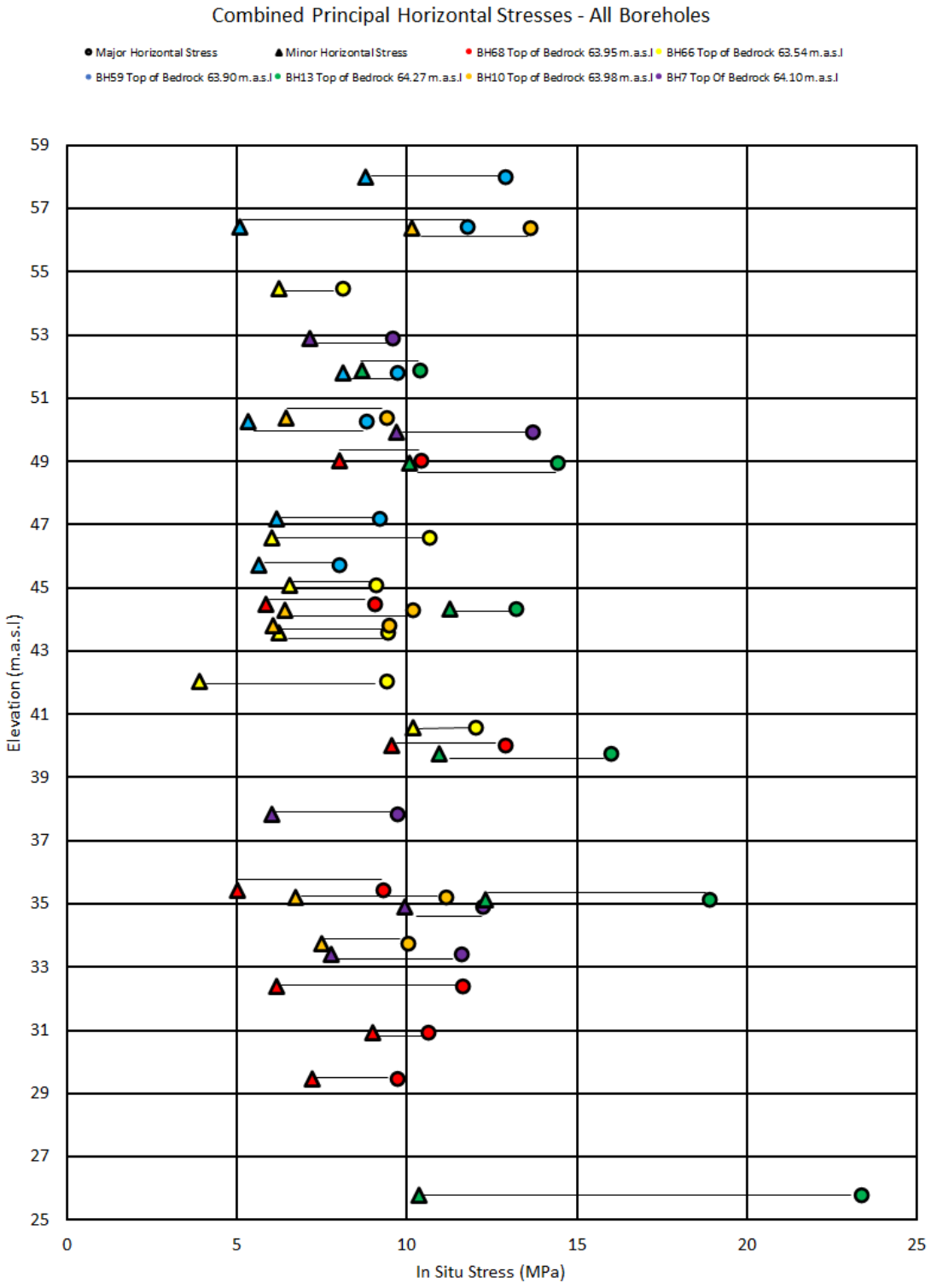


Figure E-13: Combined maximum (P) and minimum horizontal stresses (Q) for the interpretable tests

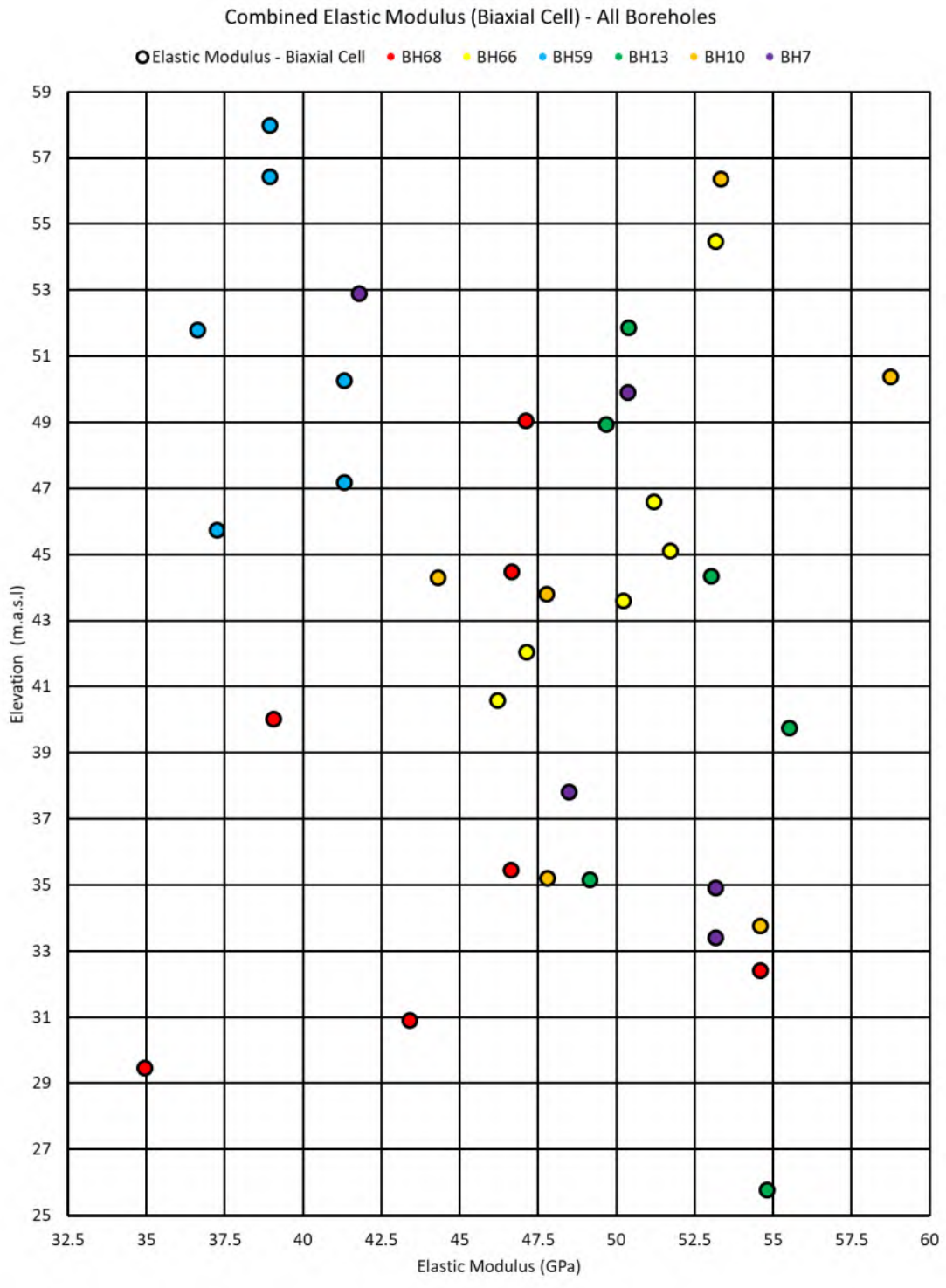


Figure E-14: horizontal elastic modulus (*E*) of the rock measured from the biaxial tests

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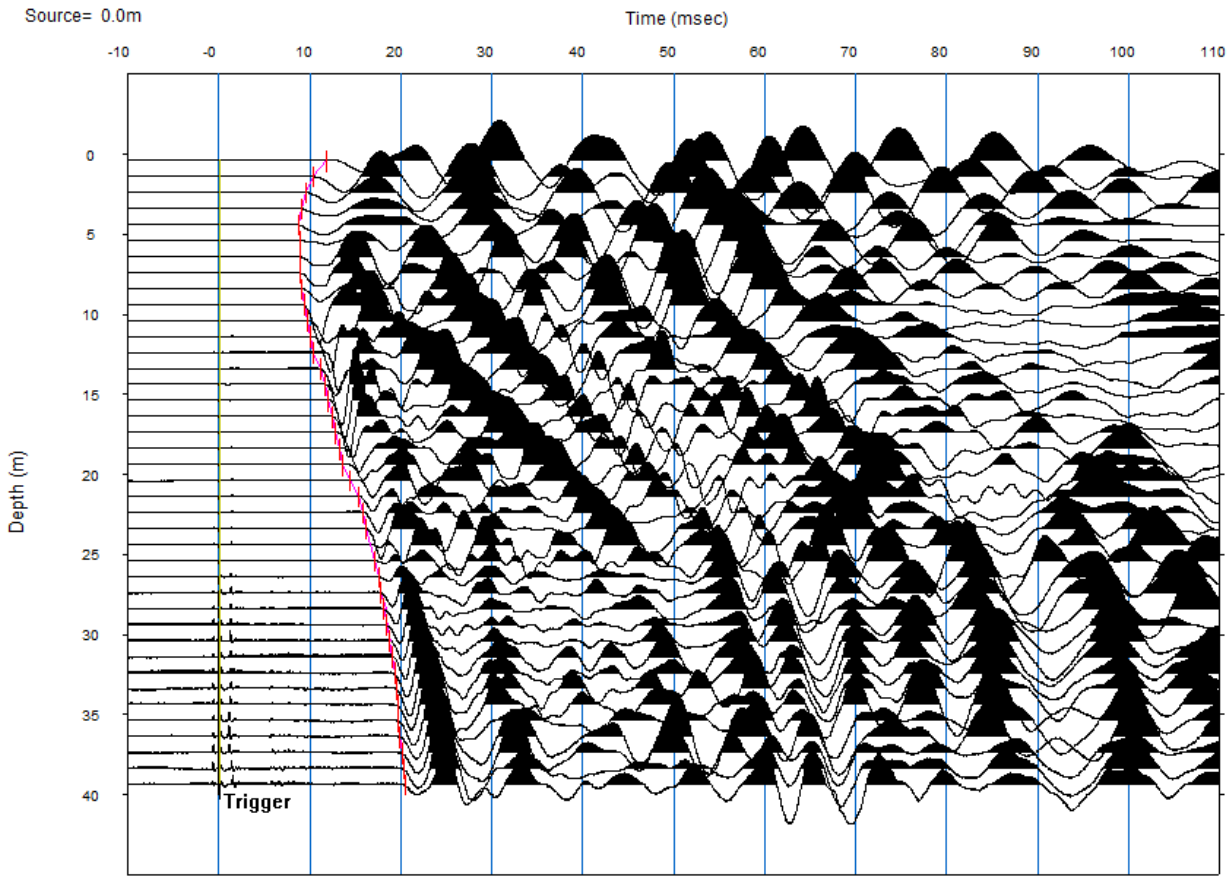
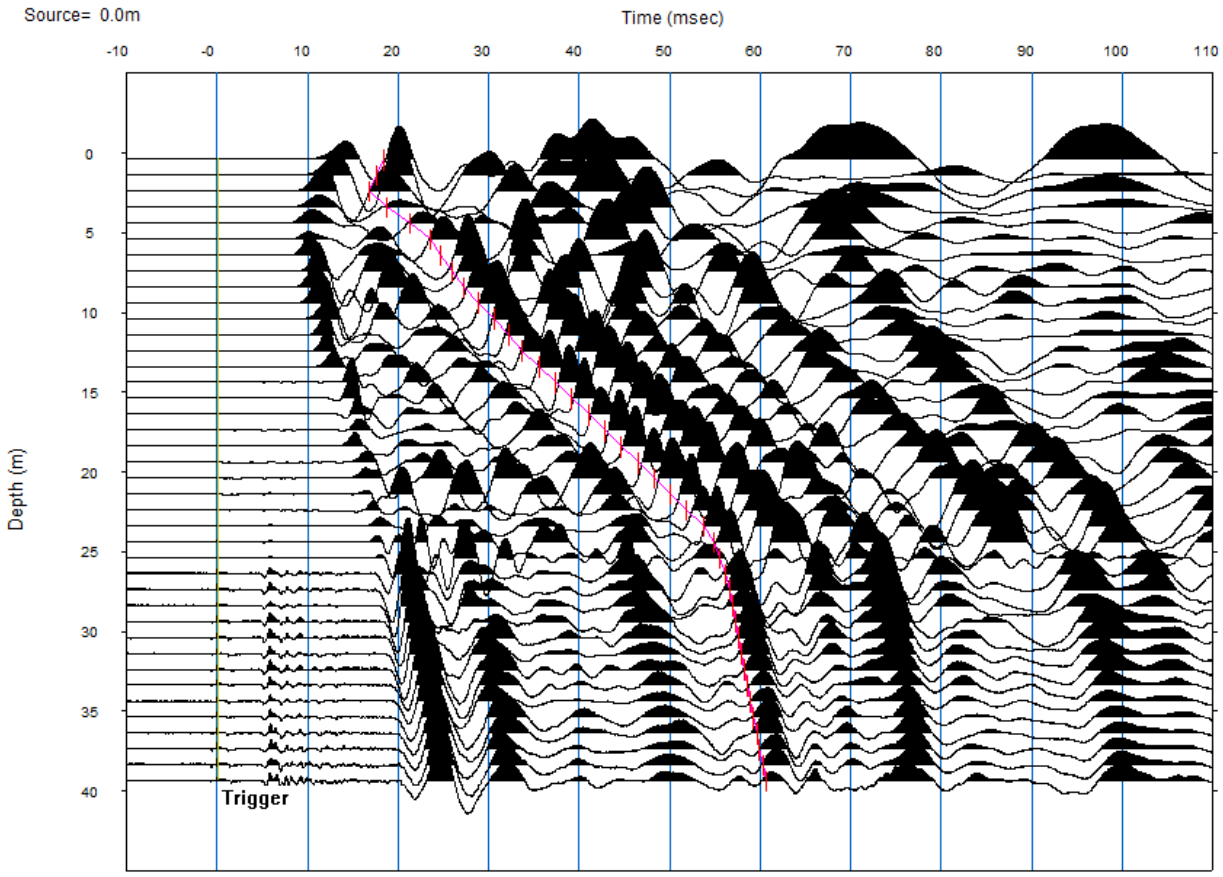
APPENDIX F

Geophysical Testing Interpretations

BH3 Compression Wave Picked Arrival Times

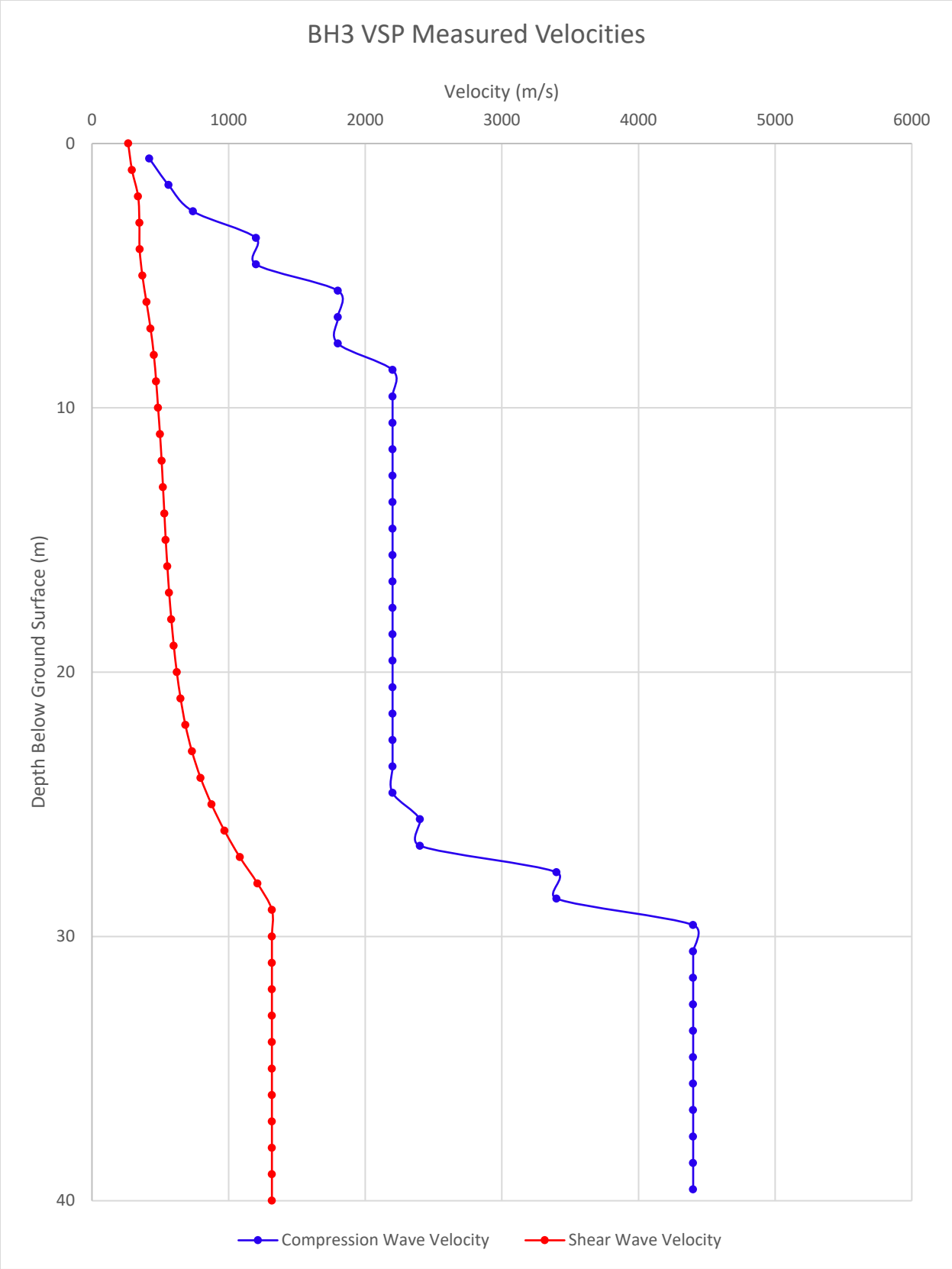


BH3 Shear Wave Picked Arrival Times

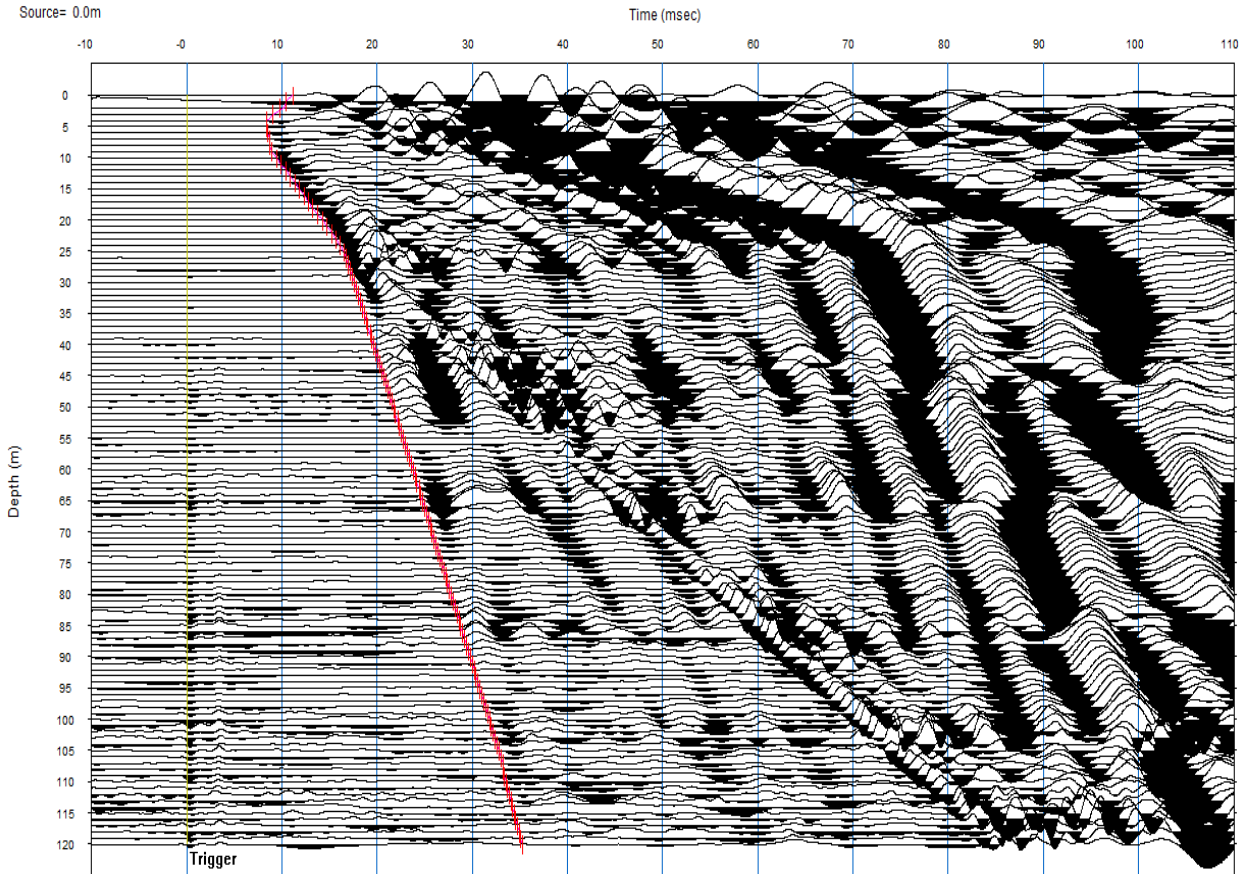


BH3 VSP Velocity Profile

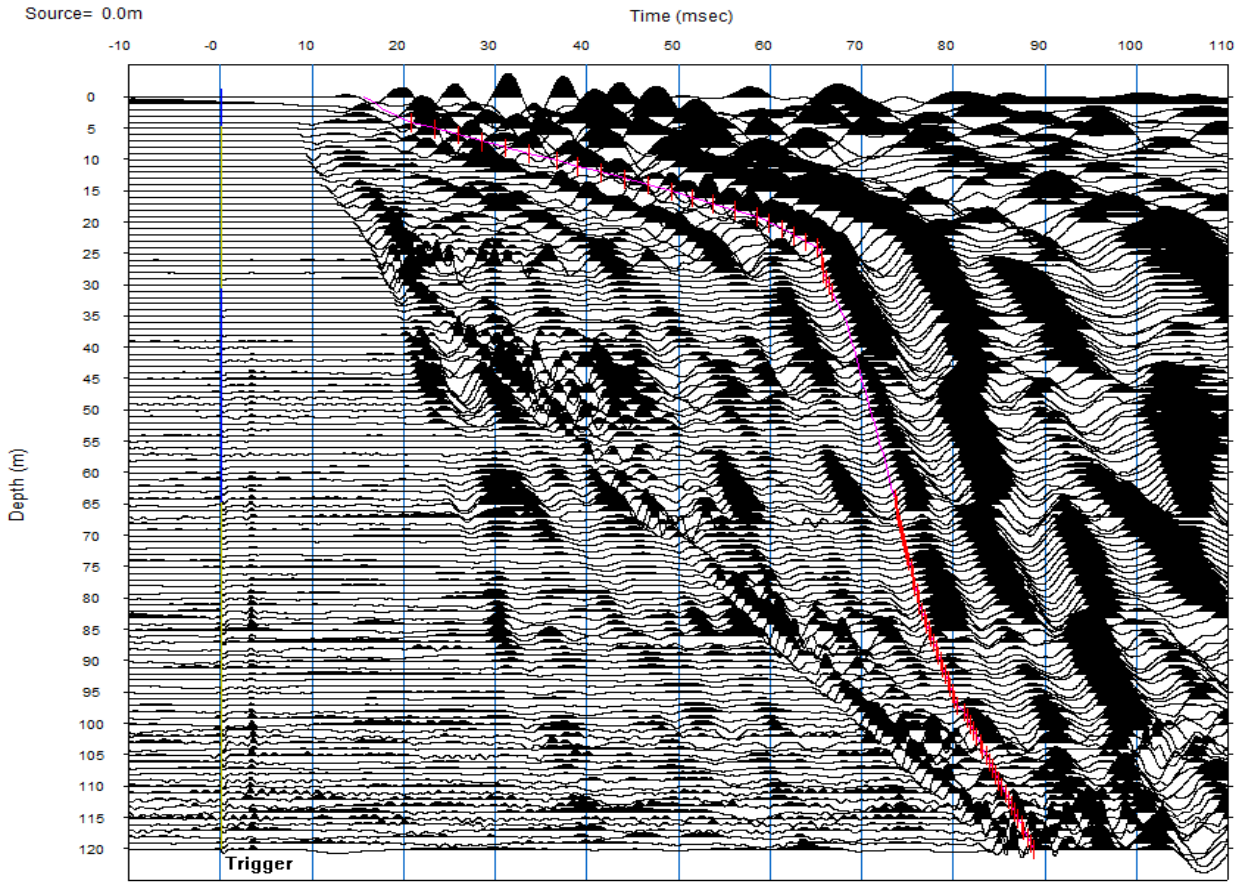
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Wave Velocity (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m^3)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.00	0.57	420	265	2141	0.17	150	352	177
0.57	1.57	560	293	2039	0.31	175	459	406
1.57	2.57	740	338	2039	0.37	233	637	806
2.57	3.57	1200	347	2039	0.45	246	714	2609
3.57	4.57	1200	349	2039	0.45	248	722	2605
4.57	5.57	1800	369	2039	0.48	278	821	6236
5.57	6.57	1800	399	2039	0.47	325	957	6174
6.57	7.57	1800	429	2345	0.47	432	1269	7022
7.57	8.57	2200	453	2345	0.48	481	1422	10708
8.57	9.57	2200	470	2345	0.48	518	1529	10659
9.57	10.57	2200	484	2141	0.47	502	1479	9694
10.57	11.57	2200	498	2141	0.47	531	1564	9654
11.57	12.57	2200	510	2141	0.47	557	1639	9620
12.57	13.57	2200	520	2243	0.47	607	1784	10047
13.57	14.57	2200	530	2243	0.47	630	1851	10016
14.57	15.57	2200	540	2243	0.47	654	1920	9984
15.57	16.57	2200	552	2243	0.47	683	2004	9945
16.57	17.57	2200	565	2243	0.46	716	2098	9901
17.57	18.57	2200	581	2141	0.46	723	2114	9399
18.57	19.57	2200	599	2141	0.46	768	2243	9338
19.57	20.57	2200	621	2243	0.46	865	2520	9703
20.57	21.57	2200	649	2141	0.45	902	2619	9160
21.57	22.57	2200	684	2141	0.45	1002	2898	9027
22.57	23.57	2200	732	2243	0.44	1202	3456	9254
23.57	24.57	2200	795	2345	0.42	1482	4224	9374
24.57	25.57	2400	875	2641	0.42	2022	5756	12516
25.57	26.57	2400	970	2641	0.40	2485	6970	11899
26.57	27.57	3400	1082	2641	0.44	3092	8927	26407
27.57	28.57	3400	1212	2641	0.43	3879	11074	25357
28.57	29.57	4400	1317	2681	0.45	4650	13493	45704
29.57	30.57	4400	1317	2681	0.45	4650	13493	45704
30.57	31.57	4400	1317	2681	0.45	4650	13493	45704
31.57	32.57	4400	1317	2681	0.45	4650	13493	45704
32.57	33.57	4400	1317	2681	0.45	4650	13493	45704
33.57	34.57	4400	1317	2681	0.45	4650	13493	45704
34.57	35.57	4400	1317	2681	0.45	4650	13493	45704
35.57	36.57	4400	1317	2681	0.45	4650	13493	45704
36.57	37.57	4400	1317	2681	0.45	4650	13493	45704
37.57	38.57	4400	1317	2681	0.45	4650	13493	45704
38.57	39.57	4400	1317	2681	0.45	4650	13493	45704


BH3 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
10
20
30
40
Compression Wave Velocity
Shear Wave Velocity

BH4 Compression Wave Picked Times



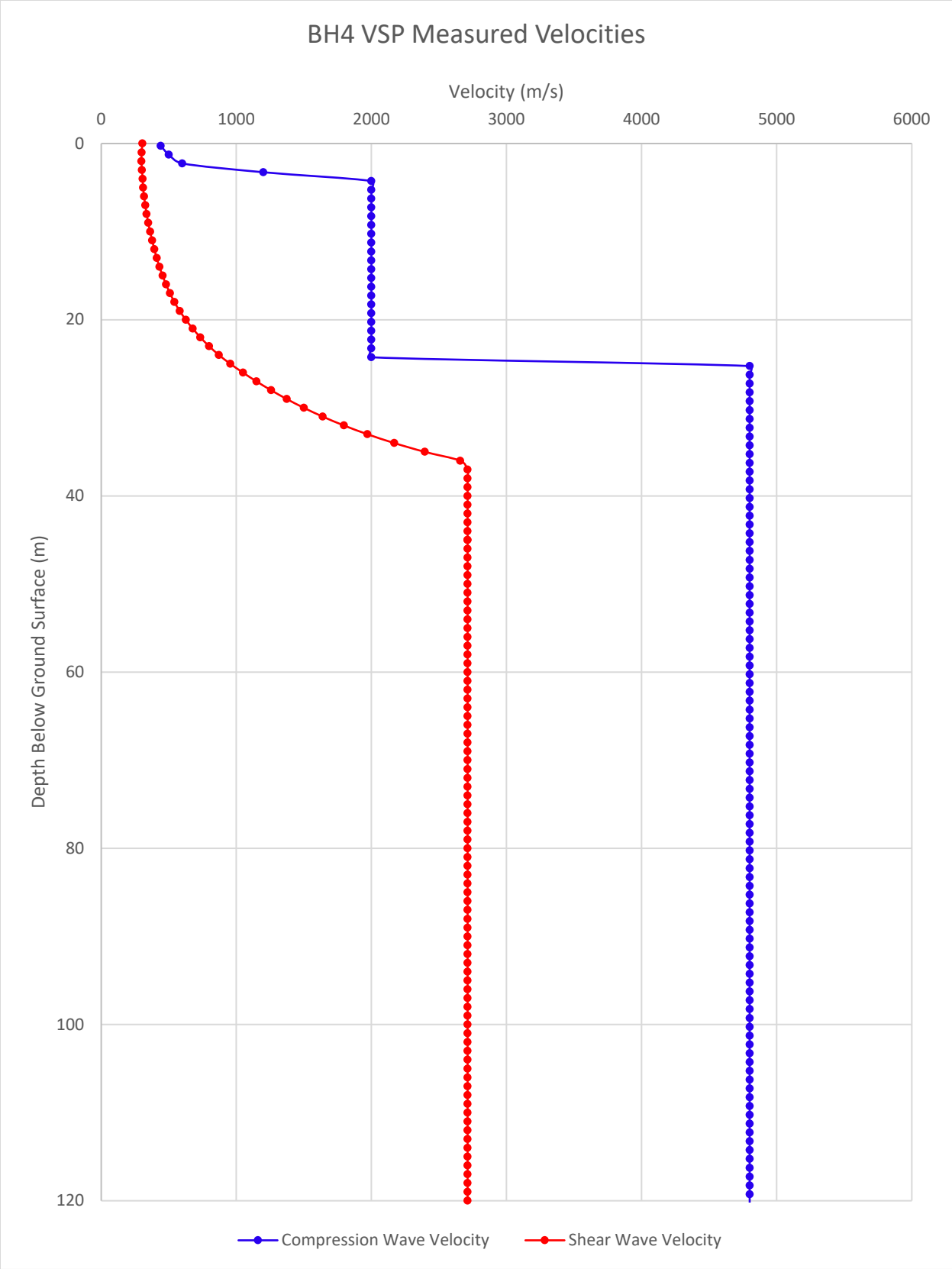
BH4 Shear Wave Picked Arrival Times



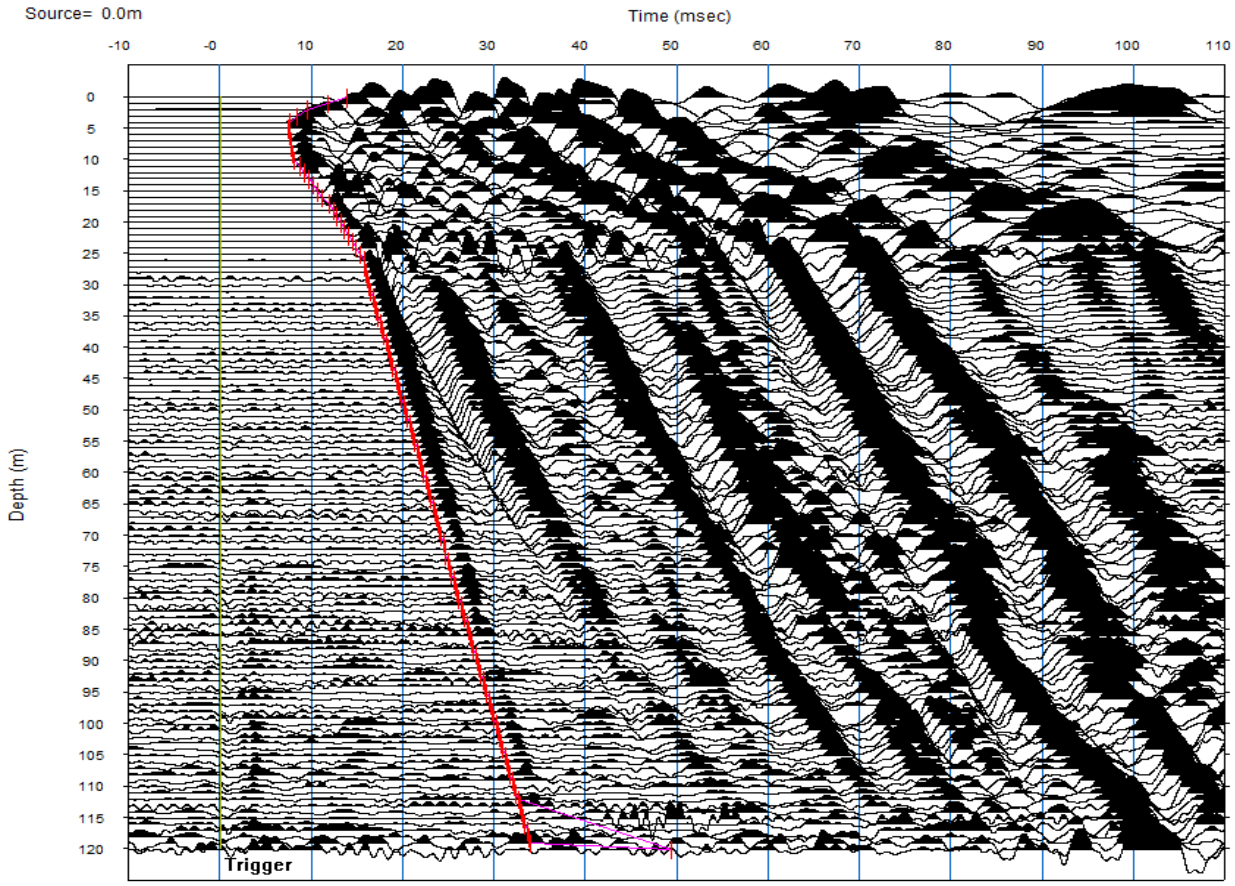
BH4 VSP Velocity Profile

Layer Depth (m)				Estimated	Dynamic Engineering Properties			
Top	Bottom	Compressional Wave (m/s)	Shear Wave (m/s)	Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	0.3	440	304	2141	0.04	198	413	151
0.3	1.3	500	300	2141	0.22	193	470	278
1.3	2.3	600	297	2141	0.34	189	505	519
2.3	3.3	1200	302	2141	0.47	195	573	2823
3.3	4.3	2000	306	2039	0.49	191	568	7901
4.3	5.3	2000	310	2039	0.49	196	583	7895
5.3	6.3	2000	317	2039	0.49	205	609	7883
6.3	7.3	2000	326	2039	0.49	217	644	7867
7.3	8.3	2000	336	2039	0.49	230	684	7849
8.3	9.3	2000	348	2039	0.48	247	733	7827
9.3	10.3	2000	362	2243	0.48	294	872	8580
10.3	11.3	2000	377	2243	0.48	319	945	8547
11.3	12.3	2000	393	2243	0.48	346	1025	8510
12.3	13.3	2000	411	2243	0.48	379	1120	8467
13.3	14.3	2000	431	2243	0.48	417	1230	8416
14.3	15.3	2000	454	2243	0.47	462	1362	8356
15.3	16.3	2000	480	2243	0.47	517	1519	8283
16.3	17.3	2000	509	2243	0.47	581	1703	8197
17.3	18.3	2000	542	2243	0.46	659	1925	8093
18.3	19.3	2000	581	2141	0.45	723	2102	7600
19.3	20.3	2000	626	2141	0.45	839	2426	7445
20.3	21.3	2000	677	2141	0.44	981	2817	7256
21.3	22.3	2000	734	2243	0.42	1208	3437	7361
22.3	23.3	2000	798	2243	0.41	1428	4015	7068
23.3	24.3	2000	871	2345	0.38	1779	4921	7008
24.3	25.3	2000	955	2345	0.35	2139	5784	6528
25.3	26.3	4800	1049	2641	0.47	2906	8573	56974
26.3	27.3	4800	1149	2641	0.47	3487	10248	56200
27.3	28.3	4800	1257	2641	0.46	4173	12211	55285
28.3	29.3	4800	1373	2641	0.46	4979	14492	54210
29.3	30.3	4800	1500	2681	0.45	6032	17444	53727
30.3	31.3	4800	1640	2681	0.43	7211	20679	52156
31.3	32.3	4800	1796	2681	0.42	8648	24536	50240
32.3	33.3	4800	1971	2681	0.40	10415	29133	47883
33.3	34.3	4800	2169	2681	0.37	12613	34603	44953
34.3	35.3	4800	2395	2681	0.33	15378	41037	41266
35.3	36.3	4800	2657	2681	0.28	18927	48419	36534
36.3	37.3	4800	2712	2681	0.27	19719	49909	35479
37.3	38.3	4800	2712	2681	0.27	19719	49909	35479
38.3	39.3	4800	2712	2681	0.27	19719	49909	35479
39.3	40.3	4800	2712	2681	0.27	19719	49909	35479
40.3	41.3	4800	2712	2681	0.27	19719	49909	35479
41.3	42.3	4800	2712	2681	0.27	19719	49909	35479
42.3	43.3	4800	2712	2681	0.27	19719	49909	35479
43.3	44.3	4800	2712	2681	0.27	19719	49909	35479
44.3	45.3	4800	2712	2681	0.27	19719	49909	35479
45.3	46.3	4800	2712	2681	0.27	19719	49909	35479
46.3	47.3	4800	2712	2681	0.27	19719	49909	35479
47.3	48.3	4800	2712	2681	0.27	19719	49909	35479
48.3	49.3	4800	2712	2681	0.27	19719	49909	35479
49.3	50.3	4800	2712	2681	0.27	19719	49909	35479
50.3	51.3	4800	2712	2681	0.27	19719	49909	35479
51.3	52.3	4800	2712	2681	0.27	19719	49909	35479
52.3	53.3	4800	2712	2681	0.27	19719	49909	35479
53.3	54.3	4800	2712	2681	0.27	19719	49909	35479
54.3	55.3	4800	2712	2681	0.27	19719	49909	35479
55.3	56.3	4800	2712	2681	0.27	19719	49909	35479
56.3	57.3	4800	2712	2681	0.27	19719	49909	35479
57.3	58.3	4800	2712	2681	0.27	19719	49909	35479
58.3	59.3	4800	2712	2681	0.27	19719	49909	35479
59.3	60.3	4800	2712	2681	0.27	19719	49909	35479
60.3	61.3	4800	2712	2681	0.27	19719	49909	35479
61.3	62.3	4800	2712	2681	0.27	19719	49909	35479
62.3	63.3	4800	2712	2681	0.27	19719	49909	35479
63.3	64.3	4800	2712	2681	0.27	19719	49909	35479
64.3	65.3	4800	2712	2681	0.27	19719	49909	35479
65.3	66.3	4800	2712	2681	0.27	19719	49909	35479
66.3	67.3	4800	2712	2681	0.27	19719	49909	35479

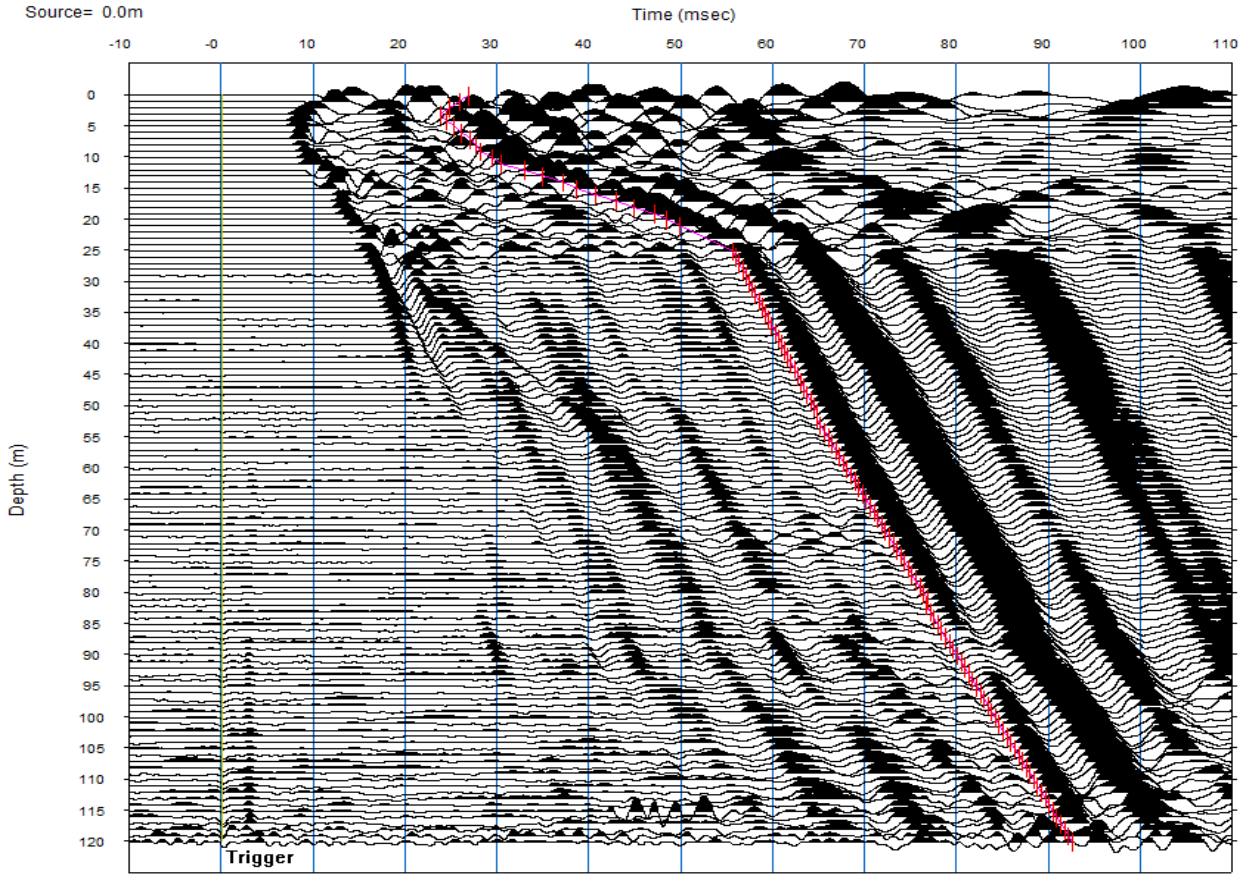
Layer Depth (m)				Estimated Bulk Density (kg/m^3)	Dynamic Engineering Properties			
Top	Bottom	Compressional Wave (m/s)	Shear Wave (m/s)		Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
67.3	68.3	4800	2712	2681	0.27	19719	49909	35479
68.3	69.3	4800	2712	2681	0.27	19719	49909	35479
69.3	70.3	4800	2712	2681	0.27	19719	49909	35479
70.3	71.3	4800	2712	2681	0.27	19719	49909	35479
71.3	72.3	4800	2712	2681	0.27	19719	49909	35479
72.3	73.3	4800	2712	2681	0.27	19719	49909	35479
73.3	74.3	4800	2712	2681	0.27	19719	49909	35479
74.3	75.3	4800	2712	2681	0.27	19719	49909	35479
75.3	76.3	4800	2712	2681	0.27	19719	49909	35479
76.3	77.3	4800	2712	2681	0.27	19719	49909	35479
77.3	78.3	4800	2712	2681	0.27	19719	49909	35479
78.3	79.3	4800	2712	2681	0.27	19719	49909	35479
79.3	80.3	4800	2712	2681	0.27	19719	49909	35479
80.3	81.3	4800	2712	2681	0.27	19719	49909	35479
81.3	82.3	4800	2712	2681	0.27	19719	49909	35479
82.3	83.3	4800	2712	2681	0.27	19719	49909	35479
83.3	84.3	4800	2712	2681	0.27	19719	49909	35479
84.3	85.3	4800	2712	2681	0.27	19719	49909	35479
85.3	86.3	4800	2712	2681	0.27	19719	49909	35479
86.3	87.3	4800	2712	2681	0.27	19719	49909	35479
87.3	88.3	4800	2712	2681	0.27	19719	49909	35479
88.3	89.3	4800	2712	2681	0.27	19719	49909	35479
89.3	90.3	4800	2712	2681	0.27	19719	49909	35479
90.3	91.3	4800	2712	2679	0.27	19704	49872	35452
91.3	92.3	4800	2712	2679	0.27	19704	49872	35452
92.3	93.3	4800	2712	2679	0.27	19704	49872	35452
93.3	94.3	4800	2712	2679	0.27	19704	49872	35452
94.3	95.3	4800	2712	2679	0.27	19704	49872	35452
95.3	96.3	4800	2712	2679	0.27	19704	49872	35452
96.3	97.3	4800	2712	2679	0.27	19704	49872	35452
97.3	98.3	4800	2712	2679	0.27	19704	49872	35452
98.3	99.3	4800	2712	2679	0.27	19704	49872	35452
99.3	100.3	4800	2712	2679	0.27	19704	49872	35452
100.3	101.3	4800	2712	2679	0.27	19704	49872	35452
101.3	102.3	4800	2712	2679	0.27	19704	49872	35452
102.3	103.3	4800	2712	2679	0.27	19704	49872	35452
103.3	104.3	4800	2712	2679	0.27	19704	49872	35452
104.3	105.3	4800	2712	2679	0.27	19704	49872	35452
105.3	106.3	4800	2712	2679	0.27	19704	49872	35452
106.3	107.3	4800	2712	2679	0.27	19704	49872	35452
107.3	108.3	4800	2712	2679	0.27	19704	49872	35452
108.3	109.3	4800	2712	2679	0.27	19704	49872	35452
109.3	110.3	4800	2712	2679	0.27	19704	49872	35452
110.3	111.3	4800	2712	2679	0.27	19704	49872	35452
111.3	112.3	4800	2712	2679	0.27	19704	49872	35452
112.3	113.3	4800	2712	2679	0.27	19704	49872	35452
113.3	114.3	4800	2712	2679	0.27	19704	49872	35452
114.3	115.3	4800	2712	2679	0.27	19704	49872	35452
115.3	116.3	4800	2712	2679	0.27	19704	49872	35452
116.3	117.3	4800	2712	2679	0.27	19704	49872	35452
117.3	118.3	4800	2712	2679	0.27	19704	49872	35452
118.3	119.3	4800	2712	2679	0.27	19704	49872	35452
119.3	120.3	4800	2712	2679	0.27	19704	49872	35452


BH4 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
20
40
60
80
100
120
Compression Wave Velocity
Shear Wave Velocity

BH9 Compression Wave Picked Arrival Times



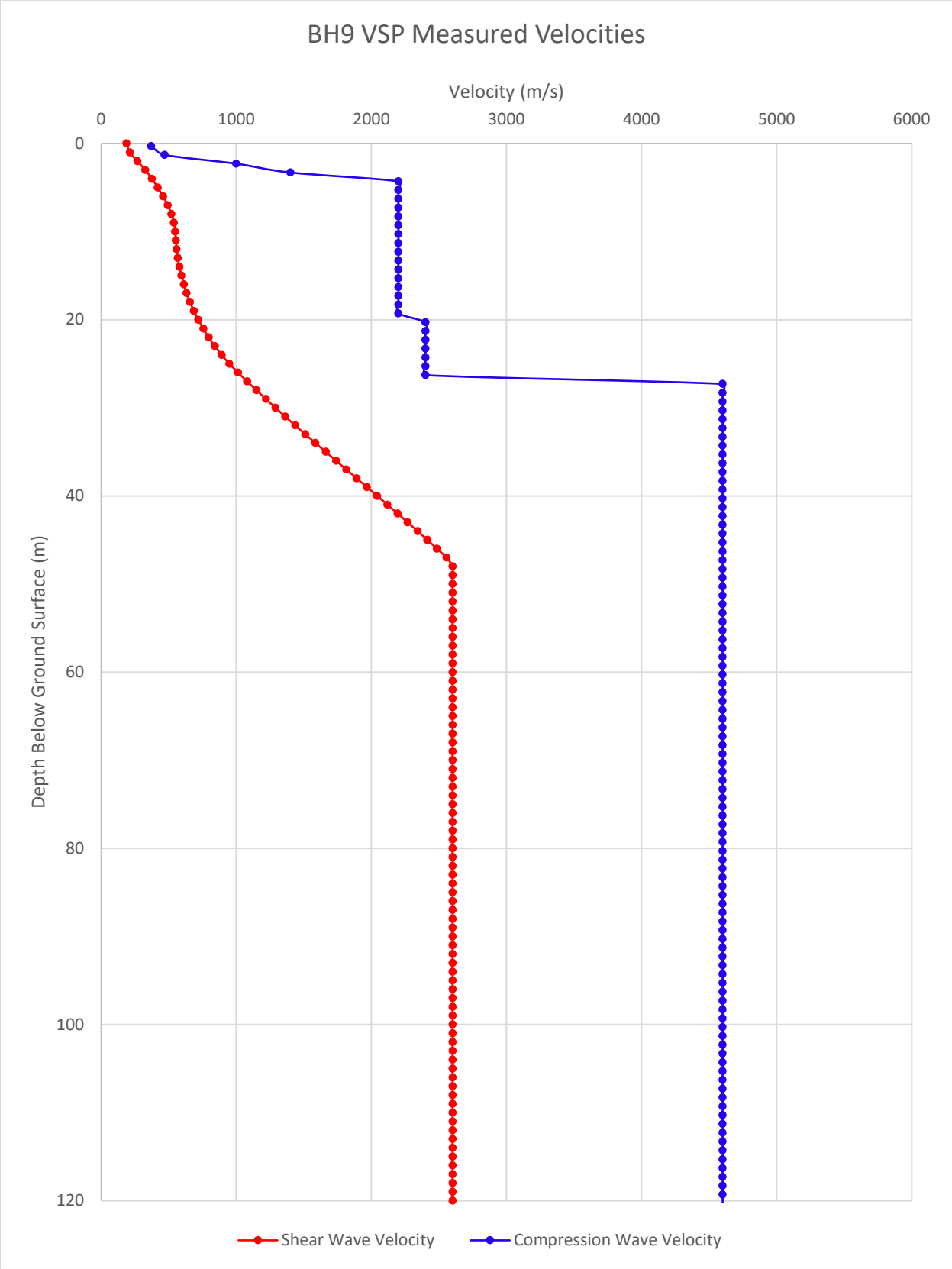
BH9 Shear Wave Picked Arrival Times



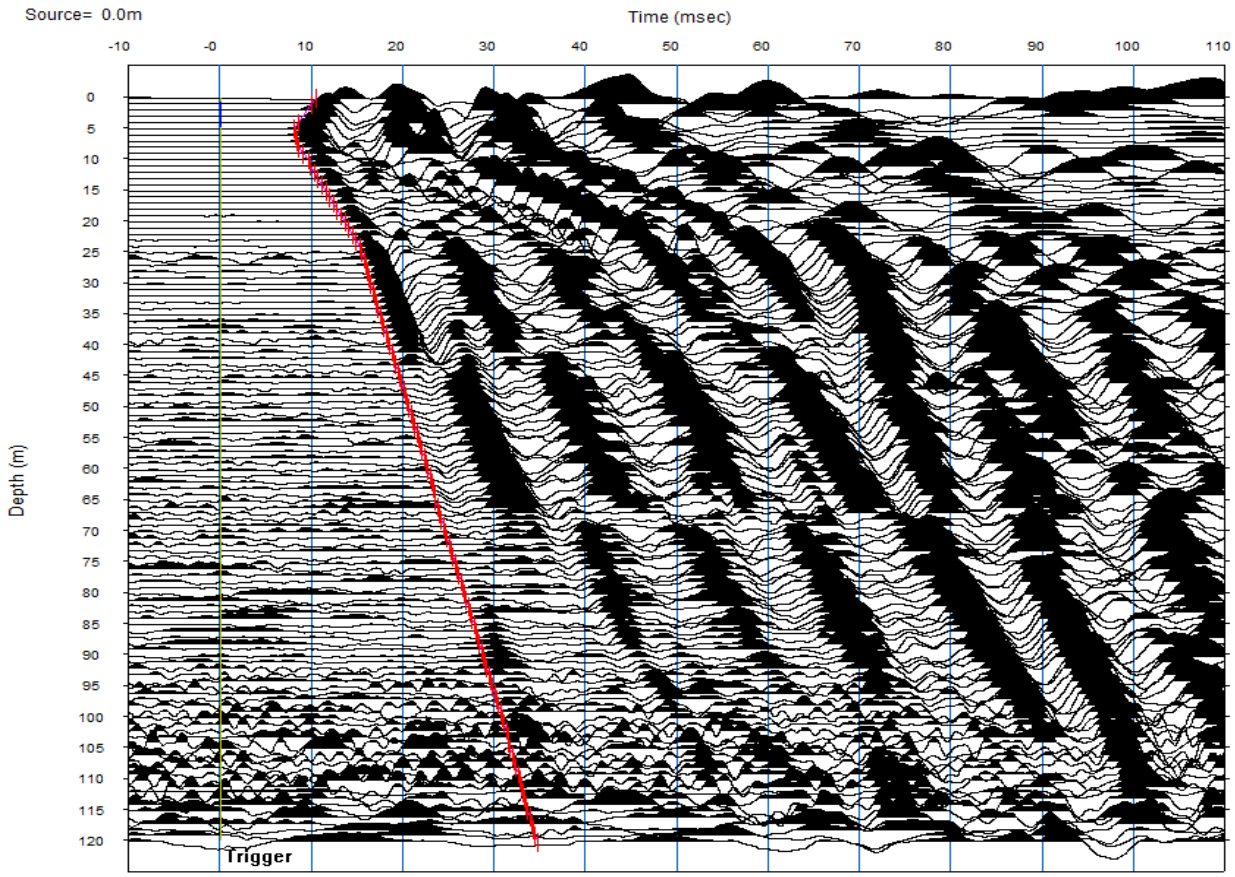
BH9 VSP Velocity Profile

Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m^3)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	0.3	370	188	2141	0.33	76	201	192
0.3	1.3	470	212	2141	0.37	96	264	345
1.3	2.3	1000	268	2141	0.46	154	449	1936
2.3	3.3	1400	326	2039	0.47	217	638	3708
3.3	4.3	2200	376	2039	0.48	288	856	9484
4.3	5.3	2200	418	2039	0.48	356	1055	9394
5.3	6.3	2200	458	2039	0.48	428	1264	9298
6.3	7.3	2200	492	2345	0.47	568	1673	10593
7.3	8.3	2200	520	2345	0.47	634	1865	10504
8.3	9.3	2200	538	2345	0.47	679	1993	10445
9.3	10.3	2200	548	2345	0.47	704	2066	10411
10.3	11.3	2200	553	2345	0.47	717	2103	10394
11.3	12.3	2200	558	2243	0.47	698	2047	9925
12.3	13.3	2200	567	2243	0.46	721	2112	9895
13.3	14.3	2200	579	2243	0.46	752	2200	9854
14.3	15.3	2200	595	2243	0.46	794	2320	9797
15.3	16.3	2200	612	2243	0.46	840	2450	9736
16.3	17.3	2200	632	2141	0.46	855	2489	9222
17.3	18.3	2200	657	2141	0.45	924	2682	9130
18.3	19.3	2200	686	2141	0.45	1008	2914	9019
19.3	20.3	2400	719	2345	0.45	1212	3517	11891
20.3	21.3	2400	756	2345	0.44	1340	3873	11720
21.3	22.3	2400	796	2243	0.44	1421	4088	11025
22.3	23.3	2400	841	2243	0.43	1586	4537	10804
23.3	24.3	2400	892	2345	0.42	1866	5298	11019
24.3	25.3	2400	949	2641	0.41	2378	6695	12041
25.3	26.3	2400	1013	2641	0.39	2710	7543	11599
26.3	27.3	4600	1080	2641	0.47	3080	9062	51776
27.3	28.3	4600	1149	2641	0.47	3487	10228	51235
28.3	29.3	4600	1219	2681	0.46	3984	11651	51418
29.3	30.3	4600	1290	2681	0.46	4461	13004	50781
30.3	31.3	4600	1363	2681	0.45	4981	14463	50089
31.3	32.3	4600	1436	2681	0.45	5528	15989	49359
32.3	33.3	4600	1511	2681	0.44	6121	17623	48569
33.3	34.3	4600	1586	2681	0.43	6744	19322	47738
34.3	35.3	4600	1662	2681	0.42	7406	21105	46856
35.3	36.3	4600	1738	2681	0.42	8098	22946	45932
36.3	37.3	4600	1814	2681	0.41	8822	24842	44967
37.3	38.3	4600	1891	2681	0.40	9587	26811	43947
38.3	39.3	4600	1967	2681	0.39	10373	28798	42899
39.3	40.3	4600	2043	2681	0.38	11190	30821	41810
40.3	41.3	4600	2119	2681	0.37	12038	32872	40679
41.3	42.3	4600	2194	2681	0.35	12905	34916	39523
42.3	43.3	4600	2268	2681	0.34	13791	36943	38343
43.3	44.3	4600	2342	2681	0.33	14705	38970	37123
44.3	45.3	4600	2415	2681	0.31	15636	40959	35882
45.3	46.3	4600	2415	2681	0.31	15636	40959	35882
46.3	47.3	4600	2486	2681	0.29	16569	42871	34638
47.3	48.3	4600	2556	2681	0.28	17515	44723	33376
48.3	49.3	4600	2601	2681	0.27	18138	45888	32547
49.3	50.3	4600	2601	2681	0.27	18138	45888	32547
50.3	51.3	4600	2601	2681	0.27	18138	45888	32547
51.3	52.3	4600	2601	2681	0.27	18138	45888	32547
52.3	53.3	4600	2601	2681	0.27	18138	45888	32547
53.3	54.3	4600	2601	2681	0.27	18138	45888	32547
54.3	55.3	4600	2601	2681	0.27	18138	45888	32547
55.3	56.3	4600	2601	2681	0.27	18138	45888	32547
56.3	57.3	4600	2601	2681	0.27	18138	45888	32547
57.3	58.3	4600	2601	2681	0.27	18138	45888	32547
58.3	59.3	4600	2601	2681	0.27	18138	45888	32547
59.3	60.3	4600	2601	2681	0.27	18138	45888	32547
60.3	61.3	4600	2601	2681	0.27	18138	45888	32547
61.3	62.3	4600	2601	2681	0.27	18138	45888	32547
62.3	63.3	4600	2601	2681	0.27	18138	45888	32547
63.3	64.3	4600	2601	2681	0.27	18138	45888	32547
64.3	65.3	4600	2601	2681	0.27	18138	45888	32547
65.3	66.3	4600	2601	2681	0.27	18138	45888	32547
66.3	67.3	4600	2601	2681	0.27	18138	45888	32547

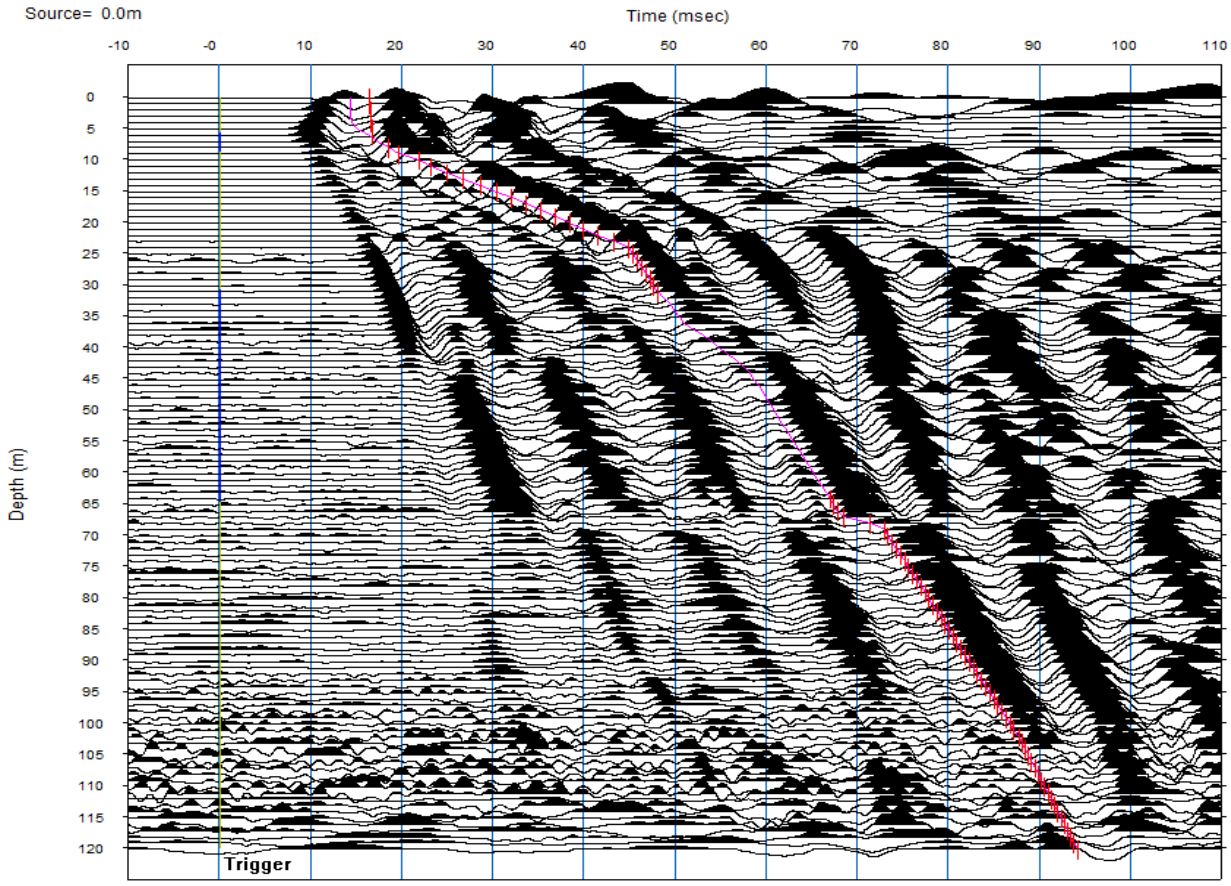
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
67.3	68.3	4600	2601	2681	0.27	18138	45888	32547
68.3	69.3	4600	2601	2681	0.27	18138	45888	32547
69.3	70.3	4600	2601	2681	0.27	18138	45888	32547
70.3	71.3	4600	2601	2681	0.27	18138	45888	32547
71.3	72.3	4600	2601	2681	0.27	18138	45888	32547
72.3	73.3	4600	2601	2681	0.27	18138	45888	32547
73.3	74.3	4600	2601	2681	0.27	18138	45888	32547
74.3	75.3	4600	2601	2681	0.27	18138	45888	32547
75.3	76.3	4600	2601	2681	0.27	18138	45888	32547
76.3	77.3	4600	2601	2681	0.27	18138	45888	32547
77.3	78.3	4600	2601	2681	0.27	18138	45888	32547
78.3	79.3	4600	2601	2681	0.27	18138	45888	32547
79.3	80.3	4600	2601	2681	0.27	18138	45888	32547
80.3	81.3	4600	2601	2681	0.27	18138	45888	32547
81.3	82.3	4600	2601	2681	0.27	18138	45888	32547
82.3	83.3	4600	2601	2681	0.27	18138	45888	32547
83.3	84.3	4600	2601	2681	0.27	18138	45888	32547
84.3	85.3	4600	2601	2681	0.27	18138	45888	32547
85.3	86.3	4600	2601	2681	0.27	18138	45888	32547
86.3	87.3	4600	2601	2681	0.27	18138	45888	32547
87.3	88.3	4600	2601	2681	0.27	18138	45888	32547
88.3	89.3	4600	2601	2681	0.27	18138	45888	32547
89.3	90.3	4600	2601	2679	0.27	18124	45854	32522
90.3	91.3	4600	2601	2679	0.27	18124	45854	32522
91.3	92.3	4600	2601	2679	0.27	18124	45854	32522
92.3	93.3	4600	2601	2679	0.27	18124	45854	32522
93.3	94.3	4600	2601	2679	0.27	18124	45854	32522
94.3	95.3	4600	2601	2679	0.27	18124	45854	32522
95.3	96.3	4600	2601	2679	0.27	18124	45854	32522
96.3	97.3	4600	2601	2679	0.27	18124	45854	32522
97.3	98.3	4600	2601	2679	0.27	18124	45854	32522
98.3	99.3	4600	2601	2679	0.27	18124	45854	32522
99.3	100.3	4600	2601	2679	0.27	18124	45854	32522
100.3	101.3	4600	2601	2679	0.27	18124	45854	32522
101.3	102.3	4600	2601	2679	0.27	18124	45854	32522
102.3	103.3	4600	2601	2679	0.27	18124	45854	32522
103.3	104.3	4600	2601	2679	0.27	18124	45854	32522
104.3	105.3	4600	2601	2679	0.27	18124	45854	32522
105.3	106.3	4600	2601	2679	0.27	18124	45854	32522
106.3	107.3	4600	2601	2679	0.27	18124	45854	32522
107.3	108.3	4600	2601	2679	0.27	18124	45854	32522
108.3	109.3	4600	2601	2679	0.27	18124	45854	32522
109.3	110.3	4600	2601	2679	0.27	18124	45854	32522
110.3	111.3	4600	2601	2679	0.27	18124	45854	32522
111.3	112.3	4600	2601	2679	0.27	18124	45854	32522
112.3	113.3	4600	2601	2679	0.27	18124	45854	32522
113.3	114.3	4600	2601	2679	0.27	18124	45854	32522
114.3	115.3	4600	2601	2679	0.27	18124	45854	32522
115.3	116.3	4600	2601	2679	0.27	18124	45854	32522
116.3	117.3	4600	2601	2679	0.27	18124	45854	32522
117.3	118.3	4600	2601	2679	0.27	18124	45854	32522
118.3	119.3	4600	2601	2679	0.27	18124	45854	32522
119.3	120.3	4600	2601	2679	0.27	18124	45854	32522


BH9 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
20
40
60
80
100
120
Shear Wave Velocity
Compression Wave Velocity

BH11 Compression Wave Picked Arrival Times



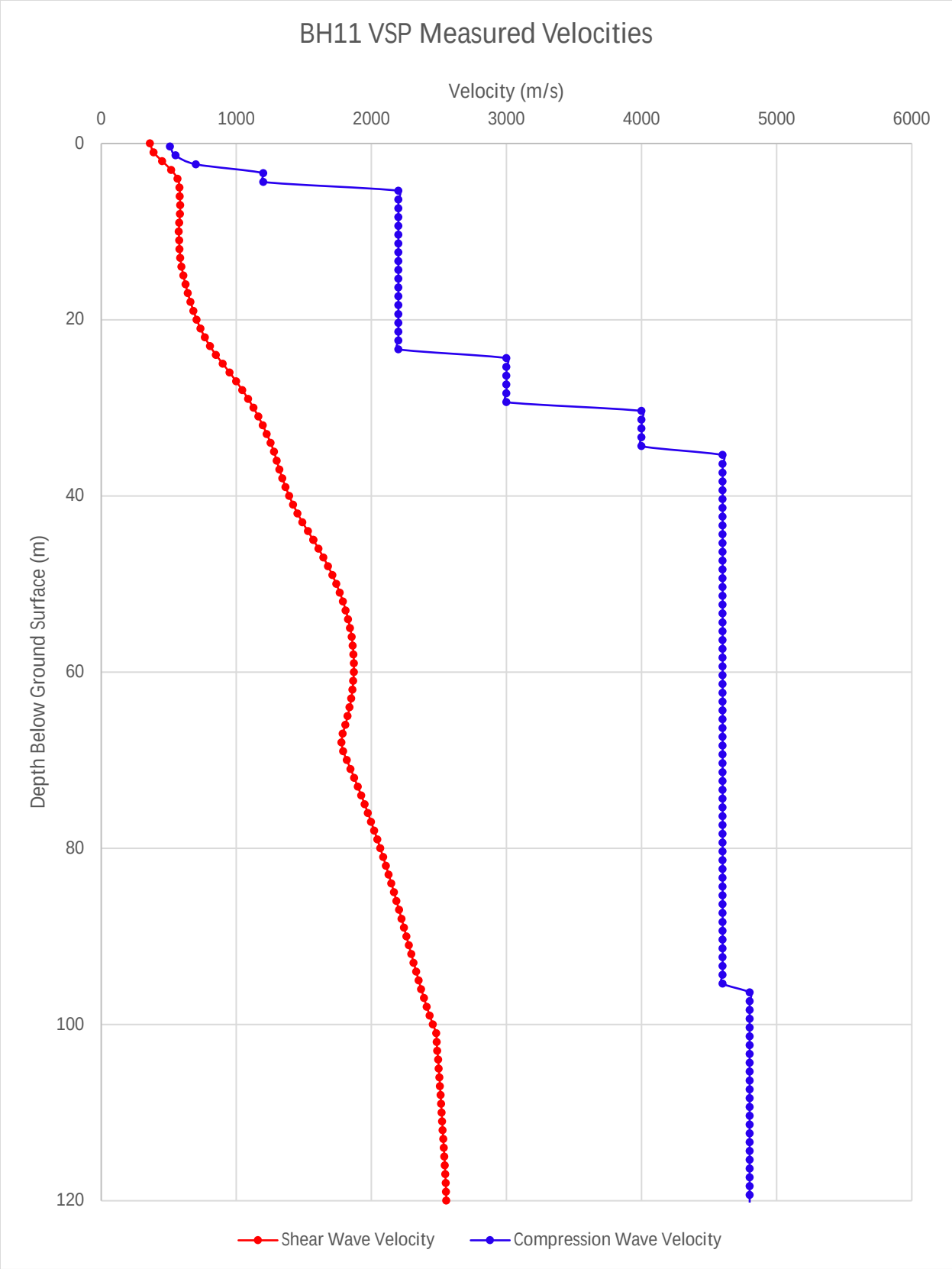
BH11 Shear Wave Picked Arrival Times



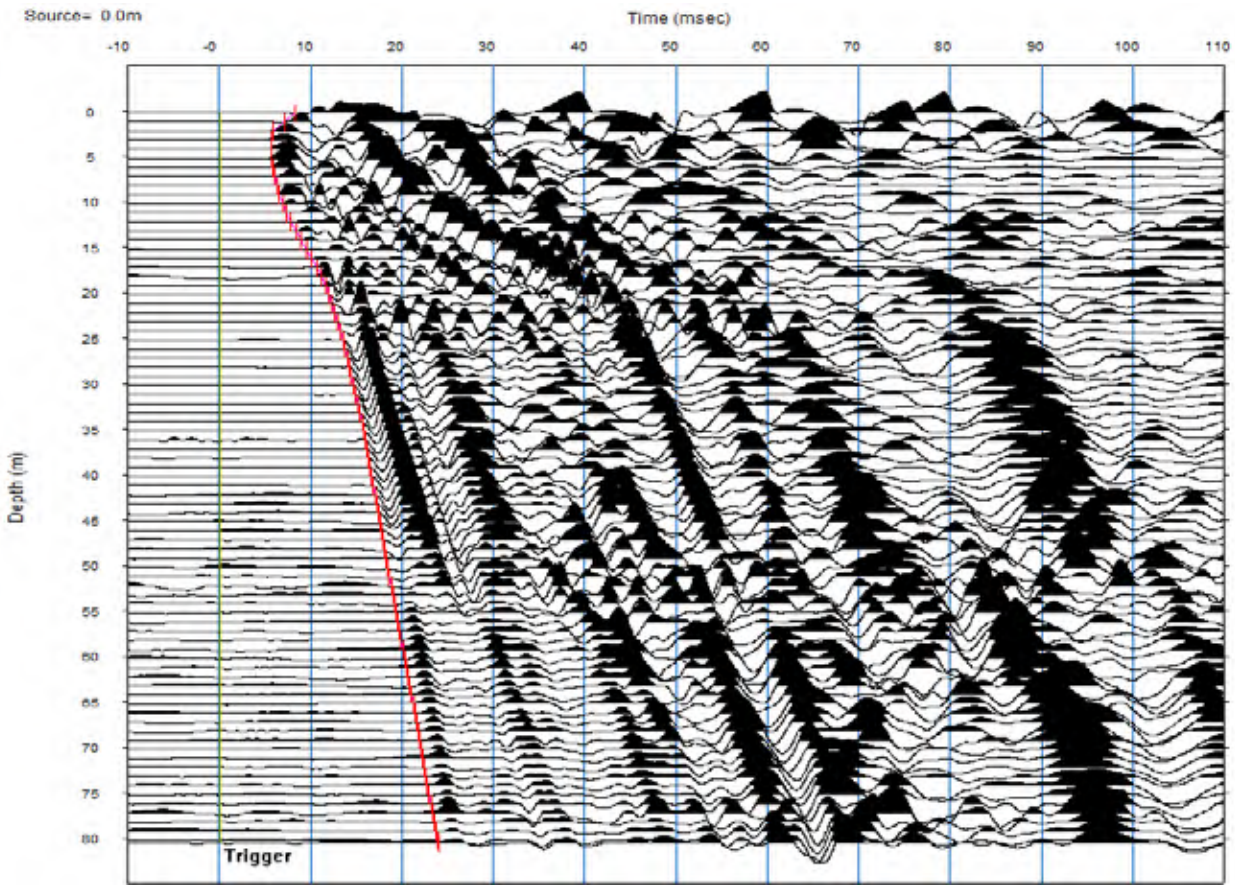
BH11 VSP Velocity Profile

Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	0.4	510	360	2141	0.00	277	557	187
0.4	1.4	550	388	2141	0.00	322	648	218
1.4	2.4	700	451	2039	0.15	415	950	446
2.4	3.4	1200	518	2345	0.39	629	1744	2538
3.4	4.4	1200	566	2345	0.36	751	2039	2375
4.4	5.4	2200	580	2345	0.46	789	2308	10298
5.4	6.4	2200	582	2345	0.46	794	2323	10291
6.4	7.4	2200	585	2345	0.46	803	2346	10280
7.4	8.4	2200	583	2345	0.46	797	2331	10287
8.4	9.4	2200	578	2345	0.46	783	2292	10305
9.4	10.4	2200	575	2345	0.46	775	2269	10316
10.4	11.4	2200	577	2243	0.46	747	2185	9860
11.4	12.4	2200	580	2243	0.46	755	2207	9850
12.4	13.4	2200	586	2243	0.46	770	2252	9829
13.4	14.4	2200	595	2243	0.46	794	2320	9797
14.4	15.4	2200	608	2243	0.46	829	2419	9751
15.4	16.4	2200	624	2141	0.46	834	2428	9251
16.4	17.4	2200	641	2141	0.45	880	2557	9190
17.4	18.4	2200	661	2141	0.45	935	2714	9115
18.4	19.4	2200	683	2345	0.45	1094	3165	9891
19.4	20.4	2200	707	2345	0.44	1172	3381	9787
20.4	21.4	2200	735	2243	0.44	1212	3483	9240
21.4	22.4	2200	767	2345	0.43	1380	3948	9510
22.4	23.4	2200	805	2345	0.42	1520	4324	9324
23.4	24.4	3000	850	2641	0.46	1908	5558	21225
24.4	25.4	3000	900	2641	0.45	2139	6206	20917
25.4	26.4	3000	951	2641	0.44	2389	6899	20584
26.4	27.4	3000	999	2641	0.44	2636	7578	20255
27.4	28.4	3000	1045	2681	0.43	2928	8379	20225
28.4	29.4	3000	1088	2681	0.42	3174	9040	19898
29.4	30.4	4000	1127	2681	0.46	3405	9922	38356
30.4	31.4	4000	1163	2681	0.45	3626	10544	38061
31.4	32.4	4000	1196	2681	0.45	3835	11128	37783
32.4	33.4	4000	1226	2681	0.45	4030	11671	37523
33.4	34.4	4000	1254	2681	0.45	4216	12188	37275
34.4	35.4	4600	1279	2681	0.46	4386	12790	50882
35.4	36.4	4600	1299	2681	0.46	4524	13180	50698
36.4	37.4	4600	1319	2681	0.46	4664	13575	50511
37.4	38.4	4600	1341	2681	0.45	4821	14016	50302
38.4	39.4	4600	1365	2681	0.45	4995	14504	50070
39.4	40.4	4600	1392	2681	0.45	5195	15061	49803
40.4	41.4	4600	1421	2681	0.45	5414	15670	49512
41.4	42.4	4600	1454	2681	0.44	5668	16375	49173
42.4	43.4	4600	1490	2681	0.44	5952	17159	48794
43.4	44.4	4600	1530	2681	0.44	6276	18047	48362
44.4	45.4	4600	1570	2681	0.43	6608	18954	47919
45.4	46.4	4600	1570	2681	0.43	6608	18954	47919
46.4	47.4	4600	1609	2681	0.43	6941	19855	47476
47.4	48.4	4600	1645	2681	0.43	7255	20701	47057
48.4	49.4	4600	1680	2681	0.42	7567	21536	46641
49.4	50.4	4600	1711	2681	0.42	7849	22286	46265
50.4	51.4	4600	1740	2681	0.42	8117	22996	45907
51.4	52.4	4600	1766	2681	0.41	8361	23639	45581
52.4	53.4	4600	1790	2681	0.41	8590	24238	45276
53.4	54.4	4600	1810	2681	0.41	8783	24741	45019
54.4	55.4	4600	1828	2681	0.41	8959	25196	44785
55.4	56.4	4600	1842	2681	0.40	9097	25552	44601
56.4	57.4	4600	1854	2681	0.40	9215	25859	44443
57.4	58.4	4600	1862	2681	0.40	9295	26064	44336
58.4	59.4	4600	1868	2681	0.40	9355	26218	44256
59.4	60.4	4600	1870	2681	0.40	9375	26269	44230
60.4	61.4	4600	1870	2681	0.40	9375	26269	44230
61.4	62.4	4600	1866	2681	0.40	9335	26167	44283
62.4	63.4	4600	1860	2681	0.40	9275	26013	44363
63.4	64.4	4600	1851	2681	0.40	9186	25782	44482
64.4	65.4	4600	1839	2681	0.40	9067	25476	44641
65.4	66.4	4600	1824	2681	0.41	8920	25095	44837
66.4	67.4	4600	1807	2681	0.41	8754	24665	45058

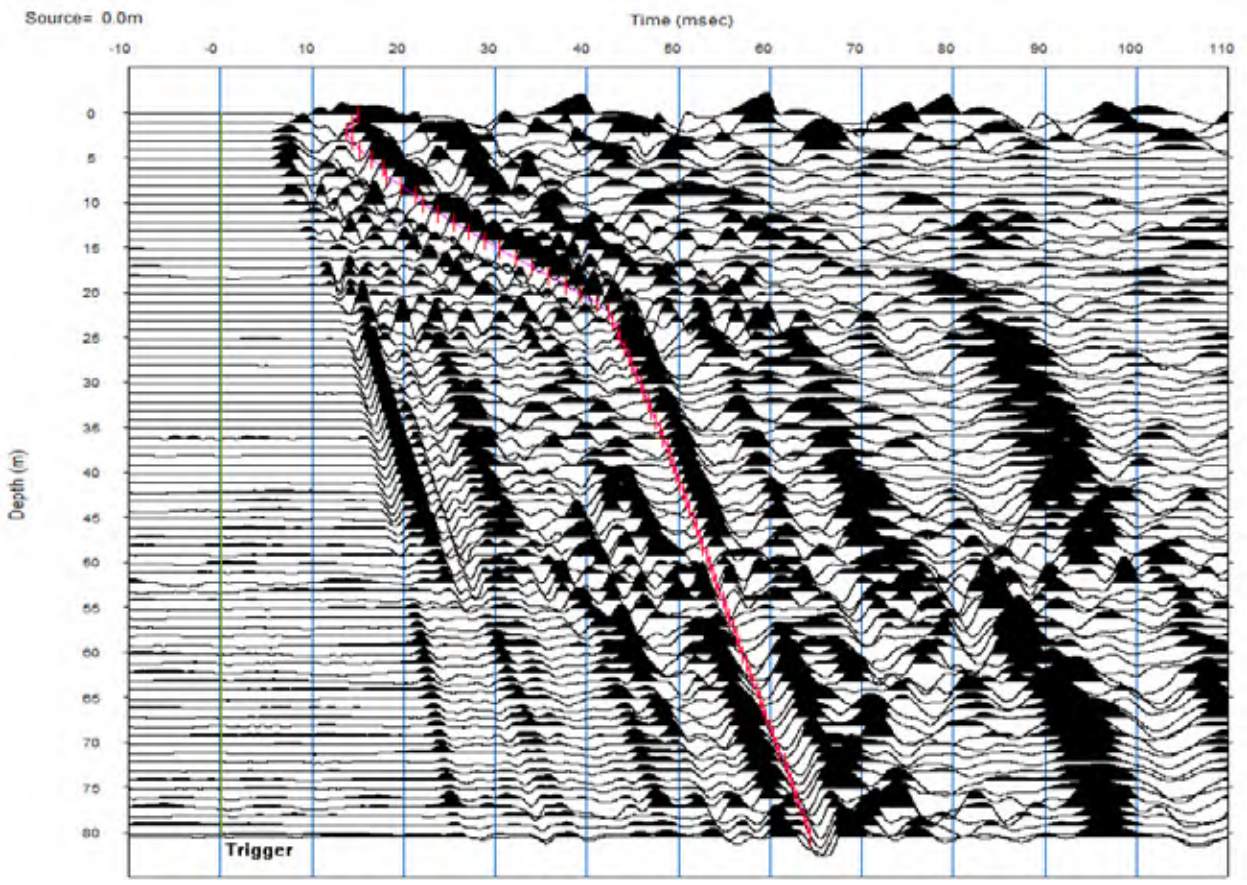
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
67.4	68.4	4600	1788	2681	0.41	8571	24188	45302
68.4	69.4	4600	1779	2681	0.41	8485	23963	45417
69.4	70.4	4600	1792	2681	0.41	8609	24288	45251
70.4	71.4	4600	1818	2681	0.41	8861	24943	44915
71.4	72.4	4600	1846	2681	0.40	9136	25655	44549
72.4	73.4	4600	1873	2681	0.40	9405	26347	44190
73.4	74.4	4600	1899	2681	0.40	9668	27018	43839
74.4	75.4	4600	1925	2681	0.39	9935	27695	43484
75.4	76.4	4600	1950	2681	0.39	10195	28350	43137
76.4	77.4	4600	1974	2681	0.39	10447	28983	42801
77.4	78.4	4600	1998	2681	0.38	10703	29619	42460
78.4	79.4	4600	2021	2681	0.38	10950	30232	42129
79.4	80.4	4600	2044	2681	0.38	11201	30847	41795
80.4	81.4	4600	2066	2681	0.37	11443	31439	41472
81.4	82.4	4600	2087	2681	0.37	11677	32005	41160
82.4	83.4	4600	2108	2681	0.37	11913	32573	40845
83.4	84.4	4600	2128	2681	0.36	12141	33116	40542
84.4	85.4	4600	2148	2681	0.36	12370	33660	40237
85.4	86.4	4600	2167	2681	0.36	12590	34178	39944
86.4	87.4	4600	2186	2681	0.35	12811	34697	39648
87.4	88.4	4600	2205	2681	0.35	13035	35217	39350
88.4	89.4	4600	2223	2679	0.35	13239	35683	39036
89.4	90.4	4600	2241	2679	0.34	13454	36176	38749
90.4	91.4	4600	2259	2679	0.34	13671	36669	38459
91.4	92.4	4600	2277	2679	0.34	13890	37162	38168
92.4	93.4	4600	2295	2679	0.33	14110	37655	37874
93.4	94.4	4600	2313	2679	0.33	14333	38148	37578
94.4	95.4	4600	2332	2679	0.33	14569	38668	37262
95.4	96.4	4800	2350	2679	0.34	14795	39720	41998
96.4	97.4	4800	2369	2679	0.34	15035	40263	41678
97.4	98.4	4800	2389	2679	0.34	15290	40835	41338
98.4	99.4	4800	2410	2679	0.33	15560	41435	40978
99.4	100.4	4800	2432	2679	0.33	15845	42063	40597
100.4	101.4	4800	2455	2679	0.32	16146	42719	40196
101.4	102.4	4800	2480	2679	0.32	16477	43431	39755
102.4	103.4	4800	2483	2679	0.32	16517	43516	39702
103.4	104.4	4800	2488	2679	0.32	16583	43658	39613
104.4	105.4	4800	2494	2679	0.32	16663	43828	39506
105.4	106.4	4800	2499	2679	0.31	16730	43970	39417
106.4	107.4	4800	2504	2679	0.31	16797	44112	39328
107.4	108.4	4800	2508	2679	0.31	16851	44225	39256
108.4	109.4	4800	2512	2679	0.31	16905	44338	39184
109.4	110.4	4800	2516	2679	0.31	16959	44452	39112
110.4	111.4	4800	2520	2679	0.31	17013	44565	39041
111.4	112.4	4800	2524	2679	0.31	17067	44678	38968
112.4	113.4	4800	2528	2679	0.31	17121	44791	38896
113.4	114.4	4800	2532	2679	0.31	17175	44904	38824
114.4	115.4	4800	2536	2679	0.31	17229	45017	38752
115.4	116.4	4800	2540	2679	0.31	17284	45129	38679
116.4	117.4	4800	2544	2679	0.30	17338	45242	38606
117.4	118.4	4800	2547	2679	0.30	17379	45327	38552
118.4	119.4	4800	2550	2679	0.30	17420	45411	38497
119.4	120.4	4800	2553	2679	0.30	17461	45495	38443


BH11 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
20
40
60
80
100
120
Shear Wave Velocity
Compression Wave Velocity

BH13 Compression Wave Picked Arrival Times



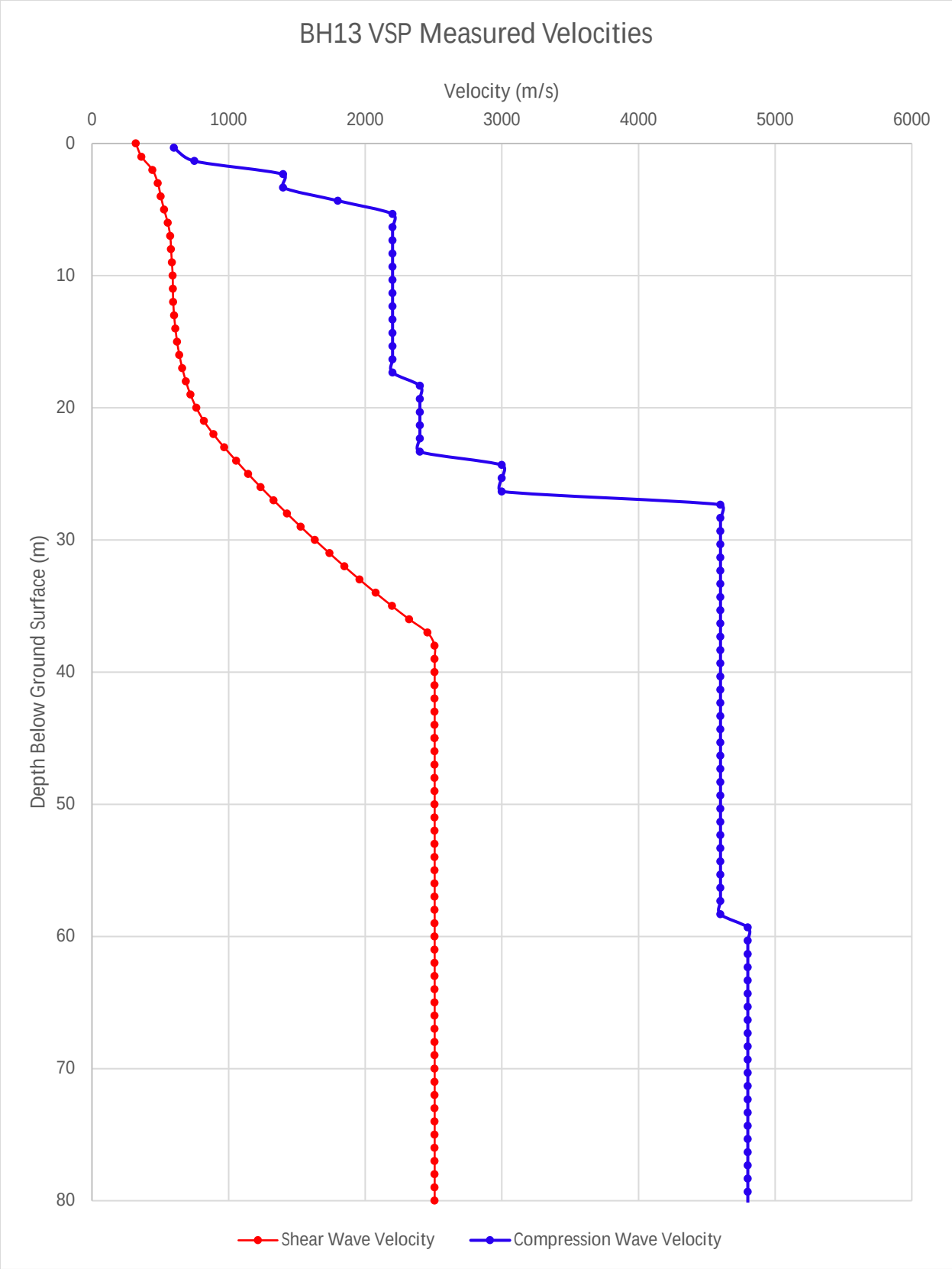
BH13 Shear Wave Picked Arrival Times



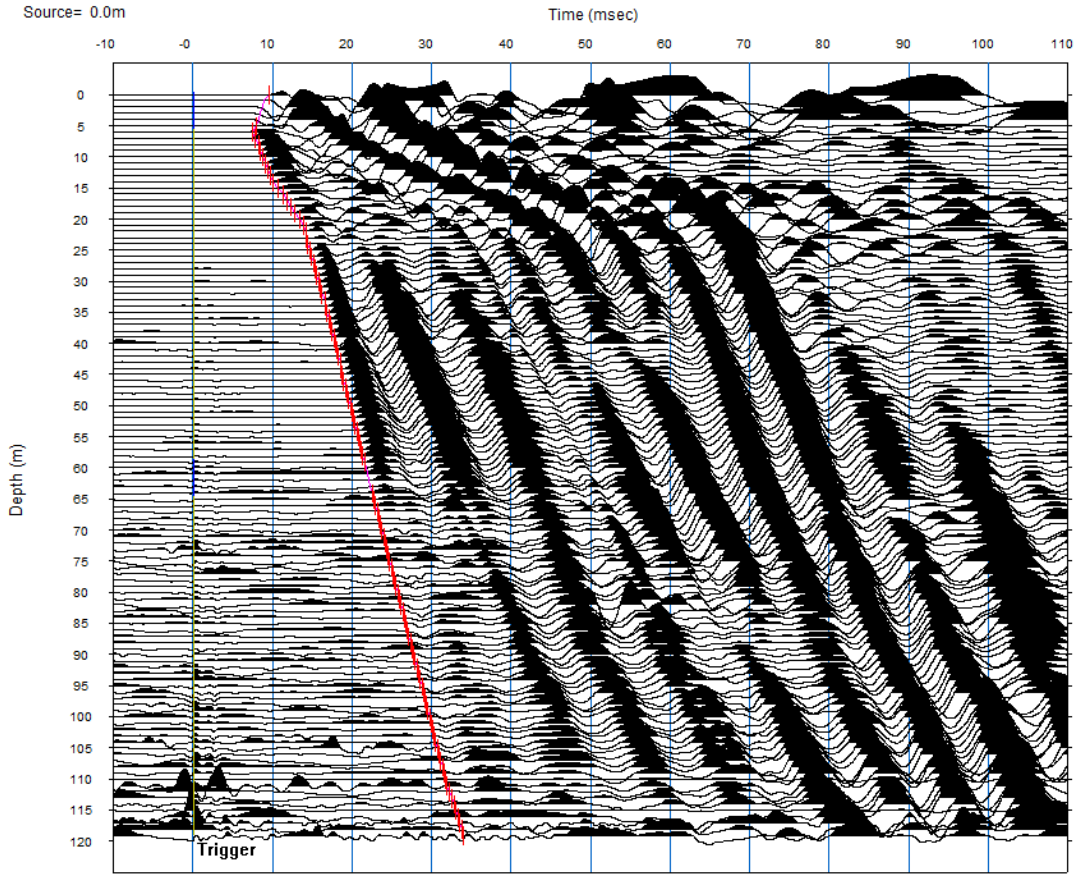
BH13 VSP Velocity Profile

Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	0.3	600	321	2141	0.30	221	573	477
0.3	1.3	750	363	2141	0.35	282	760	828
1.3	2.3	1400	443	2141	0.44	420	1214	3636
2.3	3.3	1400	482	2345	0.43	545	1561	3870
3.3	4.3	1800	504	2345	0.46	596	1736	6804
4.3	5.3	2200	528	2345	0.47	654	1921	10478
5.3	6.3	2200	555	2345	0.47	722	2118	10387
6.3	7.3	2200	573	2345	0.46	770	2254	10323
7.3	8.3	2200	579	2345	0.46	786	2300	10302
8.3	9.3	2200	585	2345	0.46	803	2346	10280
9.3	10.3	2200	591	2345	0.46	819	2393	10258
10.3	11.3	2200	592	2243	0.46	786	2297	9808
11.3	12.3	2200	595	2243	0.46	794	2320	9797
12.3	13.3	2200	601	2243	0.46	810	2365	9776
13.3	14.3	2200	611	2243	0.46	837	2442	9740
14.3	15.3	2200	623	2243	0.46	871	2536	9695
15.3	16.3	2200	640	2243	0.45	919	2671	9631
16.3	17.3	2200	661	2141	0.45	935	2714	9115
17.3	18.3	2400	688	2141	0.46	1013	2950	10981
18.3	19.3	2400	721	2345	0.45	1219	3536	11882
19.3	20.3	2400	764	2345	0.44	1369	3952	11682
20.3	21.3	2400	819	2243	0.43	1505	4315	10914
21.3	22.3	2400	889	2345	0.42	1853	5265	11036
22.3	23.3	2400	969	2641	0.40	2480	6956	11906
23.3	24.3	3000	1055	2641	0.43	2939	8404	19850
24.3	25.3	3000	1143	2641	0.42	3450	9765	19169
25.3	26.3	3000	1235	2641	0.40	4028	11262	18398
26.3	27.3	4600	1330	2641	0.45	4672	13589	49655
27.3	28.3	4600	1428	2681	0.45	5467	15818	49441
28.3	29.3	4600	1528	2681	0.44	6260	18002	48384
29.3	30.3	4600	1632	2681	0.43	7141	20394	47209
30.3	31.3	4600	1738	2681	0.42	8098	22946	45932
31.3	32.3	4600	1847	2681	0.40	9146	25680	44535
32.3	33.3	4600	1959	2681	0.39	10289	28587	43012
33.3	34.3	4600	2076	2681	0.37	11555	31708	41324
34.3	35.3	4600	2196	2681	0.35	12929	34970	39491
35.3	36.3	4600	2322	2681	0.33	14455	38423	37456
36.3	37.3	4600	2455	2681	0.30	16158	42040	35185
37.3	38.3	4600	2508	2681	0.29	16864	43458	34245
38.3	39.3	4600	2508	2681	0.29	16864	43458	34245
39.3	40.3	4600	2508	2681	0.29	16864	43458	34245
40.3	41.3	4600	2508	2681	0.29	16864	43458	34245
41.3	42.3	4600	2508	2681	0.29	16864	43458	34245
42.3	43.3	4600	2508	2681	0.29	16864	43458	34245
43.3	44.3	4600	2508	2681	0.29	16864	43458	34245
44.3	45.3	4600	2508	2681	0.29	16864	43458	34245
45.3	46.3	4600	2508	2681	0.29	16864	43458	34245
46.3	47.3	4600	2508	2681	0.29	16864	43458	34245
47.3	48.3	4600	2508	2681	0.29	16864	43458	34245
48.3	49.3	4600	2508	2681	0.29	16864	43458	34245
49.3	50.3	4600	2508	2681	0.29	16864	43458	34245
50.3	51.3	4600	2508	2681	0.29	16864	43458	34245
51.3	52.3	4600	2508	2681	0.29	16864	43458	34245
52.3	53.3	4600	2508	2681	0.29	16864	43458	34245
53.3	54.3	4600	2508	2681	0.29	16864	43458	34245
54.3	55.3	4600	2508	2681	0.29	16864	43458	34245
55.3	56.3	4600	2508	2681	0.29	16864	43458	34245
56.3	57.3	4600	2508	2681	0.29	16864	43458	34245
57.3	58.3	4600	2508	2681	0.29	16864	43458	34245
58.3	59.3	4800	2508	2681	0.31	16864	44258	39285
59.3	60.3	4800	2508	2681	0.31	16864	44258	39285
60.3	61.3	4800	2508	2681	0.31	16864	44258	39285
61.3	62.3	4800	2508	2681	0.31	16864	44258	39285
62.3	63.3	4800	2508	2681	0.31	16864	44258	39285
63.3	64.3	4800	2508	2681	0.31	16864	44258	39285
64.3	65.3	4800	2508	2681	0.31	16864	44258	39285
65.3	66.3	4800	2508	2681	0.31	16864	44258	39285
66.3	67.3	4800	2508	2681	0.31	16864	44258	39285

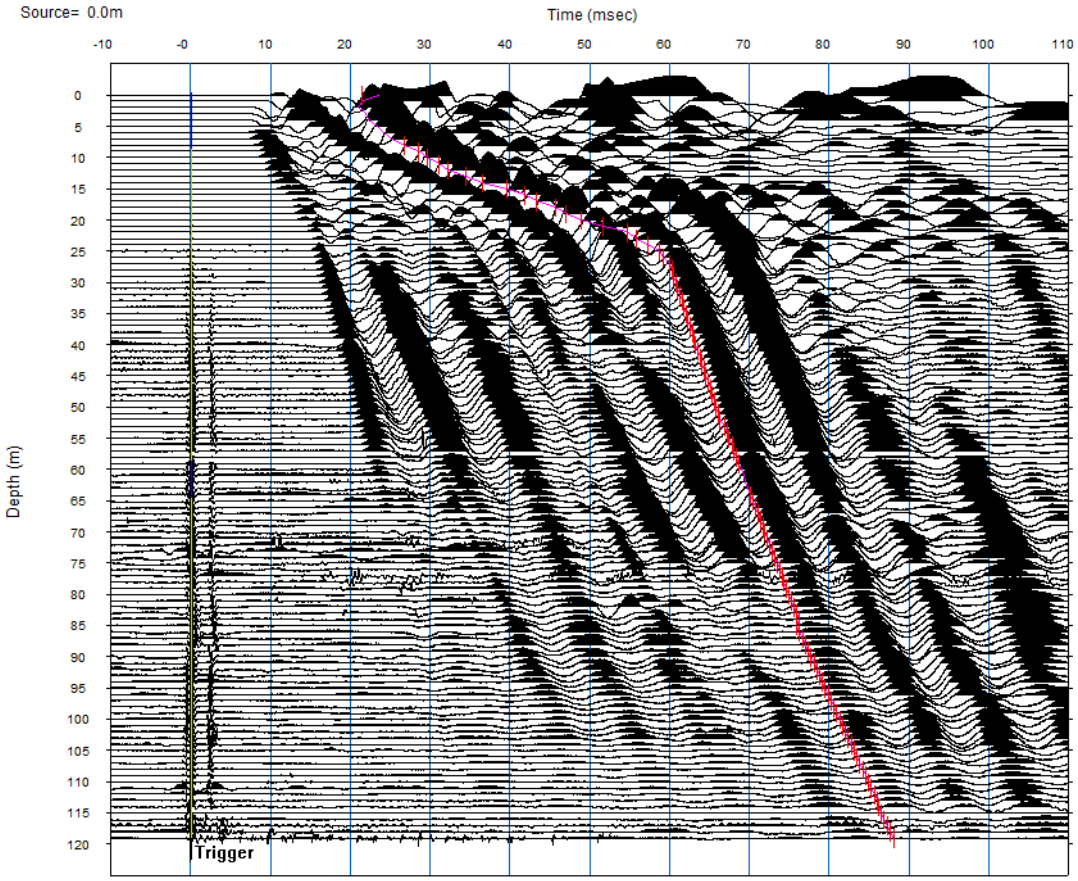
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m^3)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
67.3	68.3	4800	2508	2681	0.31	16864	44258	39285
68.3	69.3	4800	2508	2681	0.31	16864	44258	39285
69.3	70.3	4800	2508	2681	0.31	16864	44258	39285
70.3	71.3	4800	2508	2681	0.31	16864	44258	39285
71.3	72.3	4800	2508	2681	0.31	16864	44258	39285
72.3	73.3	4800	2508	2681	0.31	16864	44258	39285
73.3	74.3	4800	2508	2681	0.31	16864	44258	39285
74.3	75.3	4800	2508	2681	0.31	16864	44258	39285
75.3	76.3	4800	2508	2681	0.31	16864	44258	39285
76.3	77.3	4800	2508	2681	0.31	16864	44258	39285
77.3	78.3	4800	2508	2681	0.31	16864	44258	39285
78.3	79.3	4800	2508	2681	0.31	16864	44258	39285
79.3	80.3	4800	2508	2681	0.31	16864	44258	39285


BH13 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
10
20
30
40
50
60
70
80
Shear Wave Velocity
Compression Wave Velocity

BH14 Compression Wave Picked Arrival Times



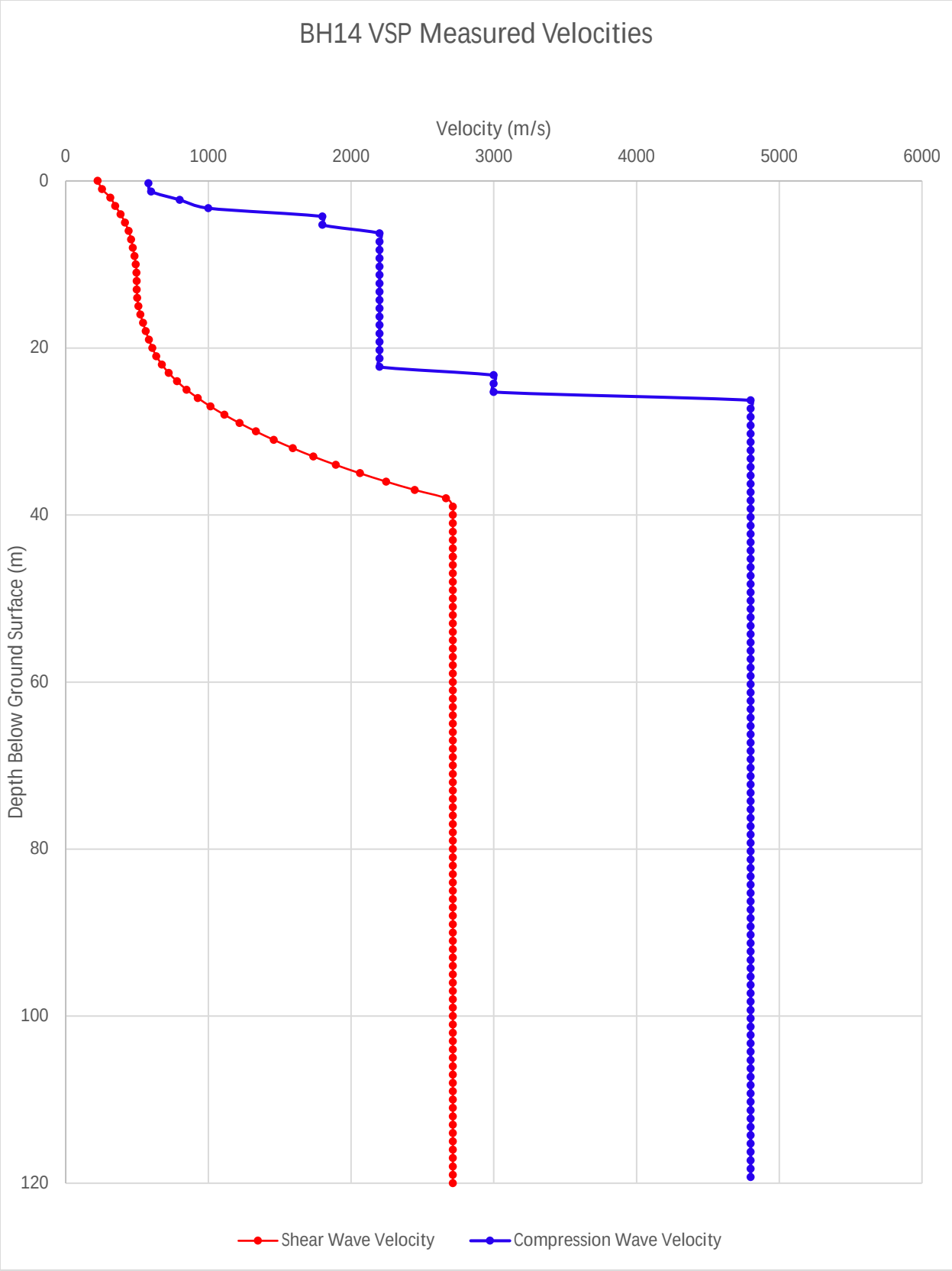
BH14 Shear Wave Picked Arrival Times



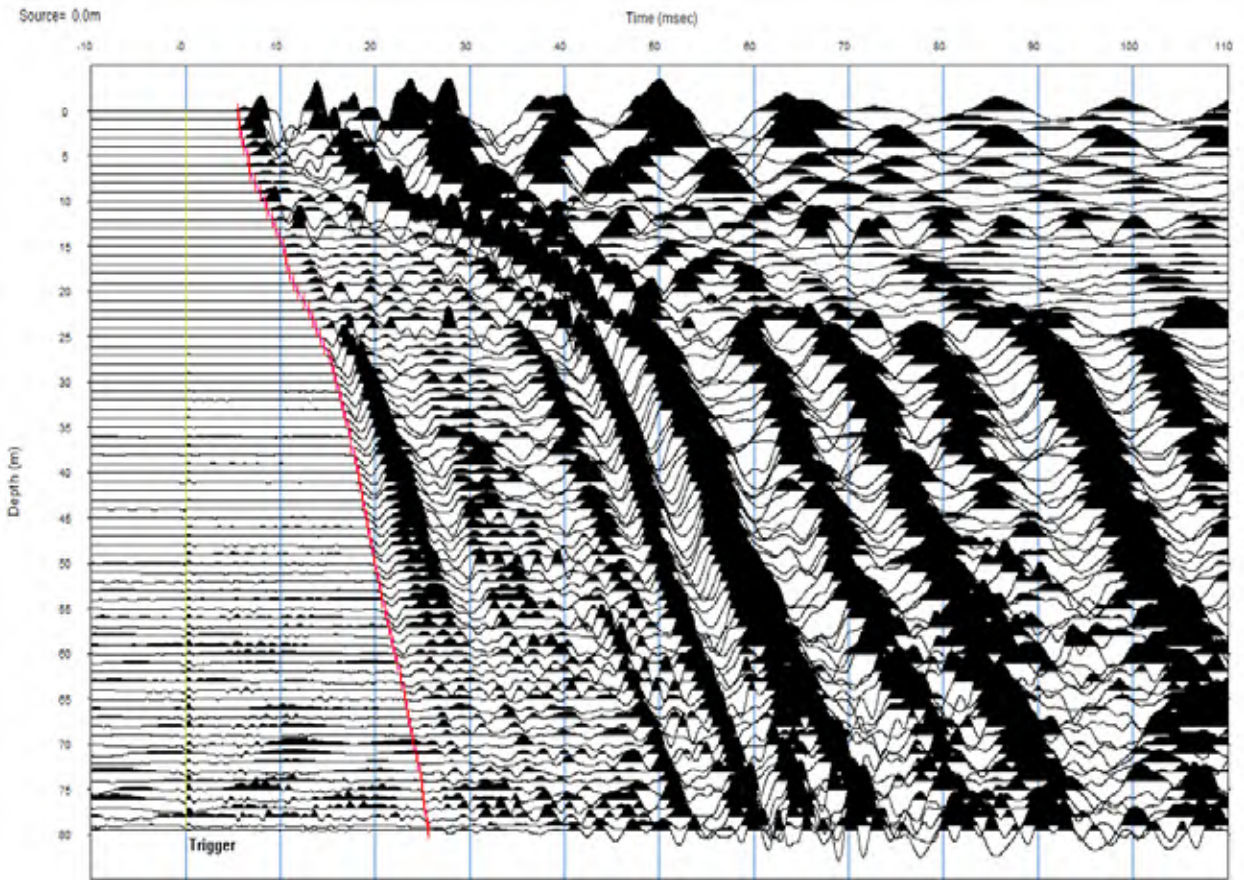
BH14 VSP Velocity Profile

Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	0.3	580	224	2141	0.41	107	303	577
0.3	1.3	600	256	2039	0.39	134	371	556
1.3	2.3	800	313	2345	0.41	230	648	1194
2.3	3.3	1000	348	2345	0.43	284	813	1966
3.3	4.3	1800	385	2345	0.48	348	1026	7134
4.3	5.3	1800	416	2345	0.47	406	1195	7057
5.3	6.3	2200	441	2345	0.48	456	1349	10742
6.3	7.3	2200	459	2345	0.48	494	1460	10691
7.3	8.3	2200	471	2243	0.48	498	1469	10193
8.3	9.3	2200	482	2141	0.47	497	1467	9699
9.3	10.3	2200	492	2141	0.47	518	1527	9671
10.3	11.3	2200	497	2243	0.47	554	1632	10117
11.3	12.3	2200	498	2243	0.47	556	1639	10114
12.3	13.3	2200	499	2243	0.47	559	1645	10111
13.3	14.3	2200	502	2243	0.47	565	1665	10102
14.3	15.3	2200	510	2243	0.47	583	1717	10078
15.3	16.3	2200	524	2243	0.47	616	1811	10035
16.3	17.3	2200	542	2243	0.47	659	1934	9978
17.3	18.3	2200	561	2141	0.47	674	1975	9464
18.3	19.3	2200	583	2141	0.46	728	2128	9392
19.3	20.3	2200	607	2243	0.46	826	2411	9754
20.3	21.3	2200	636	2243	0.45	907	2639	9646
21.3	22.3	2200	675	2243	0.45	1022	2960	9493
22.3	23.3	3000	723	2345	0.47	1226	3602	19471
23.3	24.3	3000	781	2641	0.46	1611	4716	21621
24.3	25.3	3000	848	2641	0.46	1899	5533	21237
25.3	26.3	4800	927	2641	0.48	2269	6721	57823
26.3	27.3	4800	1015	2641	0.48	2721	8035	57221
27.3	28.3	4800	1113	2681	0.47	3321	9775	57342
28.3	29.3	4800	1219	2681	0.47	3984	11677	56458
29.3	30.3	4800	1334	2681	0.46	4771	13914	55409
30.3	31.3	4800	1458	2681	0.45	5699	16518	54171
31.3	32.3	4800	1592	2681	0.44	6795	19545	52710
32.3	33.3	4800	1736	2681	0.42	8080	23023	50997
33.3	34.3	4800	1893	2681	0.41	9607	27052	48961
34.3	35.3	4800	2062	2681	0.39	11399	31618	46571
35.3	36.3	4800	2246	2681	0.36	13524	36782	43738
36.3	37.3	4800	2447	2681	0.32	16053	42523	40366
37.3	38.3	4800	2666	2681	0.28	19055	48665	36363
38.3	39.3	4800	2713	2681	0.27	19733	49936	35459
39.3	40.3	4800	2713	2681	0.27	19733	49936	35459
40.3	41.3	4800	2713	2681	0.27	19733	49936	35459
41.3	42.3	4800	2713	2681	0.27	19733	49936	35459
42.3	43.3	4800	2713	2681	0.27	19733	49936	35459
43.3	44.3	4800	2713	2681	0.27	19733	49936	35459
44.3	45.3	4800	2713	2681	0.27	19733	49936	35459
45.3	46.3	4800	2713	2681	0.27	19733	49936	35459
46.3	47.3	4800	2713	2681	0.27	19733	49936	35459
47.3	48.3	4800	2713	2681	0.27	19733	49936	35459
48.3	49.3	4800	2713	2681	0.27	19733	49936	35459
49.3	50.3	4800	2713	2681	0.27	19733	49936	35459
50.3	51.3	4800	2713	2681	0.27	19733	49936	35459
51.3	52.3	4800	2713	2681	0.27	19733	49936	35459
52.3	53.3	4800	2713	2681	0.27	19733	49936	35459
53.3	54.3	4800	2713	2681	0.27	19733	49936	35459
54.3	55.3	4800	2713	2681	0.27	19733	49936	35459
55.3	56.3	4800	2713	2681	0.27	19733	49936	35459
56.3	57.3	4800	2713	2681	0.27	19733	49936	35459
57.3	58.3	4800	2713	2681	0.27	19733	49936	35459
58.3	59.3	4800	2713	2681	0.27	19733	49936	35459
59.3	60.3	4800	2713	2681	0.27	19733	49936	35459
60.3	61.3	4800	2713	2681	0.27	19733	49936	35459
61.3	62.3	4800	2713	2681	0.27	19733	49936	35459
62.3	63.3	4800	2713	2681	0.27	19733	49936	35459
63.3	64.3	4800	2713	2681	0.27	19733	49936	35459
64.3	65.3	4800	2713	2681	0.27	19733	49936	35459
65.3	66.3	4800	2713	2681	0.27	19733	49936	35459
66.3	67.3	4800	2713	2681	0.27	19733	49936	35459

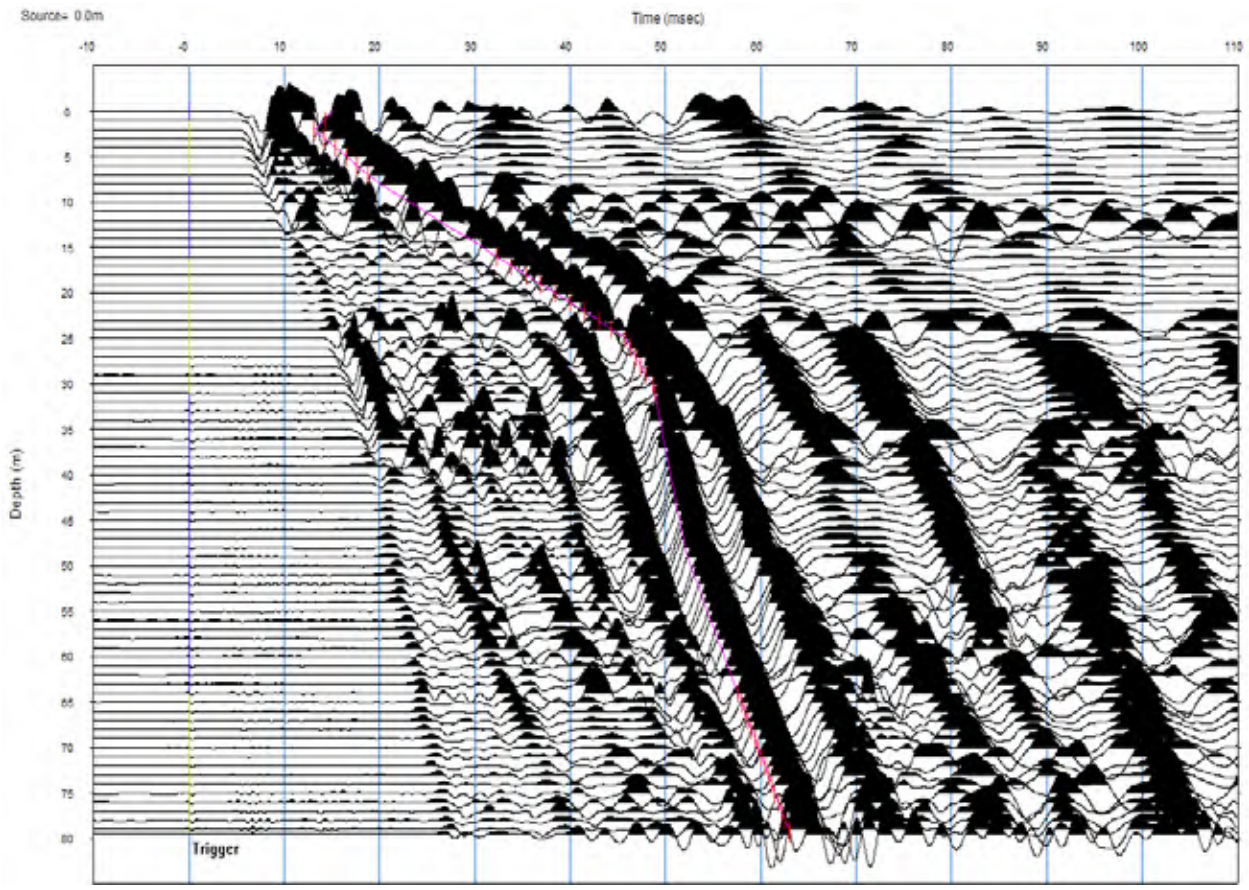
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
67.3	68.3	4800	2713	2681	0.27	19733	49936	35459
68.3	69.3	4800	2713	2681	0.27	19733	49936	35459
69.3	70.3	4800	2713	2681	0.27	19733	49936	35459
70.3	71.3	4800	2713	2681	0.27	19733	49936	35459
71.3	72.3	4800	2713	2681	0.27	19733	49936	35459
72.3	73.3	4800	2713	2681	0.27	19733	49936	35459
73.3	74.3	4800	2713	2681	0.27	19733	49936	35459
74.3	75.3	4800	2713	2681	0.27	19733	49936	35459
75.3	76.3	4800	2713	2681	0.27	19733	49936	35459
76.3	77.3	4800	2713	2681	0.27	19733	49936	35459
77.3	78.3	4800	2713	2681	0.27	19733	49936	35459
78.3	79.3	4800	2713	2681	0.27	19733	49936	35459
79.3	80.3	4800	2713	2681	0.27	19733	49936	35459
80.3	81.3	4800	2713	2681	0.27	19733	49936	35459
81.3	82.3	4800	2713	2681	0.27	19733	49936	35459
82.3	83.3	4800	2713	2681	0.27	19733	49936	35459
83.3	84.3	4800	2713	2681	0.27	19733	49936	35459
84.3	85.3	4800	2713	2681	0.27	19733	49936	35459
85.3	86.3	4800	2713	2681	0.27	19733	49936	35459
86.3	87.3	4800	2713	2681	0.27	19733	49936	35459
87.3	88.3	4800	2713	2681	0.27	19733	49936	35459
88.3	89.3	4800	2713	2681	0.27	19733	49936	35459
89.3	90.3	4800	2713	2679	0.27	19718	49899	35433
90.3	91.3	4800	2713	2679	0.27	19718	49899	35433
91.3	92.3	4800	2713	2679	0.27	19718	49899	35433
92.3	93.3	4800	2713	2679	0.27	19718	49899	35433
93.3	94.3	4800	2713	2679	0.27	19718	49899	35433
94.3	95.3	4800	2713	2679	0.27	19718	49899	35433
95.3	96.3	4800	2713	2679	0.27	19718	49899	35433
96.3	97.3	4800	2713	2679	0.27	19718	49899	35433
97.3	98.3	4800	2713	2679	0.27	19718	49899	35433
98.3	99.3	4800	2713	2679	0.27	19718	49899	35433
99.3	100.3	4800	2713	2679	0.27	19718	49899	35433
100.3	101.3	4800	2713	2679	0.27	19718	49899	35433
101.3	102.3	4800	2713	2679	0.27	19718	49899	35433
102.3	103.3	4800	2713	2679	0.27	19718	49899	35433
103.3	104.3	4800	2713	2679	0.27	19718	49899	35433
104.3	105.3	4800	2713	2679	0.27	19718	49899	35433
105.3	106.3	4800	2713	2679	0.27	19718	49899	35433
106.3	107.3	4800	2713	2679	0.27	19718	49899	35433
107.3	108.3	4800	2713	2679	0.27	19718	49899	35433
108.3	109.3	4800	2713	2679	0.27	19718	49899	35433
109.3	110.3	4800	2713	2679	0.27	19718	49899	35433
110.3	111.3	4800	2713	2679	0.27	19718	49899	35433
111.3	112.3	4800	2713	2679	0.27	19718	49899	35433
112.3	113.3	4800	2713	2679	0.27	19718	49899	35433
113.3	114.3	4800	2713	2679	0.27	19718	49899	35433
114.3	115.3	4800	2713	2679	0.27	19718	49899	35433
115.3	116.3	4800	2713	2679	0.27	19718	49899	35433
116.3	117.3	4800	2713	2679	0.27	19718	49899	35433
117.3	118.3	4800	2713	2679	0.27	19718	49899	35433
118.3	119.3	4800	2713	2679	0.27	19718	49899	35433


BH14 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
20
40
60
80
100
120
Shear Wave Velocity
Compression Wave Velocity

BH15 Compression Wave Picked Arrival Times



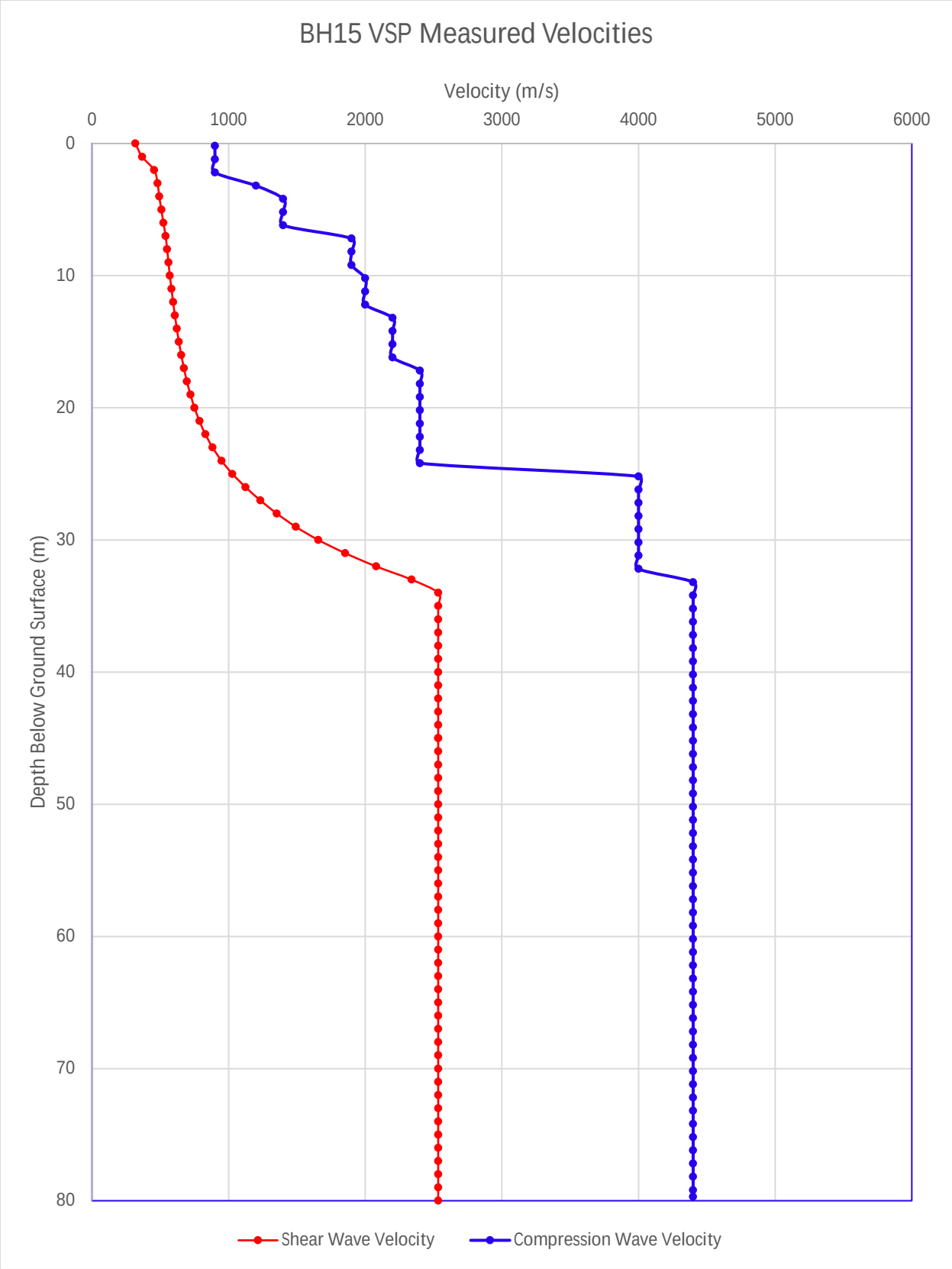
BH15 Shear Wave Picked Arrival Times



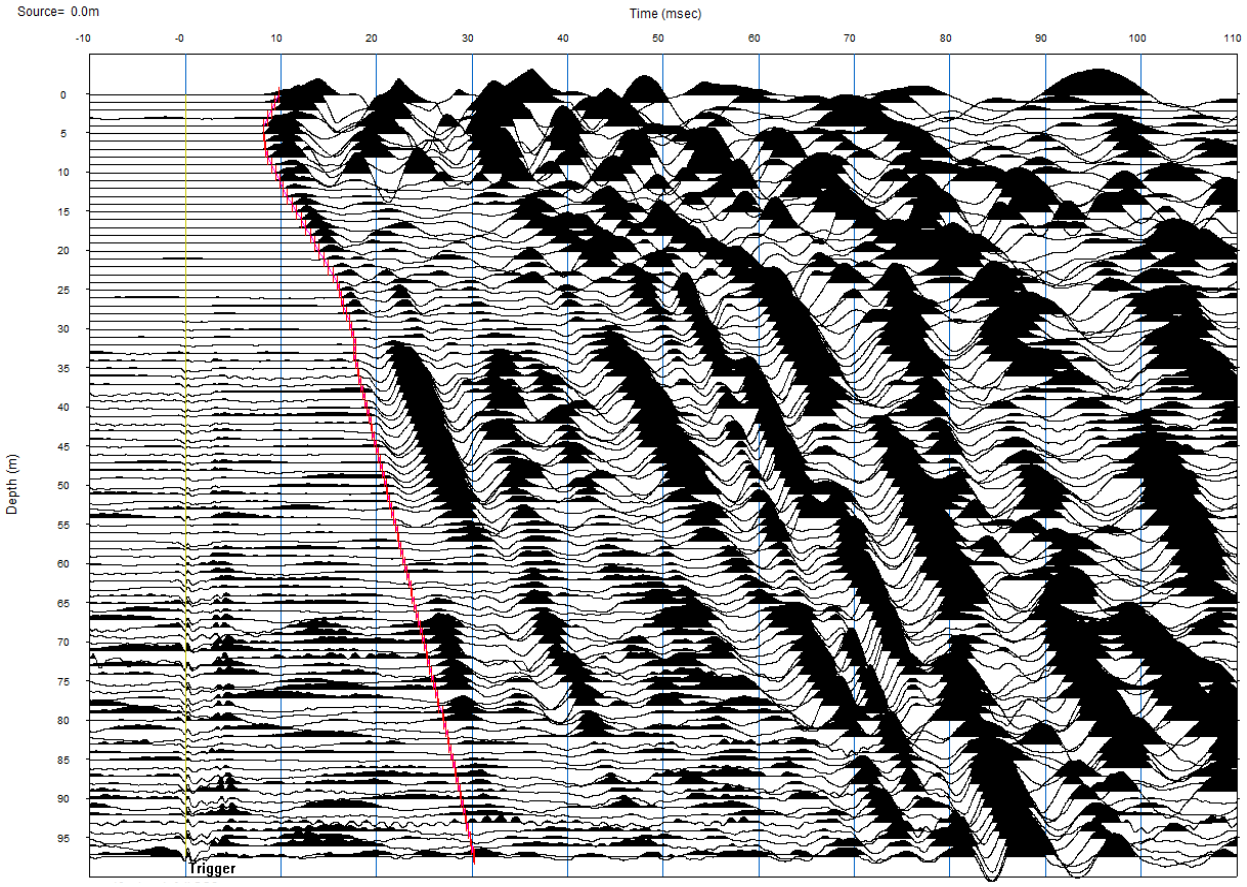
BH15 VSP Velocity Profile

Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	0.2	900	318	2141	0.43	217	619	1446
0.2	1.2	900	367	2141	0.40	288	808	1350
1.2	2.2	900	455	2345	0.33	485	1290	1252
2.2	3.2	1200	480	2345	0.40	540	1518	2656
3.2	4.2	1400	492	2345	0.43	568	1623	3839
4.2	5.2	1400	508	2345	0.42	605	1724	3789
5.2	6.2	1400	523	2345	0.42	641	1820	3741
6.2	7.2	1900	539	2345	0.46	681	1984	7557
7.2	8.2	1900	550	2345	0.45	709	2063	7520
8.2	9.2	1900	560	2345	0.45	735	2136	7485
9.2	10.2	2000	570	2243	0.46	729	2122	8000
10.2	11.2	2000	582	2243	0.45	760	2209	7959
11.2	12.2	2000	594	2243	0.45	791	2298	7917
12.2	13.2	2200	607	2243	0.46	826	2411	9754
13.2	14.2	2200	621	2141	0.46	826	2405	9262
14.2	15.2	2200	636	2141	0.45	866	2519	9208
15.2	16.2	2200	654	2141	0.45	916	2658	9141
16.2	17.2	2400	673	2141	0.46	970	2826	11039
17.2	18.2	2400	695	2345	0.45	1133	3294	11997
18.2	19.2	2400	721	2345	0.45	1219	3536	11882
19.2	20.2	2400	751	2345	0.45	1323	3824	11744
20.2	21.2	2400	787	2141	0.44	1326	3818	10564
21.2	22.2	2400	830	2141	0.43	1475	4224	10366
22.2	23.2	2400	883	2141	0.42	1669	4747	10106
23.2	24.2	2400	948	2641	0.41	2373	6682	12048
24.2	25.2	4000	1028	2641	0.46	2791	8176	38535
25.2	26.2	4000	1124	2641	0.46	3337	9724	37807
26.2	27.2	4000	1232	2641	0.45	4009	11606	36911
27.2	28.2	4000	1353	2681	0.44	4908	14090	36352
28.2	29.2	4000	1492	2681	0.42	5968	16940	34939
29.2	30.2	4000	1657	2681	0.40	7361	20558	33081
30.2	31.2	4000	1854	2681	0.36	9215	25125	30609
31.2	32.2	4000	2080	2681	0.31	11599	30498	27431
32.2	33.2	4400	2339	2681	0.30	14668	38225	32347
33.2	34.2	4400	2534	2681	0.25	17215	43102	28951
34.2	35.2	4400	2534	2681	0.25	17215	43102	28951
35.2	36.2	4400	2534	2681	0.25	17215	43102	28951
36.2	37.2	4400	2534	2681	0.25	17215	43102	28951
37.2	38.2	4400	2534	2681	0.25	17215	43102	28951
38.2	39.2	4400	2534	2681	0.25	17215	43102	28951
39.2	40.2	4400	2534	2681	0.25	17215	43102	28951
40.2	41.2	4400	2534	2681	0.25	17215	43102	28951
41.2	42.2	4400	2534	2681	0.25	17215	43102	28951
42.2	43.2	4400	2534	2681	0.25	17215	43102	28951
43.2	44.2	4400	2534	2681	0.25	17215	43102	28951
44.2	45.2	4400	2534	2681	0.25	17215	43102	28951
45.2	46.2	4400	2534	2681	0.25	17215	43102	28951
46.2	47.2	4400	2534	2681	0.25	17215	43102	28951
47.2	48.2	4400	2534	2681	0.25	17215	43102	28951
48.2	49.2	4400	2534	2681	0.25	17215	43102	28951
49.2	50.2	4400	2534	2681	0.25	17215	43102	28951
50.2	51.2	4400	2534	2681	0.25	17215	43102	28951
51.2	52.2	4400	2534	2681	0.25	17215	43102	28951
52.2	53.2	4400	2534	2681	0.25	17215	43102	28951
53.2	54.2	4400	2534	2681	0.25	17215	43102	28951
54.2	55.2	4400	2534	2681	0.25	17215	43102	28951
55.2	56.2	4400	2534	2681	0.25	17215	43102	28951
56.2	57.2	4400	2534	2681	0.25	17215	43102	28951
57.2	58.2	4400	2534	2681	0.25	17215	43102	28951
58.2	59.2	4400	2534	2681	0.25	17215	43102	28951
59.2	60.2	4400	2534	2681	0.25	17215	43102	28951
60.2	61.2	4400	2534	2681	0.25	17215	43102	28951
61.2	62.2	4400	2534	2681	0.25	17215	43102	28951
62.2	63.2	4400	2534	2681	0.25	17215	43102	28951
63.2	64.2	4400	2534	2681	0.25	17215	43102	28951
64.2	65.2	4400	2534	2681	0.25	17215	43102	28951
65.2	66.2	4400	2534	2681	0.25	17215	43102	28951
66.2	67.2	4400	2534	2681	0.25	17215	43102	28951

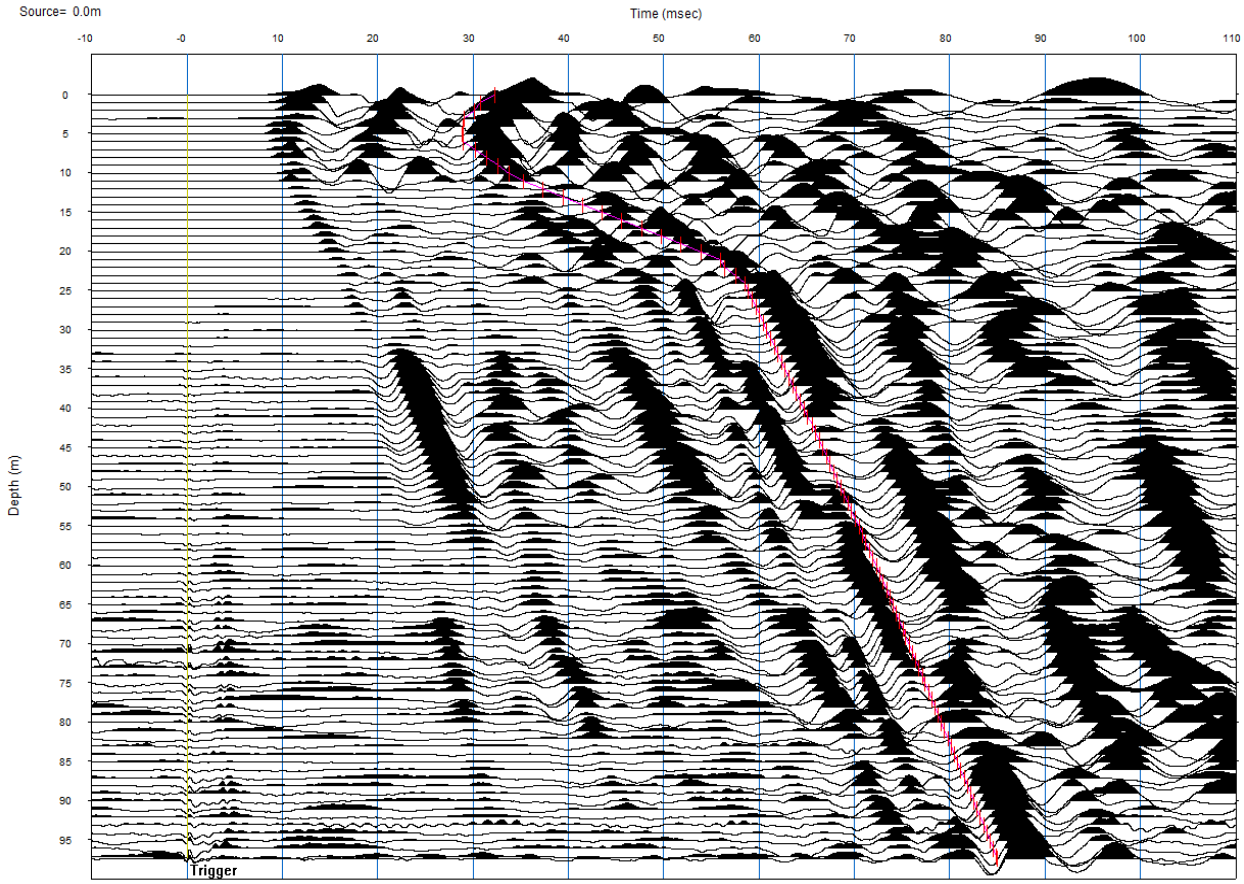
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
67.2	68.2	4400	2534	2681	0.25	17215	43102	28951
68.2	69.2	4400	2534	2681	0.25	17215	43102	28951
69.2	70.2	4400	2534	2681	0.25	17215	43102	28951
70.2	71.2	4400	2534	2681	0.25	17215	43102	28951
71.2	72.2	4400	2534	2681	0.25	17215	43102	28951
72.2	73.2	4400	2534	2681	0.25	17215	43102	28951
73.2	74.2	4400	2534	2681	0.25	17215	43102	28951
74.2	75.2	4400	2534	2681	0.25	17215	43102	28951
75.2	76.2	4400	2534	2681	0.25	17215	43102	28951
76.2	77.2	4400	2534	2681	0.25	17215	43102	28951
77.2	78.2	4400	2534	2681	0.25	17215	43102	28951
78.2	79.2	4400	2534	2681	0.25	17215	43102	28951
79.2	79.7	4400	2534	2681	0.25	17215	43102	28951


BH15 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
10
20
30
40
50
60
70
80
Shear Wave Velocity
Compression Wave Velocity

BH16 Compression Wave Picked Arrival Times



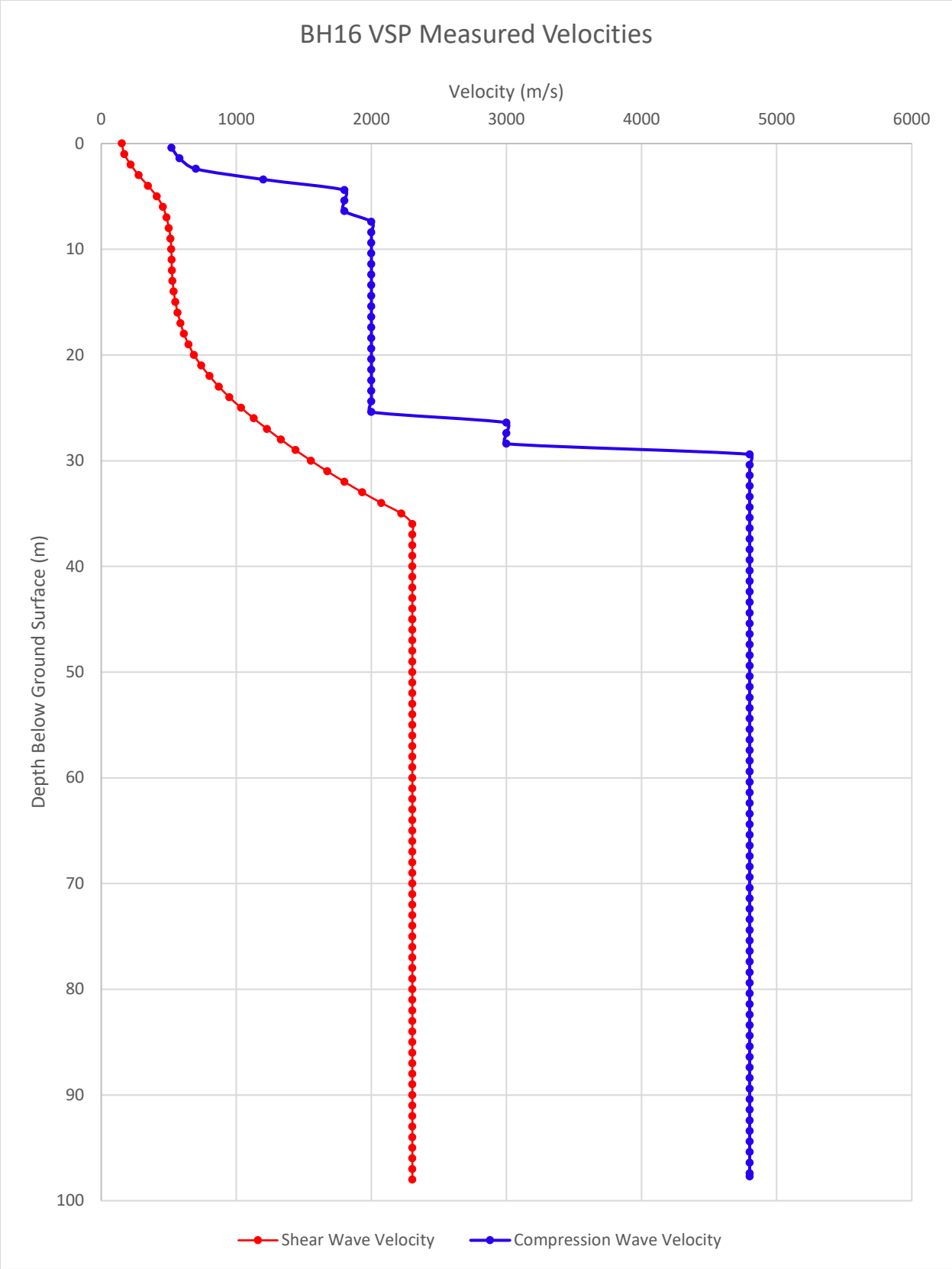
BH16 Shear Wave Picked Arrival Times



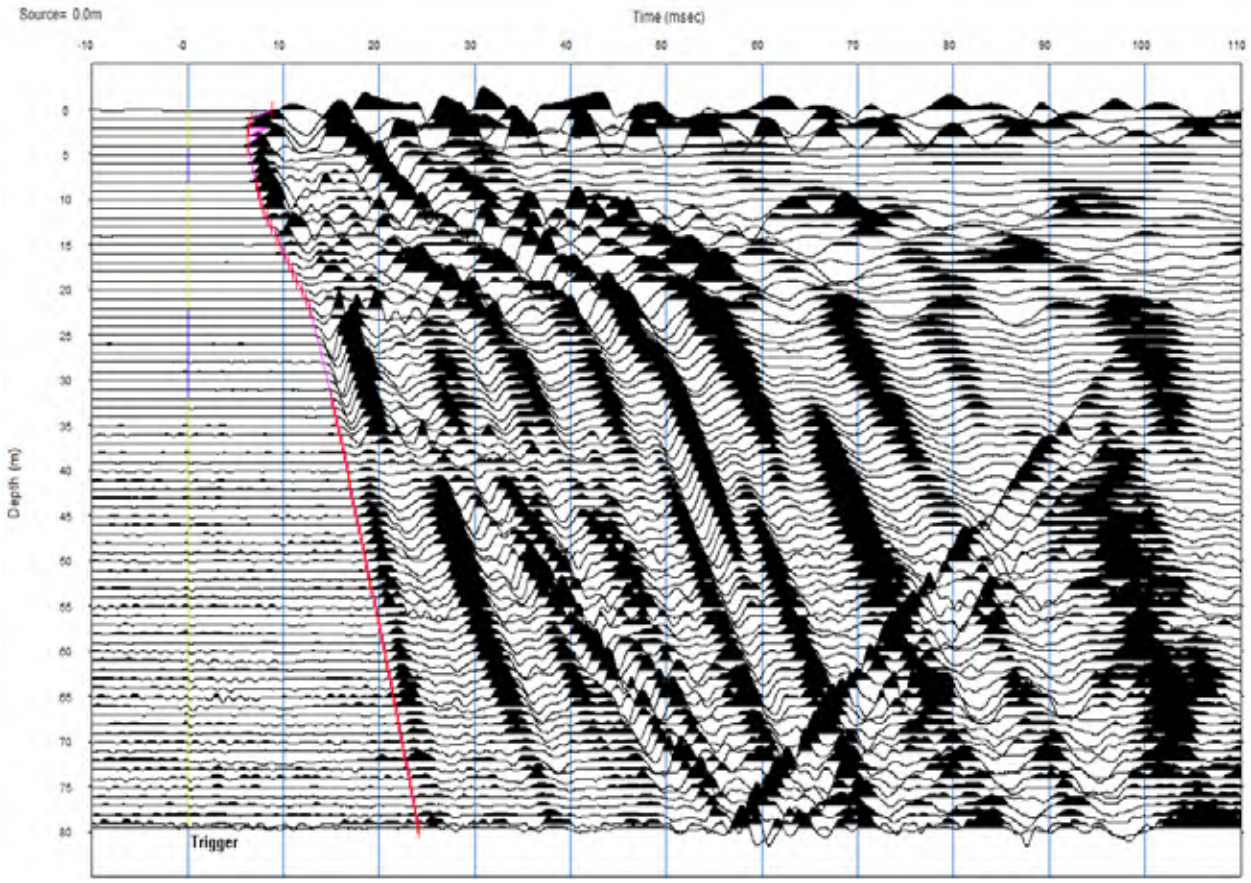
BH16 VSP Velocity Profile

Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Wave Velocity (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	0.4	520	152	2141	0.45	49	144	513
0.4	1.4	580	171	2141	0.45	63	182	637
1.4	2.4	700	218	2039	0.45	97	280	870
2.4	3.4	1200	277	2039	0.47	156	461	2728
3.4	4.4	1800	347	2039	0.48	246	727	6279
4.4	5.4	1800	411	2039	0.47	344	1014	6147
5.4	6.4	1800	457	2039	0.47	426	1248	6039
6.4	7.4	2000	483	2039	0.47	476	1398	7522
7.4	8.4	2000	501	2345	0.47	589	1726	8595
8.4	9.4	2000	513	2345	0.46	617	1808	8557
9.4	10.4	2000	519	2345	0.46	632	1849	8538
10.4	11.4	2000	521	2141	0.46	581	1701	7789
11.4	12.4	2000	523	2141	0.46	586	1714	7783
12.4	13.4	2000	528	2243	0.46	625	1829	8138
13.4	14.4	2000	537	2243	0.46	647	1890	8110
14.4	15.4	2000	549	2243	0.46	676	1973	8071
15.4	16.4	2000	566	2243	0.46	719	2093	8014
16.4	17.4	2000	587	2141	0.45	738	2144	7580
17.4	18.4	2000	613	2141	0.45	805	2330	7491
18.4	19.4	2000	646	2141	0.44	893	2576	7373
19.4	20.4	2000	687	2141	0.43	1010	2896	7217
20.4	21.4	2000	740	2243	0.42	1228	3490	7334
21.4	22.4	2000	802	2243	0.40	1443	4052	7048
22.4	23.4	2000	871	2243	0.38	1702	4707	6703
23.4	24.4	2000	949	2243	0.35	2020	5473	6279
24.4	25.4	2000	1035	2641	0.32	2829	7453	6792
25.4	26.4	3000	1129	2641	0.42	3366	9544	19281
26.4	27.4	3000	1227	2641	0.40	3976	11130	18468
27.4	28.4	3000	1330	2641	0.38	4672	12872	17540
28.4	29.4	4800	1439	2681	0.45	5552	16107	54368
29.4	30.4	4800	1553	2681	0.44	6466	18642	53149
30.4	31.4	4800	1673	2681	0.43	7504	21474	51765
31.4	32.4	4800	1800	2681	0.42	8686	24638	50188
32.4	33.4	4800	1933	2681	0.40	10018	28114	48414
33.4	34.4	4800	2074	2681	0.39	11532	31950	46394
34.4	35.4	4800	2222	2681	0.36	13237	36100	44121
35.4	36.4	4800	2303	2681	0.35	14220	38406	42811
36.4	37.4	4800	2303	2681	0.35	14220	38406	42811
37.4	38.4	4800	2303	2681	0.35	14220	38406	42811
38.4	39.4	4800	2303	2681	0.35	14220	38406	42811
39.4	40.4	4800	2303	2681	0.35	14220	38406	42811
40.4	41.4	4800	2303	2681	0.35	14220	38406	42811
41.4	42.4	4800	2303	2681	0.35	14220	38406	42811
42.4	43.4	4800	2303	2681	0.35	14220	38406	42811
43.4	44.4	4800	2303	2681	0.35	14220	38406	42811
44.4	45.4	4800	2303	2681	0.35	14220	38406	42811
45.4	46.4	4800	2303	2681	0.35	14220	38406	42811
46.4	47.4	4800	2303	2681	0.35	14220	38406	42811
47.4	48.4	4800	2303	2681	0.35	14220	38406	42811
48.4	49.4	4800	2303	2681	0.35	14220	38406	42811
49.4	50.4	4800	2303	2681	0.35	14220	38406	42811
50.4	51.4	4800	2303	2681	0.35	14220	38406	42811
51.4	52.4	4800	2303	2681	0.35	14220	38406	42811
52.4	53.4	4800	2303	2681	0.35	14220	38406	42811
53.4	54.4	4800	2303	2681	0.35	14220	38406	42811
54.4	55.4	4800	2303	2681	0.35	14220	38406	42811
55.4	56.4	4800	2303	2681	0.35	14220	38406	42811
56.4	57.4	4800	2303	2681	0.35	14220	38406	42811
57.4	58.4	4800	2303	2681	0.35	14220	38406	42811
58.4	59.4	4800	2303	2681	0.35	14220	38406	42811
59.4	60.4	4800	2303	2681	0.35	14220	38406	42811
60.4	61.4	4800	2303	2681	0.35	14220	38406	42811
61.4	62.4	4800	2303	2681	0.35	14220	38406	42811
62.4	63.4	4800	2303	2681	0.35	14220	38406	42811
63.4	64.4	4800	2303	2681	0.35	14220	38406	42811
64.4	65.4	4800	2303	2681	0.35	14220	38406	42811
65.4	66.4	4800	2303	2681	0.35	14220	38406	42811
66.4	67.4	4800	2303	2681	0.35	14220	38406	42811

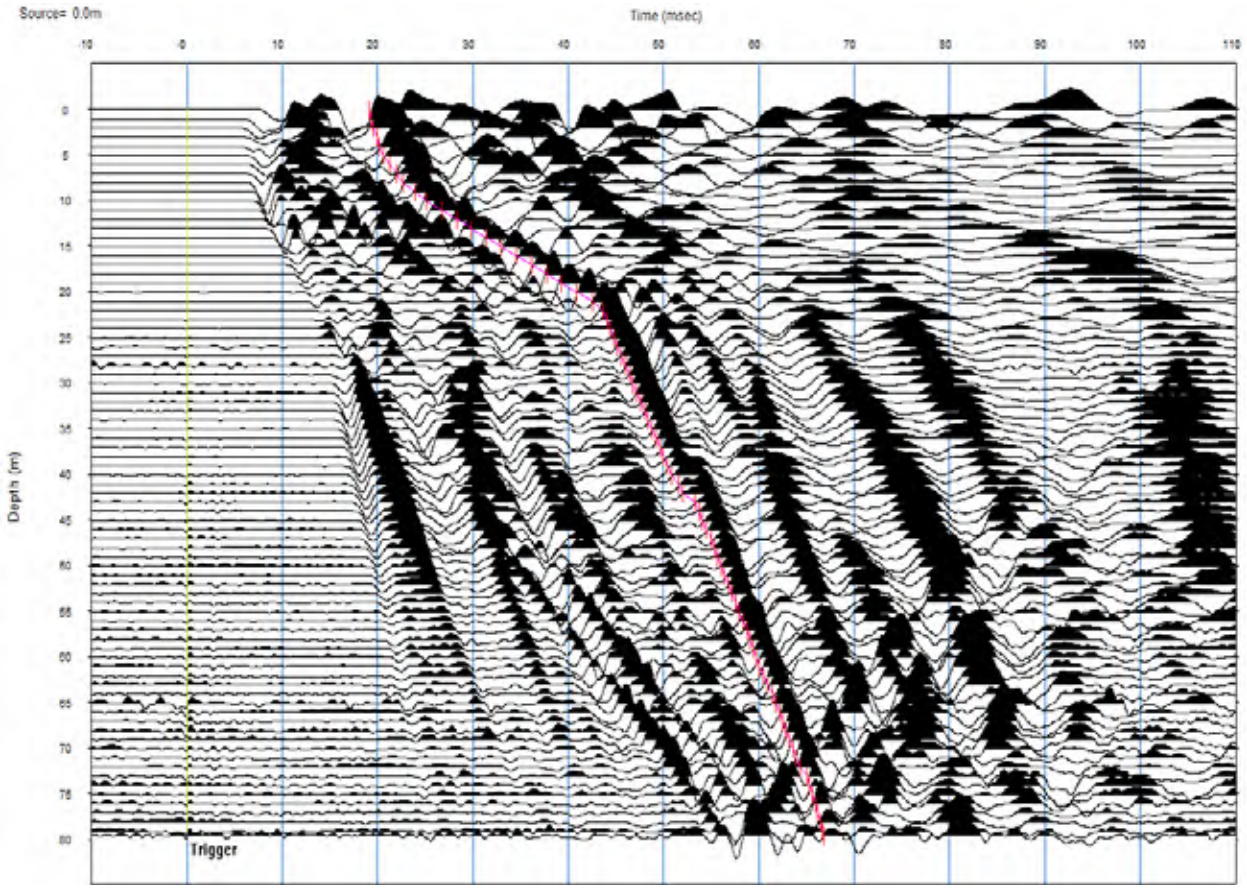
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Wave Velocity (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m^3)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
67.4	68.4	4800	2303	2681	0.35	14220	38406	42811
68.4	69.4	4800	2303	2681	0.35	14220	38406	42811
69.4	70.4	4800	2303	2681	0.35	14220	38406	42811
70.4	71.4	4800	2303	2681	0.35	14220	38406	42811
71.4	72.4	4800	2303	2681	0.35	14220	38406	42811
72.4	73.4	4800	2303	2681	0.35	14220	38406	42811
73.4	74.4	4800	2303	2681	0.35	14220	38406	42811
74.4	75.4	4800	2303	2681	0.35	14220	38406	42811
75.4	76.4	4800	2303	2681	0.35	14220	38406	42811
76.4	77.4	4800	2303	2681	0.35	14220	38406	42811
77.4	78.4	4800	2303	2681	0.35	14220	38406	42811
78.4	79.4	4800	2303	2681	0.35	14220	38406	42811
79.4	80.4	4800	2303	2681	0.35	14220	38406	42811
80.4	81.4	4800	2303	2681	0.35	14220	38406	42811
81.4	82.4	4800	2303	2681	0.35	14220	38406	42811
82.4	83.4	4800	2303	2681	0.35	14220	38406	42811
83.4	84.4	4800	2303	2681	0.35	14220	38406	42811
84.4	85.4	4800	2303	2681	0.35	14220	38406	42811
85.4	86.4	4800	2303	2681	0.35	14220	38406	42811
86.4	87.4	4800	2303	2681	0.35	14220	38406	42811
87.4	88.4	4800	2303	2681	0.35	14220	38406	42811
88.4	89.4	4800	2303	2679	0.35	14209	38378	42779
89.4	90.4	4800	2303	2679	0.35	14209	38378	42779
90.4	91.4	4800	2303	2679	0.35	14209	38378	42779
91.4	92.4	4800	2303	2679	0.35	14209	38378	42779
92.4	93.4	4800	2303	2679	0.35	14209	38378	42779
93.4	94.4	4800	2303	2679	0.35	14209	38378	42779
94.4	95.4	4800	2303	2679	0.35	14209	38378	42779
95.4	96.4	4800	2303	2679	0.35	14209	38378	42779
96.4	97.4	4800	2303	2679	0.35	14209	38378	42779
97.4	97.7	4800	2303	2679	0.35	14209	38378	42779


BH16 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
10
20
30
40
50
60
70
80
90
100
Shear Wave Velocity
Compression Wave Velocity

BH17 Compression Wave Picked Arrival Times



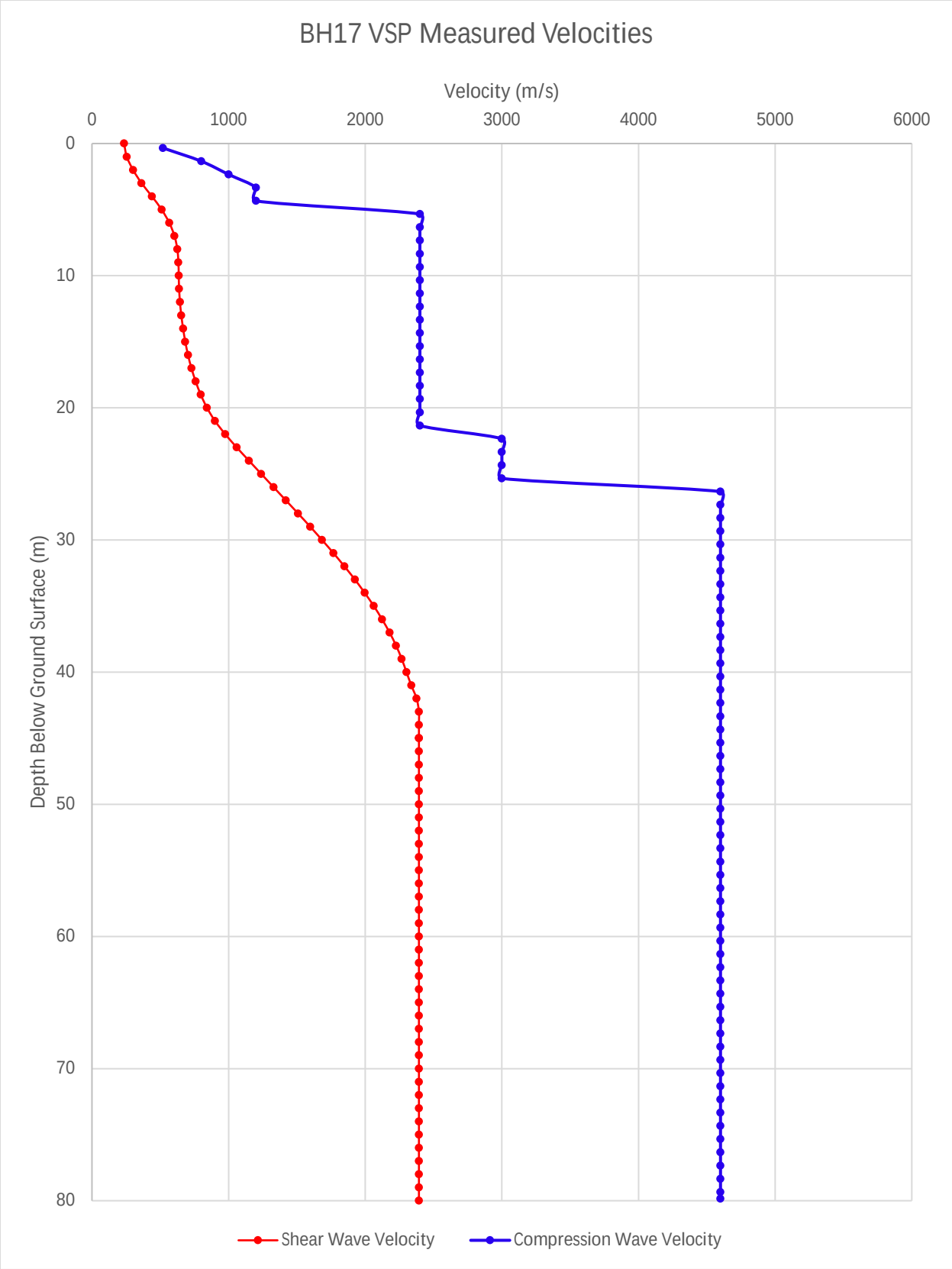
BH17 Shear Wave Picked Arrival Times



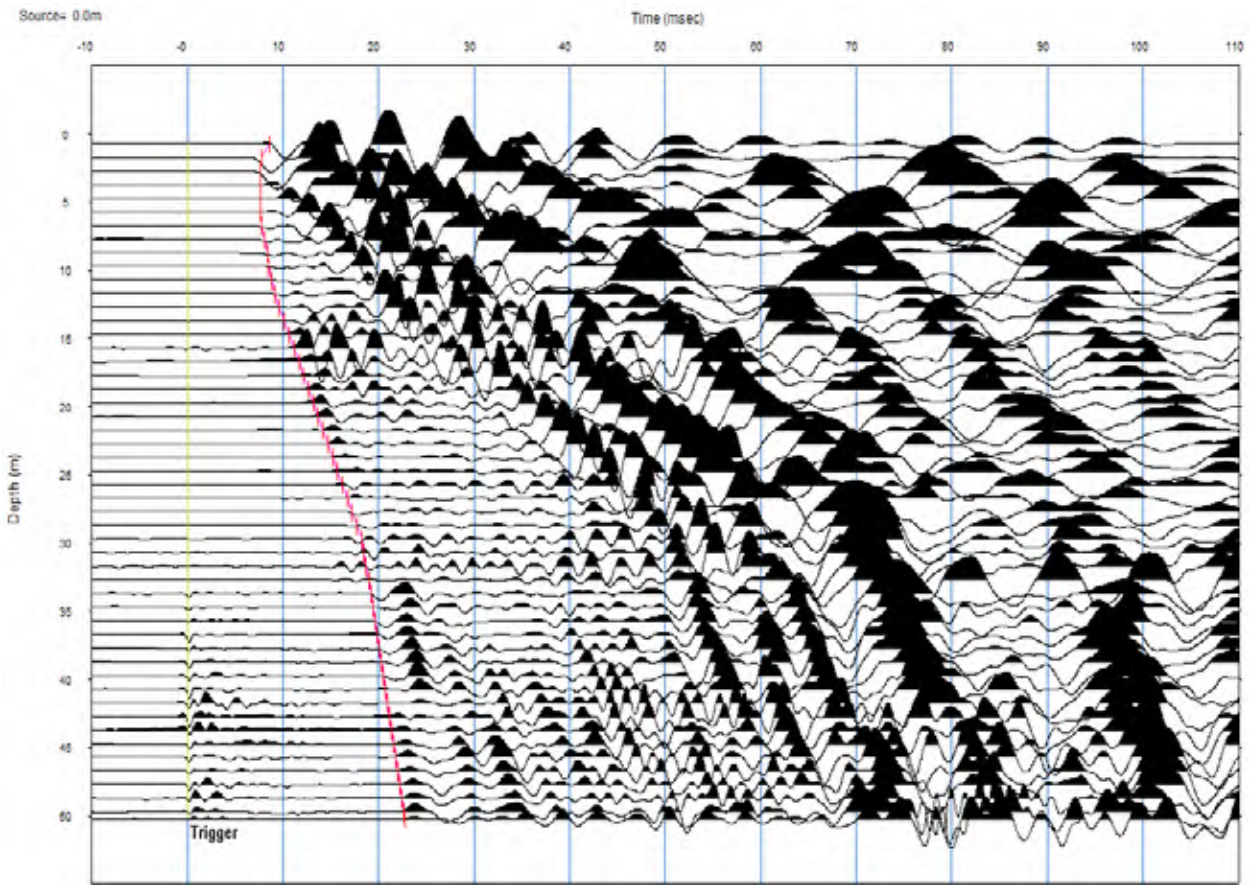
BH17 VSP Velocity Profile

Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	0.3	520	235	2141	0.37	118	324	421
0.3	1.3	800	255	2039	0.44	133	383	1128
1.3	2.3	1000	301	2039	0.45	185	536	1793
2.3	3.3	1200	363	2345	0.45	309	896	2965
3.3	4.3	1200	439	2345	0.42	452	1286	2774
4.3	5.3	2400	510	2345	0.48	610	1801	12694
5.3	6.3	2400	566	2345	0.47	751	2209	12506
6.3	7.3	2400	604	2345	0.47	855	2509	12367
7.3	8.3	2400	625	2345	0.46	916	2681	12286
8.3	9.3	2400	633	2345	0.46	940	2749	12254
9.3	10.3	2400	635	2345	0.46	946	2766	12246
10.3	11.3	2400	638	2345	0.46	955	2791	12235
11.3	12.3	2400	644	2345	0.46	973	2842	12210
12.3	13.3	2400	654	2345	0.46	1003	2929	12170
13.3	14.3	2400	667	2345	0.46	1043	3042	12116
14.3	15.3	2400	683	2345	0.46	1094	3185	12049
15.3	16.3	2400	703	2141	0.45	1058	3075	10921
16.3	17.3	2400	728	2141	0.45	1135	3289	10819
17.3	18.3	2400	759	2345	0.44	1351	3903	11706
18.3	19.3	2400	796	2345	0.44	1486	4274	11526
19.3	20.3	2400	842	2243	0.43	1590	4547	10799
20.3	21.3	2400	901	2243	0.42	1821	5164	10492
21.3	22.3	3000	976	2345	0.44	2234	6437	18127
22.3	23.3	3000	1060	2641	0.43	2967	8479	19812
23.3	24.3	3000	1149	2641	0.41	3487	9861	19120
24.3	25.3	3000	1239	2641	0.40	4054	11329	18363
25.3	26.3	4600	1329	2641	0.45	4665	13569	49664
26.3	27.3	4600	1419	2681	0.45	5398	15627	49532
27.3	28.3	4600	1509	2681	0.44	6105	17578	48590
28.3	29.3	4600	1598	2681	0.43	6846	19599	47602
29.3	30.3	4600	1684	2681	0.42	7603	21632	46593
30.3	31.3	4600	1768	2681	0.41	8380	23688	45556
31.3	32.3	4600	1848	2681	0.40	9156	25706	44522
32.3	33.3	4600	1925	2681	0.39	9935	27695	43484
33.3	34.3	4600	1996	2681	0.38	10681	29566	42488
34.3	35.3	4600	2063	2681	0.37	11410	31358	41516
35.3	36.3	4600	2123	2681	0.36	12084	32980	40618
36.3	37.3	4600	2178	2681	0.36	12718	34478	39773
37.3	38.3	4600	2226	2681	0.35	13285	35792	39017
38.3	39.3	4600	2267	2681	0.34	13778	36915	38359
39.3	40.3	4600	2302	2681	0.33	14207	37875	37787
40.3	41.3	4600	2337	2681	0.33	14642	38833	37207
41.3	42.3	4600	2376	2681	0.32	15135	39898	36550
42.3	43.3	4600	2393	2681	0.31	15353	40361	36260
43.3	44.3	4600	2393	2681	0.31	15353	40361	36260
44.3	45.3	4600	2393	2681	0.31	15353	40361	36260
45.3	46.3	4600	2393	2681	0.31	15353	40361	36260
46.3	47.3	4600	2393	2681	0.31	15353	40361	36260
47.3	48.3	4600	2393	2681	0.31	15353	40361	36260
48.3	49.3	4600	2393	2681	0.31	15353	40361	36260
49.3	50.3	4600	2393	2681	0.31	15353	40361	36260
50.3	51.3	4600	2393	2681	0.31	15353	40361	36260
51.3	52.3	4600	2393	2681	0.31	15353	40361	36260
52.3	53.3	4600	2393	2681	0.31	15353	40361	36260
53.3	54.3	4600	2393	2681	0.31	15353	40361	36260
54.3	55.3	4600	2393	2681	0.31	15353	40361	36260
55.3	56.3	4600	2393	2681	0.31	15353	40361	36260
56.3	57.3	4600	2393	2681	0.31	15353	40361	36260
57.3	58.3	4600	2393	2681	0.31	15353	40361	36260
58.3	59.3	4600	2393	2681	0.31	15353	40361	36260
59.3	60.3	4600	2393	2681	0.31	15353	40361	36260
60.3	61.3	4600	2393	2681	0.31	15353	40361	36260
61.3	62.3	4600	2393	2681	0.31	15353	40361	36260
62.3	63.3	4600	2393	2681	0.31	15353	40361	36260
63.3	64.3	4600	2393	2681	0.31	15353	40361	36260
64.3	65.3	4600	2393	2681	0.31	15353	40361	36260
65.3	66.3	4600	2393	2681	0.31	15353	40361	36260
66.3	67.3	4600	2393	2681	0.31	15353	40361	36260

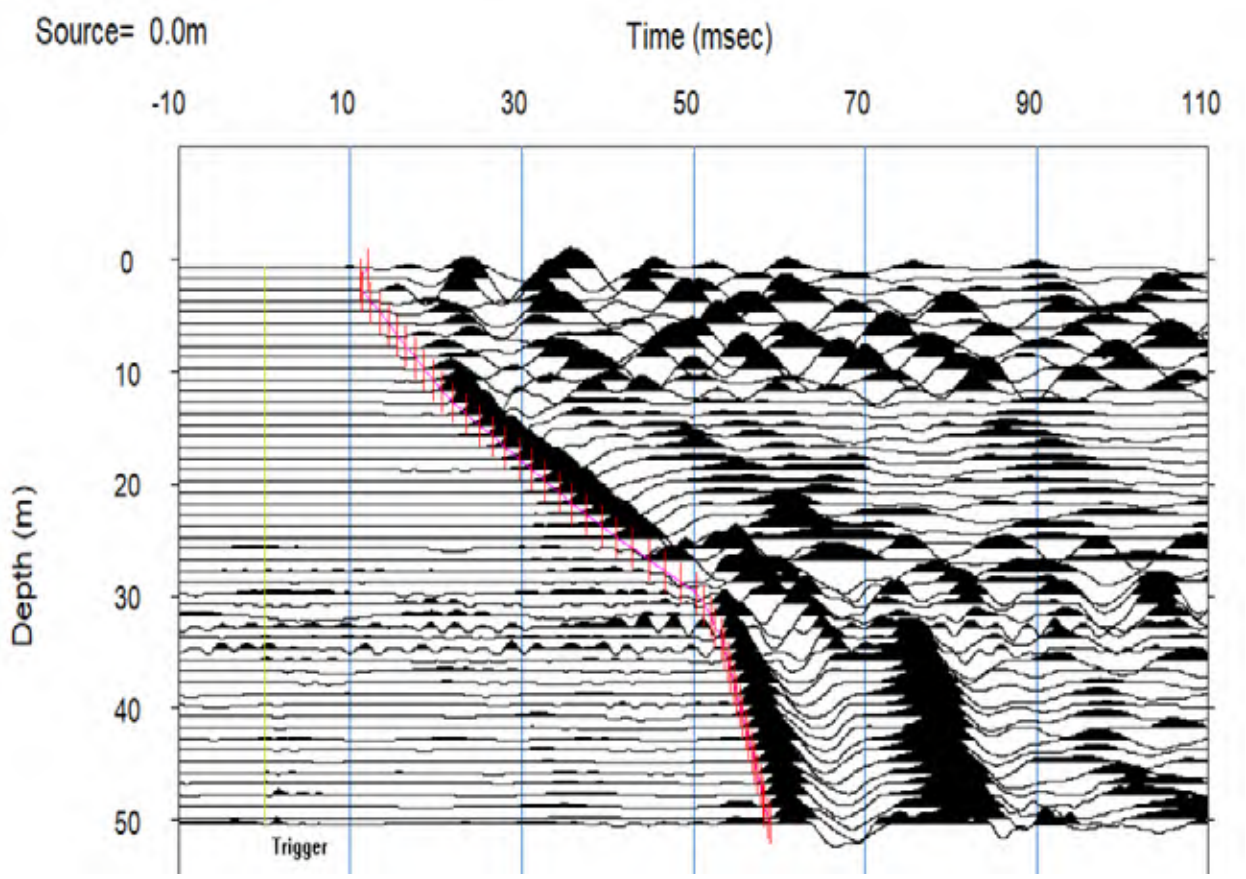
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m^3)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
67.3	68.3	4600	2393	2681	0.31	15353	40361	36260
68.3	69.3	4600	2393	2681	0.31	15353	40361	36260
69.3	70.3	4600	2393	2681	0.31	15353	40361	36260
70.3	71.3	4600	2393	2681	0.31	15353	40361	36260
71.3	72.3	4600	2393	2681	0.31	15353	40361	36260
72.3	73.3	4600	2393	2681	0.31	15353	40361	36260
73.3	74.3	4600	2393	2681	0.31	15353	40361	36260
74.3	75.3	4600	2393	2681	0.31	15353	40361	36260
75.3	76.3	4600	2393	2681	0.31	15353	40361	36260
76.3	77.3	4600	2393	2681	0.31	15353	40361	36260
77.3	78.3	4600	2393	2681	0.31	15353	40361	36260
78.3	79.3	4600	2393	2681	0.31	15353	40361	36260
79.3	79.8	4600	2393	2681	0.31	15353	40361	36260


BH17 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
10
20
30
40
50
60
70
80
Shear Wave Velocity
Compression Wave Velocity

BH28 Compression Wave Picked Arrival Times

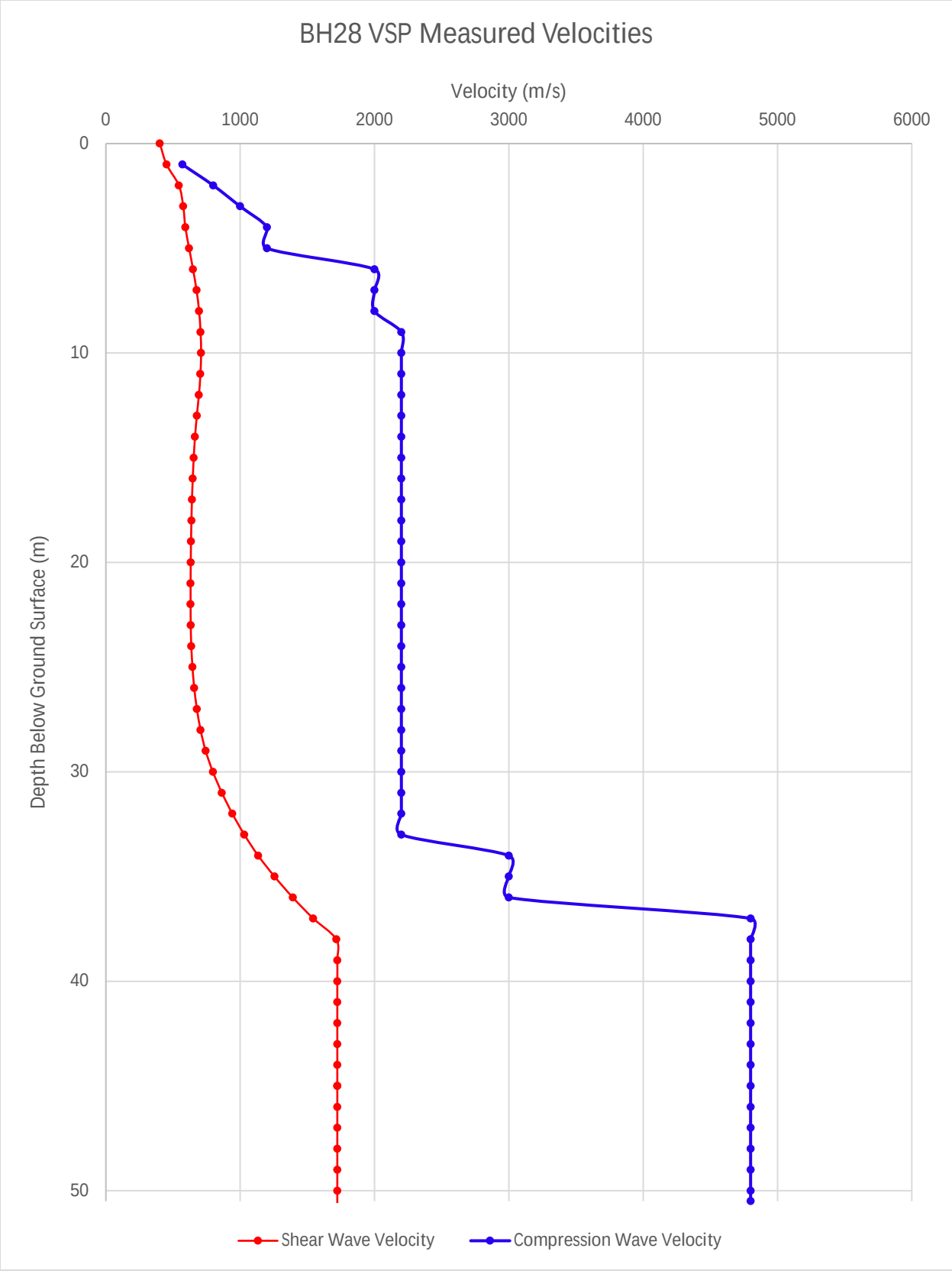


BH28 Shear Wave Picked Arrival Times

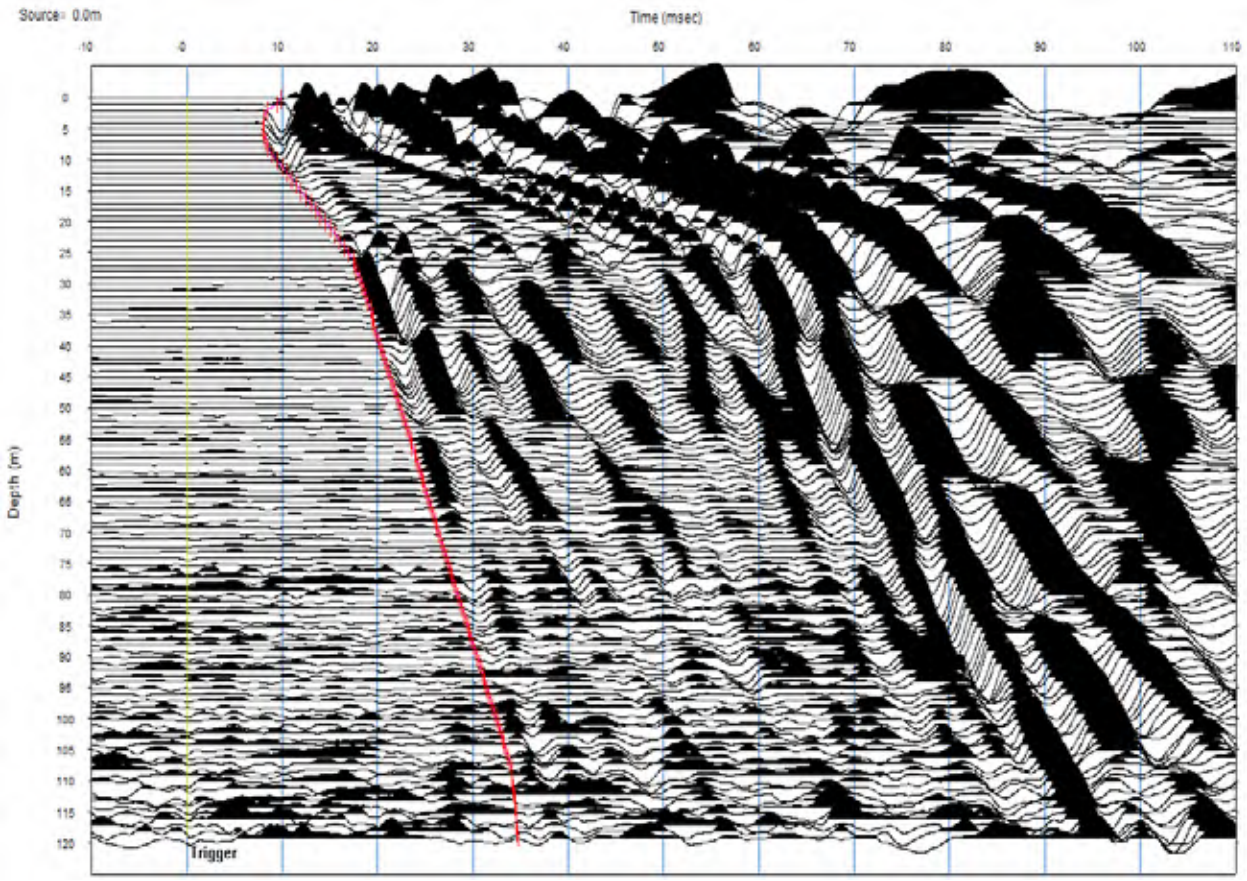


BH28 VSP Velocity Profile

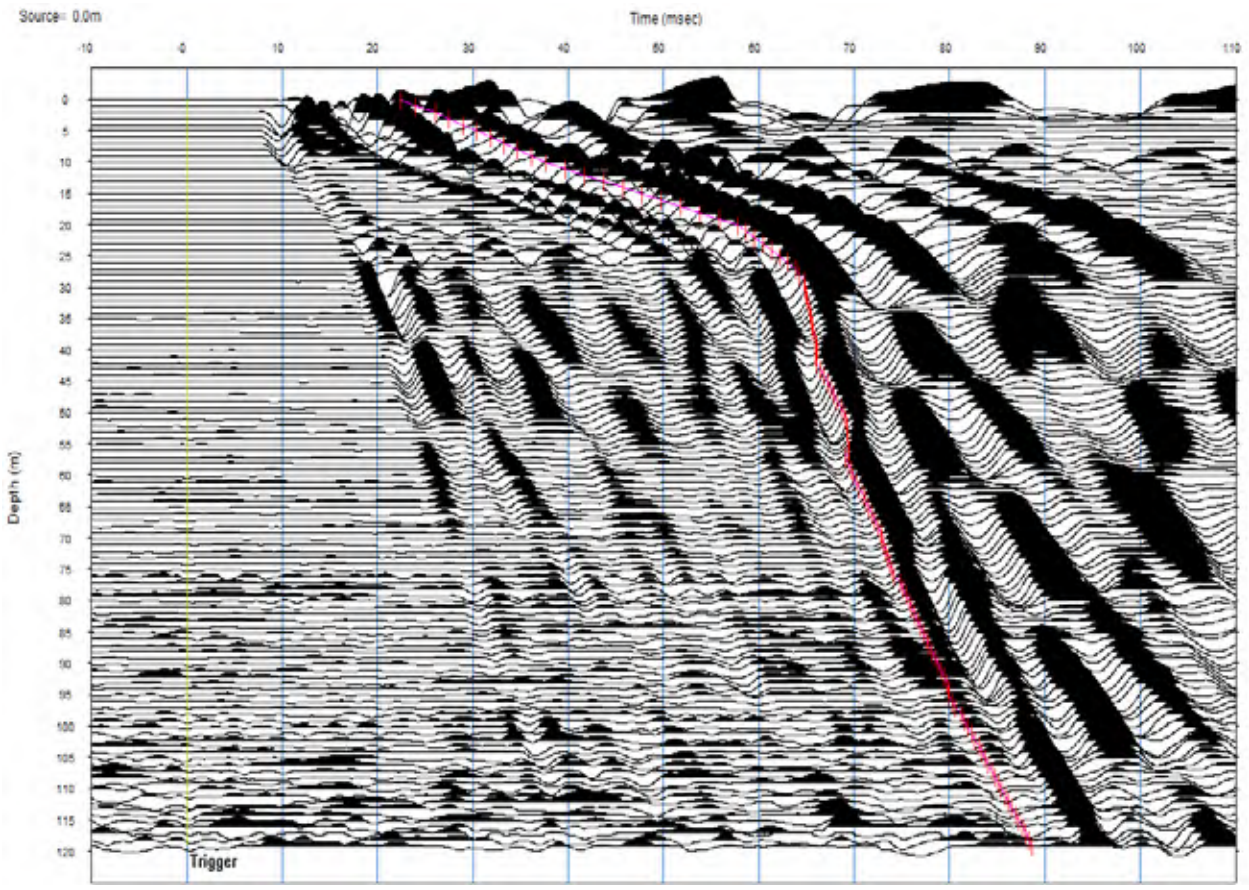
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	1	570	402	2141	0.01	346	696	234
1.0	2	800	452	2345	0.27	479	1213	862
2.0	3	1000	544	2345	0.29	694	1790	1420
3.0	4	1200	576	2345	0.35	778	2101	2339
4.0	5	1200	592	2345	0.34	822	2201	2281
5.0	6	2000	620	2345	0.45	901	2608	8178
6.0	7	2000	649	2345	0.44	988	2847	8063
7.0	8	2000	675	2345	0.44	1068	3068	7955
8.0	9	2200	694	2345	0.44	1129	3263	9844
9.0	10	2200	705	2345	0.44	1166	3363	9796
10.0	11	2200	709	2243	0.44	1128	3252	9353
11.0	12	2200	704	2243	0.44	1112	3208	9374
12.0	13	2200	693	2243	0.44	1077	3113	9420
13.0	14	2200	677	2243	0.45	1028	2977	9485
14.0	15	2200	664	2243	0.45	989	2868	9538
15.0	16	2200	654	2141	0.45	916	2658	9141
16.0	17	2200	647	2141	0.45	896	2604	9167
17.0	18	2200	641	2141	0.45	880	2557	9190
18.0	19	2200	637	2243	0.45	910	2647	9643
19.0	20	2200	634	2243	0.45	902	2623	9654
20.0	21	2200	632	2243	0.46	896	2607	9662
21.0	22	2200	631	2243	0.46	893	2599	9665
22.0	23	2200	631	2243	0.46	893	2599	9665
23.0	24	2200	632	2141	0.46	855	2489	9222
24.0	25	2200	636	2141	0.45	866	2519	9208
25.0	26	2200	645	2141	0.45	891	2588	9175
26.0	27	2200	658	2141	0.45	927	2690	9126
27.0	28	2200	678	2141	0.45	984	2849	9050
28.0	29	2200	705	2345	0.44	1166	3363	9796
29.0	30	2200	743	2345	0.44	1295	3717	9624
30.0	31	2200	797	2345	0.42	1490	4244	9364
31.0	32	2200	864	2641	0.41	1971	5555	10154
32.0	33	2200	942	2641	0.39	2344	6504	9658
33.0	34	3000	1031	2641	0.43	2807	8046	20026
34.0	35	3000	1134	2681	0.42	3448	9768	19532
35.0	36	3000	1256	2681	0.39	4229	11789	18490
36.0	37	4800	1392	2681	0.45	5195	15108	54844
37.0	38	4800	1544	2681	0.44	6391	18436	53248
38.0	39	4800	1716	2681	0.43	7895	22527	51244
39.0	40	4800	1723	2681	0.43	7959	22700	51158
40.0	41	4800	1723	2681	0.43	7959	22700	51158
41.0	42	4800	1723	2681	0.43	7959	22700	51158
42.0	43	4800	1723	2681	0.43	7959	22700	51158
43.0	44	4800	1723	2681	0.43	7959	22700	51158
44.0	45	4800	1723	2681	0.43	7959	22700	51158
45.0	46	4800	1723	2681	0.43	7959	22700	51158
46.0	47	4800	1723	2681	0.43	7959	22700	51158
47.0	48	4800	1723	2681	0.43	7959	22700	51158
48.0	49	4800	1723	2681	0.43	7959	22700	51158
49.0	50	4800	1723	2681	0.43	7959	22700	51158
50.0	50.5	4800	1723	2681	0.43	7959	22700	51158


BH28 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
10
20
30
40
50
Shear Wave Velocity
Compression Wave Velocity

BH50 Compression Wave Picked Arrival Times



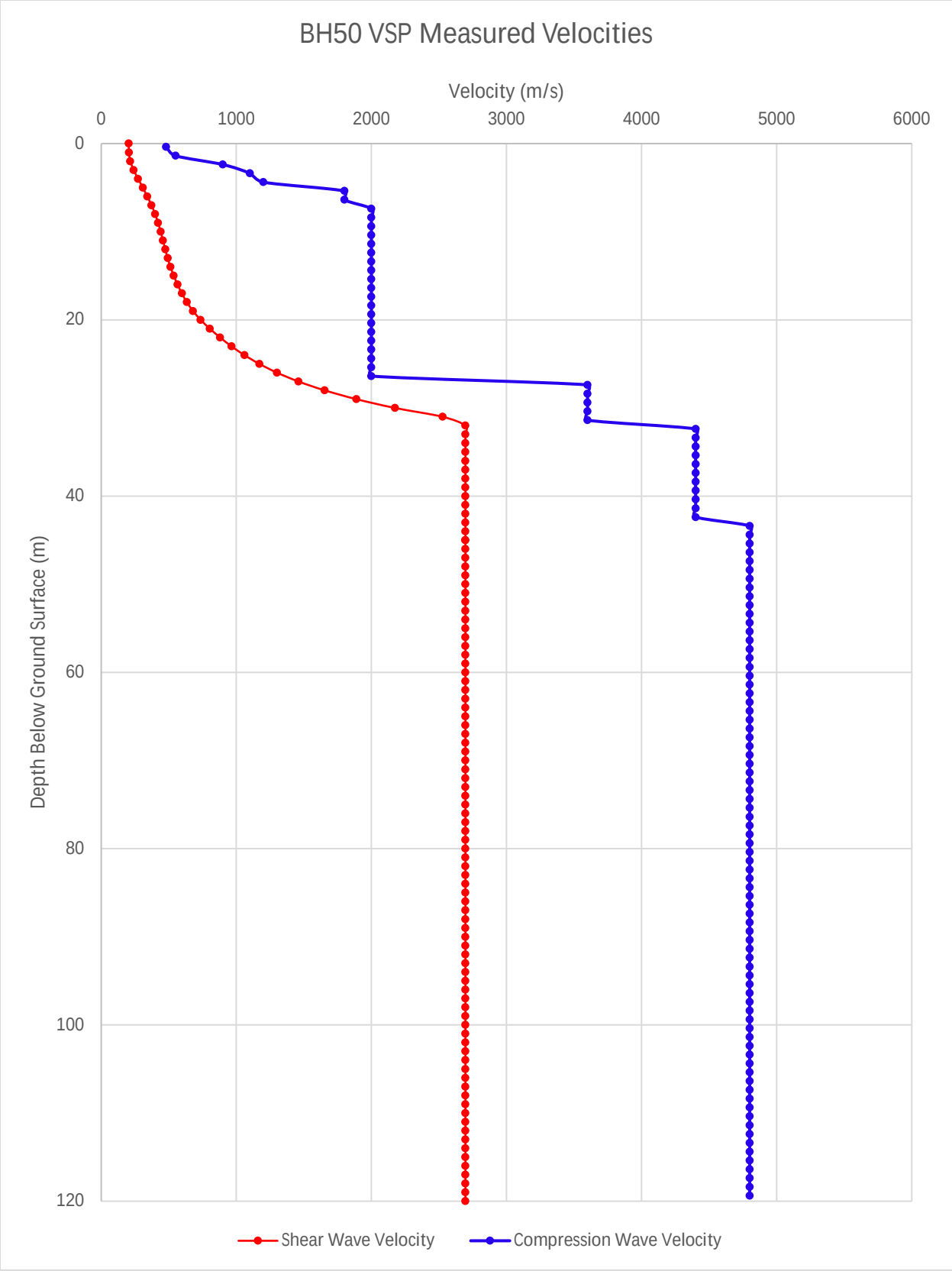
BH50 Shear Wave Picked Arrival Times



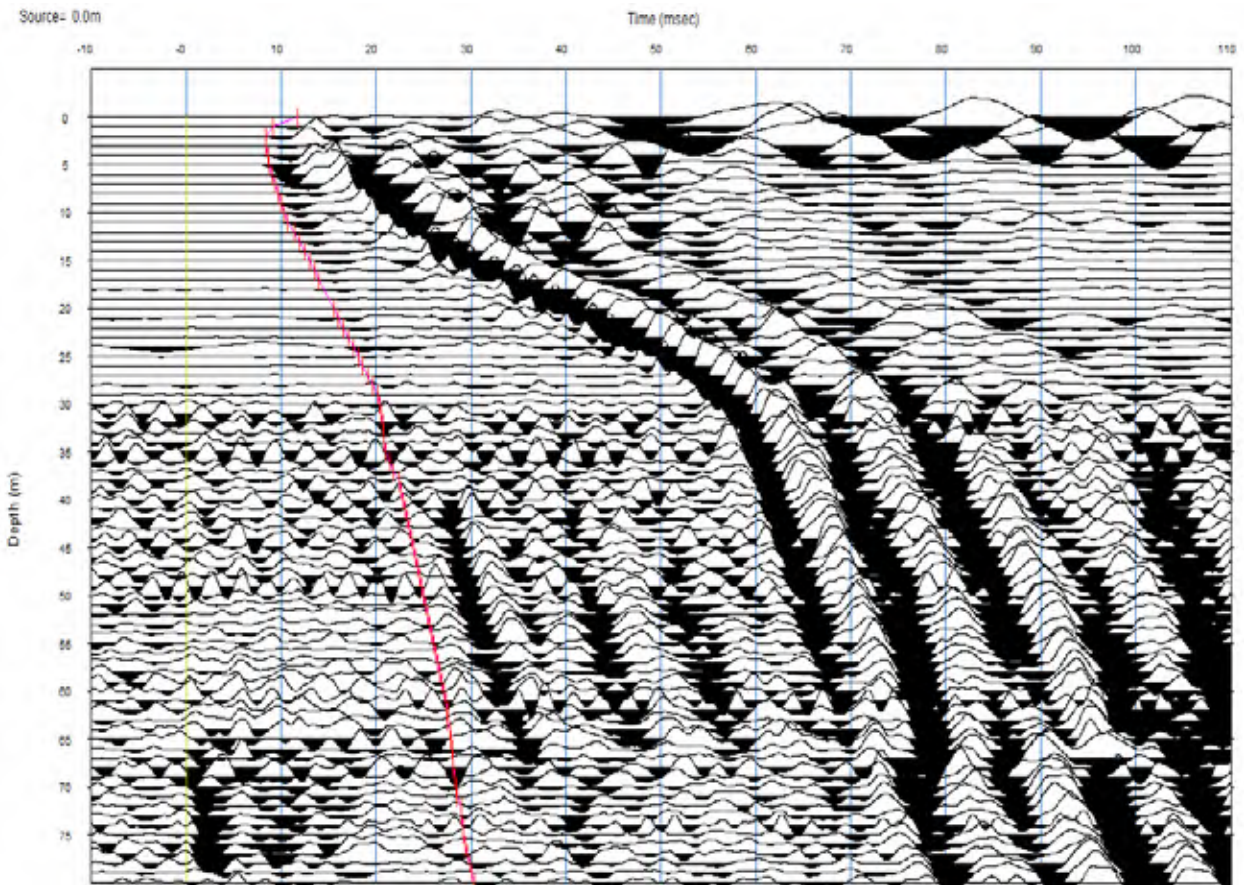
BH50 VSP Velocity Profile

Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	0.4	480	204	2141	0.39	89	248	374
0.4	1.4	550	205	2141	0.42	90	255	528
1.4	2.4	900	215	2039	0.47	94	277	1526
2.4	3.4	1100	240	2345	0.48	135	398	2657
3.4	4.4	1200	273	2345	0.47	175	515	3144
4.4	5.4	1800	308	2345	0.48	222	661	7301
5.4	6.4	1800	341	2345	0.48	273	808	7234
6.4	7.4	2000	372	2345	0.48	325	962	8947
7.4	8.4	2000	399	2345	0.48	373	1105	8882
8.4	9.4	2000	421	2345	0.48	416	1228	8826
9.4	10.4	2000	440	2141	0.47	414	1222	8011
10.4	11.4	2000	457	2141	0.47	447	1317	7968
11.4	12.4	2000	474	2243	0.47	504	1482	8300
12.4	13.4	2000	492	2243	0.47	543	1594	8248
13.4	14.4	2000	513	2243	0.46	590	1729	8185
14.4	15.4	2000	537	2243	0.46	647	1890	8110
15.4	16.4	2000	565	2243	0.46	716	2086	8017
16.4	17.4	2000	597	2243	0.45	799	2320	7906
17.4	18.4	2000	634	2141	0.44	861	2486	7417
18.4	19.4	2000	680	2343	0.43	1083	3109	7927
19.4	20.4	2000	736	2141	0.42	1160	3298	7018
20.4	21.4	2000	804	2141	0.40	1384	3885	6719
21.4	22.4	2000	880	2141	0.38	1658	4576	6353
22.4	23.4	2000	964	2141	0.35	1990	5367	5911
23.4	24.4	2000	1060	2243	0.30	2520	6576	5612
24.4	25.4	2000	1171	2345	0.24	3216	7969	5093
25.4	26.4	2000	1302	2641	0.13	4477	10138	4595
26.4	27.4	3600	1461	2641	0.40	5637	15800	26711
27.4	28.4	3600	1654	2641	0.37	7225	19742	24594
28.4	29.4	3600	1889	2641	0.31	9424	24691	21662
29.4	30.4	3600	2175	2681	0.21	12683	30758	17835
30.4	31.4	3600	2527	2681	0.01	17120	34731	11919
31.4	32.4	4400	2696	2681	0.20	19487	46746	25922
32.4	33.4	4400	2696	2681	0.20	19487	46746	25922
33.4	34.4	4400	2696	2681	0.20	19487	46746	25922
34.4	35.4	4400	2696	2681	0.20	19487	46746	25922
35.4	36.4	4400	2696	2681	0.20	19487	46746	25922
36.4	37.4	4400	2696	2681	0.20	19487	46746	25922
37.4	38.4	4400	2696	2681	0.20	19487	46746	25922
38.4	39.4	4400	2696	2681	0.20	19487	46746	25922
39.4	40.4	4400	2696	2681	0.20	19487	46746	25922
40.4	41.4	4400	2696	2681	0.20	19487	46746	25922
41.4	42.4	4400	2696	2681	0.20	19487	46746	25922
42.4	43.4	4800	2696	2681	0.27	19487	49479	35788
43.4	44.4	4800	2696	2681	0.27	19487	49479	35788
44.4	45.4	4800	2696	2681	0.27	19487	49479	35788
45.4	46.4	4800	2696	2681	0.27	19487	49479	35788
46.4	47.4	4800	2696	2681	0.27	19487	49479	35788
47.4	48.4	4800	2696	2681	0.27	19487	49479	35788
48.4	49.4	4800	2696	2681	0.27	19487	49479	35788
49.4	50.4	4800	2696	2681	0.27	19487	49479	35788
50.4	51.4	4800	2696	2681	0.27	19487	49479	35788
51.4	52.4	4800	2696	2681	0.27	19487	49479	35788
52.4	53.4	4800	2696	2681	0.27	19487	49479	35788
53.4	54.4	4800	2696	2681	0.27	19487	49479	35788
54.4	55.4	4800	2696	2681	0.27	19487	49479	35788
55.4	56.4	4800	2696	2681	0.27	19487	49479	35788
56.4	57.4	4800	2696	2681	0.27	19487	49479	35788
57.4	58.4	4800	2696	2681	0.27	19487	49479	35788
58.4	59.4	4800	2696	2681	0.27	19487	49479	35788
59.4	60.4	4800	2696	2681	0.27	19487	49479	35788
60.4	61.4	4800	2696	2681	0.27	19487	49479	35788
61.4	62.4	4800	2696	2681	0.27	19487	49479	35788
62.4	63.4	4800	2696	2681	0.27	19487	49479	35788
63.4	64.4	4800	2696	2681	0.27	19487	49479	35788
64.4	65.4	4800	2696	2681	0.27	19487	49479	35788
65.4	66.4	4800	2696	2681	0.27	19487	49479	35788
66.4	67.4	4800	2696	2681	0.27	19487	49479	35788

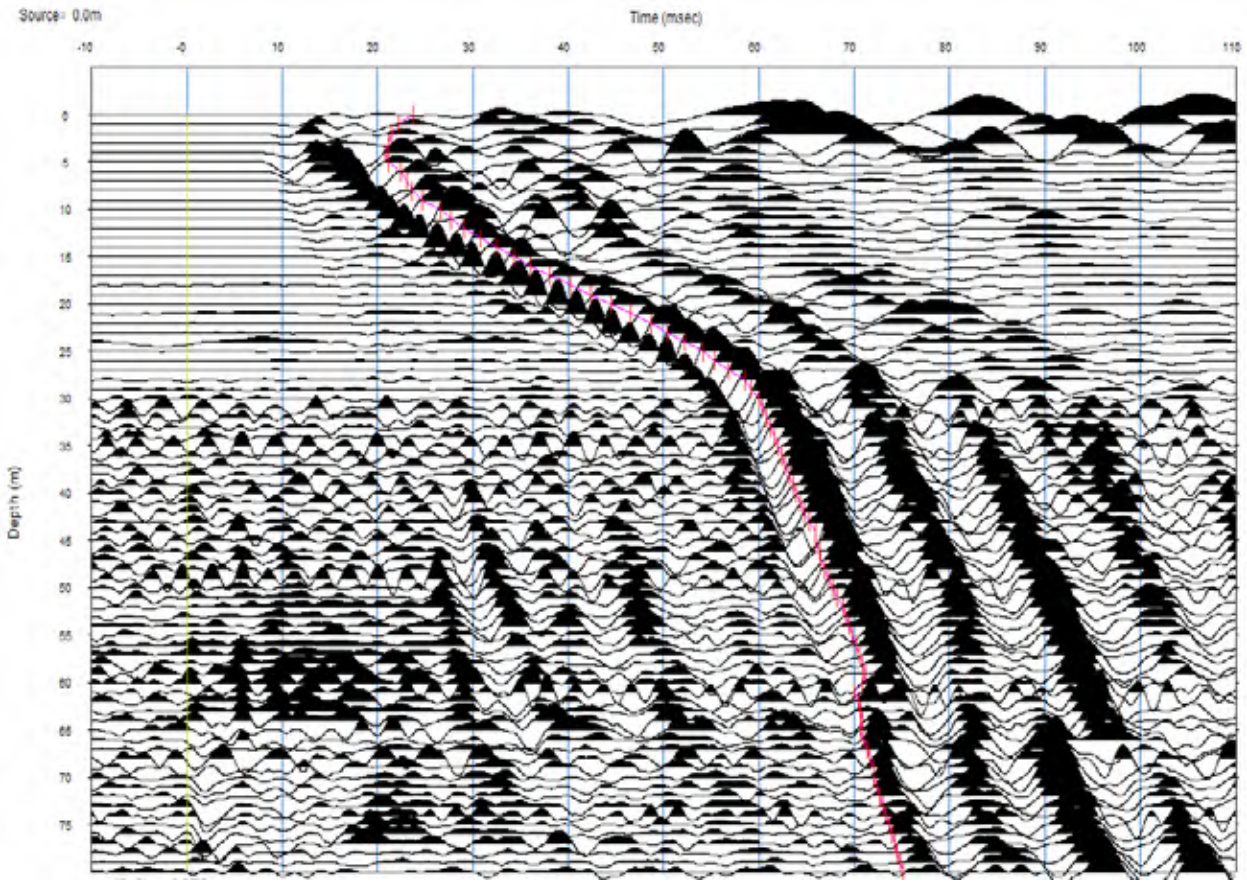
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
67.4	68.4	4800	2696	2681	0.27	19487	49479	35788
68.4	69.4	4800	2696	2681	0.27	19487	49479	35788
69.4	70.4	4800	2696	2681	0.27	19487	49479	35788
70.4	71.4	4800	2696	2681	0.27	19487	49479	35788
71.4	72.4	4800	2696	2681	0.27	19487	49479	35788
72.4	73.4	4800	2696	2681	0.27	19487	49479	35788
73.4	74.4	4800	2696	2681	0.27	19487	49479	35788
74.4	75.4	4800	2696	2681	0.27	19487	49479	35788
75.4	76.4	4800	2696	2681	0.27	19487	49479	35788
76.4	77.4	4800	2696	2681	0.27	19487	49479	35788
77.4	78.4	4800	2696	2681	0.27	19487	49479	35788
78.4	79.4	4800	2696	2681	0.27	19487	49479	35788
79.4	80.4	4800	2696	2681	0.27	19487	49479	35788
80.4	81.4	4800	2696	2681	0.27	19487	49479	35788
81.4	82.4	4800	2696	2681	0.27	19487	49479	35788
82.4	83.4	4800	2696	2681	0.27	19487	49479	35788
83.4	84.4	4800	2696	2681	0.27	19487	49479	35788
84.4	85.4	4800	2696	2681	0.27	19487	49479	35788
85.4	86.4	4800	2696	2681	0.27	19487	49479	35788
86.4	87.4	4800	2696	2681	0.27	19487	49479	35788
87.4	88.4	4800	2696	2681	0.27	19487	49479	35788
88.4	89.4	4800	2696	2681	0.27	19487	49479	35788
89.4	90.4	4800	2696	2681	0.27	19487	49479	35788
90.4	91.4	4800	2696	2679	0.27	19472	49442	35761
91.4	92.4	4800	2696	2679	0.27	19472	49442	35761
92.4	93.4	4800	2696	2679	0.27	19472	49442	35761
93.4	94.4	4800	2696	2679	0.27	19472	49442	35761
94.4	95.4	4800	2696	2679	0.27	19472	49442	35761
95.4	96.4	4800	2696	2679	0.27	19472	49442	35761
96.4	97.4	4800	2696	2679	0.27	19472	49442	35761
97.4	98.4	4800	2696	2679	0.27	19472	49442	35761
98.4	99.4	4800	2696	2679	0.27	19472	49442	35761
99.4	100.4	4800	2696	2679	0.27	19472	49442	35761
100.4	101.4	4800	2696	2679	0.27	19472	49442	35761
101.4	102.4	4800	2696	2679	0.27	19472	49442	35761
102.4	103.4	4800	2696	2679	0.27	19472	49442	35761
103.4	104.4	4800	2696	2679	0.27	19472	49442	35761
104.4	105.4	4800	2696	2679	0.27	19472	49442	35761
105.4	106.4	4800	2696	2679	0.27	19472	49442	35761
106.4	107.4	4800	2696	2679	0.27	19472	49442	35761
107.4	108.4	4800	2696	2679	0.27	19472	49442	35761
108.4	109.4	4800	2696	2679	0.27	19472	49442	35761
109.4	110.4	4800	2696	2679	0.27	19472	49442	35761
110.4	111.4	4800	2696	2679	0.27	19472	49442	35761
111.4	112.4	4800	2696	2679	0.27	19472	49442	35761
112.4	113.4	4800	2696	2679	0.27	19472	49442	35761
113.4	114.4	4800	2696	2679	0.27	19472	49442	35761
114.4	115.4	4800	2696	2679	0.27	19472	49442	35761
115.4	116.4	4800	2696	2679	0.27	19472	49442	35761
116.4	117.4	4800	2696	2679	0.27	19472	49442	35761
117.4	118.4	4800	2696	2679	0.27	19472	49442	35761
118.4	119.4	4800	2696	2679	0.27	19472	49442	35761


BH50 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
20
40
60
80
100
120
Shear Wave Velocity
Compression Wave Velocity

BH53 Compression Wave Picked Arrival Times



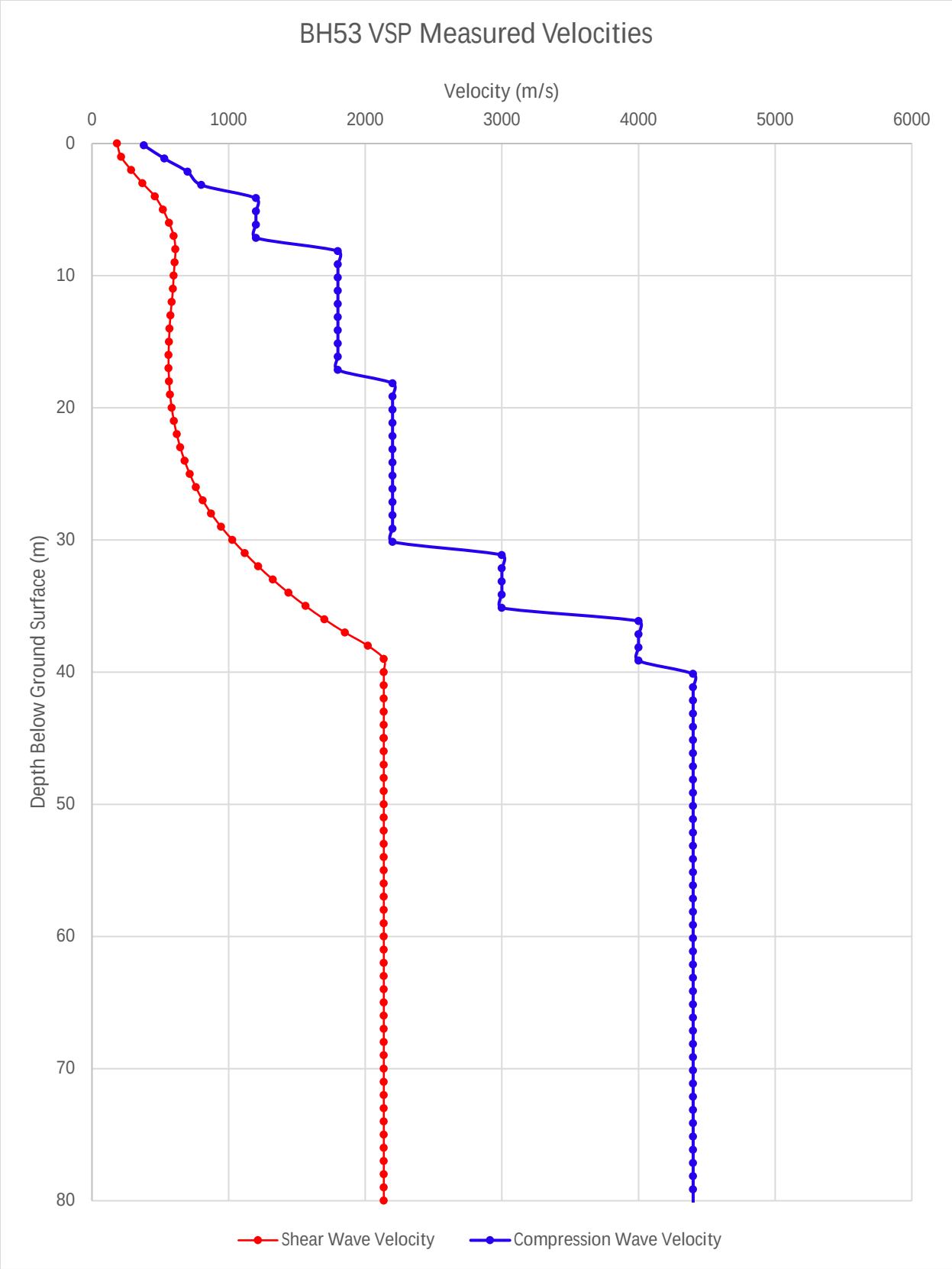
BH53 Shear Wave Picked Arrival Times



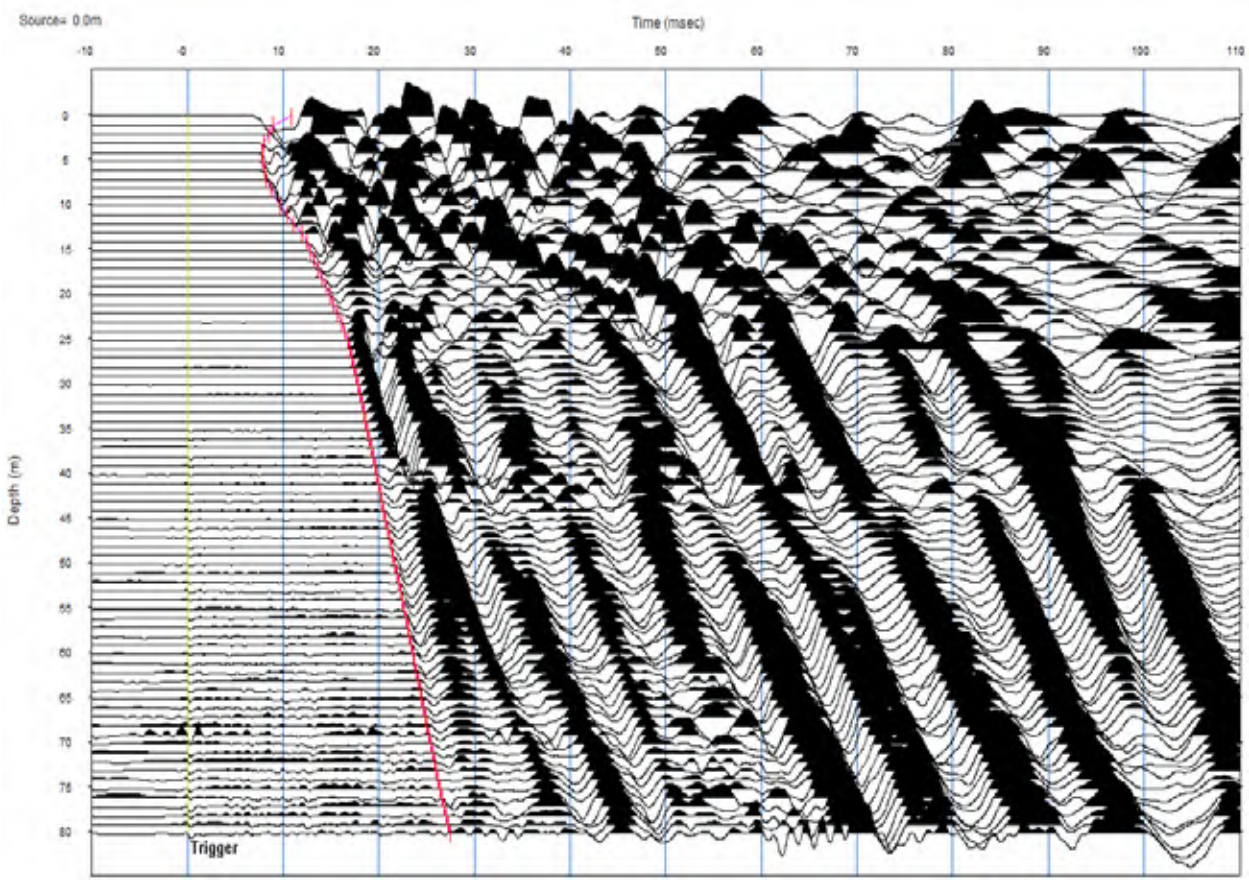
BH53 VSP Velocity Profile

Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	0.1	380	183	2141	0.35	72	193	214
0.1	1.1	530	213	2141	0.40	97	273	472
1.1	2.1	700	287	2345	0.40	193	540	892
2.1	3.1	800	370	2345	0.36	321	876	1073
3.1	4.1	1200	460	2345	0.41	496	1403	2715
4.1	5.1	1200	520	2345	0.38	634	1756	2531
5.1	6.1	1200	564	2345	0.36	746	2026	2382
6.1	7.1	1200	599	2345	0.33	841	2245	2255
7.1	8.1	1800	611	2345	0.43	875	2512	6431
8.1	9.1	1800	606	2345	0.44	861	2473	6450
9.1	10.1	1800	598	2345	0.44	839	2412	6480
10.1	11.1	1800	593	2345	0.44	825	2373	6498
11.1	12.1	1800	584	2345	0.44	800	2305	6531
12.1	13.1	1800	575	2345	0.44	775	2238	6564
13.1	14.1	1800	568	2345	0.44	757	2186	6589
14.1	15.1	1800	564	2243	0.45	713	2063	6316
15.1	16.1	1800	561	2141	0.45	674	1949	6038
16.1	17.1	1800	561	2243	0.45	706	2042	6326
17.1	18.1	2200	565	2243	0.46	716	2098	9901
18.1	19.1	2200	572	2243	0.46	734	2148	9878
19.1	20.1	2200	584	2243	0.46	765	2237	9836
20.1	21.1	2200	600	2243	0.46	807	2358	9779
21.1	22.1	2200	621	2243	0.46	865	2520	9703
22.1	23.1	2200	647	2141	0.45	896	2604	9167
23.1	24.1	2200	678	2243	0.45	1031	2985	9481
24.1	25.1	2200	716	2141	0.44	1098	3163	8899
25.1	26.1	2200	760	2141	0.43	1237	3542	8714
26.1	27.1	2200	811	2345	0.42	1542	4385	9293
27.1	28.1	2200	872	2243	0.41	1706	4799	8582
28.1	29.1	2200	945	2345	0.39	2094	5809	8558
29.1	30.1	2200	1028	2345	0.36	2478	6742	8046
30.1	31.1	3000	1119	2345	0.42	2936	8334	17190
31.1	32.1	3000	1217	2641	0.40	3912	10964	18554
32.1	33.1	3000	1324	2641	0.38	4630	12769	17596
33.1	34.1	3000	1439	2641	0.35	5469	14772	16477
34.1	35.1	3000	1564	2681	0.31	6558	17226	15385
35.1	36.1	4000	1701	2681	0.39	7757	21559	32553
36.1	37.1	4000	1852	2681	0.36	9196	25078	30635
37.1	38.1	4000	2019	2681	0.33	10929	29050	28324
38.1	39.1	4000	2136	2681	0.30	12232	31817	26587
39.1	40.1	4400	2136	2681	0.35	12232	32925	35595
40.1	41.1	4400	2136	2681	0.35	12232	32925	35595
41.1	42.1	4400	2136	2681	0.35	12232	32925	35595
42.1	43.1	4400	2136	2681	0.35	12232	32925	35595
43.1	44.1	4400	2136	2681	0.35	12232	32925	35595
44.1	45.1	4400	2136	2681	0.35	12232	32925	35595
45.1	46.1	4400	2136	2681	0.35	12232	32925	35595
46.1	47.1	4400	2136	2681	0.35	12232	32925	35595
47.1	48.1	4400	2136	2681	0.35	12232	32925	35595
48.1	49.1	4400	2136	2681	0.35	12232	32925	35595
49.1	50.1	4400	2136	2681	0.35	12232	32925	35595
50.1	51.1	4400	2136	2681	0.35	12232	32925	35595
51.1	52.1	4400	2136	2681	0.35	12232	32925	35595
52.1	53.1	4400	2136	2681	0.35	12232	32925	35595
53.1	54.1	4400	2136	2681	0.35	12232	32925	35595
54.1	55.1	4400	2136	2681	0.35	12232	32925	35595
55.1	56.1	4400	2136	2681	0.35	12232	32925	35595
56.1	57.1	4400	2136	2681	0.35	12232	32925	35595
57.1	58.1	4400	2136	2681	0.35	12232	32925	35595
58.1	59.1	4400	2136	2681	0.35	12232	32925	35595
59.1	60.1	4400	2136	2681	0.35	12232	32925	35595
60.1	61.1	4400	2136	2681	0.35	12232	32925	35595
61.1	62.1	4400	2136	2681	0.35	12232	32925	35595
62.1	63.1	4400	2136	2681	0.35	12232	32925	35595
63.1	64.1	4400	2136	2681	0.35	12232	32925	35595
64.1	65.1	4400	2136	2681	0.35	12232	32925	35595
65.1	66.1	4400	2136	2681	0.35	12232	32925	35595
66.1	67.1	4400	2136	2681	0.35	12232	32925	35595

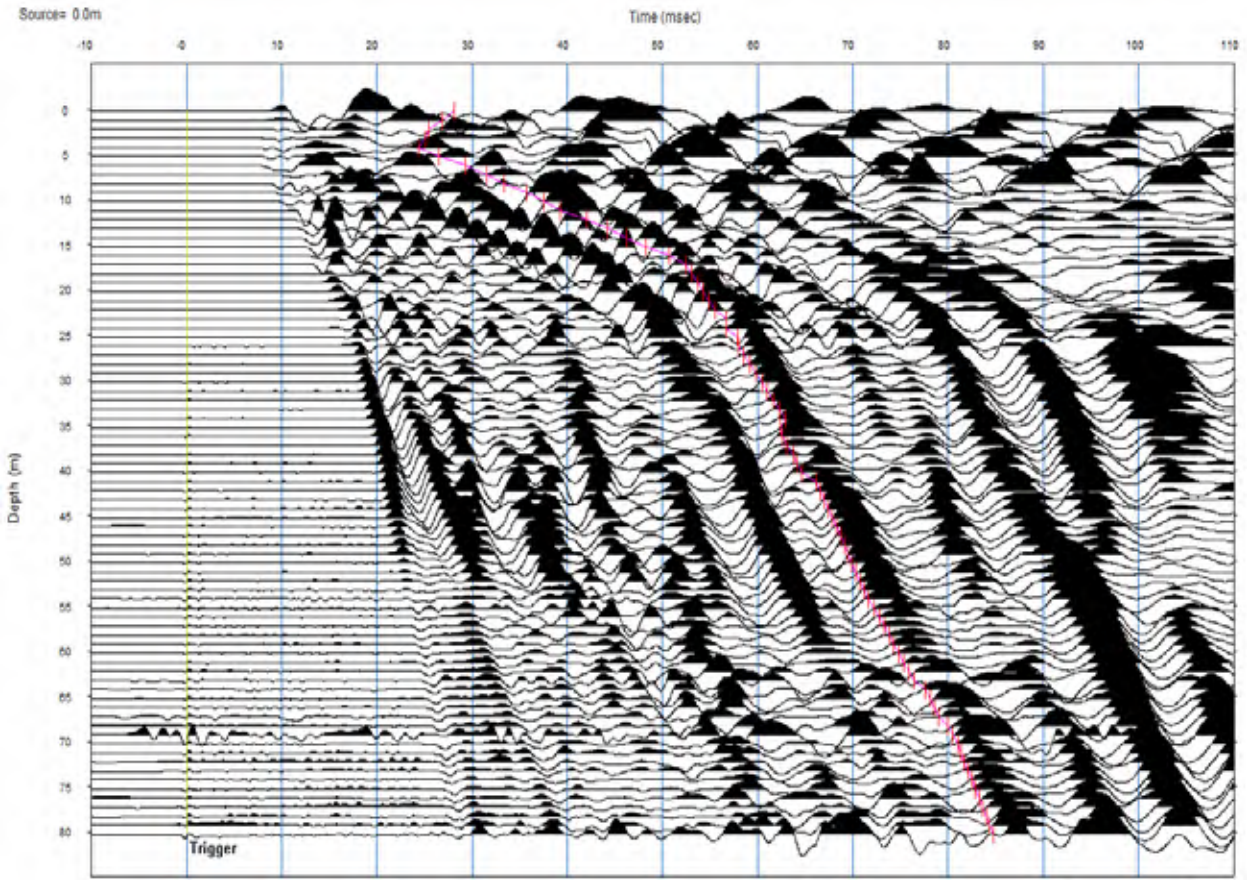
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m^3)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
67.1	68.1	4400	2136	2681	0.35	12232	32925	35595
68.1	69.1	4400	2136	2681	0.35	12232	32925	35595
69.1	70.1	4400	2136	2681	0.35	12232	32925	35595
70.1	71.1	4400	2136	2681	0.35	12232	32925	35595
71.1	72.1	4400	2136	2681	0.35	12232	32925	35595
72.1	73.1	4400	2136	2681	0.35	12232	32925	35595
73.1	74.1	4400	2136	2681	0.35	12232	32925	35595
74.1	75.1	4400	2136	2681	0.35	12232	32925	35595
75.1	76.1	4400	2136	2681	0.35	12232	32925	35595
76.1	77.1	4400	2136	2681	0.35	12232	32925	35595
77.1	78.1	4400	2136	2681	0.35	12232	32925	35595
78.1	79.1	4400	2136	2681	0.35	12232	32925	35595
79.1	80.1	4400	2136	2681	0.35	12232	32925	35595


BH53 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
10
20
30
40
50
60
70
80
Shear Wave Velocity
Compression Wave Velocity

BH59 Compression Wave Picked Arrival Times



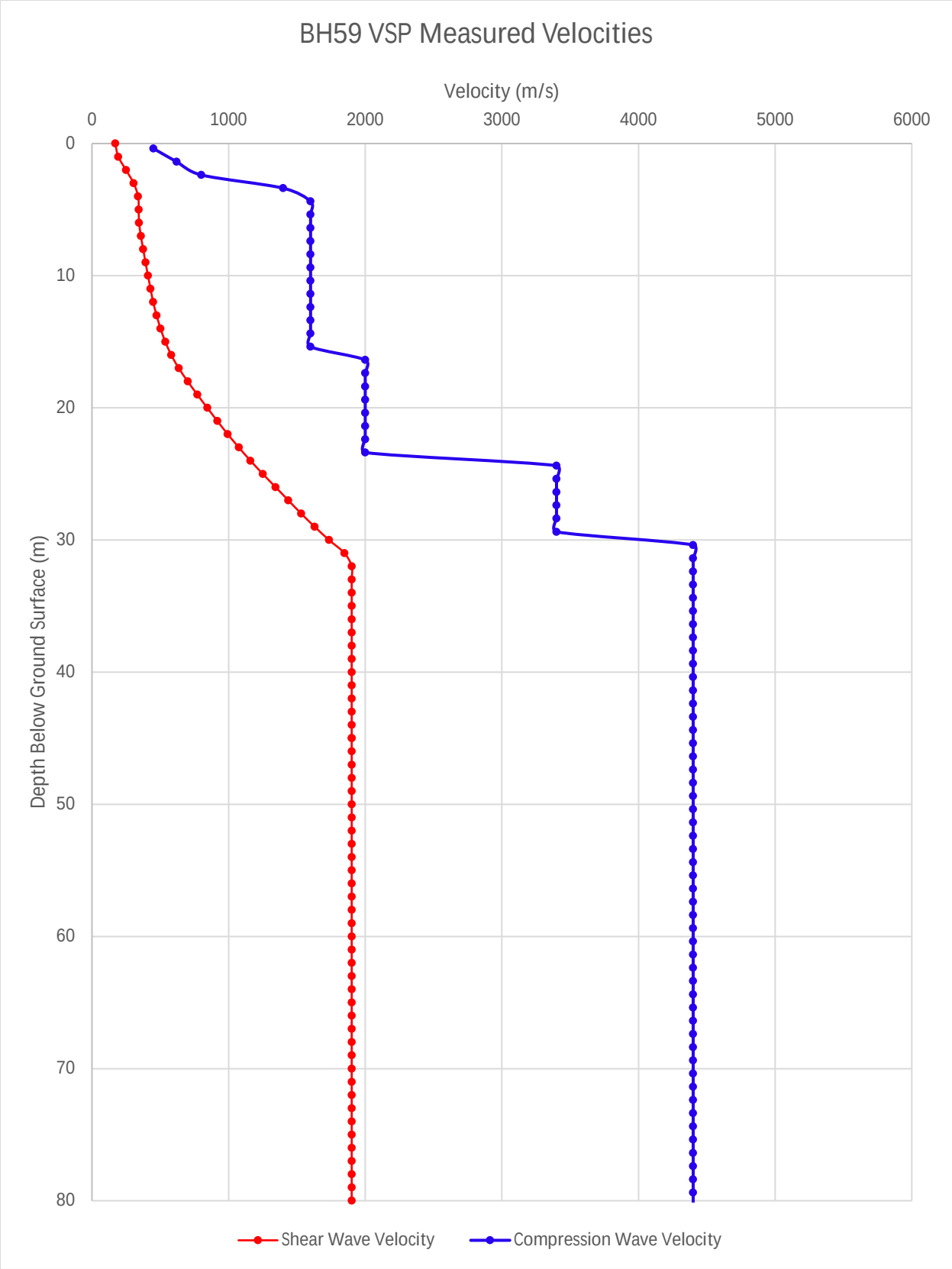
BH59 Shear Wave Picked Arrival Times



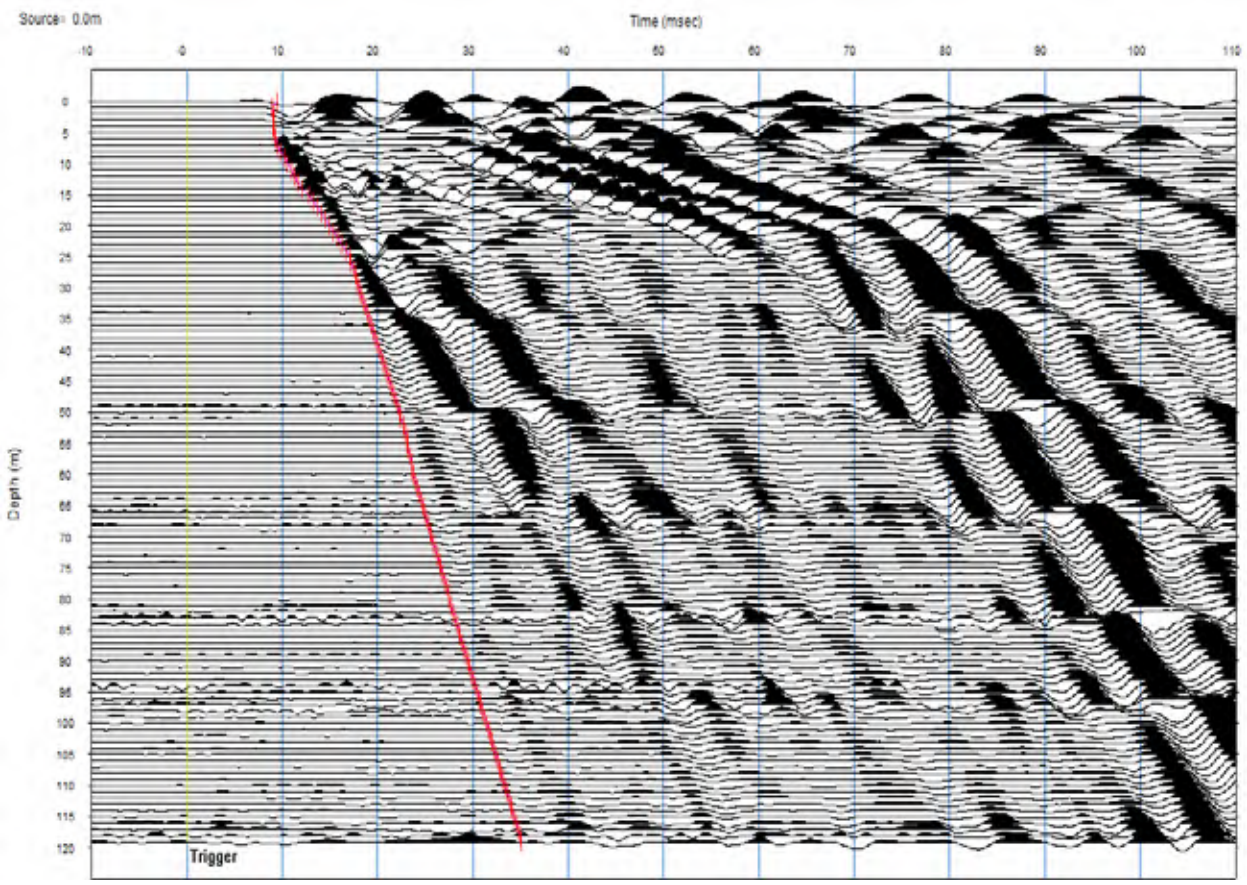
BH59 VSP Velocity Profile

Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	0.4	450	170	2141	0.42	62	175	351
0.4	1.4	620	193	2141	0.45	80	231	717
1.4	2.4	800	249	2039	0.45	126	366	1136
2.4	3.4	1400	305	2039	0.48	190	560	3744
3.4	4.4	1600	338	2345	0.48	268	791	5646
4.4	5.4	1600	342	2345	0.48	274	810	5637
5.4	6.4	1600	345	2345	0.48	279	824	5631
6.4	7.4	1600	358	2345	0.47	301	886	5602
7.4	8.4	1600	375	2345	0.47	330	970	5564
8.4	9.4	1600	392	2243	0.47	345	1012	5283
9.4	10.4	1600	410	2243	0.46	377	1105	5239
10.4	11.4	1600	429	2243	0.46	413	1206	5192
11.4	12.4	1600	448	2243	0.46	450	1312	5142
12.4	13.4	1600	473	2243	0.45	502	1457	5073
13.4	14.4	1600	502	2243	0.45	565	1634	4988
14.4	15.4	1600	537	2243	0.44	647	1858	4880
15.4	16.4	2000	580	2243	0.45	755	2194	7966
16.4	17.4	2000	635	2243	0.44	904	2612	7766
17.4	18.4	2000	701	2243	0.43	1102	3152	7502
18.4	19.4	2000	771	2243	0.41	1333	3767	7194
19.4	20.4	2000	844	2141	0.39	1525	4245	6531
20.4	21.4	2000	918	2141	0.37	1804	4931	6158
21.4	22.4	2000	994	2141	0.34	2115	5652	5743
22.4	23.4	2000	1075	2243	0.30	2592	6723	5516
23.4	24.4	3400	1160	2345	0.43	3155	9051	22901
24.4	25.4	3400	1250	2345	0.42	3664	10420	22223
25.4	26.4	3400	1344	2345	0.41	4236	11923	21460
26.4	27.4	3400	1437	2641	0.39	5454	15175	23259
27.4	28.4	3400	1531	2641	0.37	6190	16997	22276
28.4	29.4	3400	1630	2681	0.35	7123	19244	21495
29.4	30.4	4400	1735	2681	0.41	8070	22725	41144
30.4	31.4	4400	1848	2681	0.39	9156	25507	39696
31.4	32.4	4400	1901	2681	0.39	9689	26842	38986
32.4	33.4	4400	1901	2681	0.39	9689	26842	38986
33.4	34.4	4400	1901	2681	0.39	9689	26842	38986
34.4	35.4	4400	1901	2681	0.39	9689	26842	38986
35.4	36.4	4400	1901	2681	0.39	9689	26842	38986
36.4	37.4	4400	1901	2681	0.39	9689	26842	38986
37.4	38.4	4400	1901	2681	0.39	9689	26842	38986
38.4	39.4	4400	1901	2681	0.39	9689	26842	38986
39.4	40.4	4400	1901	2681	0.39	9689	26842	38986
40.4	41.4	4400	1901	2681	0.39	9689	26842	38986
41.4	42.4	4400	1901	2681	0.39	9689	26842	38986
42.4	43.4	4400	1901	2681	0.39	9689	26842	38986
43.4	44.4	4400	1901	2681	0.39	9689	26842	38986
44.4	45.4	4400	1901	2681	0.39	9689	26842	38986
45.4	46.4	4400	1901	2681	0.39	9689	26842	38986
46.4	47.4	4400	1901	2681	0.39	9689	26842	38986
47.4	48.4	4400	1901	2681	0.39	9689	26842	38986
48.4	49.4	4400	1901	2681	0.39	9689	26842	38986
49.4	50.4	4400	1901	2681	0.39	9689	26842	38986
50.4	51.4	4400	1901	2681	0.39	9689	26842	38986
51.4	52.4	4400	1901	2681	0.39	9689	26842	38986
52.4	53.4	4400	1901	2681	0.39	9689	26842	38986
53.4	54.4	4400	1901	2681	0.39	9689	26842	38986
54.4	55.4	4400	1901	2681	0.39	9689	26842	38986
55.4	56.4	4400	1901	2681	0.39	9689	26842	38986
56.4	57.4	4400	1901	2681	0.39	9689	26842	38986
57.4	58.4	4400	1901	2681	0.39	9689	26842	38986
58.4	59.4	4400	1901	2681	0.39	9689	26842	38986
59.4	60.4	4400	1901	2681	0.39	9689	26842	38986
60.4	61.4	4400	1901	2681	0.39	9689	26842	38986
61.4	62.4	4400	1901	2681	0.39	9689	26842	38986
62.4	63.4	4400	1901	2681	0.39	9689	26842	38986
63.4	64.4	4400	1901	2681	0.39	9689	26842	38986
64.4	65.4	4400	1901	2681	0.39	9689	26842	38986
65.4	66.4	4400	1901	2681	0.39	9689	26842	38986
66.4	67.4	4400	1901	2681	0.39	9689	26842	38986

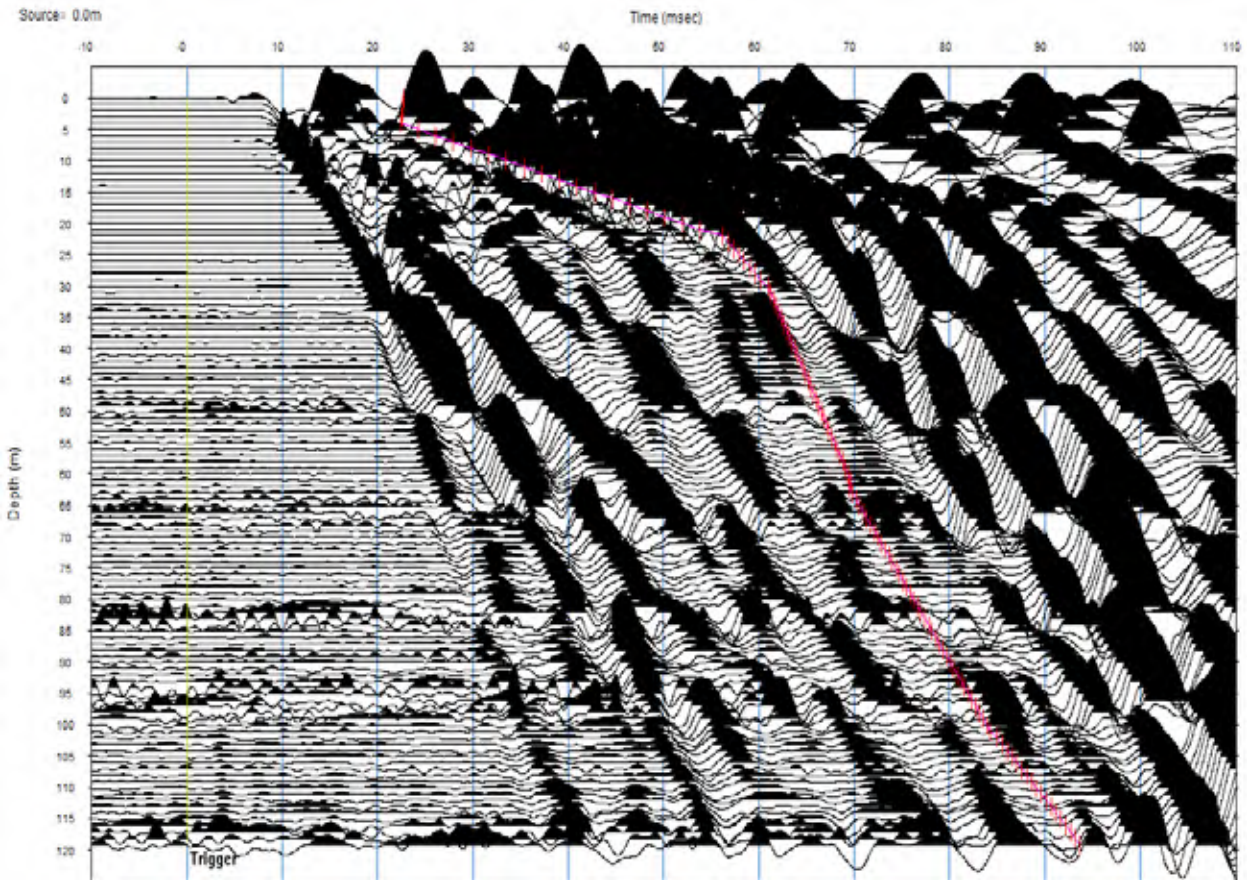
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m^3)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
67.4	68.4	4400	1901	2681	0.39	9689	26842	38986
68.4	69.4	4400	1901	2681	0.39	9689	26842	38986
69.4	70.4	4400	1901	2681	0.39	9689	26842	38986
70.4	71.4	4400	1901	2681	0.39	9689	26842	38986
71.4	72.4	4400	1901	2681	0.39	9689	26842	38986
72.4	73.4	4400	1901	2681	0.39	9689	26842	38986
73.4	74.4	4400	1901	2681	0.39	9689	26842	38986
74.4	75.4	4400	1901	2681	0.39	9689	26842	38986
75.4	76.4	4400	1901	2681	0.39	9689	26842	38986
76.4	77.4	4400	1901	2681	0.39	9689	26842	38986
77.4	78.4	4400	1901	2681	0.39	9689	26842	38986
78.4	79.4	4400	1901	2681	0.39	9689	26842	38986
79.4	80.4	4400	1901	2681	0.39	9689	26842	38986


BH59 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
10
20
30
40
50
60
70
80
Shear Wave Velocity
Compression Wave Velocity

BH65 Compression Wave Picked Arrival Times



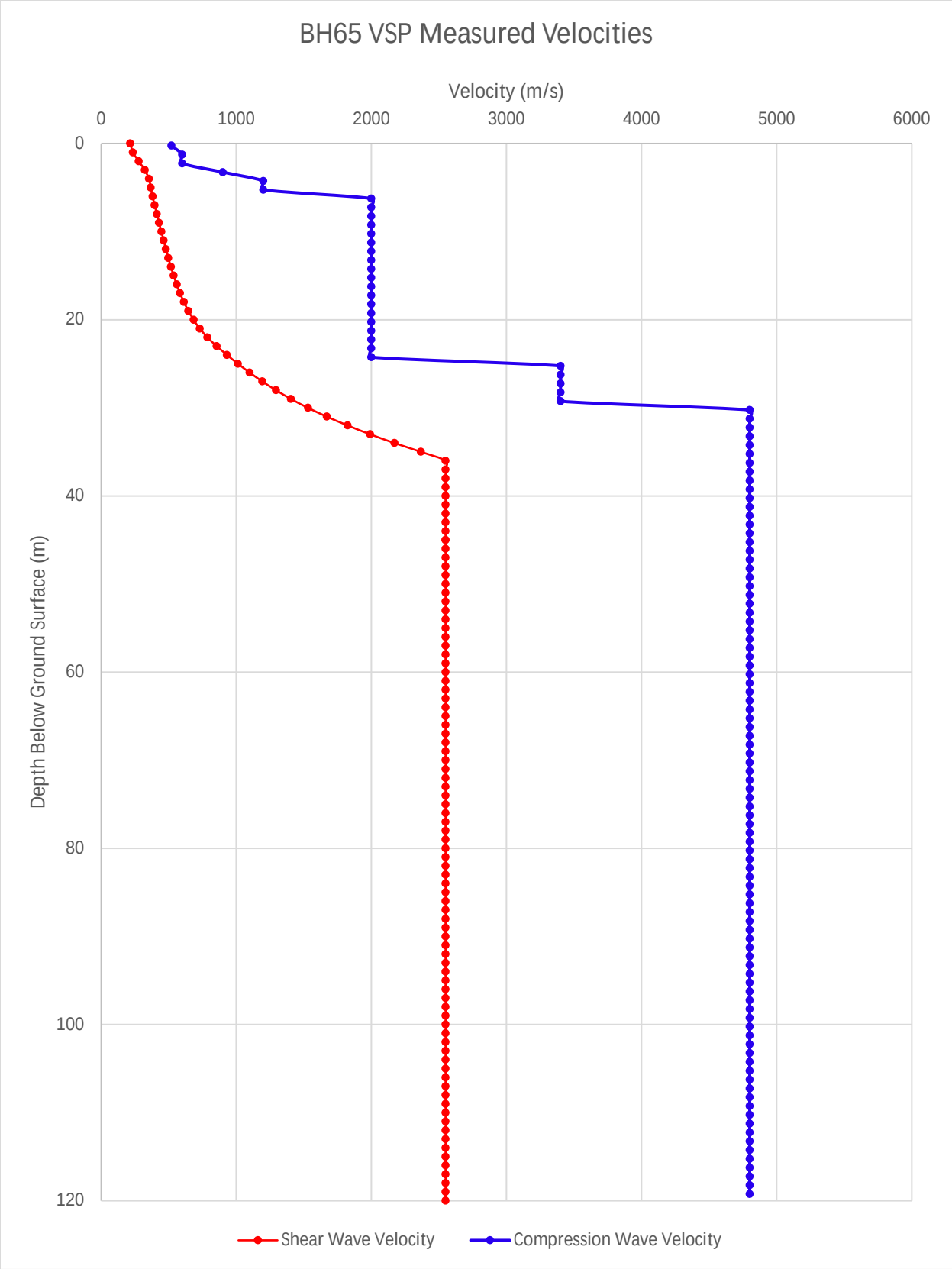
BH65 Shear Wave Picked Arrival Times



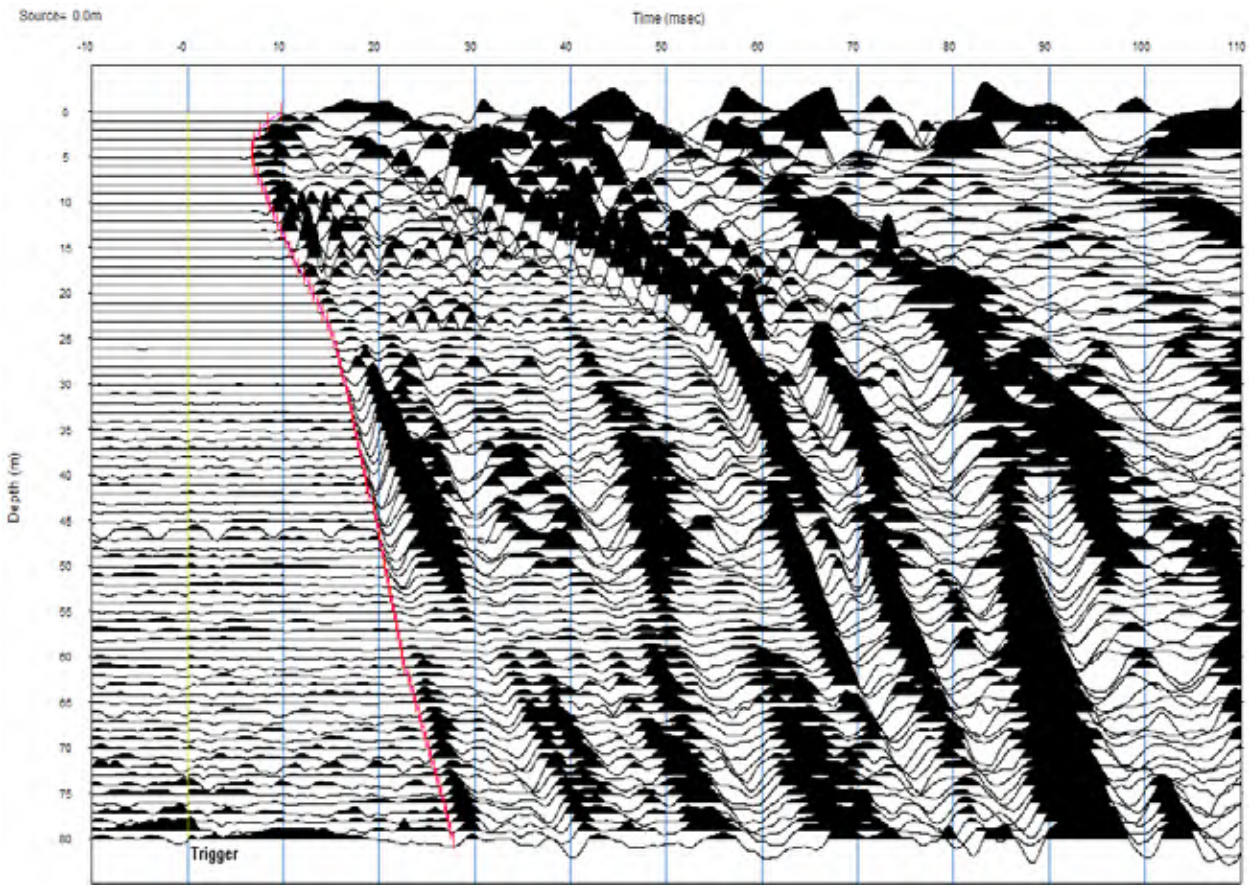
BH65 VSP Velocity Profile

Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	0.3	520	215	2141	0.40	99	276	447
0.3	1.3	600	234	2141	0.41	117	331	614
1.3	2.3	600	277	2141	0.36	164	448	552
2.3	3.3	900	322	2039	0.43	211	603	1370
3.3	4.3	1200	353	2039	0.45	254	738	2597
4.3	5.3	1200	367	2039	0.45	275	796	2570
5.3	6.3	2000	380	2039	0.48	294	872	7763
6.3	7.3	2000	395	2039	0.48	318	941	7732
7.3	8.3	2000	412	2345	0.48	398	1177	8849
8.3	9.3	2000	428	2345	0.48	430	1268	8807
9.3	10.3	2000	445	2243	0.47	444	1309	8380
10.3	11.3	2000	462	2243	0.47	479	1409	8334
11.3	12.3	2000	479	2243	0.47	515	1513	8286
12.3	13.3	2000	497	2141	0.47	529	1552	7859
13.3	14.3	2000	516	2141	0.46	570	1670	7804
14.3	15.3	2000	536	2243	0.46	644	1883	8113
15.3	16.3	2000	559	2243	0.46	701	2043	8037
16.3	17.3	2000	584	2243	0.45	765	2224	7952
17.3	18.3	2000	612	2141	0.45	802	2323	7495
18.3	19.3	2000	645	2243	0.44	933	2691	7728
19.3	20.3	2000	684	2141	0.43	1002	2872	7228
20.3	21.3	2000	729	2345	0.42	1246	3548	7718
21.3	22.3	2000	786	2141	0.41	1323	3726	6800
22.3	23.3	2000	855	2345	0.39	1714	4759	7094
23.3	24.3	2000	931	2345	0.36	2033	5535	6670
24.3	25.3	3400	1012	2345	0.45	2402	6971	23906
25.3	26.3	3400	1099	2641	0.44	3190	9197	26277
26.3	27.3	3400	1192	2641	0.43	3753	10732	25527
27.3	28.3	3400	1294	2641	0.42	4422	12518	24634
28.3	29.3	3400	1405	2681	0.40	5292	14787	23936
29.3	30.3	4800	1530	2681	0.44	6276	18118	53402
30.3	31.3	4800	1670	2681	0.43	7477	21401	51801
31.3	32.3	4800	1824	2681	0.42	8920	25253	49877
32.3	33.3	4800	1990	2681	0.40	10617	29647	47614
33.3	34.3	4800	2171	2681	0.37	12636	34659	44922
34.3	35.3	4800	2367	2681	0.34	15021	40236	41742
35.3	36.3	4800	2549	2681	0.30	17420	45417	38544
36.3	37.3	4800	2549	2681	0.30	17420	45417	38544
37.3	38.3	4800	2549	2681	0.30	17420	45417	38544
38.3	39.3	4800	2549	2681	0.30	17420	45417	38544
39.3	40.3	4800	2549	2681	0.30	17420	45417	38544
40.3	41.3	4800	2549	2681	0.30	17420	45417	38544
41.3	42.3	4800	2549	2681	0.30	17420	45417	38544
42.3	43.3	4800	2549	2681	0.30	17420	45417	38544
43.3	44.3	4800	2549	2681	0.30	17420	45417	38544
44.3	45.3	4800	2549	2681	0.30	17420	45417	38544
45.3	46.3	4800	2549	2681	0.30	17420	45417	38544
46.3	47.3	4800	2549	2681	0.30	17420	45417	38544
47.3	48.3	4800	2549	2681	0.30	17420	45417	38544
48.3	49.3	4800	2549	2681	0.30	17420	45417	38544
49.3	50.3	4800	2549	2681	0.30	17420	45417	38544
50.3	51.3	4800	2549	2681	0.30	17420	45417	38544
51.3	52.3	4800	2549	2681	0.30	17420	45417	38544
52.3	53.3	4800	2549	2681	0.30	17420	45417	38544
53.3	54.3	4800	2549	2681	0.30	17420	45417	38544
54.3	55.3	4800	2549	2681	0.30	17420	45417	38544
55.3	56.3	4800	2549	2681	0.30	17420	45417	38544
56.3	57.3	4800	2549	2681	0.30	17420	45417	38544
57.3	58.3	4800	2549	2681	0.30	17420	45417	38544
58.3	59.3	4800	2549	2681	0.30	17420	45417	38544
59.3	60.3	4800	2549	2681	0.30	17420	45417	38544
60.3	61.3	4800	2549	2681	0.30	17420	45417	38544
61.3	62.3	4800	2549	2681	0.30	17420	45417	38544
62.3	63.3	4800	2549	2681	0.30	17420	45417	38544
63.3	64.3	4800	2549	2681	0.30	17420	45417	38544
64.3	65.3	4800	2549	2681	0.30	17420	45417	38544
65.3	66.3	4800	2549	2681	0.30	17420	45417	38544
66.3	67.3	4800	2549	2681	0.30	17420	45417	38544

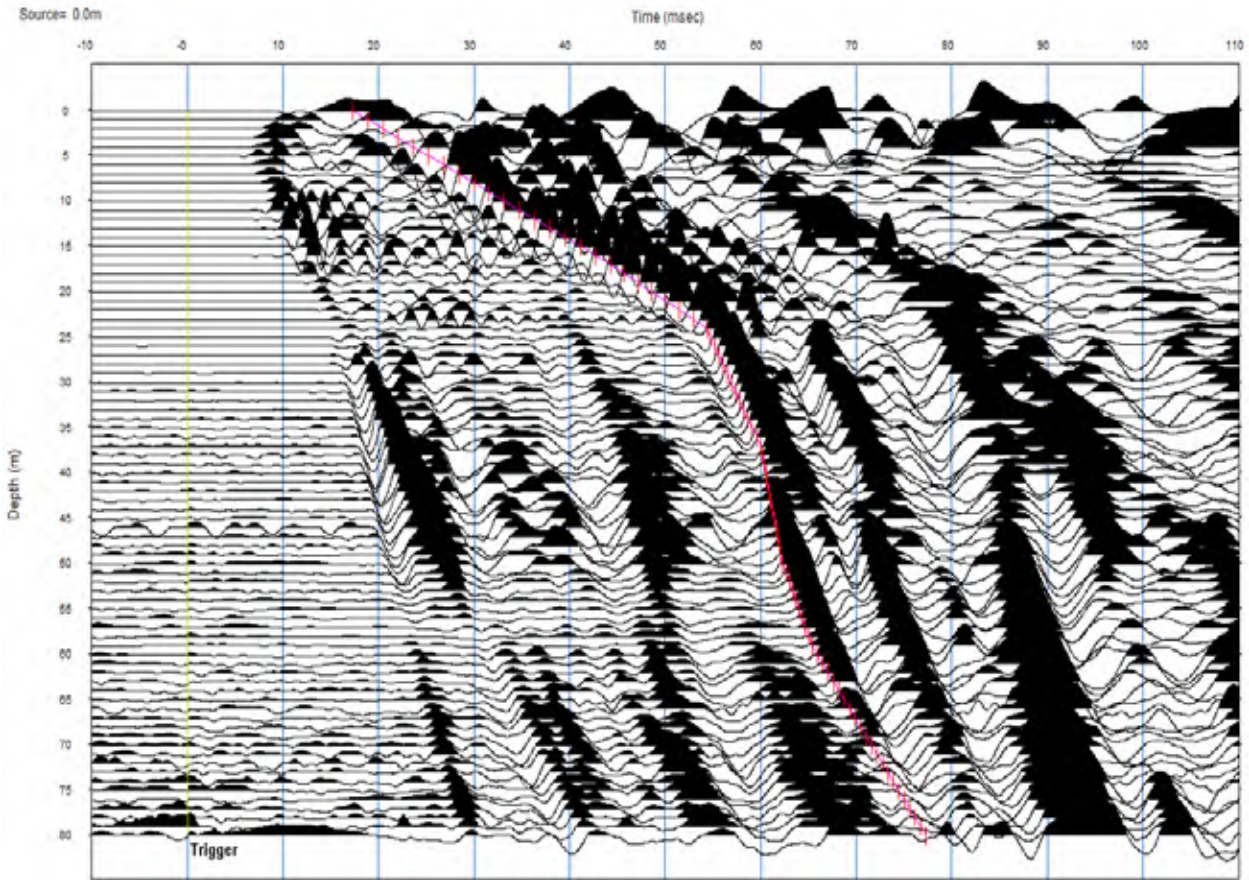
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
67.3	68.3	4800	2549	2681	0.30	17420	45417	38544
68.3	69.3	4800	2549	2681	0.30	17420	45417	38544
69.3	70.3	4800	2549	2681	0.30	17420	45417	38544
70.3	71.3	4800	2549	2681	0.30	17420	45417	38544
71.3	72.3	4800	2549	2681	0.30	17420	45417	38544
72.3	73.3	4800	2549	2681	0.30	17420	45417	38544
73.3	74.3	4800	2549	2681	0.30	17420	45417	38544
74.3	75.3	4800	2549	2681	0.30	17420	45417	38544
75.3	76.3	4800	2549	2681	0.30	17420	45417	38544
76.3	77.3	4800	2549	2681	0.30	17420	45417	38544
77.3	78.3	4800	2549	2681	0.30	17420	45417	38544
78.3	79.3	4800	2549	2681	0.30	17420	45417	38544
79.3	80.3	4800	2549	2681	0.30	17420	45417	38544
80.3	81.3	4800	2549	2681	0.30	17420	45417	38544
81.3	82.3	4800	2549	2681	0.30	17420	45417	38544
82.3	83.3	4800	2549	2681	0.30	17420	45417	38544
83.3	84.3	4800	2549	2681	0.30	17420	45417	38544
84.3	85.3	4800	2549	2681	0.30	17420	45417	38544
85.3	86.3	4800	2549	2681	0.30	17420	45417	38544
86.3	87.3	4800	2549	2681	0.30	17420	45417	38544
87.3	88.3	4800	2549	2681	0.30	17420	45417	38544
88.3	89.3	4800	2549	2681	0.30	17420	45417	38544
89.3	90.3	4800	2549	2681	0.30	17420	45417	38544
90.3	91.3	4800	2549	2679	0.30	17407	45383	38515
91.3	92.3	4800	2549	2679	0.30	17407	45383	38515
92.3	93.3	4800	2549	2679	0.30	17407	45383	38515
93.3	94.3	4800	2549	2679	0.30	17407	45383	38515
94.3	95.3	4800	2549	2679	0.30	17407	45383	38515
95.3	96.3	4800	2549	2679	0.30	17407	45383	38515
96.3	97.3	4800	2549	2679	0.30	17407	45383	38515
97.3	98.3	4800	2549	2679	0.30	17407	45383	38515
98.3	99.3	4800	2549	2679	0.30	17407	45383	38515
99.3	100.3	4800	2549	2679	0.30	17407	45383	38515
100.3	101.3	4800	2549	2679	0.30	17407	45383	38515
101.3	102.3	4800	2549	2679	0.30	17407	45383	38515
102.3	103.3	4800	2549	2679	0.30	17407	45383	38515
103.3	104.3	4800	2549	2679	0.30	17407	45383	38515
104.3	105.3	4800	2549	2679	0.30	17407	45383	38515
105.3	106.3	4800	2549	2679	0.30	17407	45383	38515
106.3	107.3	4800	2549	2679	0.30	17407	45383	38515
107.3	108.3	4800	2549	2679	0.30	17407	45383	38515
108.3	109.3	4800	2549	2679	0.30	17407	45383	38515
109.3	110.3	4800	2549	2679	0.30	17407	45383	38515
110.3	111.3	4800	2549	2679	0.30	17407	45383	38515
111.3	112.3	4800	2549	2679	0.30	17407	45383	38515
112.3	113.3	4800	2549	2679	0.30	17407	45383	38515
113.3	114.3	4800	2549	2679	0.30	17407	45383	38515
114.3	115.3	4800	2549	2679	0.30	17407	45383	38515
115.3	116.3	4800	2549	2679	0.30	17407	45383	38515
116.3	117.3	4800	2549	2679	0.30	17407	45383	38515
117.3	118.3	4800	2549	2679	0.30	17407	45383	38515
118.3	119.3	4800	2549	2679	0.30	17407	45383	38515


BH65 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
20
40
60
80
100
120
Shear Wave Velocity
Compression Wave Velocity

BH66 Compression Wave Picked Arrival Times



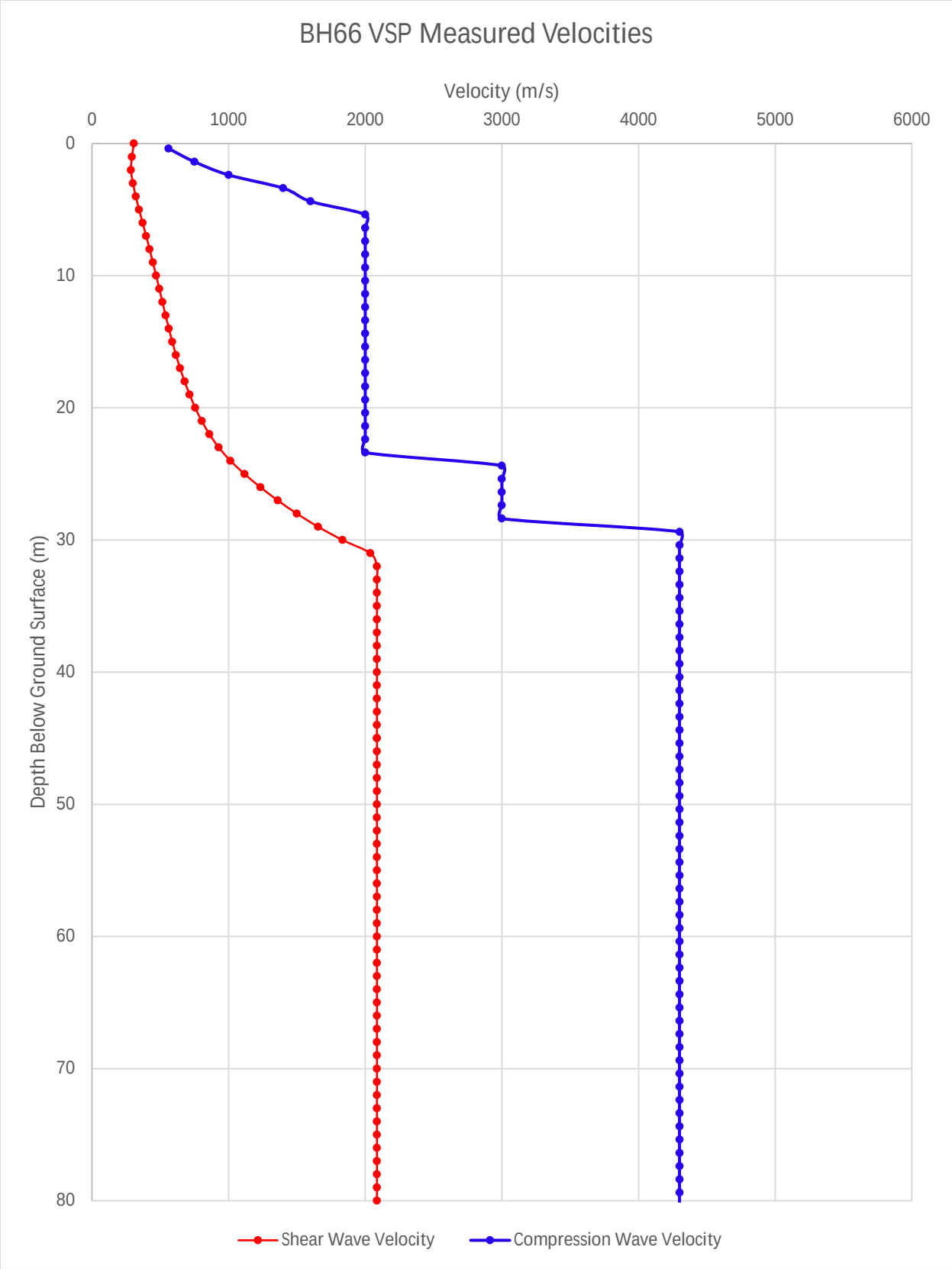
BH66 Shear Wave Picked Arrival Times



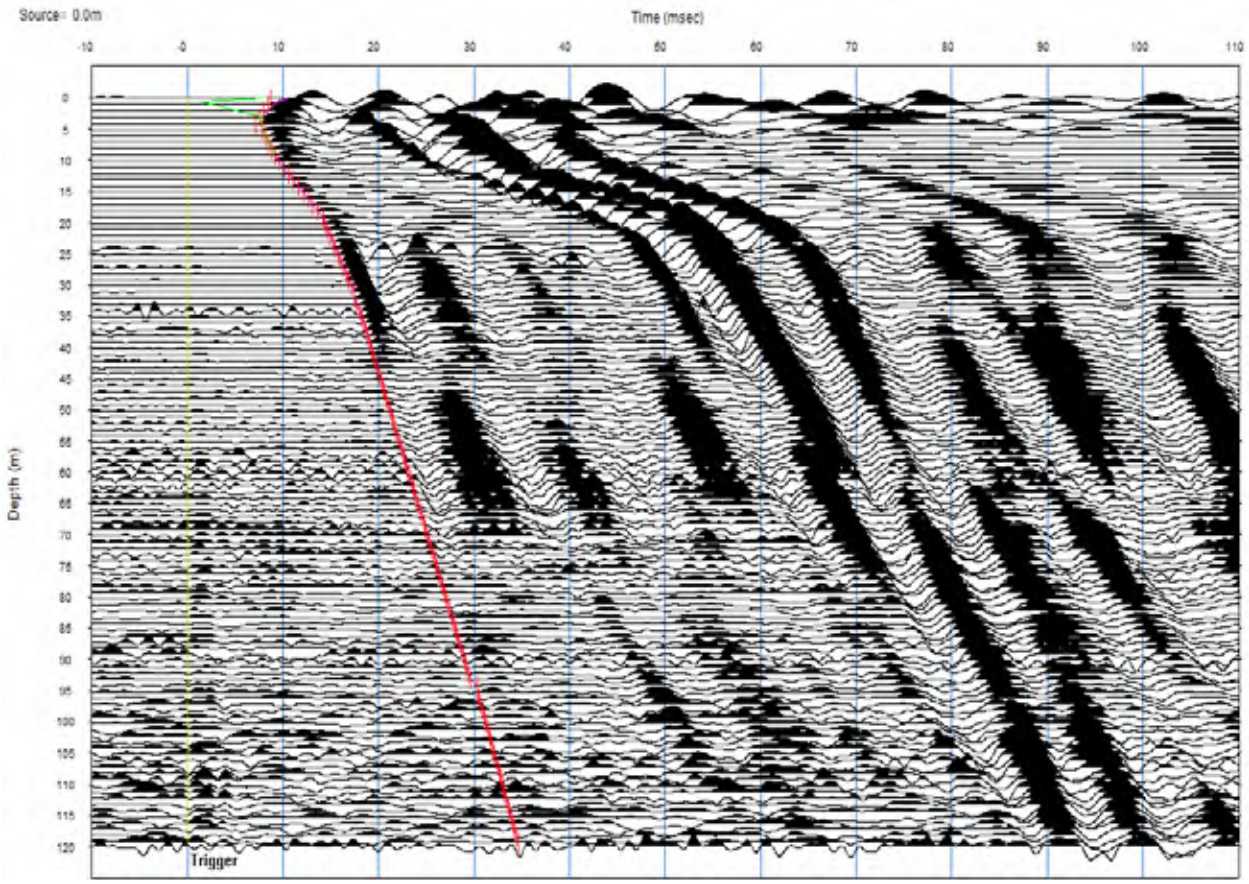
BH66 VSP Velocity Profile

Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	0.4	560	307	2141	0.29	202	519	402
0.4	1.4	750	293	2141	0.41	184	518	959
1.4	2.4	1000	285	2141	0.46	174	506	1909
2.4	3.4	1400	300	2039	0.48	184	542	3752
3.4	4.4	1600	321	2039	0.48	210	621	4940
4.4	5.4	2000	345	2039	0.48	243	721	7832
5.4	6.4	2000	371	2039	0.48	281	832	7782
6.4	7.4	2000	397	2345	0.48	370	1094	8887
7.4	8.4	2000	422	2345	0.48	418	1233	8823
8.4	9.4	2000	446	2243	0.47	446	1315	8377
9.4	10.4	2000	470	2243	0.47	495	1457	8311
10.4	11.4	2000	493	2243	0.47	545	1600	8245
11.4	12.4	2000	516	2243	0.46	597	1749	8176
12.4	13.4	2000	539	2243	0.46	652	1904	8103
13.4	14.4	2000	563	2243	0.46	711	2072	8024
14.4	15.4	2000	588	2243	0.45	776	2253	7938
15.4	16.4	2000	615	2243	0.45	848	2456	7841
16.4	17.4	2000	645	2243	0.44	933	2691	7728
17.4	18.4	2000	678	2243	0.44	1031	2959	7597
18.4	19.4	2000	715	2141	0.43	1095	3123	7105
19.4	20.4	2000	756	2141	0.42	1224	3467	6932
20.4	21.4	2000	804	2141	0.40	1384	3885	6719
21.4	22.4	2000	860	2141	0.39	1583	4391	6453
22.4	23.4	2000	928	2141	0.36	1844	5026	6106
23.4	24.4	3000	1013	2345	0.44	2406	6909	17897
24.4	25.4	3000	1116	2345	0.42	2921	8293	17211
25.4	26.4	3000	1232	2641	0.40	4009	11213	18424
26.4	27.4	3000	1359	2641	0.37	4878	13373	17266
27.4	28.4	3000	1499	2641	0.33	5934	15828	15857
28.4	29.4	4300	1655	2681	0.41	7343	20753	39781
29.4	30.4	4300	1833	2681	0.39	9008	25023	37561
30.4	31.4	4300	2037	2681	0.36	11124	30155	34739
31.4	32.4	4300	2086	2681	0.35	11666	31408	34017
32.4	33.4	4300	2086	2681	0.35	11666	31408	34017
33.4	34.4	4300	2086	2681	0.35	11666	31408	34017
34.4	35.4	4300	2086	2681	0.35	11666	31408	34017
35.4	36.4	4300	2086	2681	0.35	11666	31408	34017
36.4	37.4	4300	2086	2681	0.35	11666	31408	34017
37.4	38.4	4300	2086	2681	0.35	11666	31408	34017
38.4	39.4	4300	2086	2681	0.35	11666	31408	34017
39.4	40.4	4300	2086	2681	0.35	11666	31408	34017
40.4	41.4	4300	2086	2681	0.35	11666	31408	34017
41.4	42.4	4300	2086	2681	0.35	11666	31408	34017
42.4	43.4	4300	2086	2681	0.35	11666	31408	34017
43.4	44.4	4300	2086	2681	0.35	11666	31408	34017
44.4	45.4	4300	2086	2681	0.35	11666	31408	34017
45.4	46.4	4300	2086	2681	0.35	11666	31408	34017
46.4	47.4	4300	2086	2681	0.35	11666	31408	34017
47.4	48.4	4300	2086	2681	0.35	11666	31408	34017
48.4	49.4	4300	2086	2681	0.35	11666	31408	34017
49.4	50.4	4300	2086	2681	0.35	11666	31408	34017
50.4	51.4	4300	2086	2681	0.35	11666	31408	34017
51.4	52.4	4300	2086	2681	0.35	11666	31408	34017
52.4	53.4	4300	2086	2681	0.35	11666	31408	34017
53.4	54.4	4300	2086	2681	0.35	11666	31408	34017
54.4	55.4	4300	2086	2681	0.35	11666	31408	34017
55.4	56.4	4300	2086	2681	0.35	11666	31408	34017
56.4	57.4	4300	2086	2681	0.35	11666	31408	34017
57.4	58.4	4300	2086	2681	0.35	11666	31408	34017
58.4	59.4	4300	2086	2681	0.35	11666	31408	34017
59.4	60.4	4300	2086	2681	0.35	11666	31408	34017
60.4	61.4	4300	2086	2681	0.35	11666	31408	34017
61.4	62.4	4300	2086	2681	0.35	11666	31408	34017
62.4	63.4	4300	2086	2681	0.35	11666	31408	34017
63.4	64.4	4300	2086	2681	0.35	11666	31408	34017
64.4	65.4	4300	2086	2681	0.35	11666	31408	34017
65.4	66.4	4300	2086	2681	0.35	11666	31408	34017
66.4	67.4	4300	2086	2681	0.35	11666	31408	34017

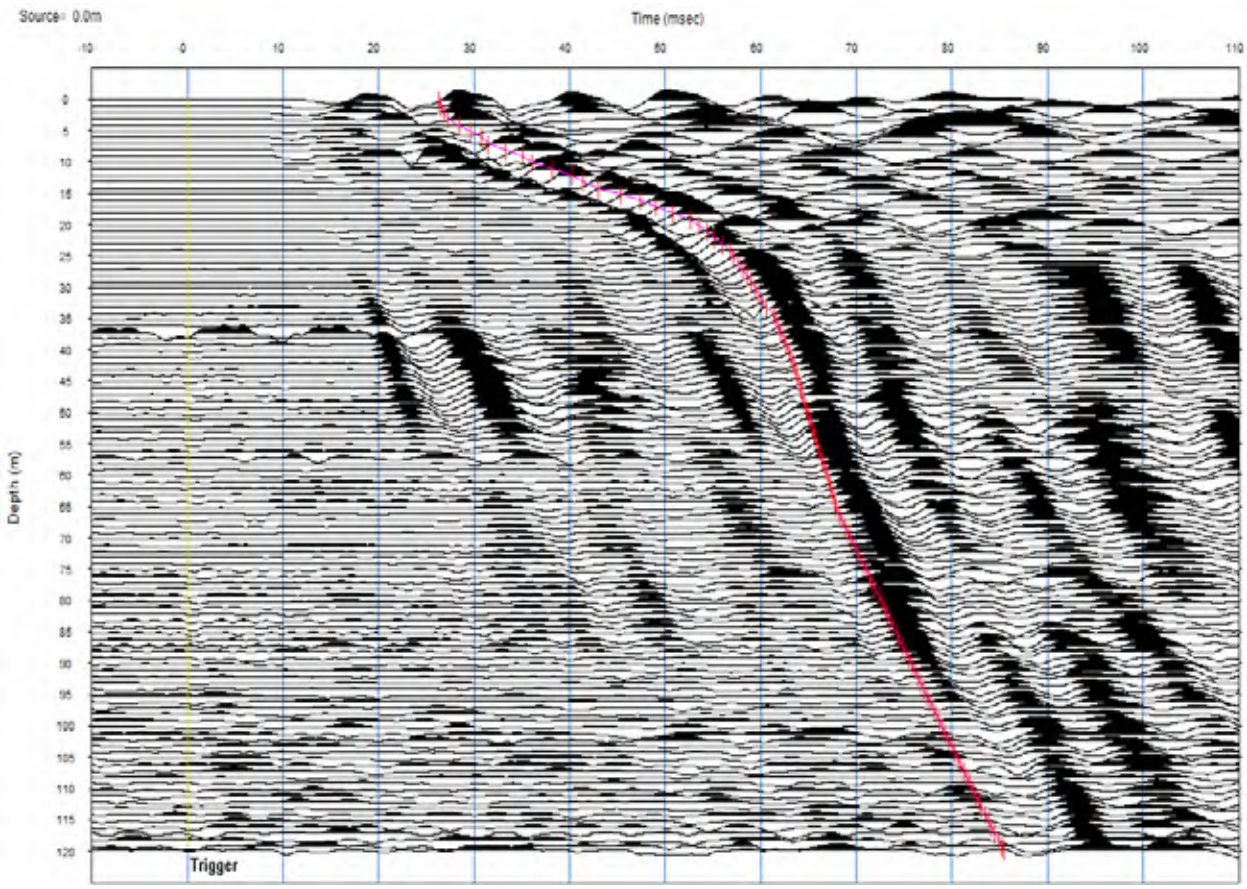
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m^3)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
67.4	68.4	4300	2086	2681	0.35	11666	31408	34017
68.4	69.4	4300	2086	2681	0.35	11666	31408	34017
69.4	70.4	4300	2086	2681	0.35	11666	31408	34017
70.4	71.4	4300	2086	2681	0.35	11666	31408	34017
71.4	72.4	4300	2086	2681	0.35	11666	31408	34017
72.4	73.4	4300	2086	2681	0.35	11666	31408	34017
73.4	74.4	4300	2086	2681	0.35	11666	31408	34017
74.4	75.4	4300	2086	2681	0.35	11666	31408	34017
75.4	76.4	4300	2086	2681	0.35	11666	31408	34017
76.4	77.4	4300	2086	2681	0.35	11666	31408	34017
77.4	78.4	4300	2086	2681	0.35	11666	31408	34017
78.4	79.4	4300	2086	2681	0.35	11666	31408	34017
79.4	80.4	4300	2086	2681	0.35	11666	31408	34017


BH66 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
10
20
30
40
50
60
70
80
Shear Wave Velocity
Compression Wave Velocity

BH71 Compression Wave Picked Arrival Times



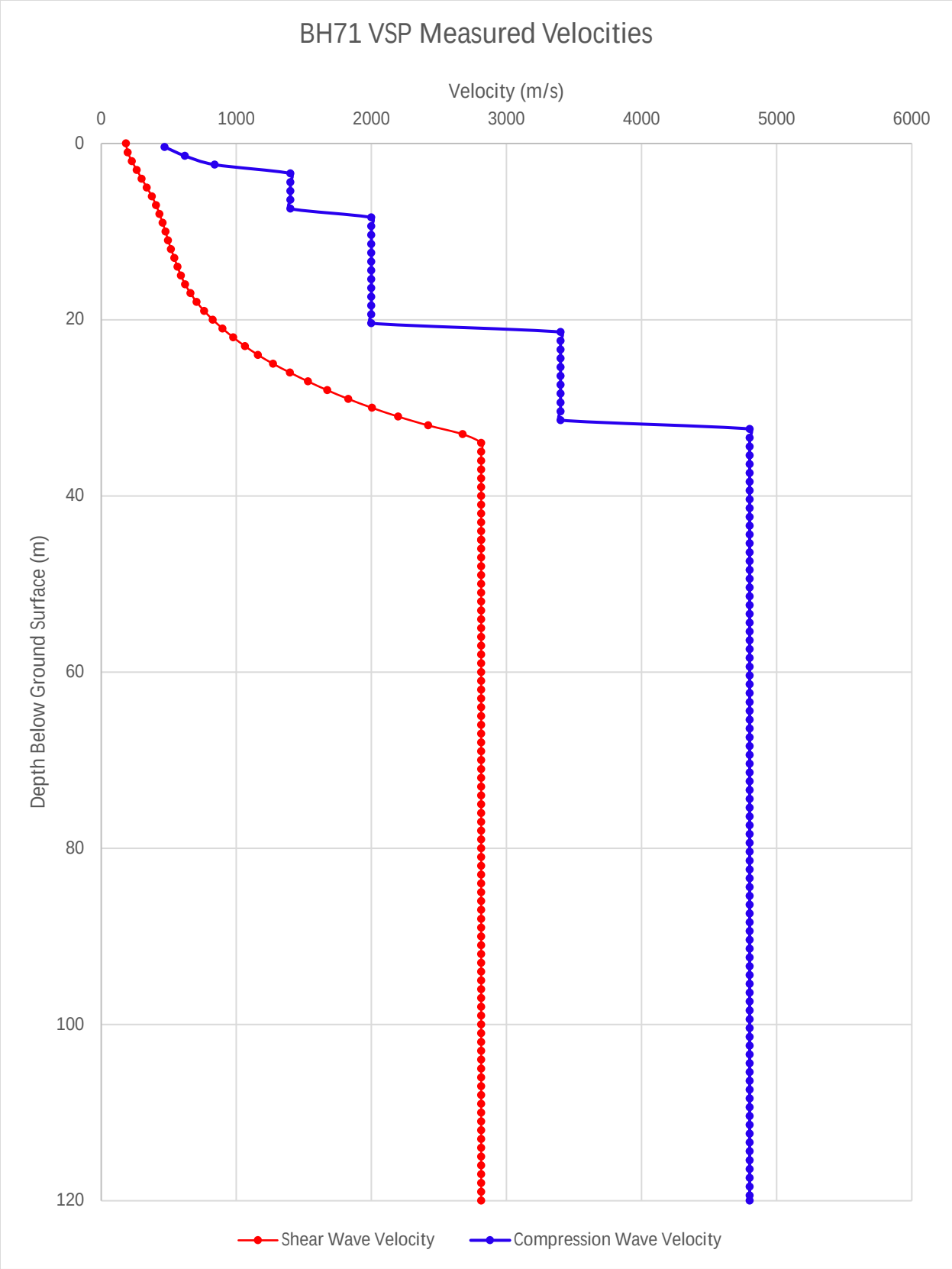
BH71 Shear Wave Picked Arrival Times



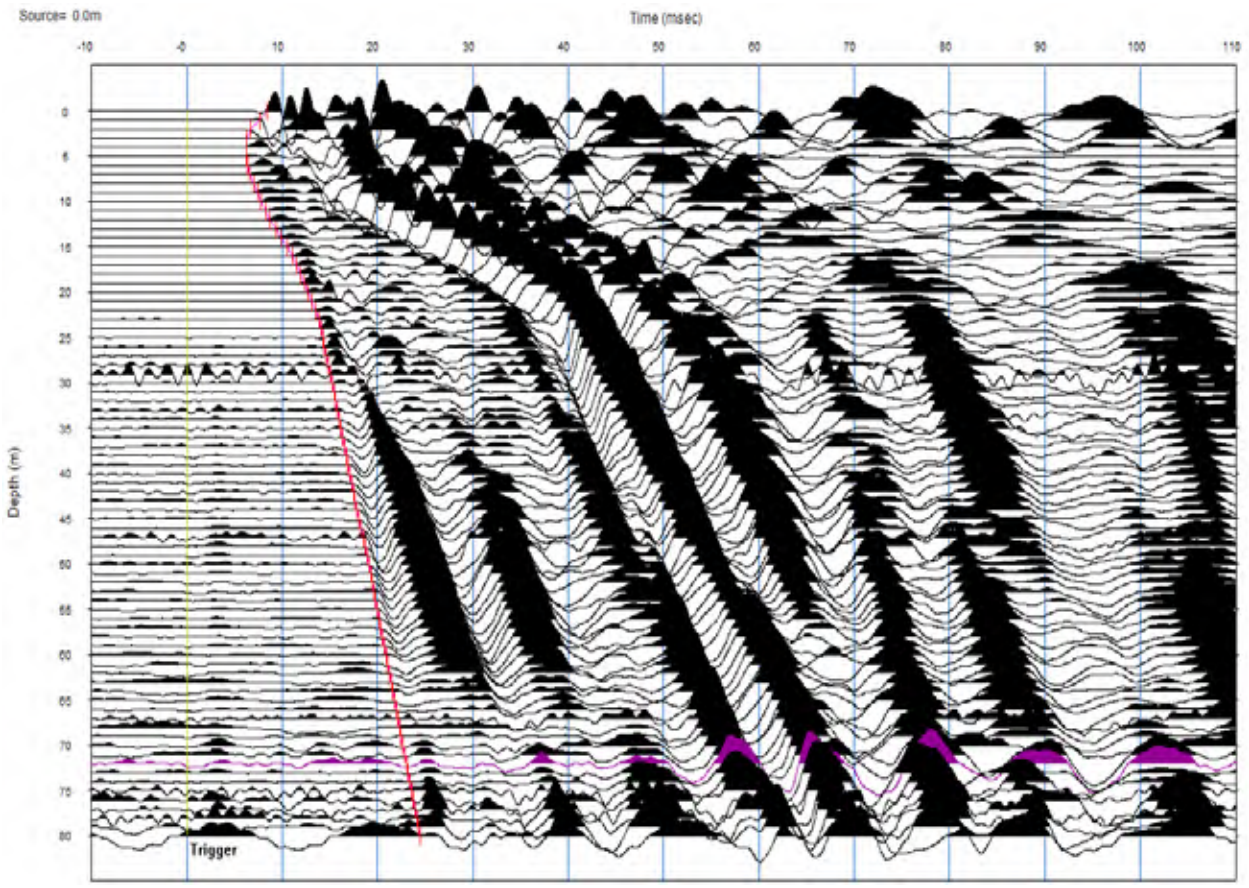
BH71 VSP Velocity Profile

Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	0.4	470	183	2141	0.41	72	202	377
0.4	1.4	620	196	2141	0.44	82	238	713
1.4	2.4	840	227	2039	0.46	105	307	1299
2.4	3.4	1400	263	2039	0.48	141	418	3808
3.4	4.4	1400	300	2039	0.48	184	542	3752
4.4	5.4	1400	338	2345	0.47	268	787	4239
5.4	6.4	1400	375	2345	0.46	330	964	4157
6.4	7.4	1400	406	2345	0.45	387	1124	4081
7.4	8.4	2000	431	2345	0.48	436	1286	8799
8.4	9.4	2000	454	2345	0.47	483	1424	8736
9.4	10.4	2000	476	2345	0.47	531	1562	8672
10.4	11.4	2000	495	2345	0.47	575	1686	8614
11.4	12.4	2000	517	2243	0.46	600	1756	8173
12.4	13.4	2000	541	2243	0.46	656	1918	8097
13.4	14.4	2000	565	2243	0.46	716	2086	8017
14.4	15.4	2000	590	2243	0.45	781	2268	7931
15.4	16.4	2000	622	2243	0.45	868	2510	7815
16.4	17.4	2000	661	2141	0.44	935	2692	7317
17.4	18.4	2000	707	2141	0.43	1070	3058	7137
18.4	19.4	2000	762	2141	0.42	1243	3518	6906
19.4	20.4	2000	826	2345	0.40	1600	4471	7247
20.4	21.4	3400	898	2345	0.46	1891	5531	24587
21.4	22.4	3400	977	2345	0.45	2238	6514	24124
22.4	23.4	3400	1064	2345	0.45	2655	7676	23569
23.4	24.4	3400	1161	2345	0.43	3161	9065	22894
24.4	25.4	3400	1272	2641	0.42	4273	12124	24832
25.4	26.4	3400	1397	2641	0.40	5154	14416	23658
26.4	27.4	3400	1530	2641	0.37	6182	16977	22287
27.4	28.4	3400	1673	2641	0.34	7392	19814	20674
28.4	29.4	3400	1830	2681	0.30	8978	23273	19021
29.4	30.4	3400	2004	2681	0.23	10767	26569	16636
30.4	31.4	3400	2199	2681	0.14	12964	29570	13707
31.4	32.4	4800	2421	2681	0.33	15714	41780	40818
32.4	33.4	4800	2676	2681	0.27	19199	48938	36172
33.4	34.4	4800	2813	2681	0.24	21215	52547	33484
34.4	35.4	4800	2813	2681	0.24	21215	52547	33484
35.4	36.4	4800	2813	2681	0.24	21215	52547	33484
36.4	37.4	4800	2813	2681	0.24	21215	52547	33484
37.4	38.4	4800	2813	2681	0.24	21215	52547	33484
38.4	39.4	4800	2813	2681	0.24	21215	52547	33484
39.4	40.4	4800	2813	2681	0.24	21215	52547	33484
40.4	41.4	4800	2813	2681	0.24	21215	52547	33484
41.4	42.4	4800	2813	2681	0.24	21215	52547	33484
42.4	43.4	4800	2813	2681	0.24	21215	52547	33484
43.4	44.4	4800	2813	2681	0.24	21215	52547	33484
44.4	45.4	4800	2813	2681	0.24	21215	52547	33484
45.4	46.4	4800	2813	2681	0.24	21215	52547	33484
46.4	47.4	4800	2813	2681	0.24	21215	52547	33484
47.4	48.4	4800	2813	2681	0.24	21215	52547	33484
48.4	49.4	4800	2813	2681	0.24	21215	52547	33484
49.4	50.4	4800	2813	2681	0.24	21215	52547	33484
50.4	51.4	4800	2813	2681	0.24	21215	52547	33484
51.4	52.4	4800	2813	2681	0.24	21215	52547	33484
52.4	53.4	4800	2813	2681	0.24	21215	52547	33484
53.4	54.4	4800	2813	2681	0.24	21215	52547	33484
54.4	55.4	4800	2813	2681	0.24	21215	52547	33484
55.4	56.4	4800	2813	2681	0.24	21215	52547	33484
56.4	57.4	4800	2813	2681	0.24	21215	52547	33484
57.4	58.4	4800	2813	2681	0.24	21215	52547	33484
58.4	59.4	4800	2813	2681	0.24	21215	52547	33484
59.4	60.4	4800	2813	2681	0.24	21215	52547	33484
60.4	61.4	4800	2813	2681	0.24	21215	52547	33484
61.4	62.4	4800	2813	2681	0.24	21215	52547	33484
62.4	63.4	4800	2813	2681	0.24	21215	52547	33484
63.4	64.4	4800	2813	2681	0.24	21215	52547	33484
64.4	65.4	4800	2813	2681	0.24	21215	52547	33484
65.4	66.4	4800	2813	2681	0.24	21215	52547	33484

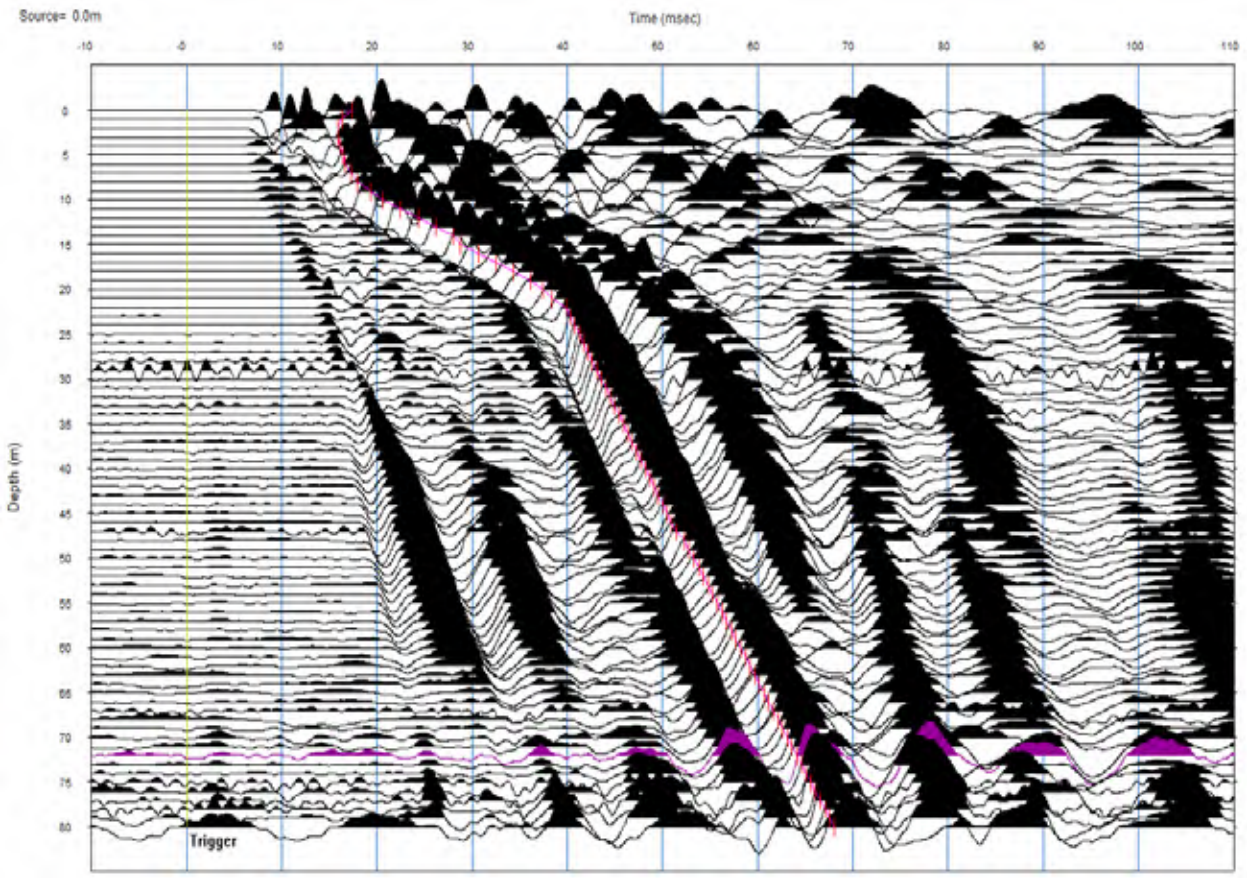
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
66.4	67.4	4800	2813	2681	0.24	21215	52547	33484
67.4	68.4	4800	2813	2681	0.24	21215	52547	33484
68.4	69.4	4800	2813	2681	0.24	21215	52547	33484
69.4	70.4	4800	2813	2681	0.24	21215	52547	33484
70.4	71.4	4800	2813	2681	0.24	21215	52547	33484
71.4	72.4	4800	2813	2681	0.24	21215	52547	33484
72.4	73.4	4800	2813	2681	0.24	21215	52547	33484
73.4	74.4	4800	2813	2681	0.24	21215	52547	33484
74.4	75.4	4800	2813	2681	0.24	21215	52547	33484
75.4	76.4	4800	2813	2681	0.24	21215	52547	33484
76.4	77.4	4800	2813	2681	0.24	21215	52547	33484
77.4	78.4	4800	2813	2681	0.24	21215	52547	33484
78.4	79.4	4800	2813	2681	0.24	21215	52547	33484
79.4	80.4	4800	2813	2681	0.24	21215	52547	33484
80.4	81.4	4800	2813	2681	0.24	21215	52547	33484
81.4	82.4	4800	2813	2681	0.24	21215	52547	33484
82.4	83.4	4800	2813	2681	0.24	21215	52547	33484
83.4	84.4	4800	2813	2681	0.24	21215	52547	33484
84.4	85.4	4800	2813	2681	0.24	21215	52547	33484
85.4	86.4	4800	2813	2681	0.24	21215	52547	33484
86.4	87.4	4800	2813	2681	0.24	21215	52547	33484
87.4	88.4	4800	2813	2681	0.24	21215	52547	33484
88.4	89.4	4800	2813	2679	0.24	21199	52507	33459
89.4	90.4	4800	2813	2679	0.24	21199	52507	33459
90.4	91.4	4800	2813	2679	0.24	21199	52507	33459
91.4	92.4	4800	2813	2679	0.24	21199	52507	33459
92.4	93.4	4800	2813	2679	0.24	21199	52507	33459
93.4	94.4	4800	2813	2679	0.24	21199	52507	33459
94.4	95.4	4800	2813	2679	0.24	21199	52507	33459
95.4	96.4	4800	2813	2679	0.24	21199	52507	33459
96.4	97.4	4800	2813	2679	0.24	21199	52507	33459
97.4	98.4	4800	2813	2679	0.24	21199	52507	33459
98.4	99.4	4800	2813	2679	0.24	21199	52507	33459
99.4	100.4	4800	2813	2679	0.24	21199	52507	33459
100.4	101.4	4800	2813	2679	0.24	21199	52507	33459
101.4	102.4	4800	2813	2679	0.24	21199	52507	33459
102.4	103.4	4800	2813	2679	0.24	21199	52507	33459
103.4	104.4	4800	2813	2679	0.24	21199	52507	33459
104.4	105.4	4800	2813	2679	0.24	21199	52507	33459
105.4	106.4	4800	2813	2679	0.24	21199	52507	33459
106.4	107.4	4800	2813	2679	0.24	21199	52507	33459
107.4	108.4	4800	2813	2679	0.24	21199	52507	33459
108.4	109.4	4800	2813	2679	0.24	21199	52507	33459
109.4	110.4	4800	2813	2679	0.24	21199	52507	33459
110.4	111.4	4800	2813	2679	0.24	21199	52507	33459
111.4	112.4	4800	2813	2679	0.24	21199	52507	33459
112.4	113.4	4800	2813	2679	0.24	21199	52507	33459
113.4	114.4	4800	2813	2679	0.24	21199	52507	33459
114.4	115.4	4800	2813	2679	0.24	21199	52507	33459
115.4	116.4	4800	2813	2679	0.24	21199	52507	33459
116.4	117.4	4800	2813	2679	0.24	21199	52507	33459
117.4	118.4	4800	2813	2679	0.24	21199	52507	33459
118.4	119.4	4800	2813	2679	0.24	21199	52507	33459
119.4	120	4800	2813	2679	0.24	21199	52507	33459


BH71 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
20
40
60
80
100
120
Shear Wave Velocity
Compression Wave Velocity

BH78 Compression Wave Pick Arrival Times



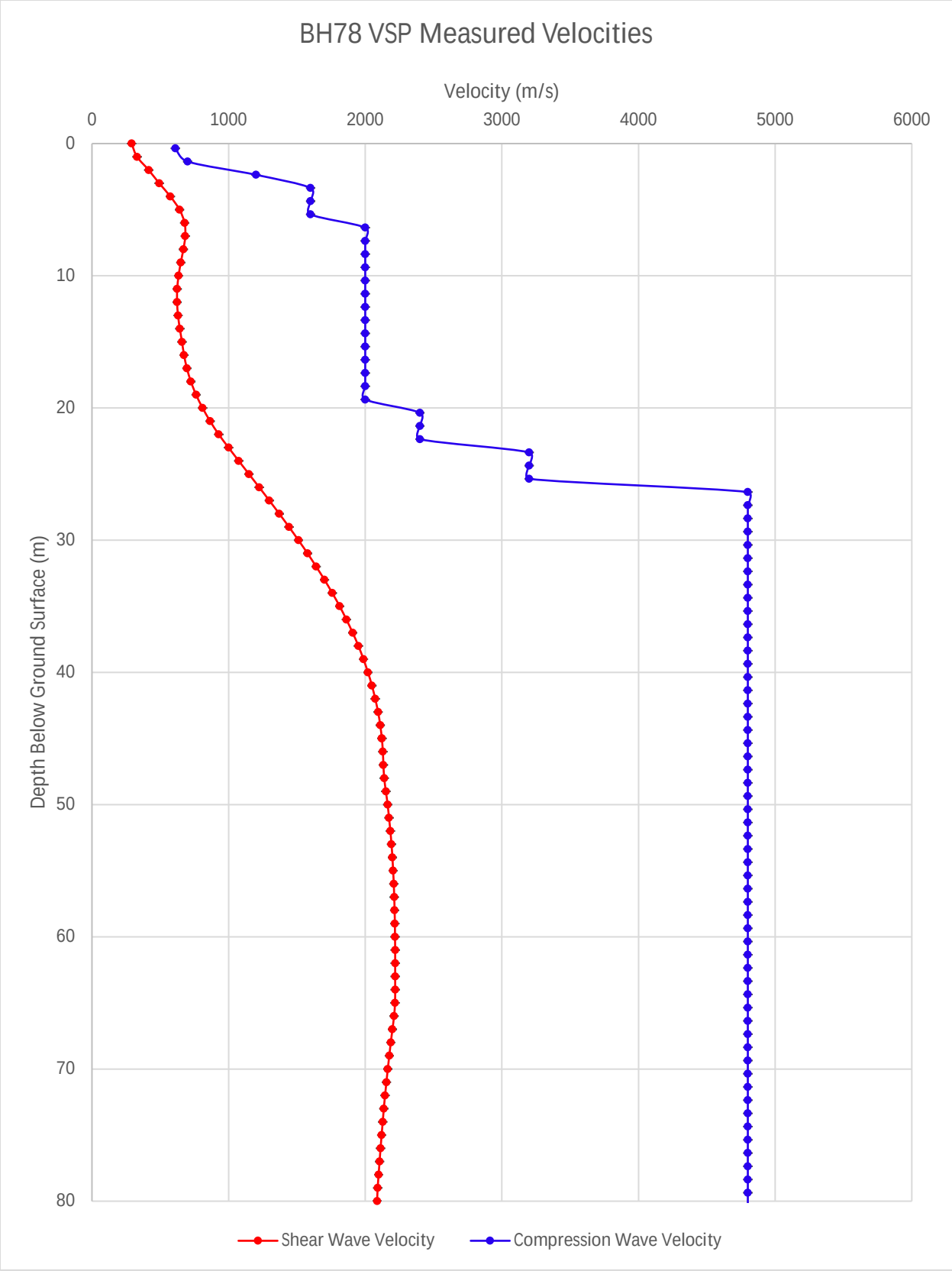
BH78 Shear Wave Pick Arrival Times



BH78 VSP Velocity Profile

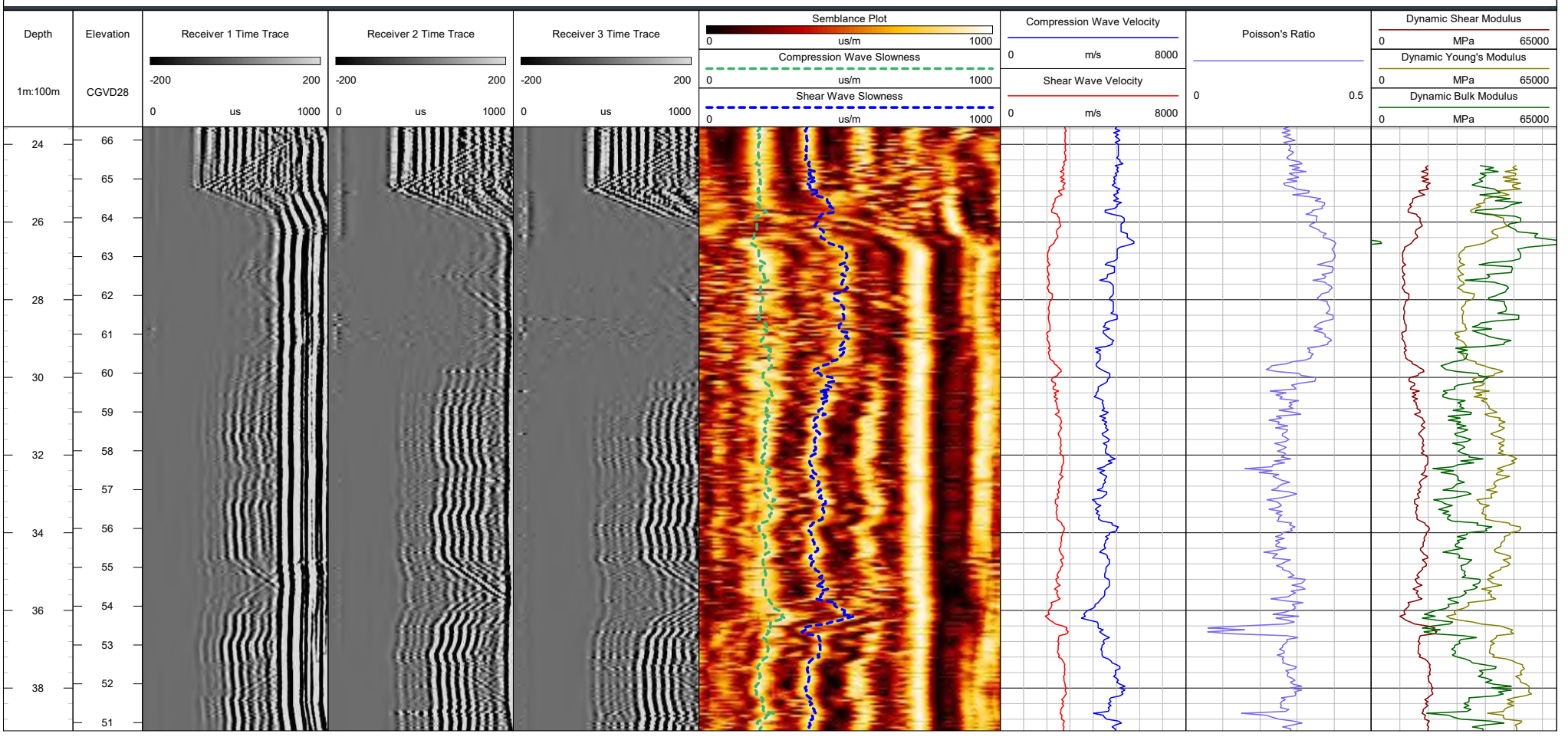
Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m³)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
0.0	0.3	610	290	2141	0.35	180	488	557
0.3	1.3	700	330	2141	0.36	233	633	738
1.3	2.3	1200	415	2345	0.43	404	1157	2838
2.3	3.3	1600	492	2345	0.45	568	1644	5246
3.3	4.3	1600	574	2345	0.43	773	2204	4973
4.3	5.3	1600	641	2345	0.40	964	2706	4719
5.3	6.3	2000	678	2345	0.44	1078	3094	7943
6.3	7.3	2000	683	2345	0.43	1094	3137	7921
7.3	8.3	2000	669	2345	0.44	1050	3016	7981
8.3	9.3	2000	650	2345	0.44	991	2855	8059
9.3	10.3	2000	634	2345	0.44	943	2722	8123
10.3	11.3	2000	624	2243	0.45	873	2526	7808
11.3	12.3	2000	623	2243	0.45	871	2518	7811
12.3	13.3	2000	630	2243	0.44	890	2573	7785
13.3	14.3	2000	643	2243	0.44	927	2675	7736
14.3	15.3	2000	659	2243	0.44	974	2804	7673
15.3	16.3	2000	674	2243	0.44	1019	2926	7613
16.3	17.3	2000	695	2141	0.43	1034	2960	7185
17.3	18.3	2000	724	2141	0.42	1122	3198	7068
18.3	19.3	2000	762	2345	0.42	1362	3854	7565
19.3	20.3	2400	810	2345	0.44	1539	4418	11456
20.3	21.3	2400	865	2345	0.43	1755	5002	11168
21.3	22.3	2400	928	2345	0.41	2019	5703	10815
22.3	23.3	3200	1000	2345	0.45	2345	6781	20886
23.3	24.3	3200	1074	2641	0.44	3046	8752	22982
24.3	25.3	3200	1149	2641	0.43	3487	9944	22395
25.3	26.3	4800	1224	2641	0.47	3957	11595	55573
26.3	27.3	4800	1298	2641	0.46	4450	12998	54916
27.3	28.3	4800	1371	2681	0.46	5039	14670	55051
28.3	29.3	4800	1442	2681	0.45	5575	16171	54337
29.3	30.3	4800	1511	2681	0.45	6121	17690	53609
30.3	31.3	4800	1578	2681	0.44	6676	19219	52869
31.3	32.3	4800	1641	2681	0.43	7220	20703	52144
32.3	33.3	4800	1702	2681	0.43	7766	22182	51415
33.3	34.3	4800	1759	2681	0.42	8295	23599	50710
34.3	35.3	4800	1813	2681	0.42	8812	24971	50020
35.3	36.3	4800	1862	2681	0.41	9295	26239	49377
36.3	37.3	4800	1908	2681	0.41	9760	27449	48757
37.3	38.3	4800	1950	2681	0.40	10195	28568	48178
38.3	39.3	4800	1987	2681	0.40	10585	29566	47657
39.3	40.3	4800	2020	2681	0.39	10940	30464	47184
40.3	41.3	4800	2049	2681	0.39	11256	31260	46762
41.3	42.3	4800	2073	2681	0.39	11521	31922	46409
42.3	43.3	4800	2094	2681	0.38	11756	32504	46096
43.3	44.3	4800	2110	2681	0.38	11936	32949	45855
44.3	45.3	4800	2122	2681	0.38	12072	33284	45674
45.3	46.3	4800	2122	2681	0.38	12072	33284	45674
46.3	47.3	4800	2129	2681	0.38	12152	33480	45568
47.3	48.3	4800	2133	2681	0.38	12198	33592	45507
48.3	49.3	4800	2139	2681	0.38	12266	33760	45415
49.3	50.3	4800	2151	2681	0.37	12404	34096	45231
50.3	51.3	4800	2164	2681	0.37	12555	34462	45030
51.3	52.3	4800	2174	2681	0.37	12671	34743	44875
52.3	53.3	4800	2184	2681	0.37	12788	35025	44720
53.3	54.3	4800	2192	2681	0.37	12882	35251	44594
54.3	55.3	4800	2199	2681	0.37	12964	35449	44485
55.3	56.3	4800	2204	2681	0.37	13023	35591	44406
56.3	57.3	4800	2209	2681	0.37	13082	35732	44327
57.3	58.3	4800	2212	2681	0.37	13118	35817	44280
58.3	59.3	4800	2215	2681	0.36	13154	35902	44232
59.3	60.3	4800	2217	2681	0.36	13177	35959	44200
60.3	61.3	4800	2218	2681	0.36	13189	35987	44185
61.3	62.3	4800	2219	2681	0.36	13201	36015	44169
62.3	63.3	4800	2219	2681	0.36	13201	36015	44169
63.3	64.3	4800	2219	2681	0.36	13201	36015	44169
64.3	65.3	4800	2219	2681	0.36	13201	36015	44169
65.3	66.3	4800	2218	2681	0.36	13189	35987	44185

Layer Depth (m)					Dynamic Engineering Properties			
Top	Bottom	Compressional Velocity Wave (m/s)	Shear Wave Velocity (m/s)	Estimated Bulk Density (kg/m^3)	Poissons Ratio	Shear Modulus (MPa)	Deformation Modulus (MPa)	Bulk Modulus (MPa)
66.3	67.3	4800	2211	2681	0.37	13106	35789	44295
67.3	68.3	4800	2199	2681	0.37	12964	35449	44485
68.3	69.3	4800	2187	2681	0.37	12823	35110	44673
69.3	70.3	4800	2176	2681	0.37	12694	34800	44844
70.3	71.3	4800	2165	2681	0.37	12566	34490	45015
71.3	72.3	4800	2155	2681	0.37	12451	34209	45169
72.3	73.3	4800	2145	2681	0.38	12335	33928	45323
73.3	74.3	4800	2136	2681	0.38	12232	33676	45461
74.3	75.3	4800	2128	2681	0.38	12141	33452	45583
75.3	76.3	4800	2120	2681	0.38	12049	33228	45704
76.3	77.3	4800	2112	2681	0.38	11959	33005	45825
77.3	78.3	4800	2105	2681	0.38	11880	32810	45931
78.3	79.3	4800	2098	2681	0.38	11801	32615	46036
79.3	80.3	4800	2091	2681	0.38	11722	32421	46141


BH78 VSP Measured Velocities
Velocity (m/s)
0
1000
2000
3000
4000
5000
6000
Depth Below Ground Surface (m)
0
10
20
30
40
50
60
70
80
Shear Wave Velocity
Compression Wave Velocity

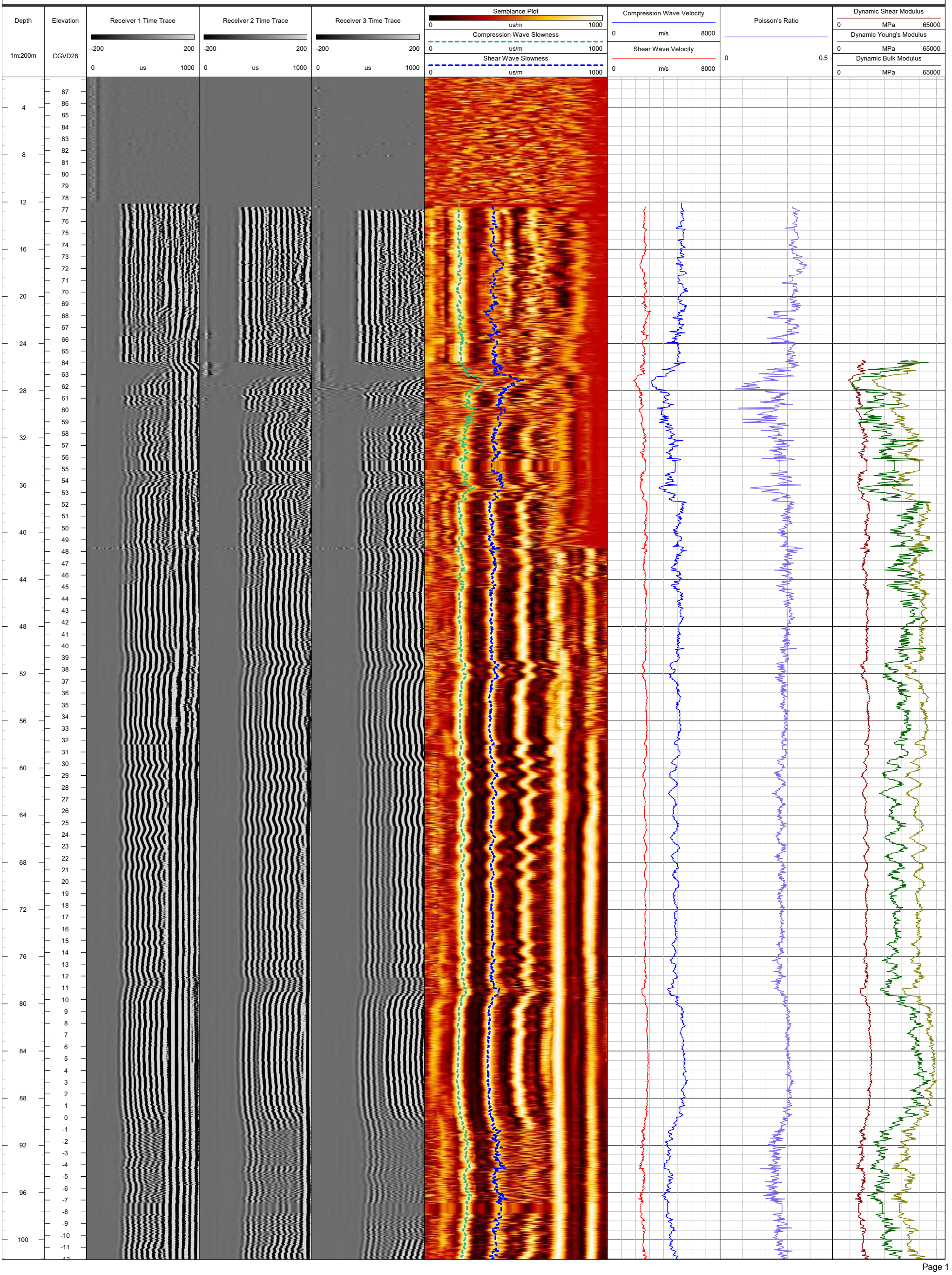
Geophysical Record of Borehole: BH3

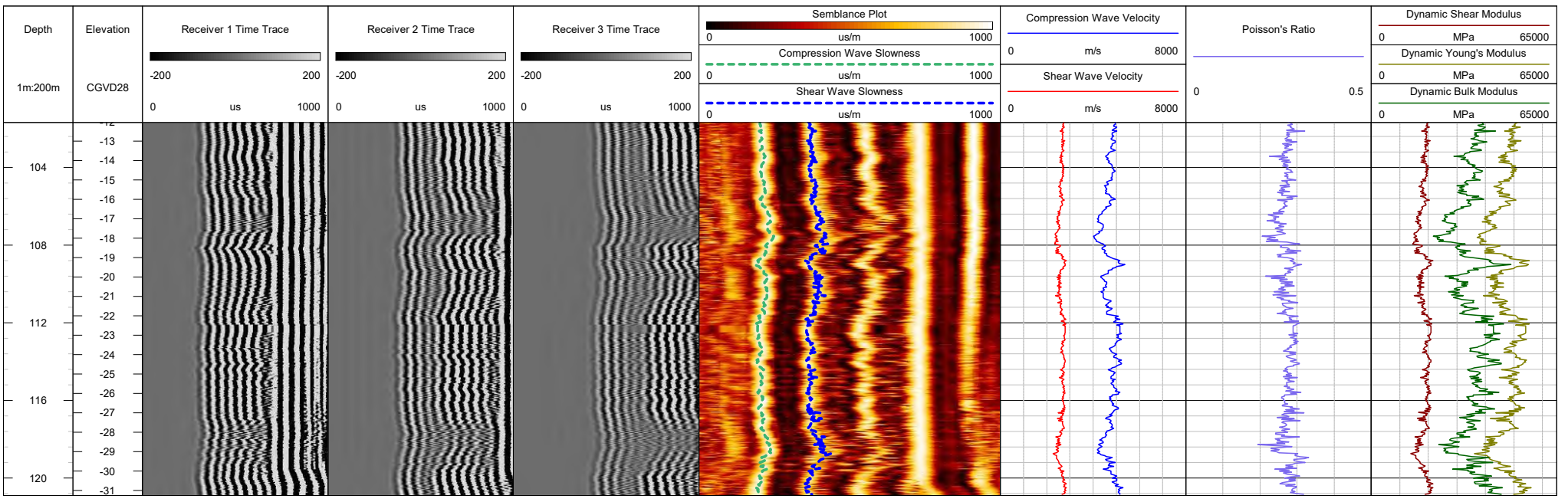
Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



Geophysical Record of Borehole: BH4

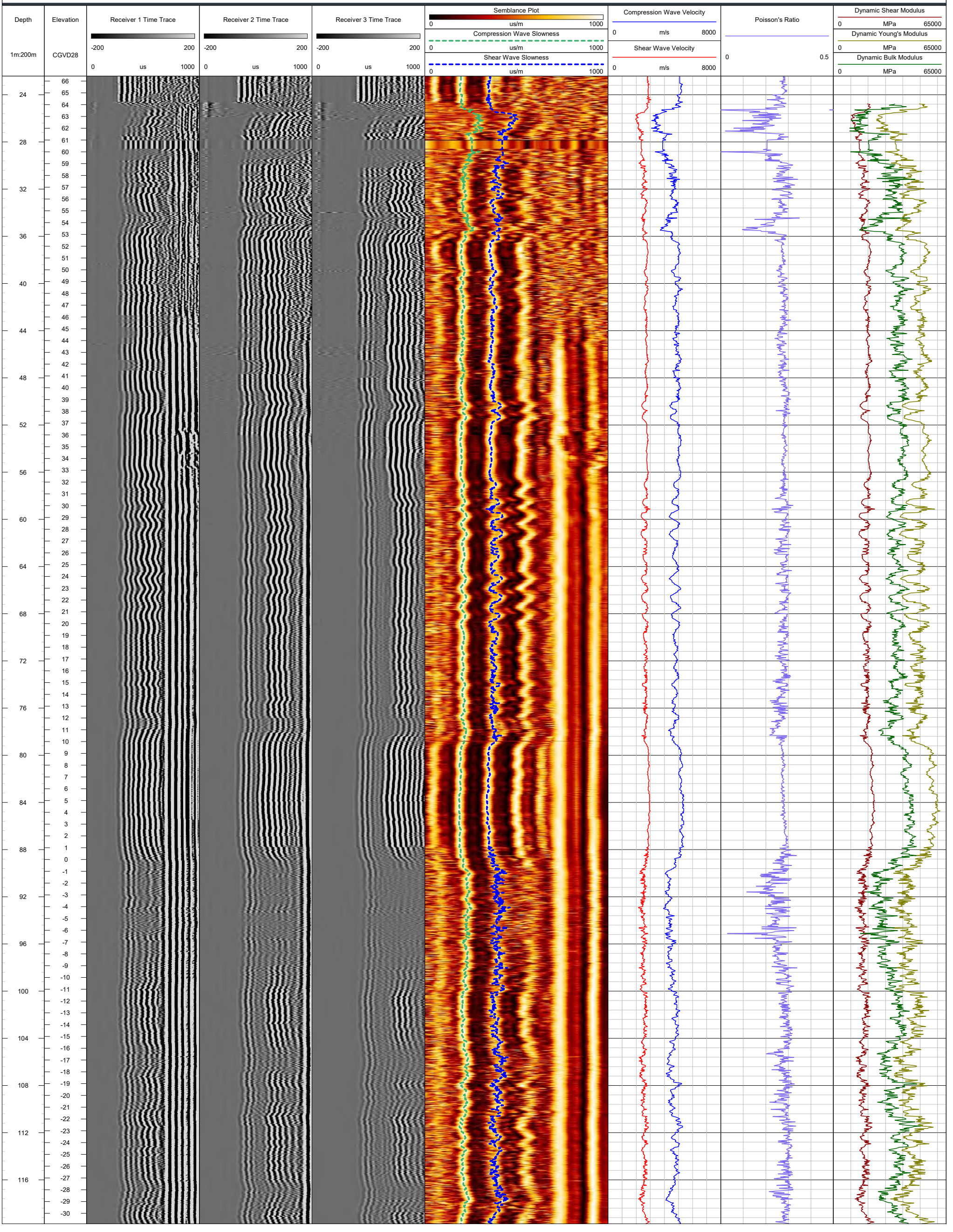
Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021




Depth
1m:200m
Elevation
CGVD28
Receiver 1 Time Trace
-200
200
0
us
1000
Receiver 2 Time Trace
-200
200
0
us
1000
Receiver 3 Time Trace
-200
200
0
us
1000
Semblance Plot
0
us/m
1000
Compression Wave Slowness
0
us/m
1000
Shear Wave Slowness
0
us/m
1000
Compression Wave Velocity
0
m/s
8000
Shear Wave Velocity
0
m/s
8000
Poisson's Ratio
0
0.5
Dynamic Shear Modulus
0
MPa
65000
Dynamic Young's Modulus
0
MPa
65000
Dynamic Bulk Modulus
0
MPa
65000
104
108
112
116
120
-13
-14
-15
-16
-17
-18
-19
-20
-21
-22
-23
-24
-25
-26
-27
-28
-29
-30
-31

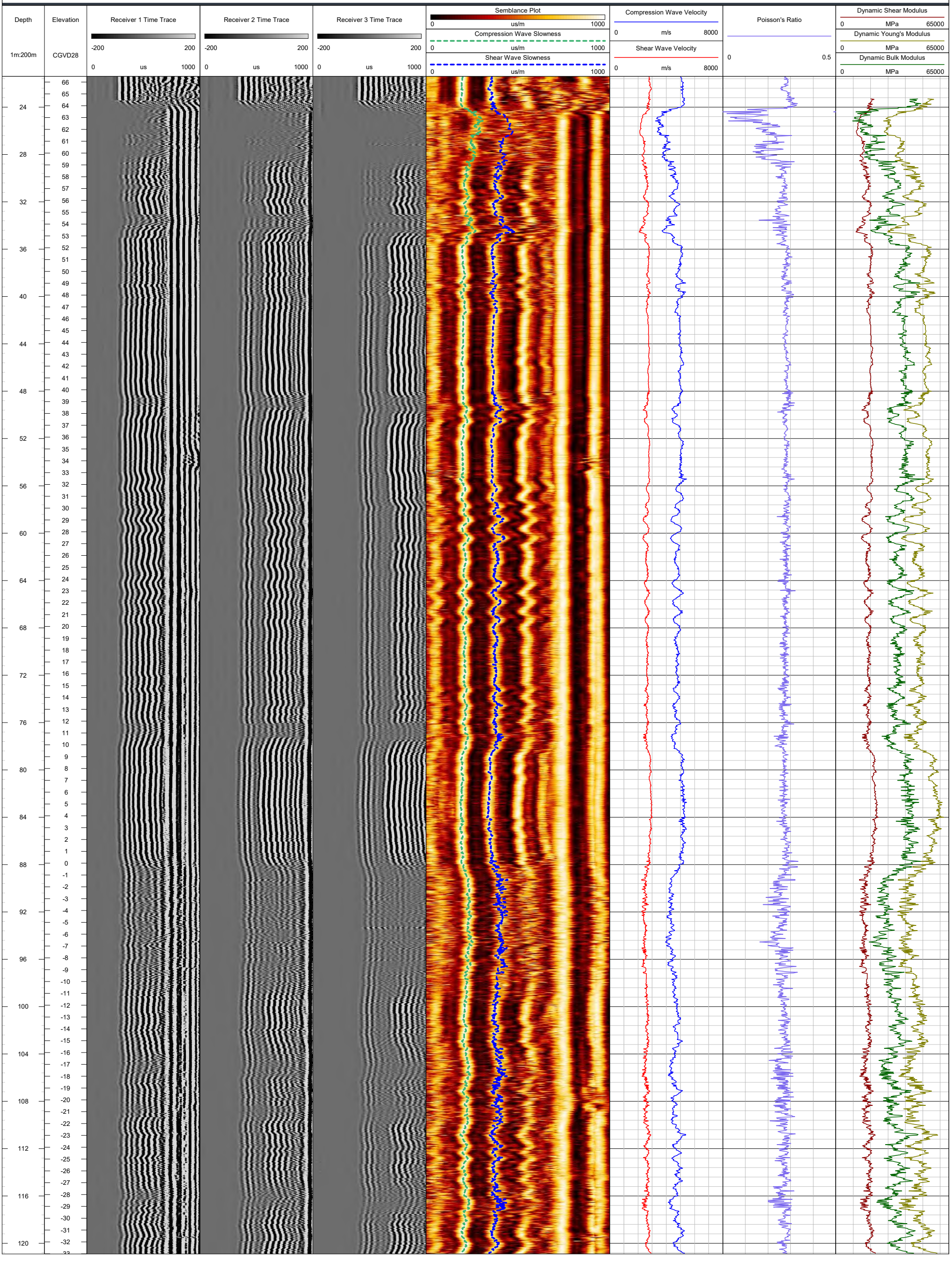
Geophysical Record of Borehole: BH9

Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



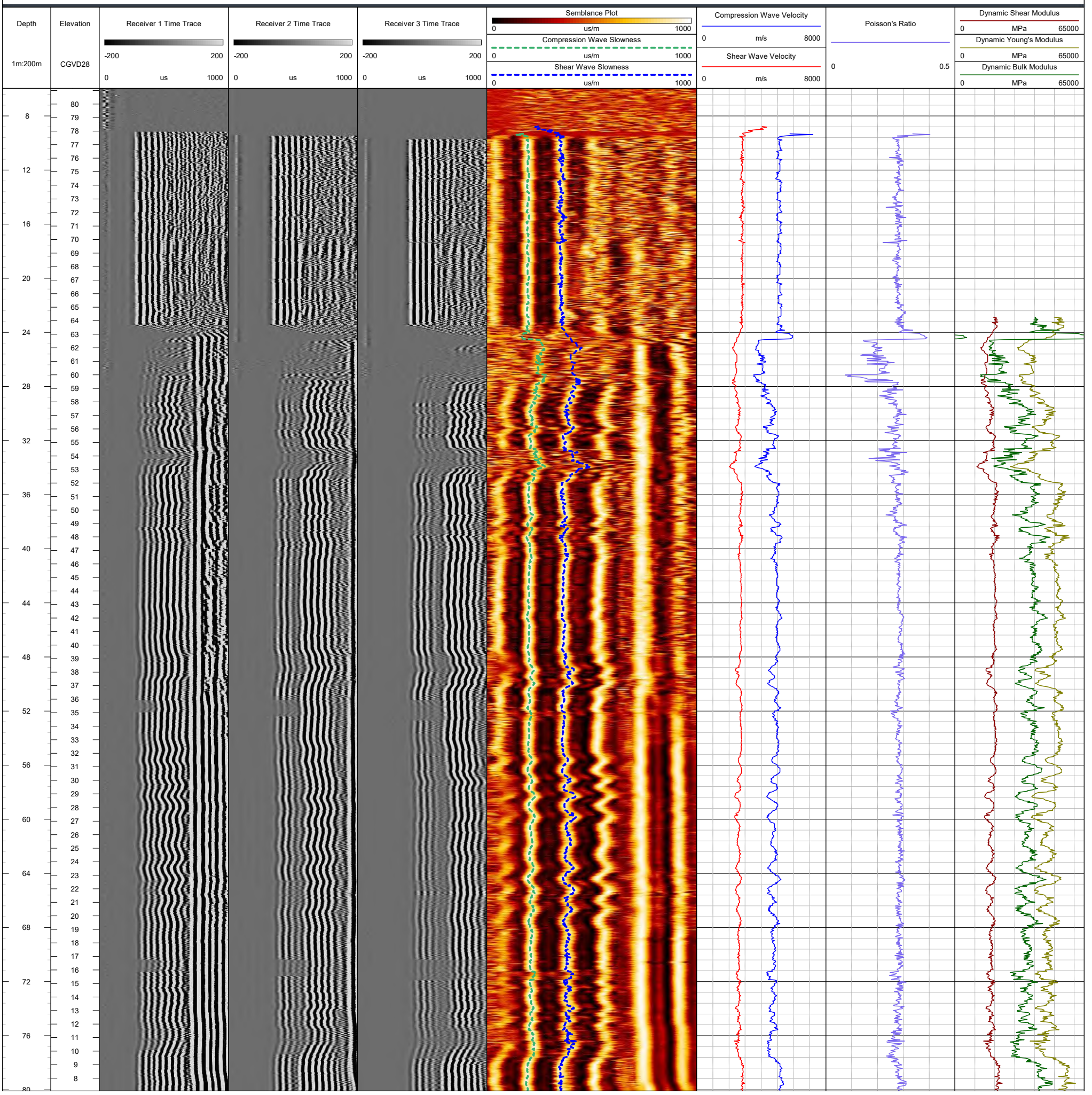
Geophysical Record of Borehole: BH11

Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



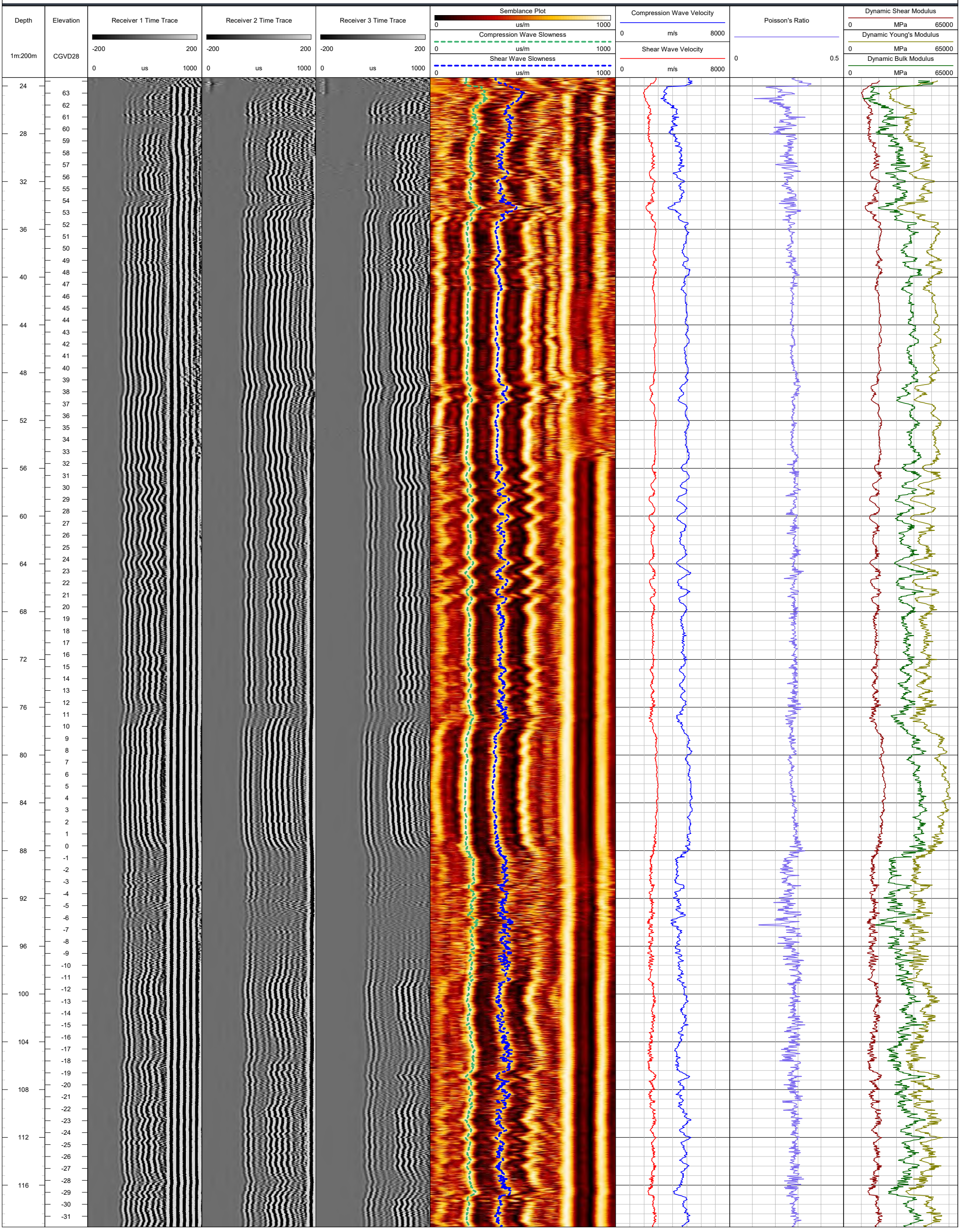
Geophysical Record of Borehole: BH13

Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



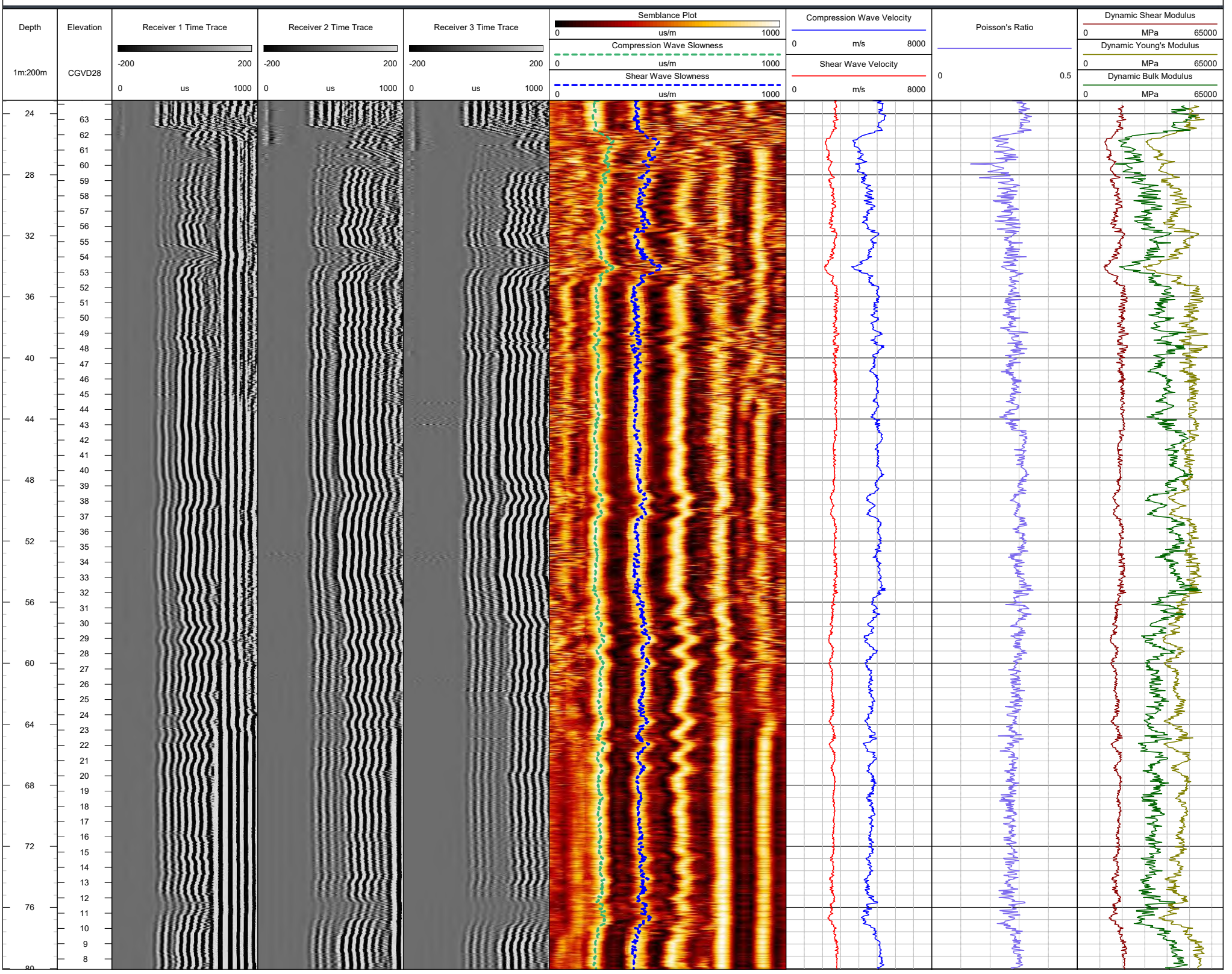
Geophysical Record of Borehole: BH14

Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



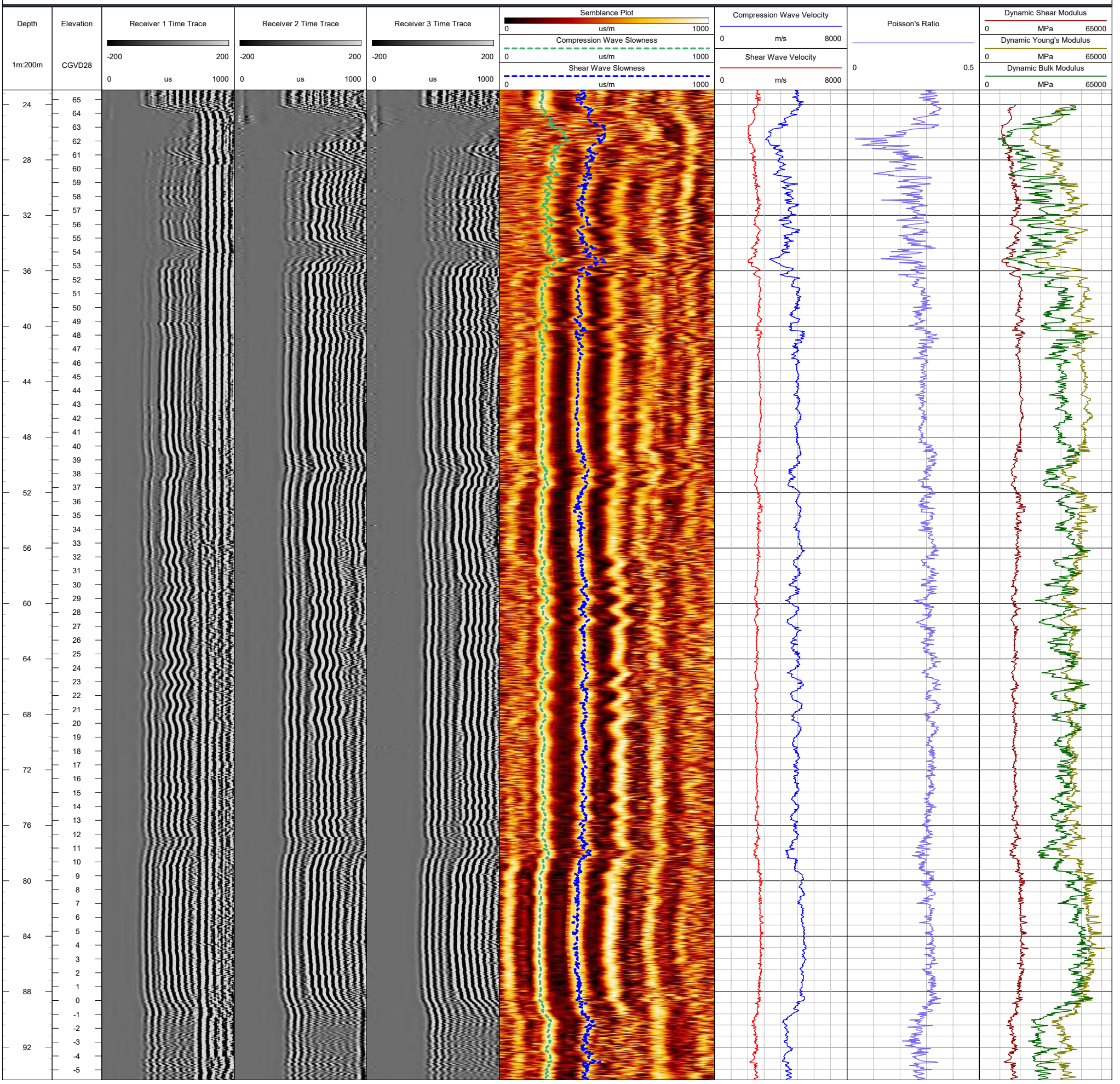
Geophysical Record of Borehole: BH15

Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



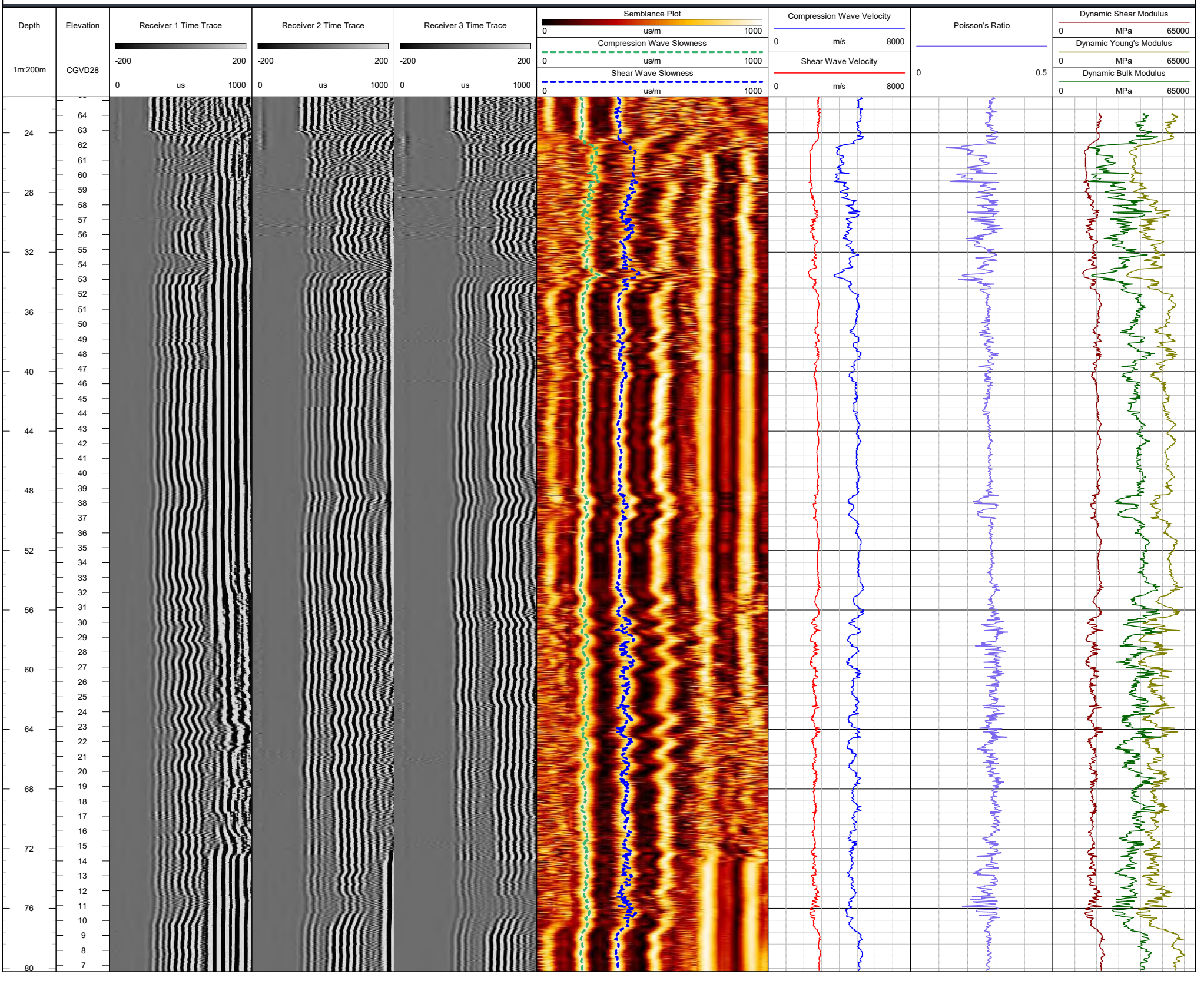
Geophysical Record of Borehole: BH16

Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



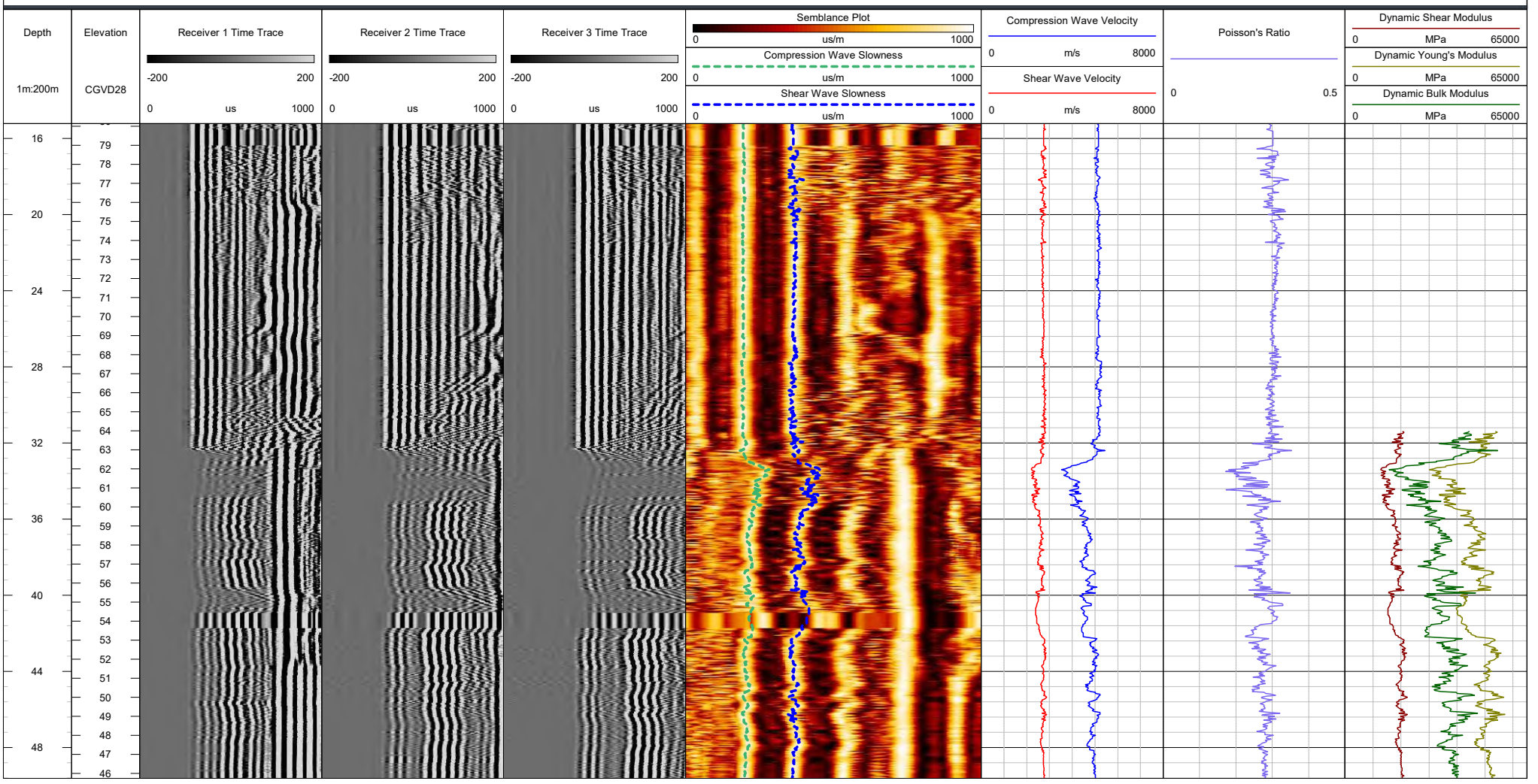
Geophysical Record of Borehole: BH17

Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



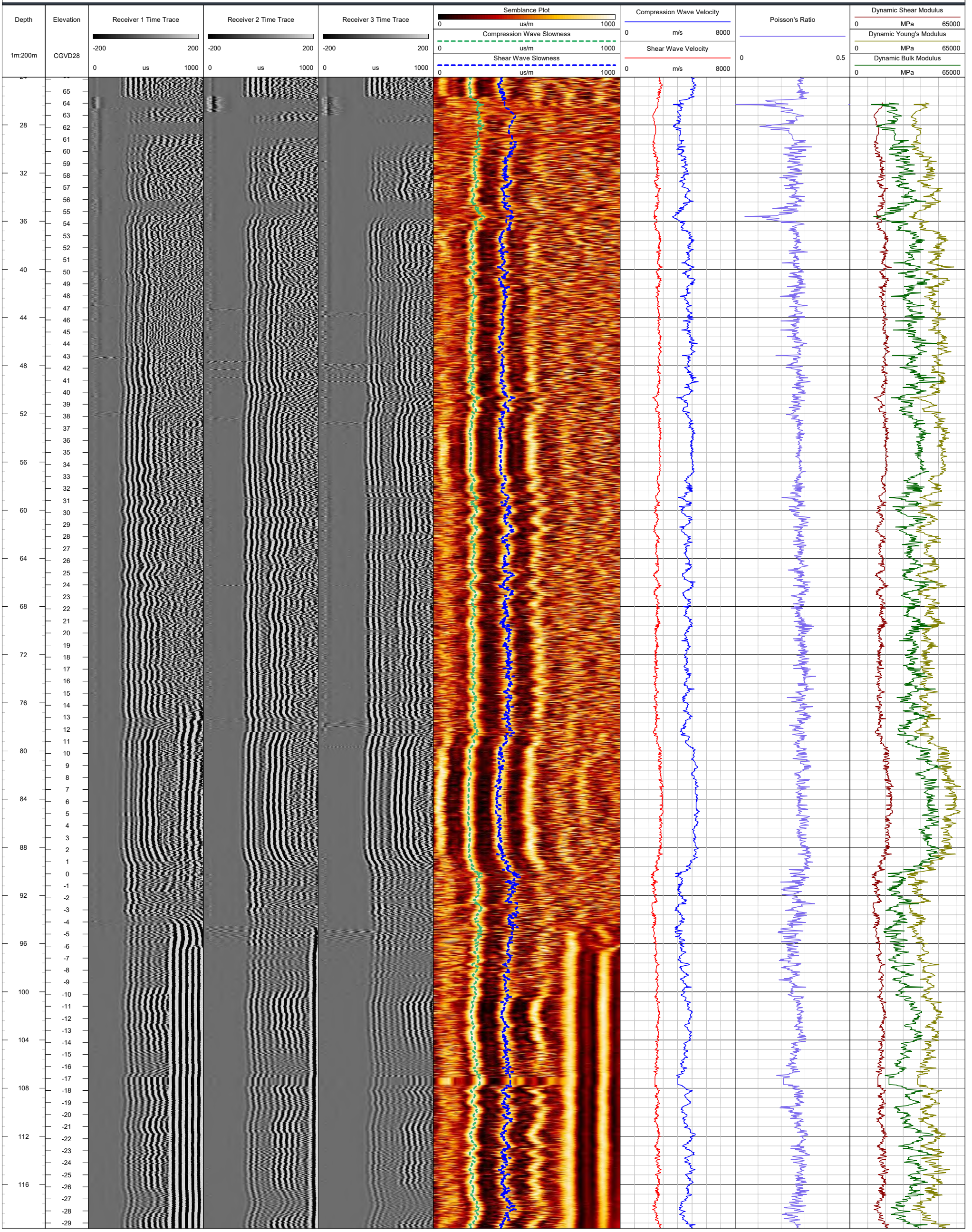
Geophysical Record of Borehole: BH28

Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



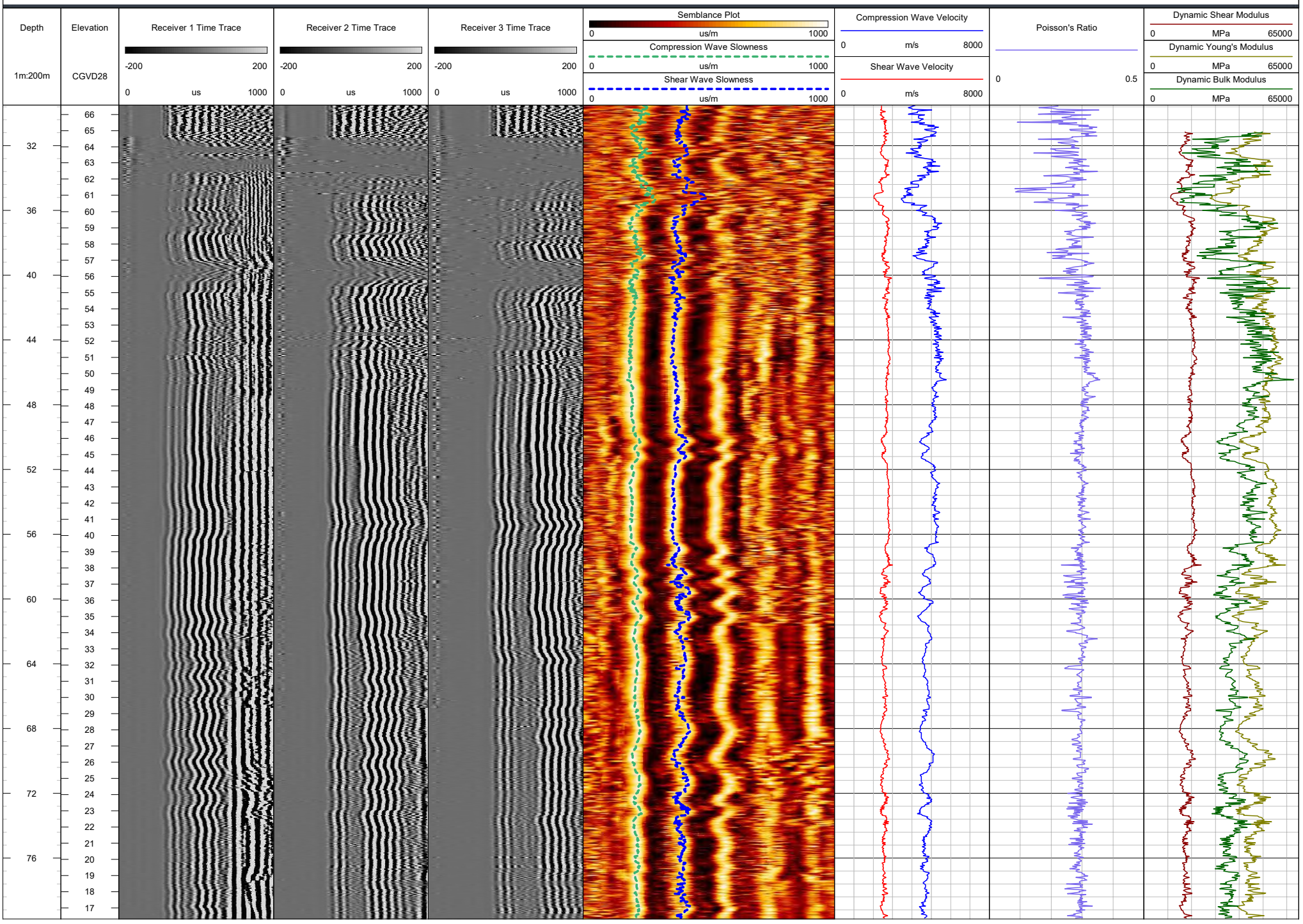
Geophysical Record of Borehole: BH50

Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



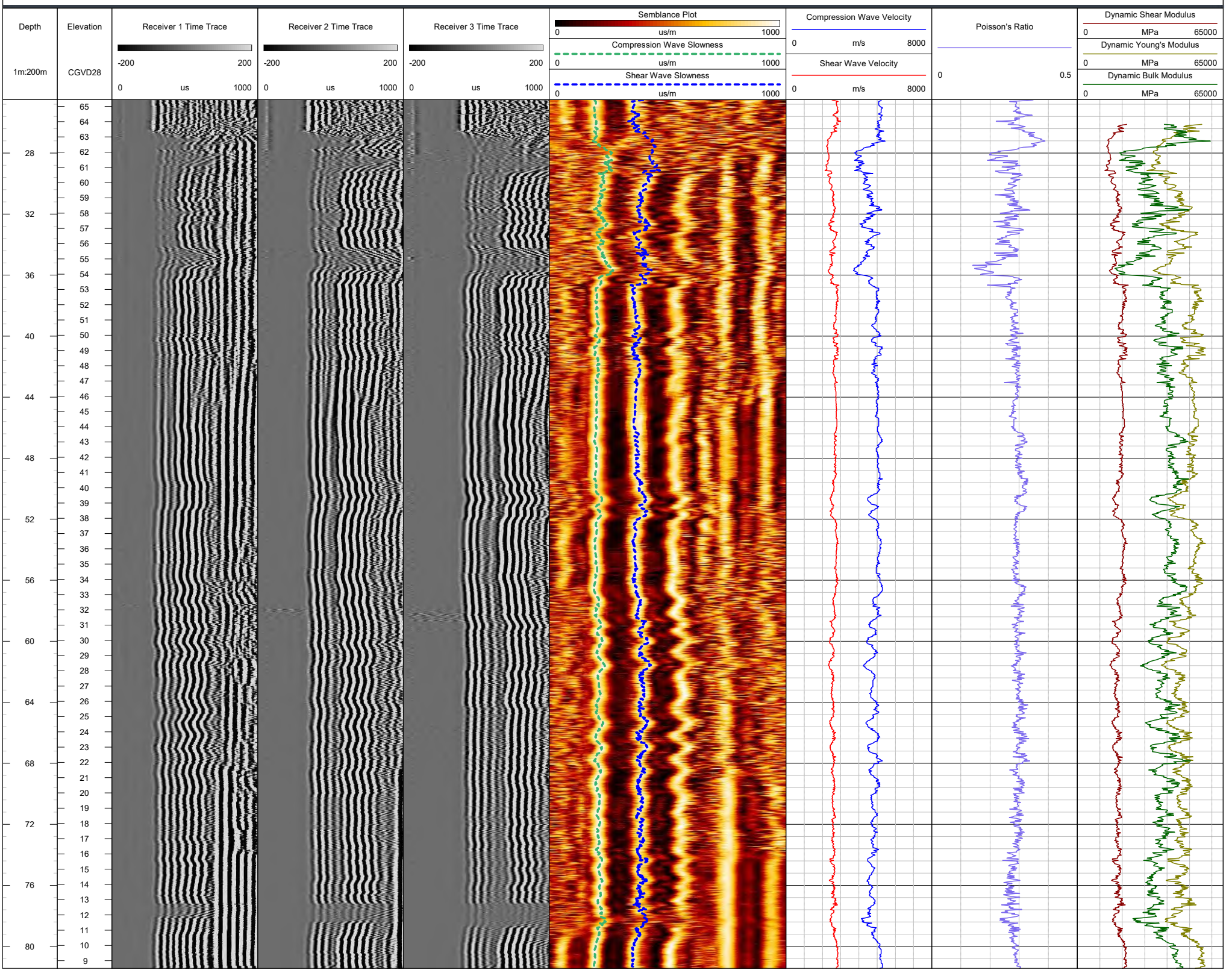
Geophysical Record of Borehole: BH53

Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



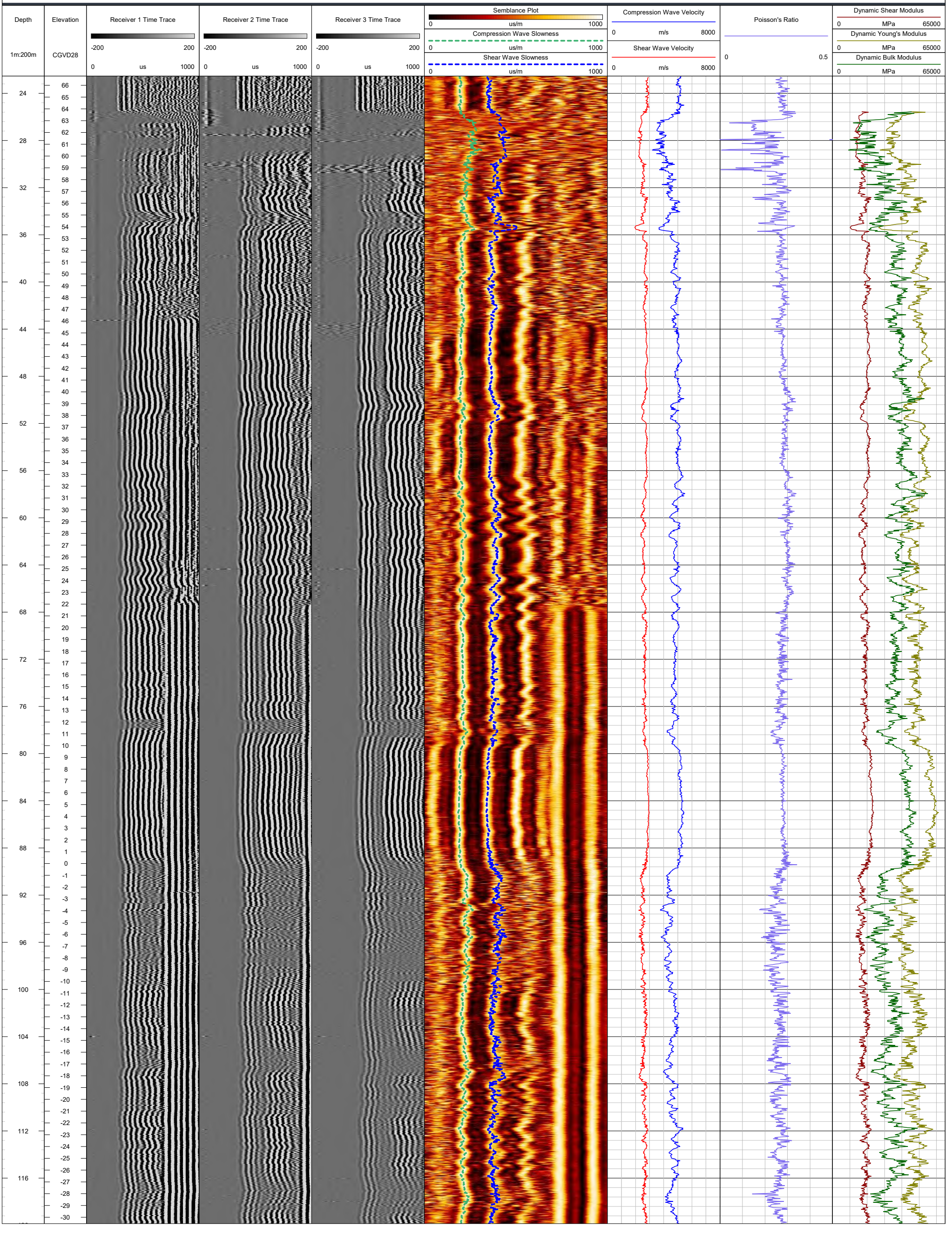
Geophysical Record of Borehole: BH59

Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



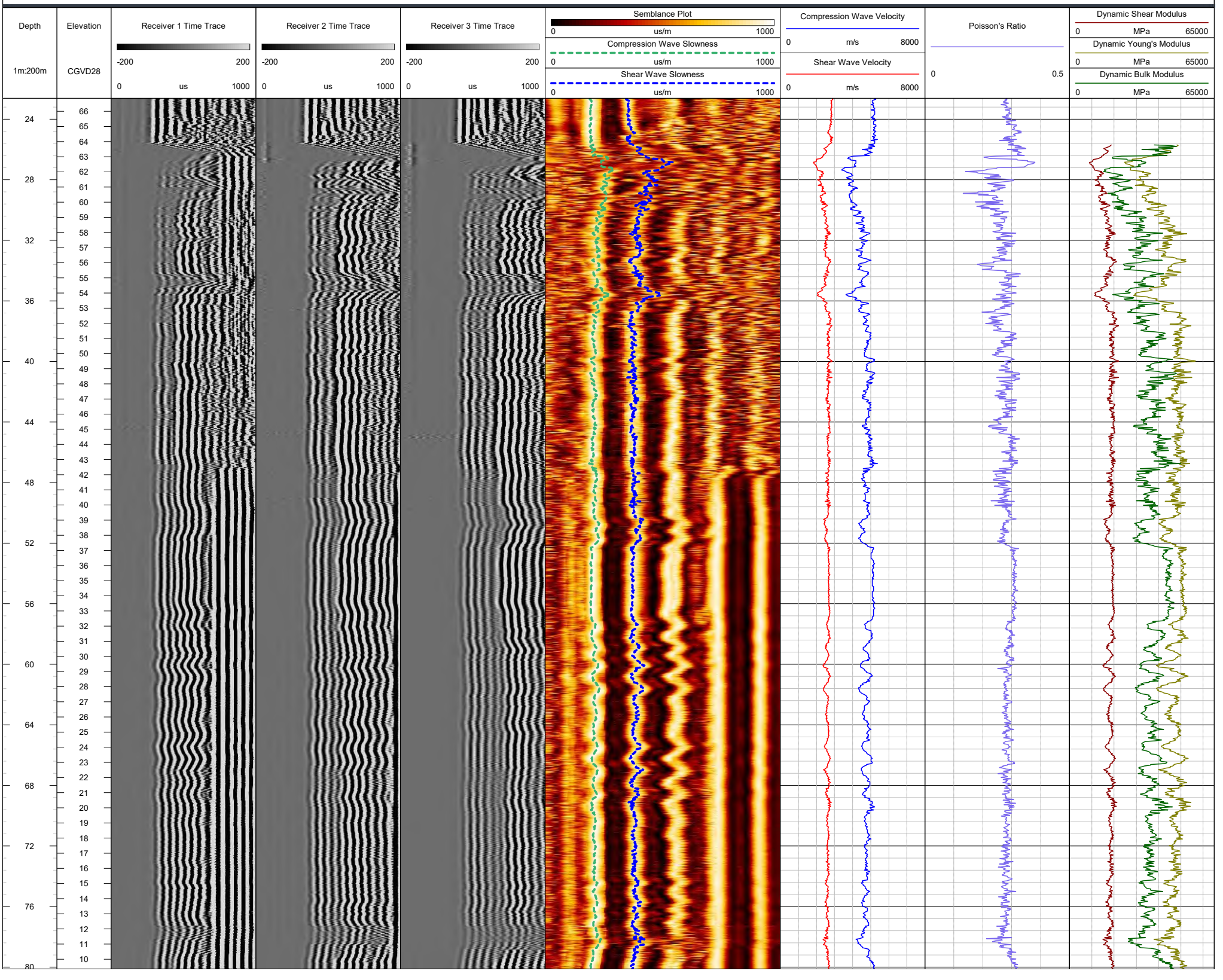
Geophysical Record of Borehole: BH65

Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



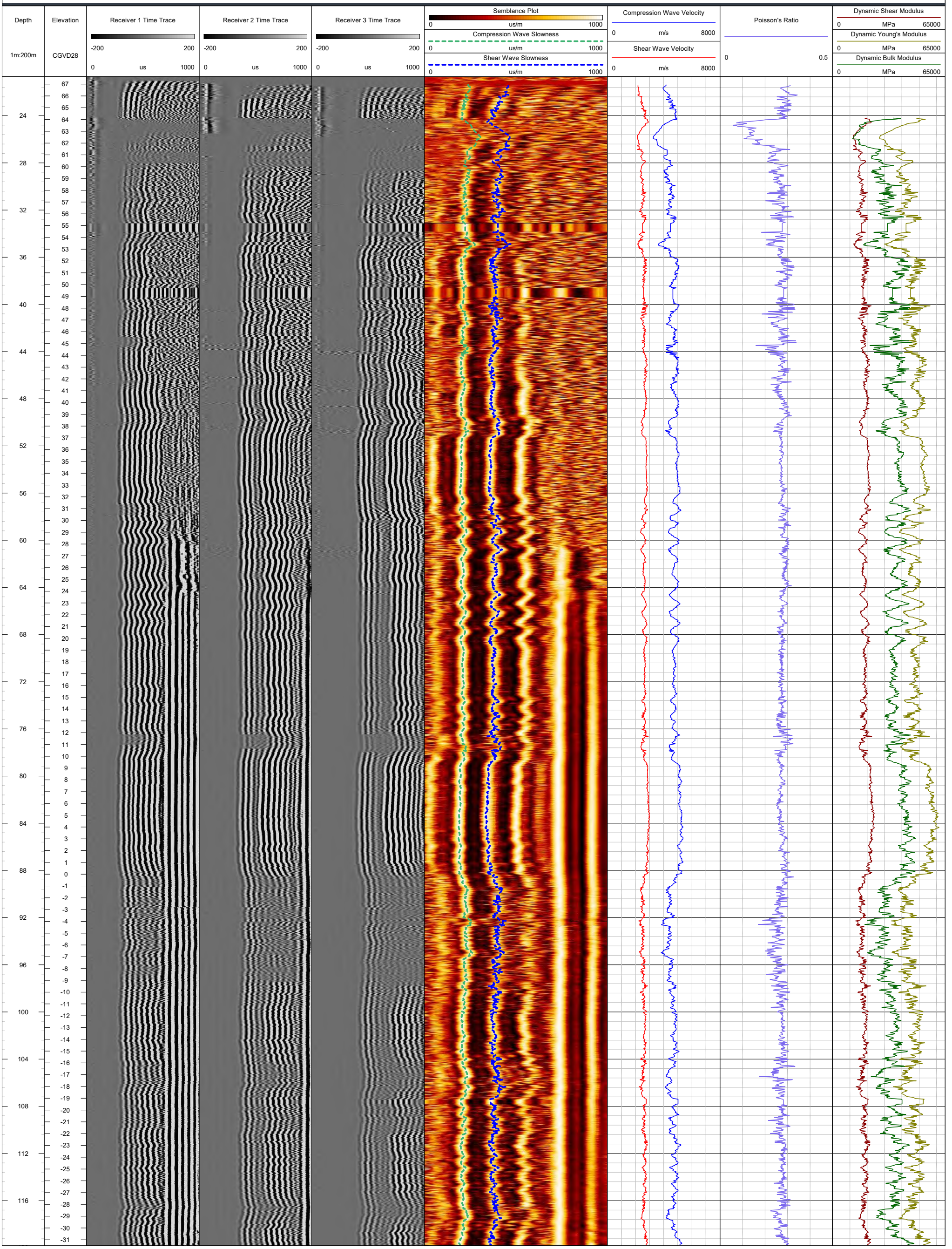
Geophysical Record of Borehole: BH66

Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



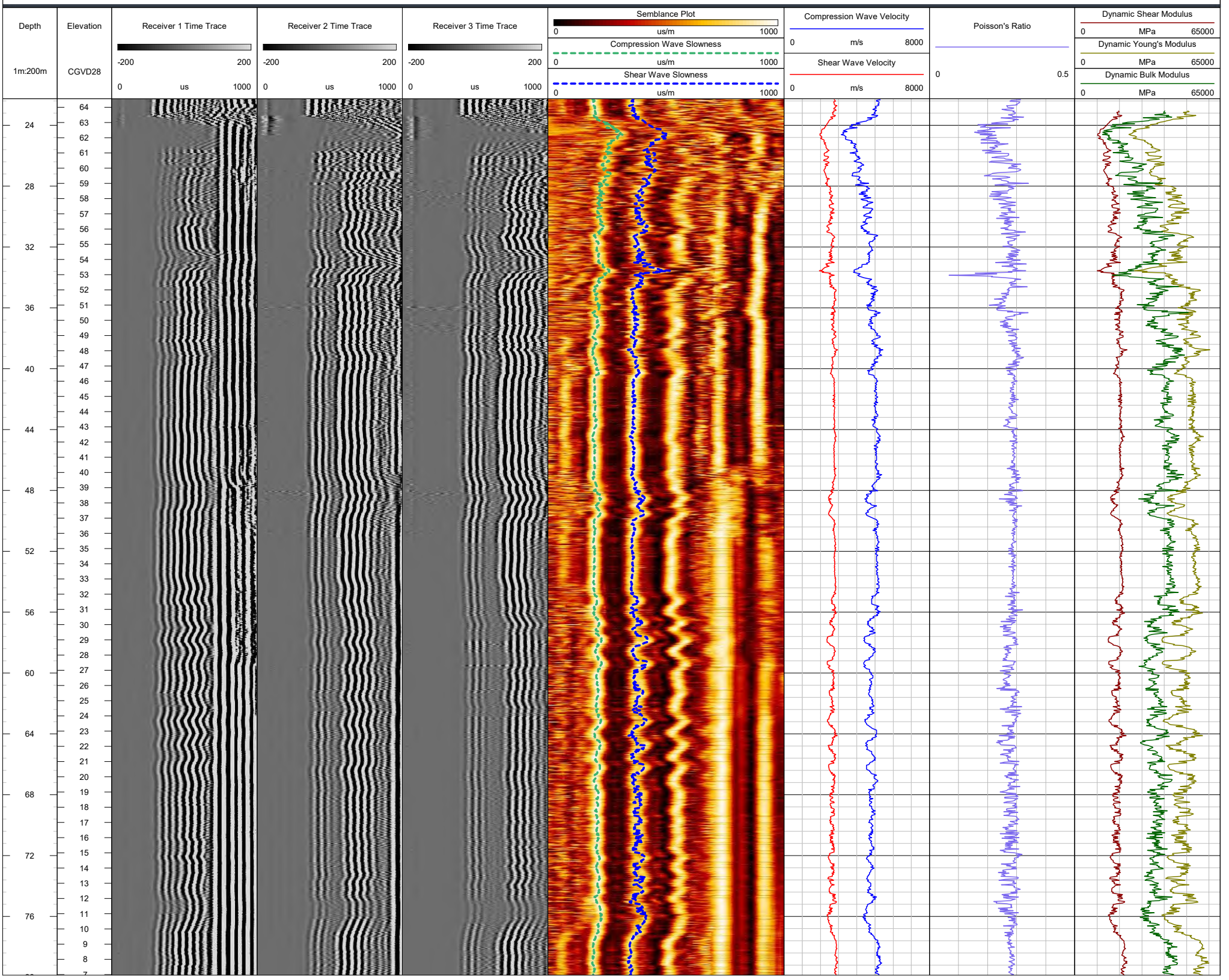
Geophysical Record of Borehole: BH71

Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



Geophysical Record of Borehole: BH78

Log Title: Full Waveform Sonic Log
Project Number: 21451329
Client: Ontario Power Generation
Date: December 2021



Engineering Properties of Soil in each Borehole

Hole ID	Depth (mbgs)	Bottom (mbgs)	Subsurface Unit	Minimum Shear Wave velocity (m/s)	Maximum Shear Wave velocity (m/s)	Average Shear Wave velocity (m/s)	Minimum Compression Wave velocity (m/s)	Maximum Compression Wave velocity (m/s)	Average Compression Wave velocity (m/s)	Density (kg/m^3)	Poisson's Ratio	Dynamic Shear Modulus (MPa)	Dynamic Young's Modulus (MPa)	Dynamic Bulk Modulus (MPa)
BH3	0	0.69	1	265	265	265	420	420	420	2,141	0.17	150	352	177
BH3	0.69	5.94	2a	293	369	339	560	1,800	1,100	2,039	0.45	234	678	2,155
BH3	5.94	6.63	2b	399	399	399	1,800	1,800	1,800	2,345	0.47	373	1,101	7,100
BH3	6.63	10.06	3	429	470	451	1,800	2,200	2,067	2,345	0.48	477	1,407	9,383
BH3	10.06	12.32	4b	484	510	497	2,200	2,200	2,200	2,141	0.47	529	1,558	9,657
BH3	12.32	17.69	4a	520	565	541	2,200	2,200	2,200	2,243	0.47	656	1,927	9,981
BH3	17.69	19.28	4b	581	599	590	2,200	2,200	2,200	2,141	0.46	745	2,178	9,369
BH3	19.28	20.8	4a	621	621	621	2,200	2,200	2,200	2,243	0.46	865	2,520	9,703
BH3	20.8	22.35	4b	649	684	667	2,200	2,200	2,200	2,141	0.45	953	2,761	9,092
BH3	22.35	23.84	4a	732	732	732	2,200	2,200	2,200	2,243	0.44	1,202	3,456	9,254
BH3	23.84	25.44	5	795	795	795	2,200	2,200	2,200	2,345	0.42	1,482	4,224	9,374
BH4	0	3.28	1	297	304	301	440	1,200	685	2,141	0.38	194	536	746
BH4	3.28	9.37	2b	306	348	324	2,000	2,000	2,000	2,345	0.49	246	732	9,052
BH4	9.37	18.52	4a	362	542	450	2,000	2,000	2,000	2,243	0.47	454	1,338	8,366
BH4	18.52	21.56	4b	581	677	628	2,000	2,000	2,000	2,141	0.45	844	2,441	7,438
BH4	21.56	23.69	4a	734	798	766	2,000	2,000	2,000	2,243	0.41	1,316	3,722	7,217
BH4	23.69	25.45	5	871	955	913	2,000	2,000	2,000	2,345	0.37	1,955	5,350	6,774
BH9	0	2.13	1	188	268	223	370	1,000	613	2,141	0.42	106	303	663
BH9	2.13	4.04	2a	326	376	351	1,400	2,200	1,800	2,039	0.48	251	744	6,271
BH9	4.04	5.94	2b	418	458	438	2,200	2,200	2,200	2,345	0.48	450	1,331	10,750
BH9	5.94	11.56	3	492	553	530	2,200	2,200	2,200	2,345	0.47	659	1,936	10,472
BH9	11.56	16.23	4a	558	612	582	2,200	2,200	2,200	2,243	0.46	760	2,222	9,843
BH9	16.23	19.96	4b	632	686	658	2,200	2,200	2,200	2,141	0.45	927	2,690	9,126
BH9	19.96	21.44	5	719	756	737	2,400	2,400	2,400	2,345	0.45	1,274	3,689	11,809
BH9	21.44	23.83	4a	796	841	819	2,400	2,400	2,400	2,243	0.43	1,505	4,315	10,914
BH9	23.83	24.71	5	892	892	892	2,400	2,400	2,400	2,345	0.42	1,866	5,298	11,019
BH11	0	0.61	1	360	388	369	510	550	530	2,141	0.03	292	600	213
BH11	0.61	1.75	2a	451	451	451	700	700	700	2,039	0.15	415	950	446
BH11	1.75	10.2	3	518	585	571	1,200	2,200	1,950	2,345	0.45	765	2,222	7,897
BH11	10.2	15.47	4a	577	608	589	2,200	2,200	2,200	2,243	0.46	778	2,274	9,819
BH11	15.47	18.54	4b	624	661	642	2,200	2,200	2,200	2,141	0.45	882	2,565	9,186
BH11	18.54	20.04	5	683	707	695	2,200	2,200	2,200	2,345	0.44	1,133	3,273	9,840
BH11	20.04	21.77	4a	735	735	735	2,200	2,200	2,200	2,243	0.44	1,212	3,483	9,240
BH11	21.77	23.24	5	767	805	786	2,200	2,200	2,200	2,345	0.43	1,449	4,134	9,418
BH13	0	2.13	1	321	443	376	600	1,400	916	2,141	0.40	303	847	1,393
BH13	2.13	10.05	3	482	591	550	1,400	2,200	2,050	2,345	0.46	709	2,073	8,909
BH13	10.05	16.15	4a	592	640	610	2,200	2,200	2,200	2,243	0.46	835	2,434	9,743
BH13	16.15	17.98	4b	661	688	675	2,200	2,400	2,300	2,141	0.45	975	2,835	10,025
BH13	17.98	20.88	5	721	764	743	2,400	2,400	2,400	2,345	0.45	1,295	3,746	11,781
BH13	20.88	22.33	4a	819	819	819	2,400	2,400	2,400	2,243	0.43	1,505	4,315	10,914
BH13	22.33	22.87	5	889	889	889	2,400	2,400	2,400	2,345	0.42	1,853	5,265	11,036
BH14	0	0.69	1	224	224	224	580	580	580	2,141	0.41	107	303	577
BH14	0.69	1.37	2a	256	256	256	600	600	600	2,039	0.39	134	371	556
BH14	1.37	7.72	3	348	459	410	800	2,200	1,633	2,345	0.47	394	1,156	5,728
BH14	7.72	8.61	4a	471	471	471	2,200	2,200	2,200	2,243	0.48	498	1,469	10,193
BH14	8.61	10.12	4b	482	492	487	2,200	2,200	2,200	2,141	0.47	508	1,497	9,685
BH14	10.12	17.75	4a	497	542	510	2,200	2,200	2,200	2,243	0.47	583	1,717	10,078
BH14	17.75	19.28	4b	561	583	572	2,200	2,200	2,200	2,141	0.46	701	2,051	9,428
BH14	19.28	22.2	4a	607	675	639	2,200	2,200	2,200	2,243	0.45	916	2,663	9,635
BH14	22.2	23.56	5	723	723	723	3,000	3,000	3,000	2,345	0.47	1,226	3,602	19,471
BH15	0	1.37	1	318	367	343	900	900	900	2,141	0.42	252	713	1,398
BH15	1.37	9.22	3	455	560	513	900	1,900	1,500	2,345	0.43	617	1,770	4,453
BH15	9.22	13.03	4a	570	607	588	2,000	2,200	2,050	2,243	0.46	776	2,257	8,392
BH15	13.03	16.99	4b	621	673	646	2,200	2,400	2,250	2,141	0.46	893	2,600	9,648
BH15	16.99	19.94	5	695	791	722	2,400	2,400	2,400	2,345	0.45	1,222	3,546	11,877
BH15	19.94	23.47	4b	787	883	833	2,400	2,400	2,400	2,141	0.43	1,486	4,253	10,351
BH16	0	1.37	1	152	170	162	520	580	550	2,141	0.45	56	163	573
BH16	1.37	3.66	2a	218	277	248	700	1,200	950	2,039	0.46	125	367	1,673
BH16	3.66	7.09	2b	347	483	425	1,800	2,000	1,850	2,345	0.47	424	1,247	7,461
BH16	7.09	10.06	3	501	519	511	2,000	2,000	2,000	2,345	0.47	612	1,794	8,564
BH16	10.06	12.34	4b	521	523	522	2,000	2,000	2,000	2,141	0.46	583	1,708	7,786
BH16	12.34	16.84	4a	528	566	545	2,000	2,000	2,000	2,243	0.46	666	1,945	8,084
BH16	16.84	20.08	4b	587	687	633	2,000	2,000	2,200	2,141	0.45	858	2,496	9,219
BH16	20.08	24.08	4a	740	949	841	2,000	2,000	2,000	2,243	0.39	1,586	4,419	6,857
BH17	0	0.89	1	235	235	235	520	520	520	2,141	0.37	118	324	421
BH17	0.89	2.13	2b	255	301	278	800	1,000	900	2,345	0.45	181	525	1,658
BH17	2.13	15.62	3	363	683	589	1,200	2,400	2,215	2,345	0.46	814	2,379	10,420
BH17	15.62	17.75	4b	703	728	716	2,400	2,400	2,400	2,141	0.45	1,098	3,186	10,869
BH17	17.75	19.86	5	759	796	778	2,400	2,400	2,400	2,345	0.44	1,419	4,092	11,615
BH17	19.86	22.16	4a	842	901	872	2,400	2,400	2,400	2,243	0.42	1,706	4,857	10,646
BH17	22.16	22.66	5	976	976	976	3,000	3,000	3,000	2,345	0.44	2,234	6,437	18,127
BH28	0	1.07	1	402	402	402	570	570	570	2,141	0.01	346	696	234
BH28	1.07	10.11	3	452	705	612	800	2,200	1,622	2,345	0.42	878	2,489	4,998
BH28	10.11	14.55	4a	664	709	689	2,200	2,200	2,200	2,243	0.45	1,065	3,079	9,436
BH28	14.55	18.44	4b	641	654	647	2,200	2,200	2,200	2,141	0.45	896	2,604	9,167
BH28	18.44	22.92	4a	631	634	632	2,200	2,200	2,200	2,243	0.46	896	2,607	9,662
BH28	22.92	27.71	4b	632	678	650	2,200	2,200	2,200	2,141	0.45	905	2,627	9,156
BH28	27.71	31.39	5	705	797	748	2,200	2,200	2,200	2,345	0.43	1,312	3,765	9,600
BH50-3	0	1.6	1	204	205	205	480	550	515	2,141	0.41	90	253	448
BH50-3	1.6	2.13	2a	215	215	215	900	900	900	2,039	0.47	94	277	1,526
BH50-3	2.13	8.99	3	240	421	336	1,100	2,000	1,700	2,345	0.48	265	783	6,424
BH50-3	8.99	10.74	4b	440	457	449	2,000	2,000	2,000	2,141	0.47	432	1,272	7,988
BH50-3	10.74	17.72	4a	574	597	530	2,000	2,000	2,000	2,243	0.46	630	1,843	8,132
BH50-3	17.72	18.57	4b	634	634	634	2,000	2,000	2,000	2,141	0.44	861	2,486	7,417
BH50-3	18.57	18.69	4a	680	680	680	2,000	2,000	2,000	2,243	0.43	1,037	2,976	7,589
BH50-3	18.69	23.06	4b	736	964	846	2,000	2,000	2,000	2,141	0.39	1,532	4,263	6,521
BH50-3	23.06	23.75	4a	1,060	1,060	1,060	2,000	2,000	2,000	2,243	0.30	2,520	6,576	5,612
BH50-3	24.49	26.17	5	1,171	1,171	1,171	2,000	2,000	2,000	2,345	0.24	3,216	7,969	5,093
BH53	0	1.14	1	183	213	198	380	530	455	2,141	0.38	84	232	331
BH53	1.14	14.25	3	287	611	534	700	1,800	1,454	2,345	0.42	669	1,902	4,066
BH53	14.25	14.55	4a	564	564	564	1,800	1,800	1,800	2,243	0.45	713	2,063	6,316
BH53	14.55	16.18	4b	561	561	561	1,800	1,800	1,800	2,141	0.45	674	1,949	6,038
BH53	16.18	22.48	4a	561	621	584	1,800	2,200	2,133	2,243	0.46	765	2,233	9,185
BH53	22.48	22.81	4b	647	647	647	2,200	2,200	2,200	2,141	0.45	896	2,604	9,167
BH53	22.81	24.31	4a	678	678	678	2,200	2,200	2,200	2,243	0.45	1,031	2,985	9,481
BH53	24.31	26.14	4b	716	760	738	2,200	2,200	2,200	2,141	0.44	1,166	3,350	8,808
BH53	26.14	27.1	5	811	811	811	2,200	2,200	2,200	2,345	0.42	1,542	4,385	9,293
BH53	27.1	27.33	4a	872	872	872	2,200	2,200	2,200	2,243	0.41	1,706	4,799	8,582
BH53	27.33	31.14	5	945	1,119	1,031	2,200	3,000	2,467	2,345	0.39	2,493	6,950	10,948
BH59	0	1.57	1	170	193	182	450	620	535	2,141	0.43	71	203	518
BH59	1.57	3.25	2a	249	305	277	800	1,400	1,100	2,039	0.47	156	459	2,259
BH59	3.25	8.57	3	338	375	352	1,600	1,600	1,600	2,345	0.47	291	857	5,616
BH59	8.57	19.28	4a	392	771	534	1,600	2,000	1,745	2,243	0.45	640	1,853	5,977
BH59	19.28	22.33	4b	844	994	919	2,000	2,000	2,000	2,141	0.37	1,808	4,941	6,153
BH59	22.33	23.75	4a	1,078	1,078	1,078	2,000	2,000	2,000	2,243	0.30	2,607	6,752	5,497
BH59	23.75	26.1	5	1,160	1,344	1,251	3,400	3,400	3,400	2,345	0.42	3,670	10,435	22,215
BH65	0	2.36	1	215	277	242	520	600	573	2,141	0.39	125	349	536
BH65	2.36	5.03	2a	322	367	347	900	1,200	1,100	2,039	0.44	246	709	2,140
BH65	5.03	7.27	2b	380	395	288	2,000	2,000	2,000	2,345	0.49	195	579	9,121
BH65	7.27	9.07	3	412	428	420	2,000	2,000	2,000	2,345	0.48	414	1,222	8,828
BH65	9.07	12.8	4a	449	479	462	2,000	2,000	2,000	2,243	0.47	479	1,409	8,334
BH65	12.8	13.94	4b	497	516	507	2,000	2,000	2,000	2,141	0.47	550	1,613	7,830
BH65	13.94	16.99	4a	536	584	560	2,000	2,000	2,000	2,243	0.46	703	2,050	8,034
BH65	16.99	17.83	4b	612	612	612	2,000	2,000	2,000	2,141	0.45	802	2,323	7,495
BH65	17.83	18.39	4a	645	645	645	2,000	2,000	2,000	2,243	0.44	933	2,691	7,728
BH65	18.39	20.88	4b	684	684	684	2,000	2,000	2,000	2,141	0.43	1,002	2,872	7,228
BH65	20.88	21.41	5	729	729	729	2,000	2,000	2,000	2,345	0.42	1,246	3,548	7,718
BH65	21.41	22	4b	786	786	786	2,000	2,000	2,000	2,141	0.41	1,323	3,726	6,800
BH65	22	25.55	5	815	1,012	933	2,000	3,400	2,467	2,345	0.42	2,041	5,783	11,550
BH66	0	2.13	1	293	307	295	560	1,000	770	2,141	0.41	186	527	1,021
BH66	2.13	4.04	2a	300	321	311	1,400	1,600	1,500	2,039	0.48	197	583	4,325
BH66	4.04	6.71	2b	345	371	358	2,000	2,000	2,000	2,345	0.48	301	892	8,979
BH66	6.71	8.62	3	397	422	410	2,000	2,000	2,000	2,345	0.48	394	1,165	8,854
BH66	8.62	18.57	4a	446	678	555	2,000	2,000	2,000	2,243	0.46	691	2,015	8,051
BH66	18.57	23.16	4b	715	928	813	2,000	2,000	2,000	2,141	0.40	1,415	3,965	6,677
BH66	23.16	25.77	5	1,013	1,116	1,065	3,000	3,000	3,000	2,345	0.43	2,660	7,596	17,559
BH71	0	1.83	1	183	196	190	470	620	545	2,141	0.43	77	221	533
BH71	1.83	3.66	2a	227	263	245	840	1,400	1,120	2,039	0.47	122	361	2,395
BH71	3.66	4.8	2b	300	300	300	1,400	1,400	1,400	2,345	0.48	211	623	4,315
BH71	4.8	11.48	3	338	495	425	1,400	2,000	1,743	2,345	0.47	424	1,244	6,559
BH71	11.48	16.15	4a	517	622	567	2,000	2,000	2,000	2,243	0.46	721	2,100	8,011
BH71	16.15	19.28	4b	661	762	710	2,000	2,000	2,000	2,141	0.43	1,079	3,082	7,125
BH71	19.28	24.18	5	826	1,161	985	2,000	3,400	3,120	2,345	0.44	2,275	6,574	19,794

Hole ID	Depth (mbgs)	Bottom (mbgs)	Subsurface Unit	Minimum Shear Wave velocity (m/s)	Maximum Shear Wave velocity (m/s)	Average Shear Wave velocity (m/s)	Minimum Compression Wave velocity (m/s)	Maximum Compression Wave velocity (m/s)	Average Compression Wave velocity (m/s)	Density (kg/m^3)	Poisson's Ratio	Dynamic Shear Modulus (MPa)	Dynamic Young's Modulus (MPa)	Dynamic Bulk Modulus (MPa)
BH78	0	1.07	1	290	330	310	610	700	645	2,141	0.35	206	555	616
BH78	1.07	10.13	3	415	683	604	1,200	2,000	1,778	2,345	0.43	855	2,455	6,273
BH78	10.13	16.23	4a	624	674	642	2,000	2,000	2,000	2,243	0.44	924	2,667	7,739
BH78	16.23	17.75	4b	695	724	710	2,000	2,000	2,000	2,141	0.43	1,079	3,082	7,125
BH78	17.75	23.07	5	762	1,000	873	2,000	3,200	2,480	2,345	0.43	1,787	5,109	12,040

Engineering Properties of Rock in each Borehole

Hole ID	Depth (mbgs)	Bottom (mbgs)	Lithology group	Minimum Shear Wave velocity (m/s)	Maximum Shear Wave velocity (m/s)	Average Shear Wave velocity (m/s)	Minimum Compression Wave velocity (m/s)	Maximum Compression Wave velocity (m/s)	Average Compression Wave velocity (m/s)	Density (kg/m^3)	Poisson's Ratio	Dynamic Shear Modulus (MPa)	Dynamic Young's Modulus (MPa)	Dynamic Bulk Modulus (MPa)
BH3	25.44	28.99	Blue Mountain Formation	2,016	2,606	2,199	4,281	5,753	4,935	2,641	0.38	12,772	35,153	47,300
BH3	28.99	41.34	Lindsay Formation	1,944	2,931	2,525	3,495	5,366	4,520	2,681	0.27	17,099	43,539	31,985
BH4	25.45	28.84	Blue Mountain Formation	1,850	2,683	2,317	3,121	5,522	4,053	2,641	0.26	14,176	35,648	24,484
BH4	28.84	89.98	Lindsay Formation	2,263	2,908	2,694	3,528	5,687	4,907	2,681	0.28	19,458	49,978	38,608
BH4	89.98	122.01	Verulam Formation	2,215	2,843	2,595	3,888	5,366	4,611	2,679	0.27	18,041	45,762	32,917
BH9	24.71	28.12	Blue Mountain Formation	1,964	2,843	2,338	3,073	5,149	3,878	2,641	0.21	14,438	35,067	20,463
BH9	28.12	89.63	Lindsay Formation	2,190	3,000	2,688	3,342	5,366	4,832	2,681	0.28	19,365	49,420	36,771
BH9	89.63	120.8	Verulam Formation	2,153	2,953	2,539	3,928	5,292	4,580	2,679	0.28	17,272	44,153	33,177
BH11	23.24	27.39	Blue Mountain Formation	2,119	2,886	2,423	3,229	5,292	4,063	2,641	0.22	15,507	37,962	22,927
BH11	27.39	88.67	Lindsay Formation	2,082	3,024	2,681	3,699	5,443	4,822	2,681	0.28	19,273	49,191	36,630
BH11	88.67	120.7	Verulam Formation	2,254	2,908	2,583	3,928	5,366	4,587	2,679	0.27	17,873	45,322	32,545
BH13	22.87	27.31	Blue Mountain Formation	2,212	2,865	2,528	3,528	5,935	4,450	2,641	0.26	16,875	42,587	29,806
BH13	27.31	81.01	Lindsay Formation	2,027	2,977	2,638	3,594	5,366	4,777	2,681	0.28	18,653	47,777	36,309
BH14	23.56	27.23	Blue Mountain Formation	1,958	2,791	2,290	3,175	5,366	4,000	2,641	0.26	13,850	34,795	23,779
BH14	27.23	88.7	Lindsay Formation	2,140	2,977	2,666	3,663	5,366	4,812	2,681	0.28	19,059	48,733	36,666
BH14	88.7	120.47	Verulam Formation	2,228	2,865	2,551	3,888	5,292	4,605	2,679	0.28	17,433	44,581	33,563
BH15	23.47	27.01	Blue Mountain Formation	2,156	2,865	2,503	3,663	5,481	4,616	2,641	0.29	16,541	42,739	34,225
BH15	27.01	80.9	Lindsay Formation	2,105	2,908	2,611	3,594	5,443	4,763	2,681	0.29	18,278	46,982	36,455
BH16	24.08	27.86	Blue Mountain Formation	2,029	2,584	2,269	3,075	5,149	3,976	2,641	0.26	13,597	34,224	23,625
BH16	27.86	88.47	Lindsay Formation	2,016	2,977	2,615	3,313	5,522	4,894	2,681	0.30	18,334	47,675	39,773
BH16	88.47	100.66	Verulam Formation	2,128	2,801	2,484	4,097	5,443	4,502	2,679	0.28	16,534	42,363	32,249
BH17	22.66	26.41	Blue Mountain Formation	2,335	2,953	2,624	3,810	5,366	4,632	2,641	0.26	18,186	45,959	32,404
BH17	26.41	81.18	Lindsay Formation	2,257	2,977	2,669	3,699	5,366	4,822	2,681	0.28	19,093	48,851	36,884
BH28	31.39	33.73	Blue Mountain Formation	2,202	2,822	2,574	3,528	5,443	4,654	2,641	0.28	17,499	44,783	33,861
BH28	33.73	50.52	Lindsay Formation	2,228	2,886	2,623	3,888	5,219	4,705	2,681	0.27	18,450	47,027	34,750
BH50-3	26.17	28.62	Blue Mountain Formation	2,273	2,623	2,434	3,699	4,430	4,085	2,641	0.22	15,652	38,333	23,195
BH50-3	28.62	90.22	Lindsay Formation	2,254	3,024	2,630	3,629	5,522	4,754	2,681	0.28	18,546	47,460	35,872
BH50-3	90.22	120.8	Verulam Formation	2,153	2,865	2,536	3,810	5,219	4,499	2,679	0.27	17,226	43,658	31,261
BH53	31.14	33.65	Blue Mountain Formation	2,363	2,801	2,581	3,699	5,443	4,660	2,641	0.28	17,597	45,002	33,886
BH53	33.65	80.99	Lindsay Formation	2,049	3,000	2,618	3,443	5,773	4,849	2,681	0.29	18,380	47,575	38,531
BH59	26.1	28.36	Blue Mountain Formation	2,222	2,886	2,429	3,772	5,443	4,697	2,641	0.32	15,579	41,053	37,499
BH59	28.36	82.1	Lindsay Formation	2,140	2,908	2,625	3,699	5,292	4,816	2,681	0.29	18,473	47,610	37,542
BH65	25.55	28.32	Blue Mountain Formation	2,153	2,801	2,391	3,432	5,149	4,019	2,641	0.23	15,101	37,025	22,516
BH65	28.32	90.25	Lindsay Formation	1,957	2,977	2,677	3,202	5,510	4,850	2,681	0.28	19,213	49,221	37,445
BH65	90.25	120.61	Verulam Formation	2,228	2,886	2,593	3,772	5,366	4,556	2,679	0.26	18,010	45,401	31,590
BH66	25.77	28.41	Blue Mountain Formation	1,841	2,610	2,234	3,404	5,219	4,127	2,641	0.29	13,175	34,068	27,420
BH66	28.41	81.03	Lindsay Formation	2,048	2,865	2,609	3,629	5,366	4,739	2,681	0.28	18,248	46,808	35,880
BH71	24.18	28.42	Blue Mountain Formation	2,128	2,915	2,435	3,261	4,940	3,986	2,641	0.20	15,653	37,646	21,089
BH71	28.42	87.98	Lindsay Formation	2,121	3,000	2,656	3,629	5,366	4,779	2,681	0.28	18,911	48,280	36,008
BH71	87.98	120.34	Verulam Formation	2,228	2,908	2,589	3,810	5,292	4,622	2,679	0.27	17,964	45,673	33,280
BH78	23.07	26.47	Blue Mountain Formation	1,968	2,822	2,323	3,149	5,149	3,984	2,641	0.24	14,247	35,407	22,929
BH78	26.47	81.03	Lindsay Formation	1,934	2,953	2,662	3,735	5,443	4,830	2,681	0.28	18,994	48,696	37,207

APPENDIX G

Direct Simple Shear Testing Interpretations

Figure No. G - 1

Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	2a

Sample ID:	SA2-1
Test ID:	DSS-11A
Depth:	2.98m - 3.04m

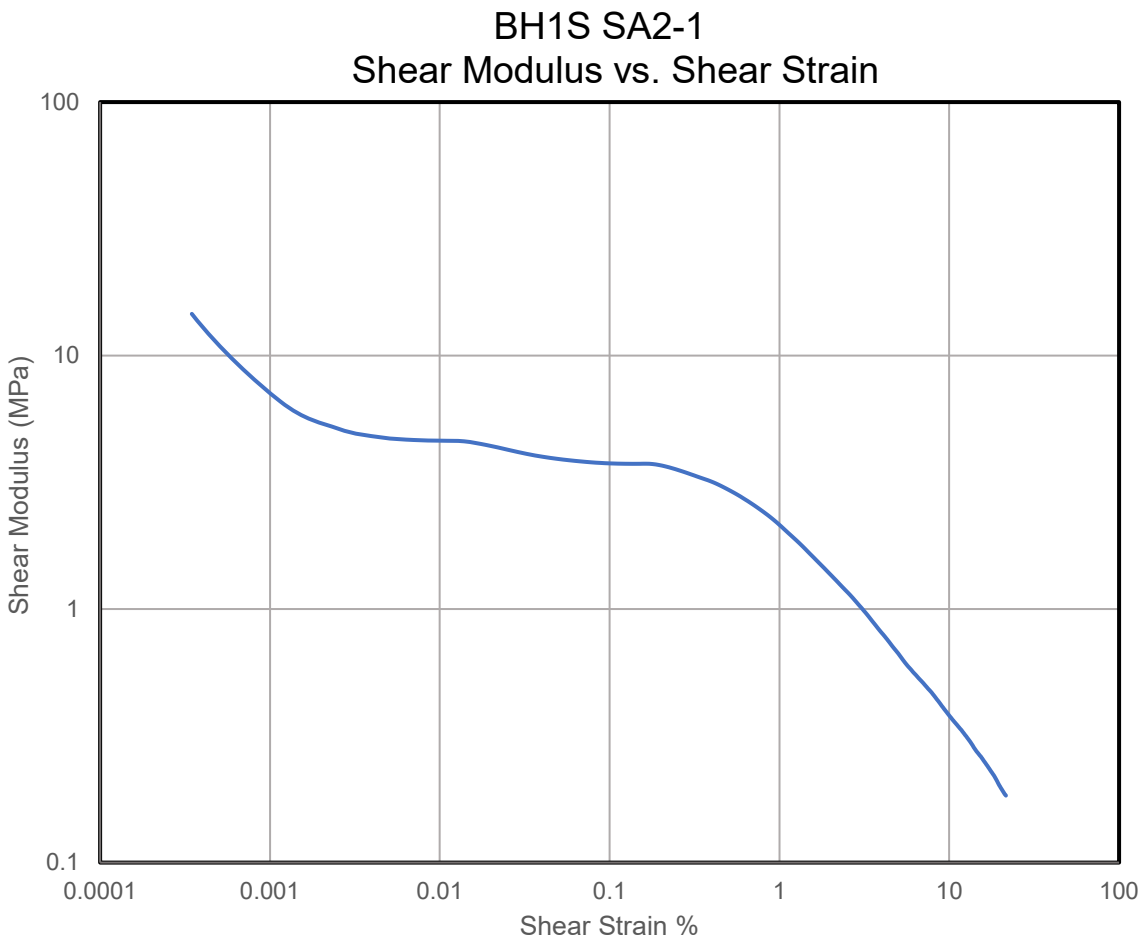


Figure No. G - 2

Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH8S
Soil Unit:	2a

Sample ID:	SA2
Test ID:	DSS-14
Depth:	1.60m - 1.68m

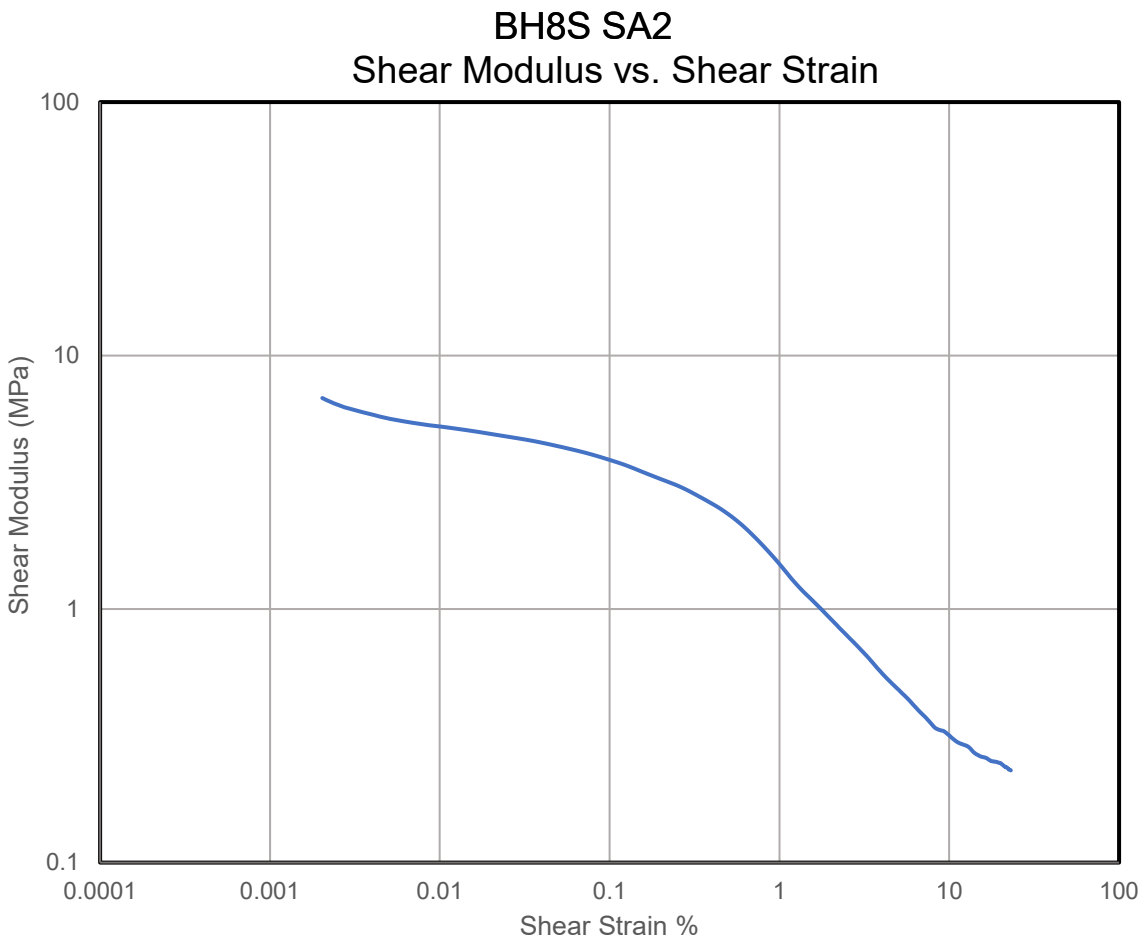


Figure No. G - 3

Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH11SB
Soil Unit:	2a

Sample ID:	SA1
Test ID:	DSS-20
Depth:	1.44m - 1.52m

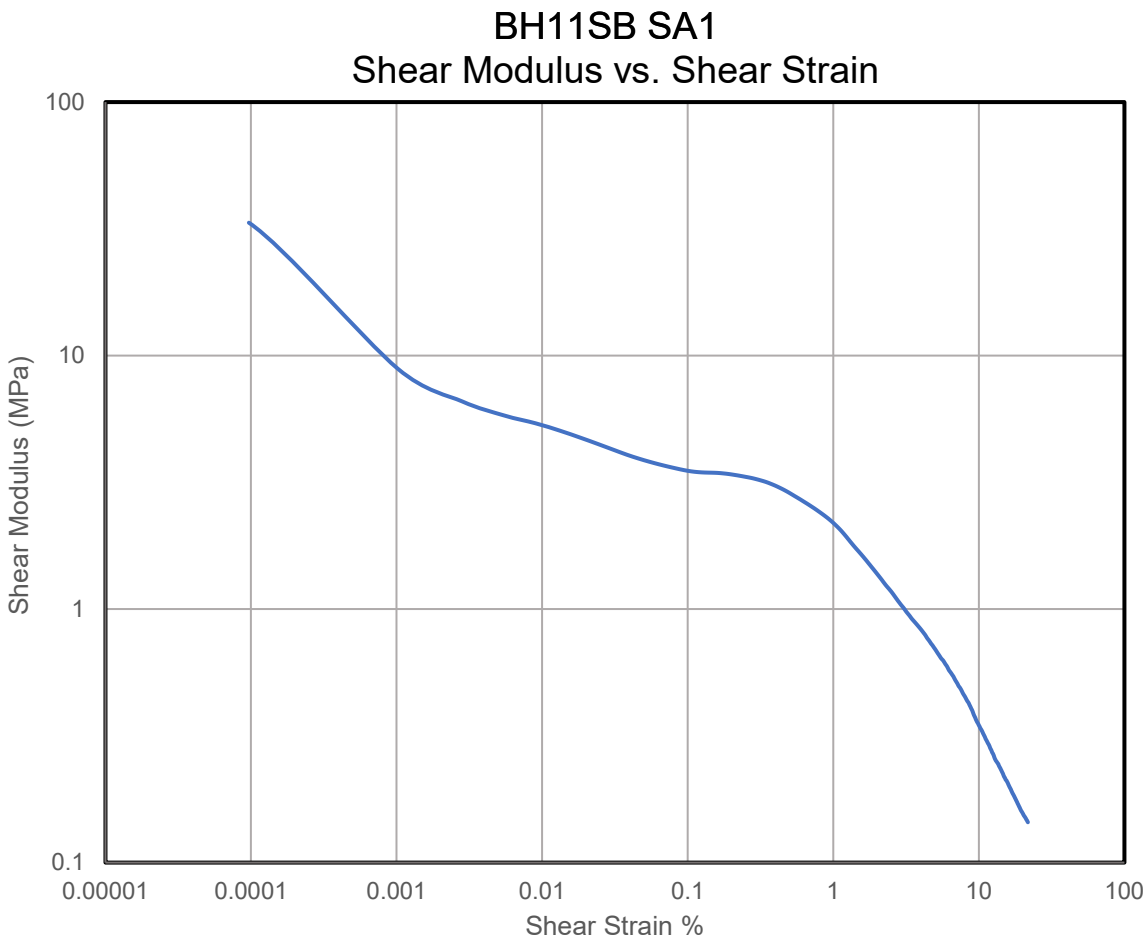


Figure No. G - 4

Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	2a

Sample ID:	SA3-2
Test ID:	DSS-1A
Depth:	2.98m - 3.04m

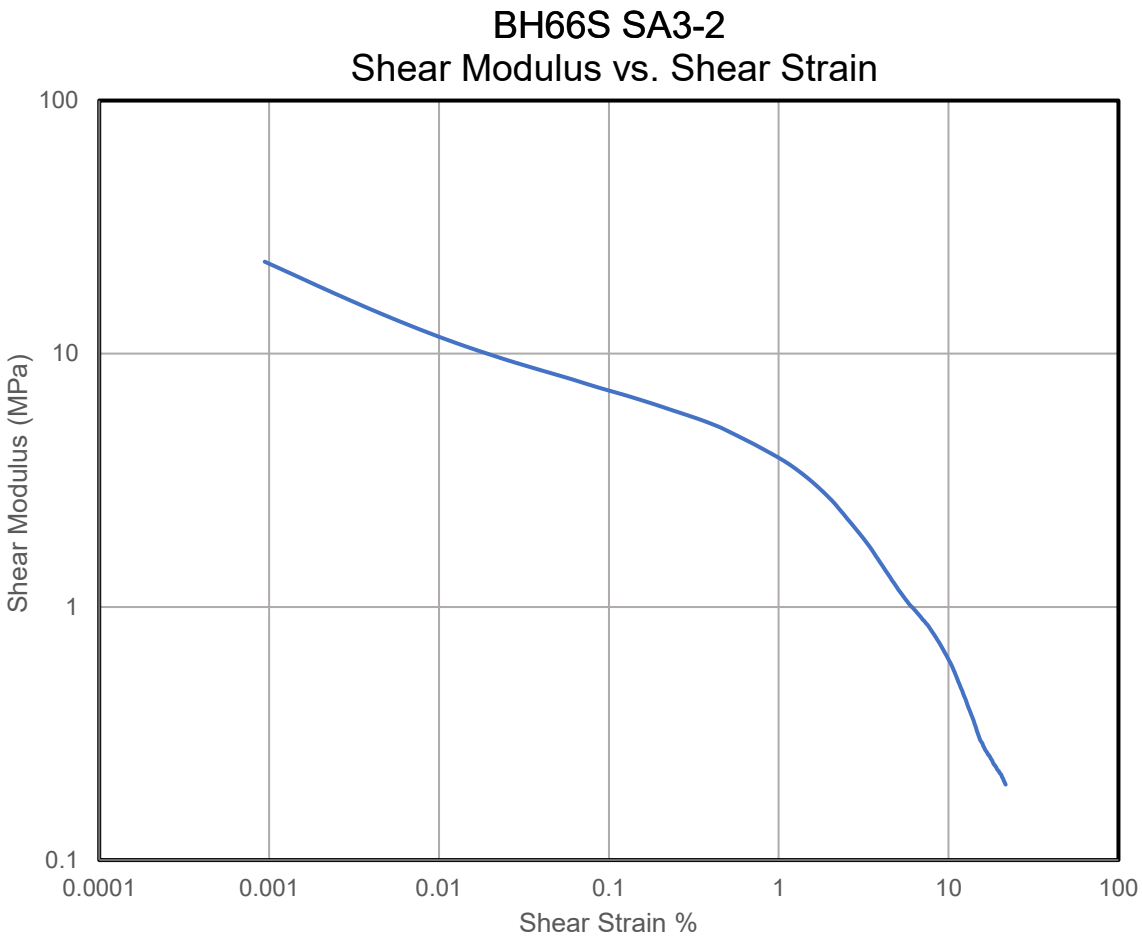


Figure No. G - 5

Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	2a

Sample ID:	SA6
Test ID:	DSS-3B
Depth:	3.56m - 3.58m

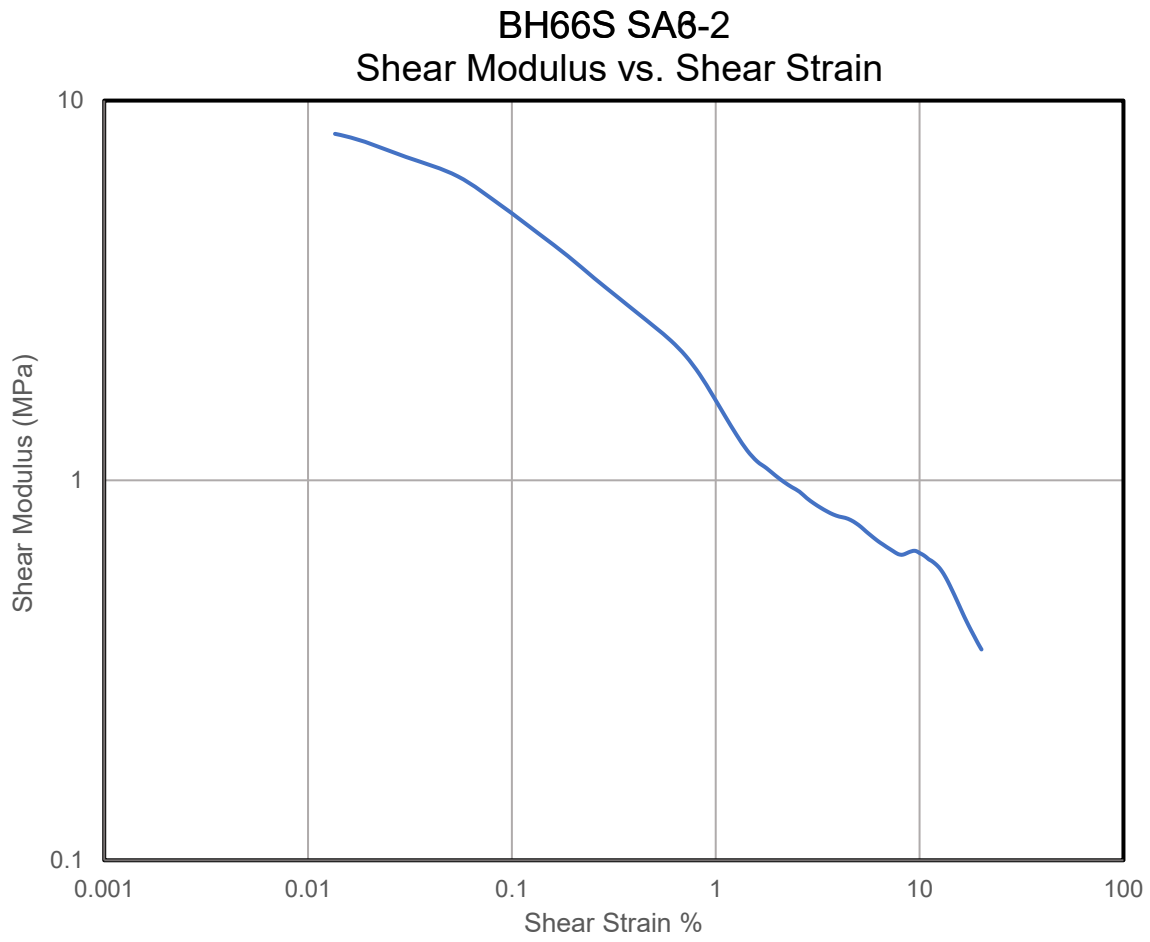


Figure No. G - 6

Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	2a

Sample ID:	SA7
Test ID:	DSS-2A
Depth:	4.11m - 4.17m

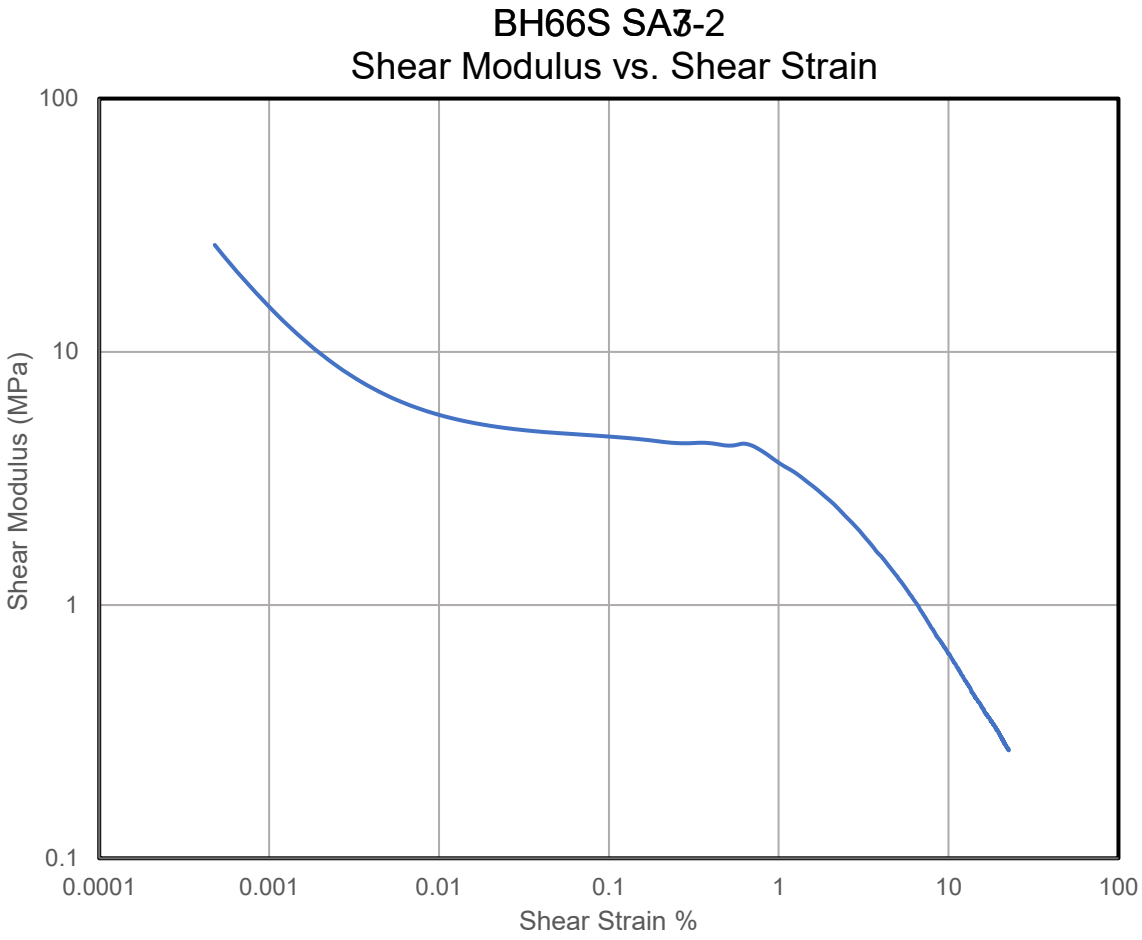


Figure No. G - 7

Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	4b

Sample ID:	SA14
Test ID:	DSS-12
Depth:	8.79m - 8.84m

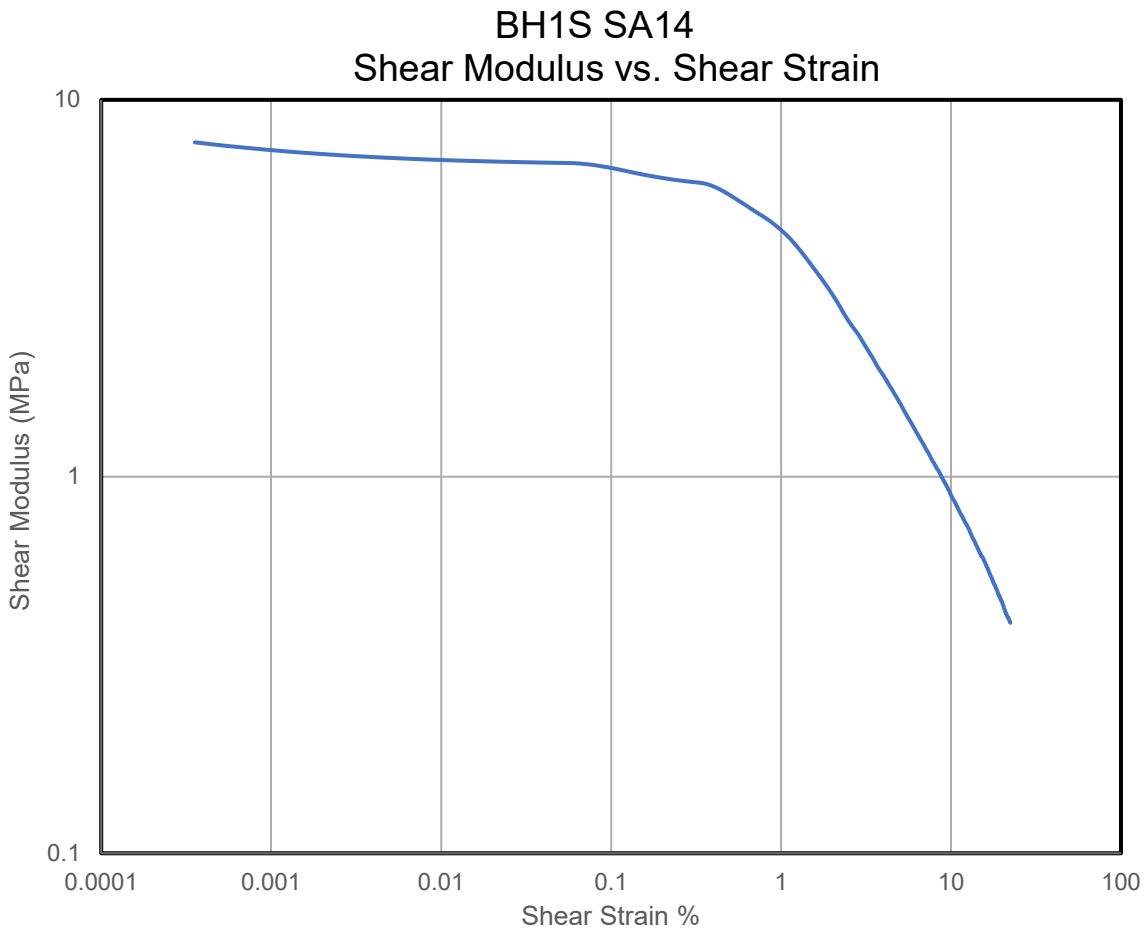


Figure No. G - 8

Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	4b

Sample ID:	SA26
Test ID:	DSS-13
Depth:	19.46m - 19.51m

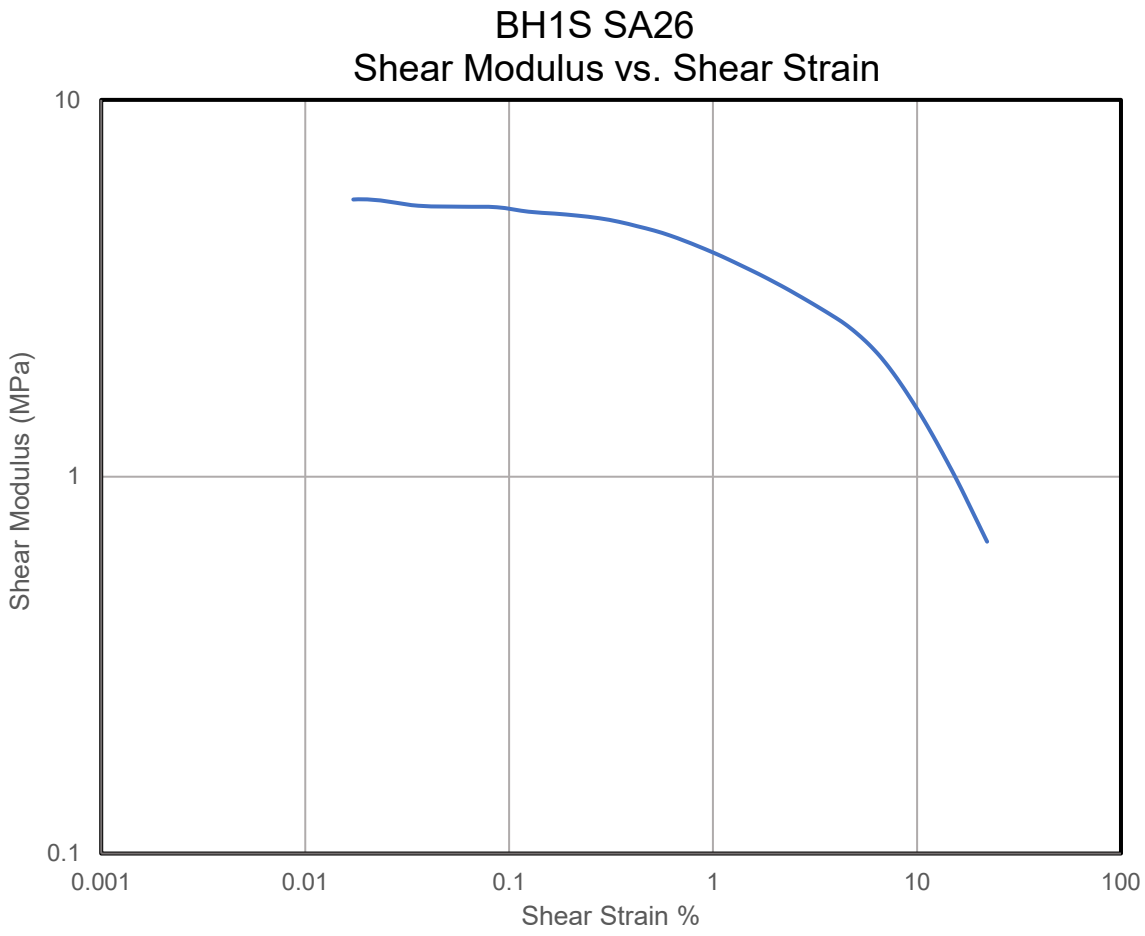


Figure No. G - 9

Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH8S
Soil Unit:	4a/4b

Sample ID:	SA6
Test ID:	DSS-15
Depth:	15.57m - 15.62m

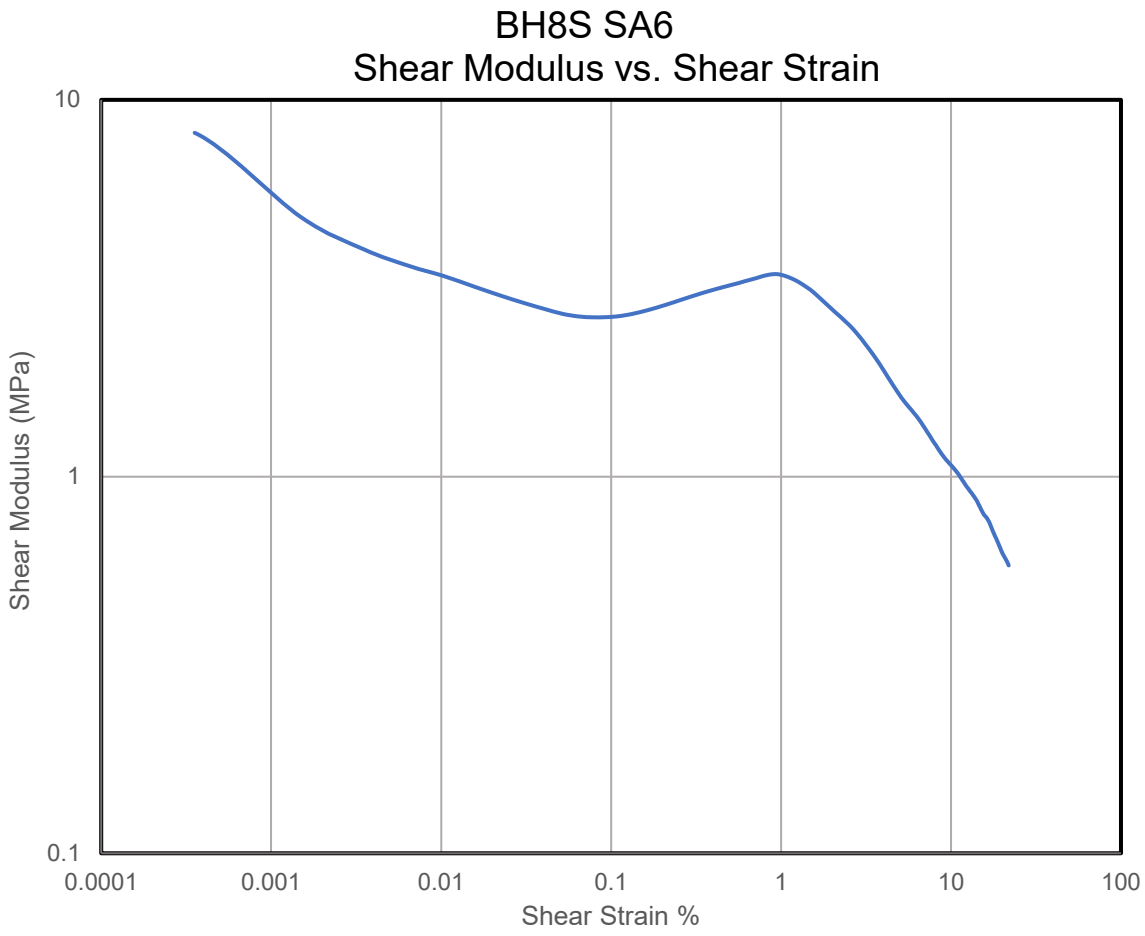


Figure No. G - 10

Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH8S
Soil Unit:	4b

Sample ID:	SA7-2
Test ID:	DSS-16
Depth:	16.00m - 16.05m

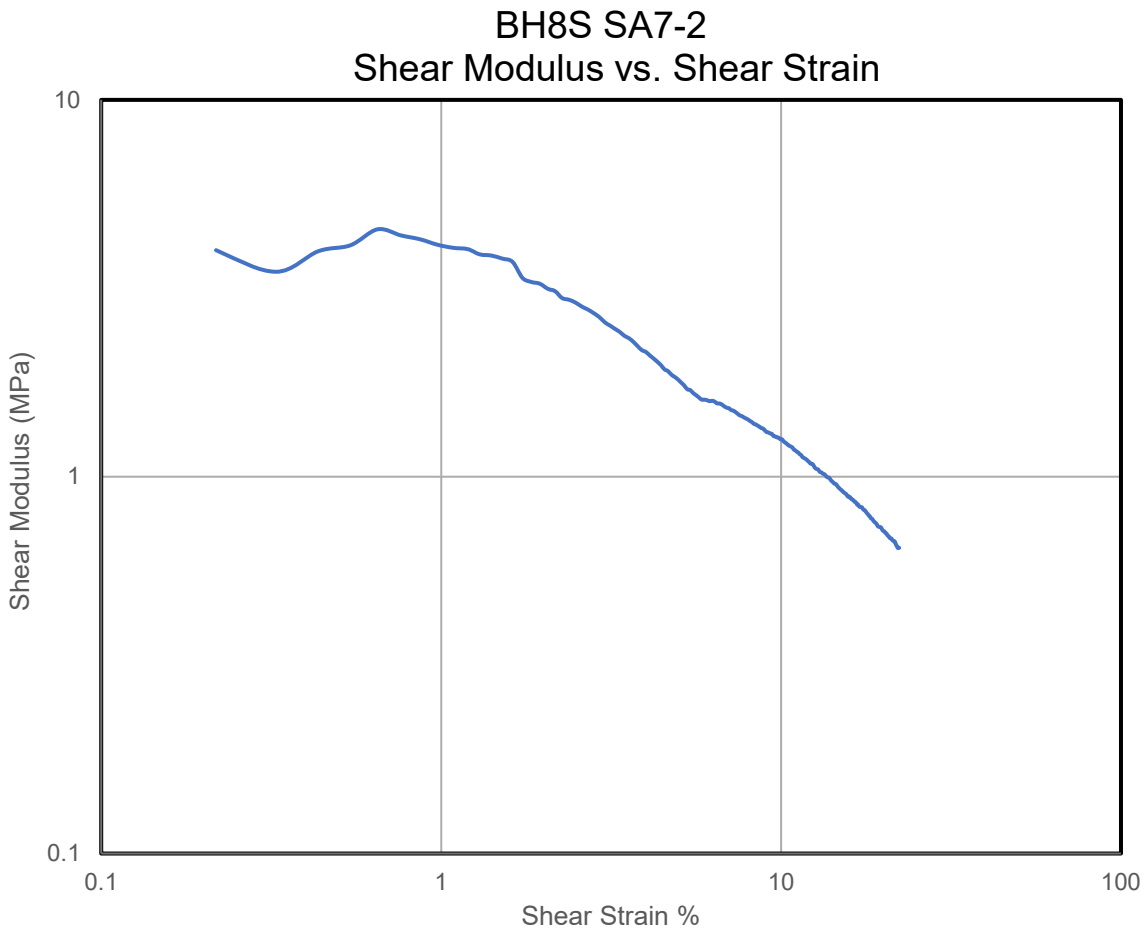
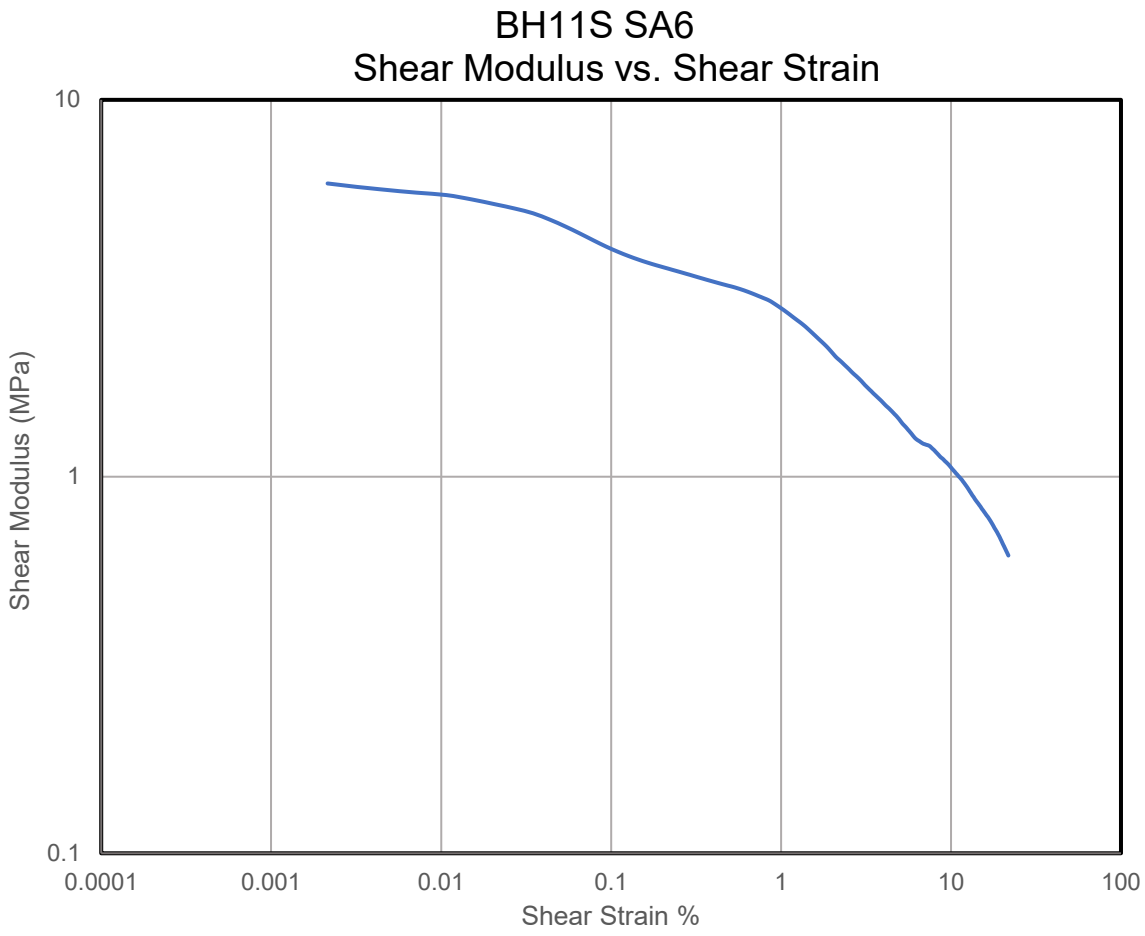


Figure No. G - 11

Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH11S
Soil Unit:	4b

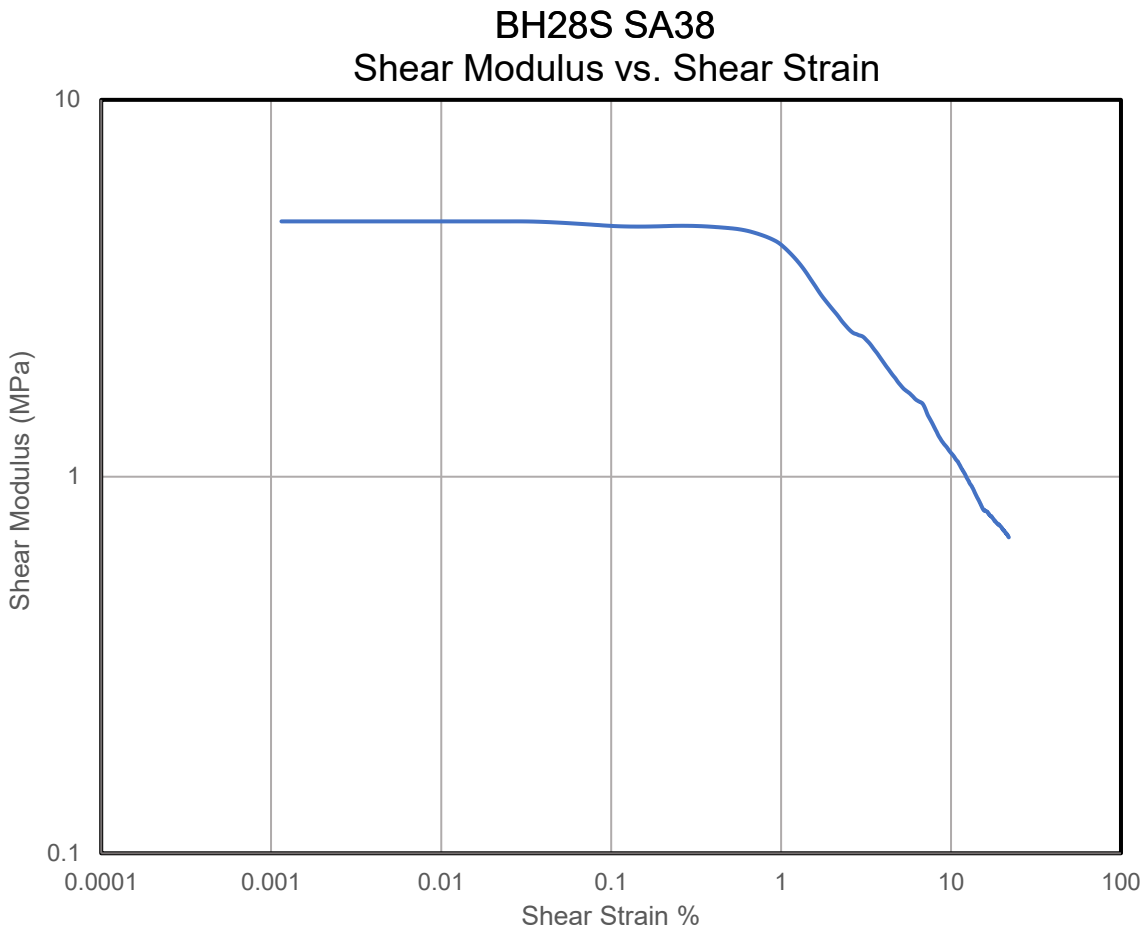
Sample ID:	SA6
Test ID:	DSS-21
Depth:	16.38m - 16.41m



Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	4b

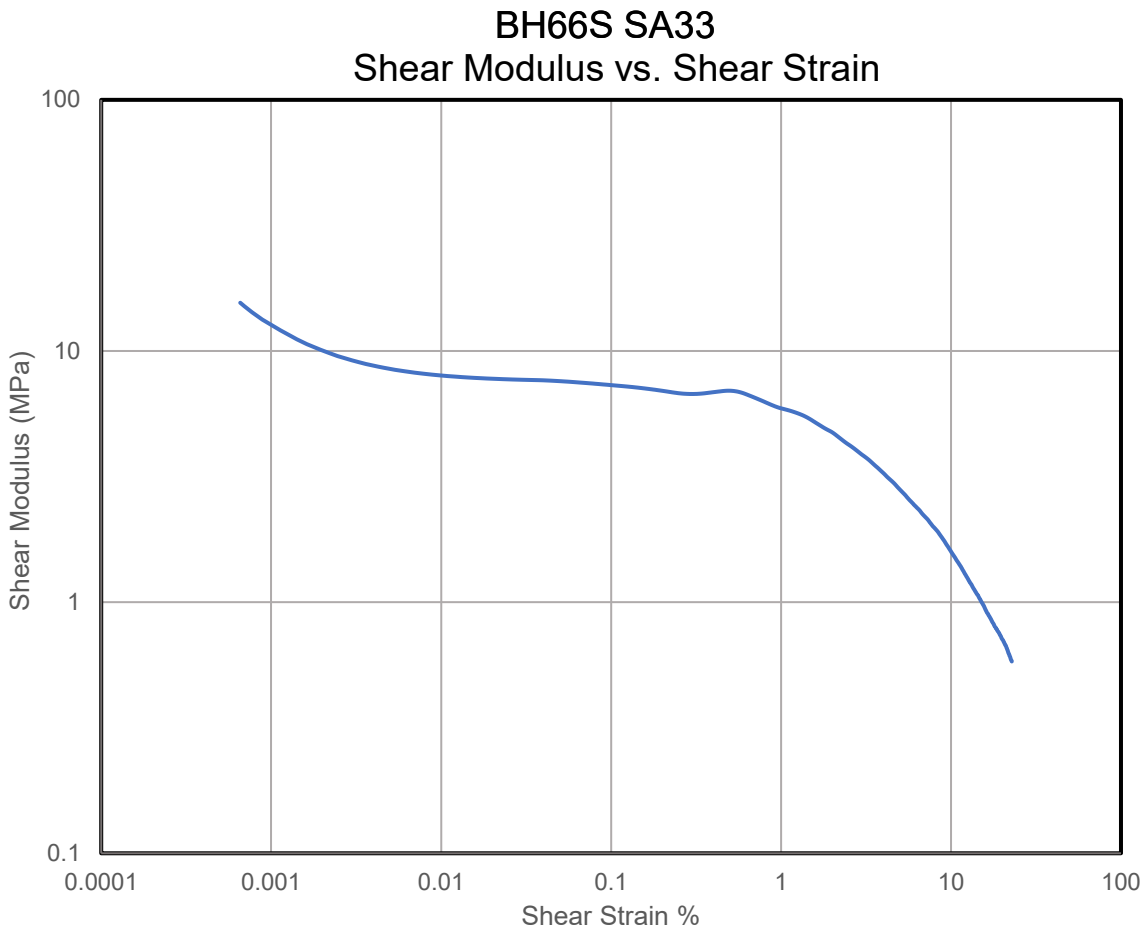
Sample ID:	SA38
Test ID:	DSS-7
Depth:	23.32m - 23.37m



Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	4b

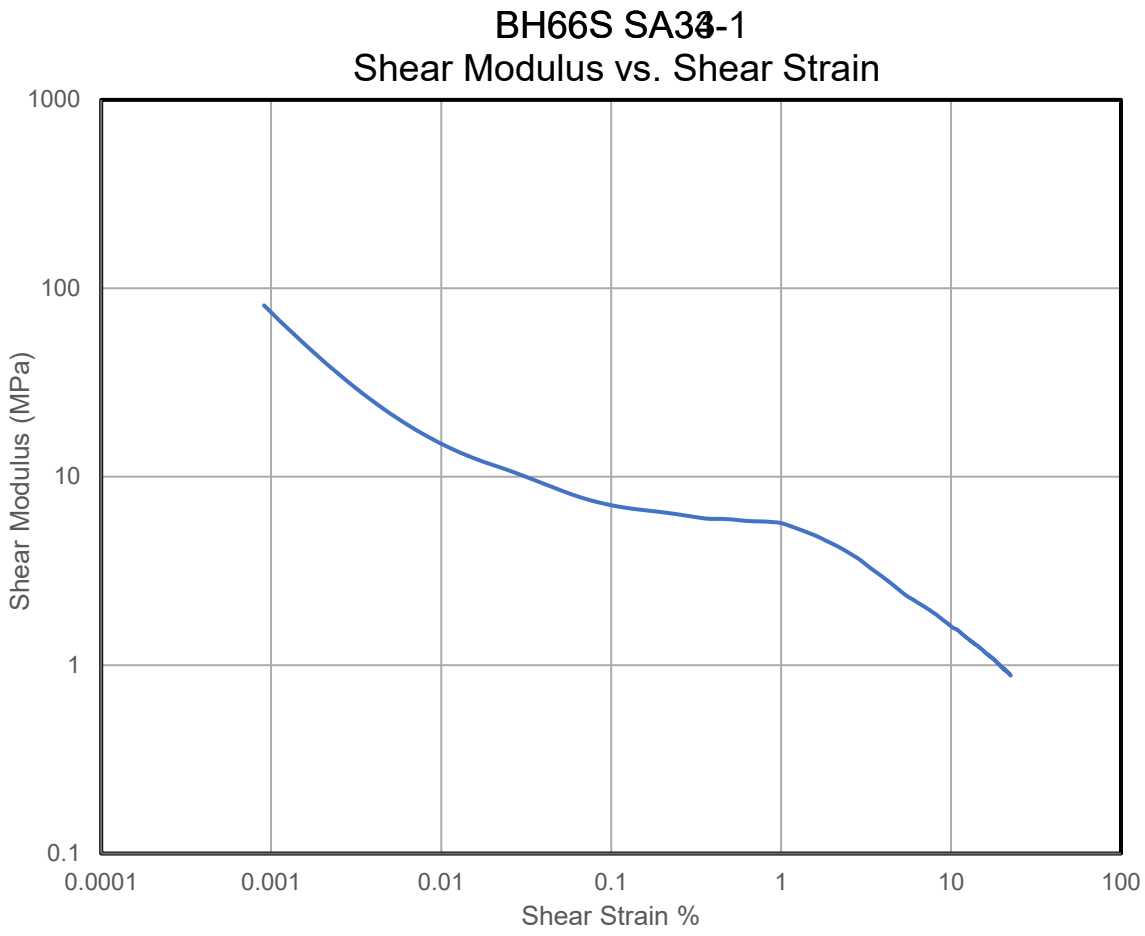
Sample ID:	SA33
Test ID:	DSS-4
Depth:	16.38m - 16.42m



Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	4b

Sample ID:	SA34-1
Test ID:	DSS-5
Depth:	17.68m - 17.73m



Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	4b

Sample ID:	SA41
Test ID:	DSS-6
Depth:	19.46m - 19.51m

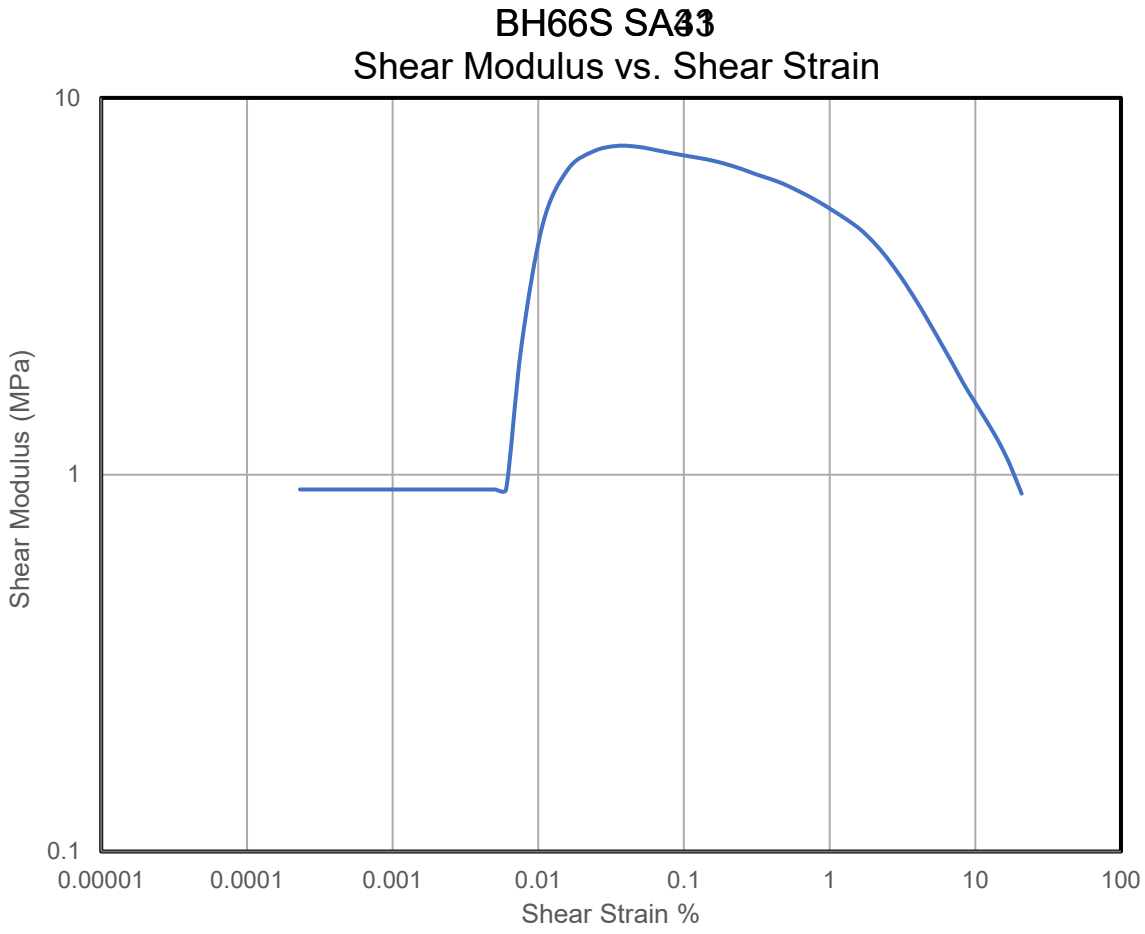
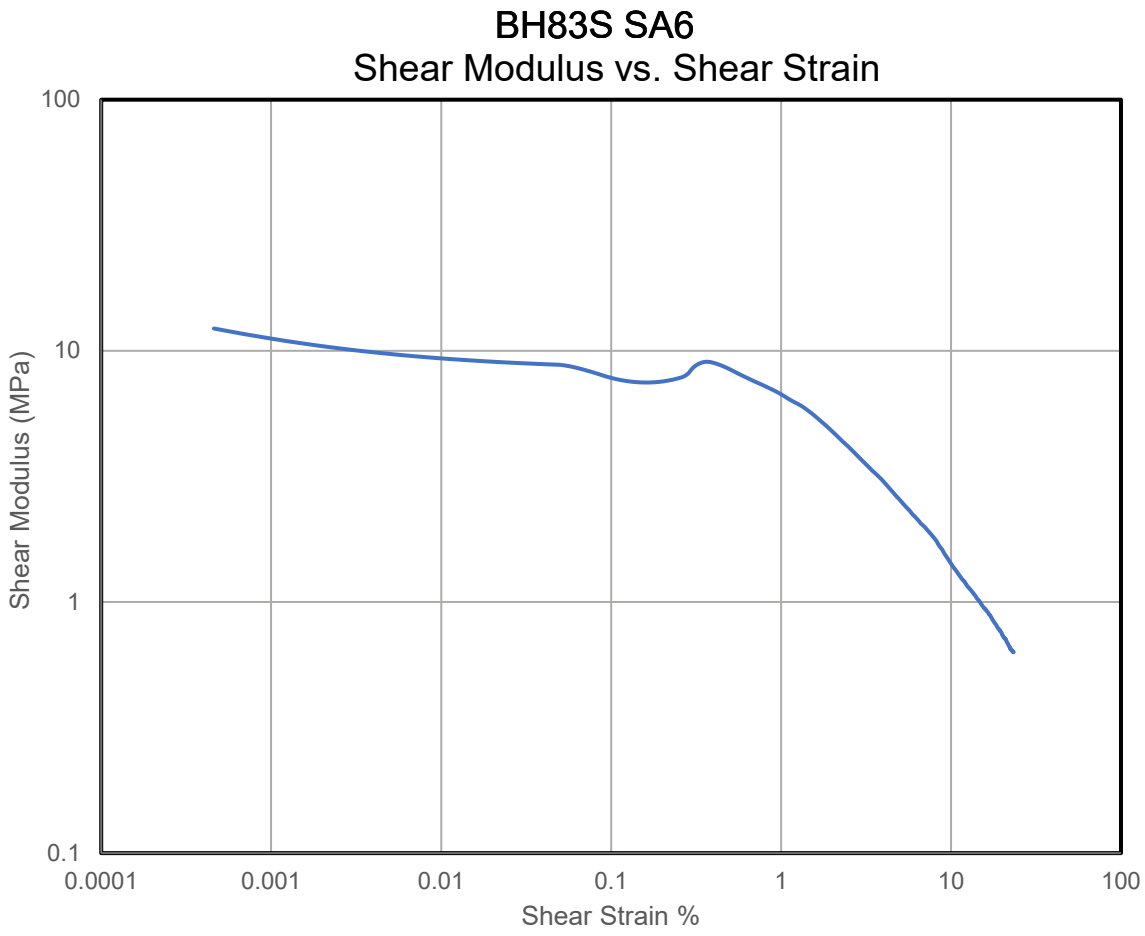


Figure No. G - 16

Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH83S
Soil Unit:	4b

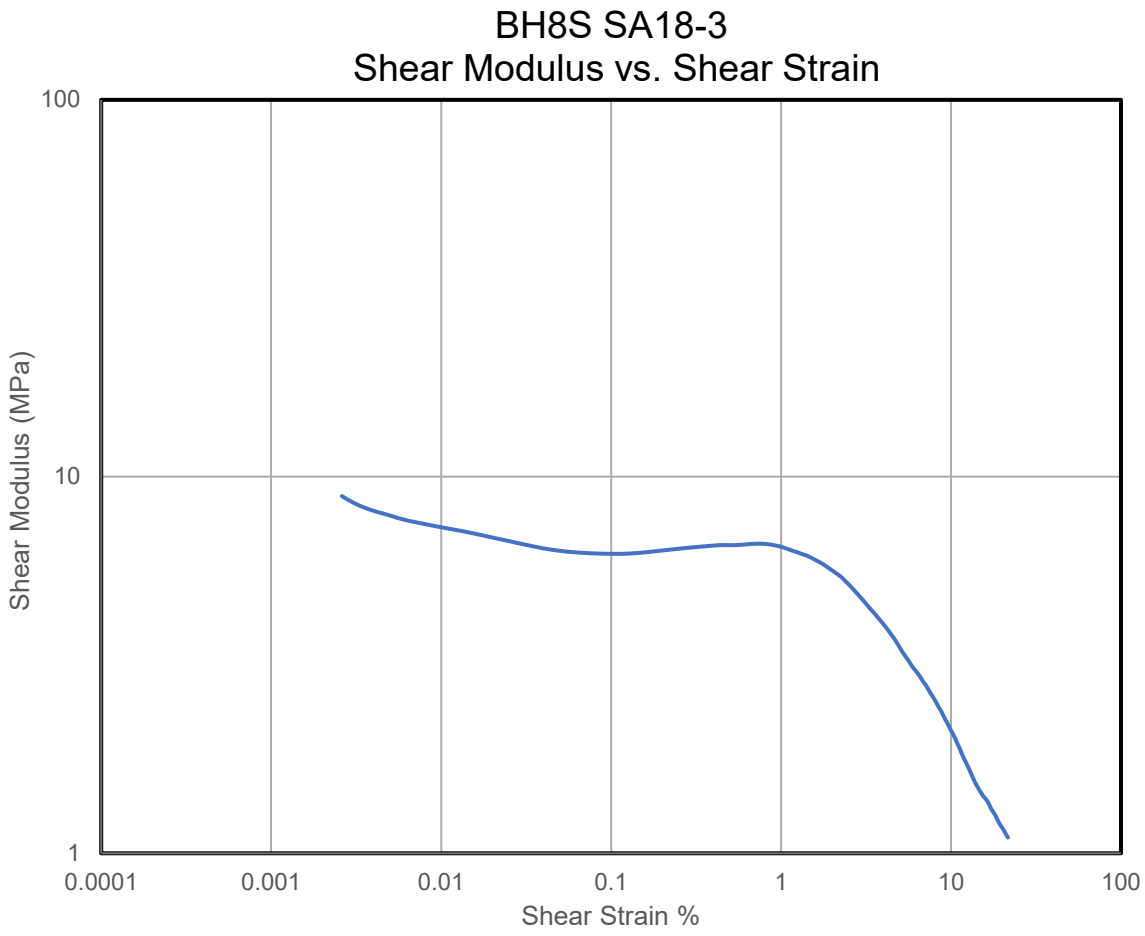
Sample ID:	SA6
Test ID:	DSS-24
Depth:	16.68m - 16.73m



Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH8S
Soil Unit:	5

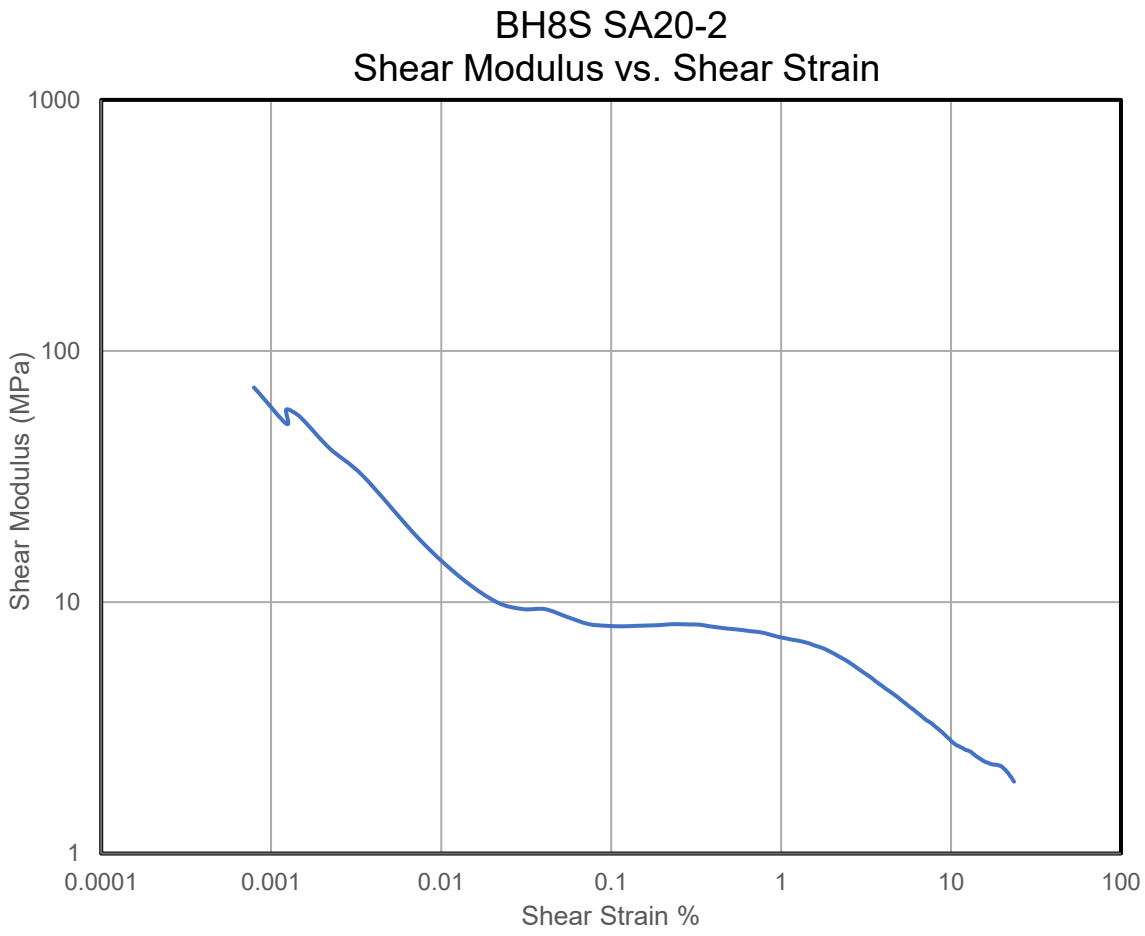
Sample ID:	SA18-3
Test ID:	DSS-17
Depth:	16.38m - 16.42m



Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH8S
Soil Unit:	5

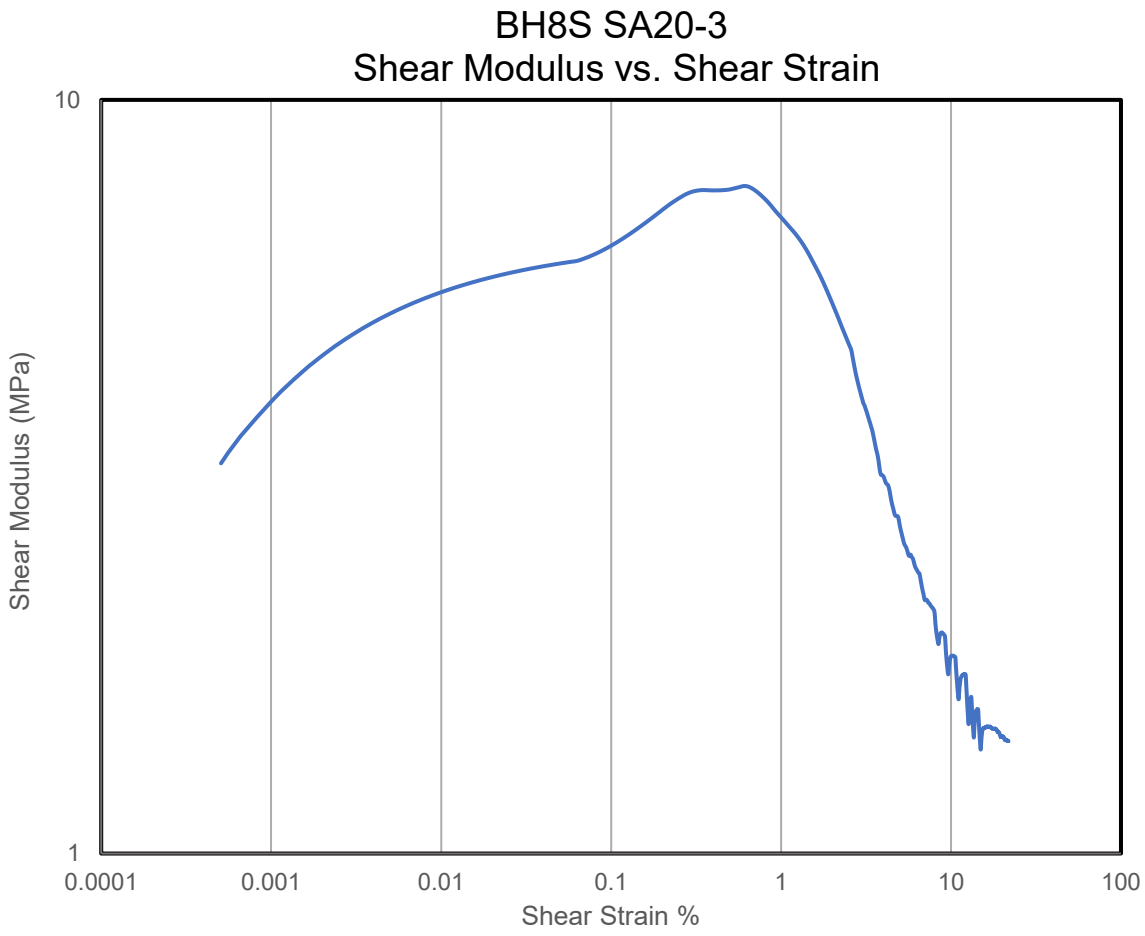
Sample ID:	SA20-2
Test ID:	DSS-18
Depth:	17.68m - 17.73m



Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH8S
Soil Unit:	5

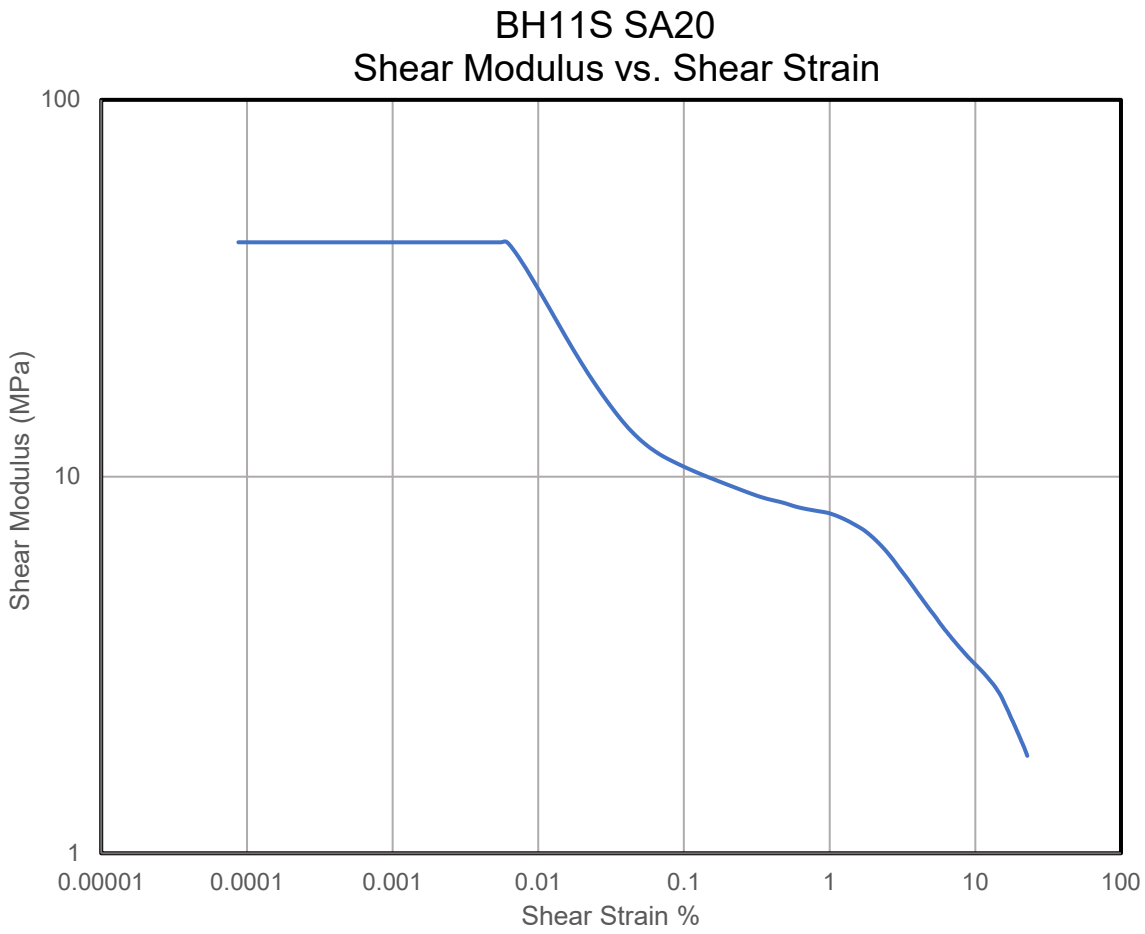
Sample ID:	SA20-3
Test ID:	DSS-19
Depth:	19.46m - 19.51m



Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH11S
Soil Unit:	5

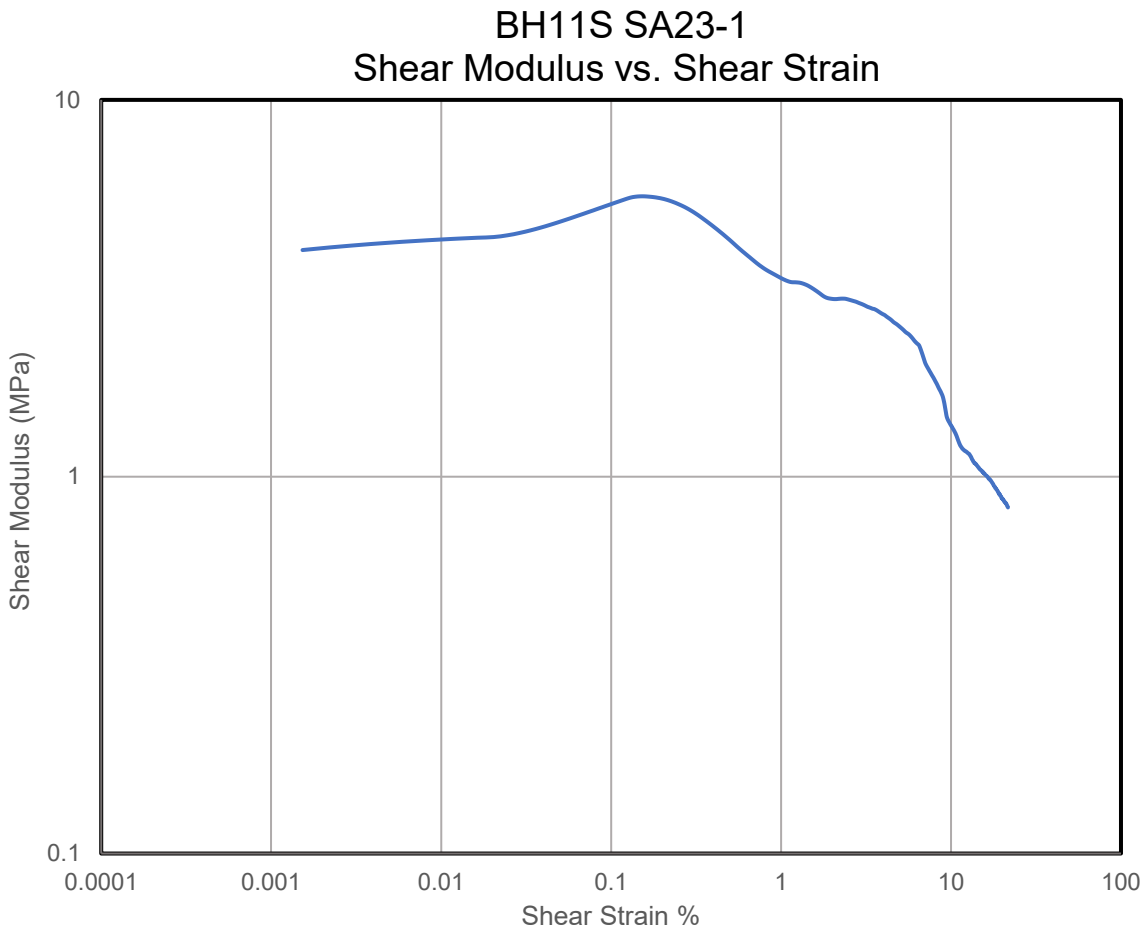
Sample ID:	SA20
Test ID:	DSS-22R
Depth:	19.42m - 19.46m



Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH11S
Soil Unit:	5

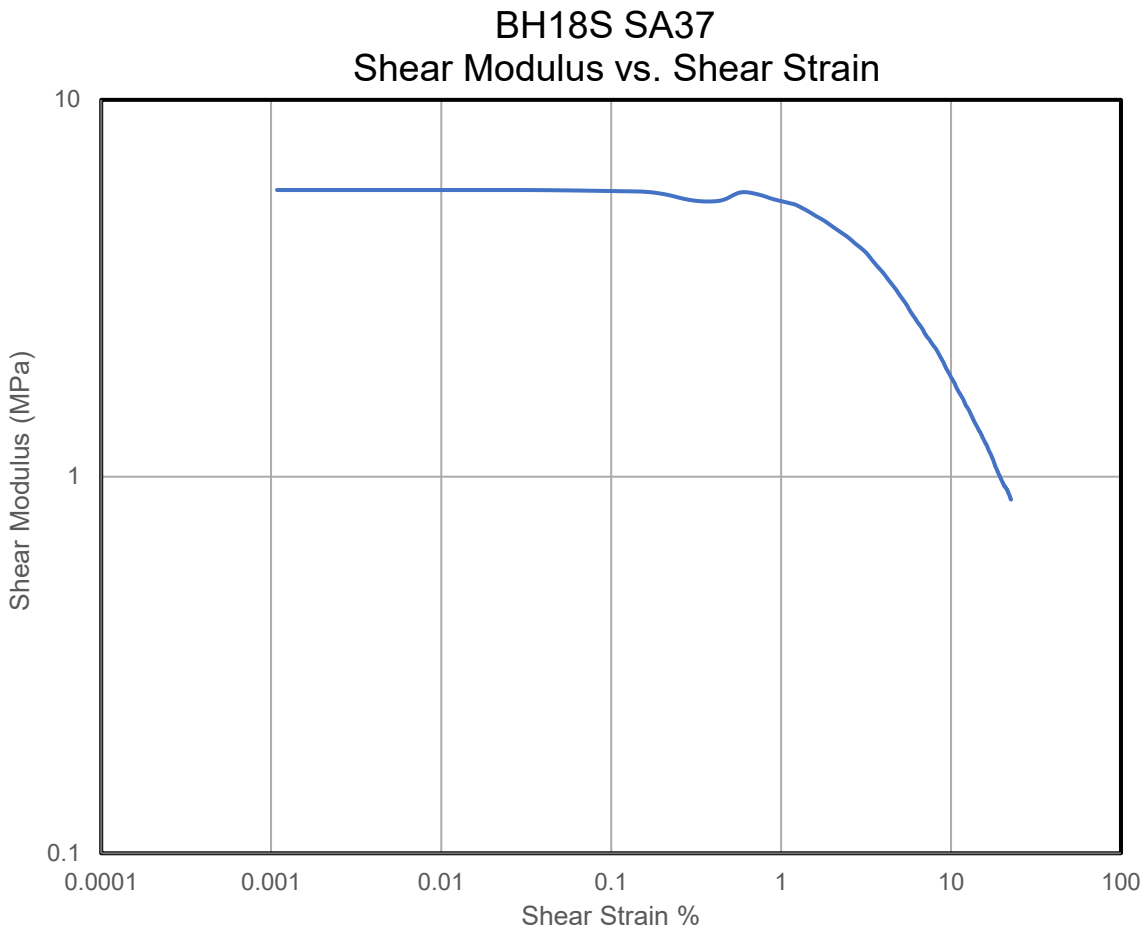
Sample ID:	SA23-1
Test ID:	DSS-23
Depth:	22.00m - 22.05m



Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	5

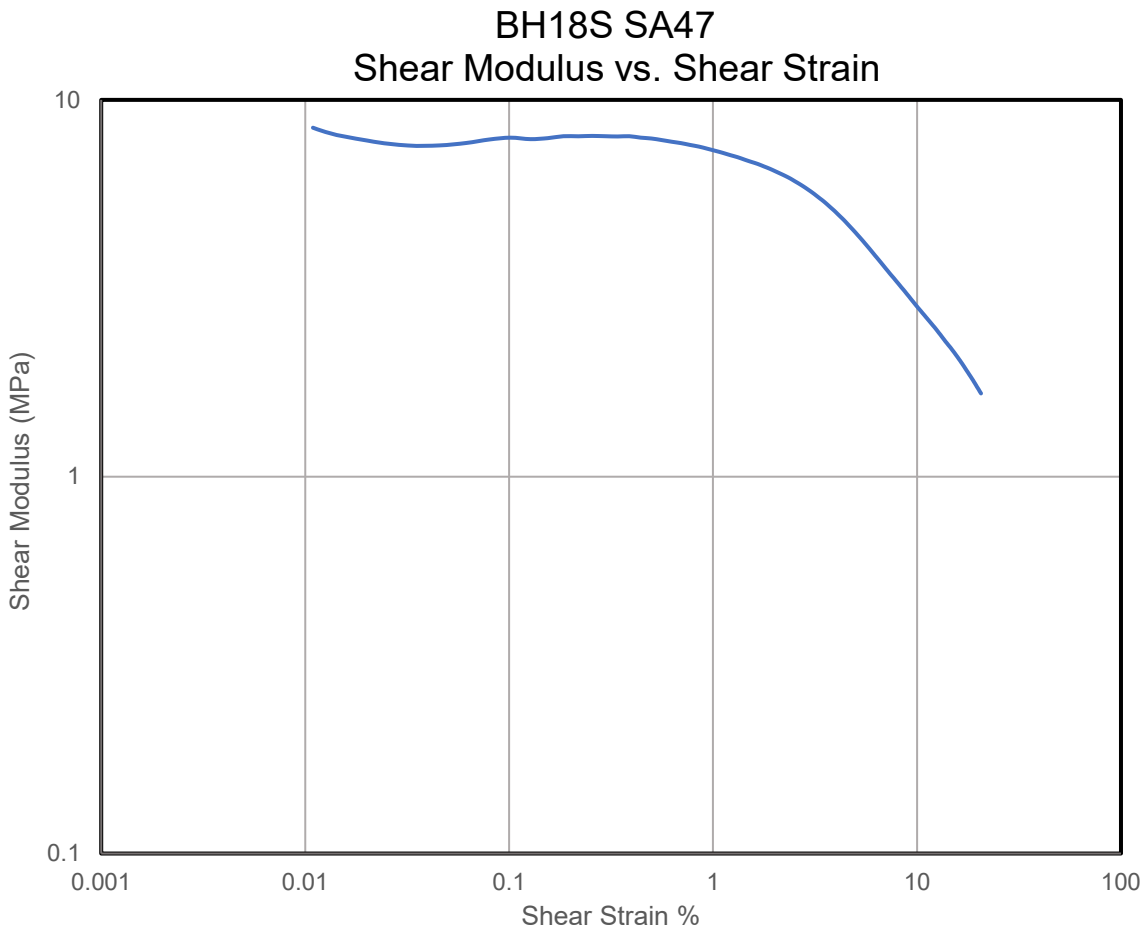
Sample ID:	SA37
Test ID:	DSS-9
Depth:	16.83m - 16.88m



Consolidated Undrained Direct Simple Shear Test

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	5

Sample ID:	SA47
Test ID:	DSS-10
Depth:	22.50m - 22.56m



APPENDIX H

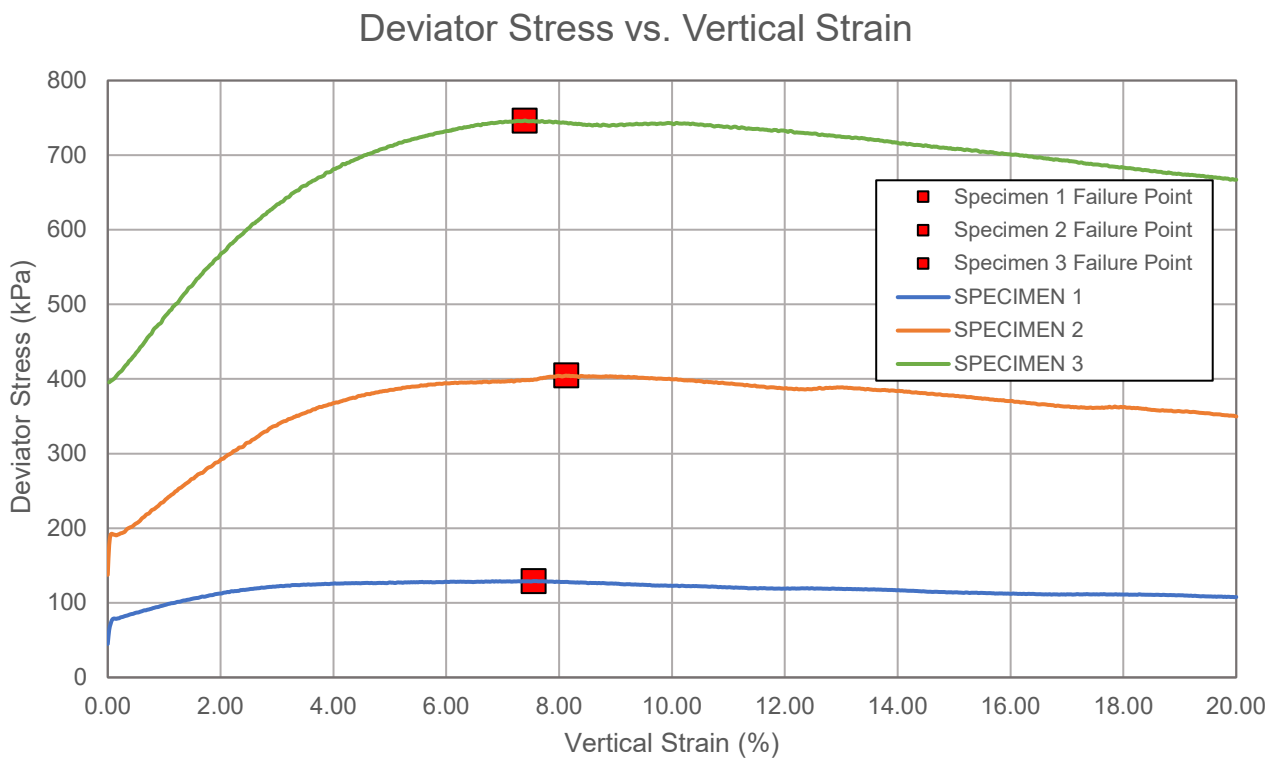
Consolidated Drained Triaxial Compression Testing Interpretations

Figure No. H - 1.1

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S&66SB
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.51)	Anisotropic (Consol. K= 0.50)	Anisotropic (Consol. K= 0.50)
Sample ID:	66S SA9-1	66S SA10-1	66SB SA10-1
Test ID:	CAD-7	CAD-8	CAD-9
Depth:	4.27 m - 5.31 m	5.33 m - 5.54 m	6.71 m - 7.01 m



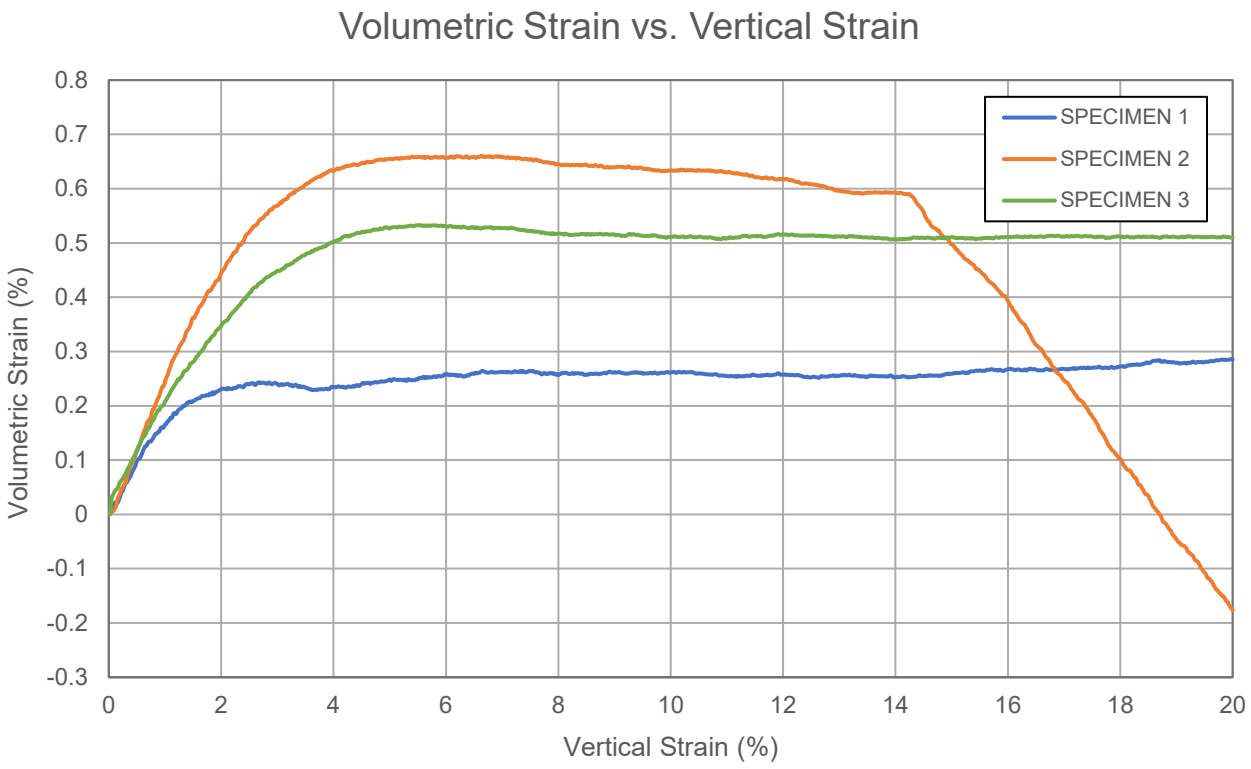
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 1.2

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S&66SB
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.51)	Anisotropic (Consol. K= 0.50)	Anisotropic (Consol. K= 0.50)
Sample ID:	66S SA9-1	66S SA10-1	66SB SA10-1
Test ID:	CAD-7	CAD-8	CAD-9
Depth:	4.27 m - 5.31 m	5.33 m - 5.54 m	6.71 m - 7.01 m



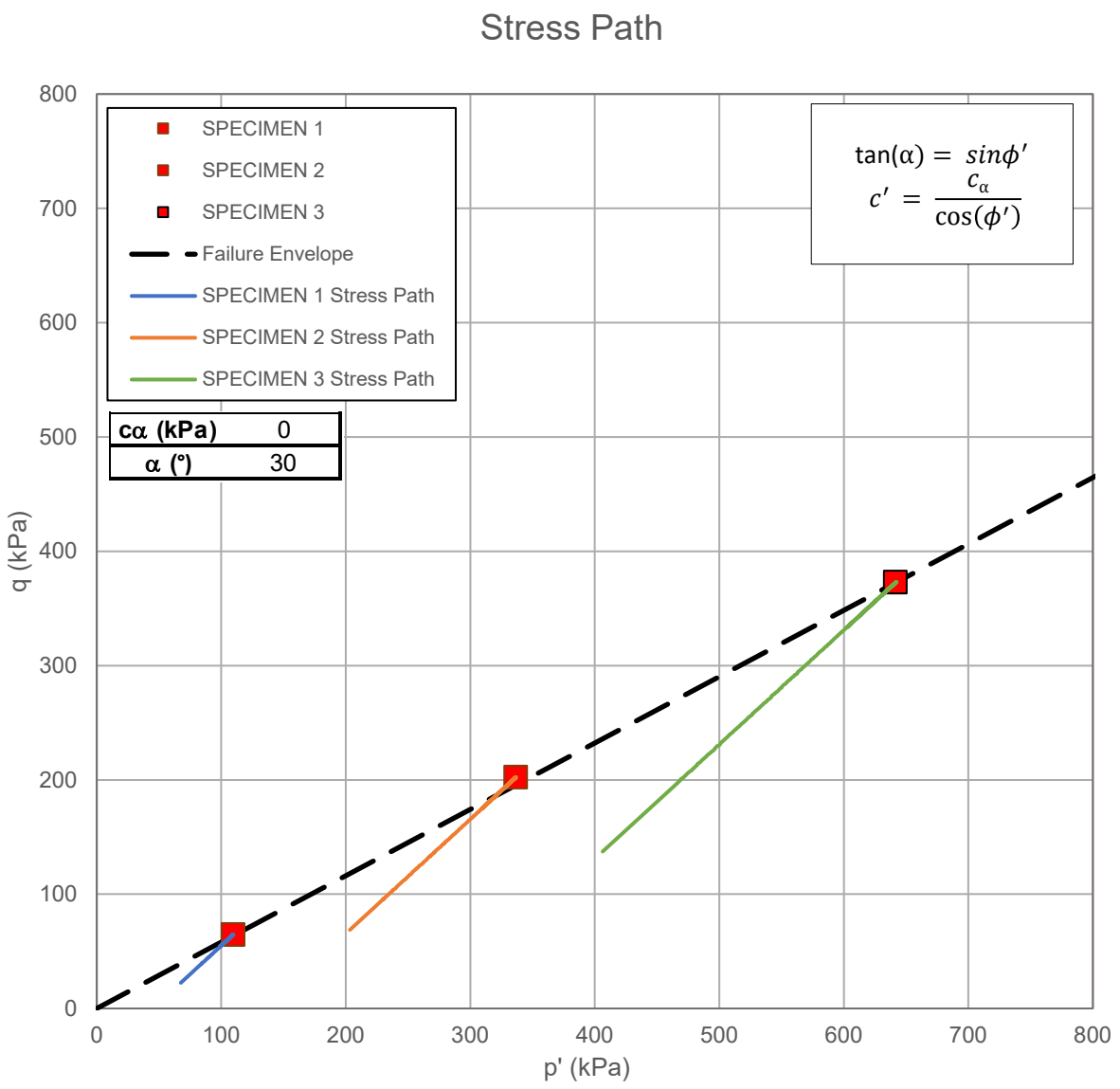
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 1.3

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S&66SB
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.51)	Anisotropic (Consol. K= 0.50)	Anisotropic (Consol. K= 0.50)
Sample ID:	66S SA9-1	66S SA10-1	66SB SA10-1
Test ID:	CAD-7	CAD-8	CAD-9
Depth:	4.27 m - 5.31 m	5.33 m - 5.54 m	6.71 m - 7.01 m



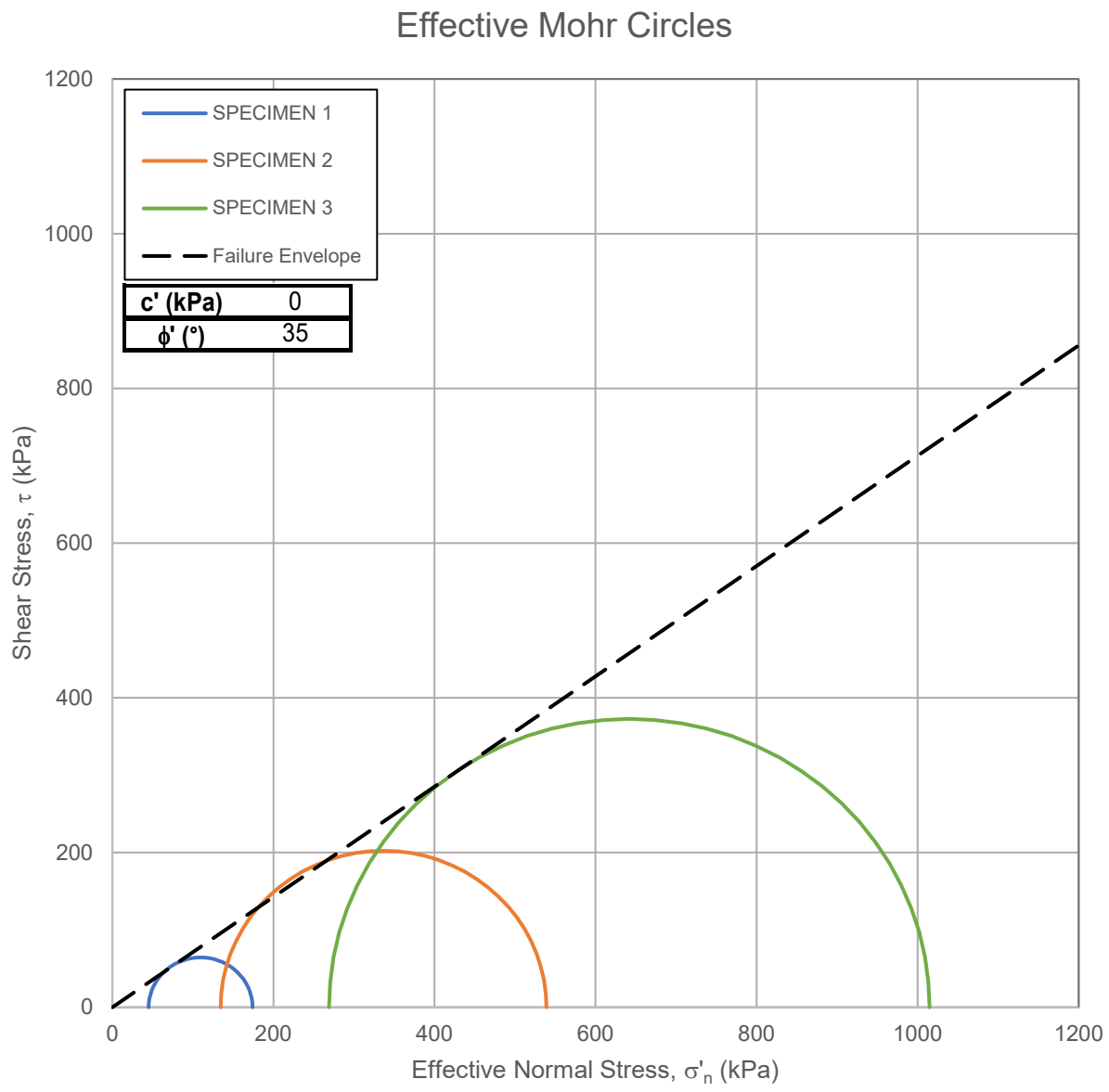
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 1.4

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S&66SB
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.51)	Anisotropic (Consol. K= 0.50)	Anisotropic (Consol. K= 0.50)
Sample ID:	66S SA9-1	66S SA10-1	66SB SA10-1
Test ID:	CAD-7	CAD-8	CAD-9
Depth:	4.27 m - 5.31 m	5.33 m - 5.54 m	6.71 m - 7.01 m



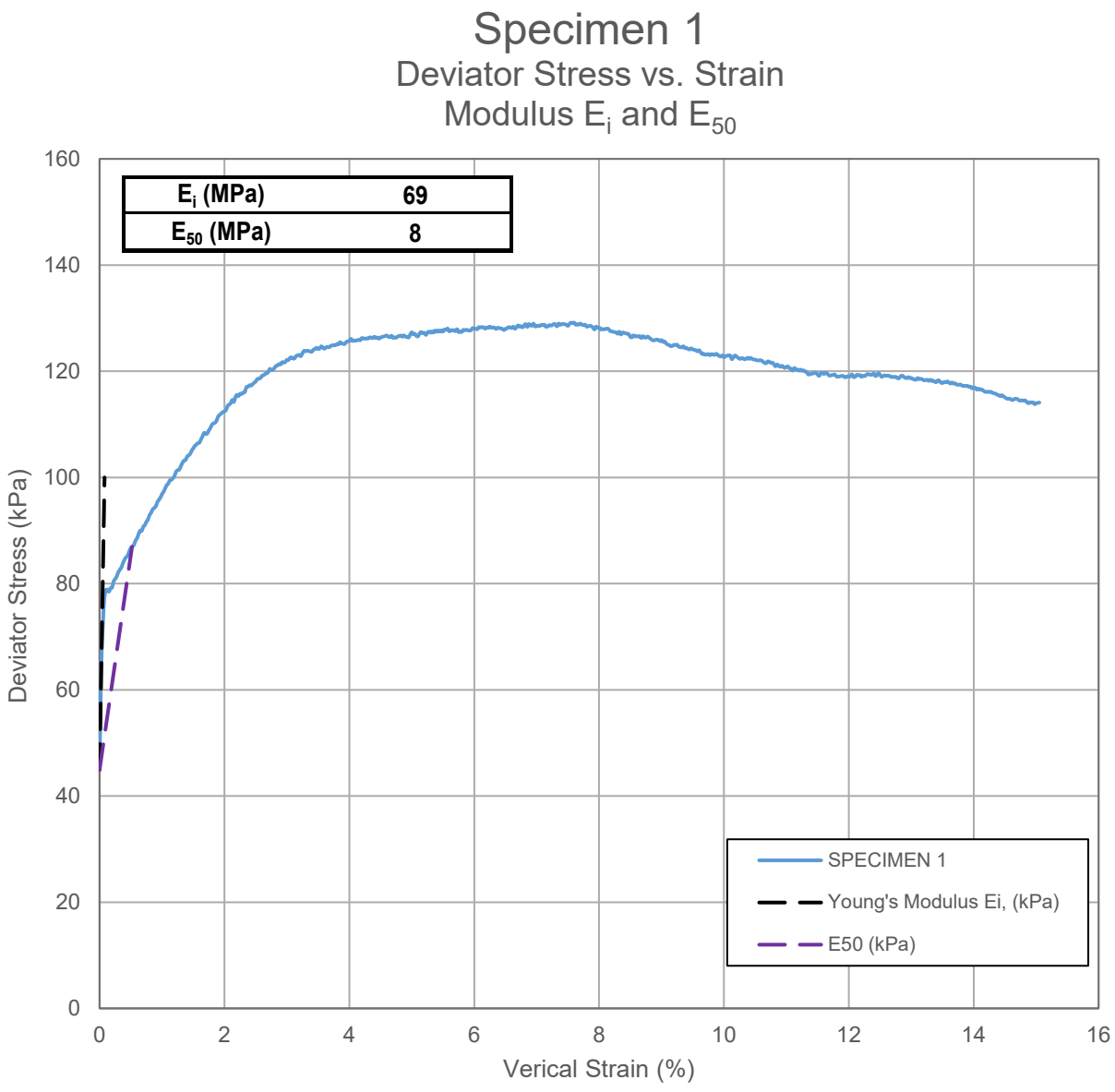
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 1.5

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S&66SB
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.51)	Anisotropic (Consol. K= 0.50)	Anisotropic (Consol. K= 0.50)
Sample ID:	66S SA9-1	66S SA10-1	66SB SA10-1
Test ID:	CAD-7	CAD-8	CAD-9
Depth:	4.27 m - 5.31 m	5.33 m - 5.54 m	6.71 m - 7.01 m



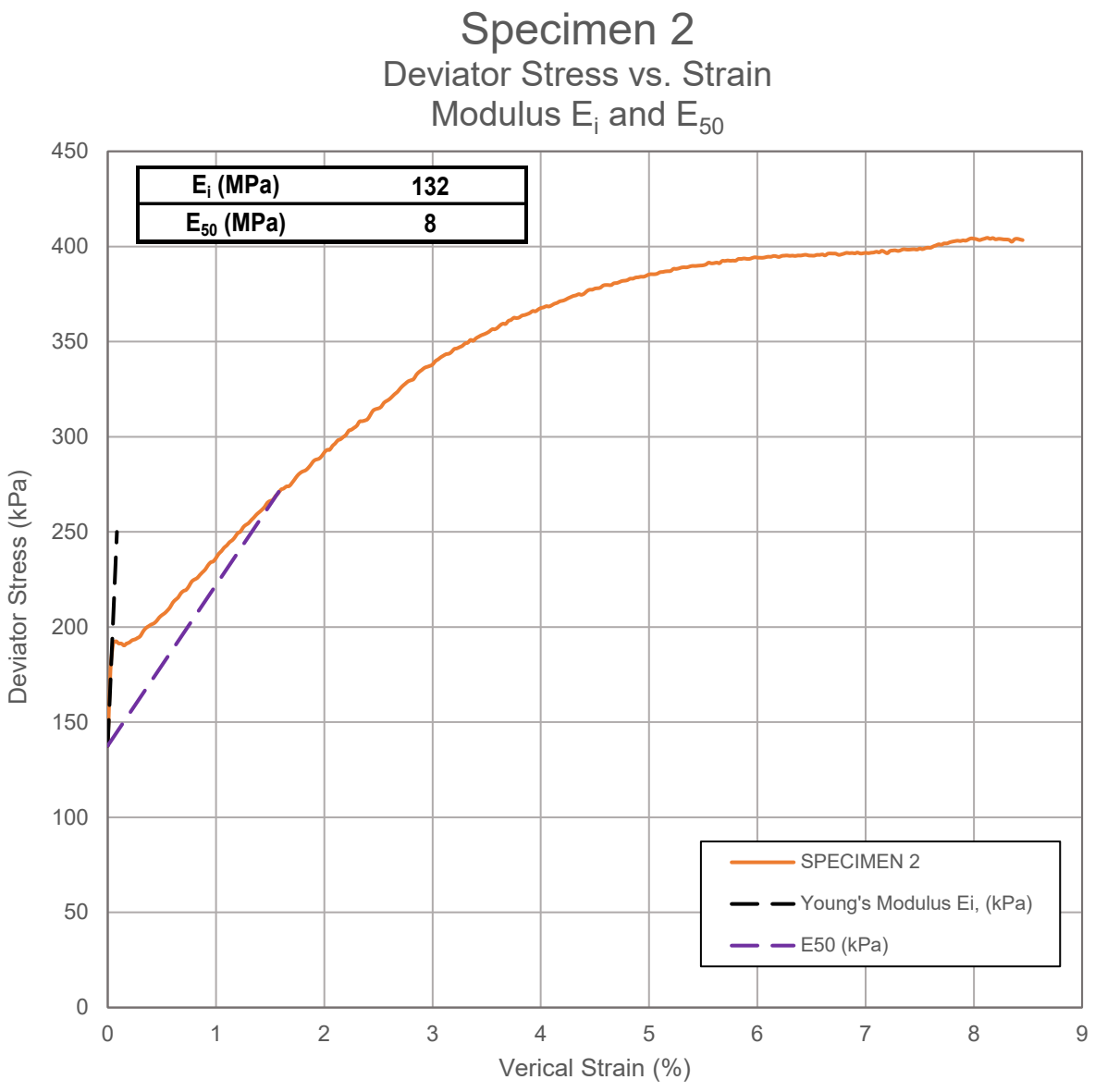
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 1.6

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S&66SB
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.51)	Anisotropic (Consol. K= 0.50)	Anisotropic (Consol. K= 0.50)
Sample ID:	66S SA9-1	66S SA10-1	66SB SA10-1
Test ID:	CAD-7	CAD-8	CAD-9
Depth:	4.27 m - 5.31 m	5.33 m - 5.54 m	6.71 m - 7.01 m



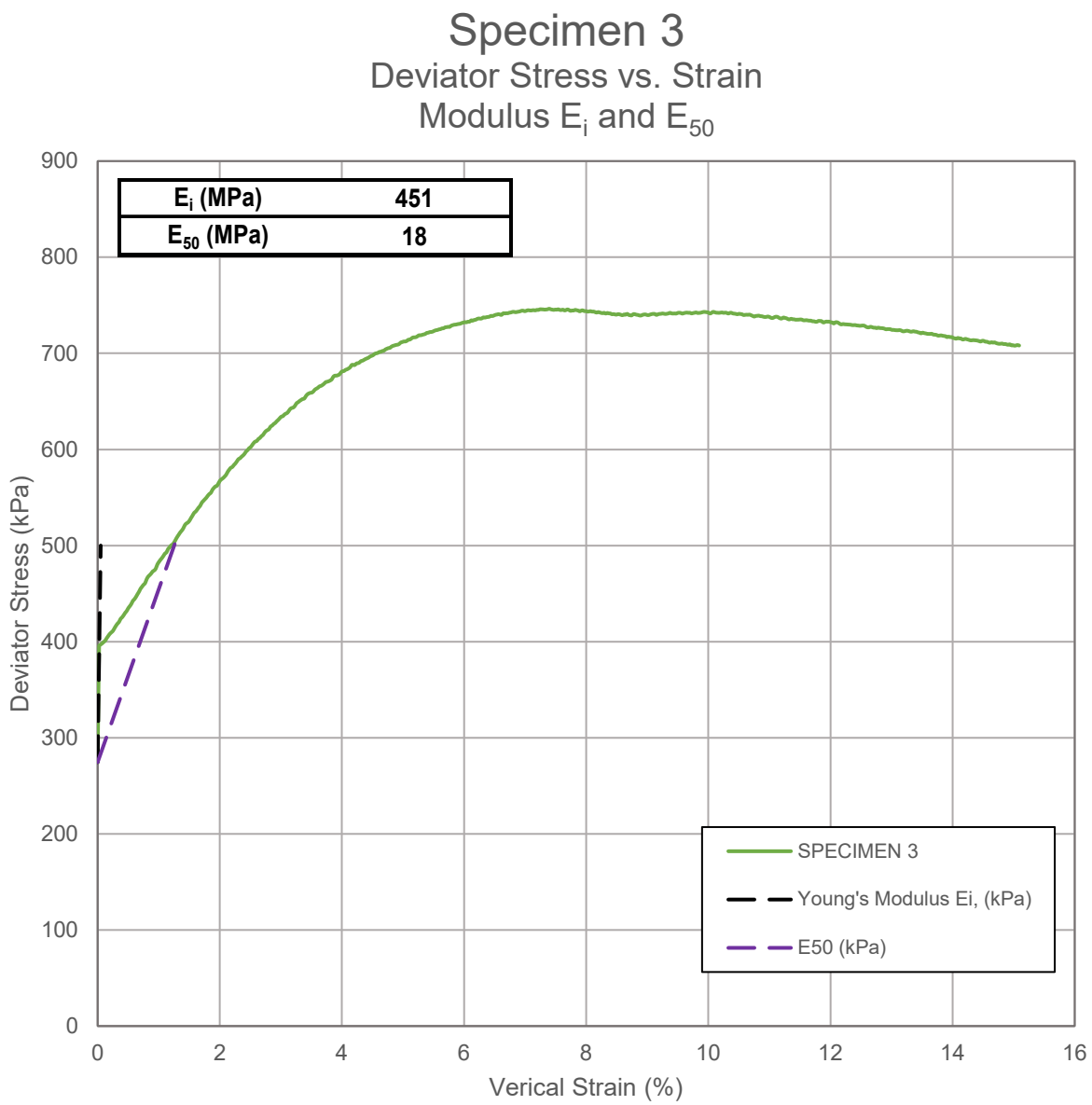
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 1.7

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S&66SB
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.51)	Anisotropic (Consol. K= 0.50)	Anisotropic (Consol. K= 0.50)
Sample ID:	66S SA9-1	66S SA10-1	66SB SA10-1
Test ID:	CAD-7	CAD-8	CAD-9
Depth:	4.27 m - 5.31 m	5.33 m - 5.54 m	6.71 m - 7.01 m



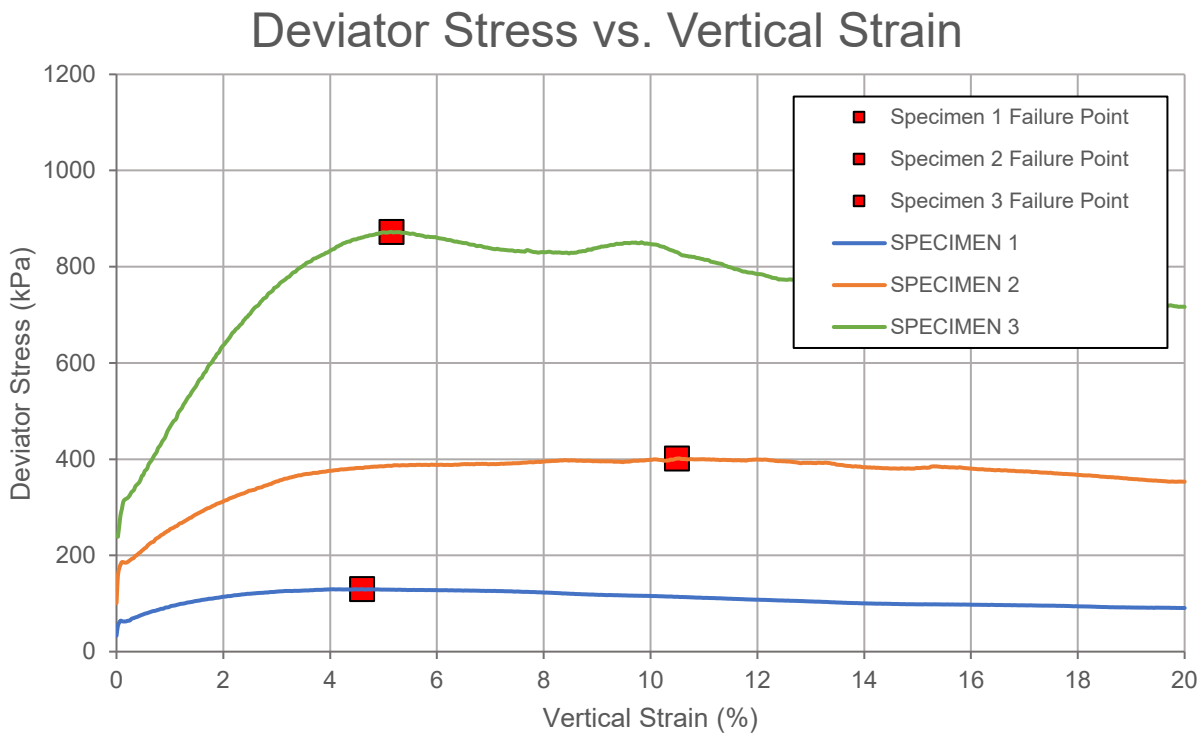
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 2.1

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	18S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.60)	Anisotropic (Consol. K= 0.60)	Anisotropic (Consol. K= 0.60)
Sample ID:	SA5	SA8	SA11
Test ID:	CAD-16	CAD-17	CAD-18
Depth:	2.74m - 3.05m	4.27m - 4.57m	5.18m - 5.49m



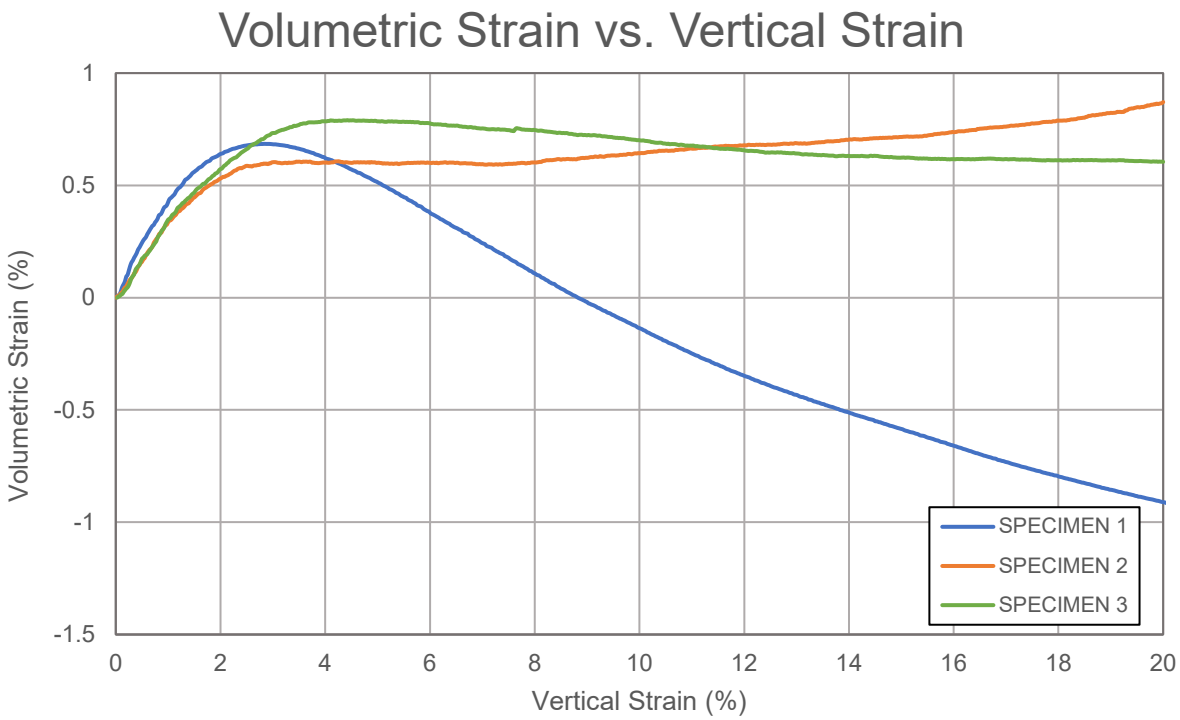
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 2.2

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	18S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.60)	Anisotropic (Consol. K= 0.60)	Anisotropic (Consol. K= 0.60)
Sample ID:	SA5	SA8	SA11
Test ID:	CAD-16	CAD-17	CAD-18
Depth:	2.74m - 3.05m	4.27m - 4.57m	5.18m - 5.49m



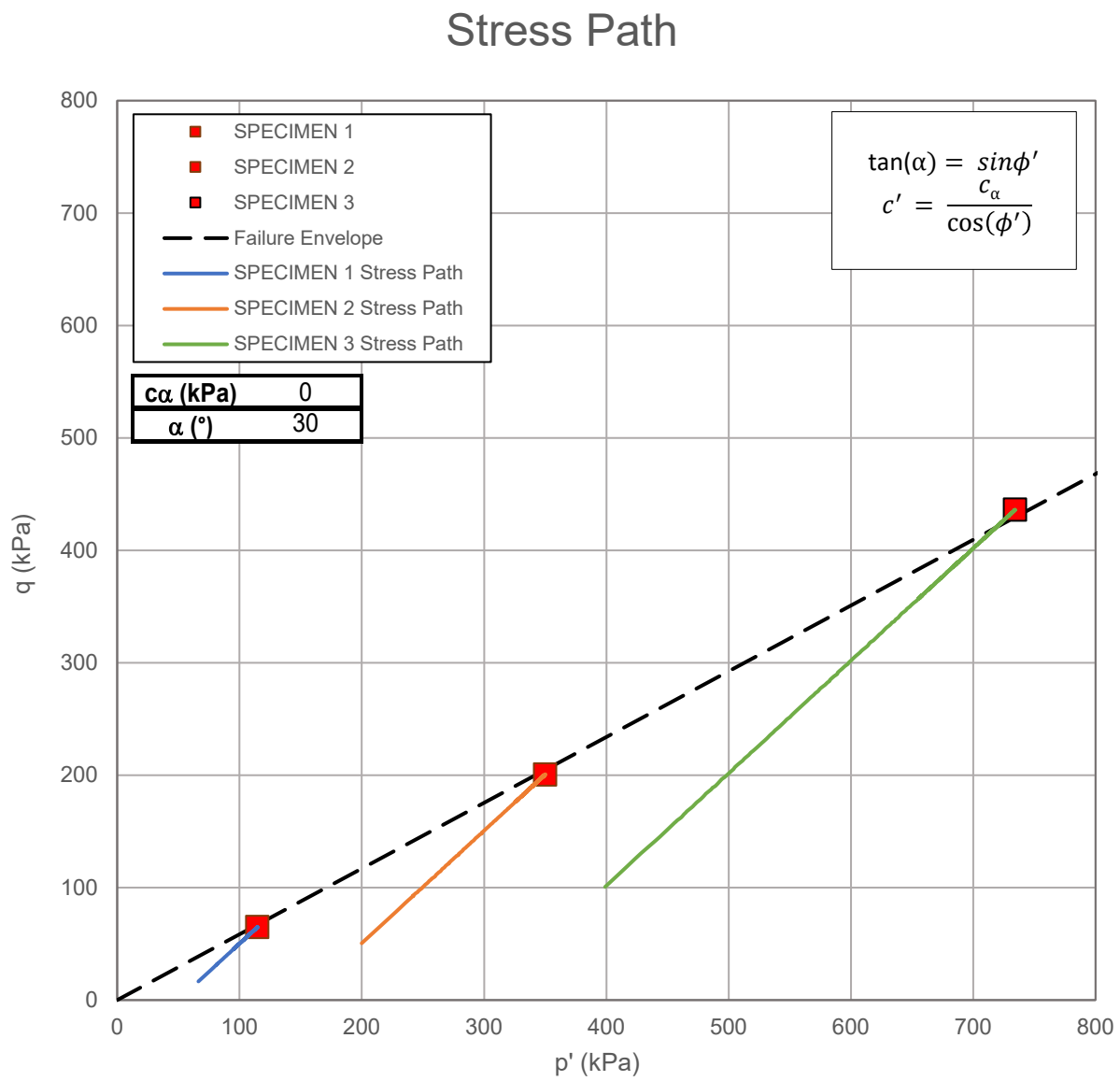
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 2.3

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	18S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.60)	Anisotropic (Consol. K= 0.60)	Anisotropic (Consol. K= 0.60)
Sample ID:	SA5	SA8	SA11
Test ID:	CAD-16	CAD-17	CAD-18
Depth:	2.74m - 3.05m	4.27m - 4.57m	5.18m - 5.49m



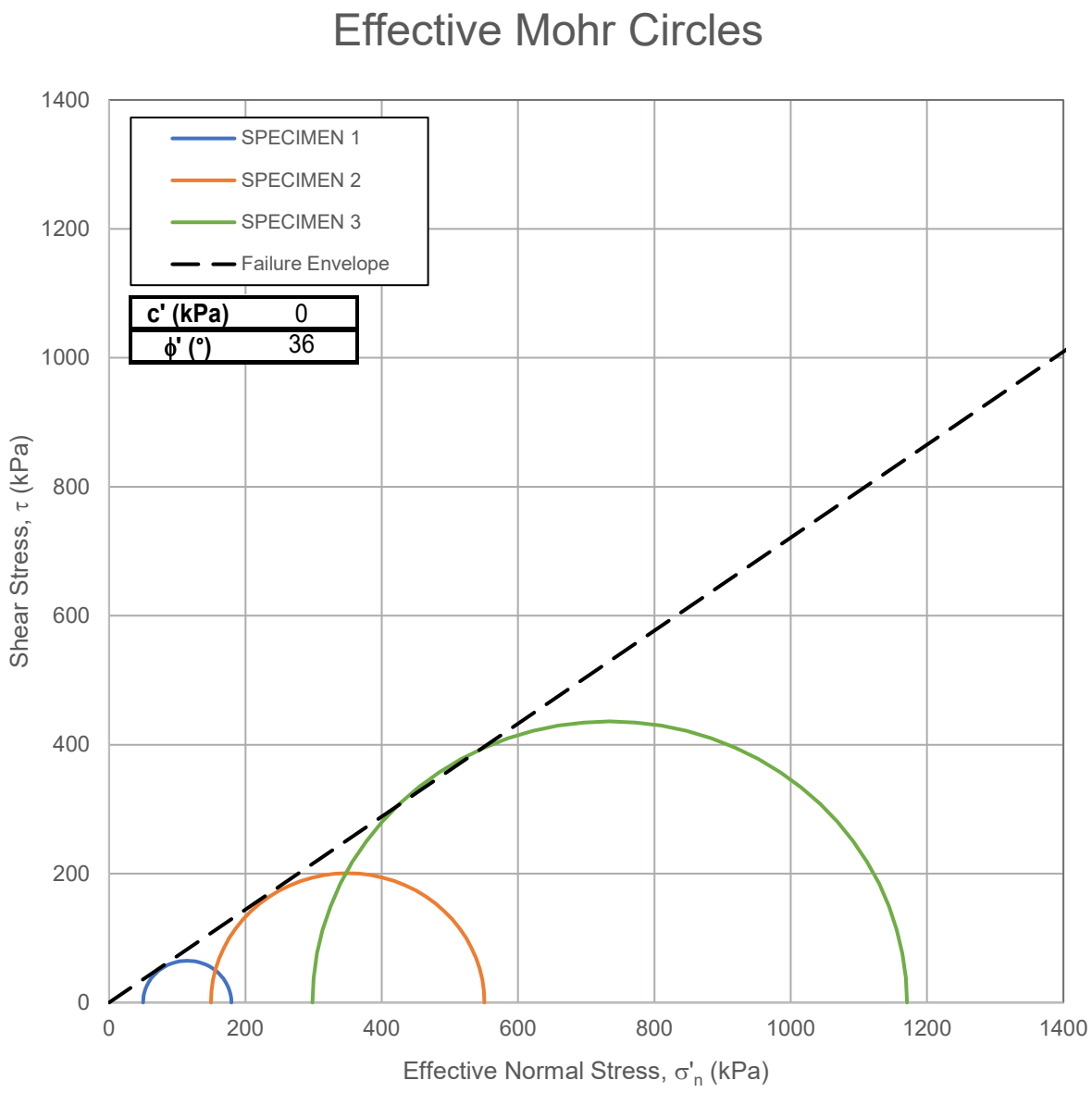
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 2.4

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	18S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.60)	Anisotropic (Consol. K= 0.60)	Anisotropic (Consol. K= 0.60)
Sample ID:	SA5	SA8	SA11
Test ID:	CAD-16	CAD-17	CAD-18
Depth:	2.74m - 3.05m	4.27m - 4.57m	5.18m - 5.49m



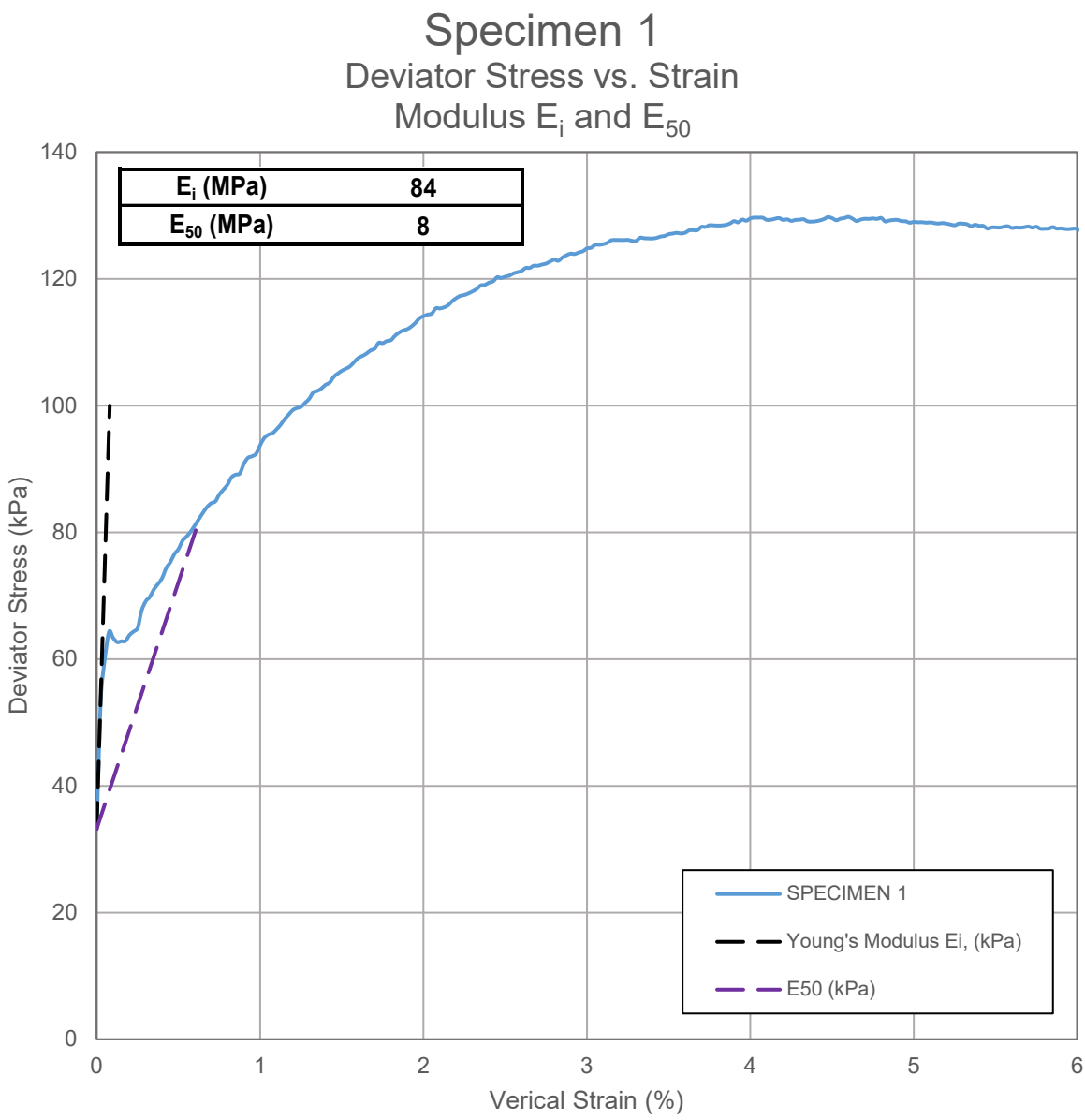
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 2.5

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	18S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.60)	Anisotropic (Consol. K= 0.60)	Anisotropic (Consol. K= 0.60)
Sample ID:	SA5	SA8	SA11
Test ID:	CAD-16	CAD-17	CAD-18
Depth:	2.74m - 3.05m	4.27m - 4.57m	5.18m - 5.49m



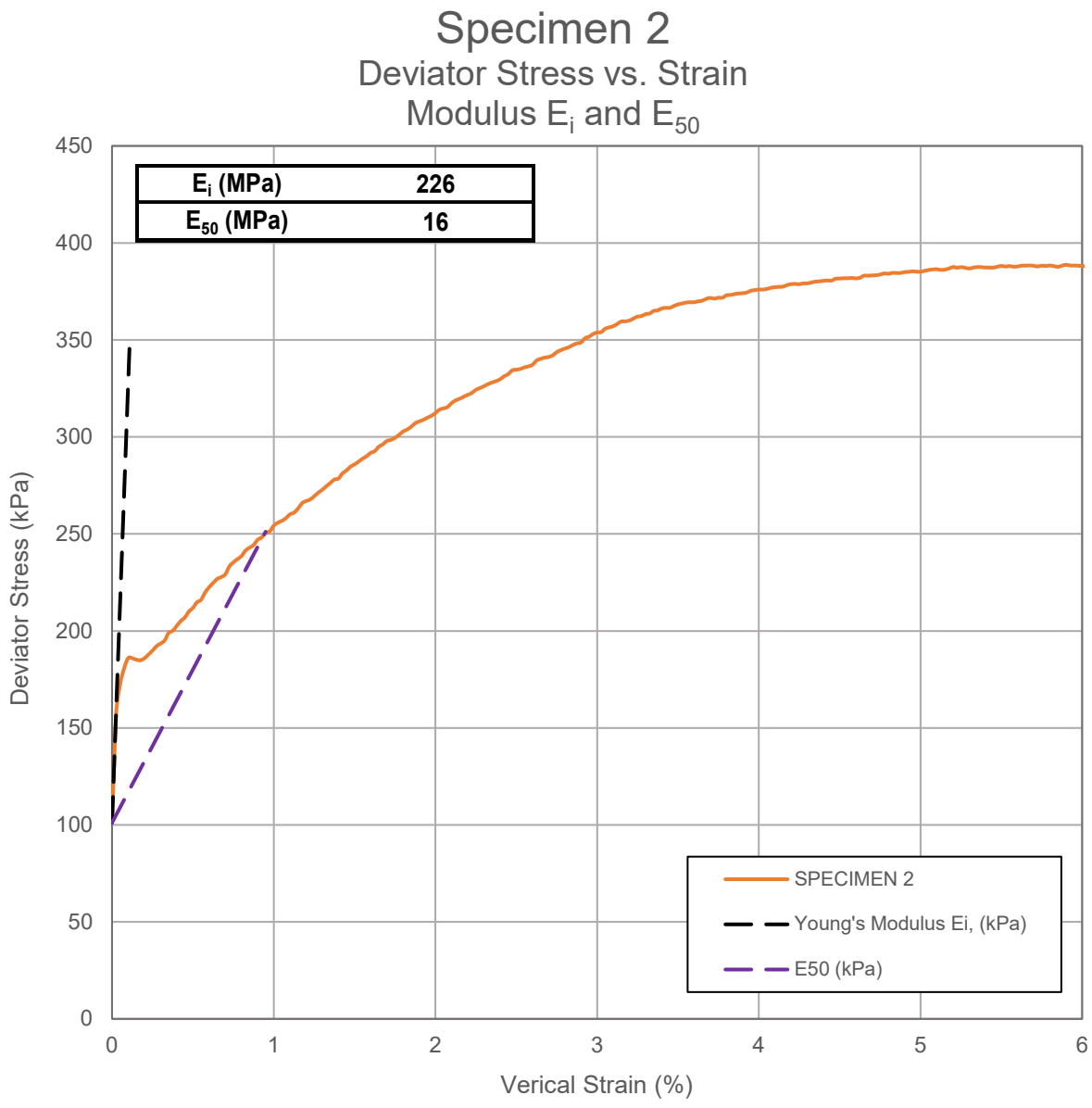
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 2.6

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	18S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.60)	Anisotropic (Consol. K= 0.60)	Anisotropic (Consol. K= 0.60)
Sample ID:	SA5	SA8	SA11
Test ID:	CAD-16	CAD-17	CAD-18
Depth:	2.74m - 3.05m	4.27m - 4.57m	5.18m - 5.49m



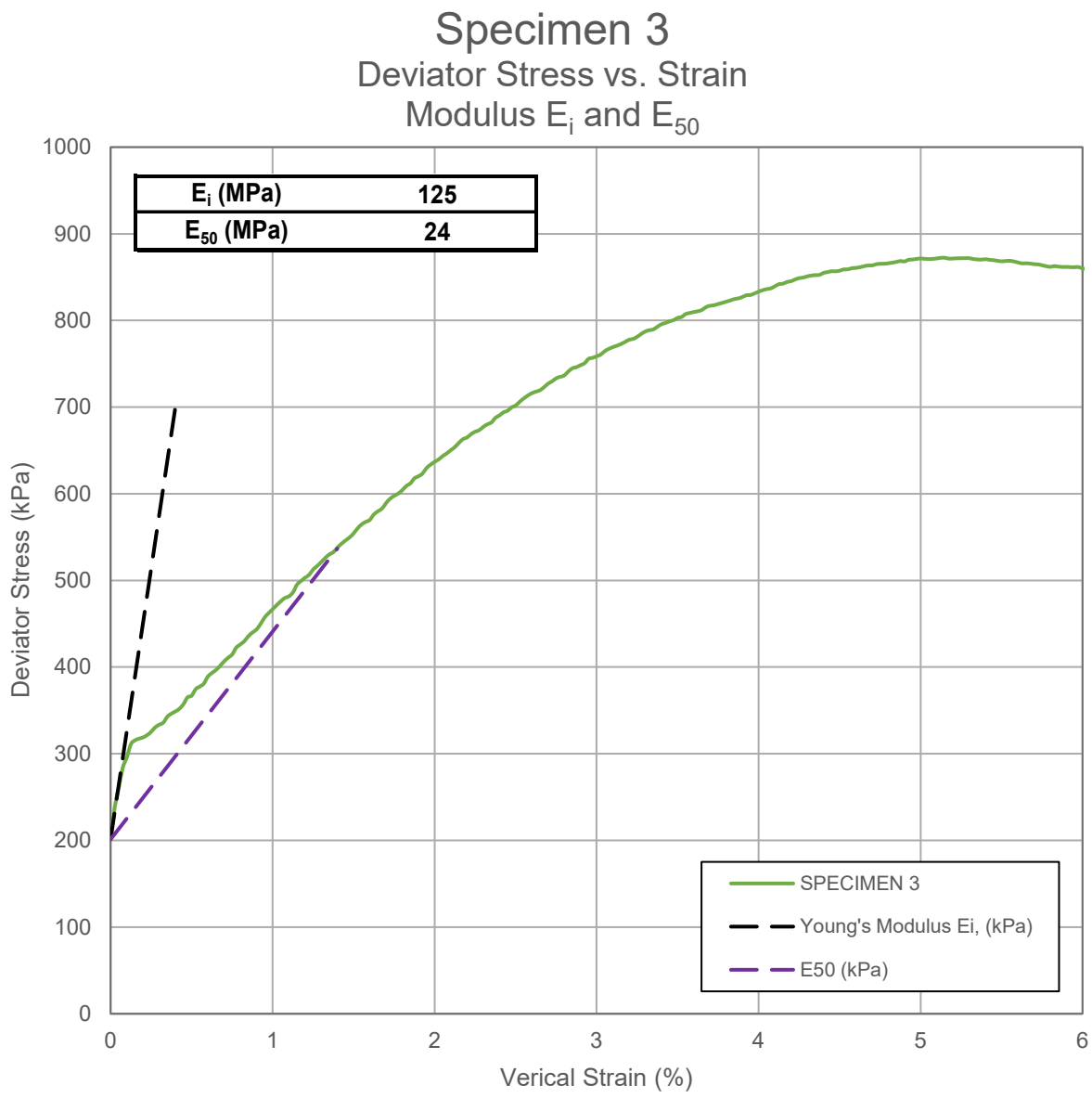
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 2.7

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	18S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.60)	Anisotropic (Consol. K= 0.60)	Anisotropic (Consol. K= 0.60)
Sample ID:	SA5	SA8	SA11
Test ID:	CAD-16	CAD-17	CAD-18
Depth:	2.74m - 3.05m	4.27m - 4.57m	5.18m - 5.49m



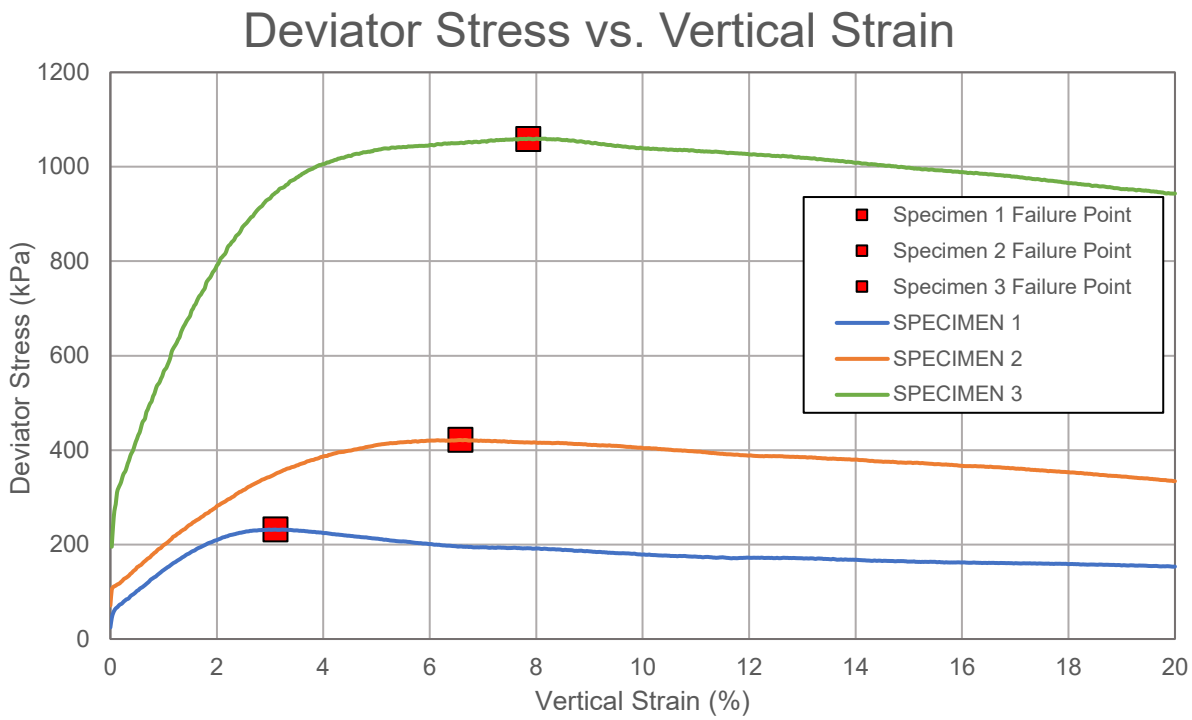
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 3.1

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.72)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.72)
Sample ID:	SA3	SA21	SA9
Test ID:	CAD-10	CAD-13	CAD-11
Depth:	2.74m - 3.05 m	15.01m - 15.27 m	5.49m - 5.79 m



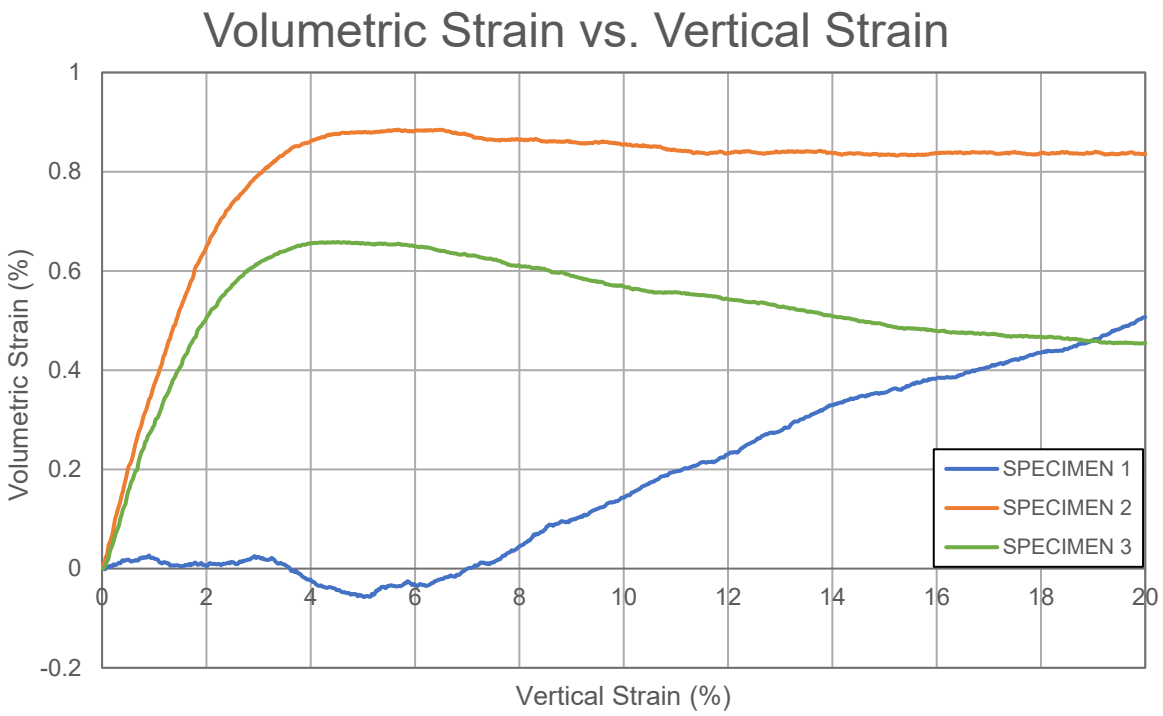
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 3.2

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.72)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.72)
Sample ID:	SA3	SA21	SA9
Test ID:	CAD-10	CAD-13	CAD-11
Depth:	2.74m - 3.05 m	15.01m - 15.27 m	5.49m - 5.79 m



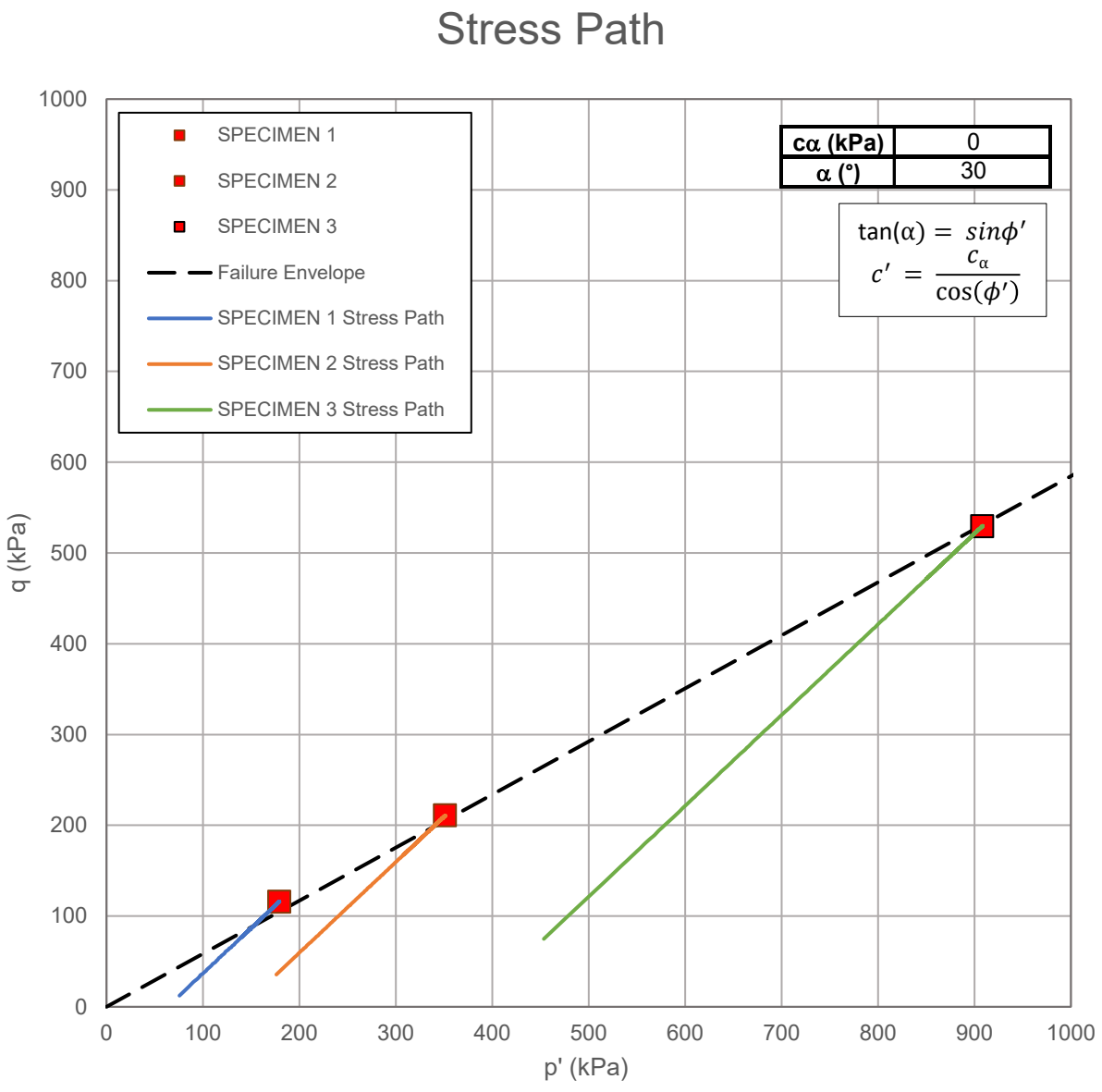
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 3.3

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.72)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.72)
Sample ID:	SA3	SA21	SA9
Test ID:	CAD-10	CAD-13	CAD-11
Depth:	2.74m - 3.05 m	15.01m - 15.27 m	5.49m - 5.79 m



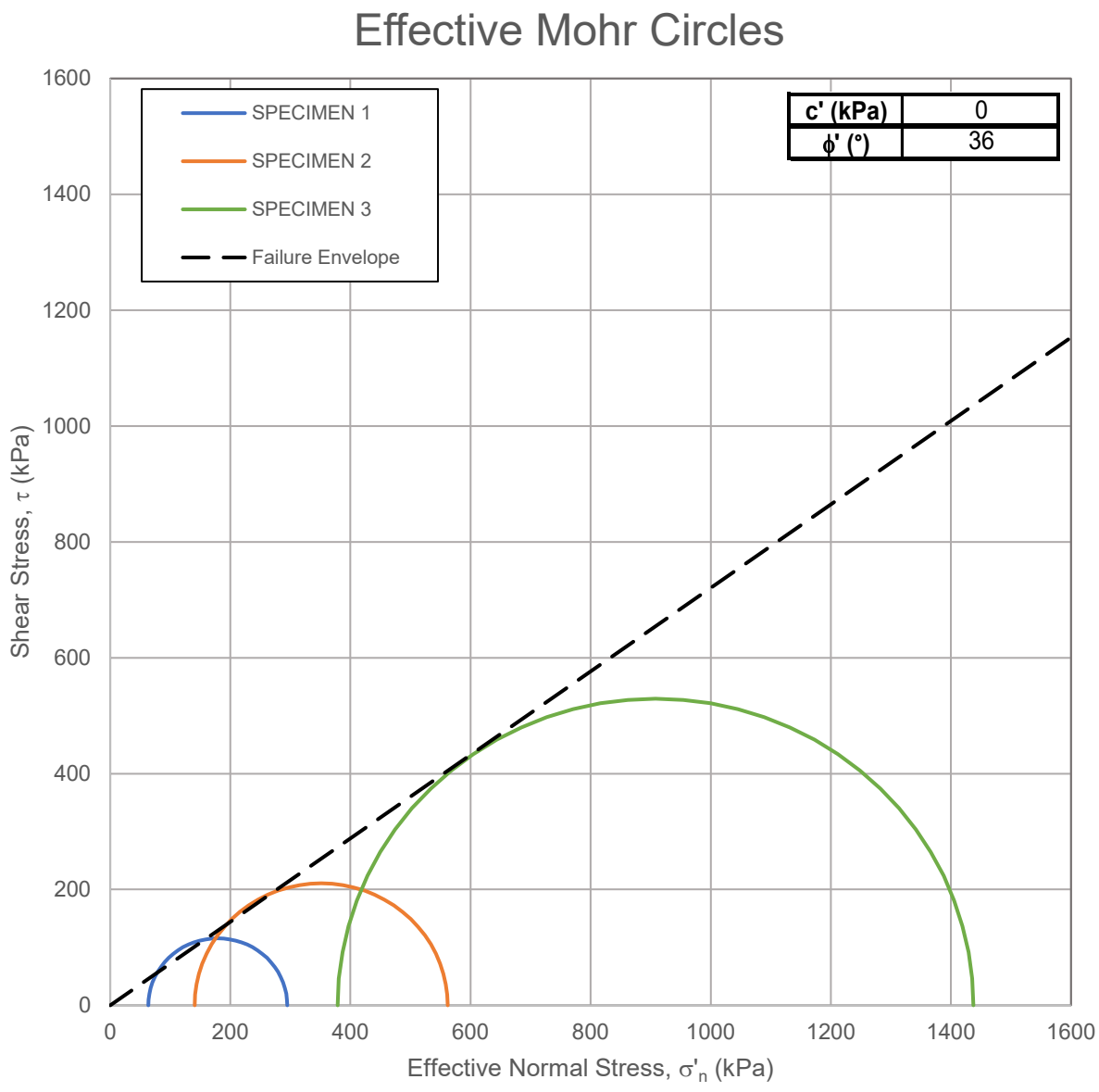
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 3.4

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.72)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.72)
Sample ID:	SA3	SA21	SA9
Test ID:	CAD-10	CAD-13	CAD-11
Depth:	2.74m - 3.05 m	15.01m - 15.27 m	5.49m - 5.79 m



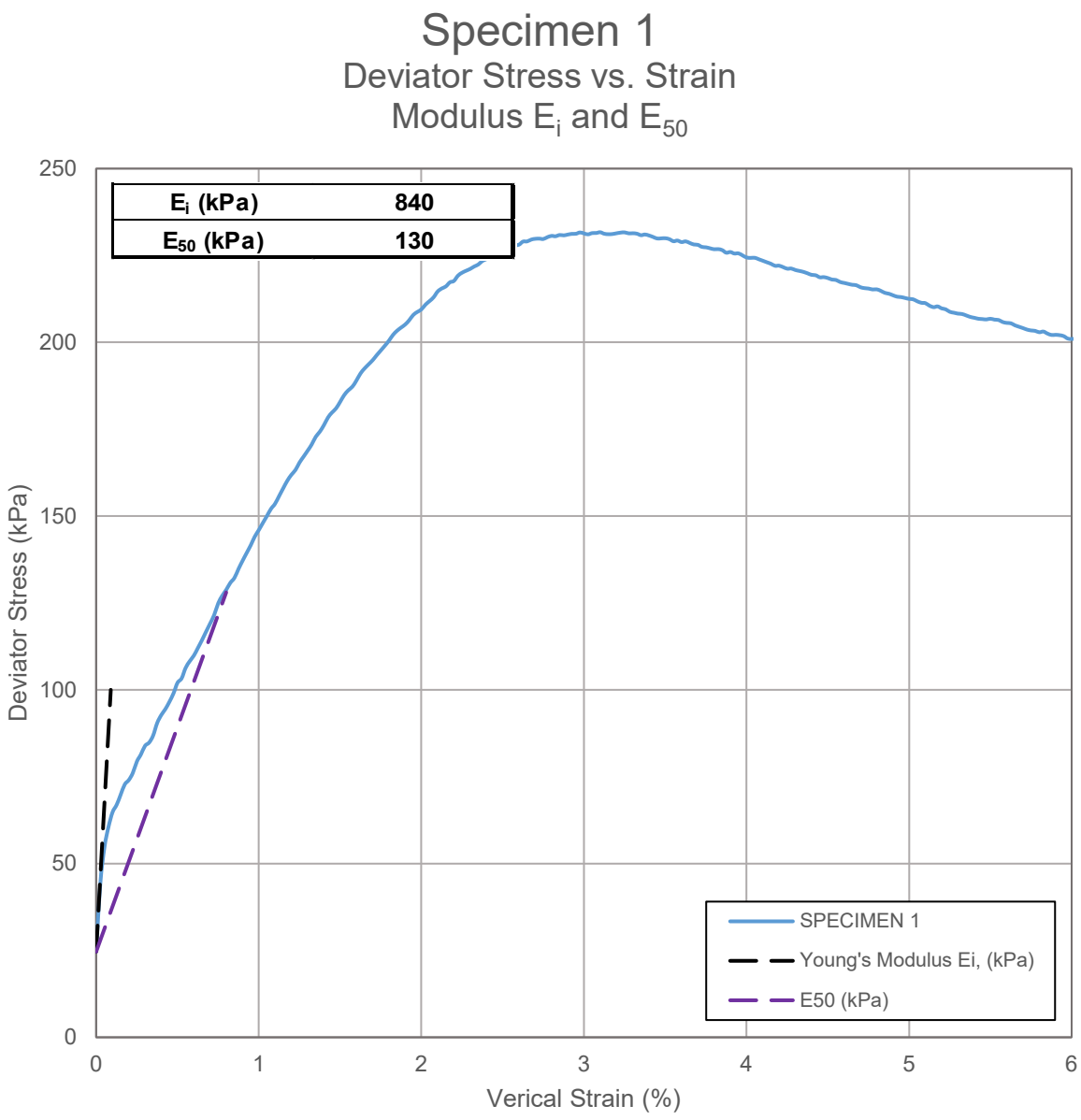
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 3.5

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.72)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.72)
Sample ID:	SA3	SA21	SA9
Test ID:	CAD-10	CAD-13	CAD-11
Depth:	2.74m - 3.05 m	15.01m - 15.27 m	5.49m - 5.79 m



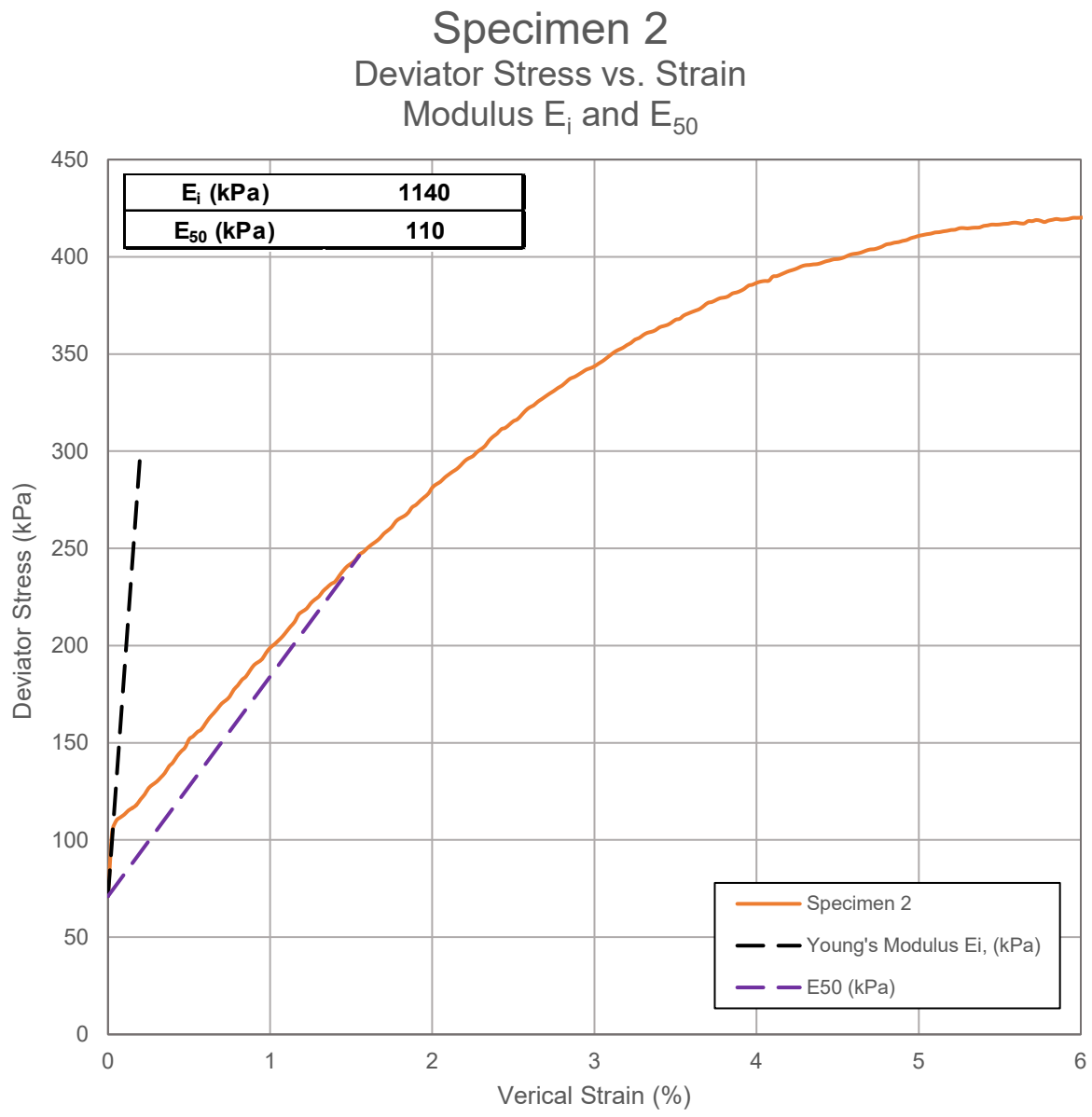
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 3.6

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.72)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.72)
Sample ID:	SA3	SA21	SA9
Test ID:	CAD-10	CAD-13	CAD-11
Depth:	2.74m - 3.05 m	15.01m - 15.27 m	5.49m - 5.79 m



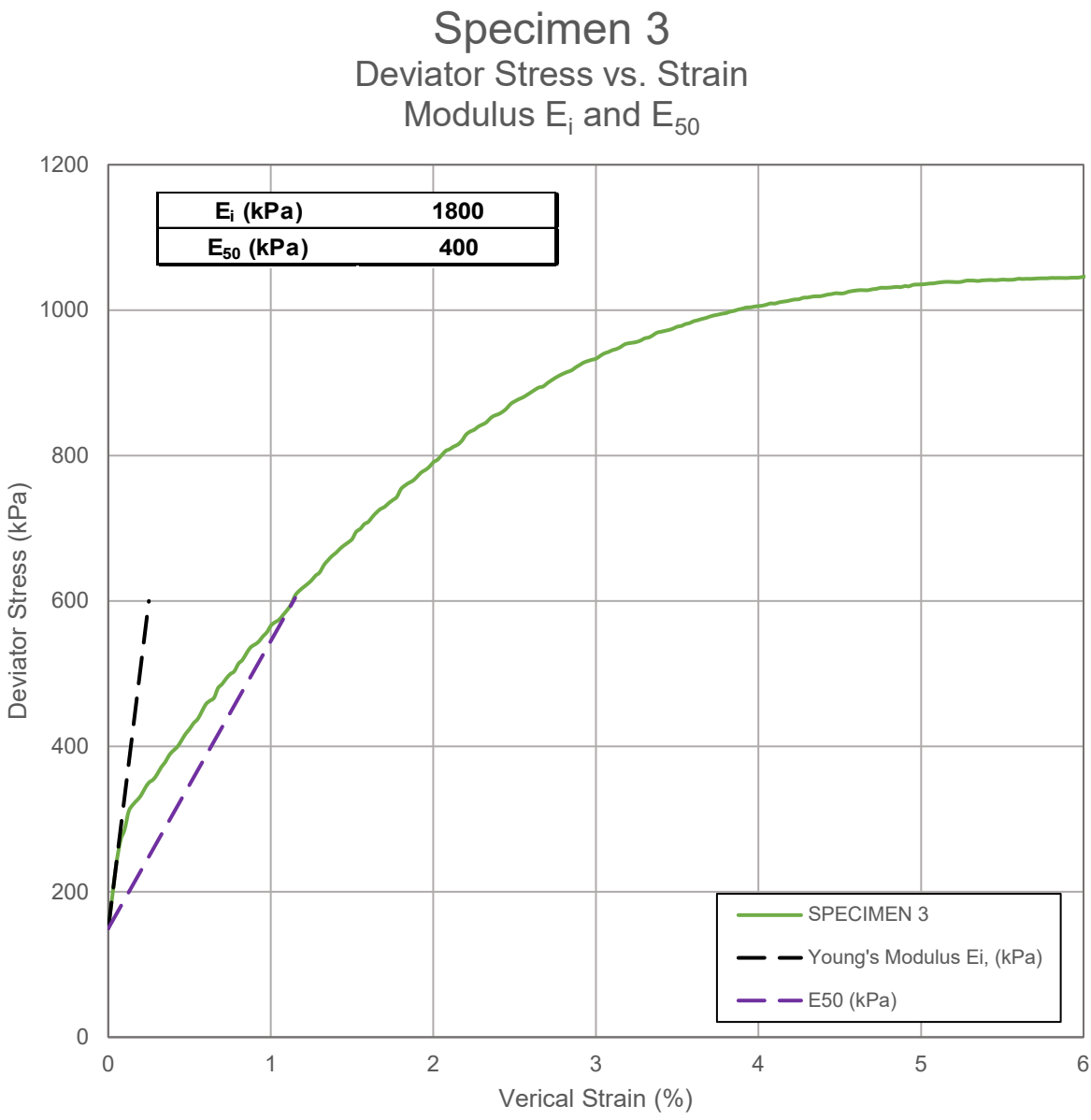
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 3.7

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 2
Consolidation Stage:	Anisotropic (Consol. K= 0.72)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.72)
Sample ID:	SA3	SA21	SA9
Test ID:	CAD-10	CAD-13	CAD-11
Depth:	2.74m - 3.05 m	15.01m - 15.27 m	5.49m - 5.79 m



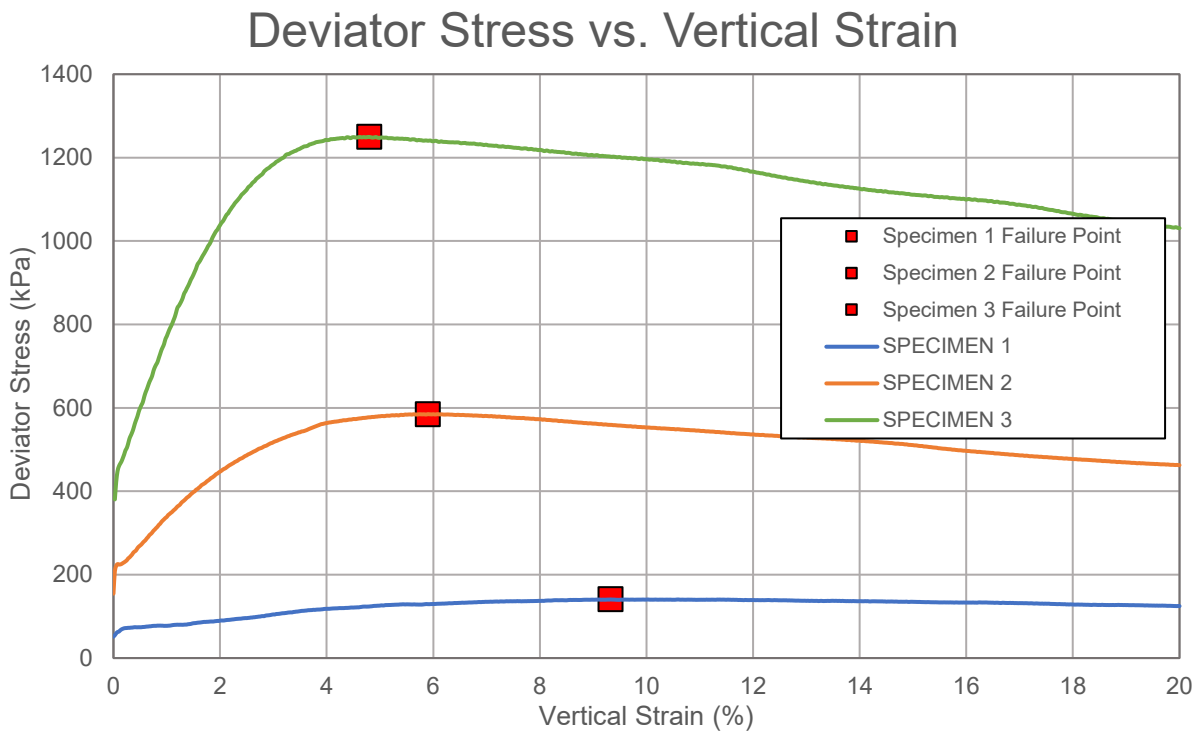
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 4.1

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.57)	Anisotropic (Consol. K= 0.56)	Anisotropic (Consol. K= 0.56)
Sample ID:	SA14-1	SA15	SA16
Test ID:	CAD-1	CAD-3	CAD-2
Depth:	7.01m - 7.29m	7.32m - 8.36m	8.84m - 9.14m



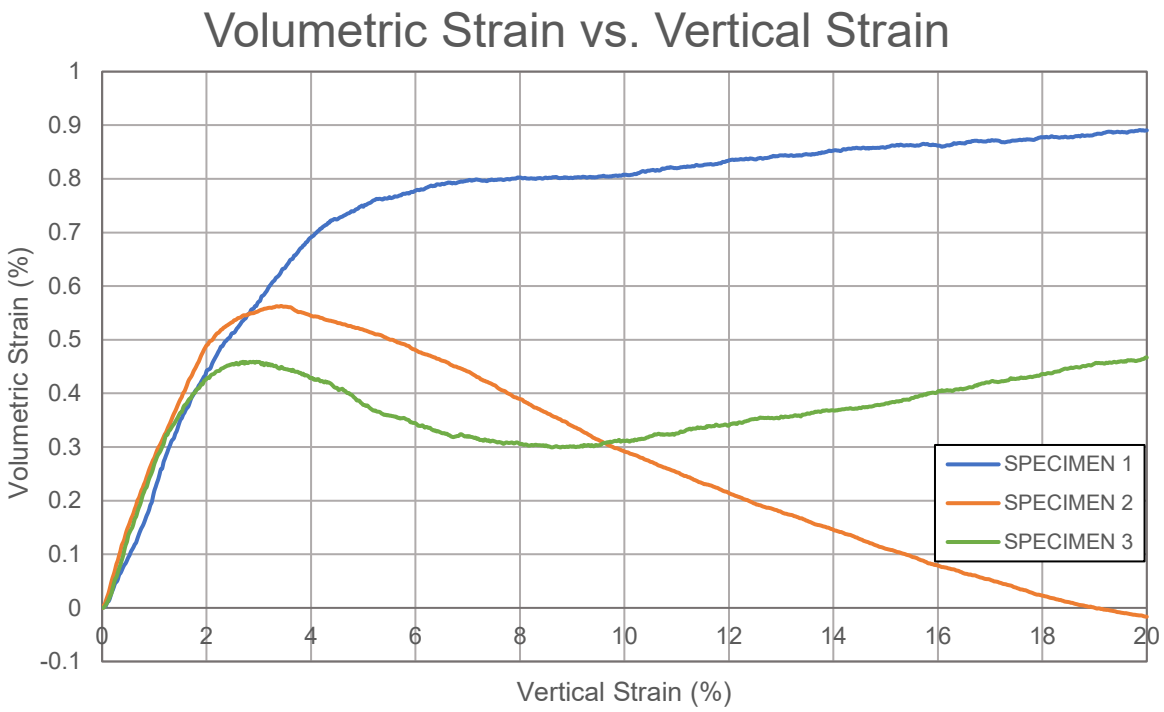
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 4.2

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.57)	Anisotropic (Consol. K= 0.56)	Anisotropic (Consol. K= 0.56)
Sample ID:	SA14-1	SA15	SA16
Test ID:	CAD-1	CAD-3	CAD-2
Depth:	7.01m - 7.29m	7.32m - 8.36m	8.84m - 9.14m



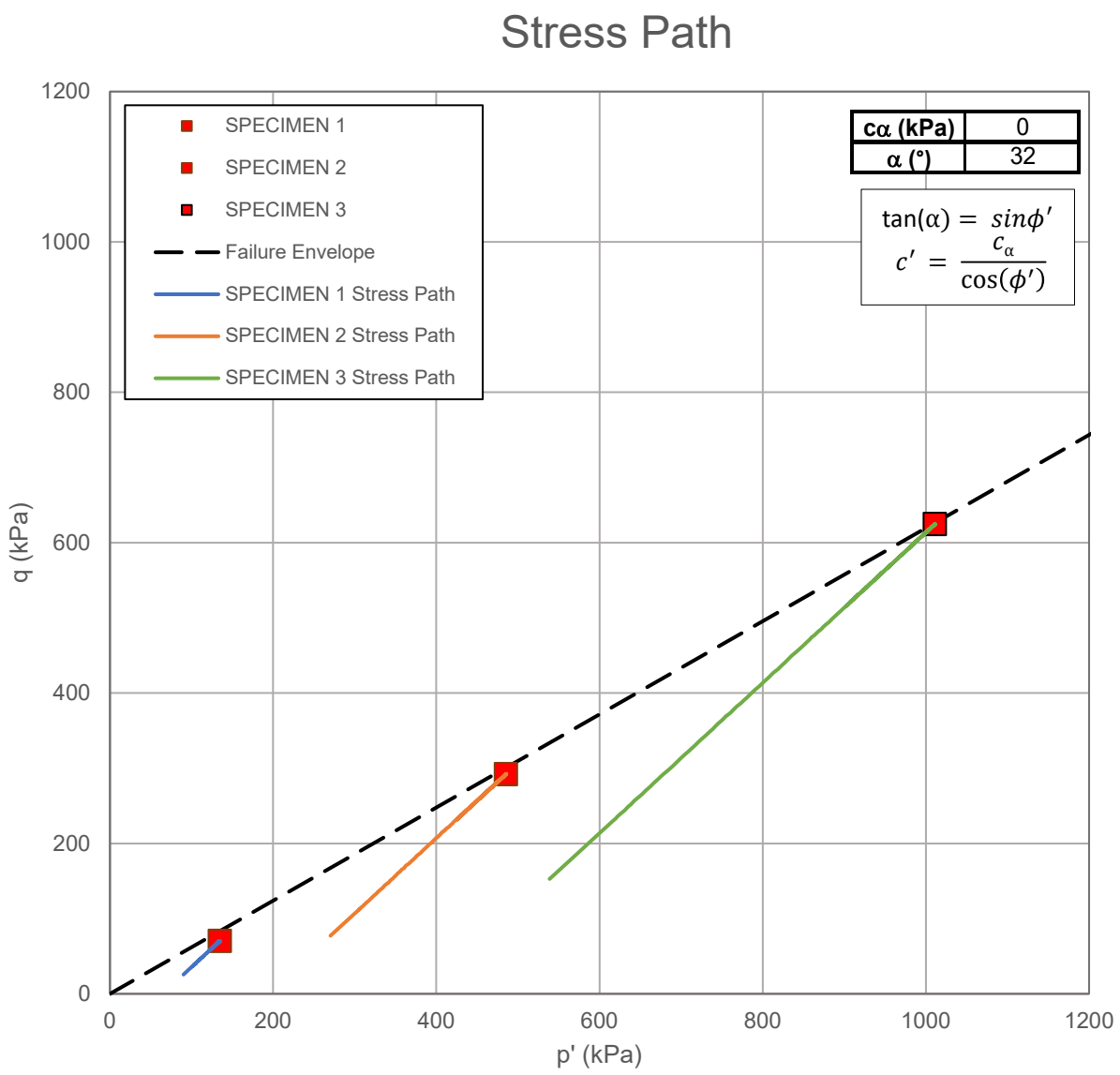
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 4.3

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.57)	Anisotropic (Consol. K= 0.56)	Anisotropic (Consol. K= 0.56)
Sample ID:	SA14-1	SA15	SA16
Test ID:	CAD-1	CAD-3	CAD-2
Depth:	7.01m - 7.29m	7.32m - 8.36m	8.84m - 9.14m



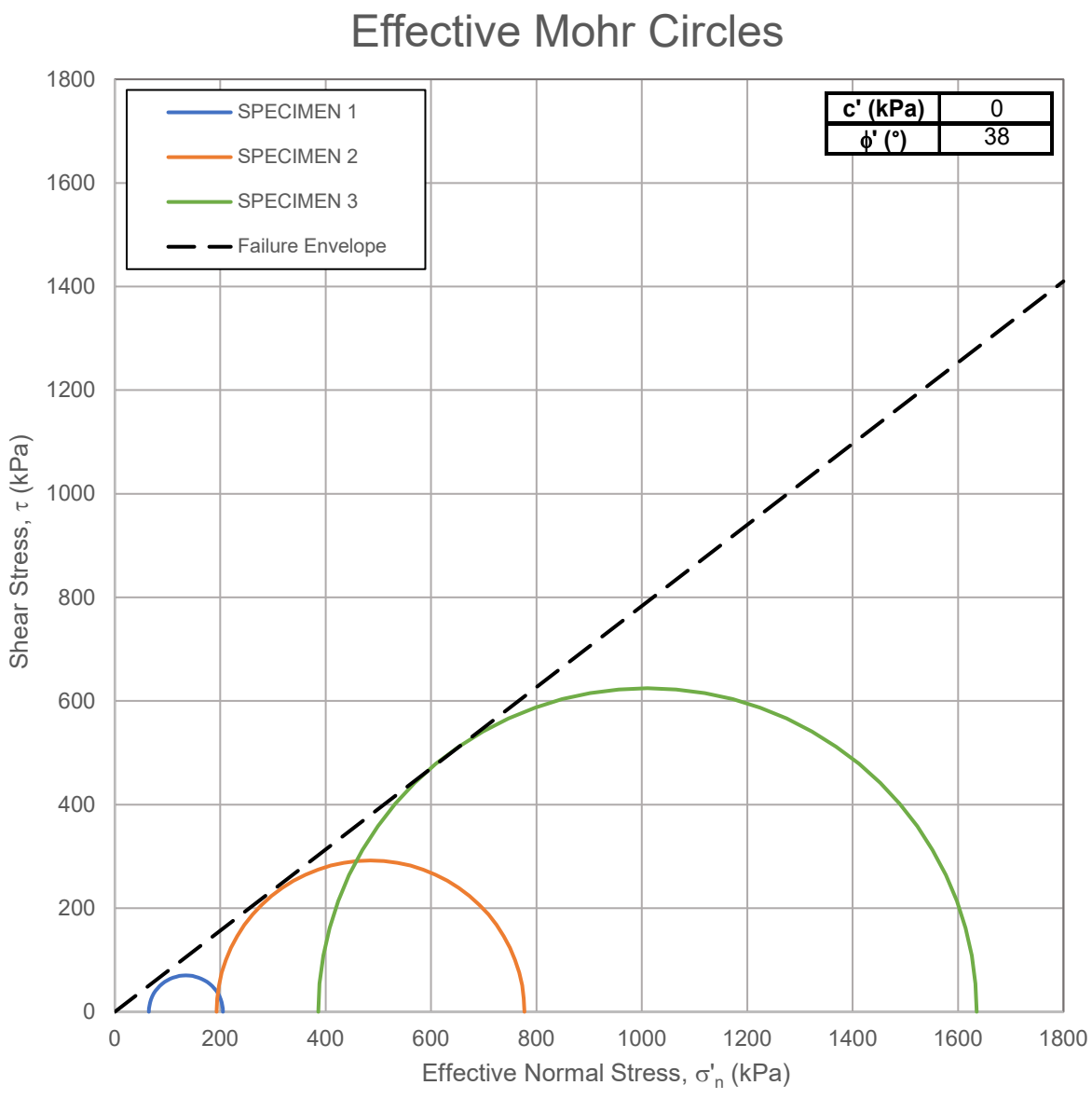
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 4.4

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.57)	Anisotropic (Consol. K= 0.56)	Anisotropic (Consol. K= 0.56)
Sample ID:	SA14-1	SA15	SA16
Test ID:	CAD-1	CAD-3	CAD-2
Depth:	7.01m - 7.29m	7.32m - 8.36m	8.84m - 9.14m



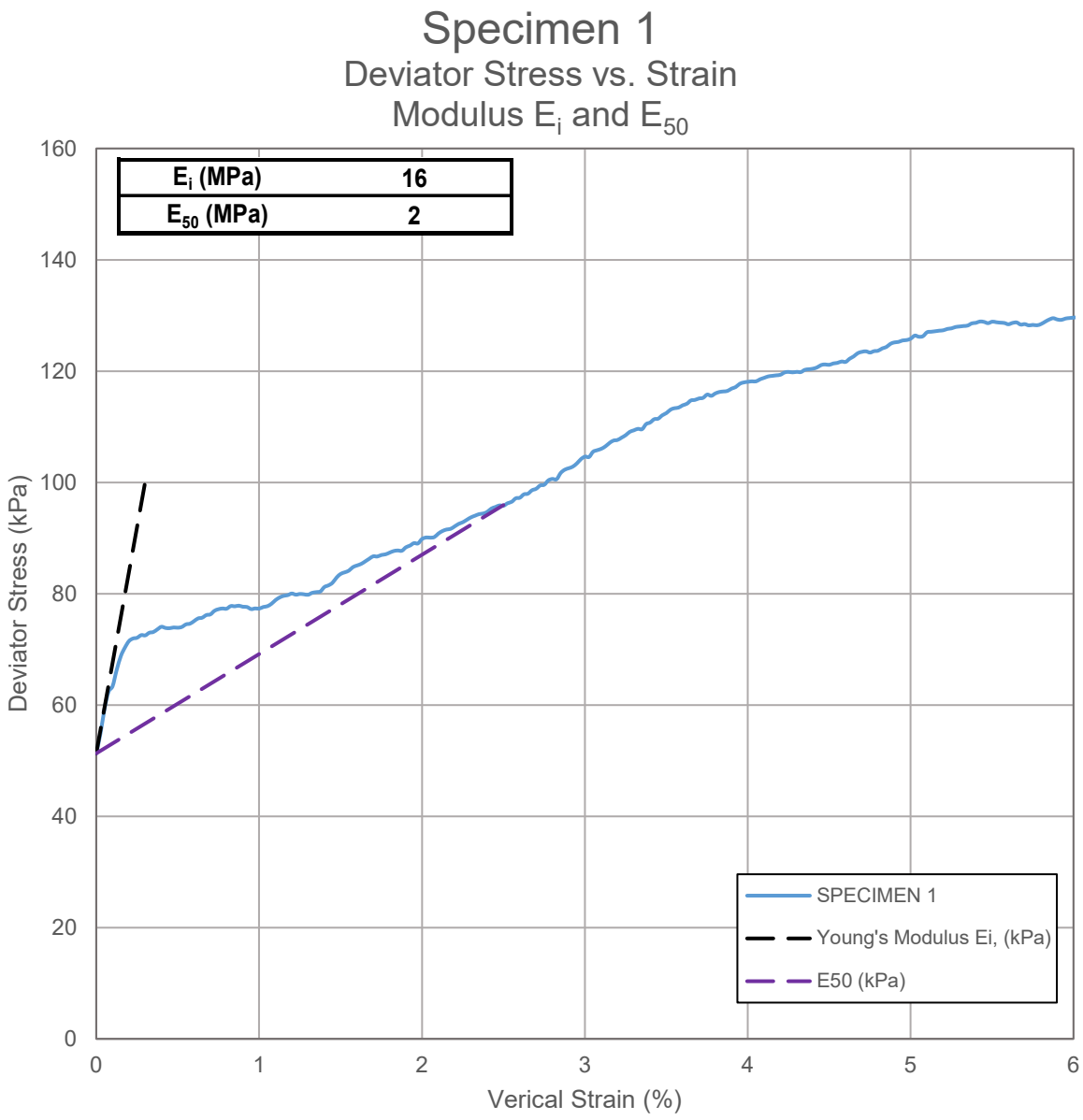
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 4.5

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.57)	Anisotropic (Consol. K= 0.56)	Anisotropic (Consol. K= 0.56)
Sample ID:	SA14-1	SA15	SA16
Test ID:	CAD-1	CAD-3	CAD-2
Depth:	7.01m - 7.29m	7.32m - 8.36m	8.84m - 9.14m



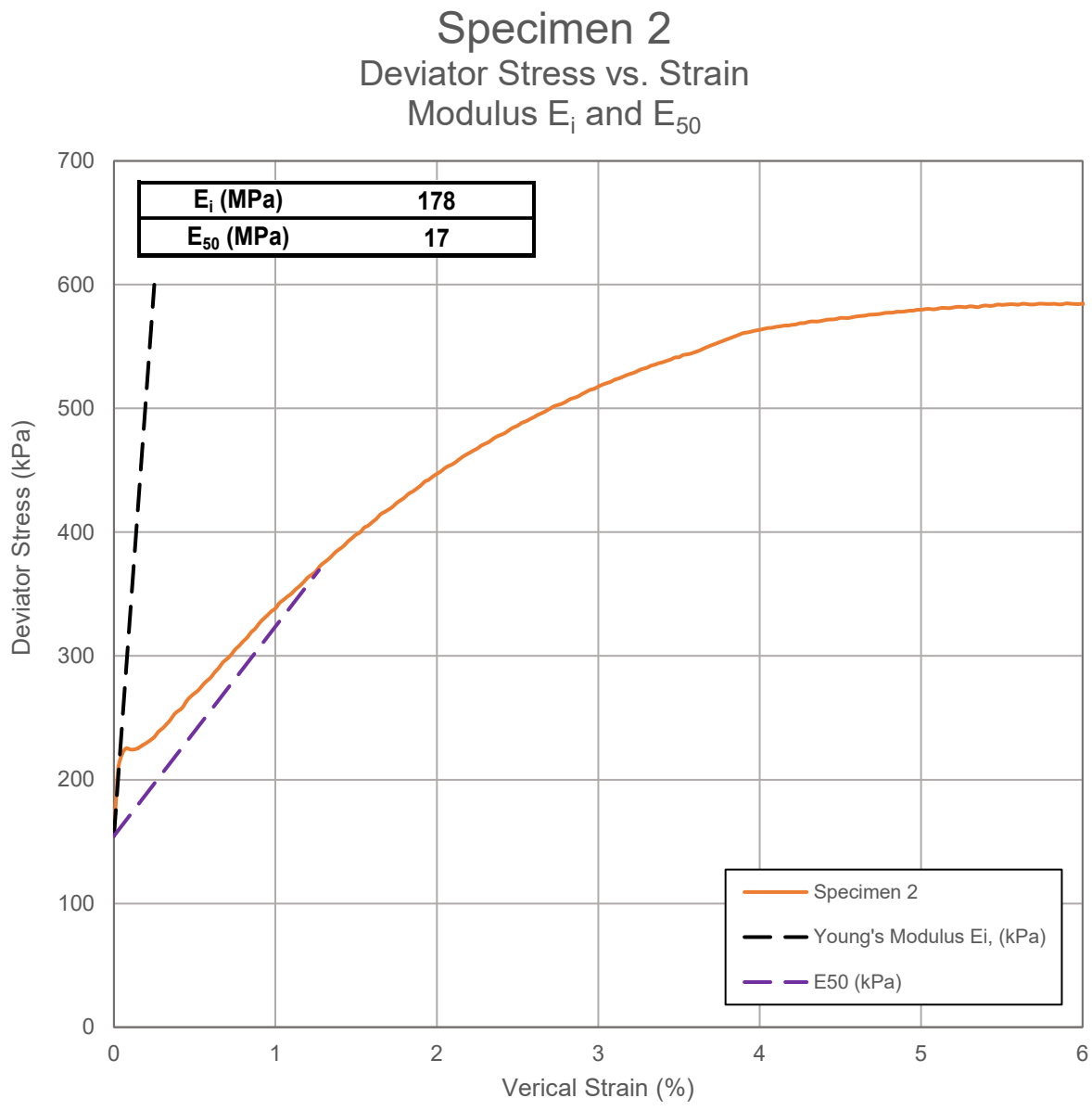
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 4.6

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.57)	Anisotropic (Consol. K= 0.56)	Anisotropic (Consol. K= 0.56)
Sample ID:	SA14-1	SA15	SA16
Test ID:	CAD-1	CAD-3	CAD-2
Depth:	7.01m - 7.29m	7.32m - 8.36m	8.84m - 9.14m



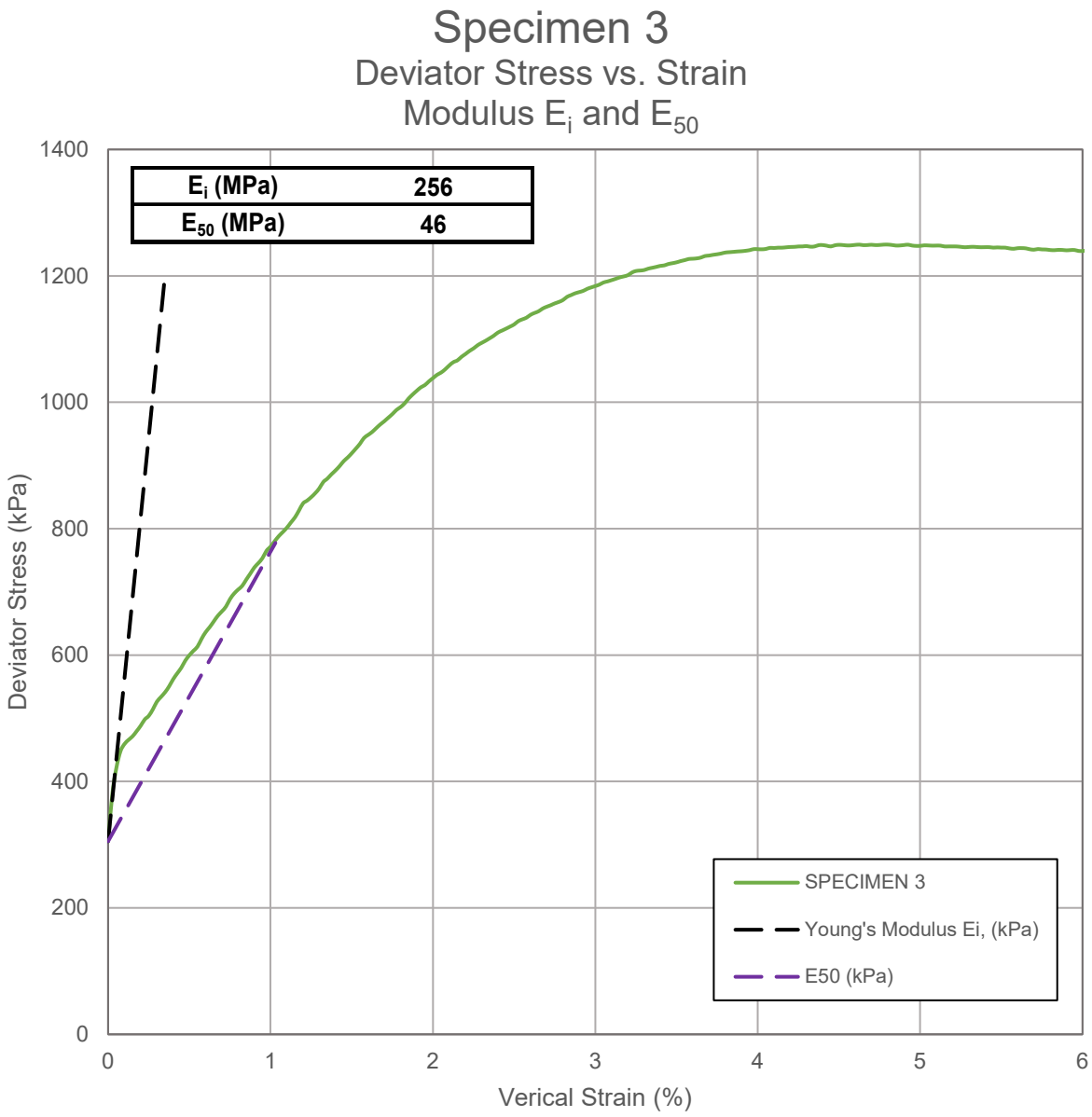
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 4.7

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S
Soil Unit:	3

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.57)	Anisotropic (Consol. K= 0.56)	Anisotropic (Consol. K= 0.56)
Sample ID:	SA14-1	SA15	SA16
Test ID:	CAD-1	CAD-3	CAD-2
Depth:	7.01m - 7.29m	7.32m - 8.36m	8.84m - 9.14m



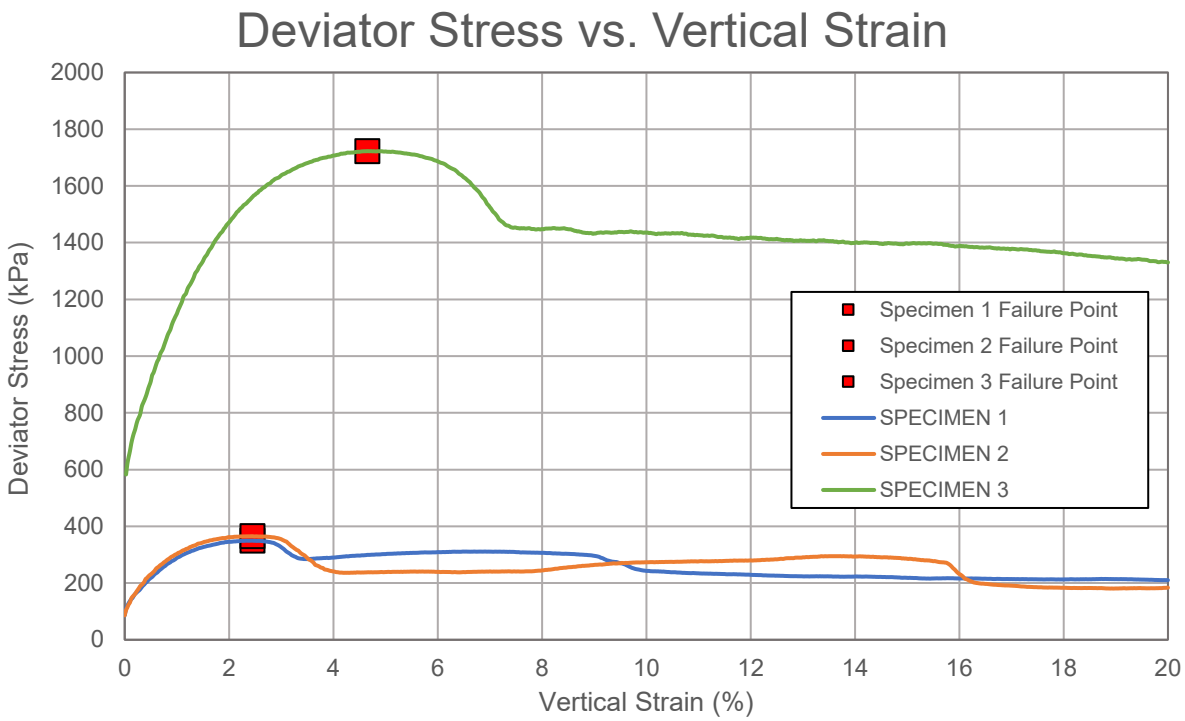
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 5.1

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	18S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.47)	Anisotropic (Consol. K= 0.47)	Anisotropic (Consol. K= 0.47)
Sample ID:	SA19	SA22	SA25
Test ID:	CAD-19	CAD-20	CAD-21
Depth:	9.55m - 9.86 m	10.67m - 10.97 m	11.88m - 12.19 m



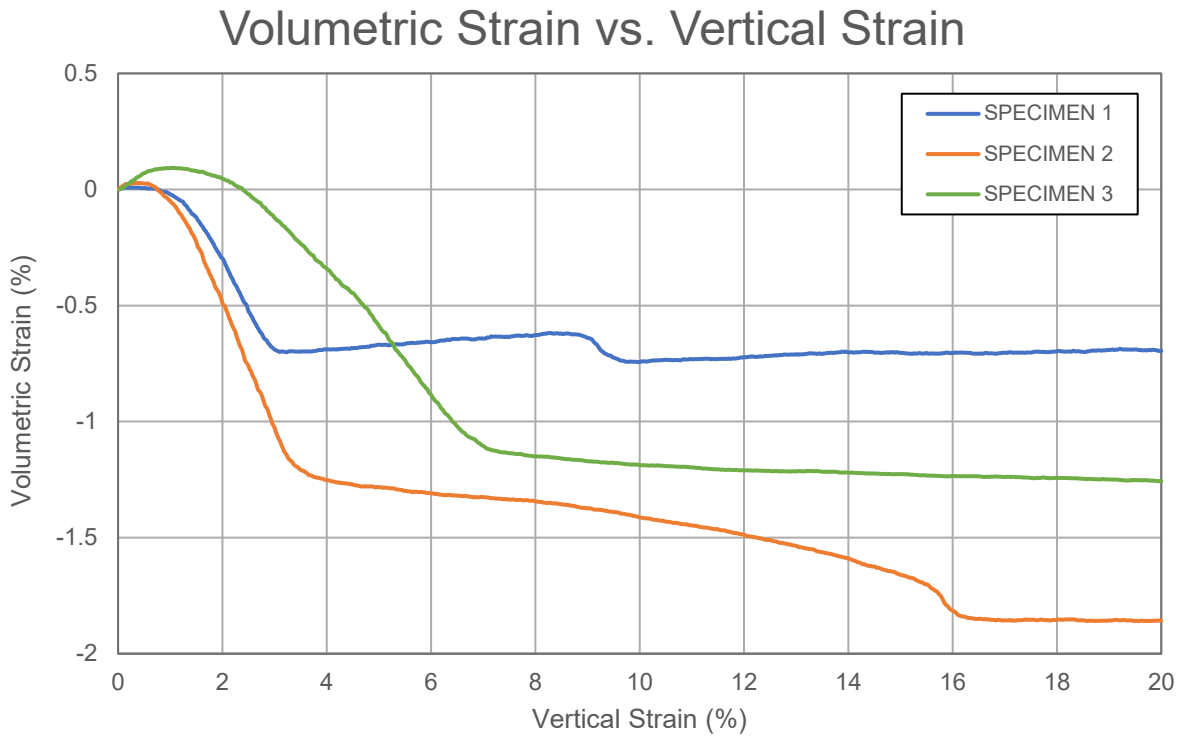
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 5.2

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	18S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.47)	Anisotropic (Consol. K= 0.47)	Anisotropic (Consol. K= 0.47)
Sample ID:	SA19	SA22	SA25
Test ID:	CAD-19	CAD-20	CAD-21
Depth:	9.55m - 9.86 m	10.67m - 10.97 m	11.88m - 12.19 m



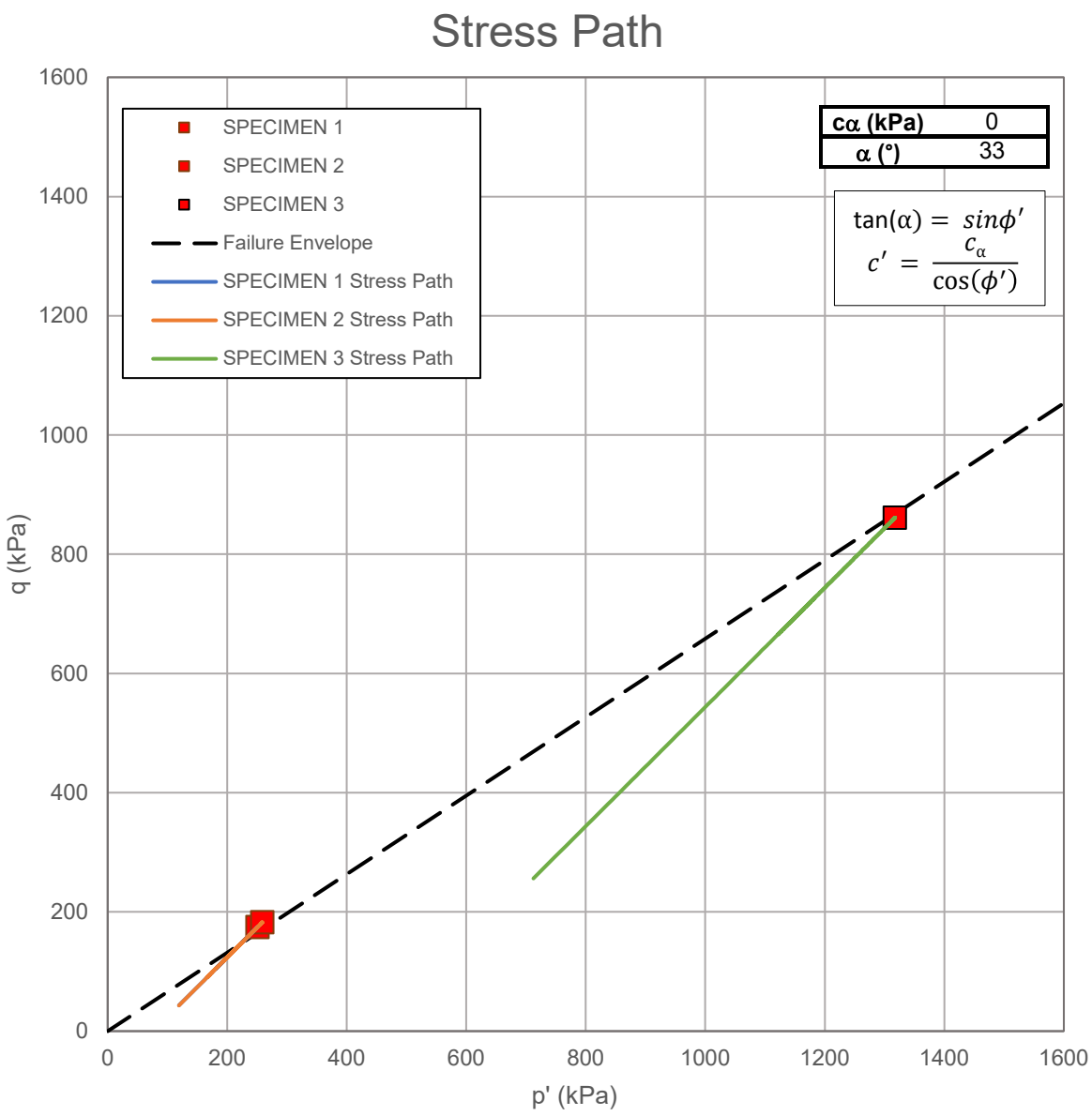
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 5.3

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	18S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.47)	Anisotropic (Consol. K= 0.47)	Anisotropic (Consol. K= 0.47)
Sample ID:	SA19	SA22	SA25
Test ID:	CAD-19	CAD-20	CAD-21
Depth:	9.55m - 9.86 m	10.67m - 10.97 m	11.88m - 12.19 m



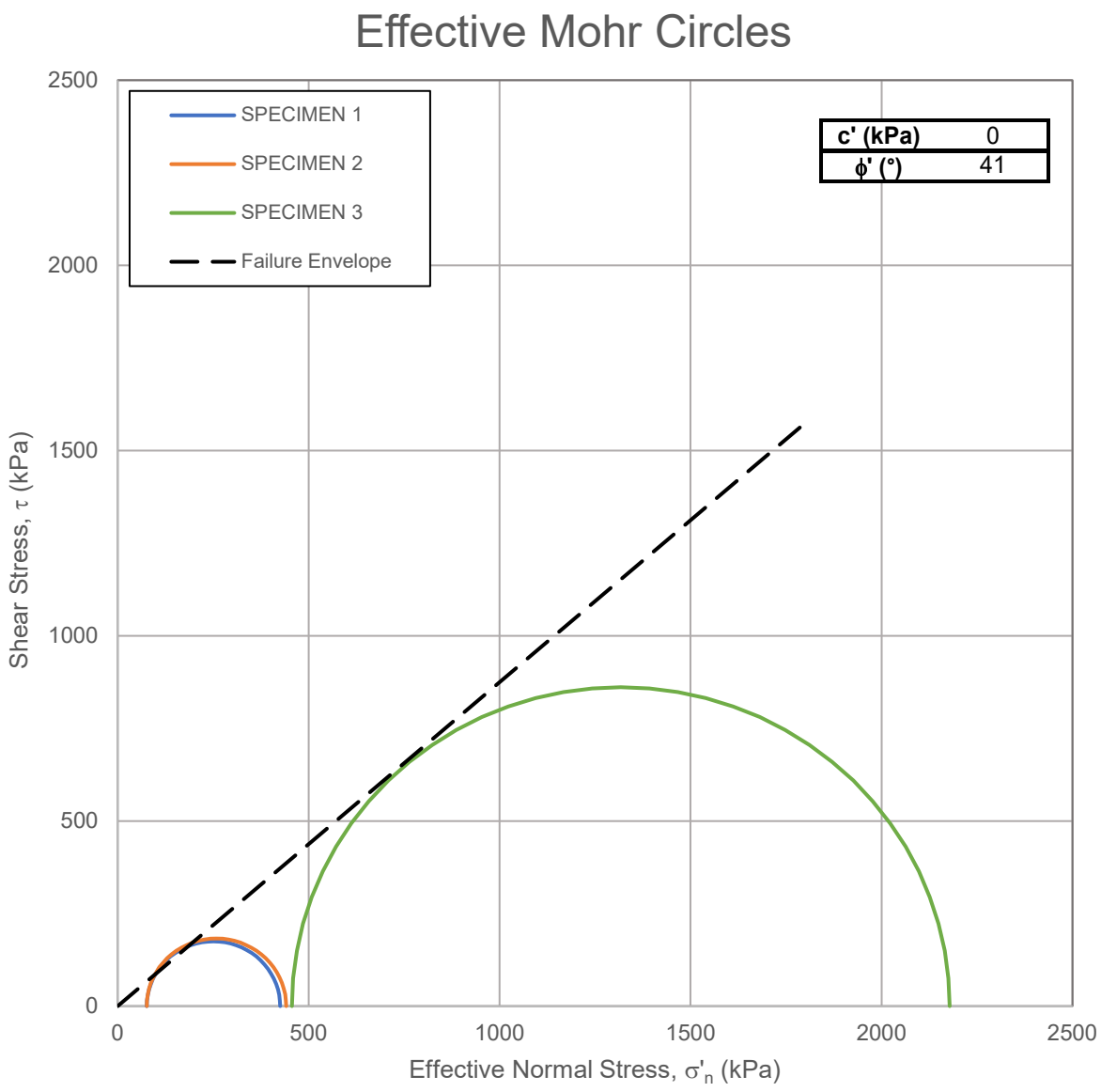
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 5.4

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	18S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.47)	Anisotropic (Consol. K= 0.47)	Anisotropic (Consol. K= 0.47)
Sample ID:	SA19	SA22	SA25
Test ID:	CAD-19	CAD-20	CAD-21
Depth:	9.55m - 9.86 m	10.67m - 10.97 m	11.88m - 12.19 m



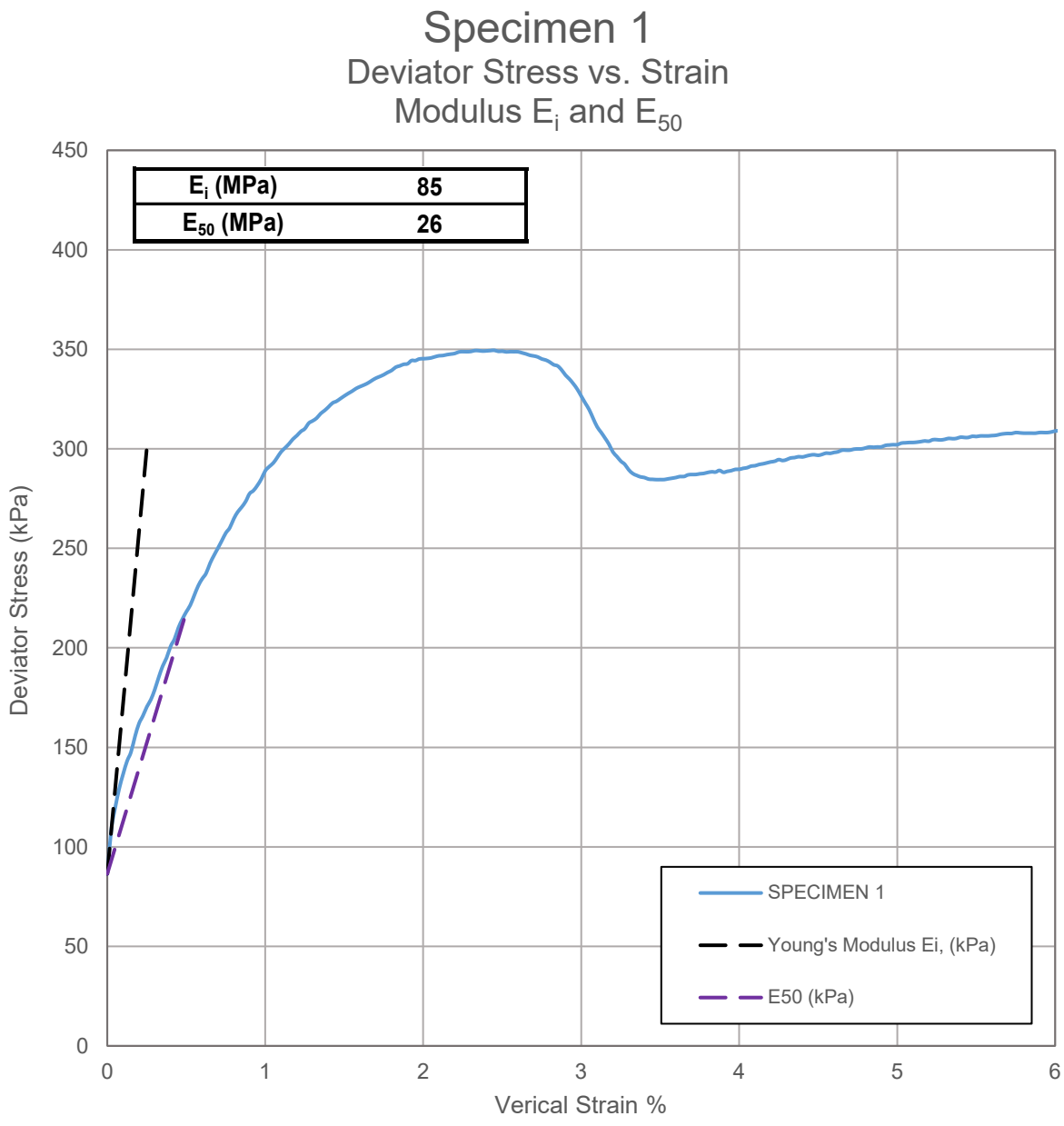
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 5.5

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	18S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.47)	Anisotropic (Consol. K= 0.47)	Anisotropic (Consol. K= 0.47)
Sample ID:	SA19	SA22	SA25
Test ID:	CAD-19	CAD-20	CAD-21
Depth:	9.55m - 9.86 m	10.67m - 10.97 m	11.88m - 12.19 m



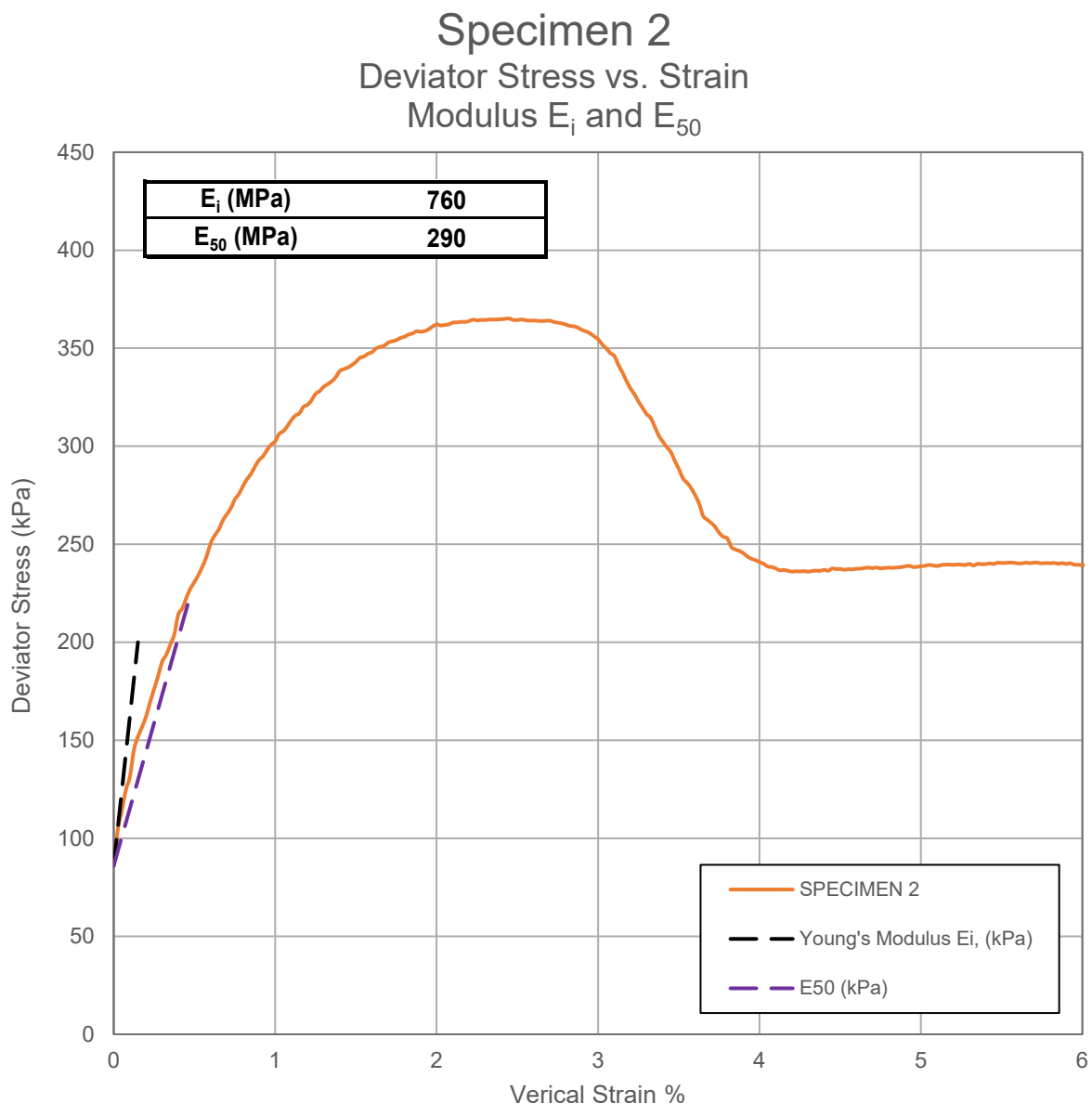
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 5.6

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	18S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.47)	Anisotropic (Consol. K= 0.47)	Anisotropic (Consol. K= 0.47)
Sample ID:	SA19	SA22	SA25
Test ID:	CAD-19	CAD-20	CAD-21
Depth:	9.55m - 9.86 m	10.67m - 10.97 m	11.88m - 12.19 m



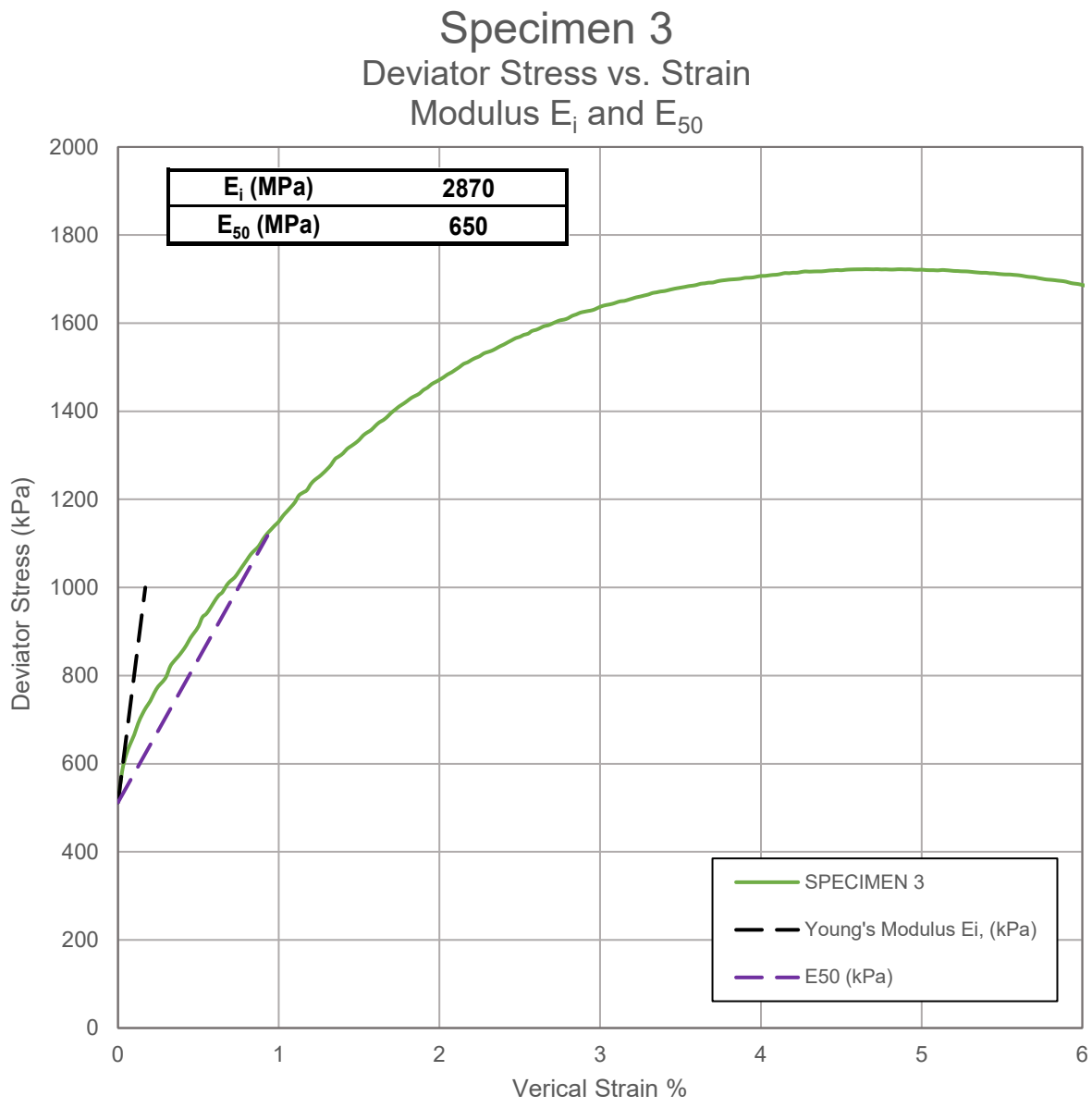
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 5.7

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	18S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.47)	Anisotropic (Consol. K= 0.47)	Anisotropic (Consol. K= 0.47)
Sample ID:	SA19	SA22	SA25
Test ID:	CAD-19	CAD-20	CAD-21
Depth:	9.55m - 9.86 m	10.67m - 10.97 m	11.88m - 12.19 m



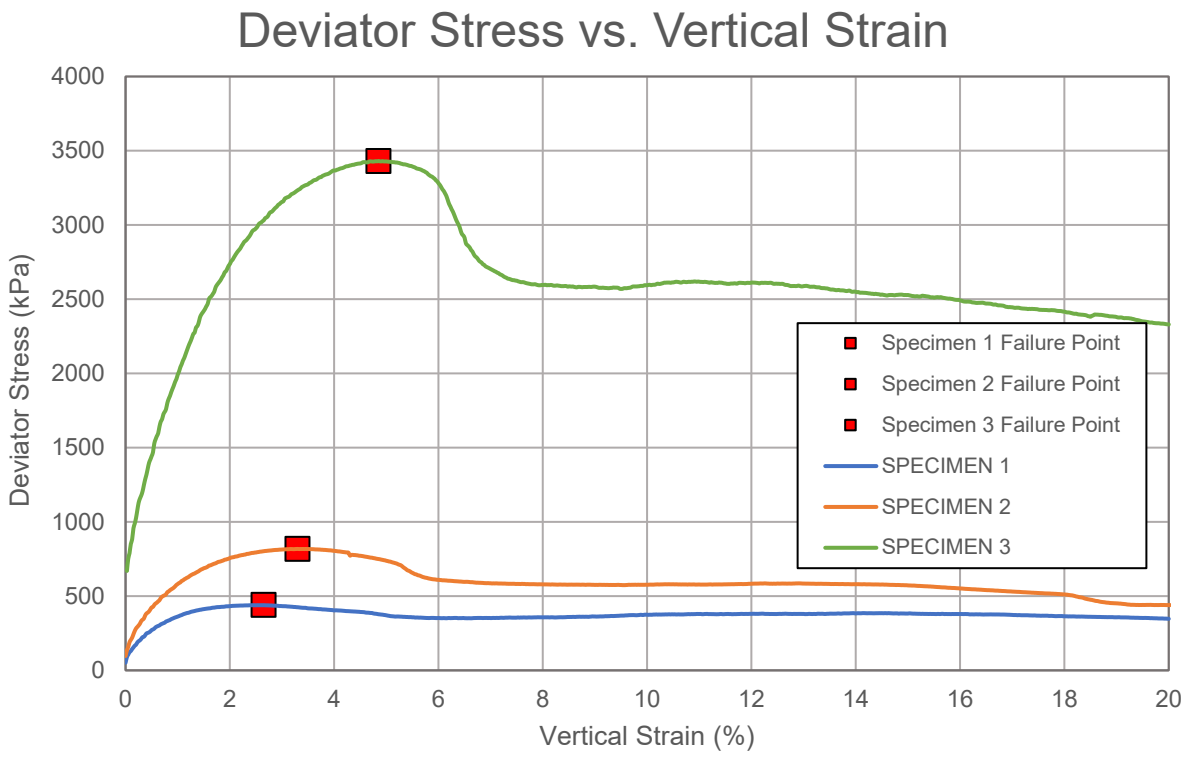
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 6.1

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	28S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.70)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.64)
Sample ID:	SA15	SA28	SA34
Test ID:	CAD-12	CAD-14	CAD-15
Depth:	10.92m - 11.23m	17.98m - 18.28m	20.12m - 20.42m



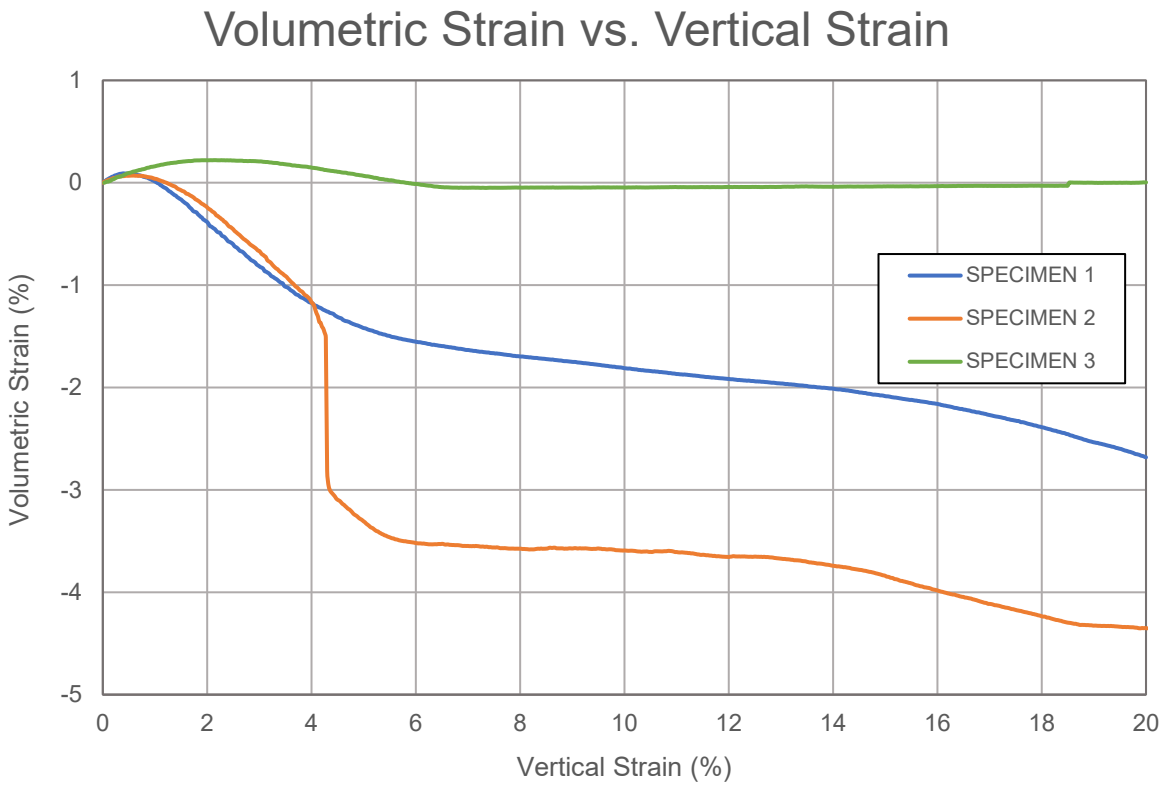
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 6.2

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	28S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.70)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.64)
Sample ID:	SA15	SA28	SA34
Test ID:	CAD-12	CAD-14	CAD-15
Depth:	10.92m - 11.23m	17.98m - 18.28m	20.12m - 20.42m



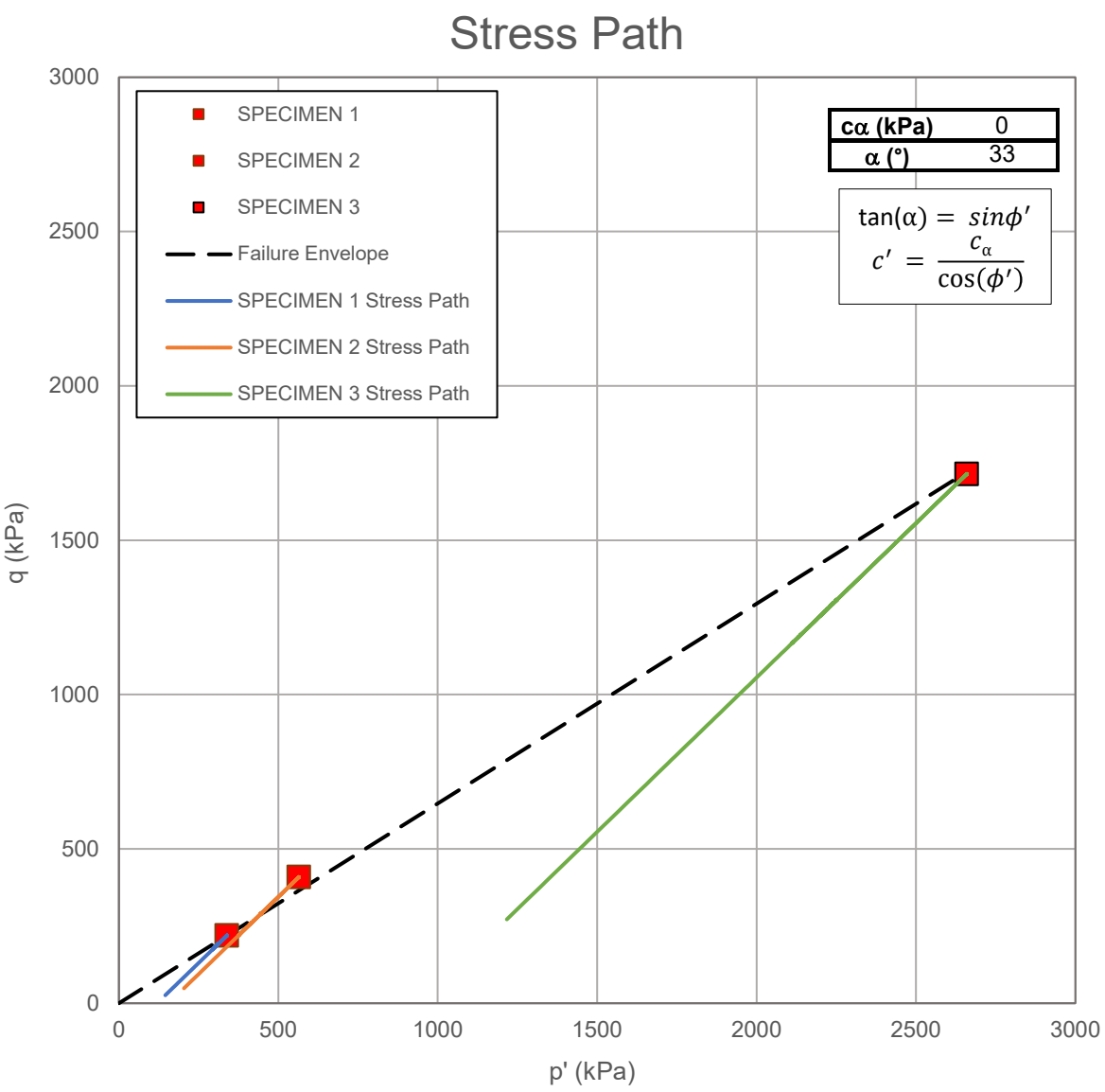
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 6.3

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	28S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.70)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.64)
Sample ID:	SA15	SA28	SA34
Test ID:	CAD-12	CAD-14	CAD-15
Depth:	10.92m - 11.23m	17.98m - 18.28m	20.12m - 20.42m



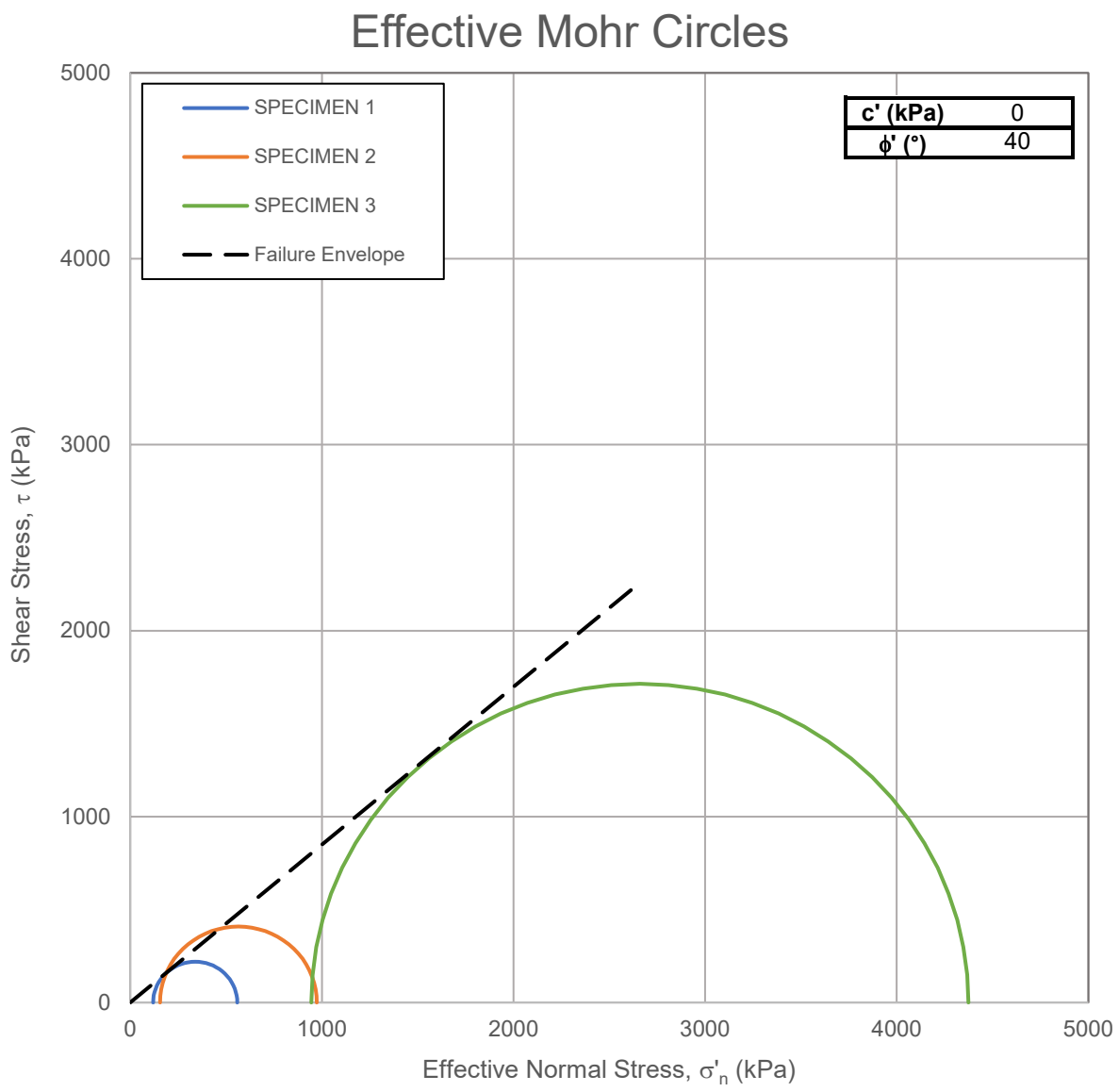
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 6.4

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	28S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.70)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.64)
Sample ID:	SA15	SA28	SA34
Test ID:	CAD-12	CAD-14	CAD-15
Depth:	10.92m - 11.23m	17.98m - 18.28m	20.12m - 20.42m



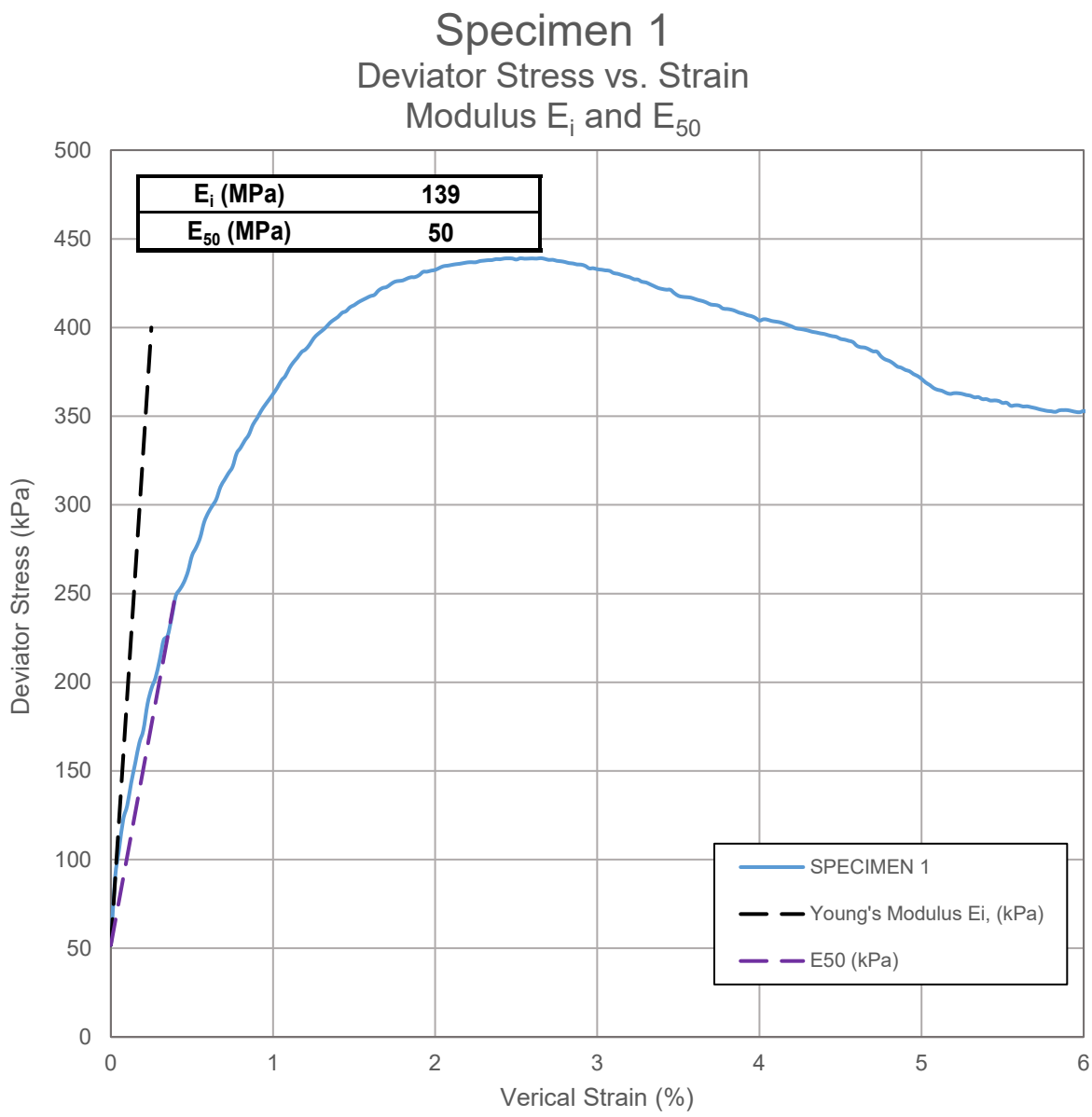
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 6.5

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	28S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.70)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.64)
Sample ID:	SA15	SA28	SA34
Test ID:	CAD-12	CAD-14	CAD-15
Depth:	10.92m - 11.23m	17.98m - 18.28m	20.12m - 20.42m



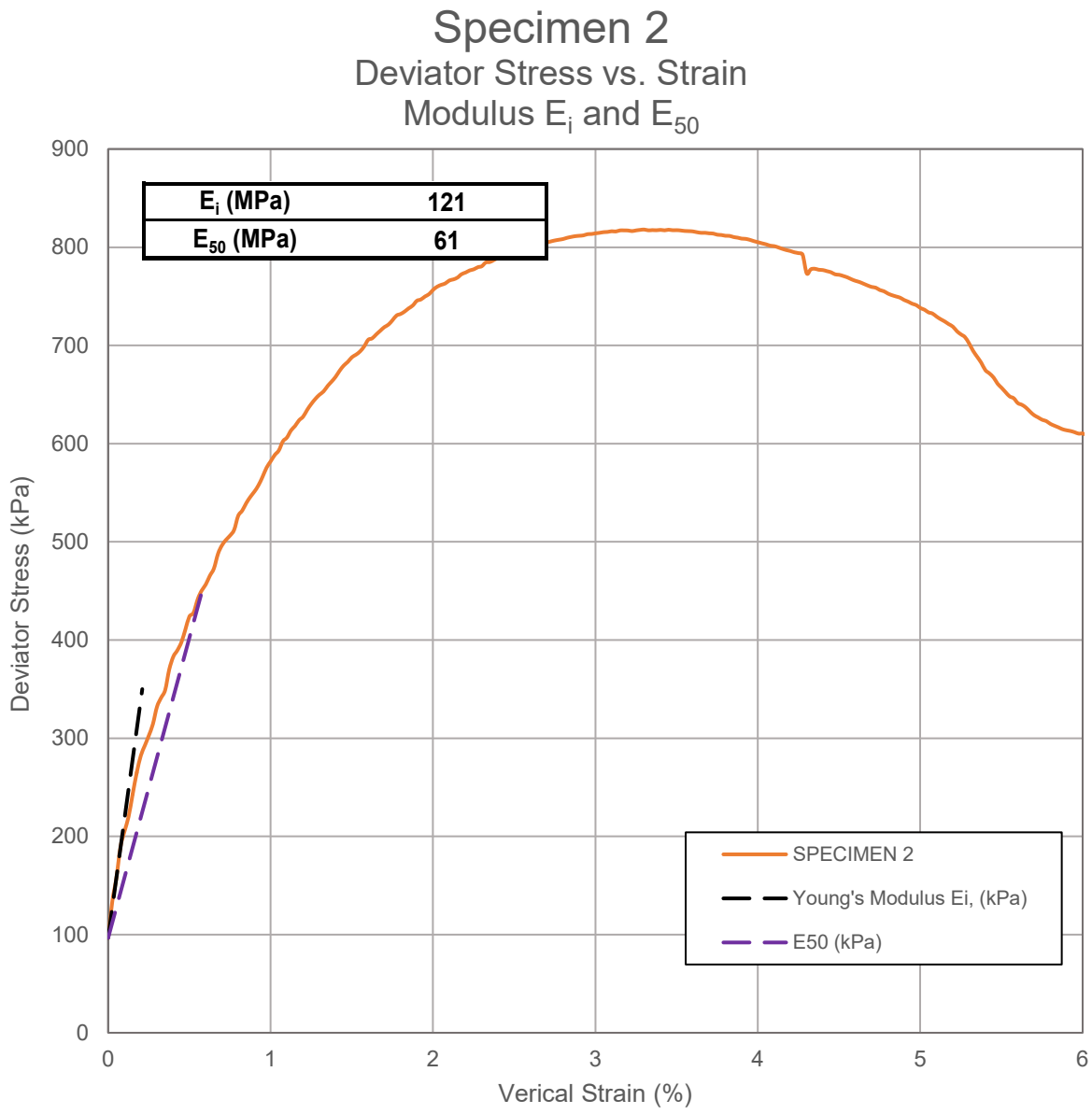
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 6.6

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	28S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.70)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.64)
Sample ID:	SA15	SA28	SA34
Test ID:	CAD-12	CAD-14	CAD-15
Depth:	10.92m - 11.23m	17.98m - 18.28m	20.12m - 20.42m



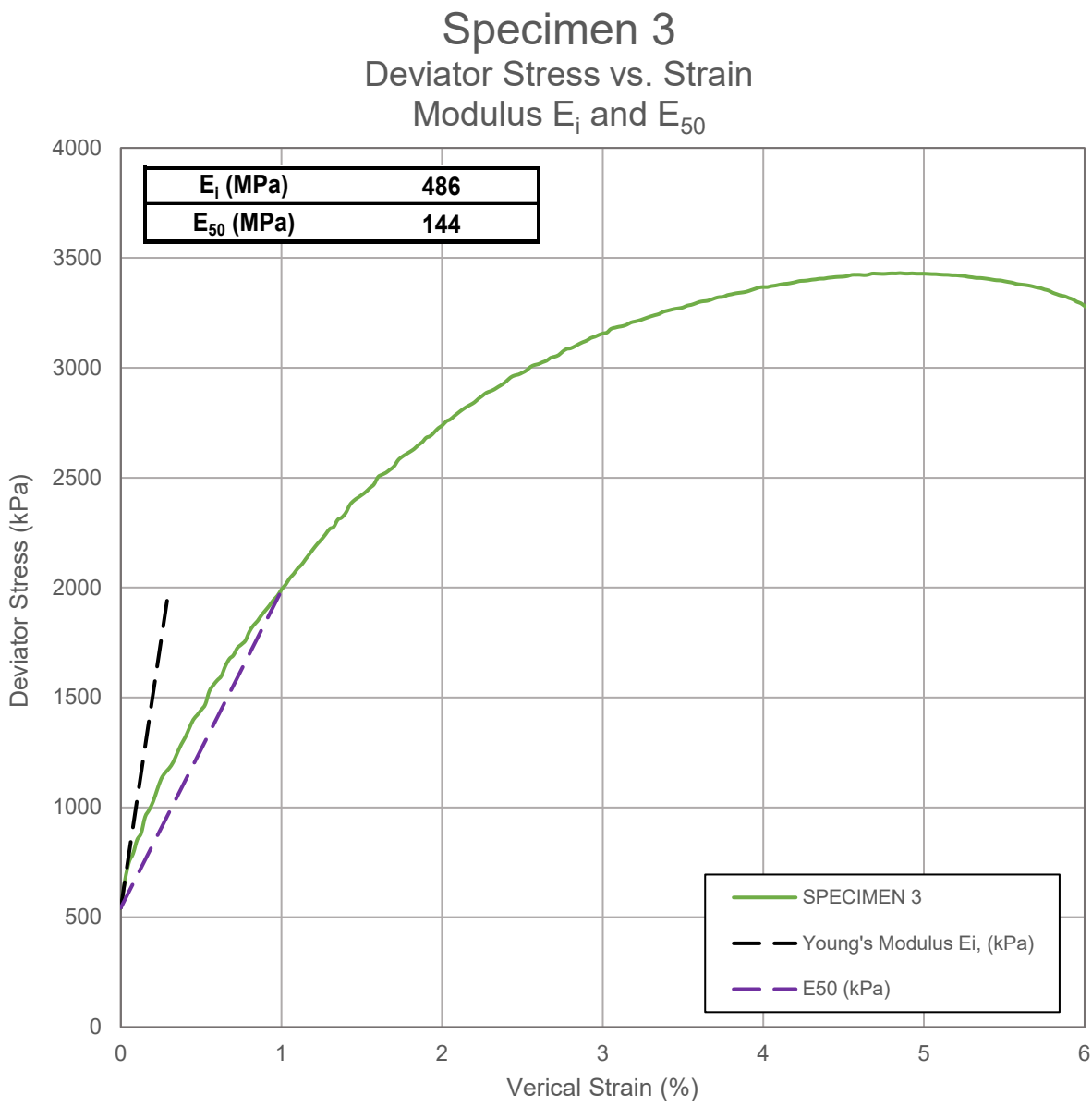
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 6.7

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	28S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.70)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.64)
Sample ID:	SA15	SA28	SA34
Test ID:	CAD-12	CAD-14	CAD-15
Depth:	10.92m - 11.23m	17.98m - 18.28m	20.12m - 20.42m



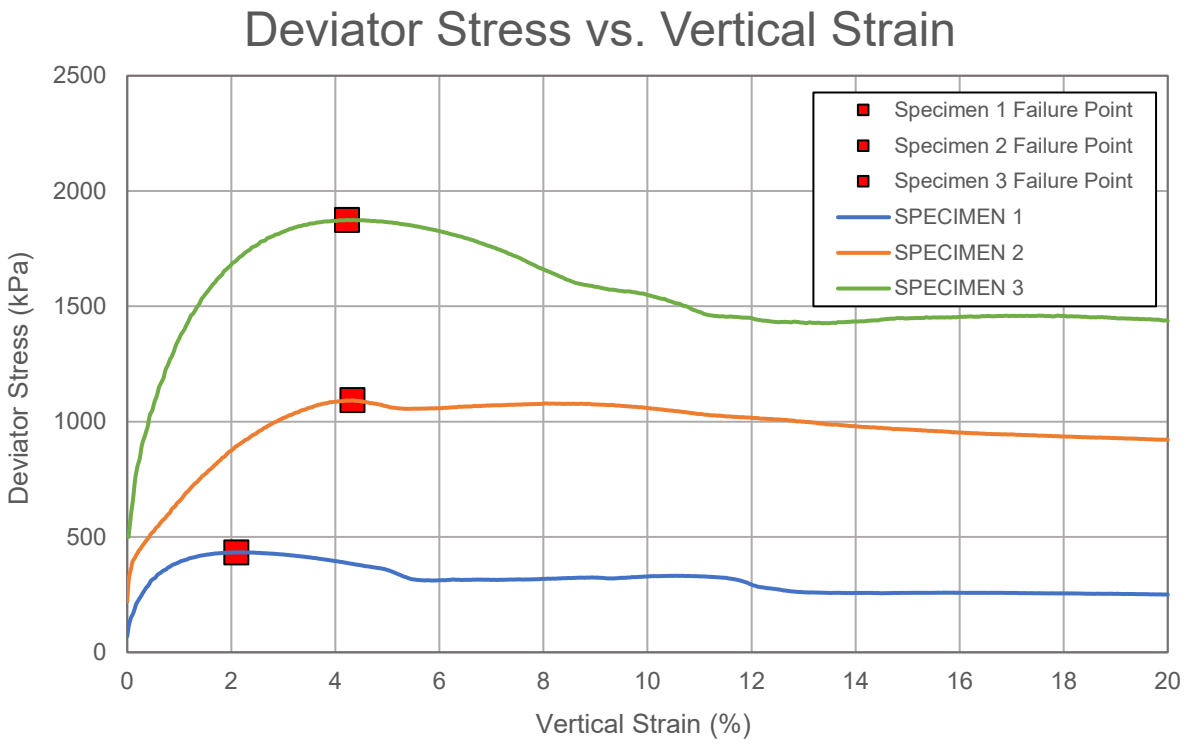
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 7.1

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.58)	Anisotropic (Consol. K= 0.57)	Anisotropic (Consol. K= 0.58)
Sample ID:	SA18	SA22	SA26
Test ID:	CAD-4	CAD-5	CAD-6
Depth:	9.80m - 10.11m	11.58m - 11.89m	12.80m - 13.39m



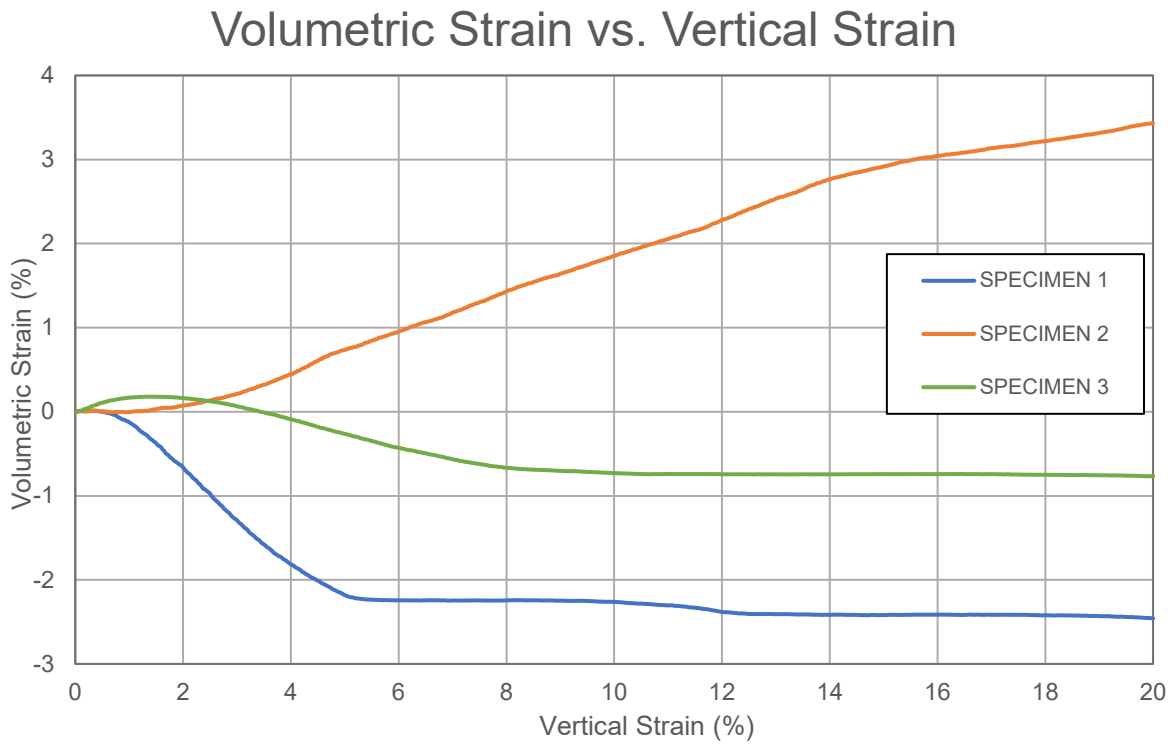
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 7.2

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.58)	Anisotropic (Consol. K= 0.57)	Anisotropic (Consol. K= 0.58)
Sample ID:	SA18	SA22	SA26
Test ID:	CAD-4	CAD-5	CAD-6
Depth:	9.80m - 10.11m	11.58m - 11.89m	12.80m - 13.39m



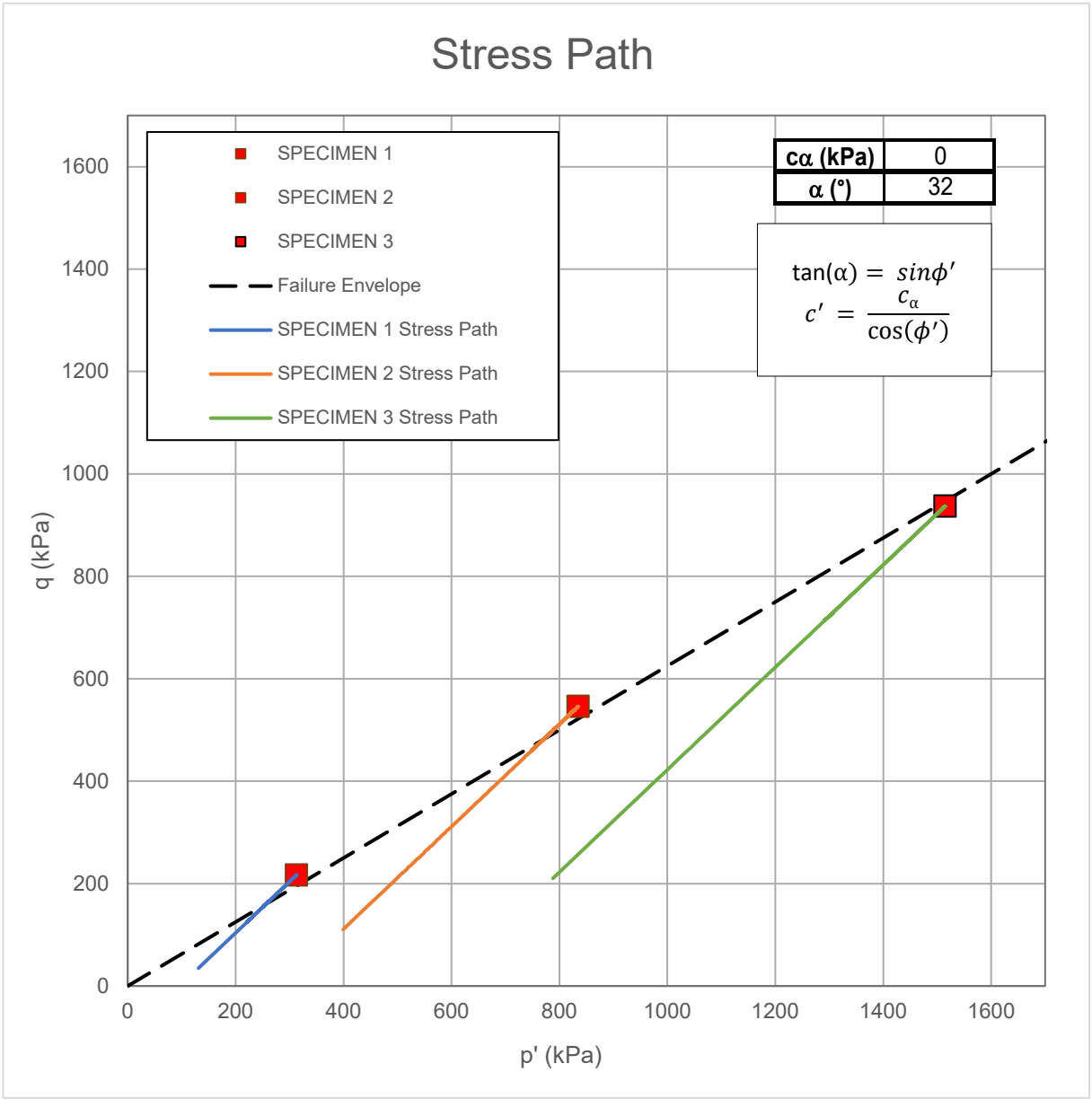
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 7.3

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.58)	Anisotropic (Consol. K= 0.57)	Anisotropic (Consol. K= 0.58)
Sample ID:	SA18	SA22	SA26
Test ID:	CAD-4	CAD-5	CAD-6
Depth:	9.80m - 10.11m	11.58m - 11.89m	12.80m - 13.39m



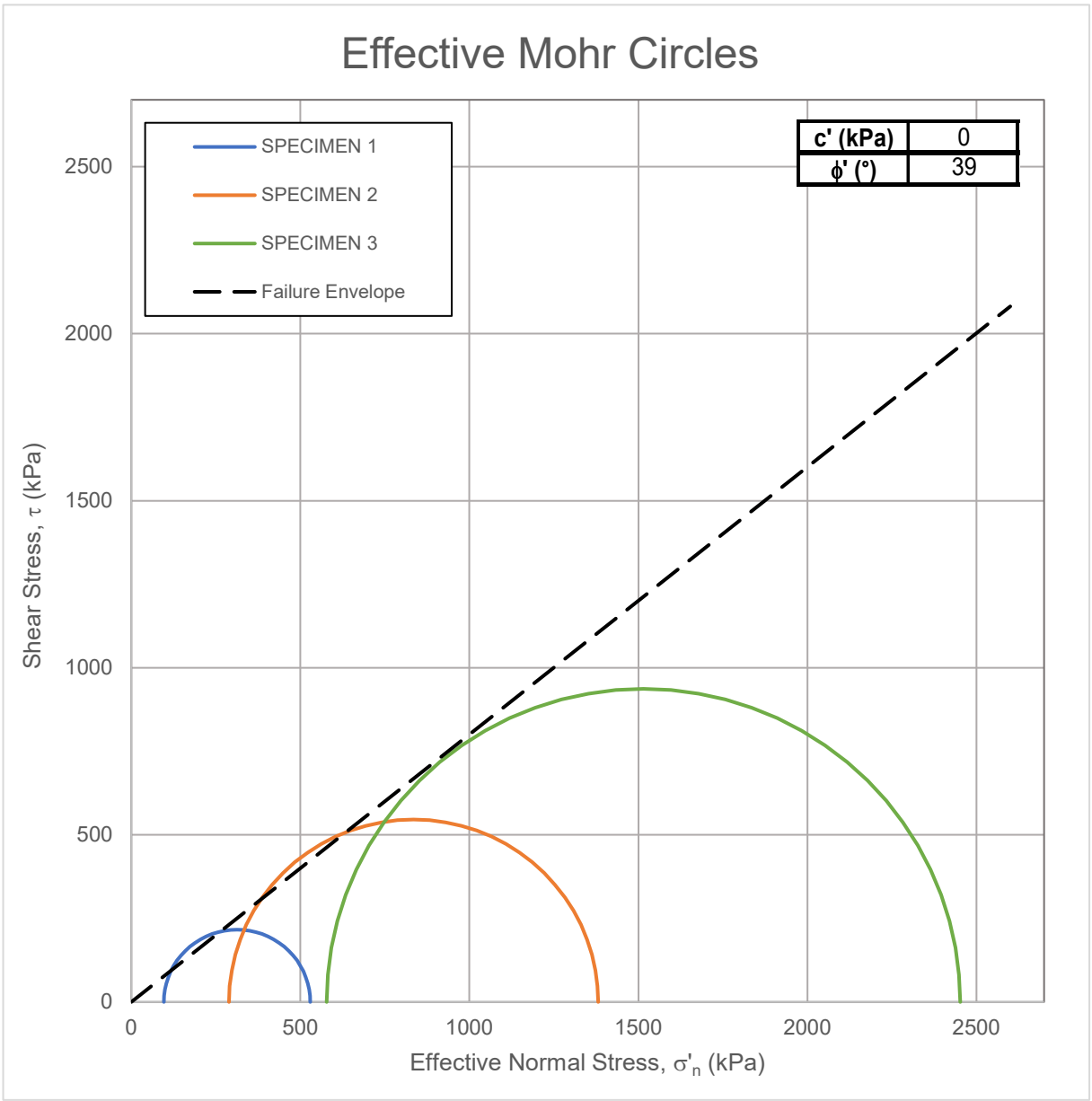
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 7.4

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.58)	Anisotropic (Consol. K= 0.57)	Anisotropic (Consol. K= 0.58)
Sample ID:	SA18	SA22	SA26
Test ID:	CAD-4	CAD-5	CAD-6
Depth:	9.80m - 10.11m	11.58m - 11.89m	12.80m - 13.39m



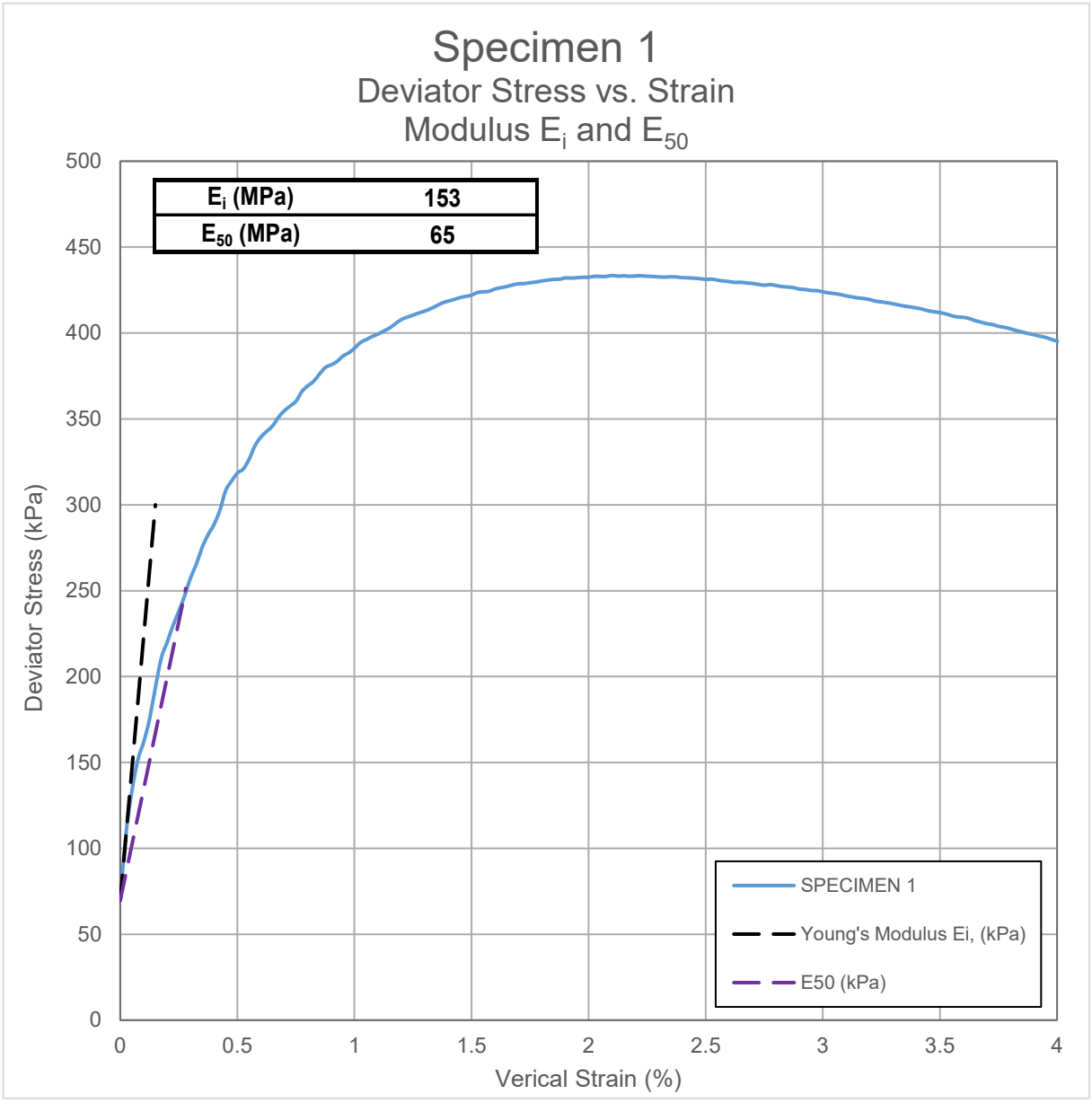
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 7.5

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.58)	Anisotropic (Consol. K= 0.57)	Anisotropic (Consol. K= 0.58)
Sample ID:	SA18	SA22	SA26
Test ID:	CAD-4	CAD-5	CAD-6
Depth:	9.80m - 10.11m	11.58m - 11.89m	12.80m - 13.39m



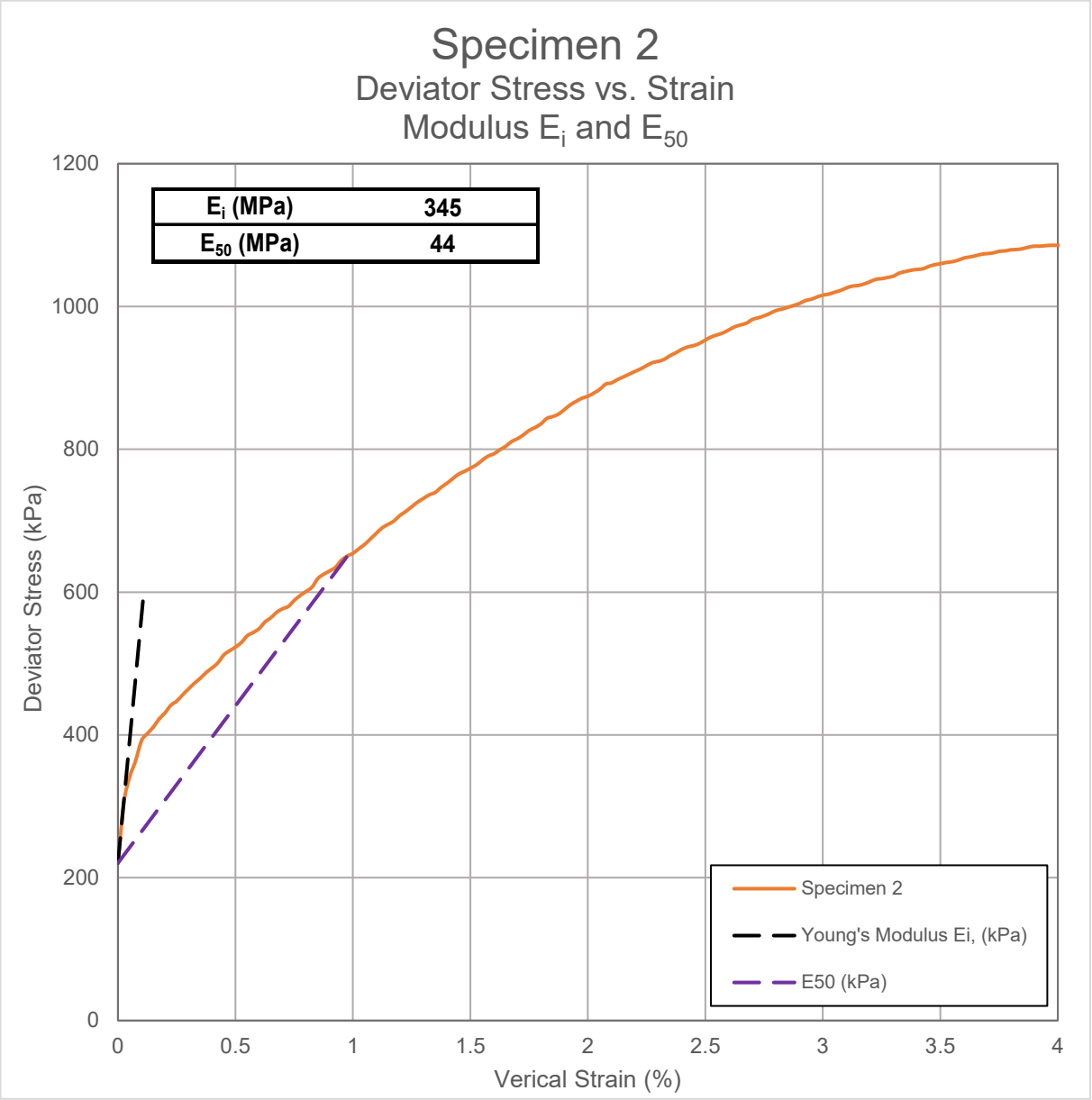
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 7.6

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.58)	Anisotropic (Consol. K= 0.57)	Anisotropic (Consol. K= 0.58)
Sample ID:	SA18	SA22	SA26
Test ID:	CAD-4	CAD-5	CAD-6
Depth:	9.80m - 10.11m	11.58m - 11.89m	12.80m - 13.39m



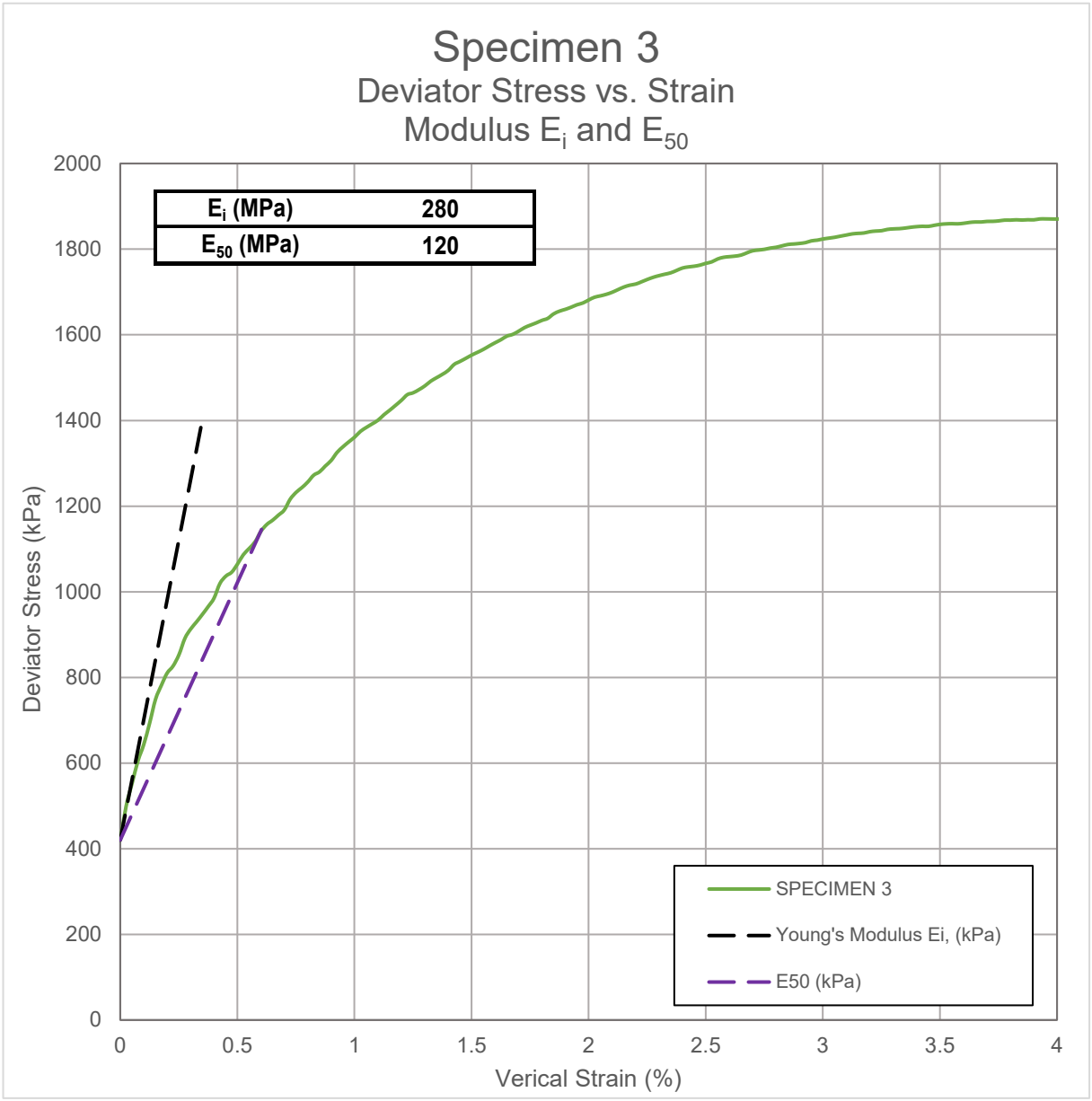
Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. H - 7.7

Consolidated Drained (CAD) Triaxial Test

Project No.:	21451329
BH ID:	66S
Soil Unit:	4a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	Anisotropic (Consol. K= 0.58)	Anisotropic (Consol. K= 0.57)	Anisotropic (Consol. K= 0.58)
Sample ID:	SA18	SA22	SA26
Test ID:	CAD-4	CAD-5	CAD-6
Depth:	9.80m - 10.11m	11.58m - 11.89m	12.80m - 13.39m



Consolidation of specimen(s) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

APPENDIX I

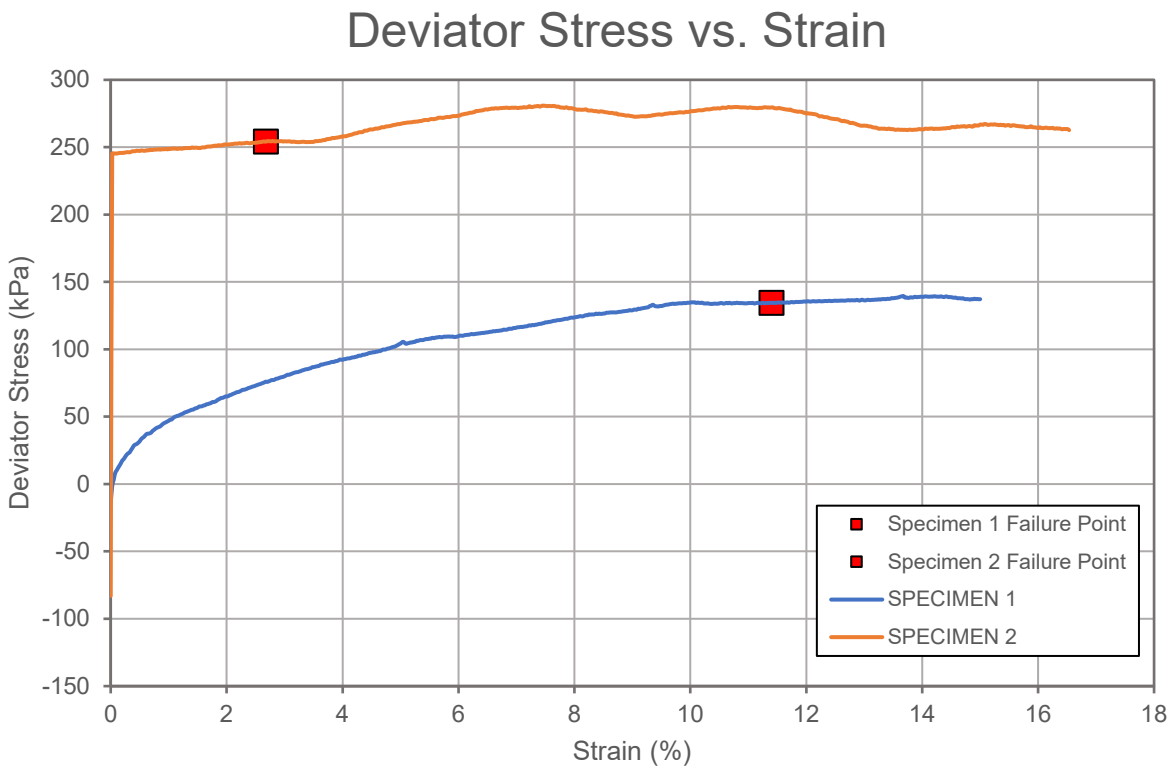
Consolidated Undrained Triaxial Compression Testing Interpretations

Figure No. I - 1.1

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH1
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 1.34)	Anisotropic (Consol. K= 1.35)
Sample ID:	SA4-2	SA4-3
Test ID:	CKOUc-1	CKOUc-1-2
Depth:	1.88m - 2.01m	2.01m - 2.16m

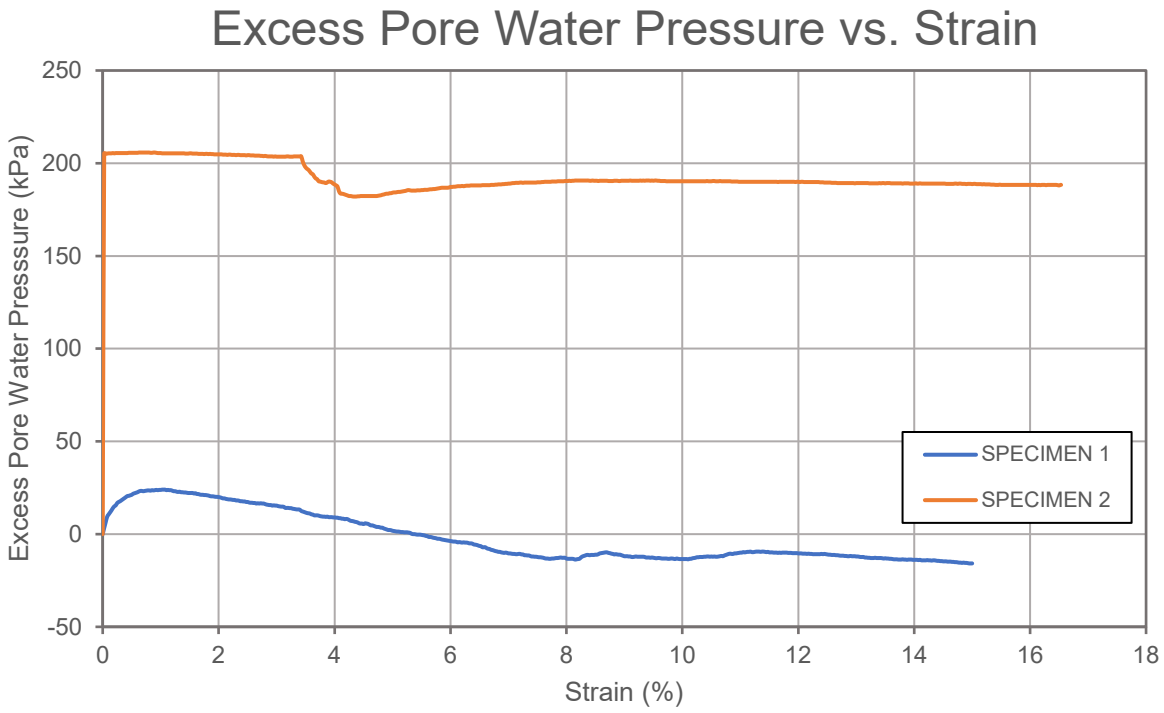


Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH1
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 1.34)	Anisotropic (Consol. K= 1.35)
Sample ID:	SA4-2	SA4-3
Test ID:	CKOUc-1	CKOUc-1-2
Depth:	1.88m - 2.01m	2.01m - 2.16m



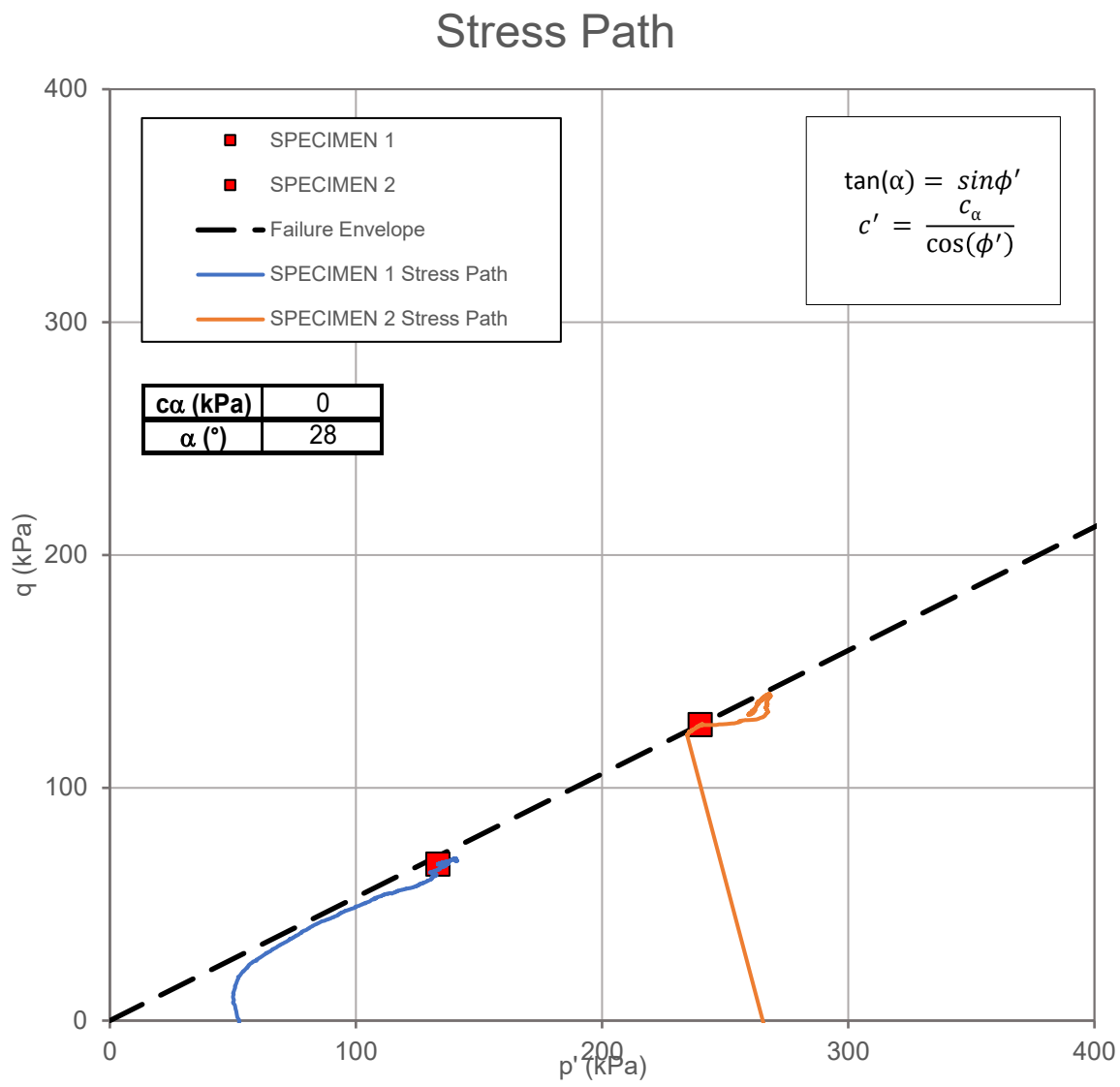
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 1.3

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH1
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 1.34)	Anisotropic (Consol. K= 1.35)
Sample ID:	SA4-2	SA4-3
Test ID:	CKOUc-1	CKOUc-1-2
Depth:	1.88m - 2.01m	2.01m - 2.16m



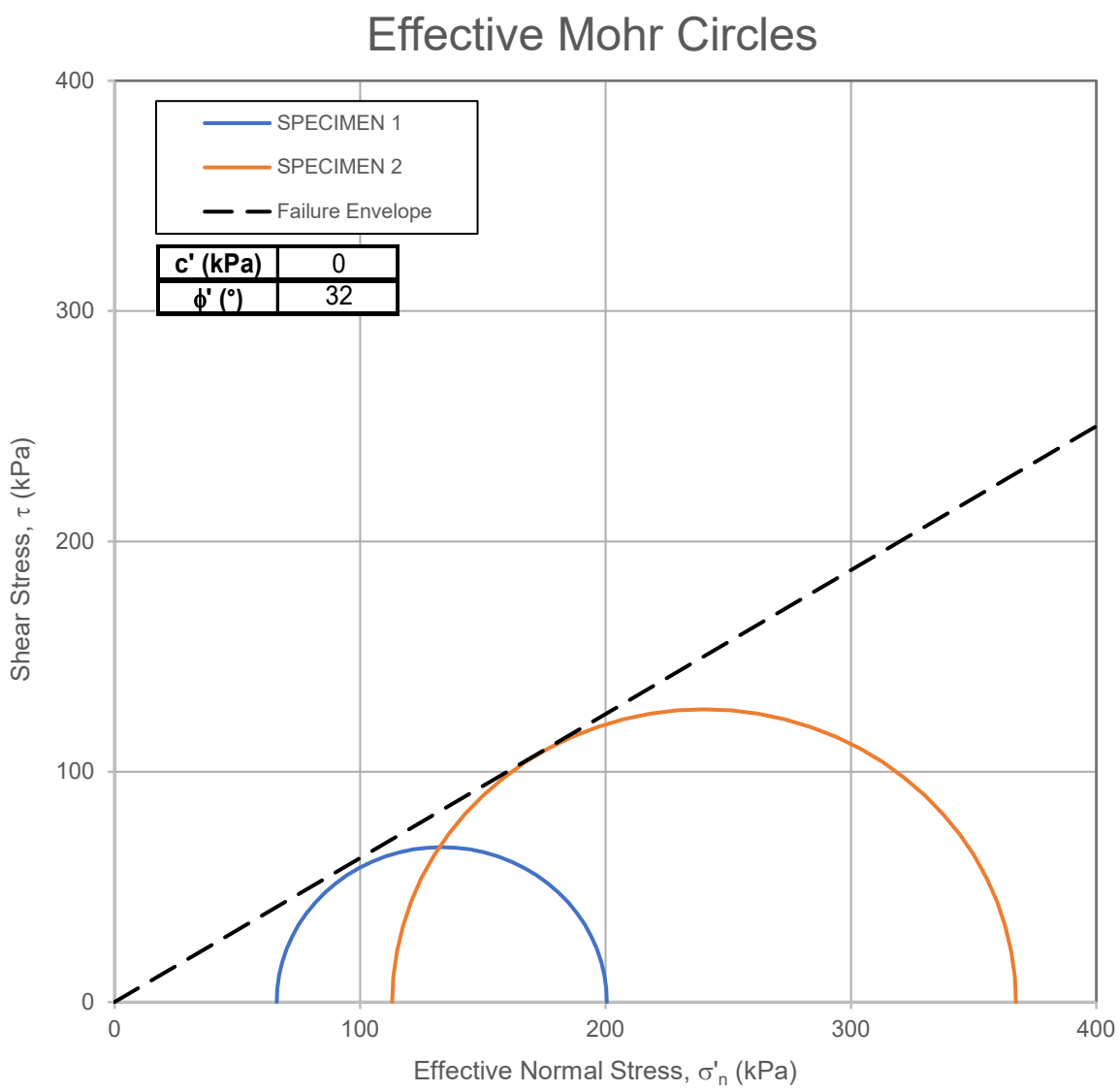
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 1.4

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH1
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 1.34)	Anisotropic (Consol. K= 1.35)
Sample ID:	SA4-2	SA4-3
Test ID:	CKOUc-1	CKOUc-1-2
Depth:	1.88m - 2.01m	2.01m - 2.16m



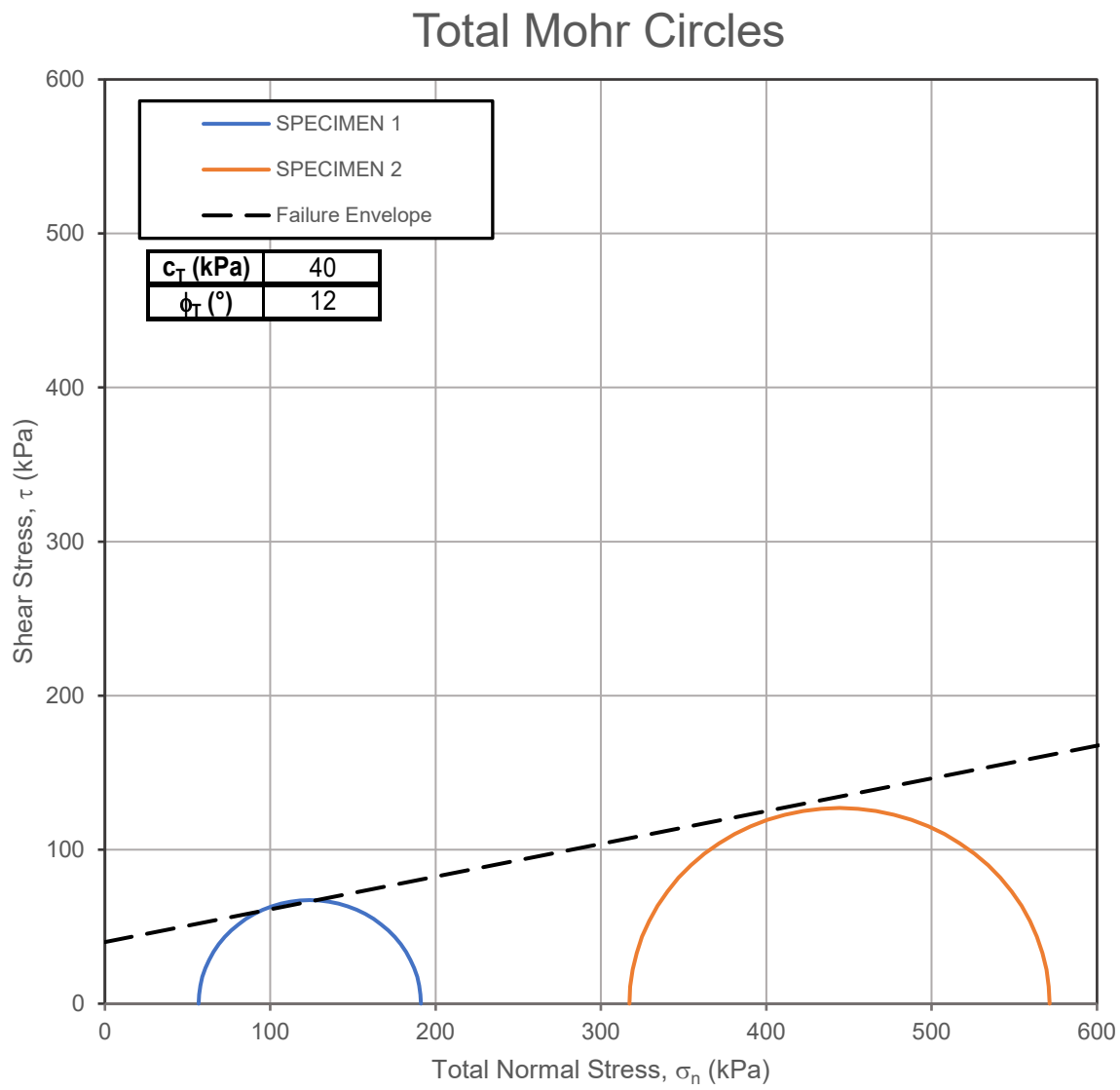
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 1.5

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH1
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 1.34)	Anisotropic (Consol. K= 1.35)
Sample ID:	SA4-2	SA4-3
Test ID:	CKOUc-1	CKOUc-1-2
Depth:	1.88m - 2.01m	2.01m - 2.16m



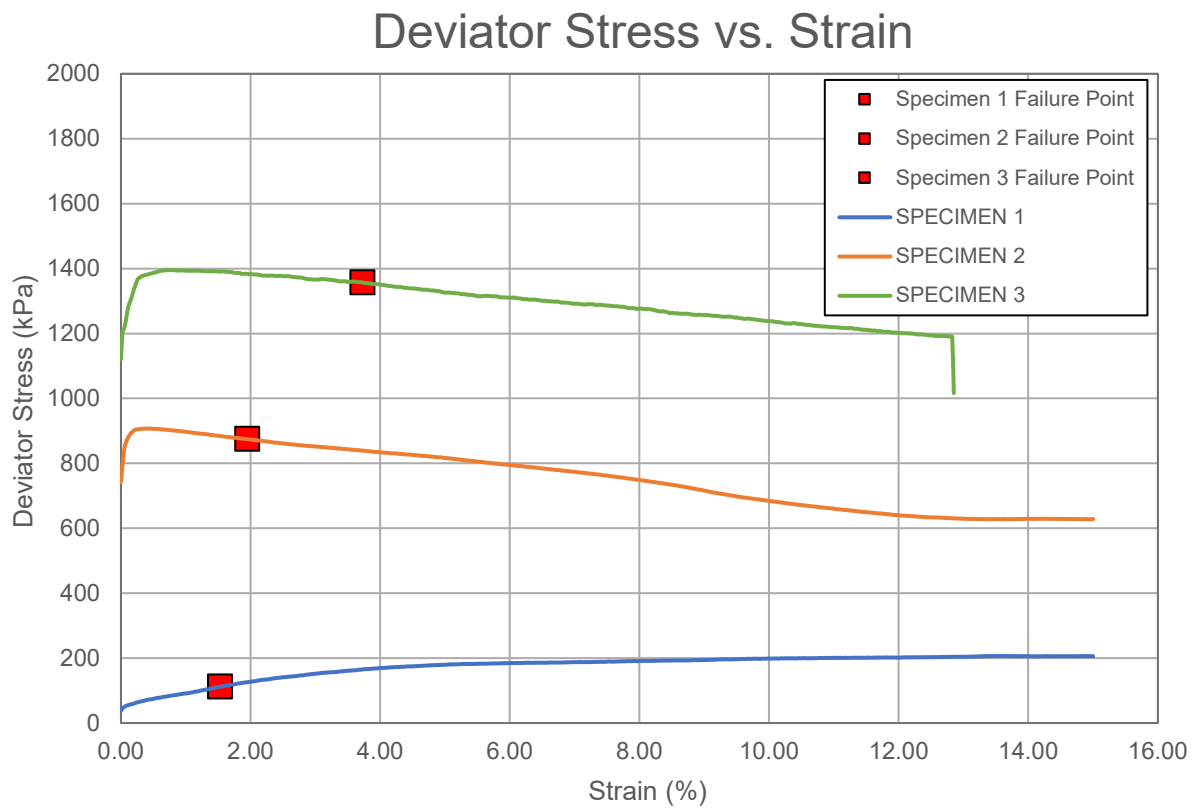
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 2.1

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH2
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	K_0-Conditions (Consol. K= 0.38)	Anisotropic (Consol. K= 0.38)	Anisotropic (Consol. K= 0.45)
Sample ID:	SA5-2	SA5-3	SA5-4
Test ID:	CKoUc-2	CK0Uc-2-2	CK0Uc-2-3
Depth:	3.05m - 3.18m	3.18m - 3.30m	3.30m - 3.43m



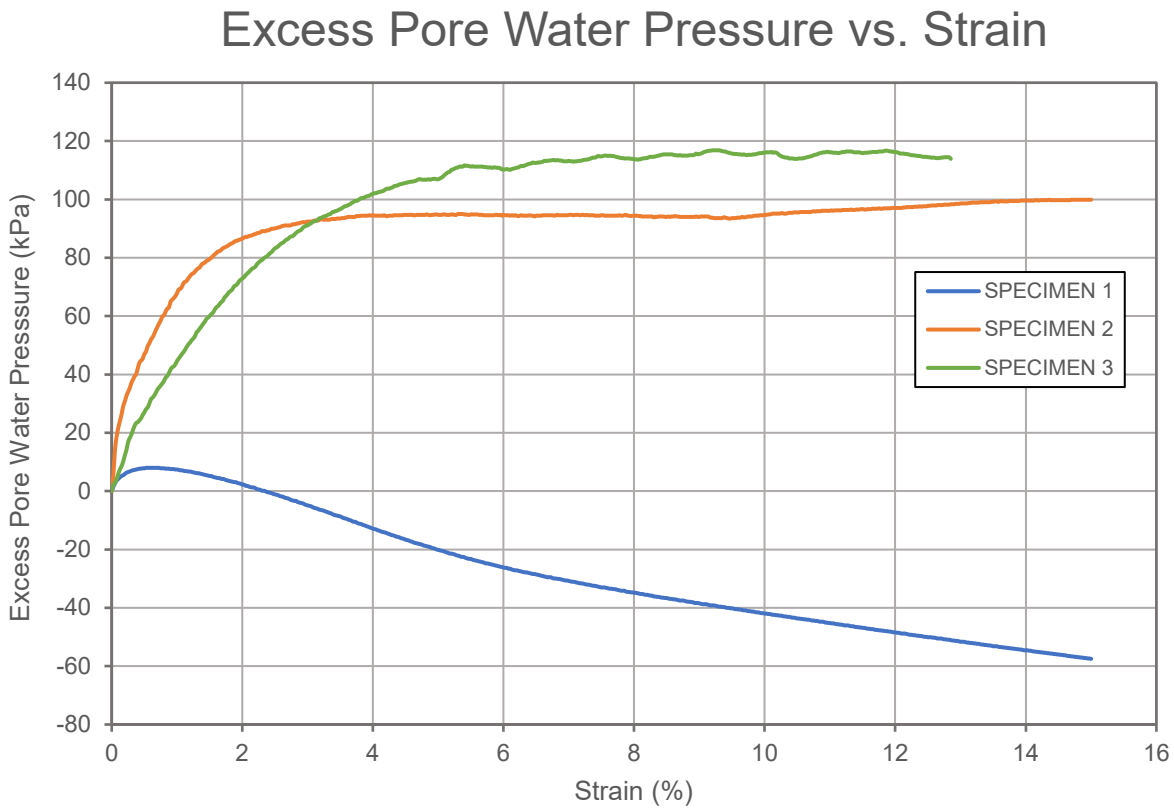
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 2.2

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH2
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	K_0-Conditions (Consol. K= 0.38)	Anisotropic (Consol. K= 0.38)	Anisotropic (Consol. K= 0.45)
Sample ID:	SA5-2	SA5-3	SA5-4
Test ID:	CKoUc-2	CK0Uc-2-2	CK0Uc-2-3
Depth:	3.05m - 3.18m	3.18m - 3.30m	3.30m - 3.43m



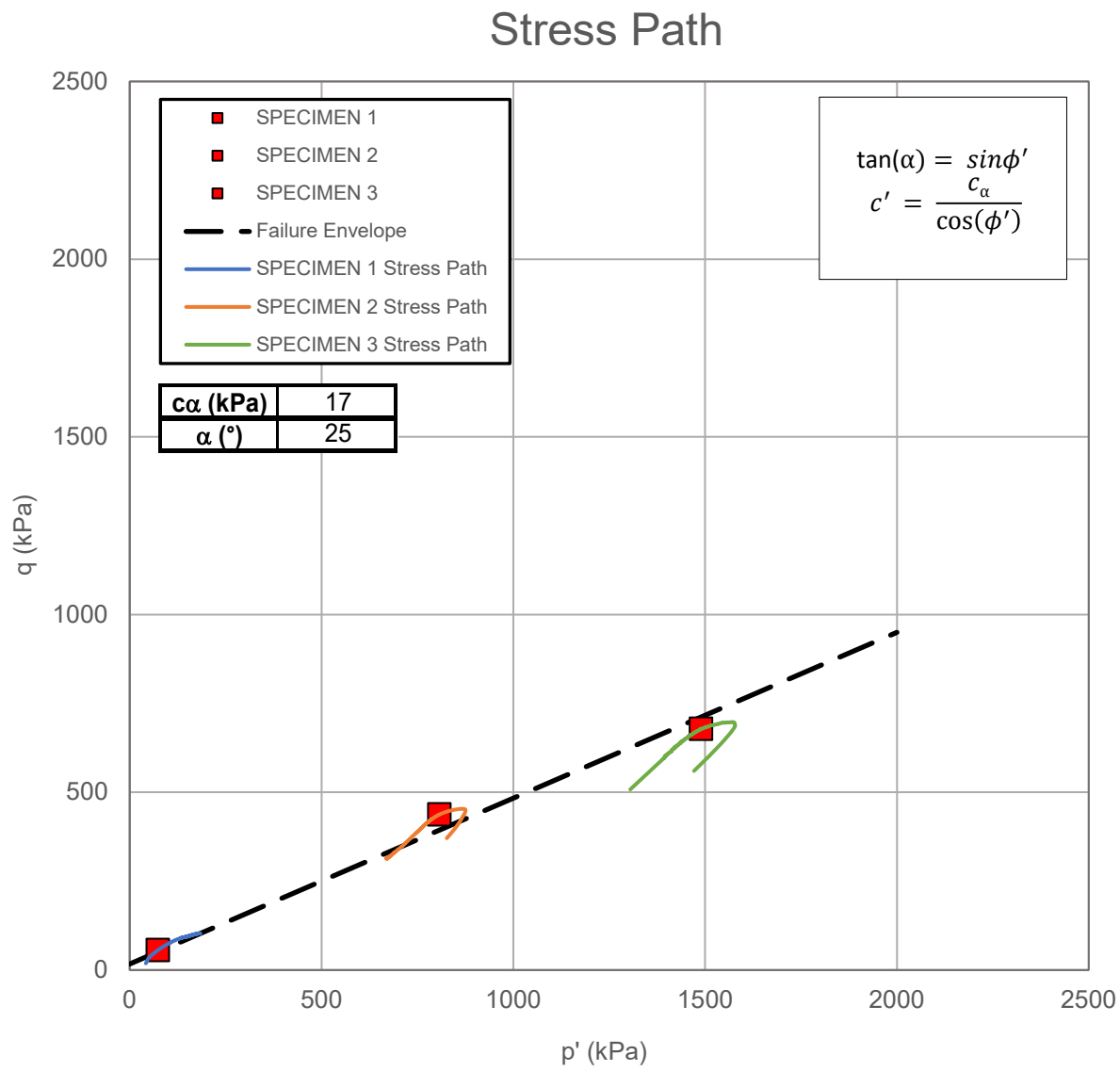
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 2.3

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH2
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	K_0-Conditions (Consol. K= 0.38)	Anisotropic (Consol. K= 0.38)	Anisotropic (Consol. K= 0.45)
Sample ID:	SA5-2	SA5-3	SA5-4
Test ID:	CKoUc-2	CK0Uc-2-2	CK0Uc-2-3
Depth:	3.05m - 3.18m	3.18m - 3.30m	3.30m - 3.43m



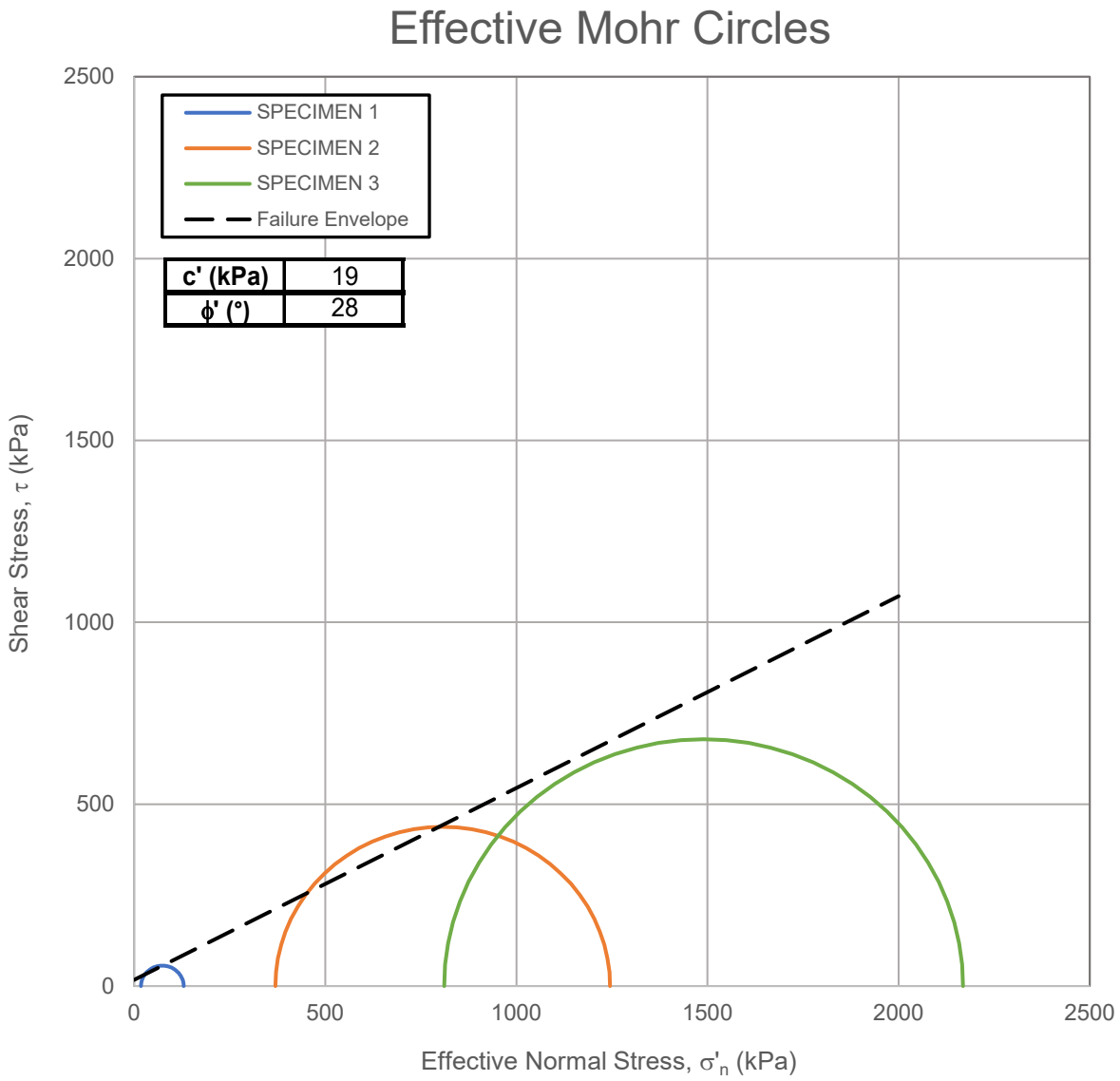
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 2.4

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH2
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	K_0-Conditions (Consol. K= 0.38)	Anisotropic (Consol. K= 0.38)	Anisotropic (Consol. K= 0.45)
Sample ID:	SA5-2	SA5-3	SA5-4
Test ID:	CKoUc-2	CK0Uc-2-2	CK0Uc-2-3
Depth:	3.05m - 3.18m	3.18m - 3.30m	3.30m - 3.43m



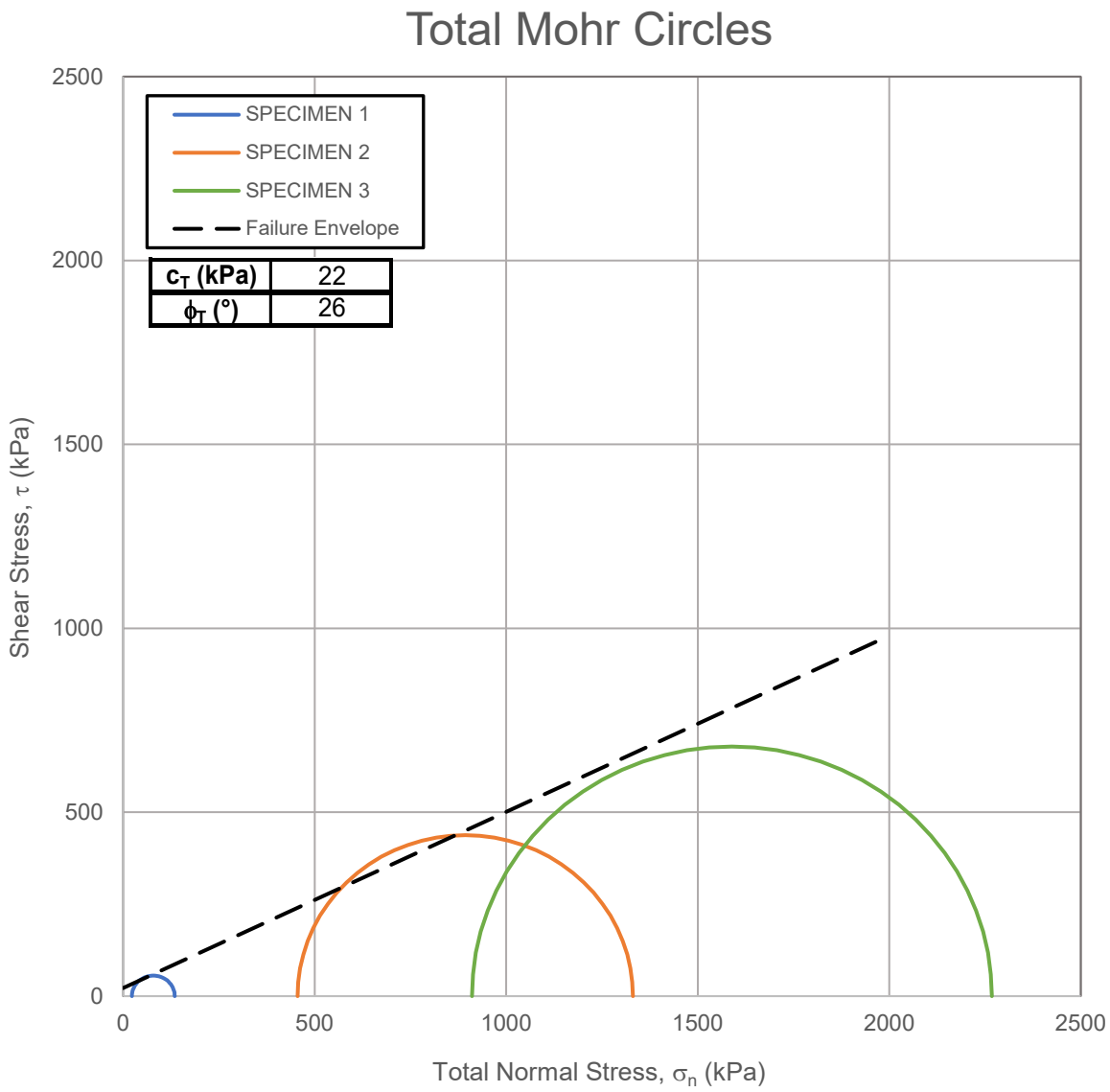
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 2.5

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH2
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	K_0-Conditions (Consol. K= 0.38)	Anisotropic (Consol. K= 0.38)	Anisotropic (Consol. K= 0.45)
Sample ID:	SA5-2	SA5-3	SA5-4
Test ID:	CKoUc-2	CK0Uc-2-2	CK0Uc-2-3
Depth:	3.05m - 3.18m	3.18m - 3.30m	3.30m - 3.43m



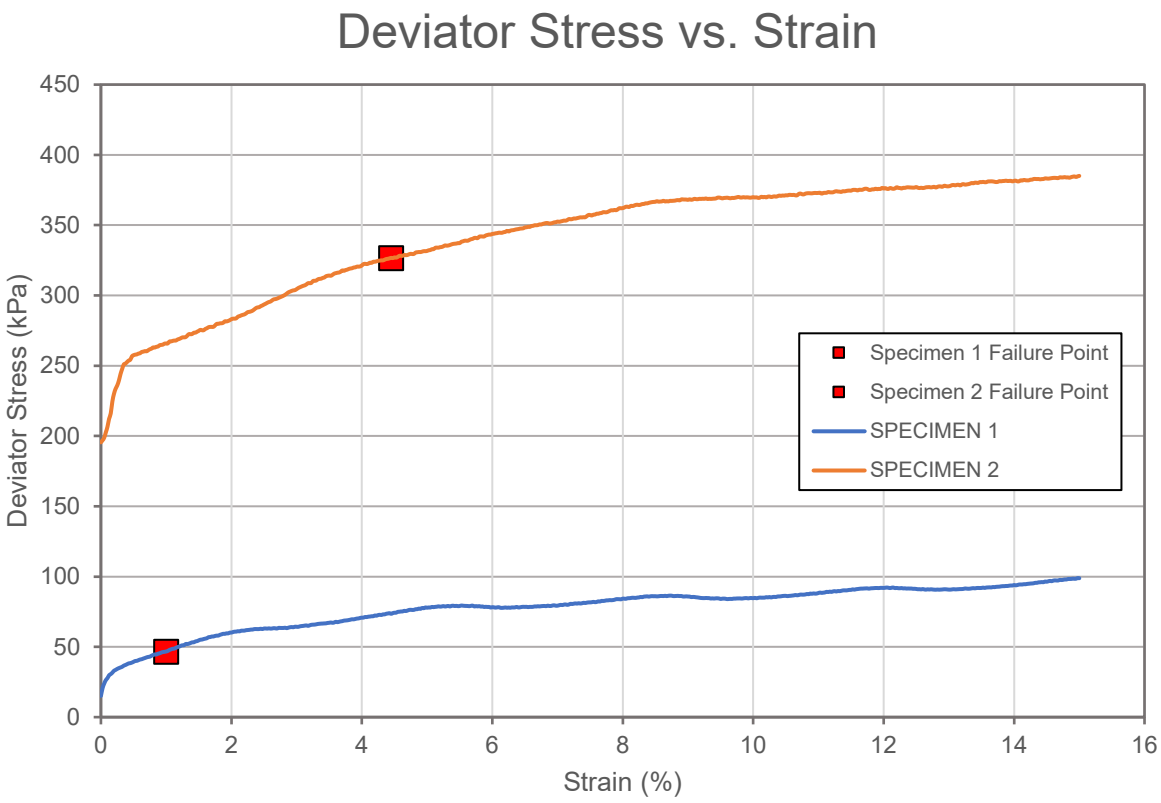
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 3.1

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH3
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.58)	Anisotropic (Consol. K= 0.58)
Sample ID:	SA3-2	SA3-3
Test ID:	CK0Uc-3	CK0Uc-3-2
Depth:	1.85m - 1.98m	1.7m - 1.83m



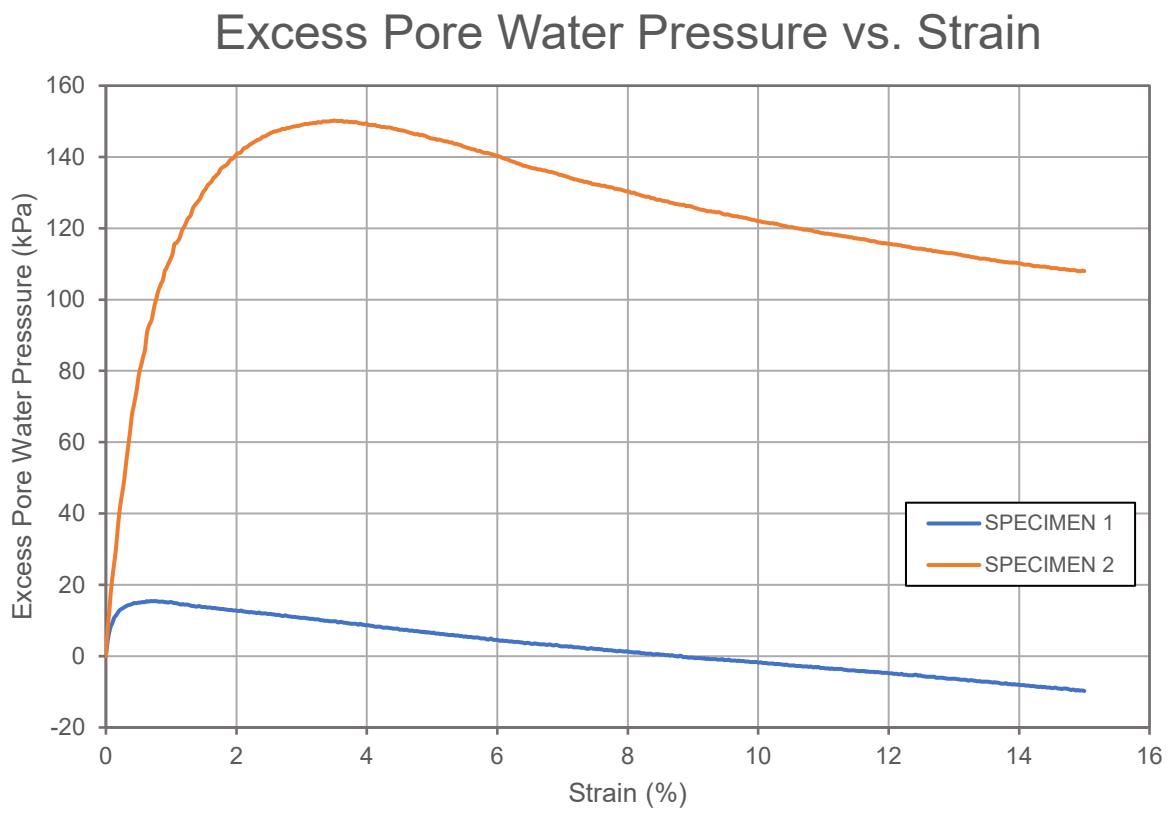
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 3.2

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH3
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.58)	Anisotropic (Consol. K= 0.58)
Sample ID:	SA3-2	SA3-3
Test ID:	CK0Uc-3	CK0Uc-3-2
Depth:	1.85m - 1.98m	1.7m - 1.83m



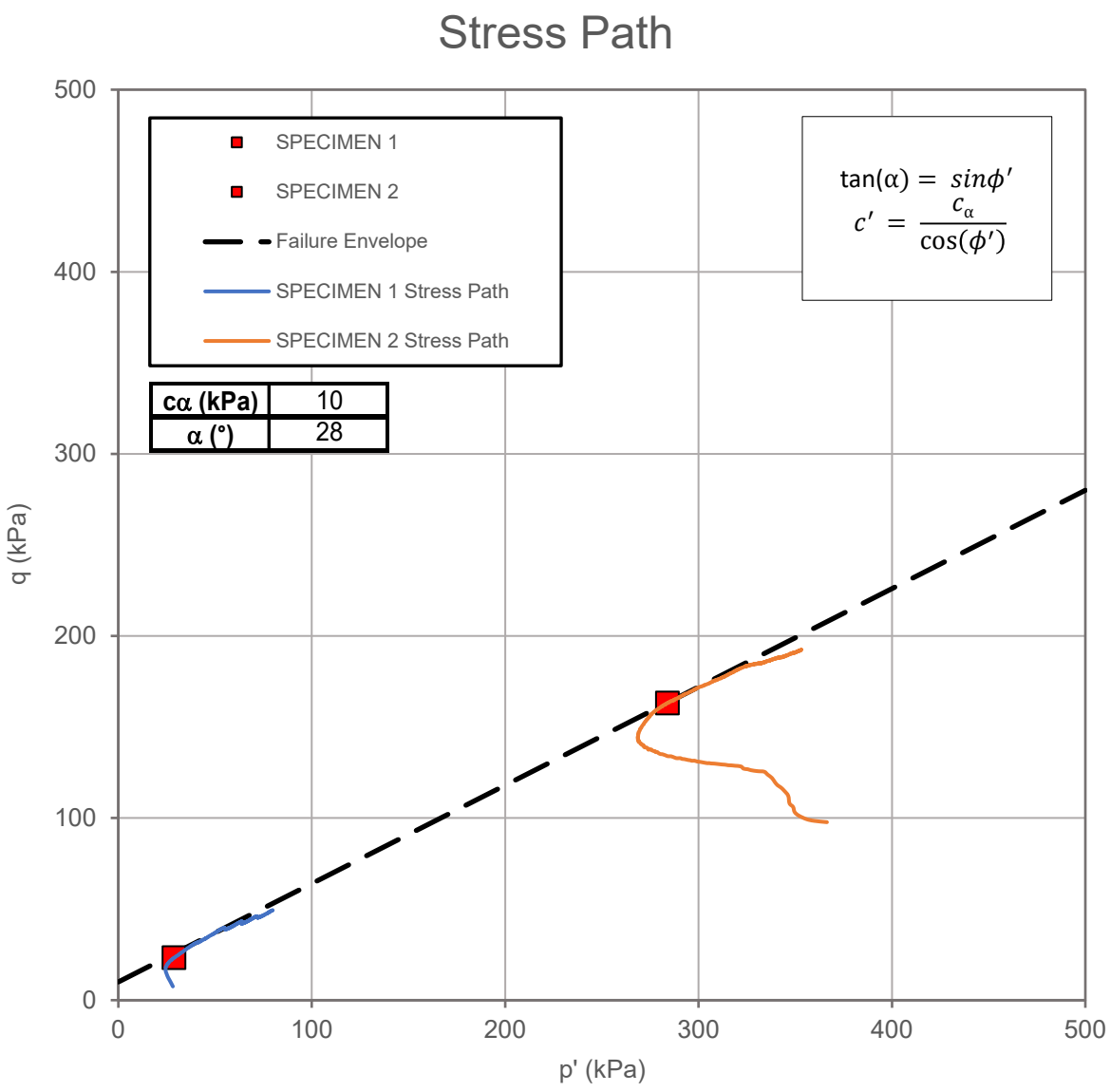
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 3.3

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH3
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.58)	Anisotropic (Consol. K= 0.58)
Sample ID:	SA3-2	SA3-3
Test ID:	CK0Uc-3	CK0Uc-3-2
Depth:	1.85m - 1.98m	1.7m - 1.83m



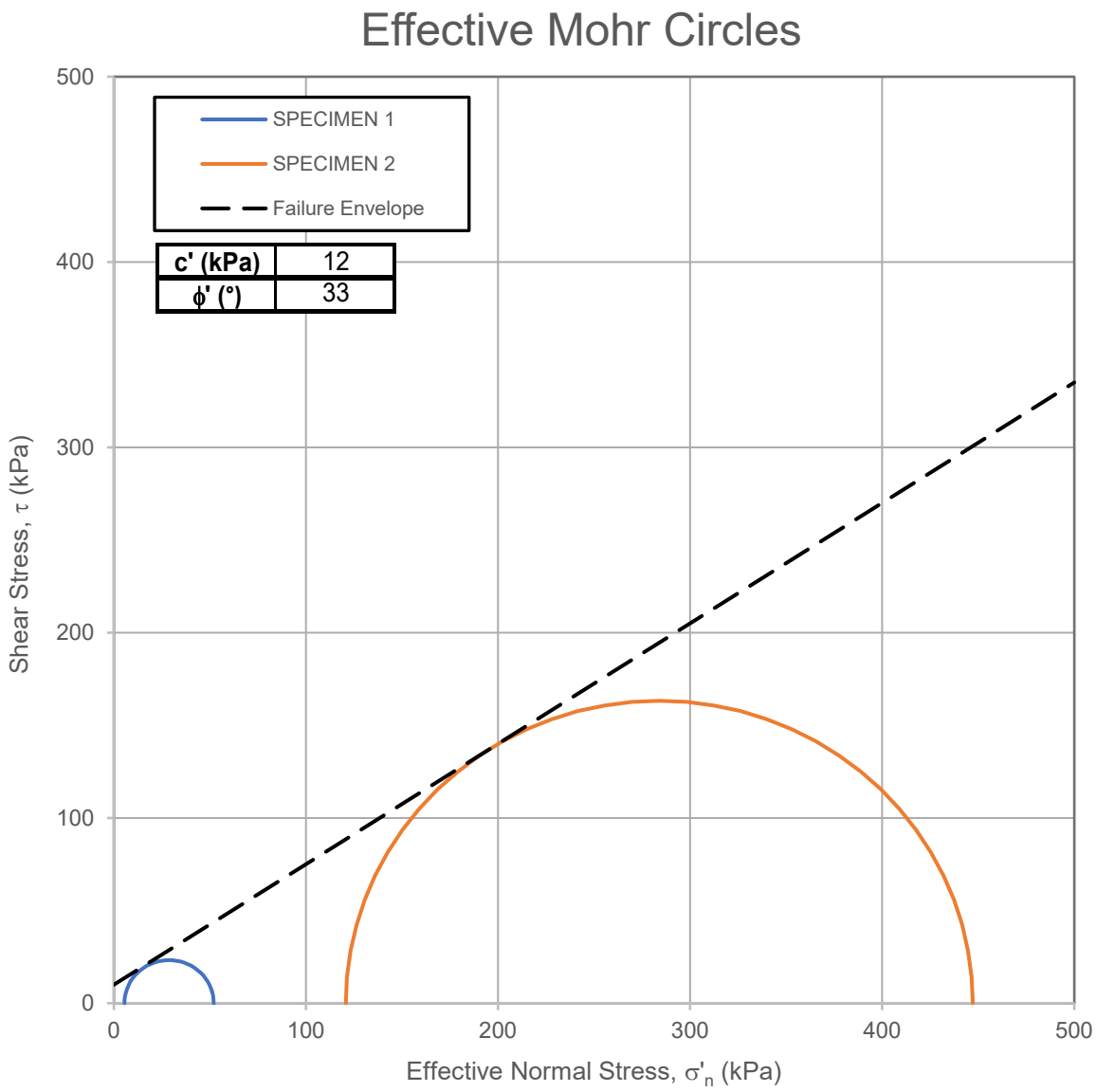
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 3.4

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH3
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.58)	Anisotropic (Consol. K= 0.58)
Sample ID:	SA3-2	SA3-3
Test ID:	CK0Uc-3	CK0Uc-3-2
Depth:	1.85m - 1.98m	1.7m - 1.83m



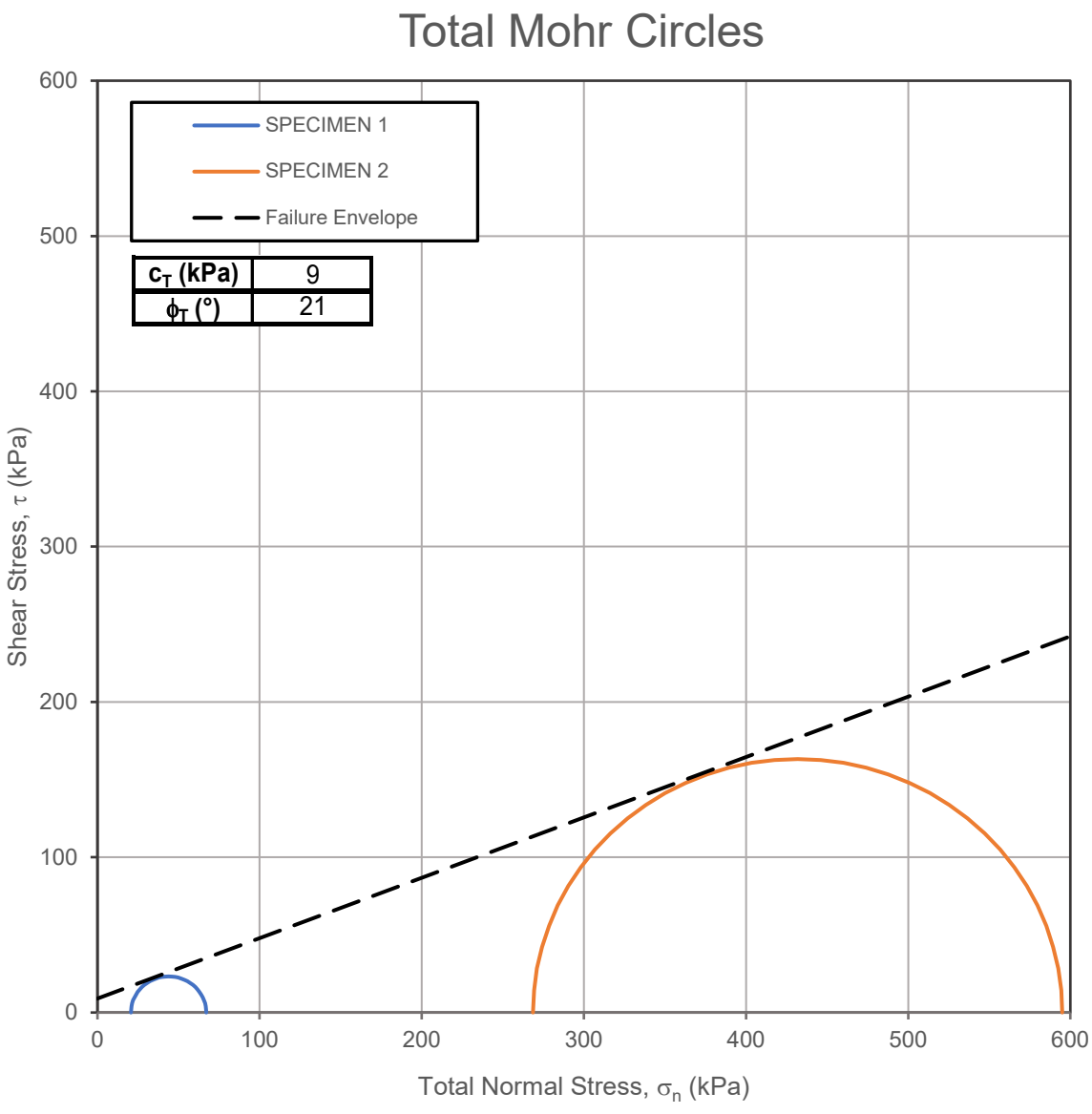
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 3.5

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH3
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.58)	Anisotropic (Consol. K= 0.58)
Sample ID:	SA3-2	SA3-3
Test ID:	CK0Uc-3	CK0Uc-3-2
Depth:	1.85m - 1.98m	1.7m - 1.83m



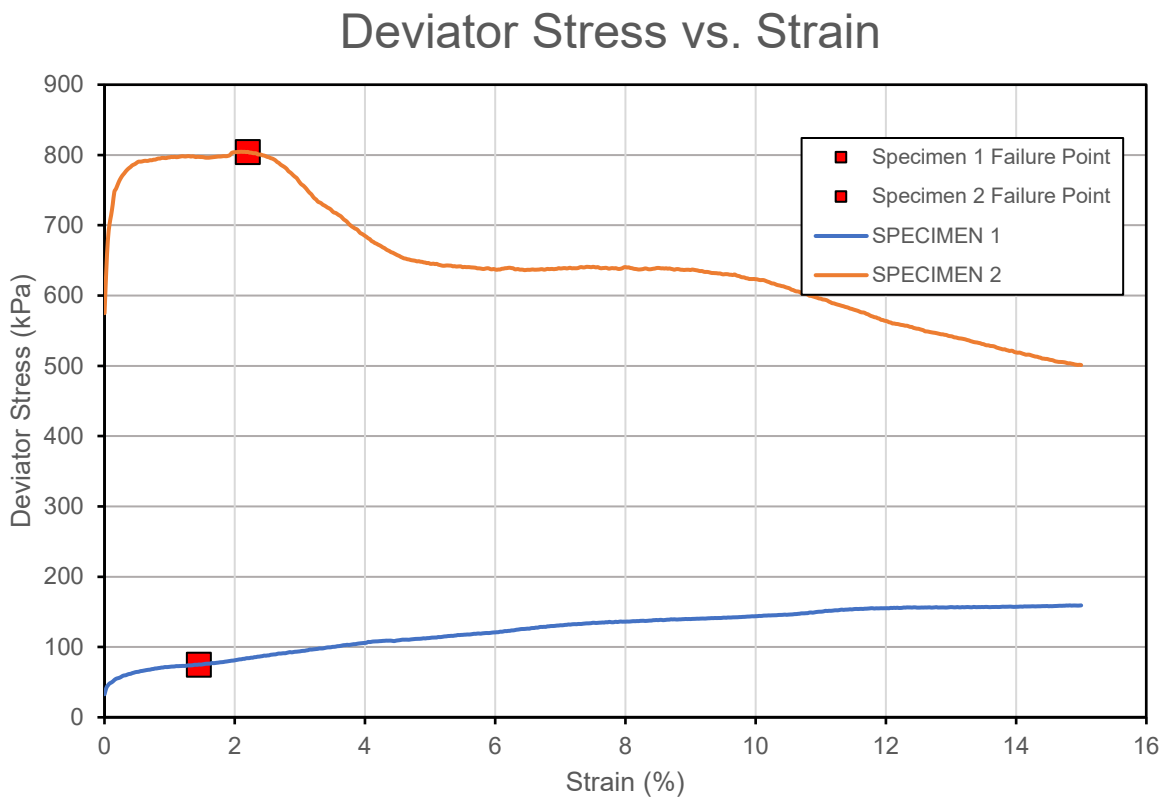
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 4.1

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH3
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K=0.44)	Anisotropic (Consol. K= 0.43)
Sample ID:	SA5-2	SA5-3
Test ID:	CK0Uc-4R	CK0Uc-4-2
Depth:	2.95m - 3.07m	3.23m - 3.35m



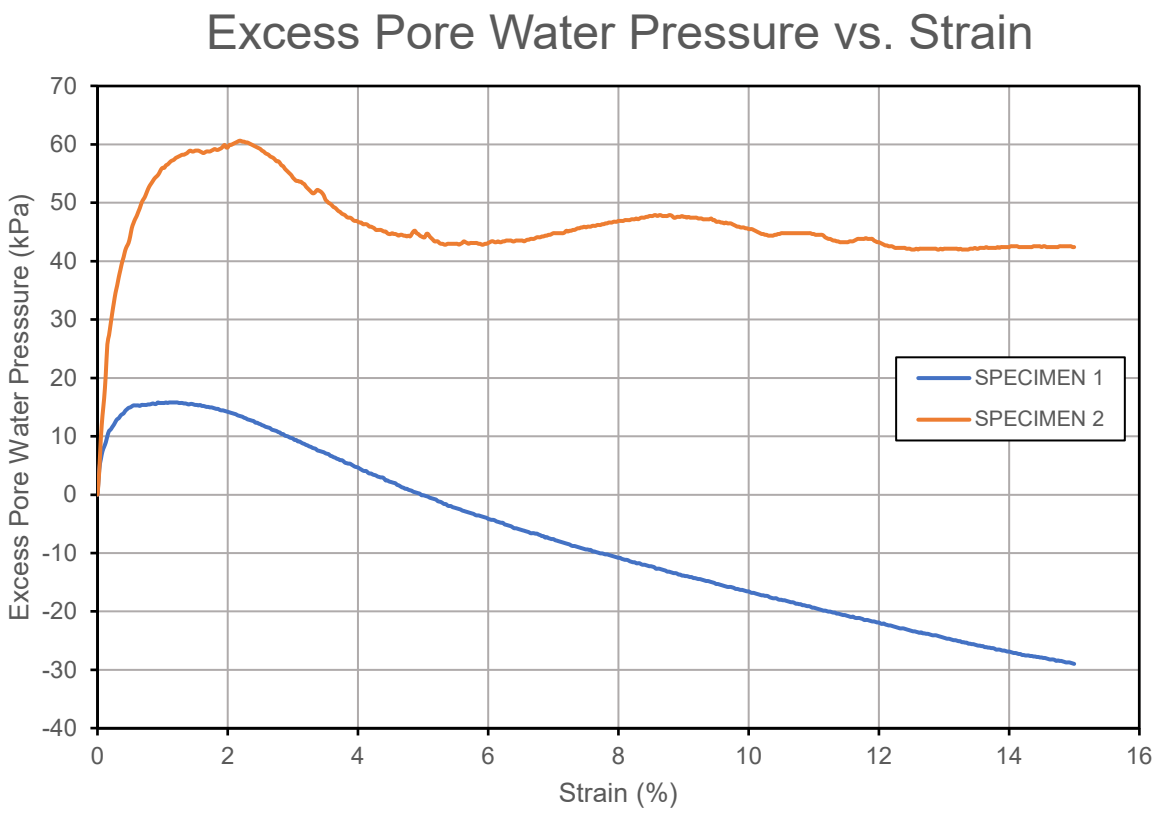
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 4.2

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH3
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K=0.44)	Anisotropic (Consol. K= 0.43)
Sample ID:	SA5-2	SA5-3
Test ID:	CK0Uc-4R	CK0Uc-4-2
Depth:	2.95m - 3.07m	3.23m - 3.35m



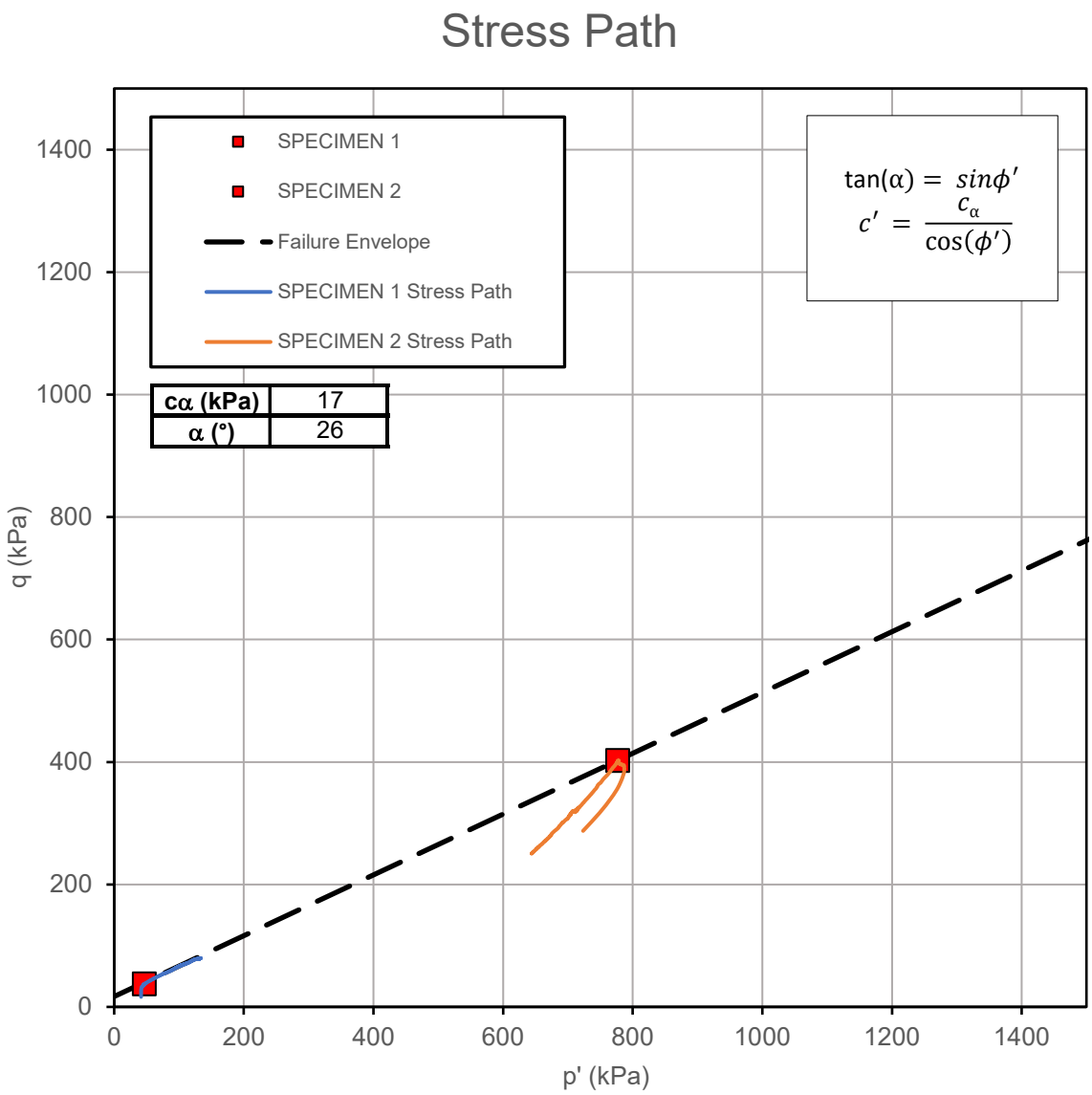
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 4.3

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH3
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K=0.44)	Anisotropic (Consol. K= 0.43)
Sample ID:	SA5-2	SA5-3
Test ID:	CK0Uc-4R	CK0Uc-4-2
Depth:	2.95m - 3.07m	3.23m - 3.35m



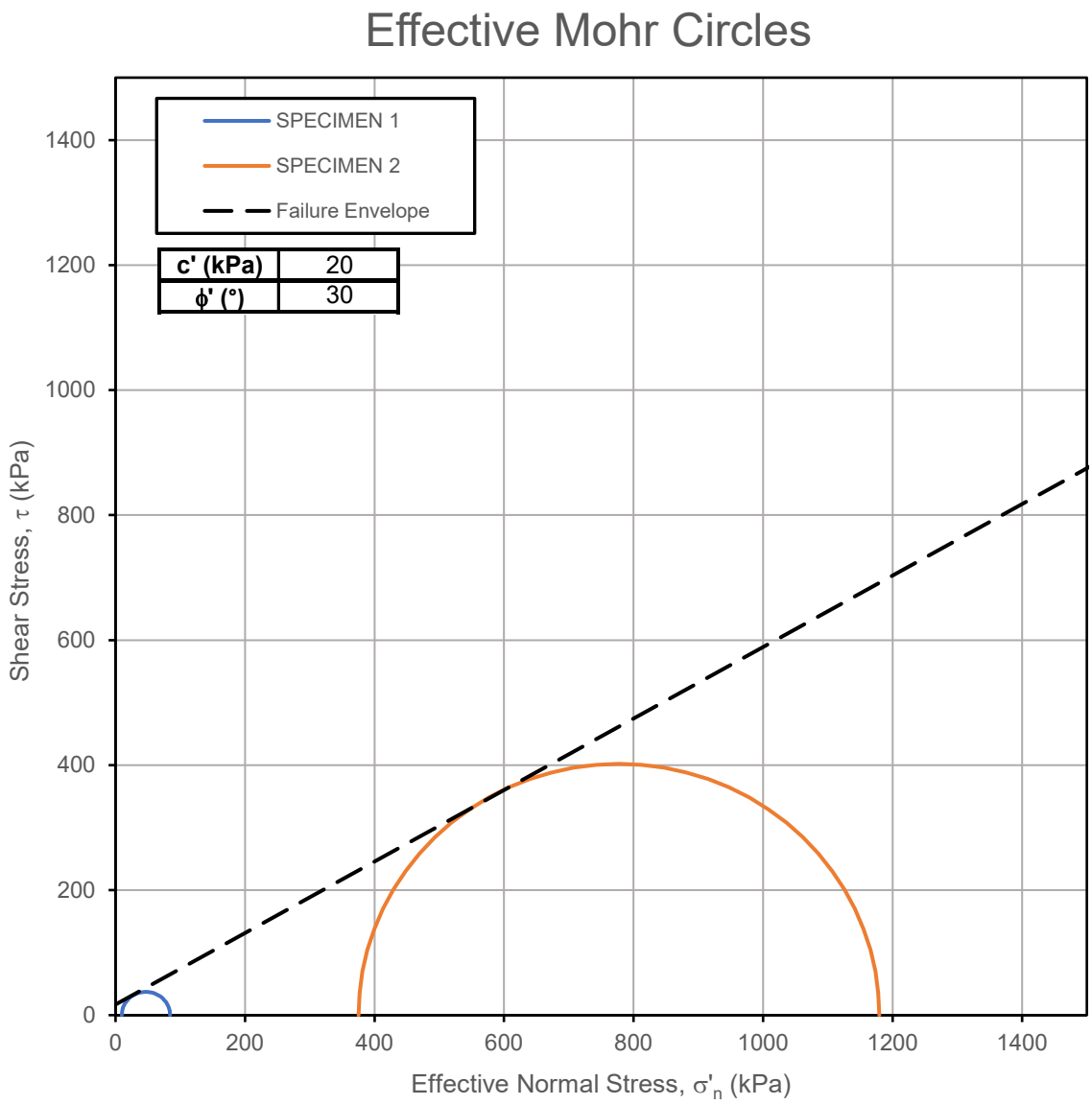
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 4.4

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH3
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K=0.44)	Anisotropic (Consol. K= 0.43)
Sample ID:	SA5-2	SA5-3
Test ID:	CK0Uc-4R	CK0Uc-4-2
Depth:	2.95m - 3.07m	3.23m - 3.35m



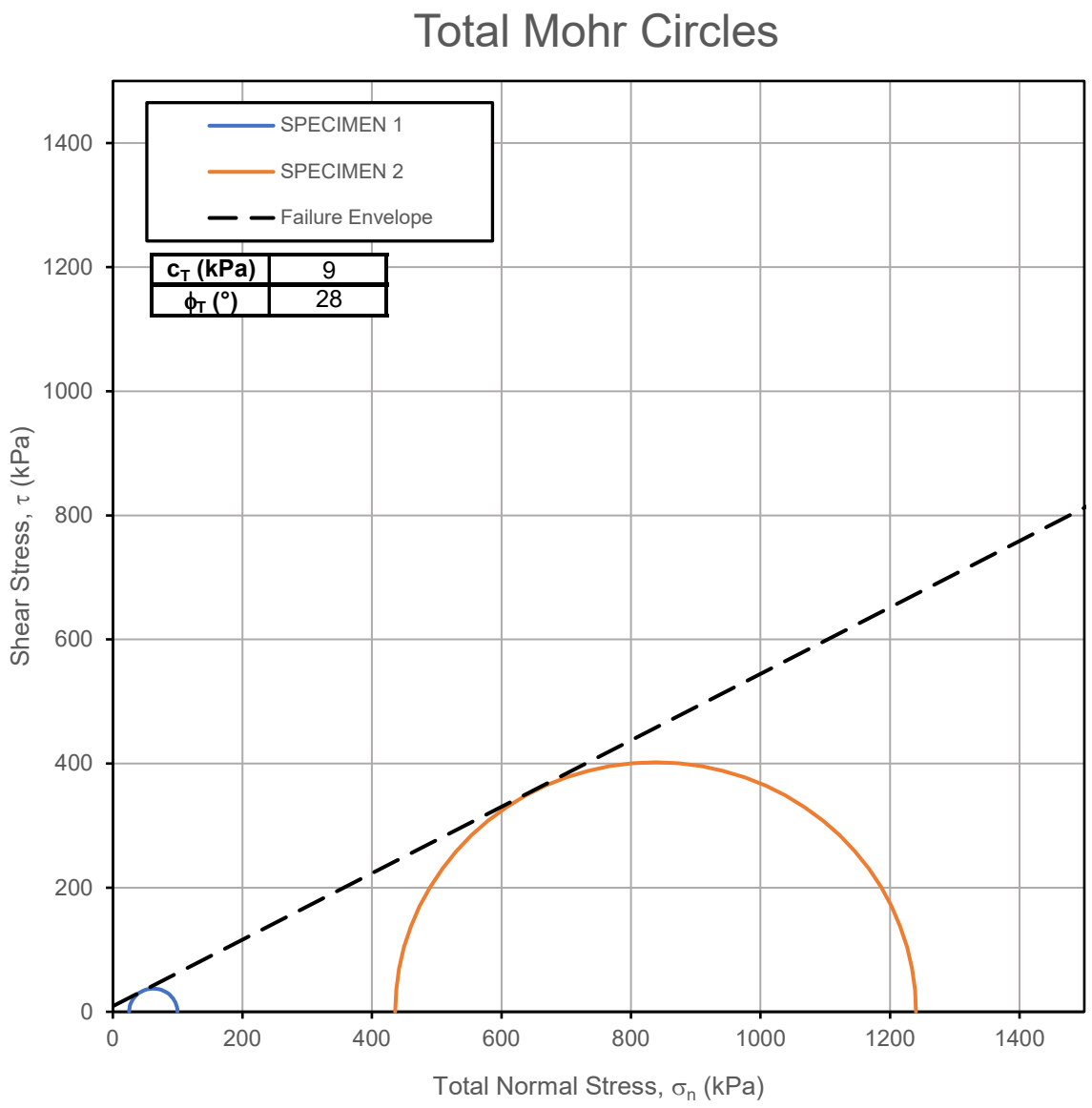
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 4.5

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH3
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K=0.44)	Anisotropic (Consol. K= 0.43)
Sample ID:	SA5-2	SA5-3
Test ID:	CK0Uc-4R	CK0Uc-4-2
Depth:	2.95m - 3.07m	3.23m - 3.35m



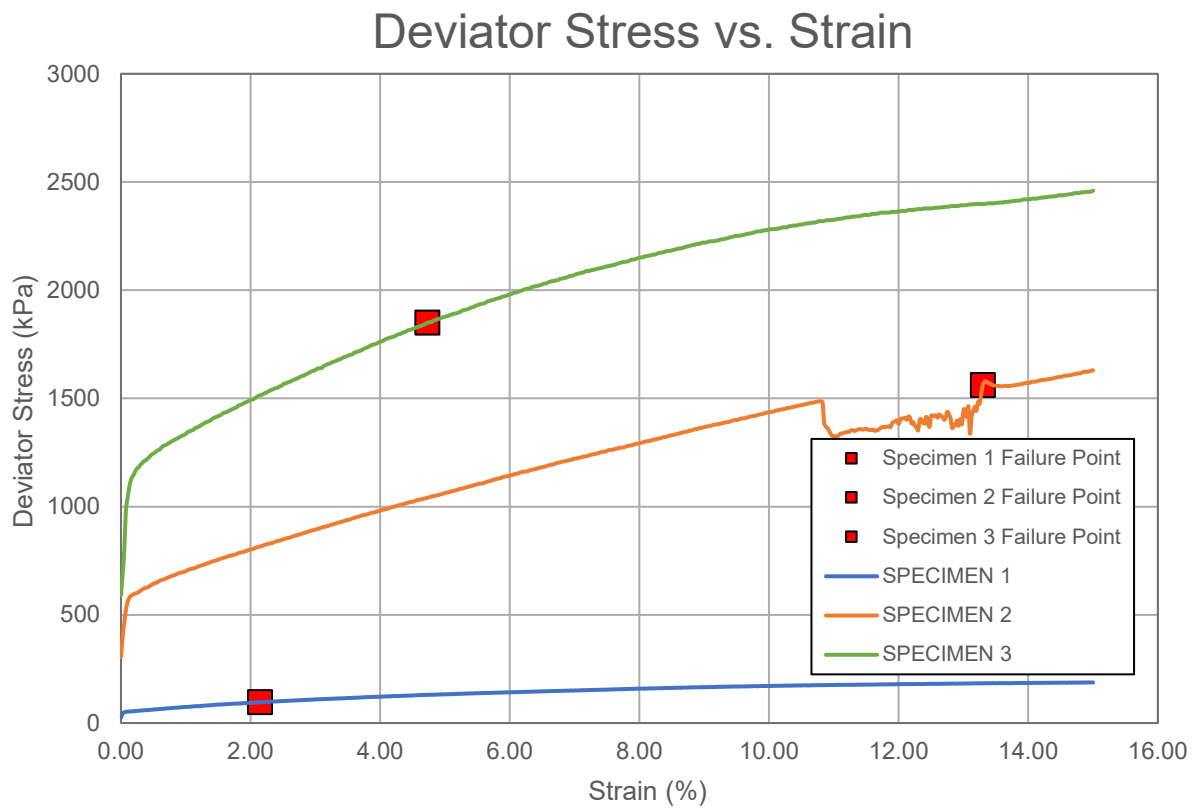
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 5.1

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH7
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	K_0-Conditions (Consol. K= 0.63)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.63)
Sample ID:	SA6-1	SA6-2	SA6-3
Test ID:	CKoUc-5	CK0Uc-5-2	CK0Uc-5-3
Depth:	3.66m - 3.78m	3.78m - 3.91m	3.99m - 4.11m



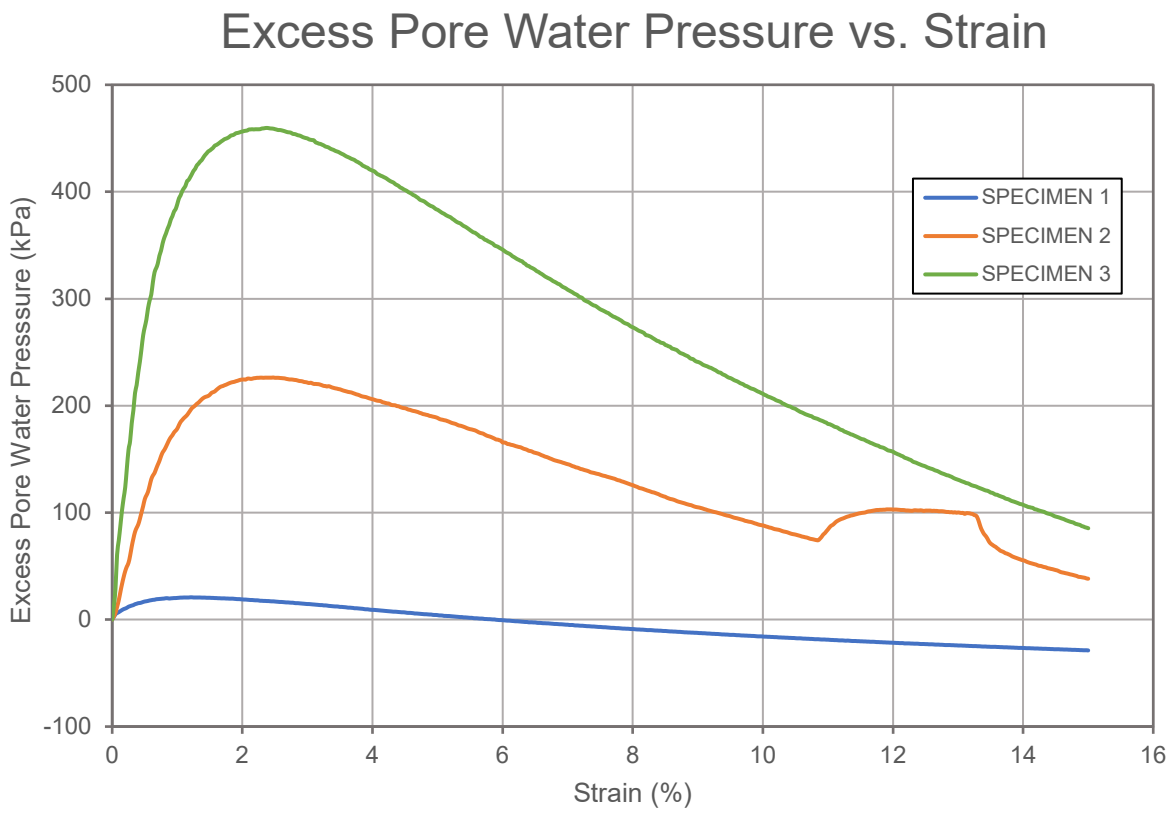
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 5.2

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH7
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	K_0-Conditions (Consol. K= 0.63)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.63)
Sample ID:	SA6-1	SA6-2	SA6-3
Test ID:	CKoUc-5	CK0Uc-5-2	CK0Uc-5-3
Depth:	3.66m - 3.78m	3.78m - 3.91m	3.99m - 4.11m



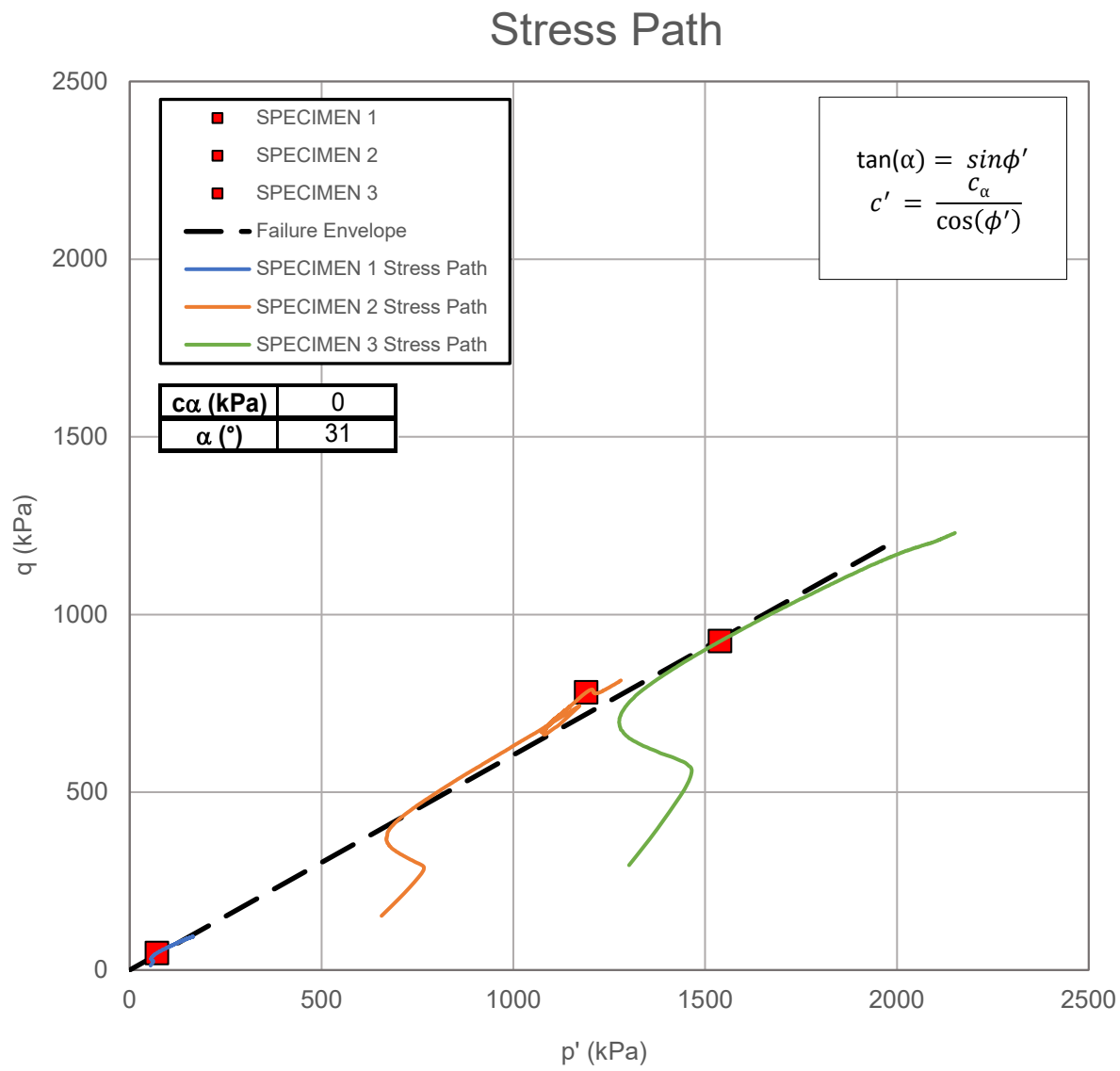
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 5.3

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH7
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	K_0-Conditions (Consol. K= 0.63)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.63)
Sample ID:	SA6-1	SA6-2	SA6-3
Test ID:	CKoUc-5	CK0Uc-5-2	CK0Uc-5-3
Depth:	3.66m - 3.78m	3.78m - 3.91m	3.99m - 4.11m



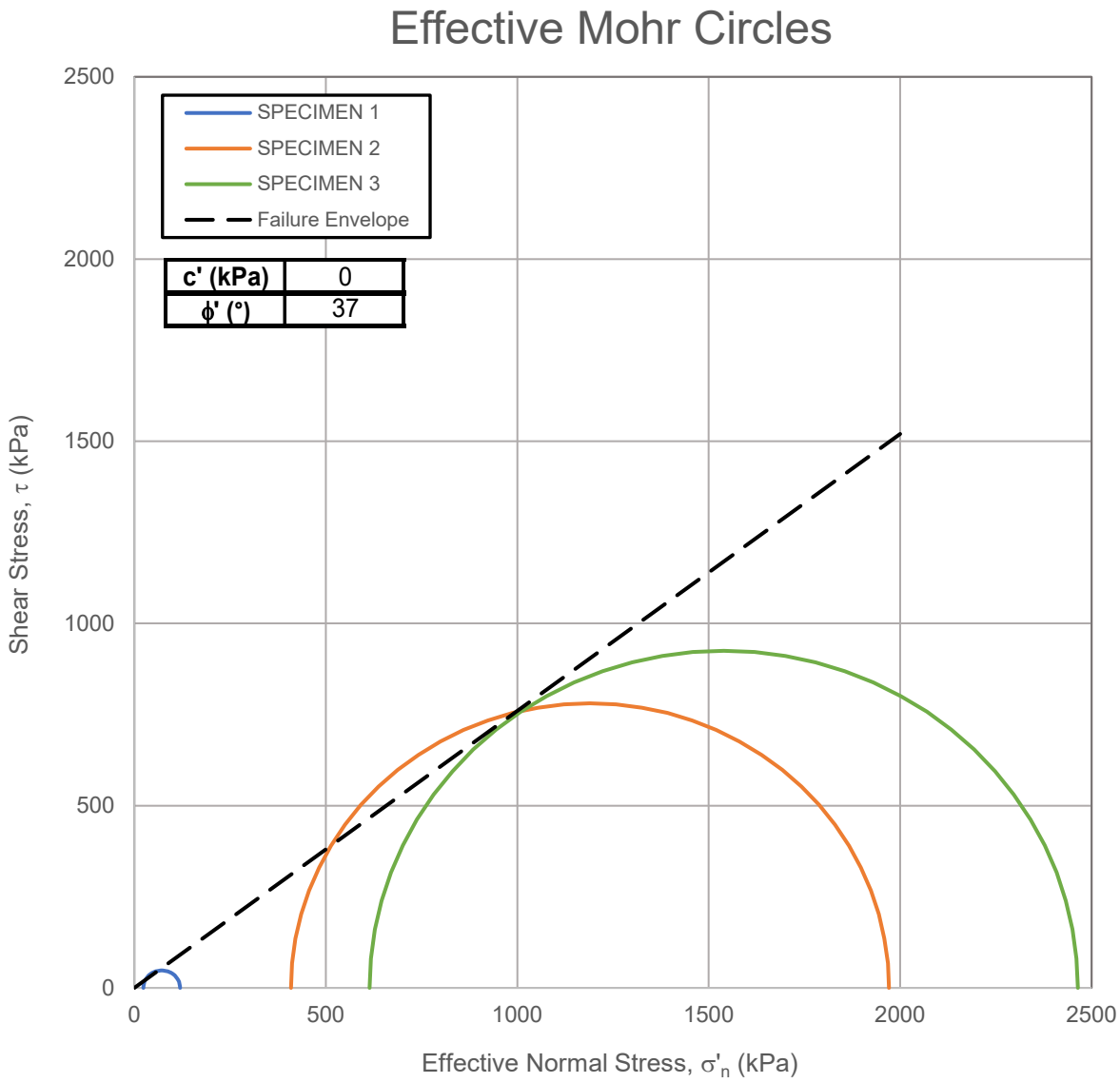
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 5.4

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH7
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	K_0-Conditions (Consol. K= 0.63)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.63)
Sample ID:	SA6-1	SA6-2	SA6-3
Test ID:	CKoUc-5	CK0Uc-5-2	CK0Uc-5-3
Depth:	3.66m - 3.78m	3.78m - 3.91m	3.99m - 4.11m



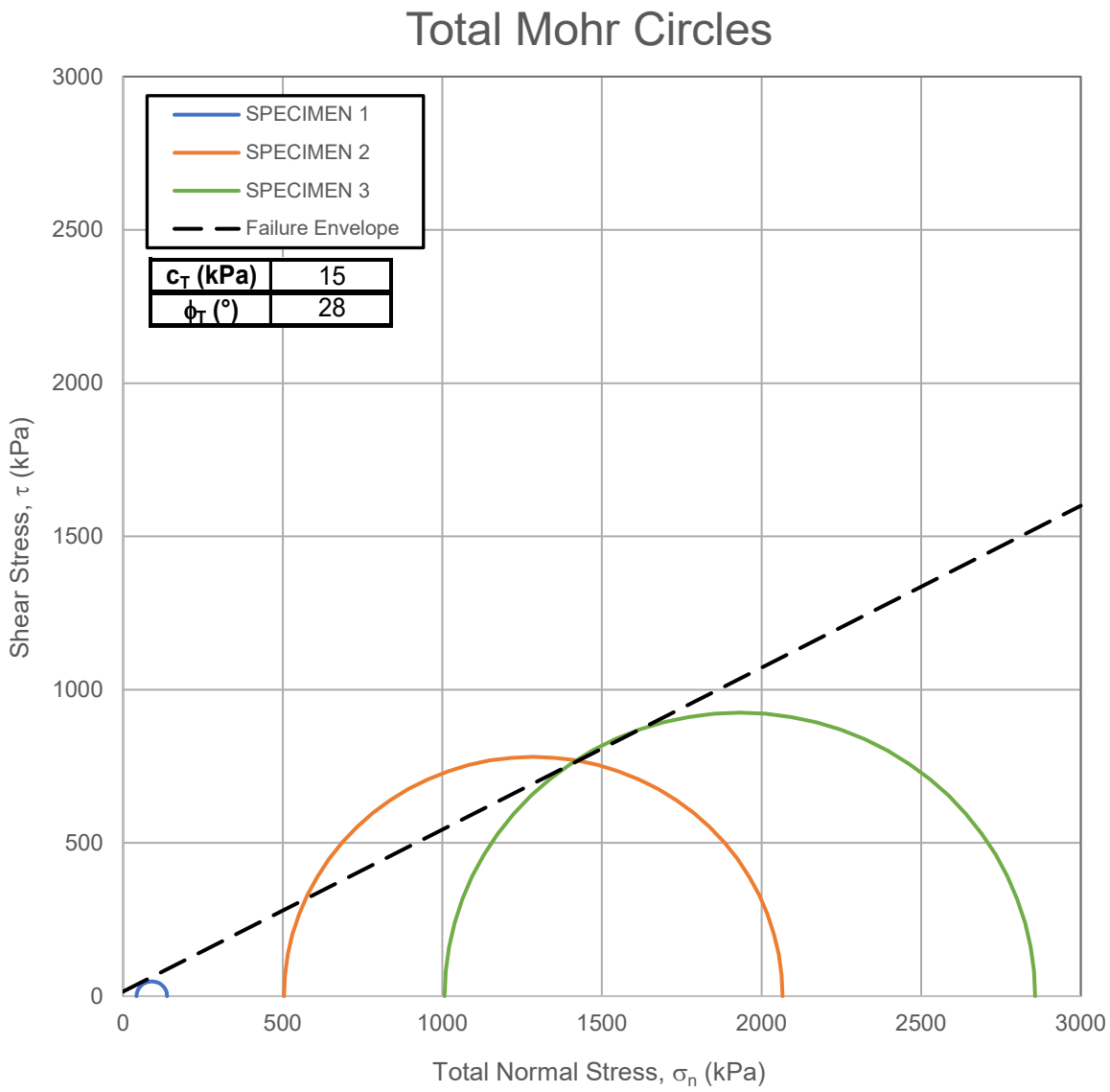
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 5.5

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH7
Soil Unit:	2a

	Specimen 1	Specimen 2	Specimen 3
Consolidation Stage:	K_0-Conditions (Consol. K= 0.63)	Anisotropic (Consol. K= 0.62)	Anisotropic (Consol. K= 0.63)
Sample ID:	SA6-1	SA6-2	SA6-3
Test ID:	CKoUc-5	CK0Uc-5-2	CK0Uc-5-3
Depth:	3.66m - 3.78m	3.78m - 3.91m	3.99m - 4.11m



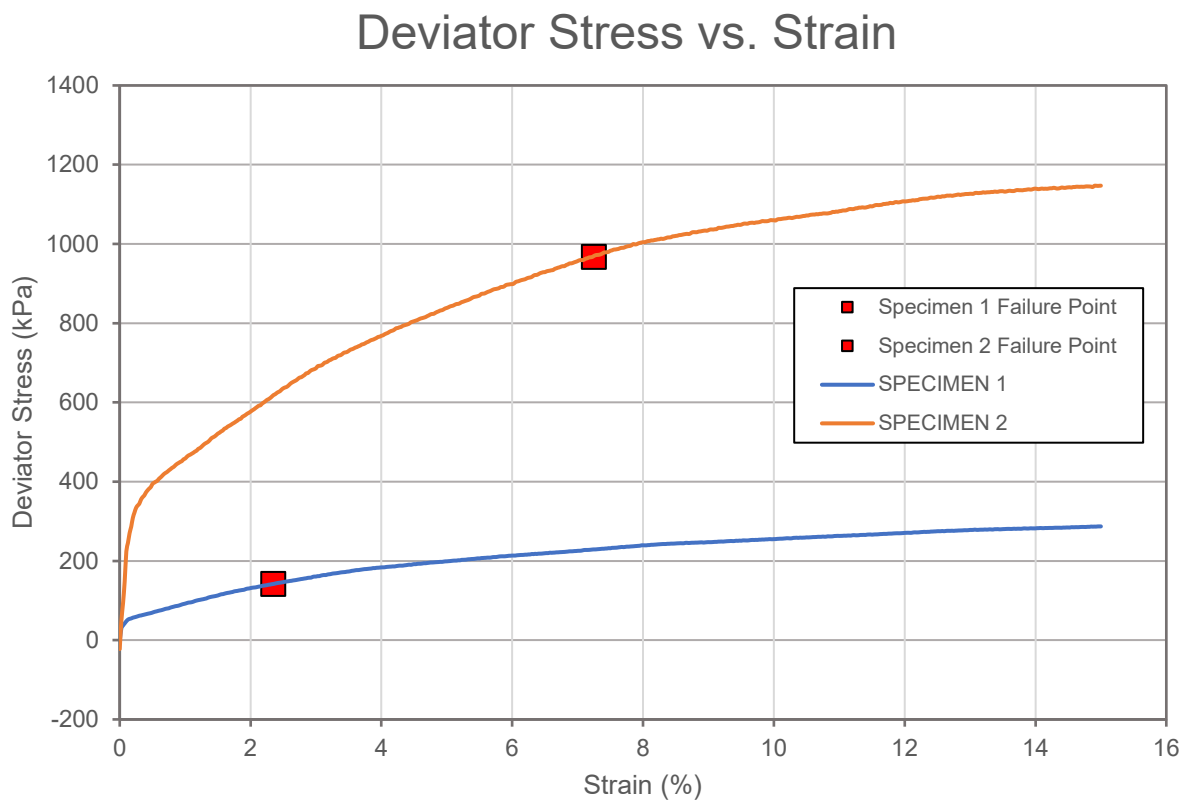
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 6.1

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH10
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 1.05)	Anisotropic (Consol. K= 1.05)
Sample ID:	SA5-2	SA5-3
Test ID:	CK0Uc-6	CK0Uc-6-2
Depth:	3.35m - 3.48m	3.20m - 3.33m



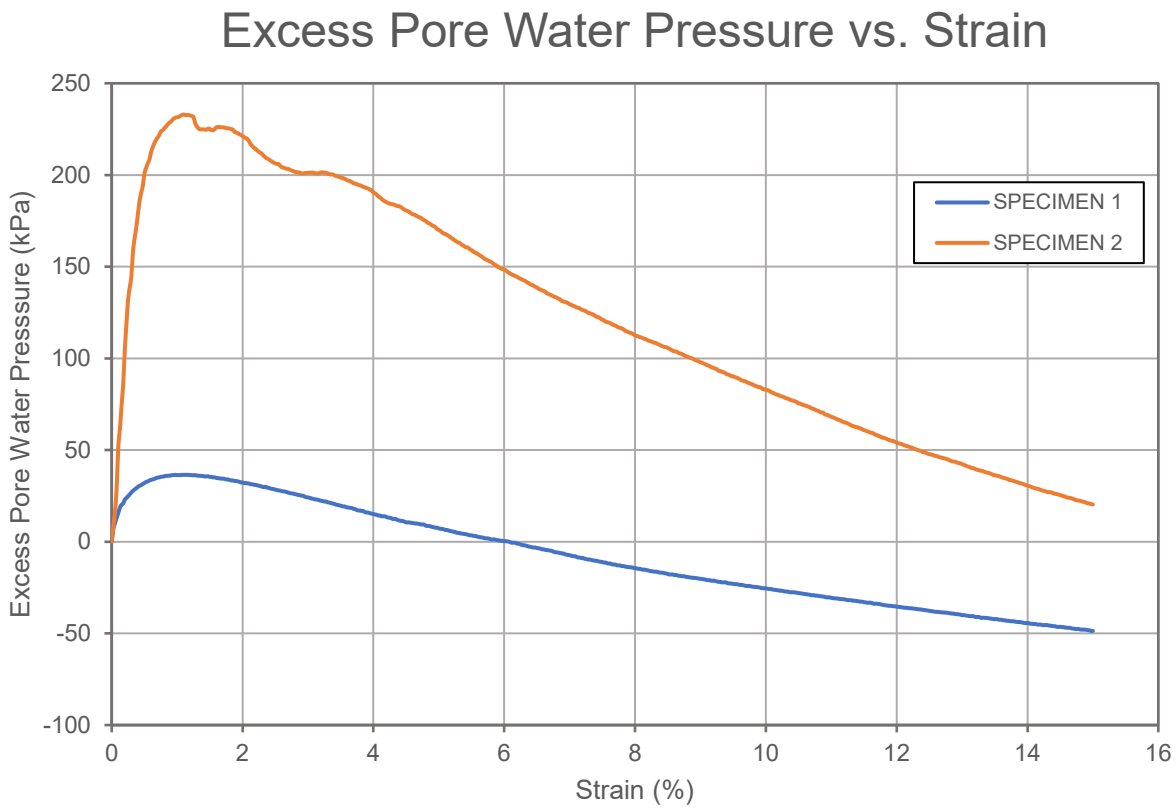
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 6.2

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH10
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 1.05)	Anisotropic (Consol. K= 1.05)
Sample ID:	SA5-2	SA5-3
Test ID:	CK0Uc-6	CK0Uc-6-2
Depth:	3.35m - 3.48m	3.20m - 3.33m



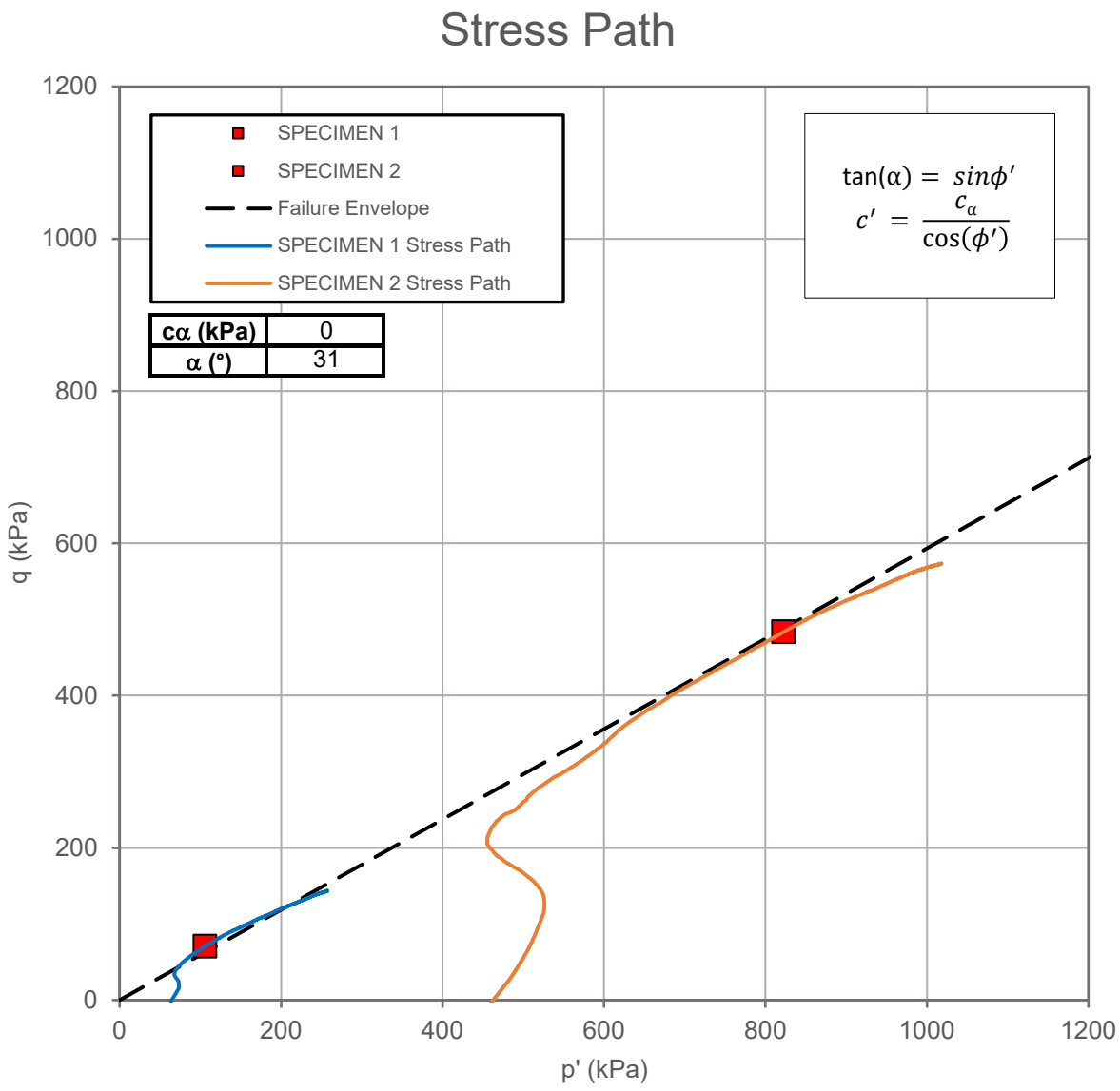
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 6.3

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH10
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 1.05)	Anisotropic (Consol. K= 1.05)
Sample ID:	SA5-2	SA5-3
Test ID:	CK0Uc-6	CK0Uc-6-2
Depth:	3.35m - 3.48m	3.20m - 3.33m



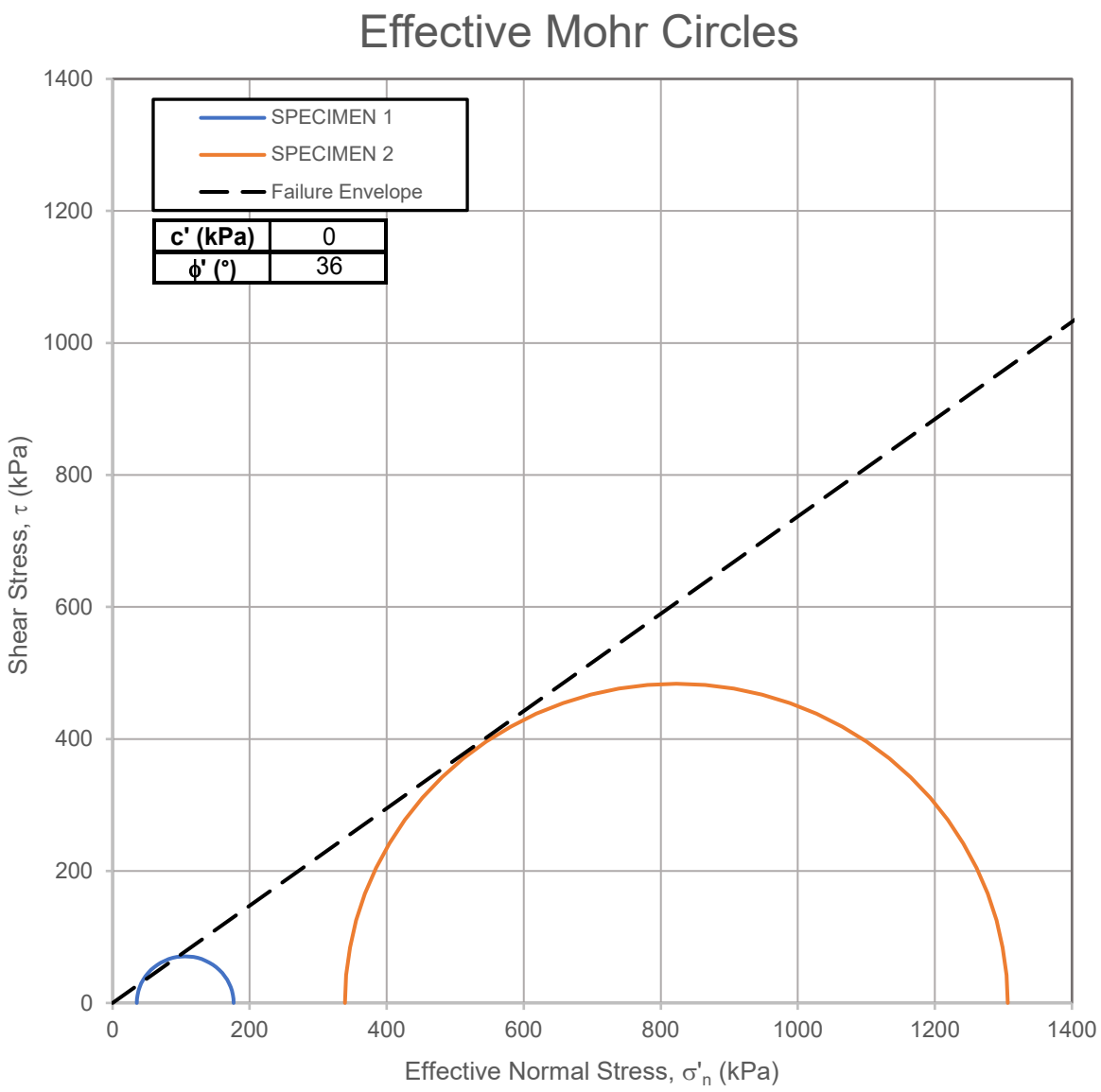
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 6.4

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH10
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 1.05)	Anisotropic (Consol. K= 1.05)
Sample ID:	SA5-2	SA5-3
Test ID:	CK0Uc-6	CK0Uc-6-2
Depth:	3.35m - 3.48m	3.20m - 3.33m



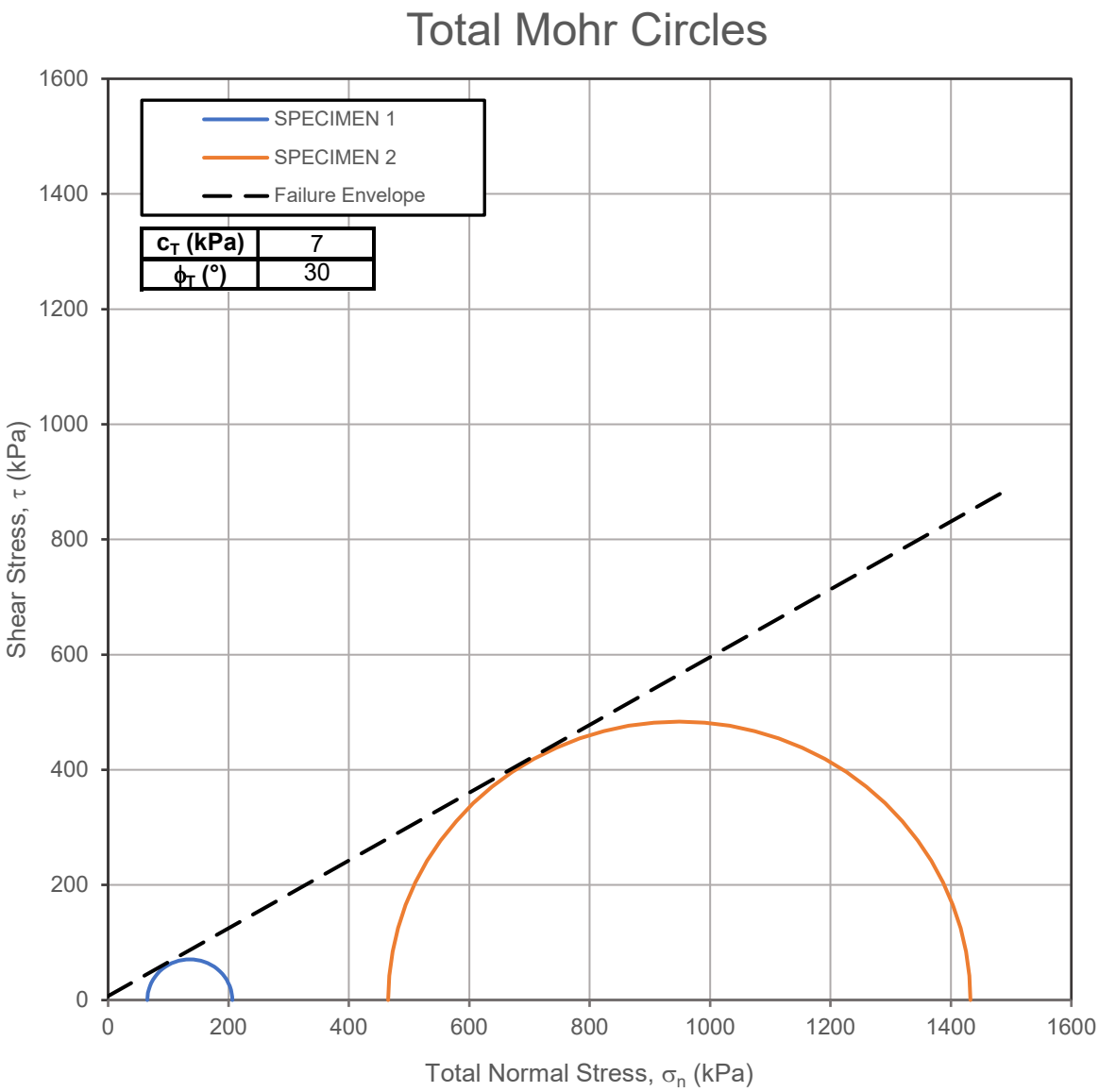
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 6.5

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH10
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 1.05)	Anisotropic (Consol. K= 1.05)
Sample ID:	SA5-2	SA5-3
Test ID:	CK0Uc-6	CK0Uc-6-2
Depth:	3.35m - 3.48m	3.20m - 3.33m



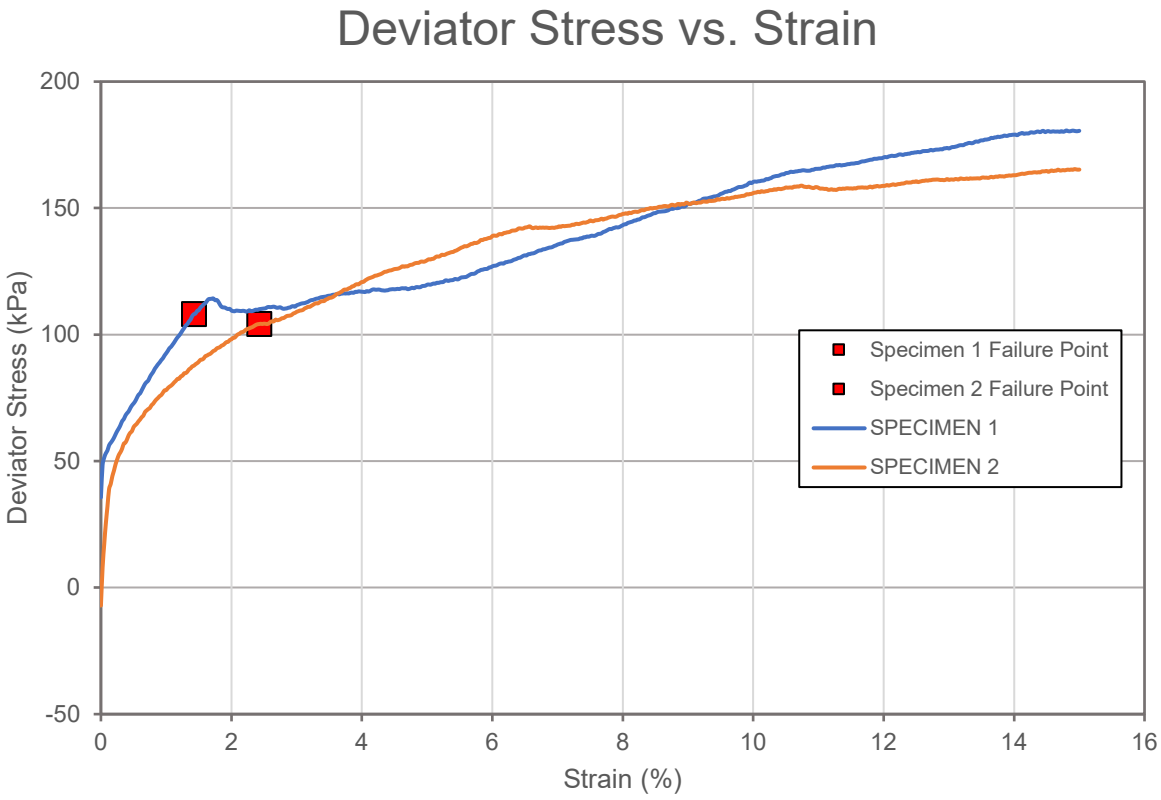
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 7.1

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH65
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.41)	K_0-Conditions (Consol. K= 1.11)
Sample ID:	SA6-2	SA7-2
Test ID:	CK0Uc-7	CK0Uc-8
Depth:	3.10m - 3.23m	4.22m - 4.34m

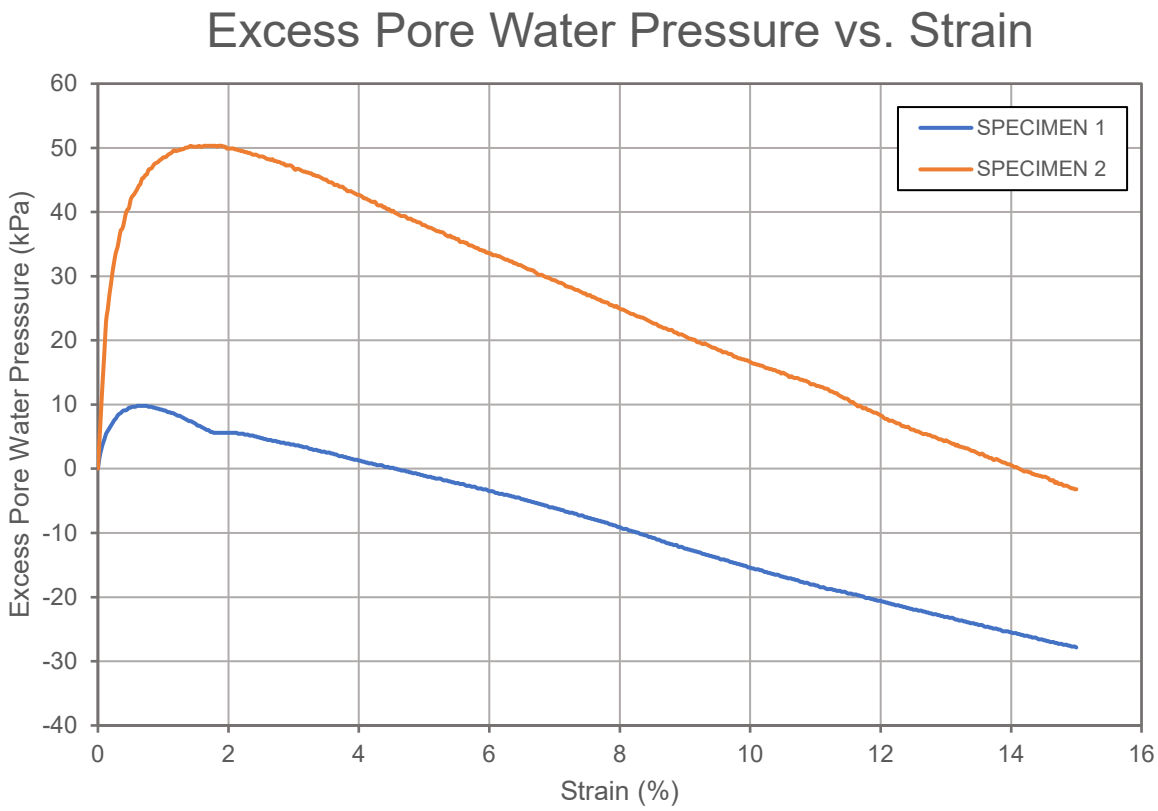


Note: Consolidation of Specimen 1 and 2 carried out under K0-conditions (zero lateral strain).

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH65
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.41)	K_0-Conditions (Consol. K= 1.11)
Sample ID:	SA6-2	SA7-2
Test ID:	CK0Uc-7	CK0Uc-8
Depth:	3.10m - 3.23m	4.22m - 4.34m



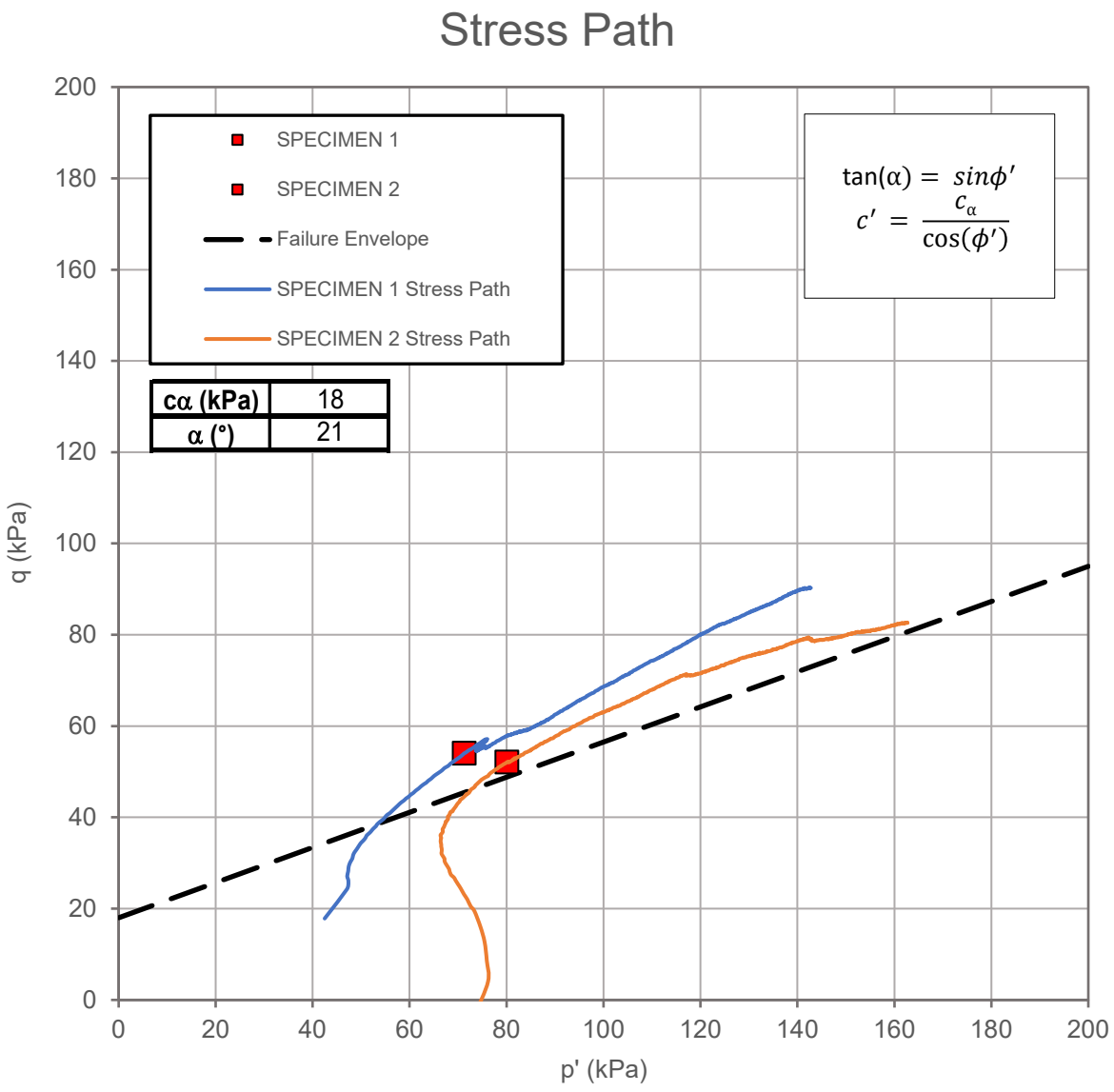
Note: Consolidation of Specimen 1 and 2 carried out under K0-conditions (zero lateral strain).

Figure No. I - 7.3

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH65
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.41)	K_0-Conditions (Consol. K= 1.11)
Sample ID:	SA6-2	SA7-2
Test ID:	CK0Uc-7	CK0Uc-8
Depth:	3.10m - 3.23m	4.22m - 4.34m



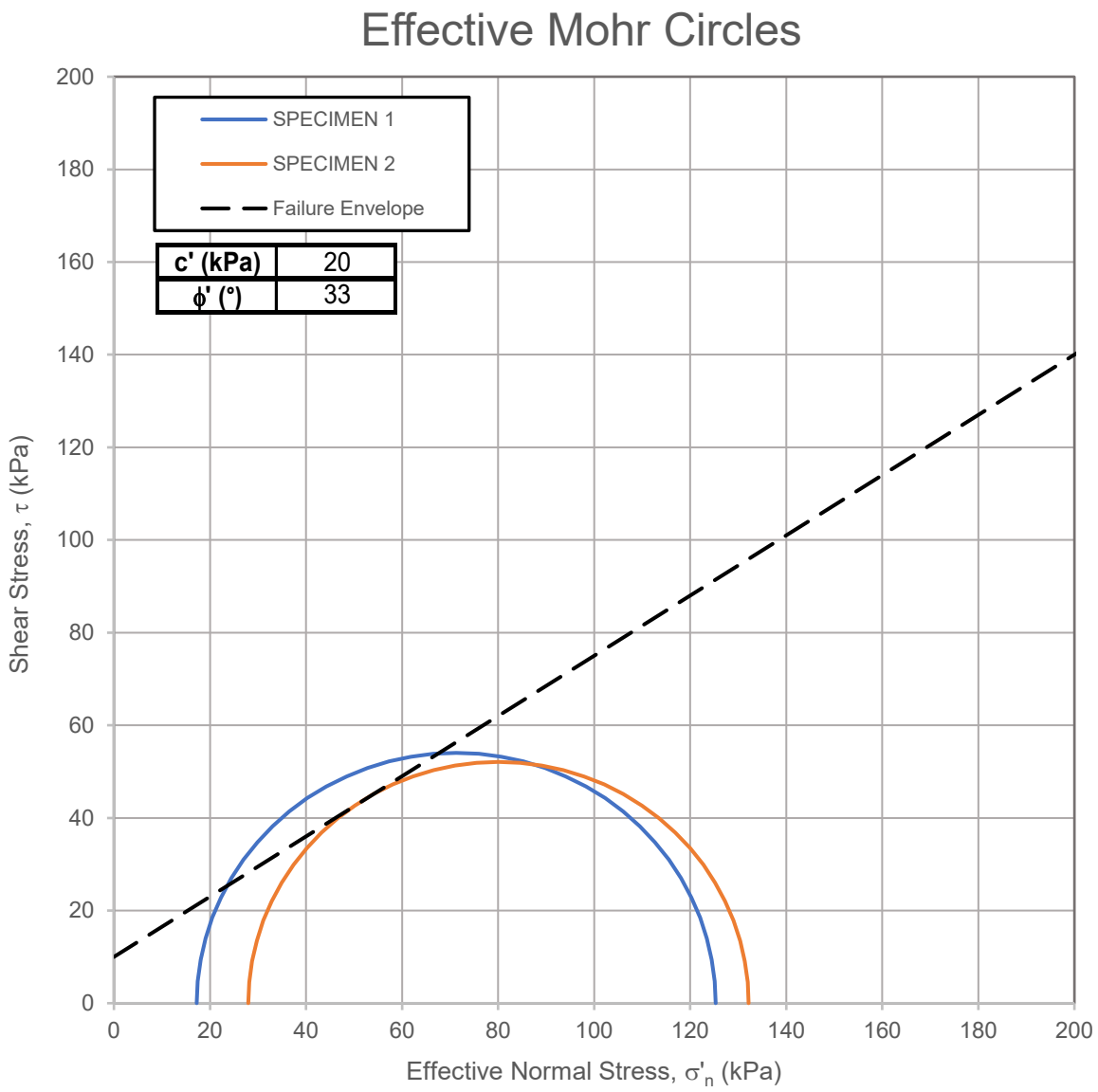
Note: Consolidation of Specimen 1 and 2 carried out under K0-conditions (zero lateral strain).

Figure No. I - 7.4

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH65
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.41)	K_0-Conditions (Consol. K= 1.11)
Sample ID:	SA6-2	SA7-2
Test ID:	CK0Uc-7	CK0Uc-8
Depth:	3.10m - 3.23m	4.22m - 4.34m



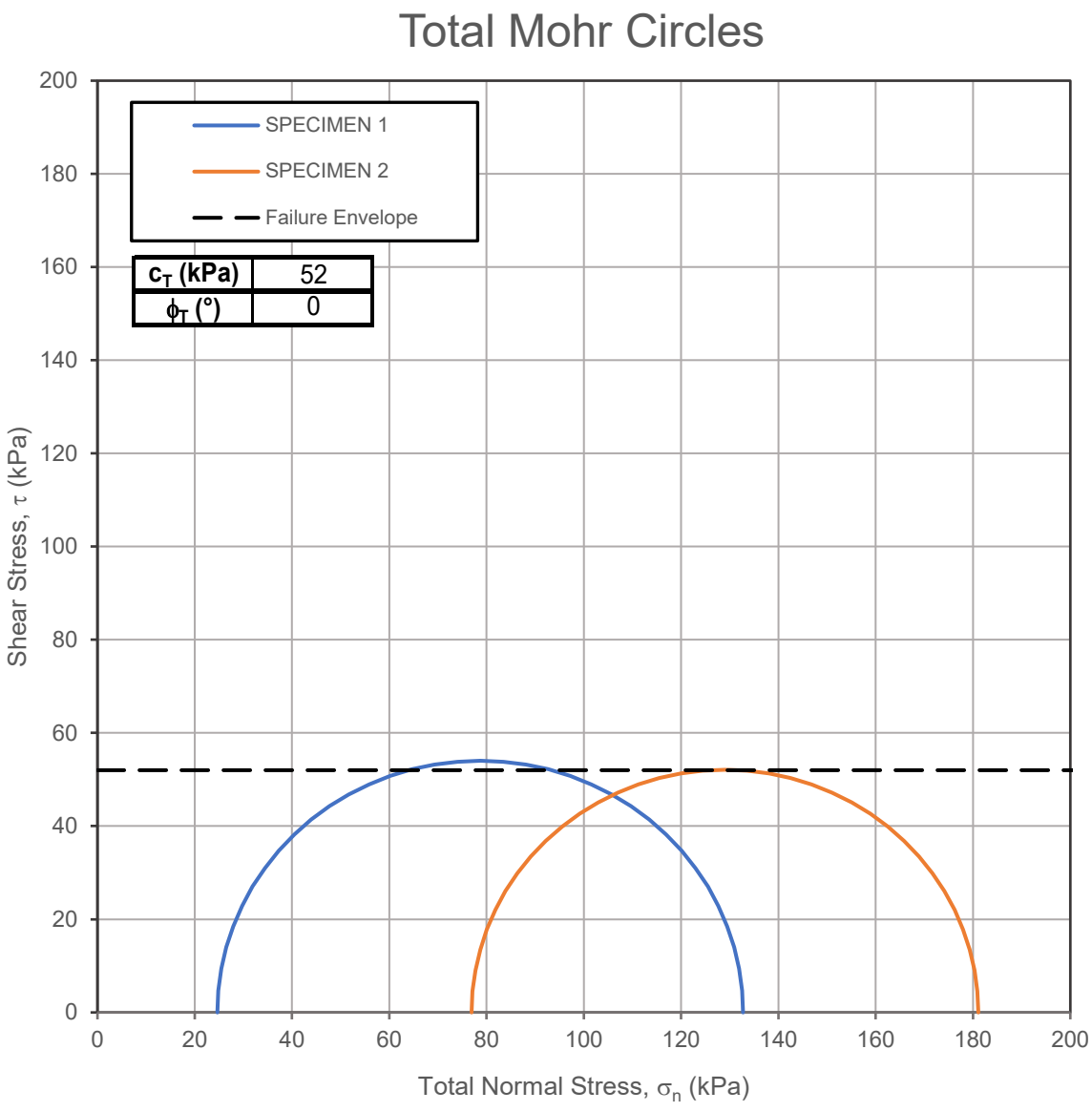
Note: Consolidation of Specimen 1 and 2 carried out under K0-conditions (zero lateral strain).

Figure No. I - 7.5

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH65
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.41)	K_0-Conditions (Consol. K= 1.11)
Sample ID:	SA6-2	SA7-2
Test ID:	CK0Uc-7	CK0Uc-8
Depth:	3.10m - 3.23m	4.22m - 4.34m



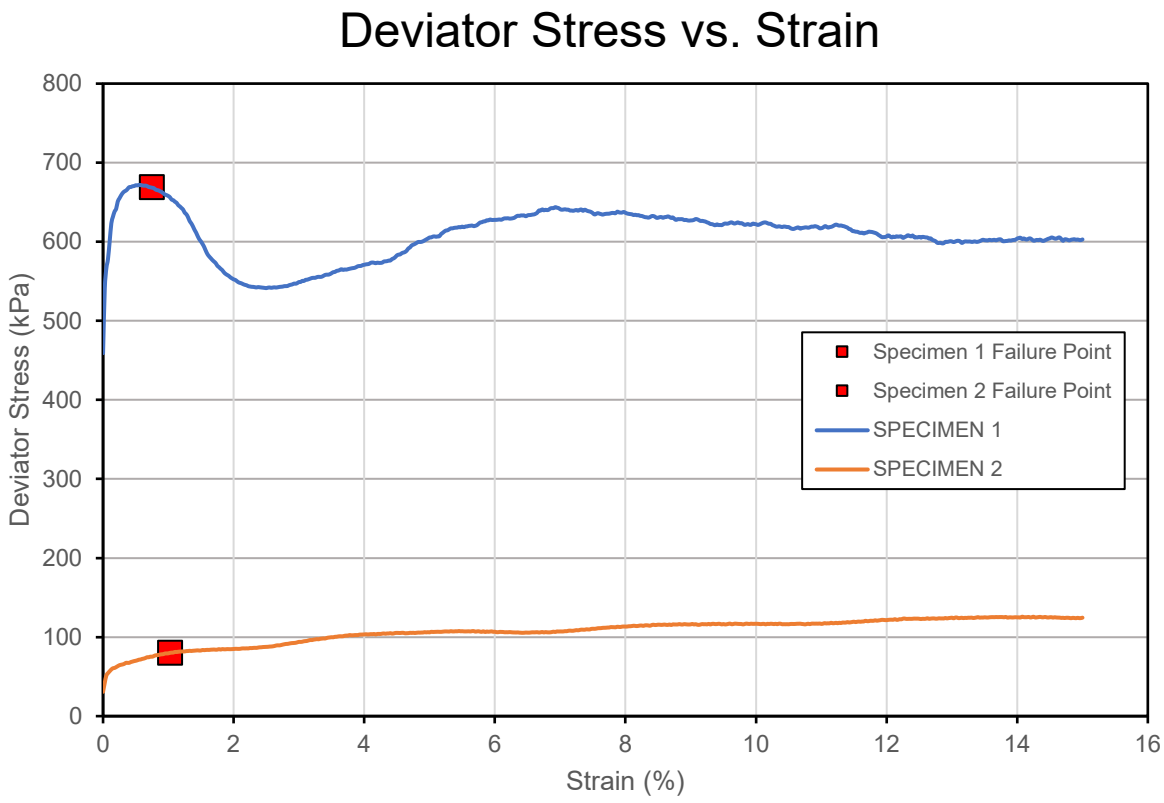
Note: Consolidation of Specimen 1 and 2 carried out under K0-conditions (zero lateral strain).

Figure No. I - 8.1

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH68
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.50)	Anisotropic (Consol. K= 0.51)
Sample ID:	SA5-3	SA5-2
Test ID:	CK0Uc-9-2	CK0Uc-9A
Depth:	3.05m - 3.18m	3.18m - 3.30m

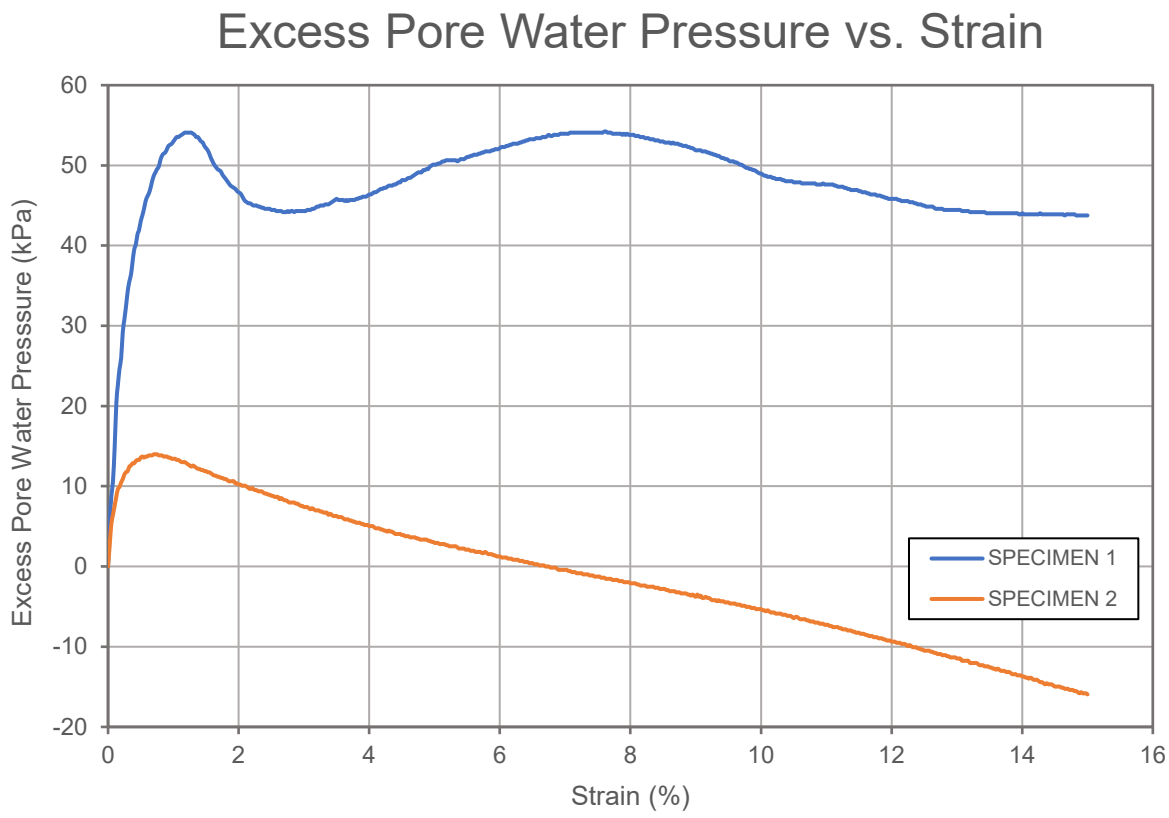


Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH68
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.50)	Anisotropic (Consol. K= 0.51)
Sample ID:	SA5-3	SA5-2
Test ID:	CK0Uc-9-2	CK0Uc-9A
Depth:	3.05m - 3.18m	3.18m - 3.30m



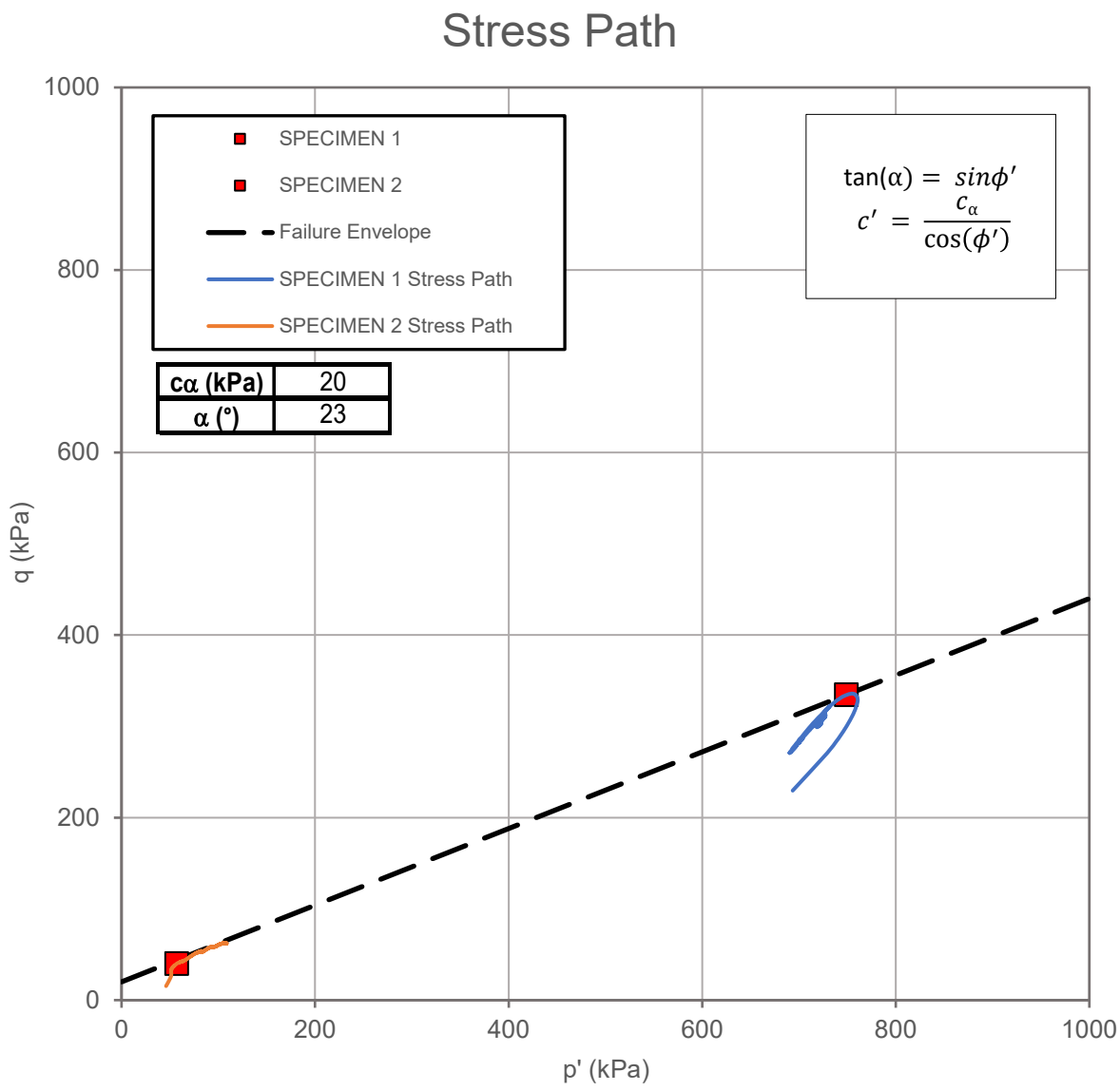
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 8.3

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH68
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.50)	Anisotropic (Consol. K= 0.51)
Sample ID:	SA5-3	SA5-2
Test ID:	CK0Uc-9-2	CK0Uc-9A
Depth:	3.05m - 3.18m	3.18m - 3.30m

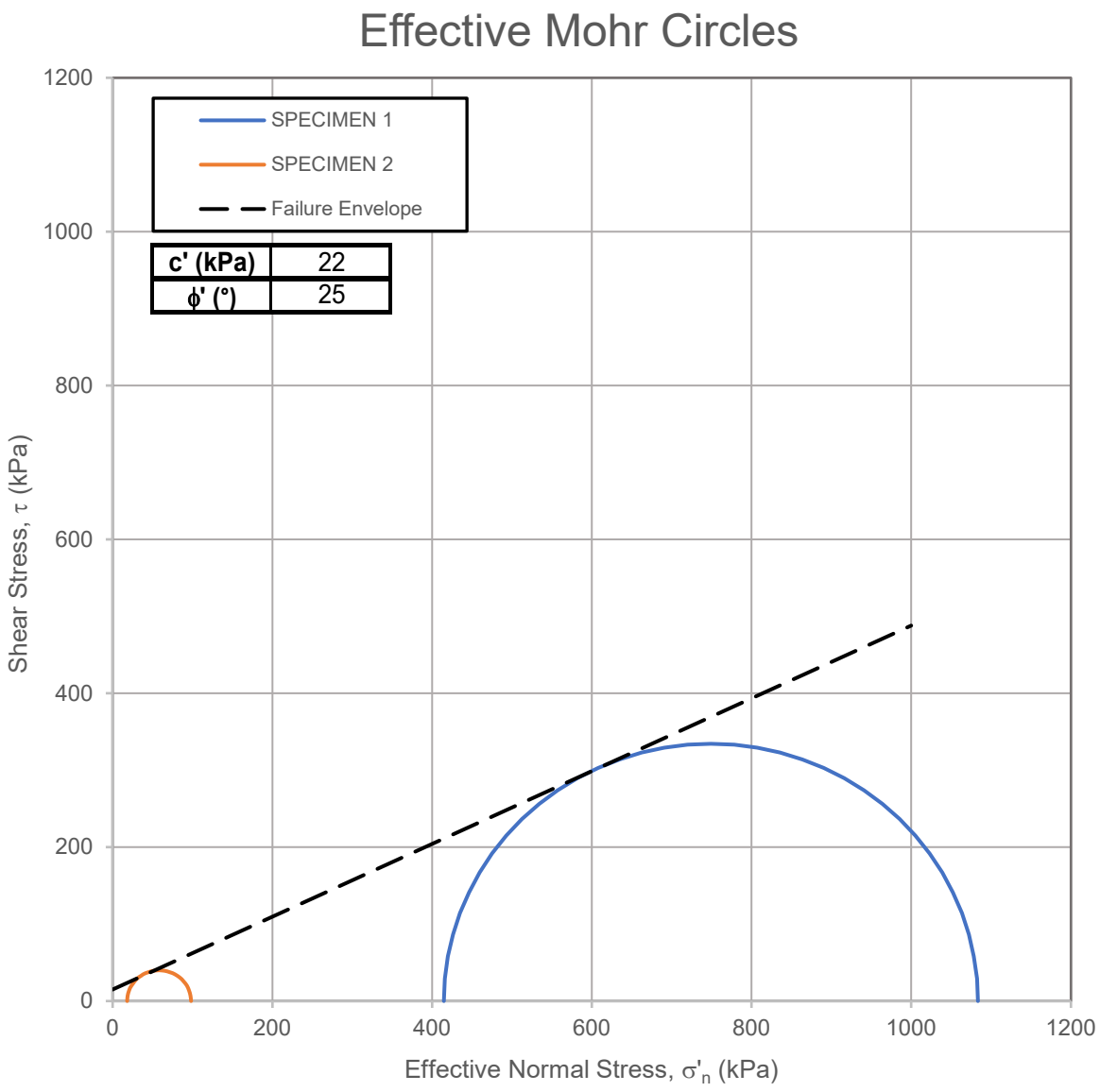


Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH68
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.50)	Anisotropic (Consol. K= 0.51)
Sample ID:	SA5-3	SA5-2
Test ID:	CK0Uc-9-2	CK0Uc-9A
Depth:	3.05m - 3.18m	3.18m - 3.30m



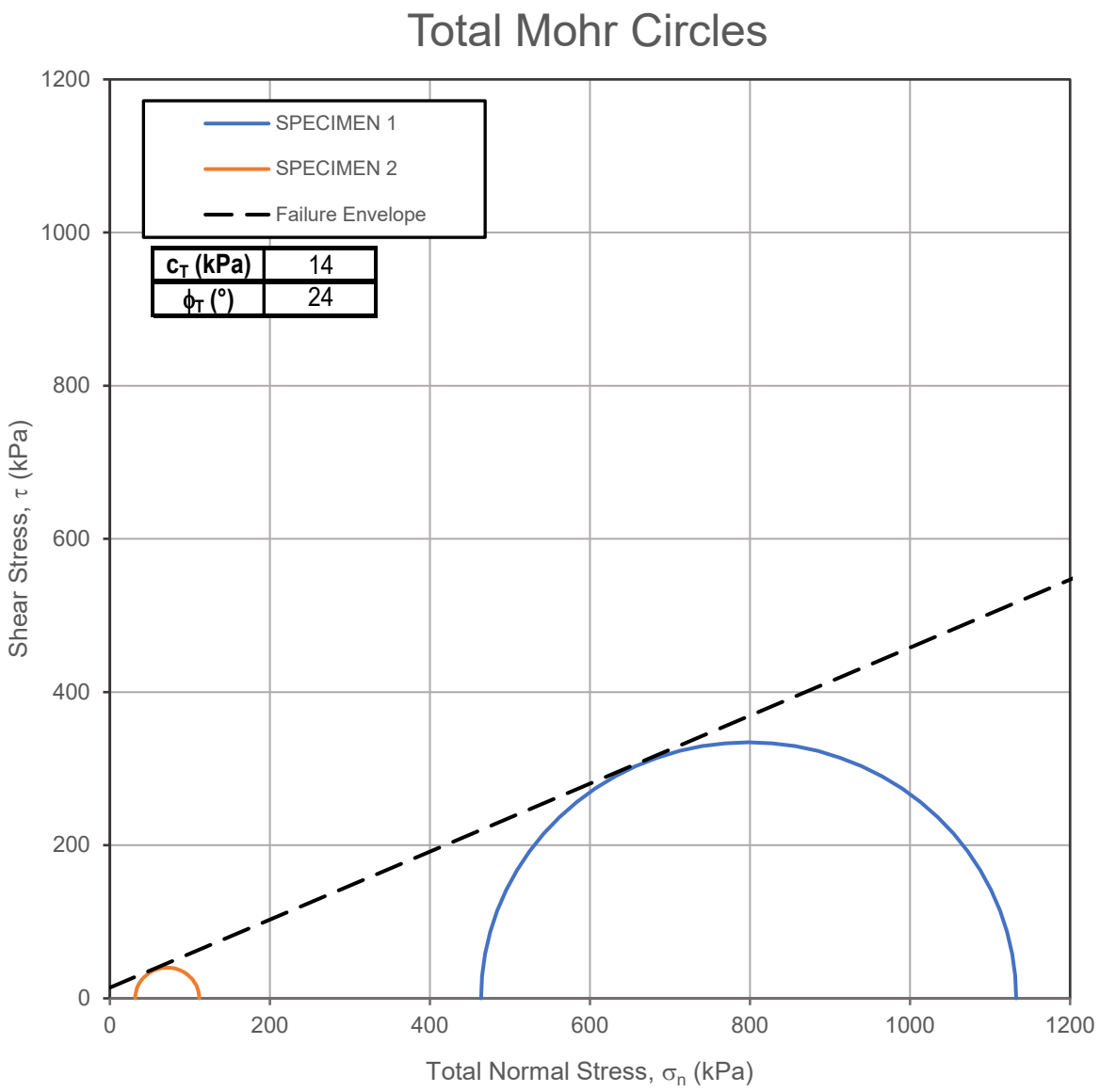
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 8.5

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH68
Soil Unit:	2a

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.50)	Anisotropic (Consol. K= 0.51)
Sample ID:	SA5-3	SA5-2
Test ID:	CK0Uc-9-2	CK0Uc-9A
Depth:	3.05m - 3.18m	3.18m - 3.30m



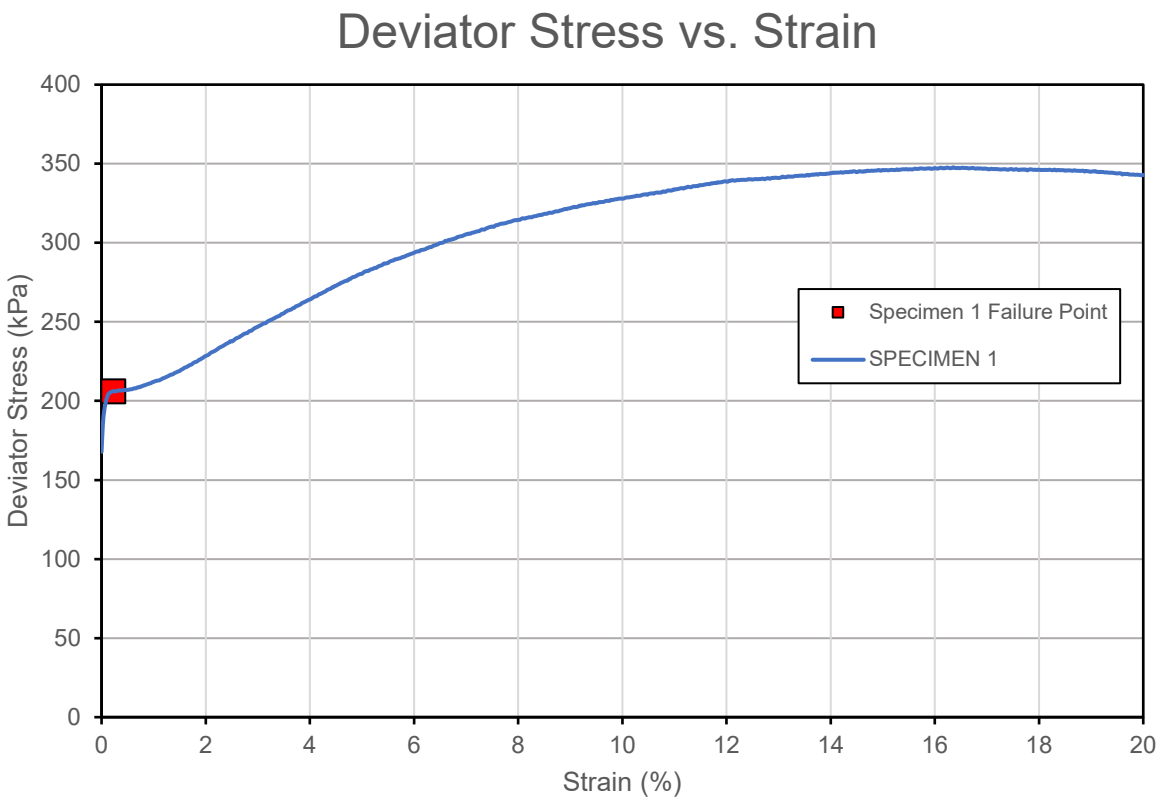
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 9.1

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=0.30)
Sample ID:	SA23
Test ID:	CKoUc-26
Depth:	18.82m - 18.95m



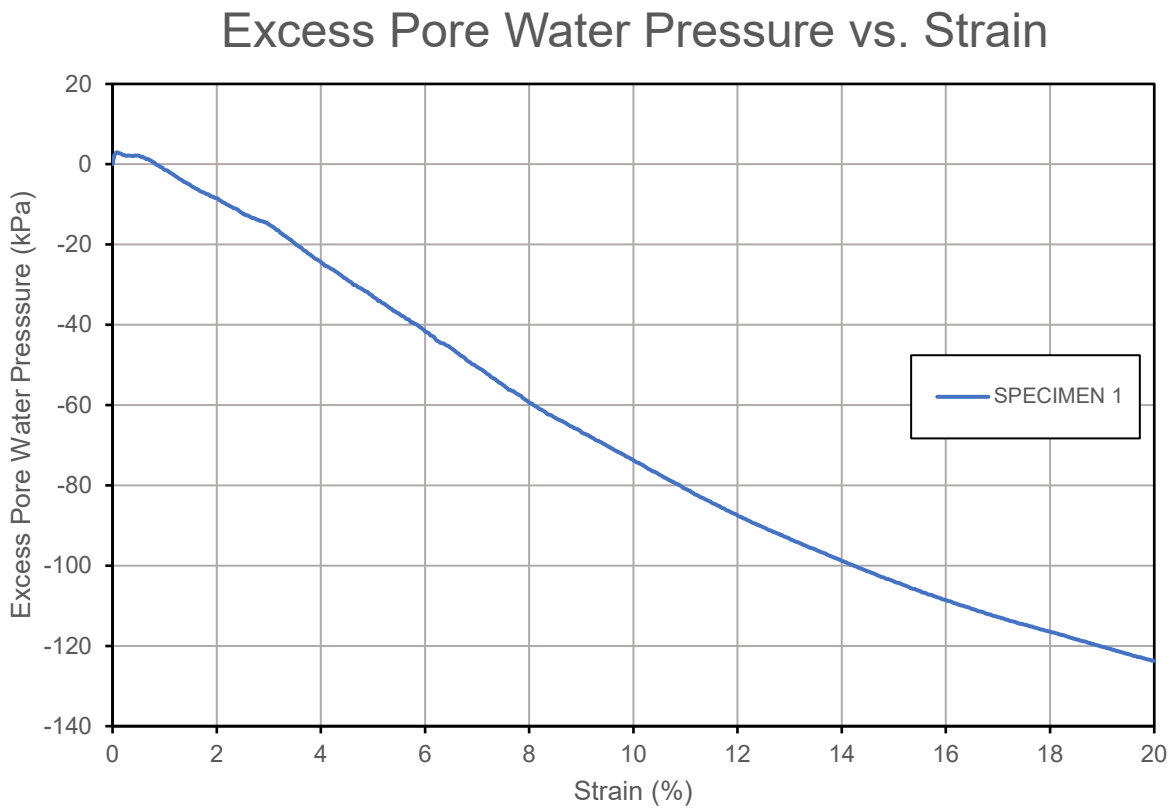
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 9.2

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=0.30)
Sample ID:	SA23
Test ID:	CKoUc-26
Depth:	18.82m - 18.95m



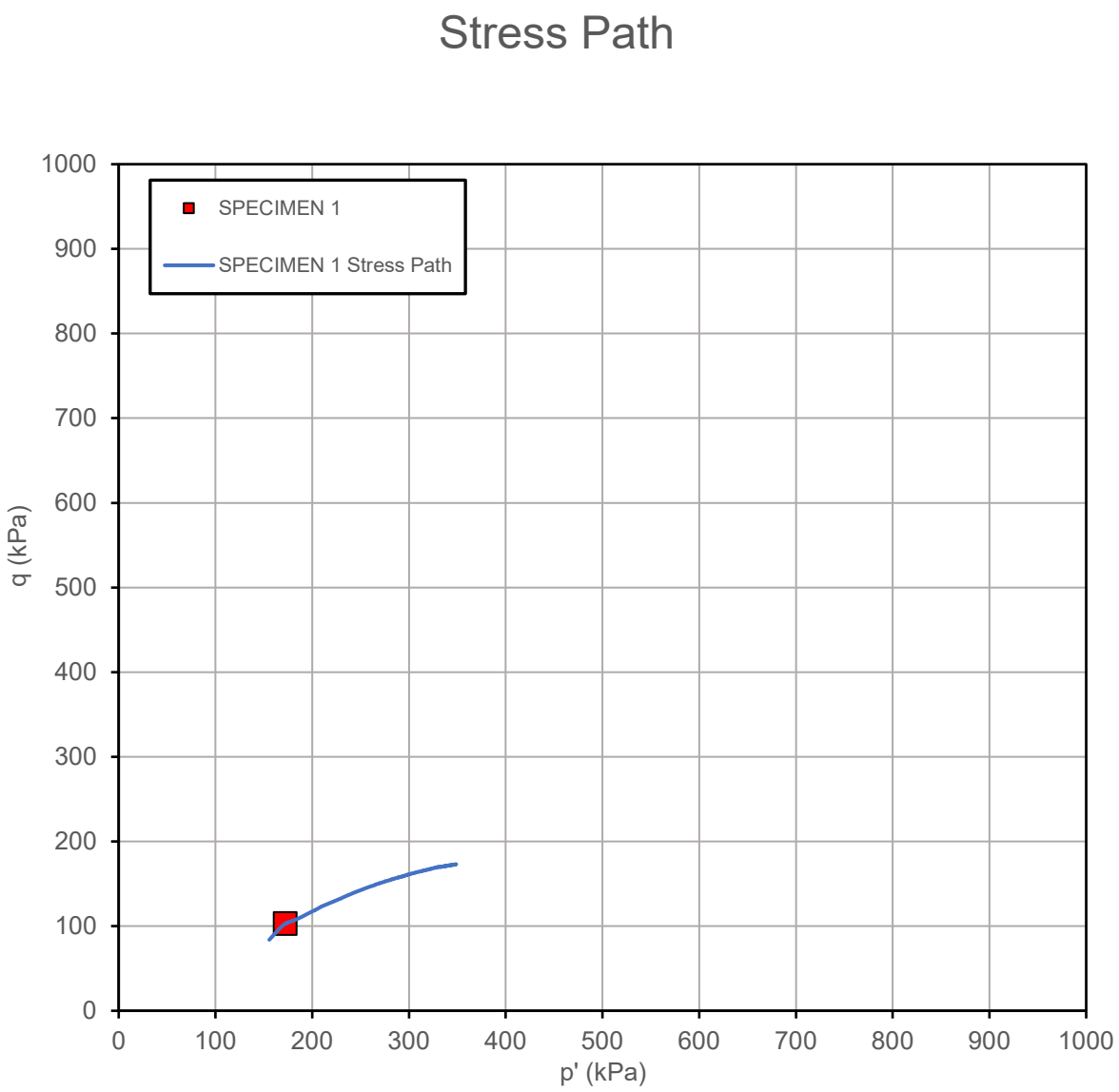
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 9.3

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=0.30)
Sample ID:	SA23
Test ID:	CKoUc-26
Depth:	18.82m - 18.95m



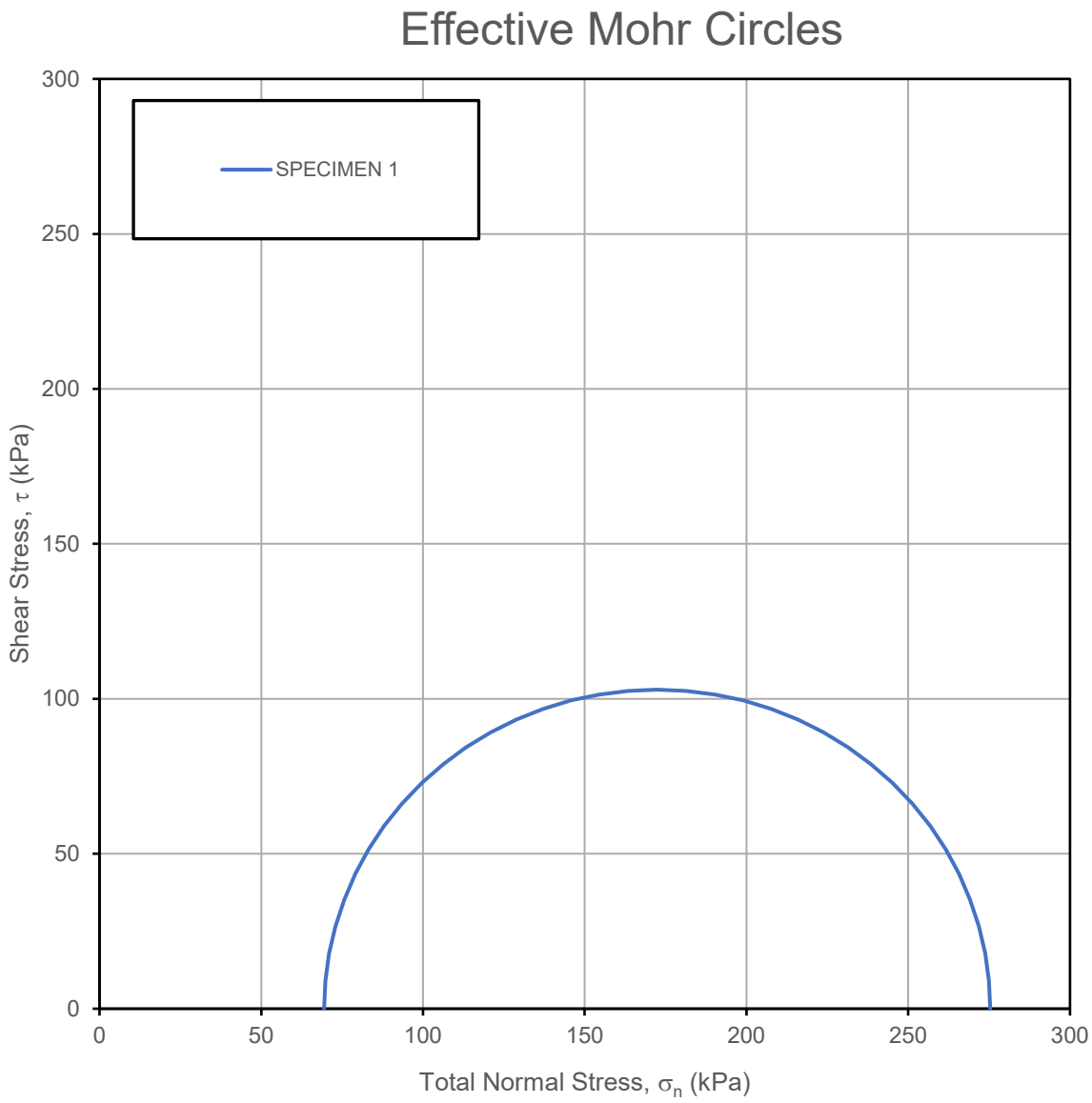
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 9.4

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=0.30)
Sample ID:	SA23
Test ID:	CKoUc-26
Depth:	18.82m - 18.95m



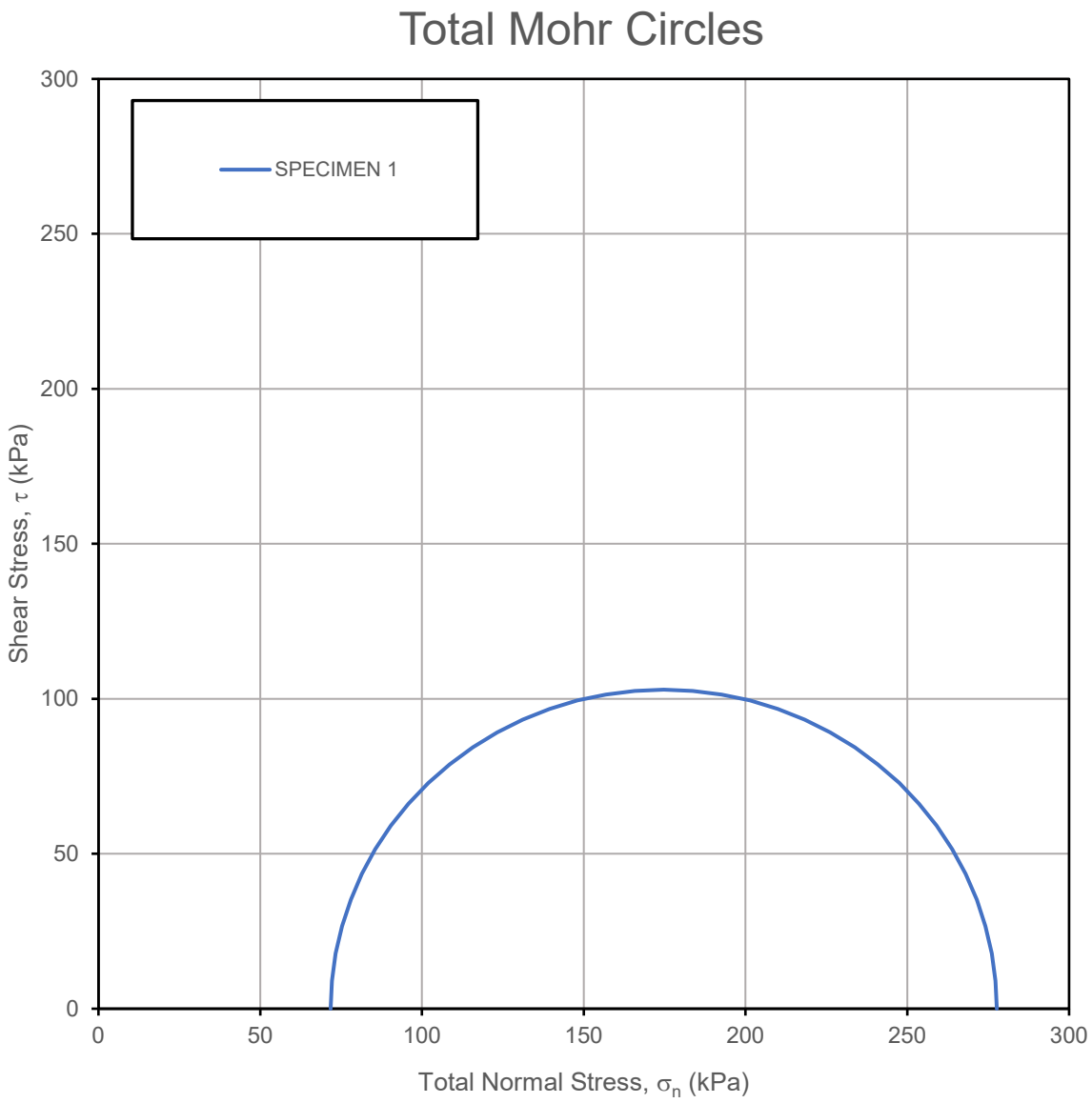
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 9.5

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=0.30)
Sample ID:	SA23
Test ID:	CKoUc-26
Depth:	18.82m - 18.95m

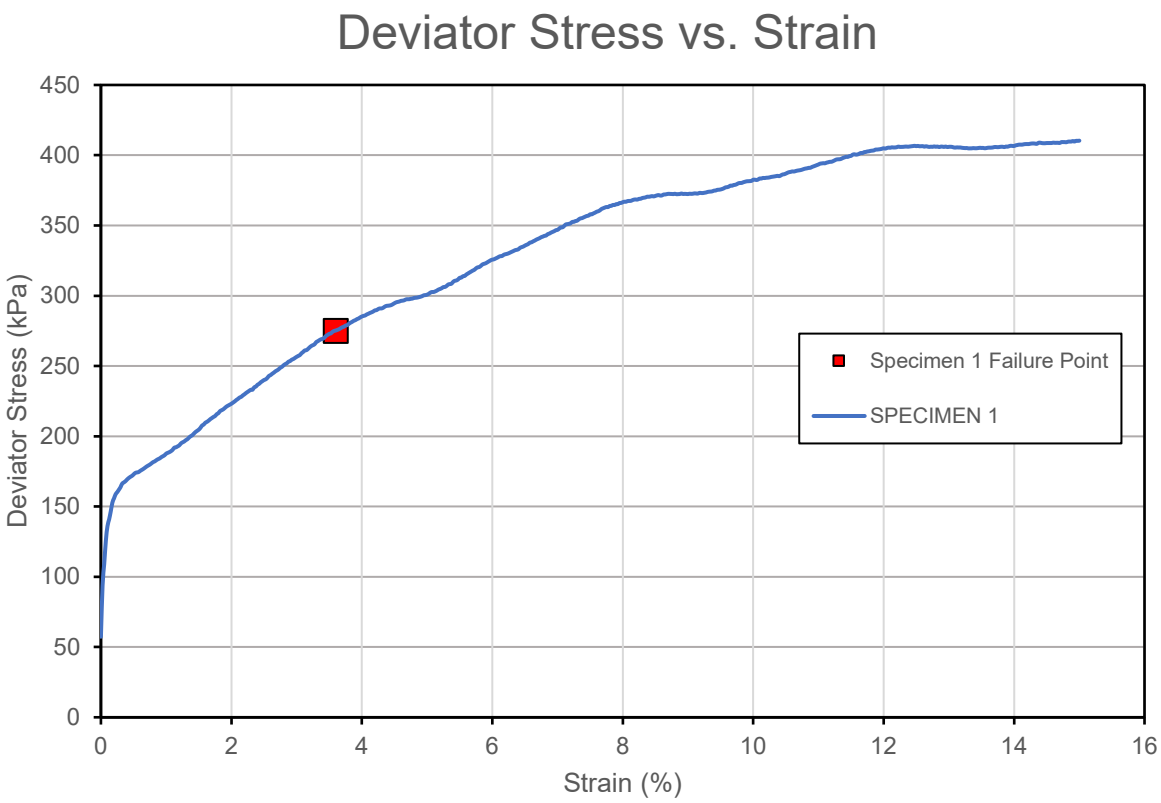


Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH11S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 0.74)
Sample ID:	SA9
Test ID:	CK0Uc-28
Depth:	17.25m - 17.39m



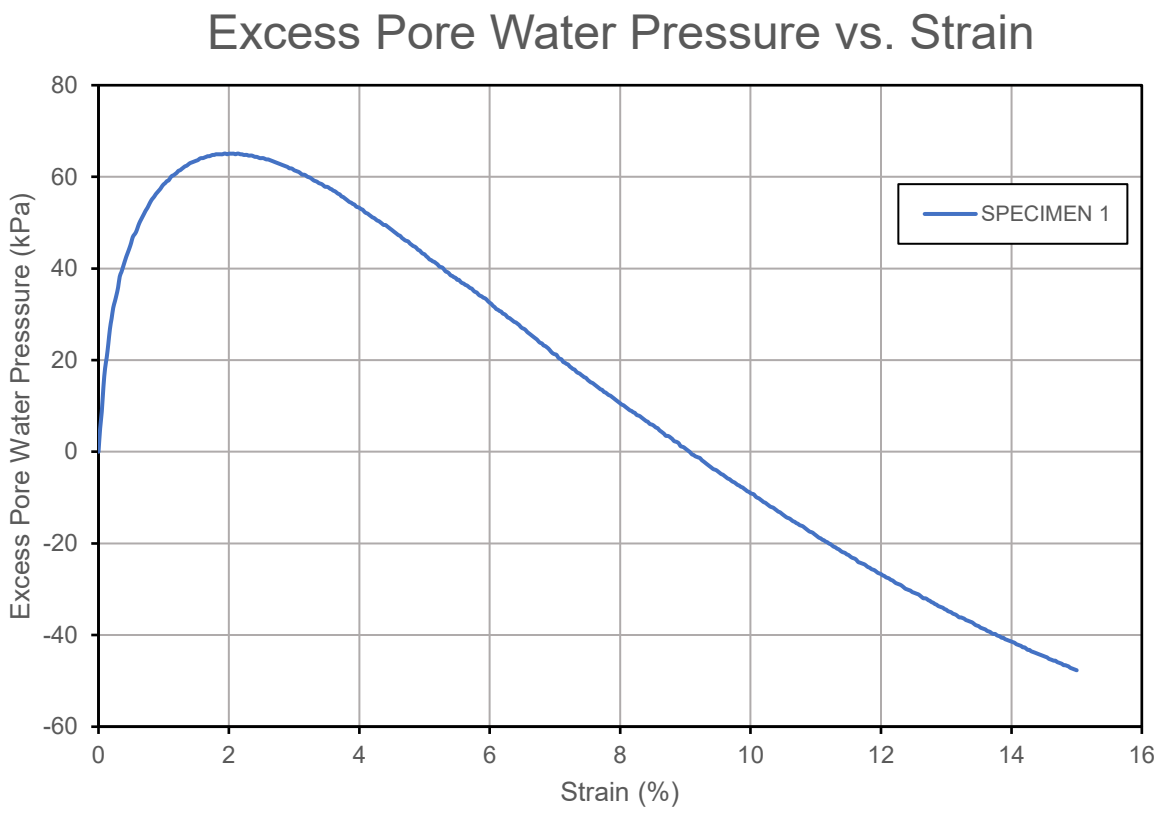
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 10.2

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH11S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 0.74)
Sample ID:	SA9
Test ID:	CK0Uc-28
Depth:	17.25m - 17.39m



Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 10.3

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH11S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 0.74)
Sample ID:	SA9
Test ID:	CK0Uc-28
Depth:	17.25m - 17.39m



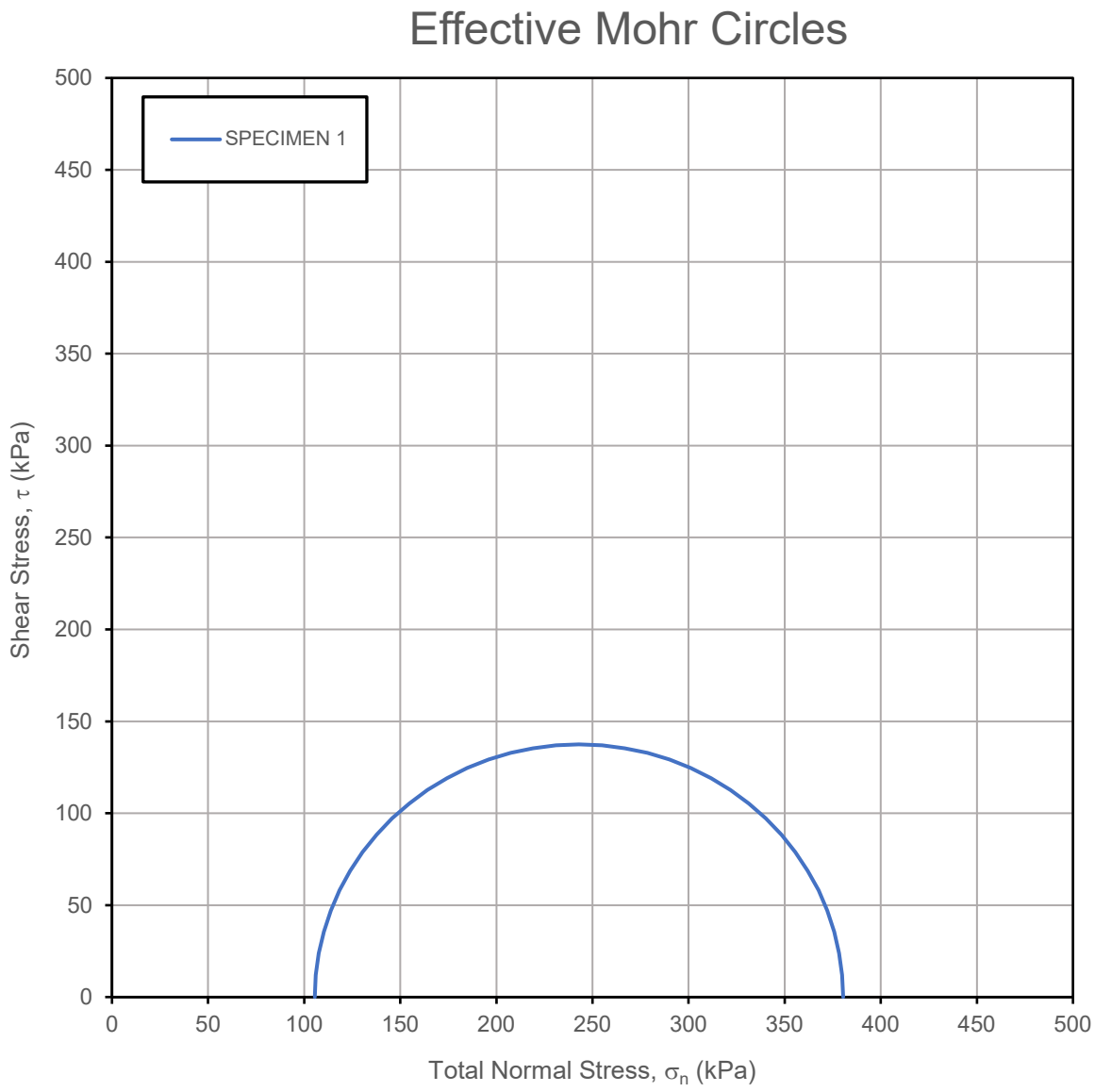
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 10.4

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH11S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 0.74)
Sample ID:	SA9
Test ID:	CK0Uc-28
Depth:	17.25m - 17.39m



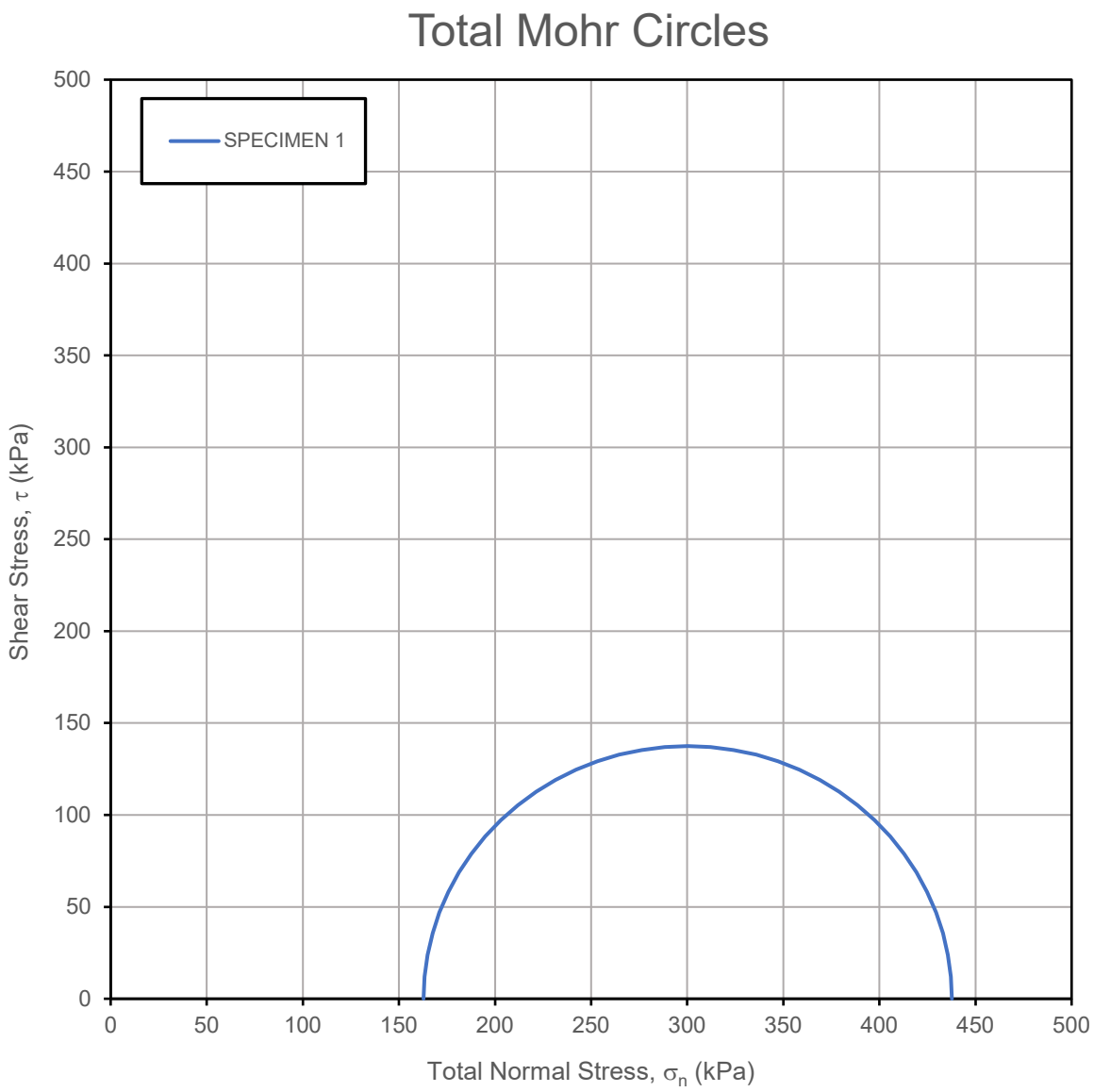
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 10.5

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH11S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 0.74)
Sample ID:	SA9
Test ID:	CK0Uc-28
Depth:	17.25m - 17.39m



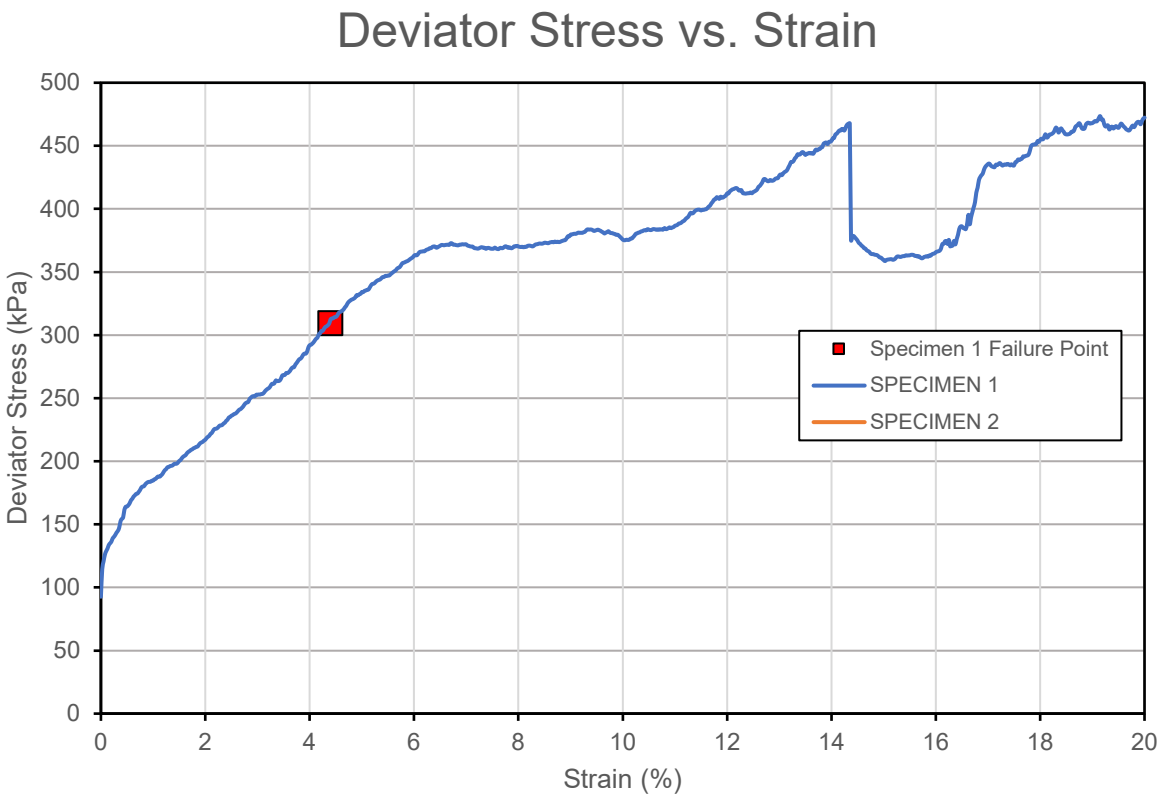
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 11.1

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 0.55)
Sample ID:	SA31
Test ID:	CK0Uc-19
Depth:	15.13m-15.24m



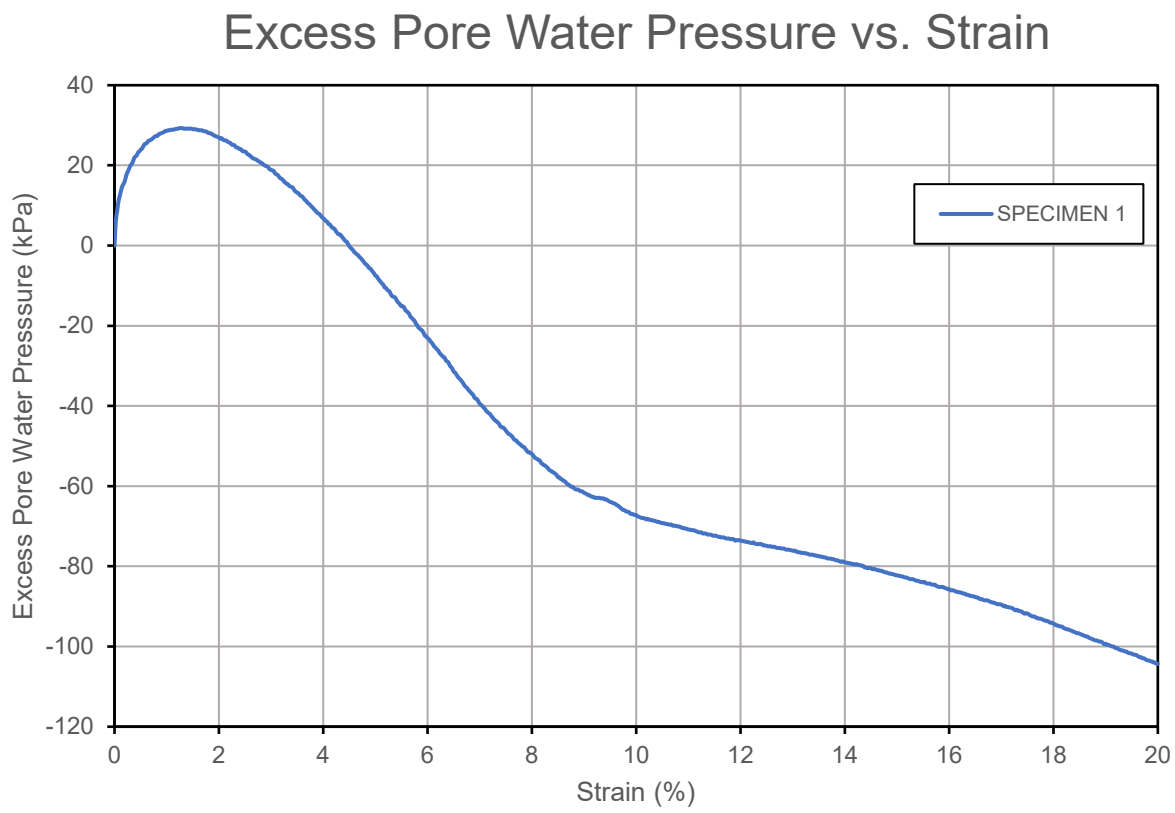
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 11.2

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 0.55)
Sample ID:	SA31
Test ID:	CK0Uc-19
Depth:	15.13m-15.24m



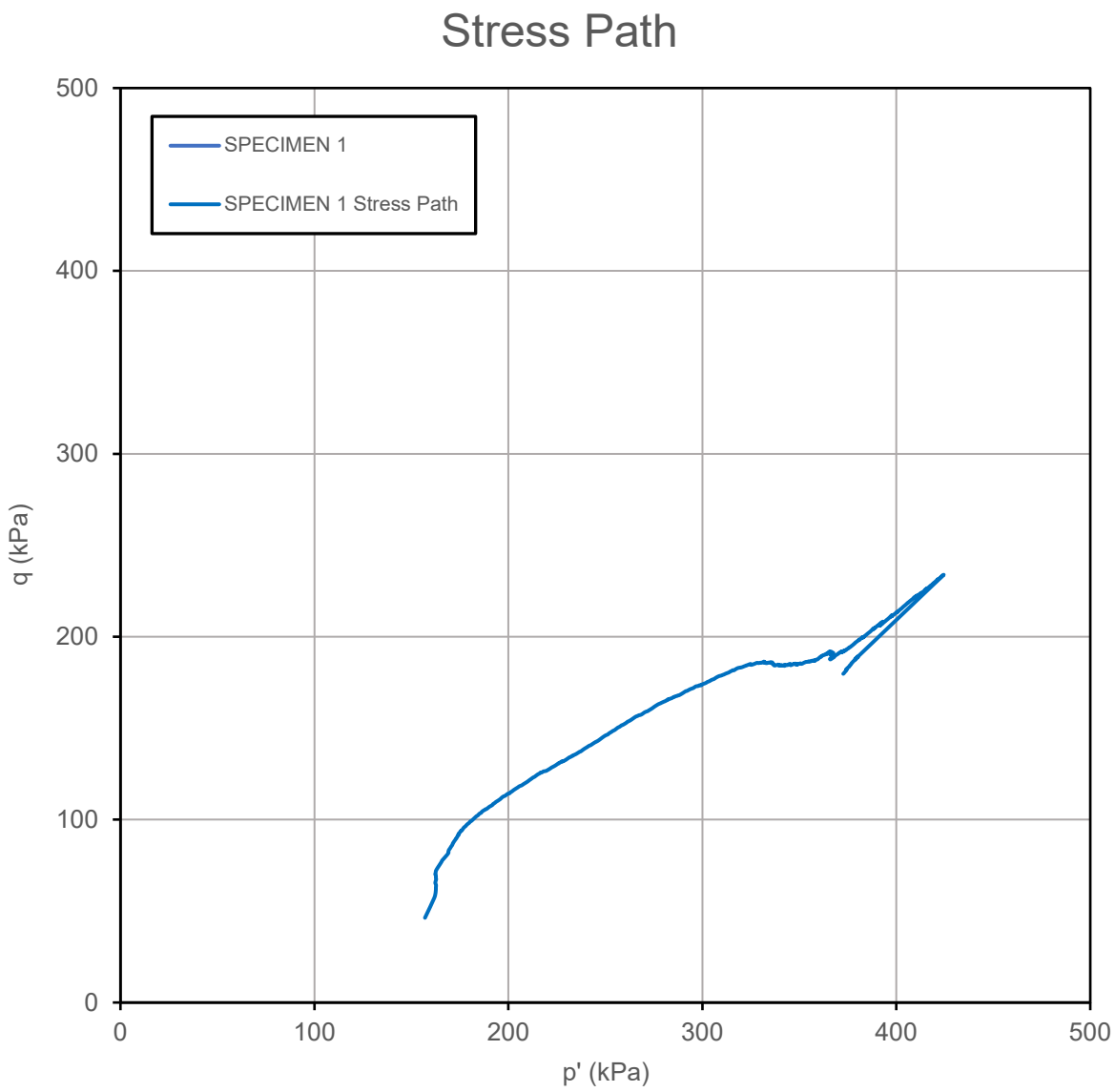
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 11.3

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 0.55)
Sample ID:	SA31
Test ID:	CK0Uc-19
Depth:	15.13m-15.24m



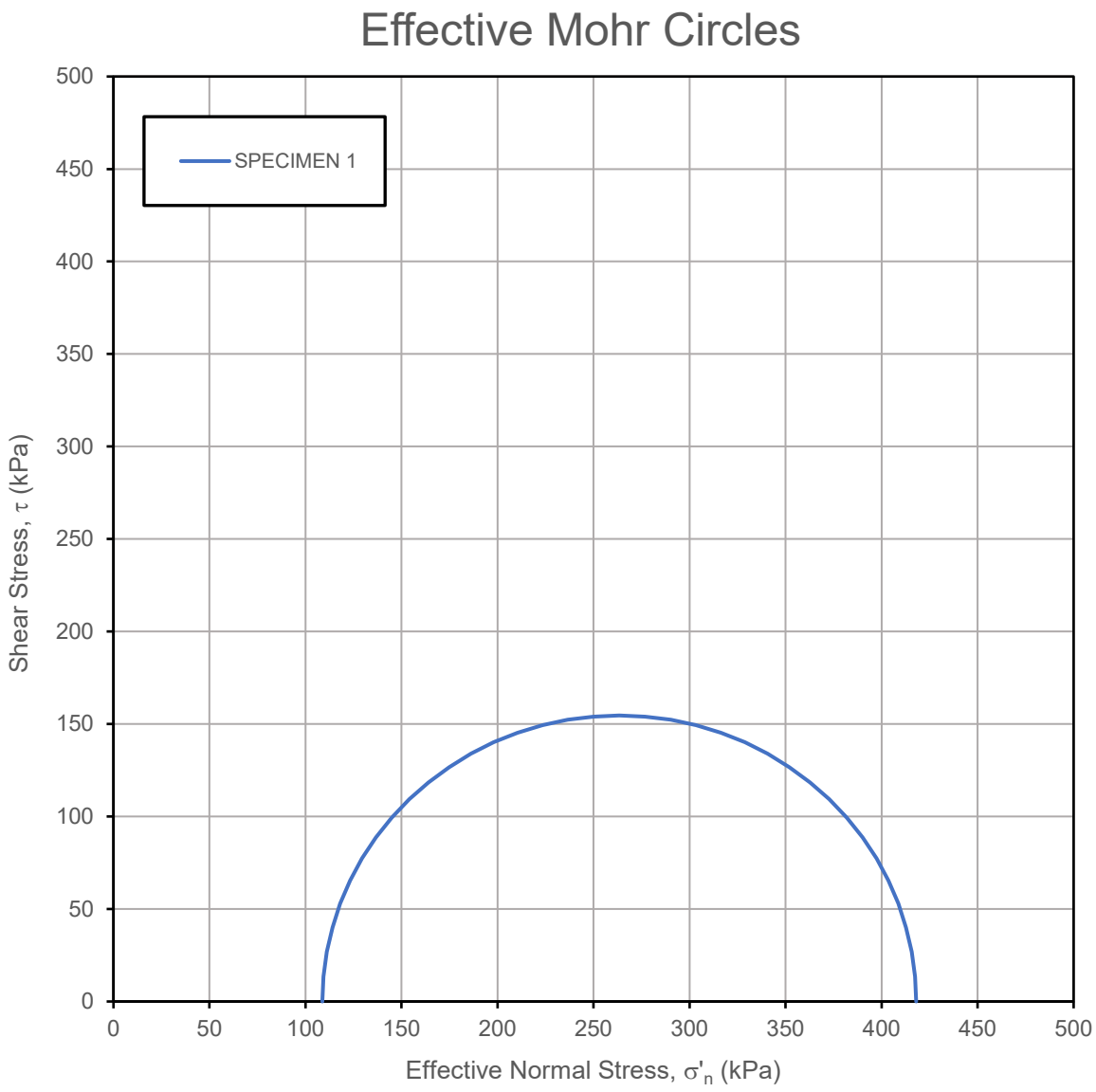
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 11.4

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 0.55)
Sample ID:	SA31
Test ID:	CK0Uc-19
Depth:	15.13m-15.24m



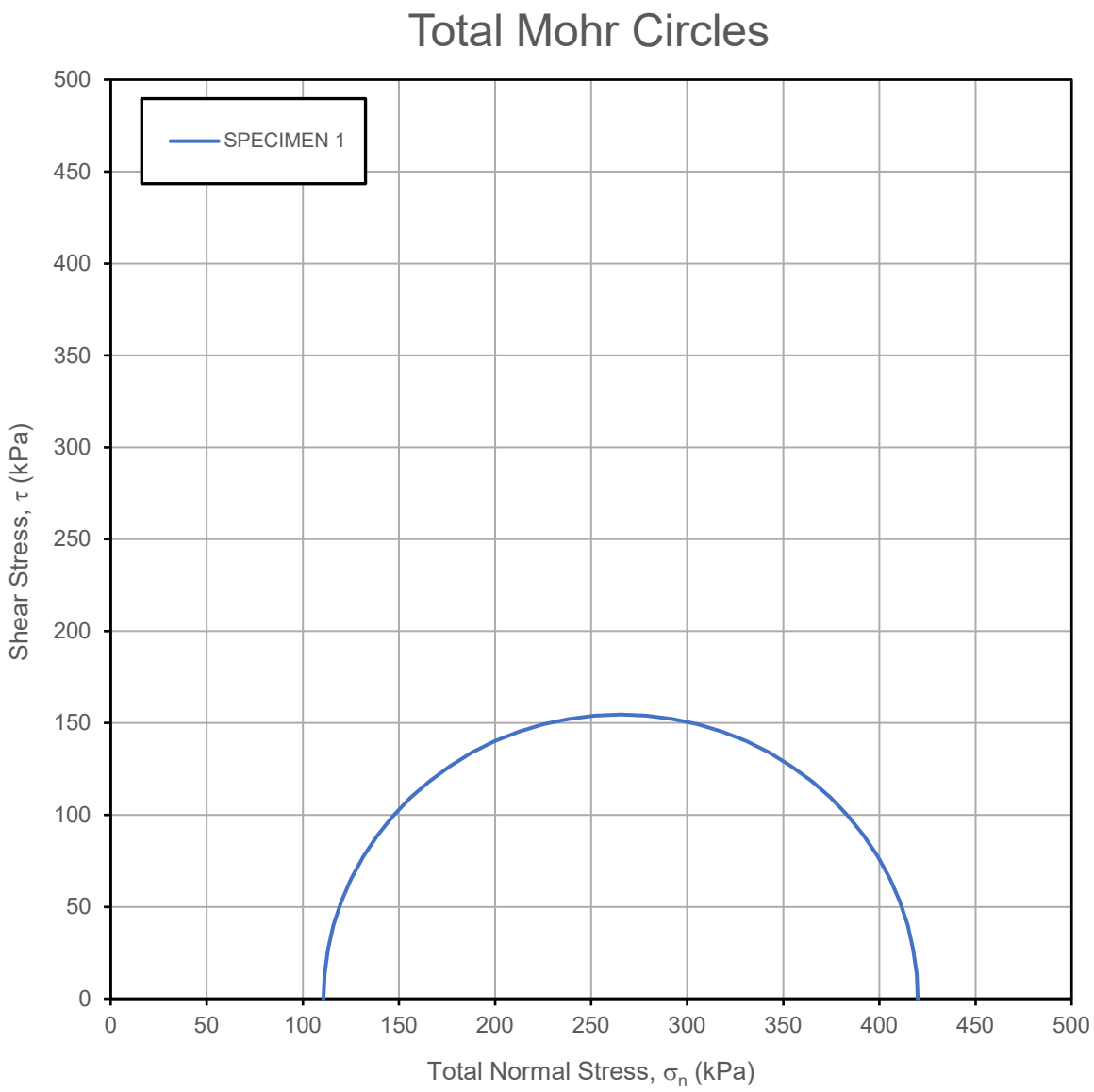
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 11.5

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 0.55)
Sample ID:	SA31
Test ID:	CK0Uc-19
Depth:	15.13m-15.24m



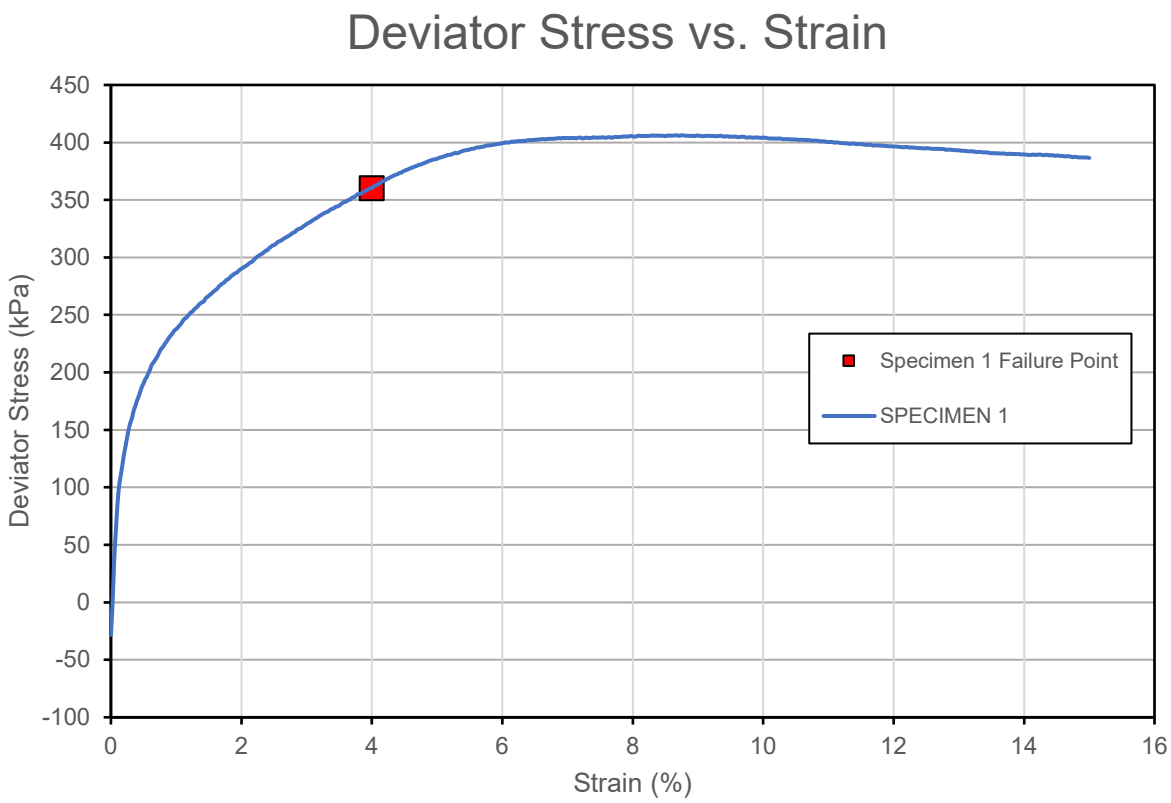
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 12.1

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH28
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 1.09)
Sample ID:	SA18-2
Test ID:	CK0Uc-10
Depth:	24.84m - 24.97m



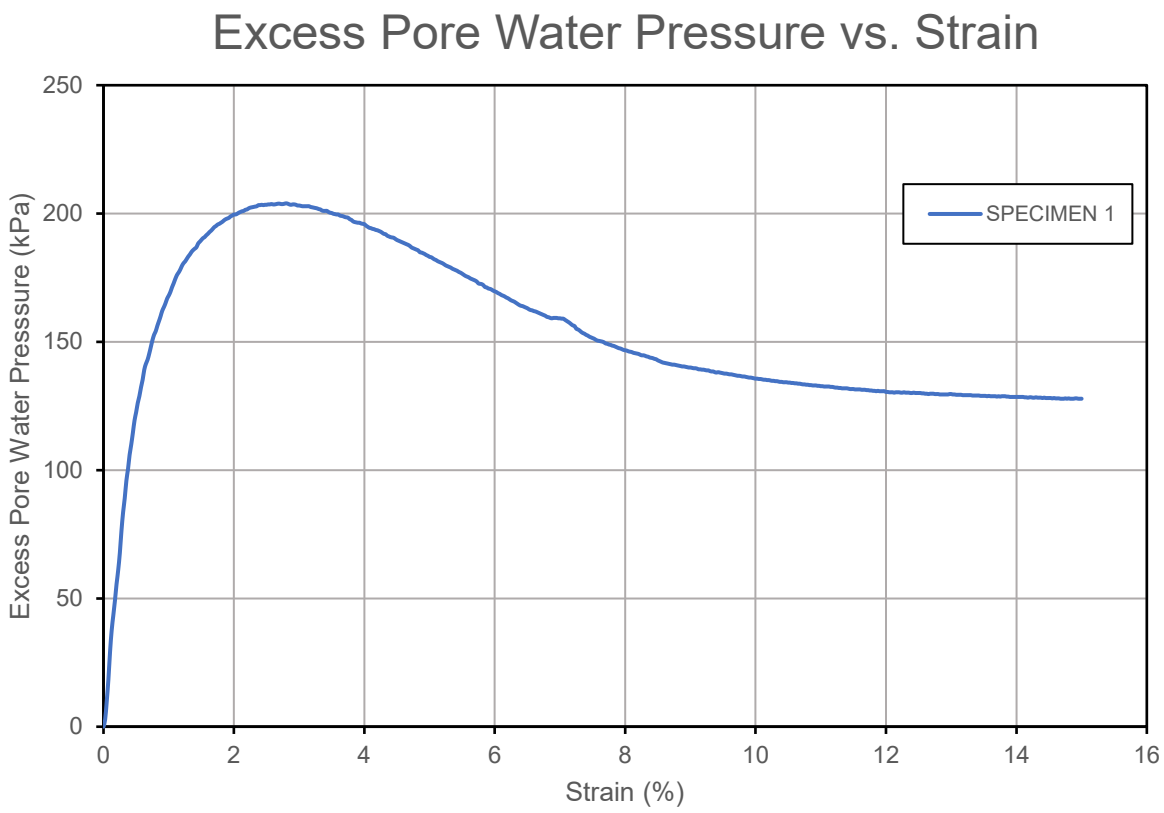
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 12.2

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH28
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 1.09)
Sample ID:	SA18-2
Test ID:	CK0Uc-10
Depth:	24.84m - 24.97m



Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 12.3

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH28
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 1.09)
Sample ID:	SA18-2
Test ID:	CK0Uc-10
Depth:	24.84m - 24.97m



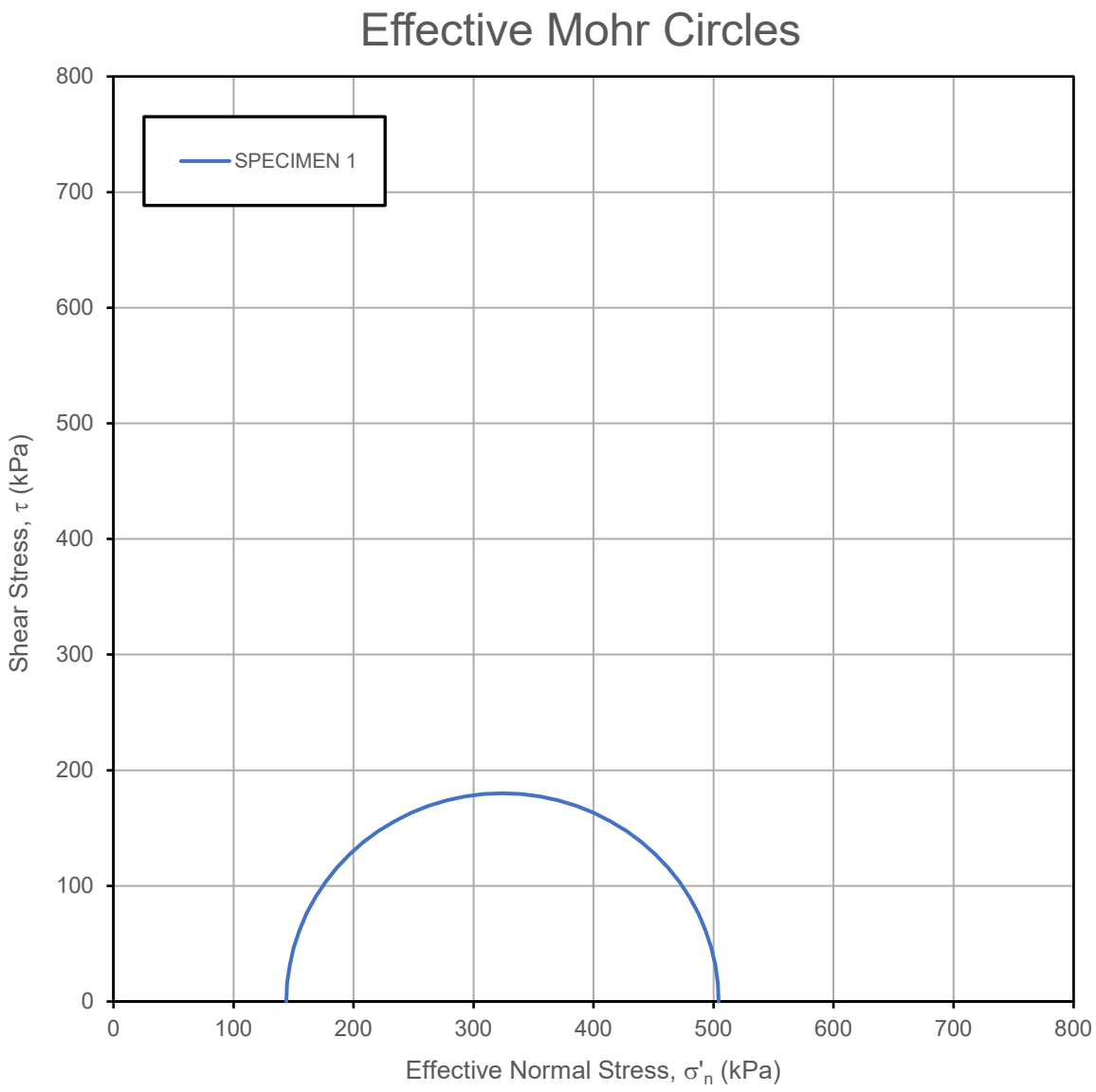
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 12.4

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH28
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 1.09)
Sample ID:	SA18-2
Test ID:	CK0Uc-10
Depth:	24.84m - 24.97m



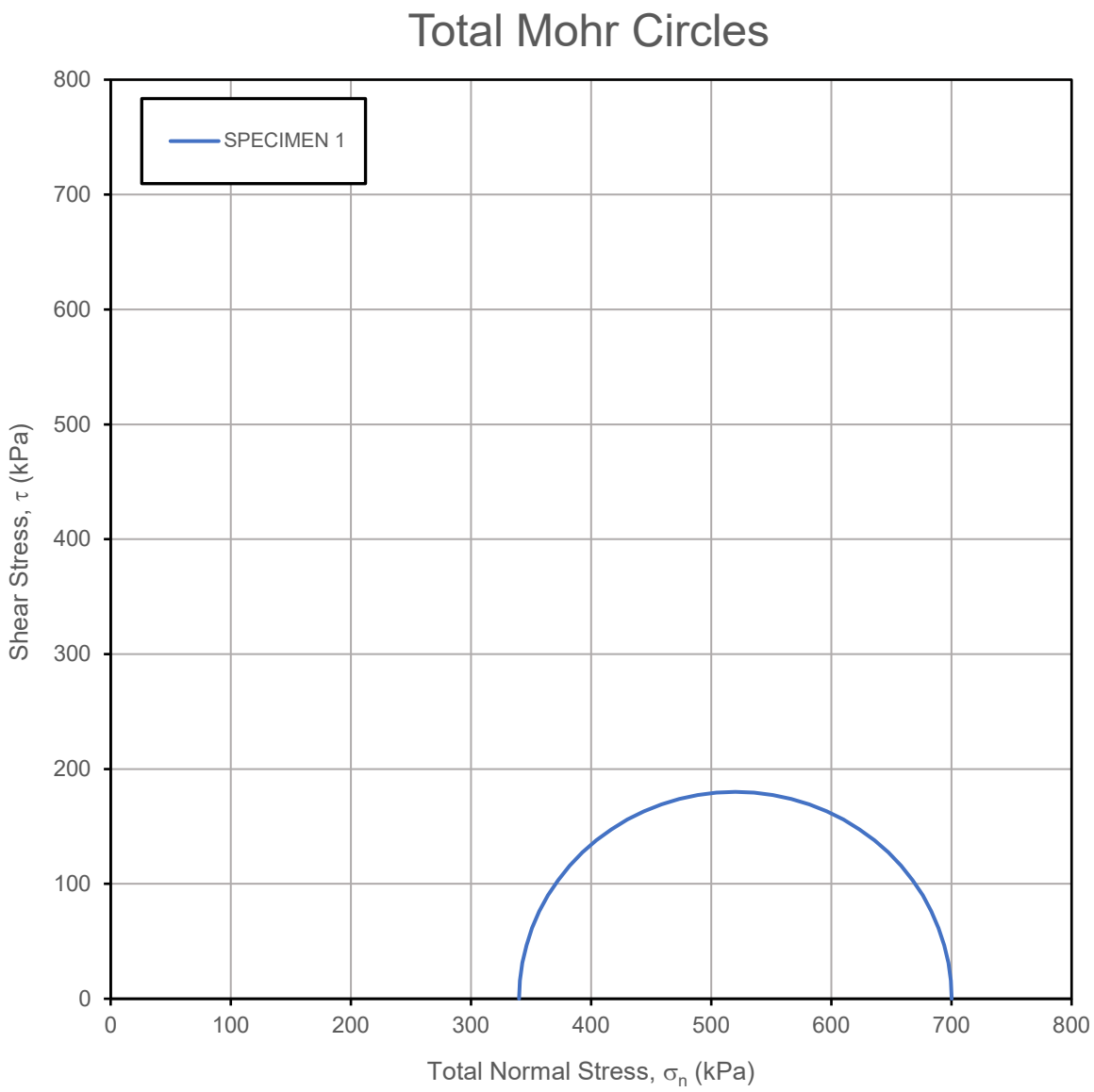
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 12.5

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH28
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 1.09)
Sample ID:	SA18-2
Test ID:	CK0Uc-10
Depth:	24.84m - 24.97m



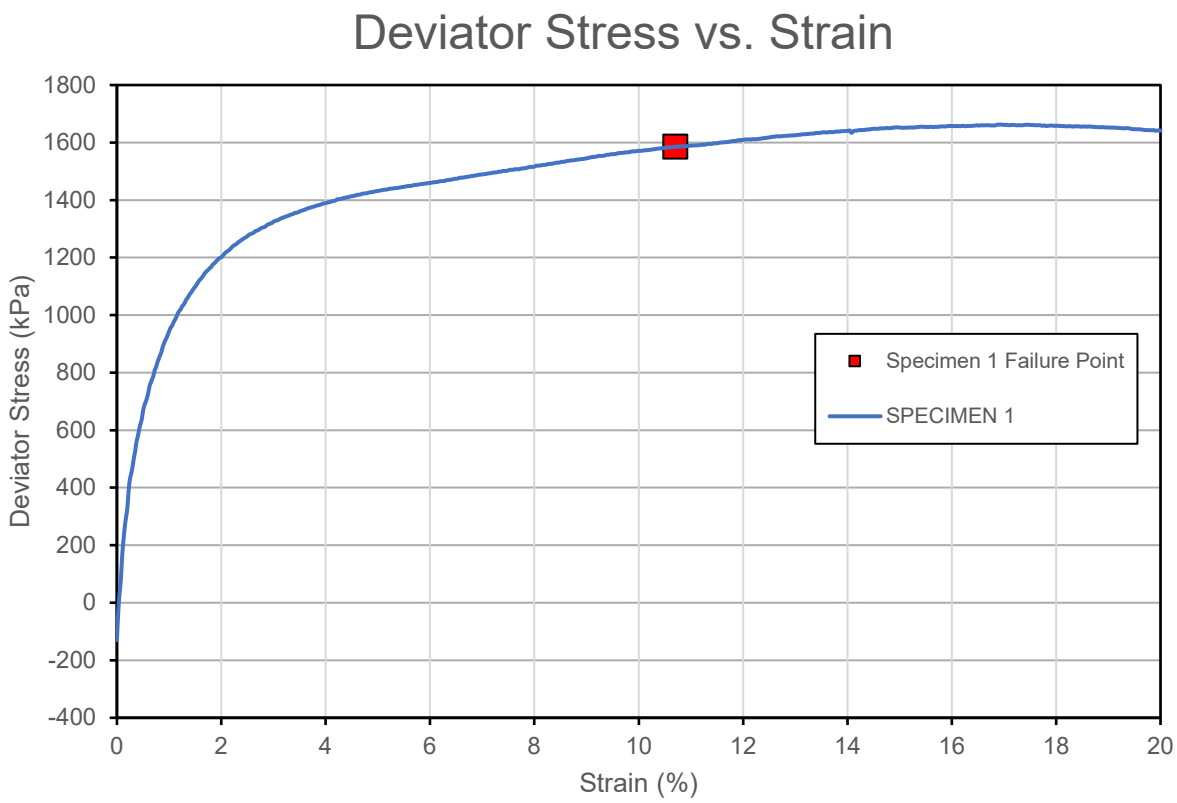
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 13.1

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 1.08)
Sample ID:	SA43-1
Test ID:	CK0Uc-18
Depth:	24.53m - 24.66m



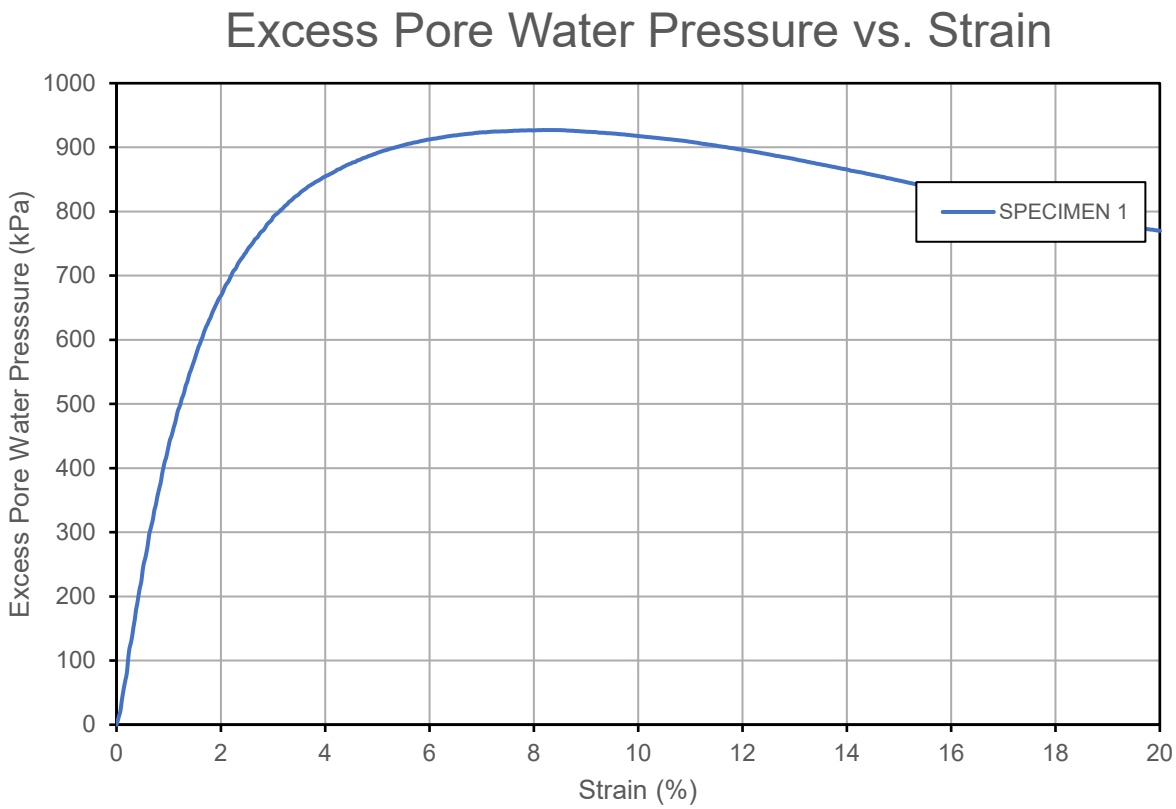
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 13.2

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 1.08)
Sample ID:	SA43-1
Test ID:	CK0Uc-18
Depth:	24.53m - 24.66m



Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 13.3

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 1.08)
Sample ID:	SA43-1
Test ID:	CK0Uc-18
Depth:	24.53m - 24.66m



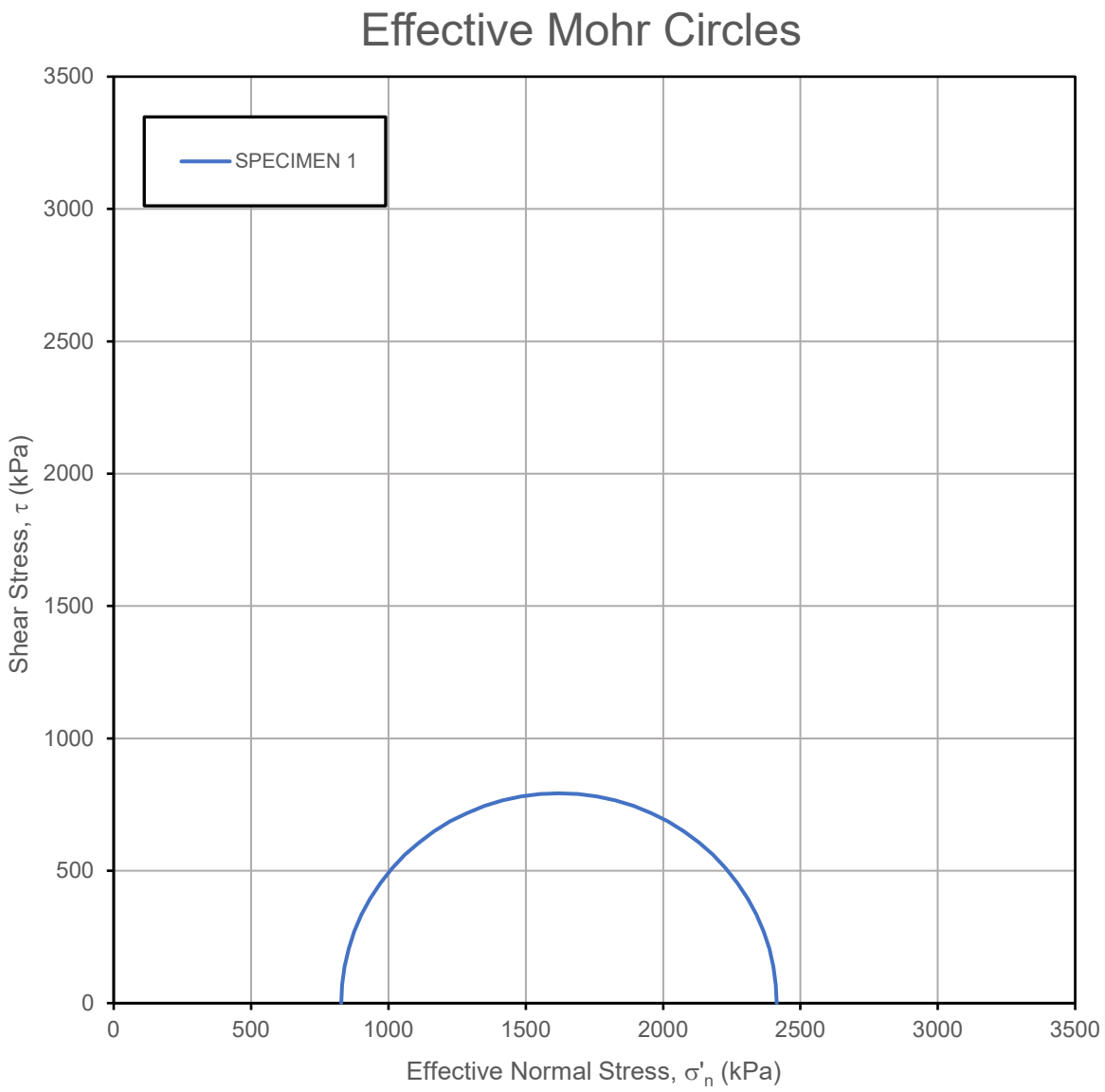
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 13.4

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 1.08)
Sample ID:	SA43-1
Test ID:	CK0Uc-18
Depth:	24.53m - 24.66m



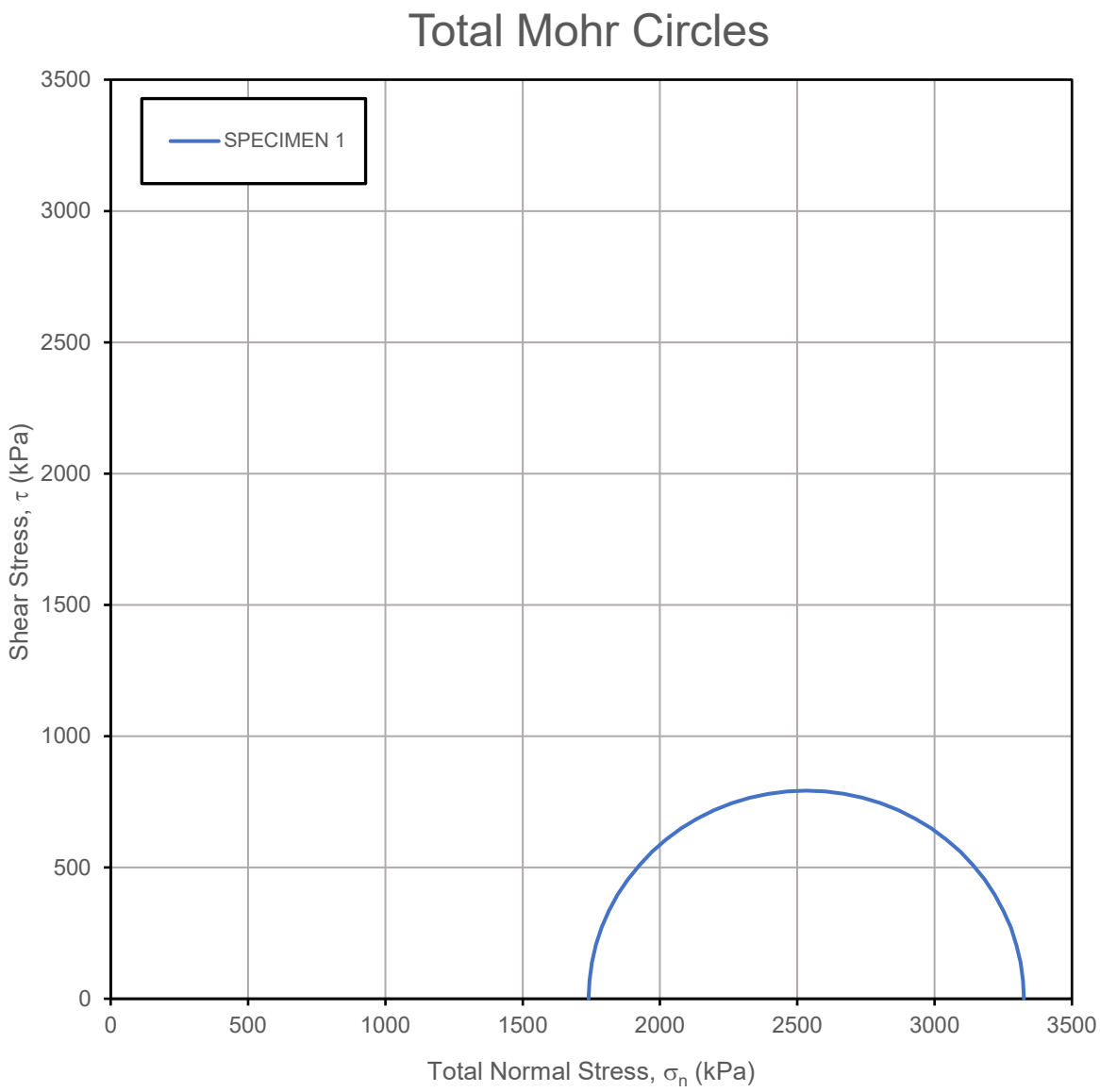
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 13.5

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K= 1.08)
Sample ID:	SA43-1
Test ID:	CK0Uc-18
Depth:	24.53m - 24.66m



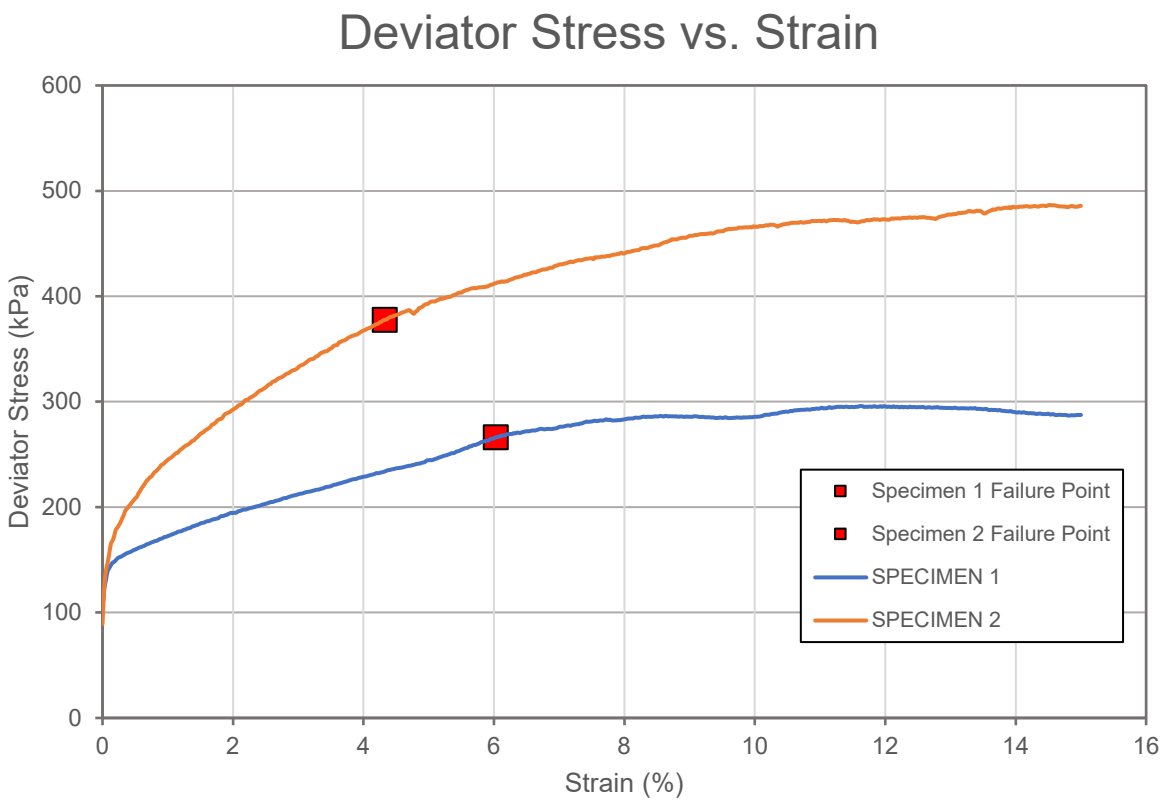
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 14.1

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH65
Soil Unit:	4b

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.59)	Anisotropic (Consol. K= 0.62)
Sample ID:	SA34-2	SA32-2
Test ID:	CK0Uc-12	CKoUc-11R
Depth:	20.40 m - 20.52 m	19.08 m - 19.20 m



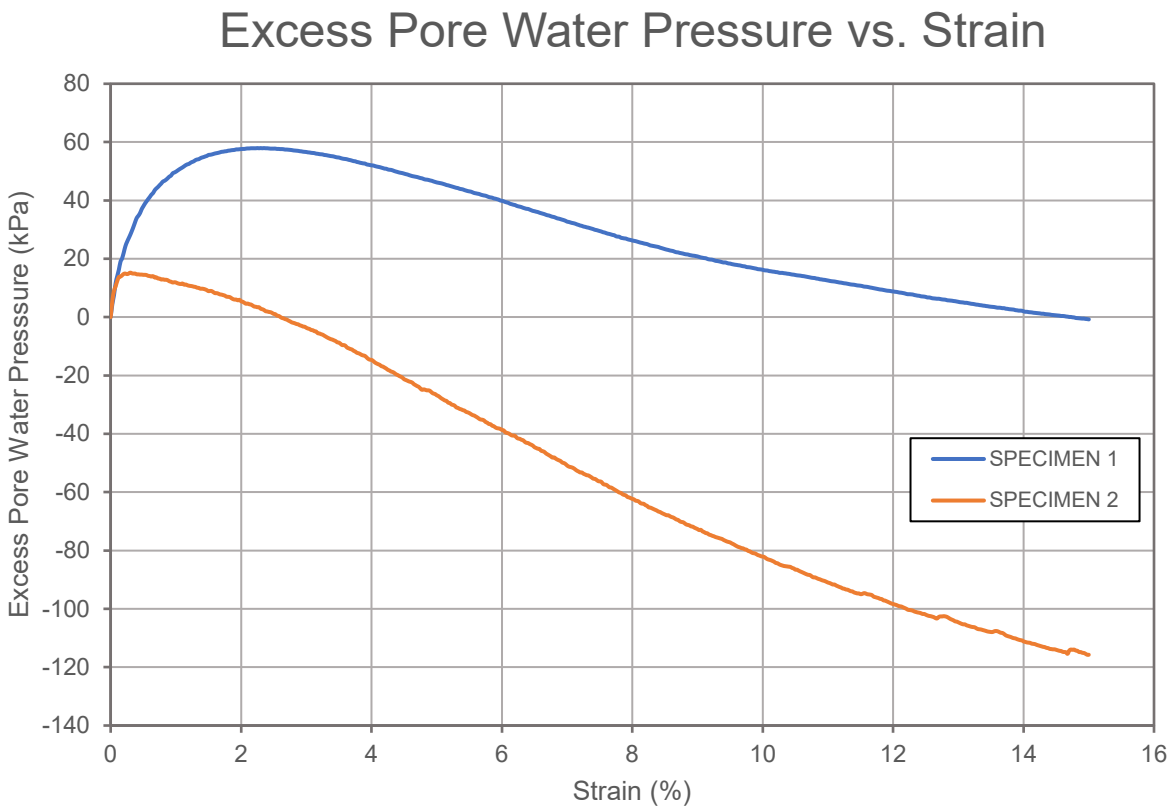
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 14.2

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH65
Soil Unit:	4b

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.59)	Anisotropic (Consol. K= 0.62)
Sample ID:	SA34-2	SA32-2
Test ID:	CK0Uc-12	CKoUc-11R
Depth:	20.40 m - 20.52 m	19.08 m - 19.20 m



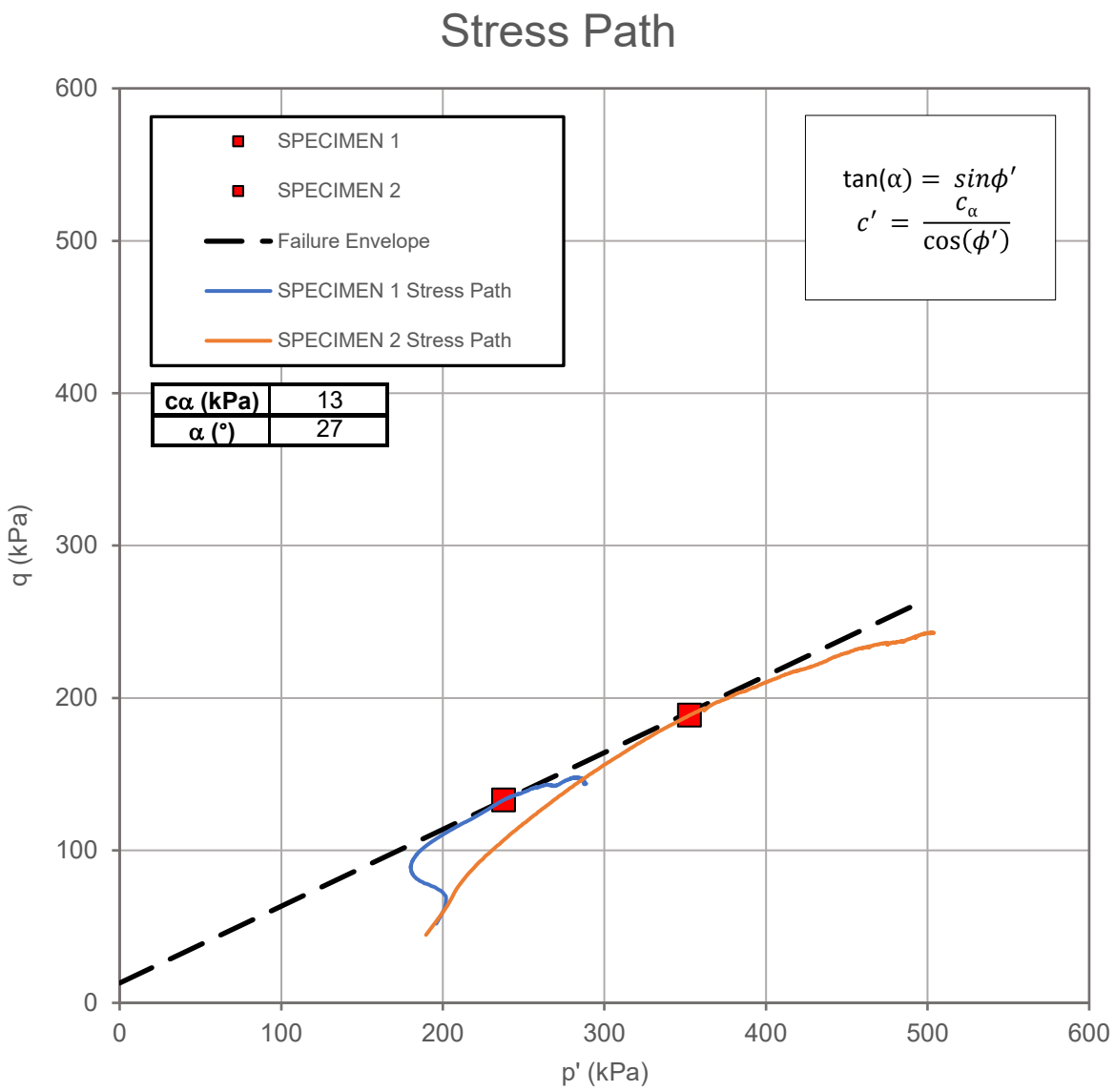
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 14.3

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH65
Soil Unit:	4b

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.59)	Anisotropic (Consol. K= 0.62)
Sample ID:	SA34-2	SA32-2
Test ID:	CK0Uc-12	CKoUc-11R
Depth:	20.40 m - 20.52 m	19.08 m - 19.20 m



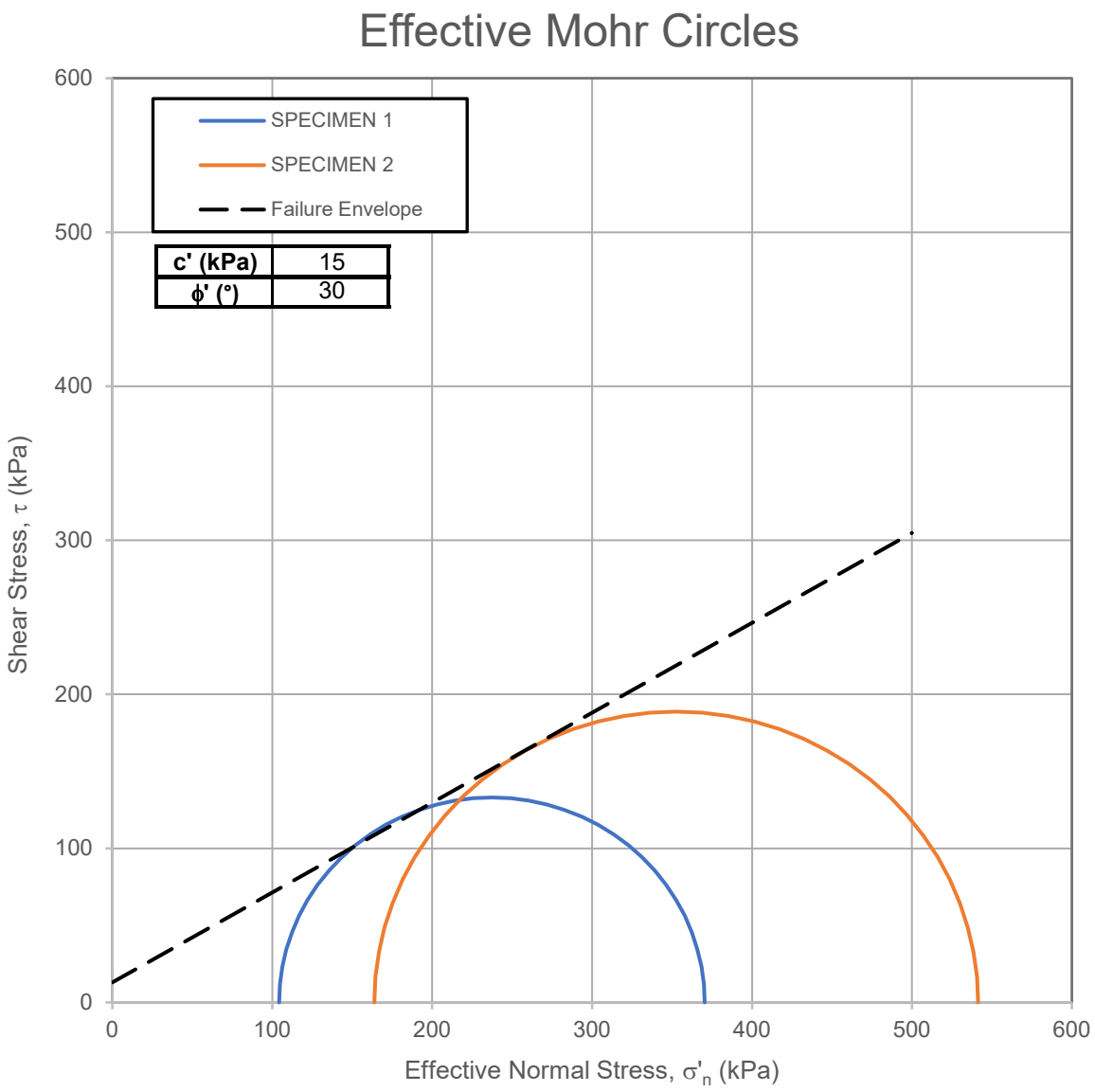
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 14.4

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH65
Soil Unit:	4b

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.59)	Anisotropic (Consol. K= 0.62)
Sample ID:	SA34-2	SA32-2
Test ID:	CK0Uc-12	CKoUc-11R
Depth:	20.40 m - 20.52 m	19.08 m - 19.20 m

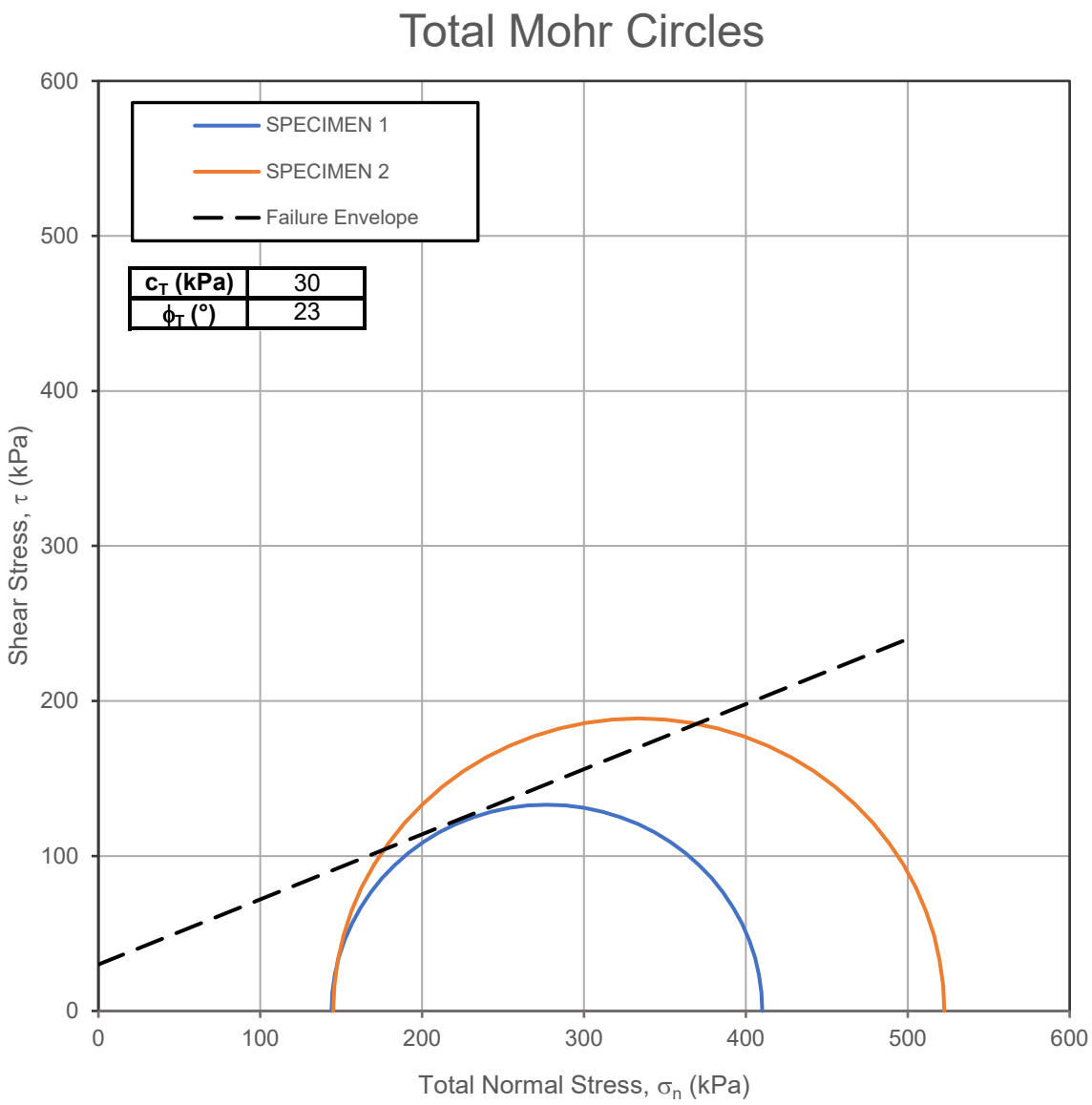


Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH65
Soil Unit:	4b

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.59)	Anisotropic (Consol. K= 0.62)
Sample ID:	SA34-2	SA32-2
Test ID:	CK0Uc-12	CKoUc-11R
Depth:	20.40 m - 20.52 m	19.08 m - 19.20 m



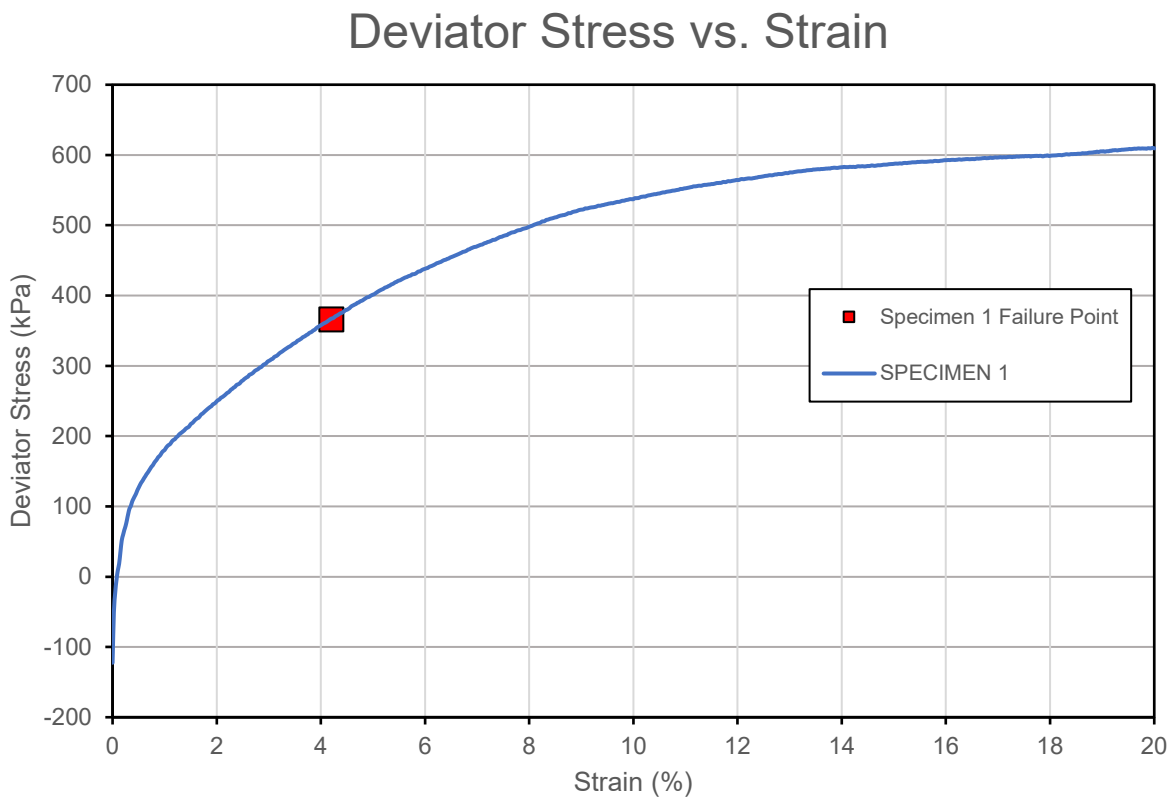
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions. Ratio of horizontal to vertical effective stress at end of consolidation stage (Consol. K) indicated above for each specimen.

Figure No. I - 15.1

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH83S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=1.59)
Sample ID:	SA2
Test ID:	CKoUc-32
Depth:	15.77m - 15.90m



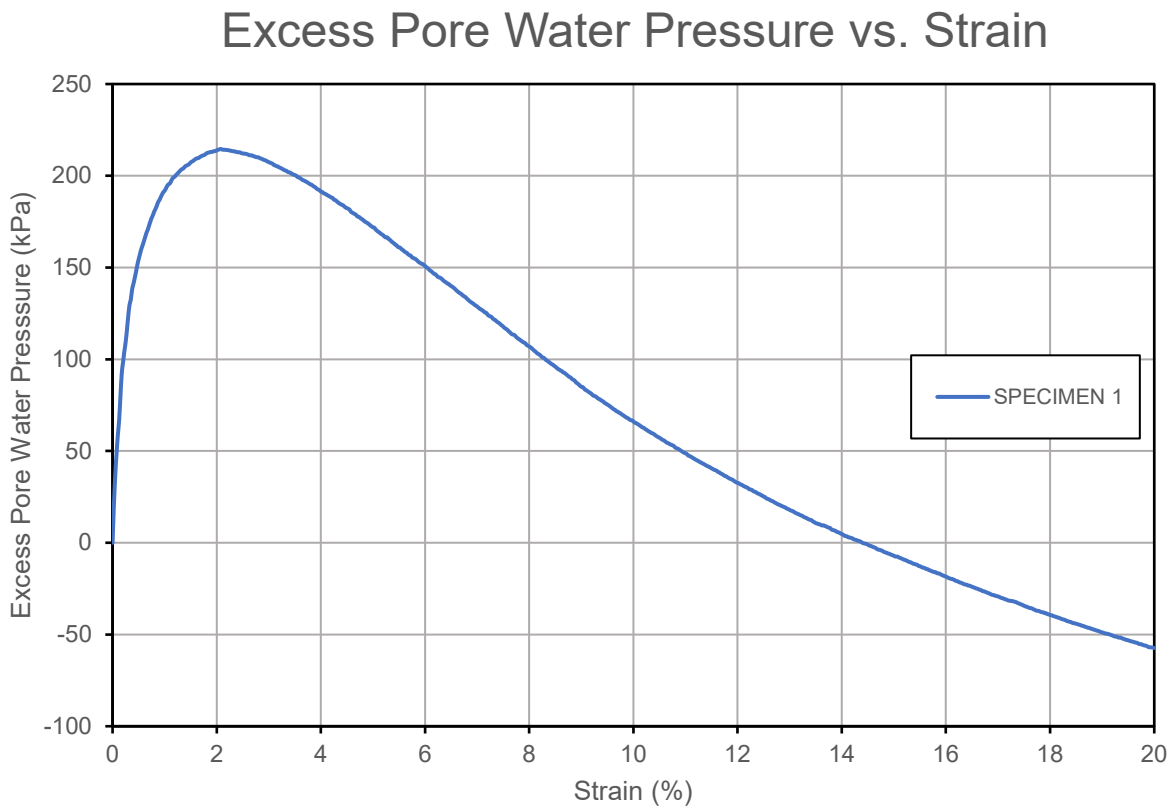
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 15.2

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH83S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=1.59)
Sample ID:	SA2
Test ID:	CKoUc-32
Depth:	15.77m - 15.90m



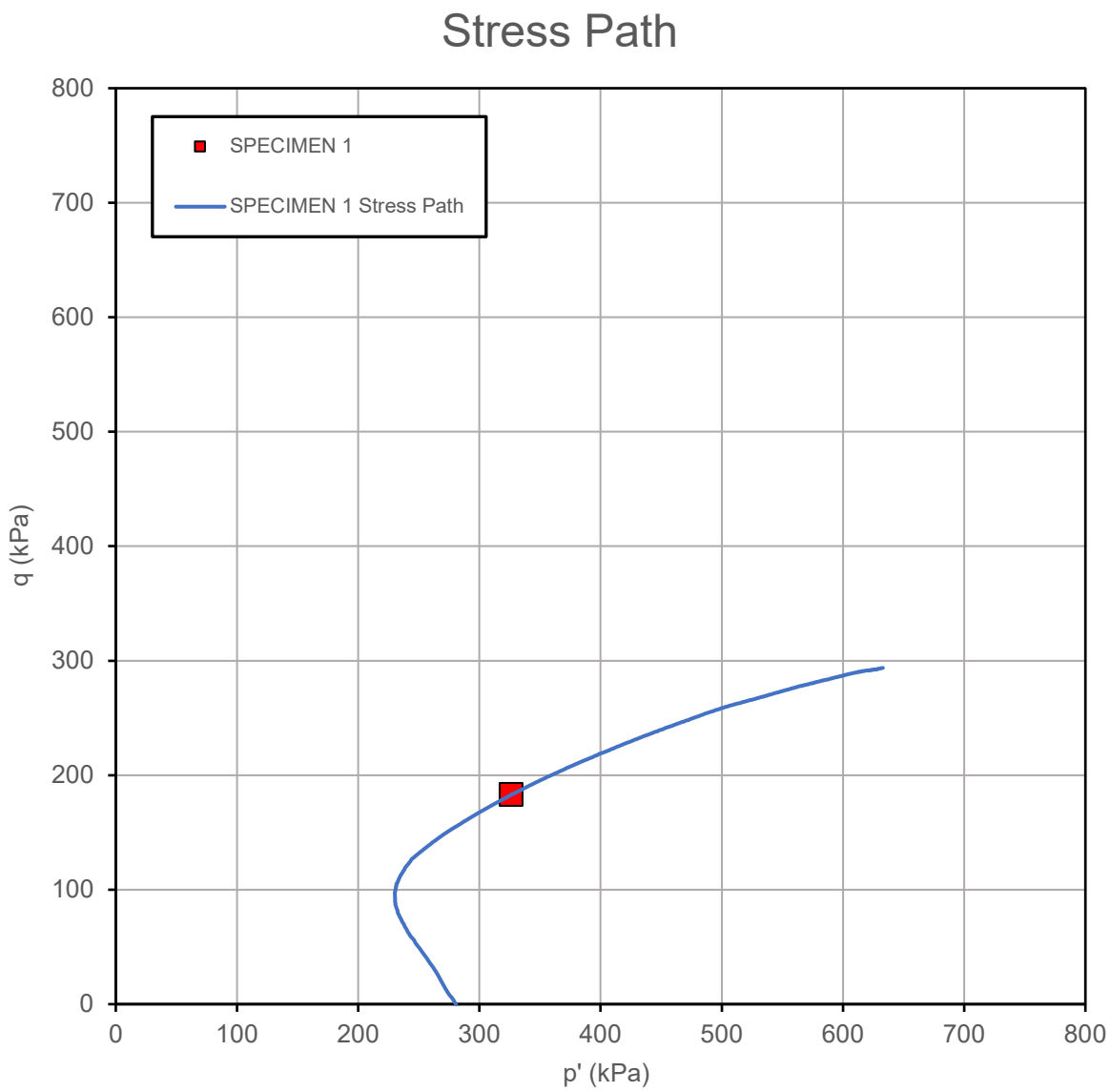
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 15.3

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH83S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=1.59)
Sample ID:	SA2
Test ID:	CKoUc-32
Depth:	15.77m - 15.90m



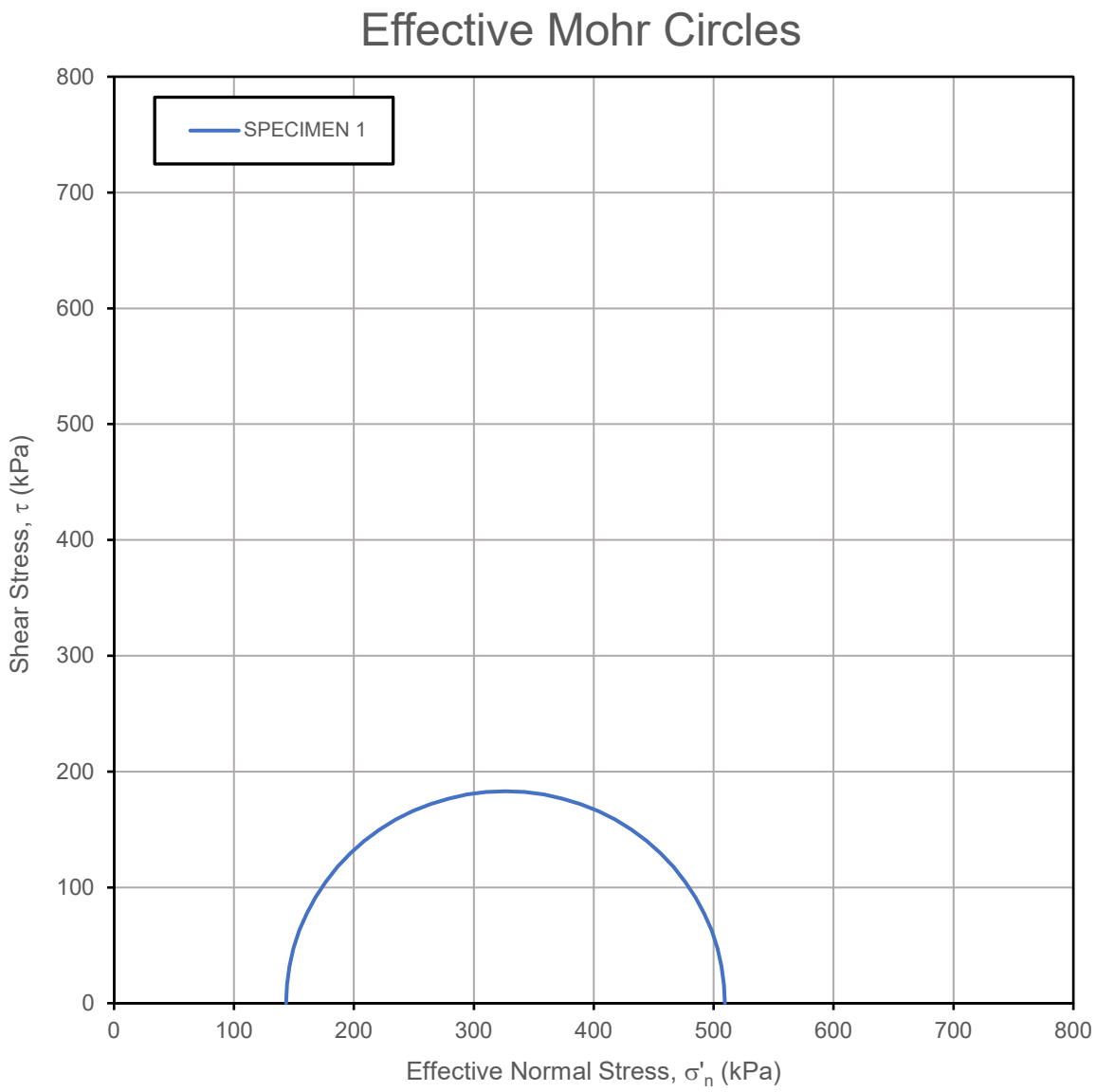
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 15.4

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH83S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=1.59)
Sample ID:	SA2
Test ID:	CKoUc-32
Depth:	15.77m - 15.90m



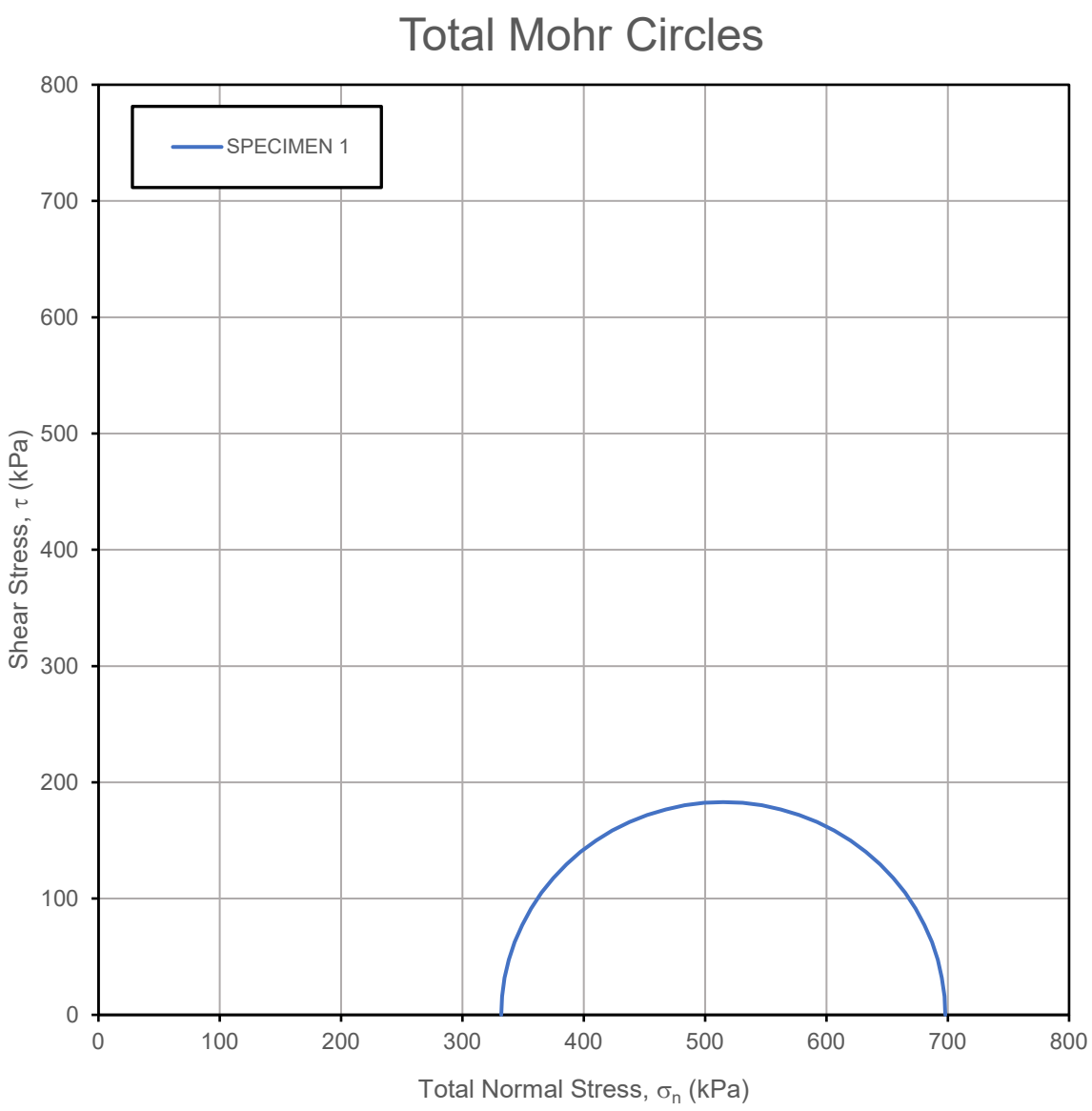
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 15.5

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH83S
Soil Unit:	4b

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=1.59)
Sample ID:	SA2
Test ID:	CKoUc-32
Depth:	15.77m - 15.90m



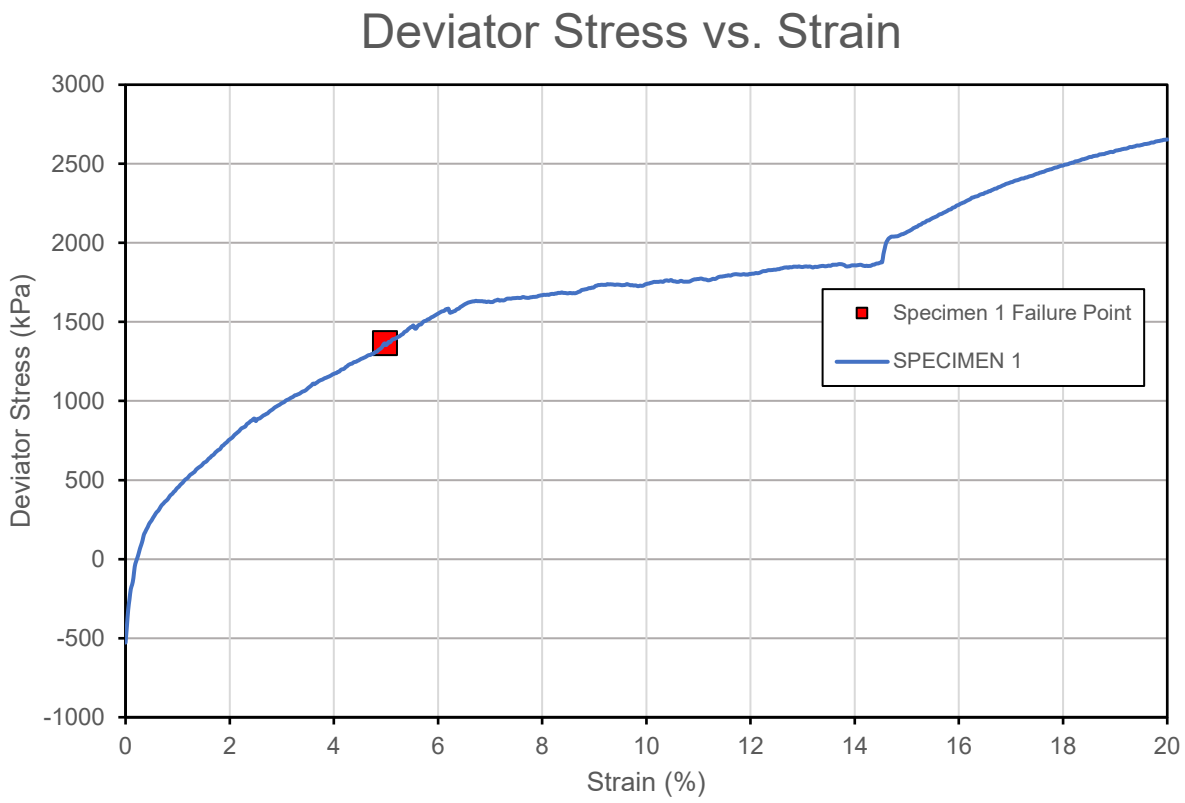
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 16.1

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	5

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=2.93)
Sample ID:	SA30
Test ID:	CKoUc-27
Depth:	20.70m - 20.83m



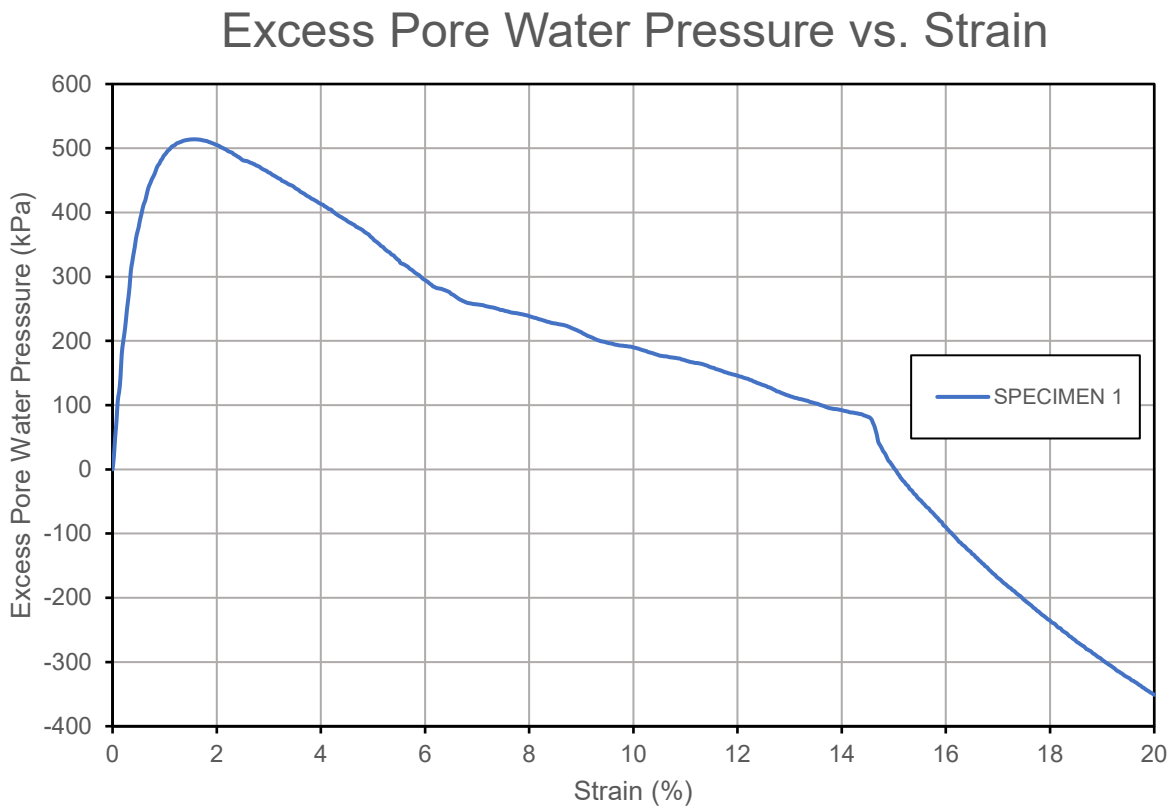
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 16.2

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	5

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=2.93)
Sample ID:	SA30
Test ID:	CKoUc-27
Depth:	20.70m - 20.83m



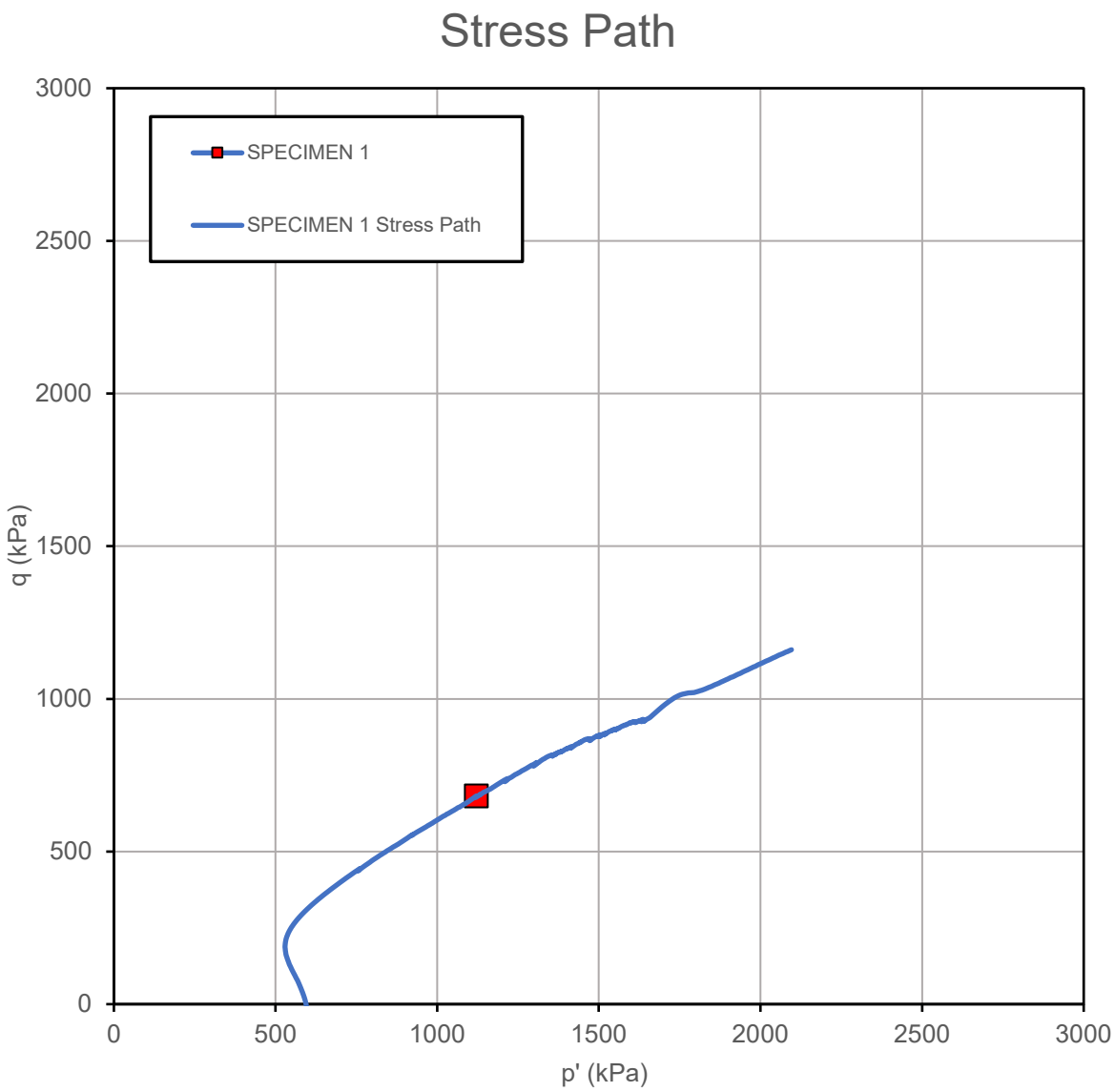
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 16.3

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	5

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=2.93)
Sample ID:	SA30
Test ID:	CKoUc-27
Depth:	20.70m - 20.83m



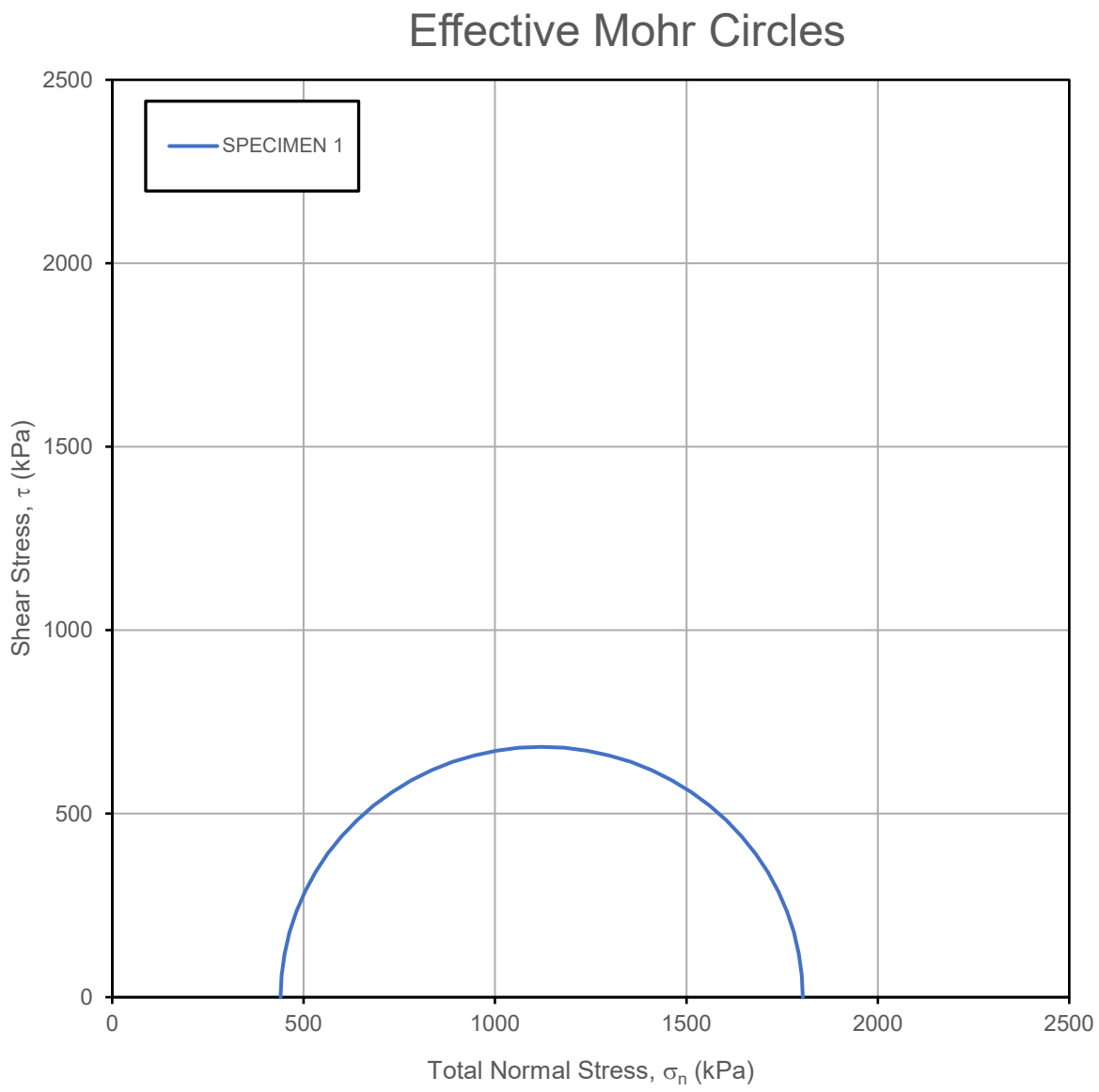
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 16.4

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	5

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=2.93)
Sample ID:	SA30
Test ID:	CKoUc-27
Depth:	20.70m - 20.83m



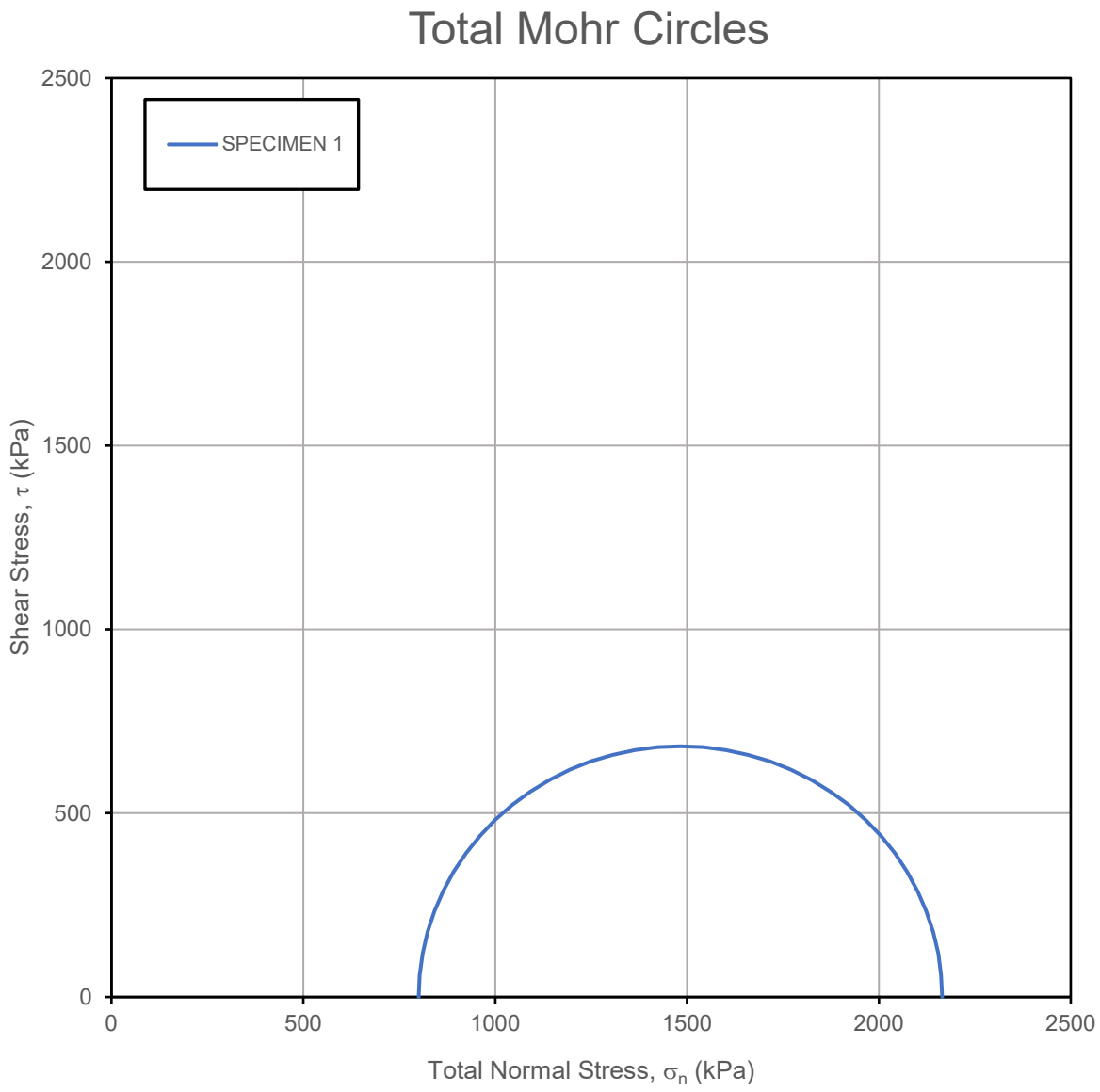
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 16.5

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	5

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=2.93)
Sample ID:	SA30
Test ID:	CKoUc-27
Depth:	20.70m - 20.83m



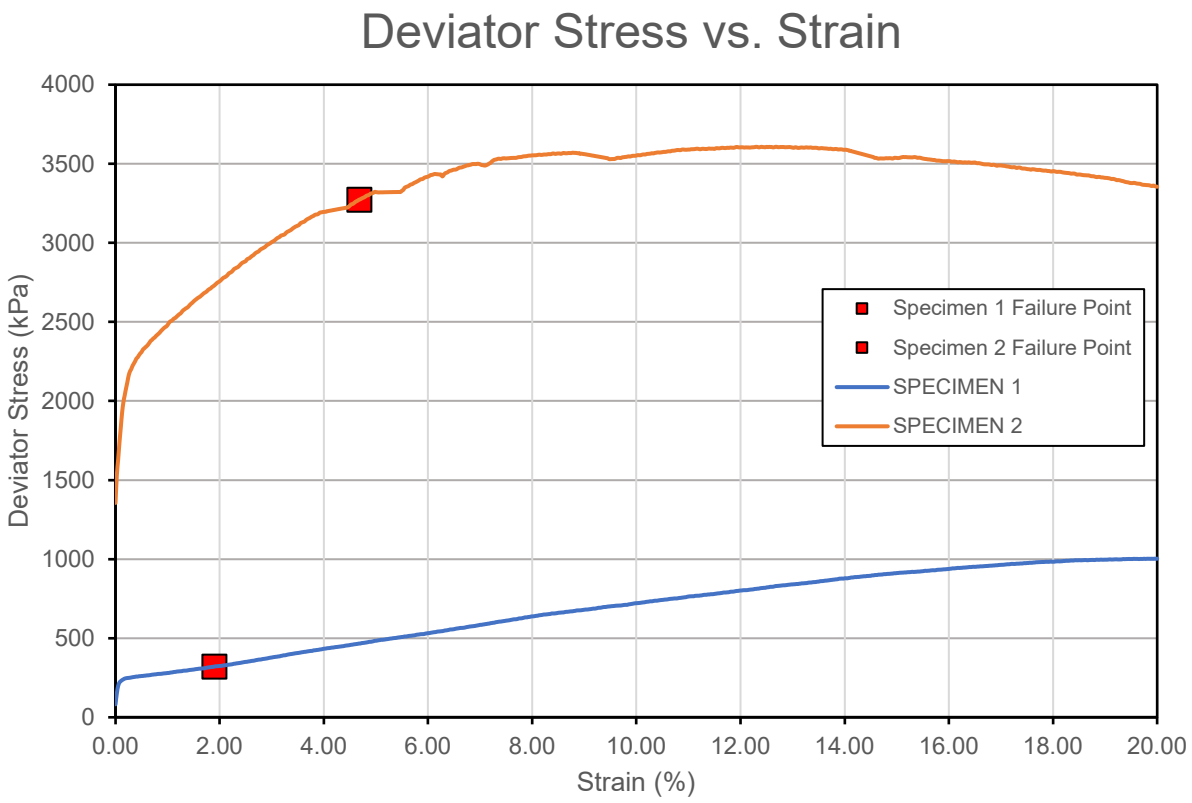
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 17.1

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	5

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K=0.66)	K_0-Conditions (Consol. K=0.46)
Sample ID:	SA39	SA45
Test ID:	CK0Uc-21	CK0Uc-22
Depth:	17.98m - 18.11m	21.79m - 22.00m

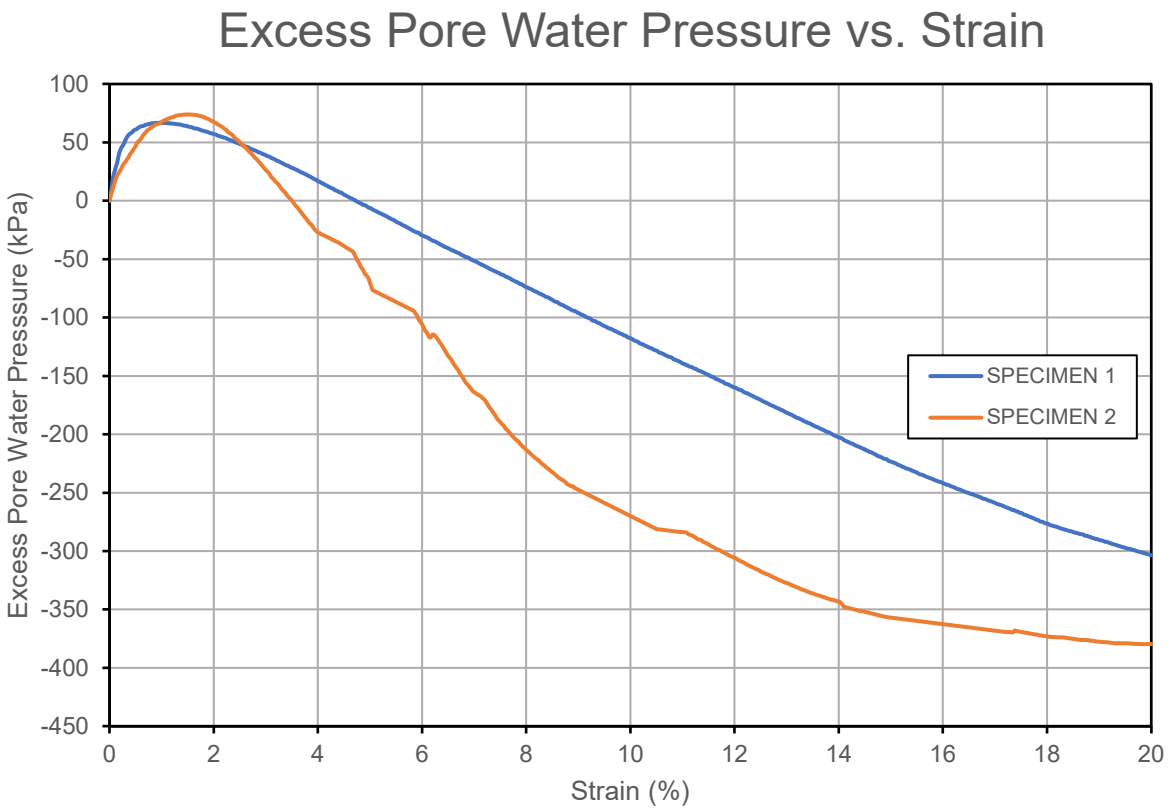


Note: Consolidation of Specimen 1 and 2 carried out under K0-conditions (zero lateral strain).

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	5

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K=0.66)	K_0-Conditions (Consol. K=0.46)
Sample ID:	SA39	SA45
Test ID:	CK0Uc-21	CK0Uc-22
Depth:	17.98m - 18.11m	21.79m - 22.00m



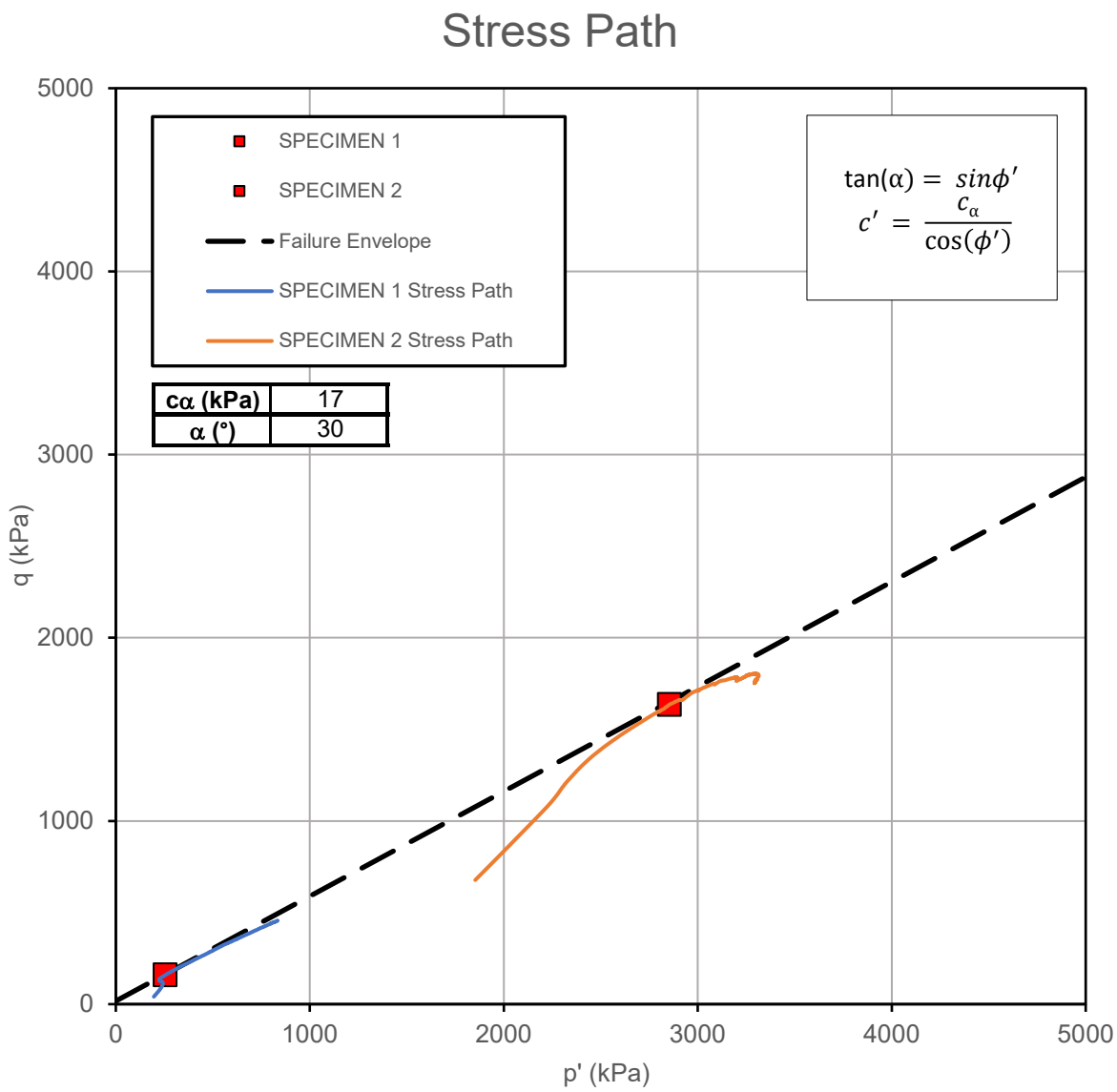
Note: Consolidation of Specimen 1 and 2 carried out under K0-conditions (zero lateral strain).

Figure No. I - 17.3

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	5

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K=0.66)	K_0-Conditions (Consol. K=0.46)
Sample ID:	SA39	SA45
Test ID:	CK0Uc-21	CK0Uc-22
Depth:	17.98m - 18.11m	21.79m - 22.00m



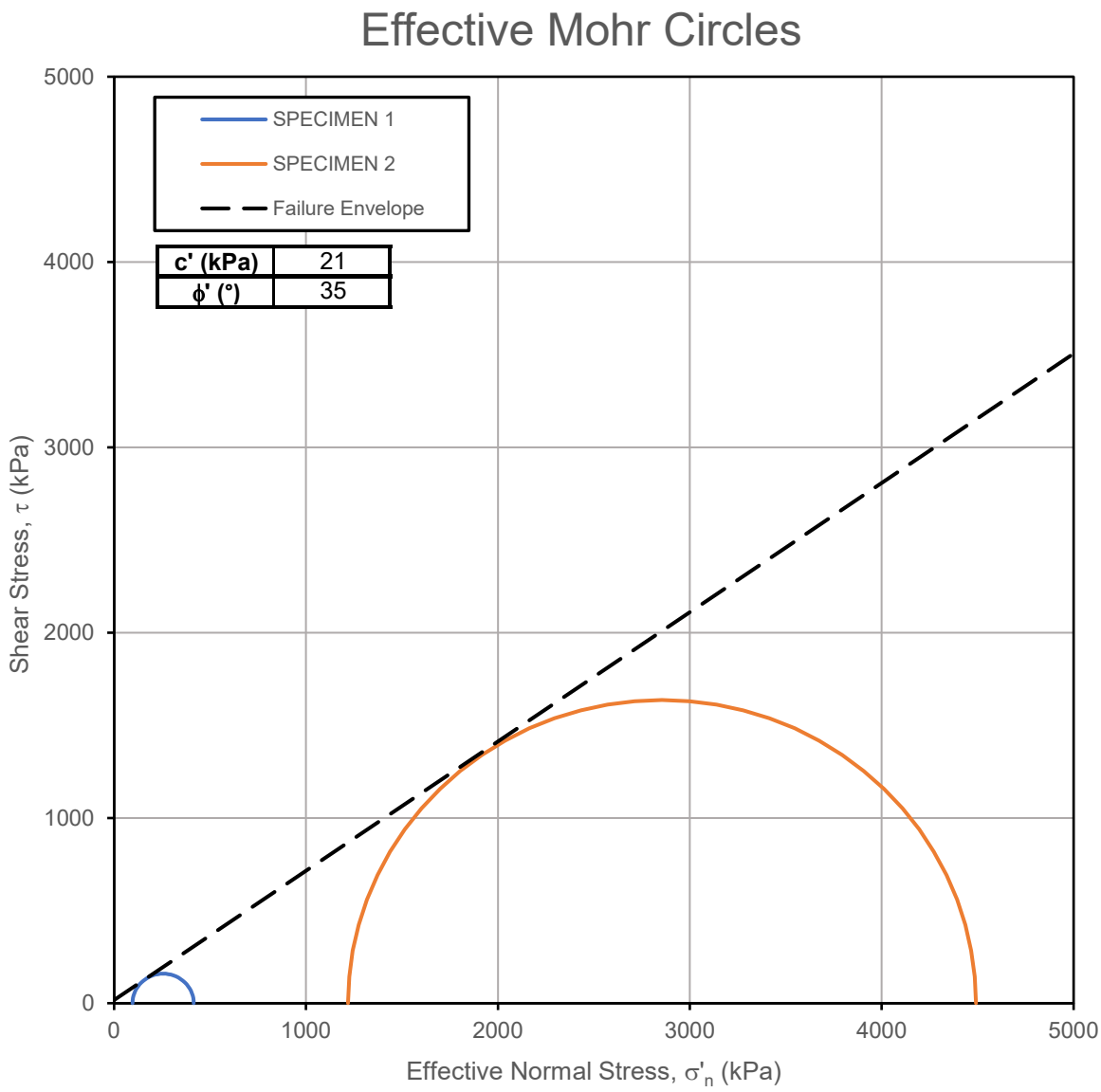
Note: Consolidation of Specimen 1 and 2 carried out under K0-conditions (zero lateral strain).

Figure No. I - 17.4

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	5

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K=0.66)	K_0-Conditions (Consol. K=0.46)
Sample ID:	SA39	SA45
Test ID:	CK0Uc-21	CK0Uc-22
Depth:	17.98m - 18.11m	21.79m - 22.00m



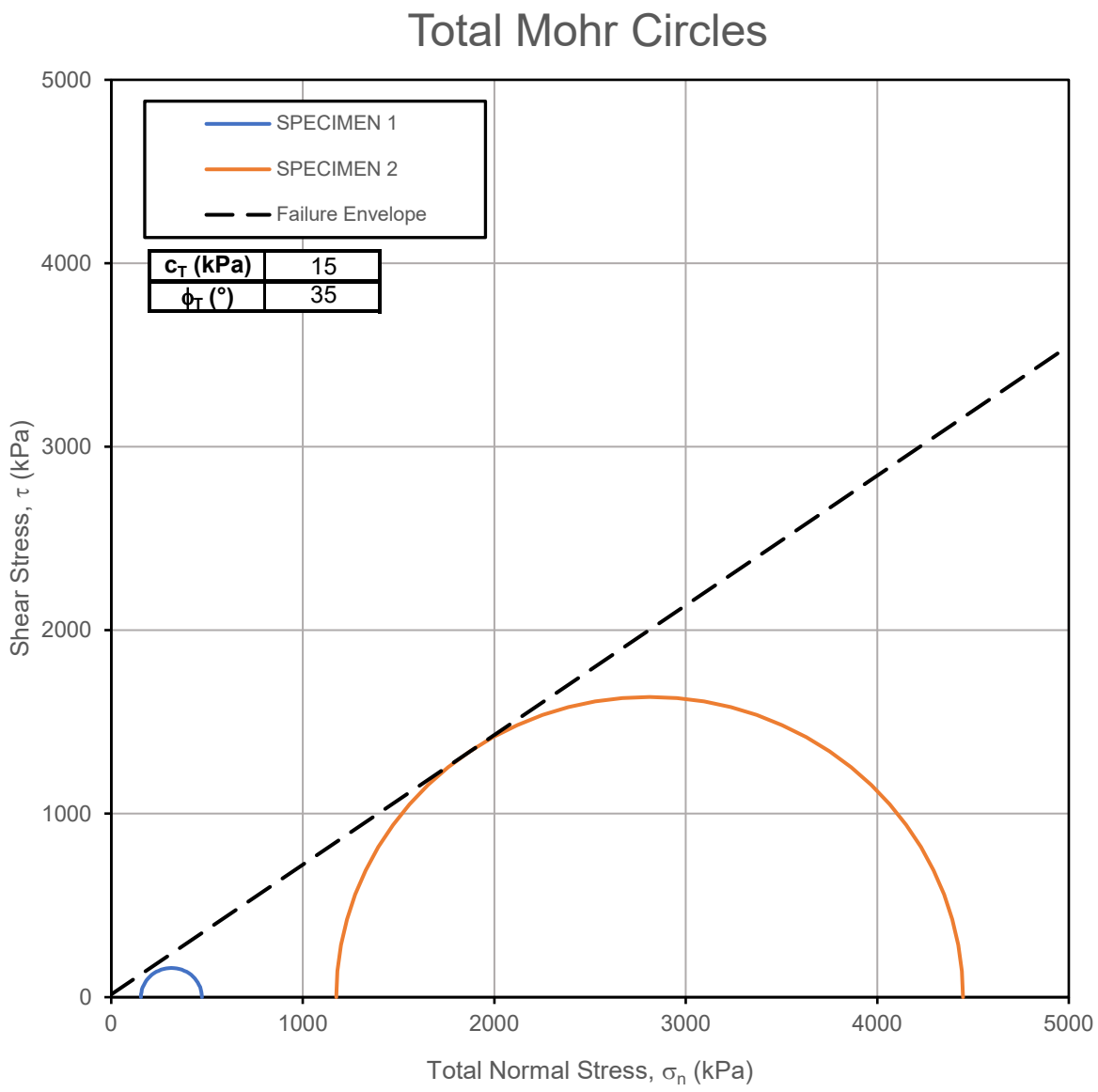
Note: Consolidation of Specimen 1 and 2 carried out under K0-conditions (zero lateral strain).

Figure No. I - 17.5

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	5

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K=0.66)	K_0-Conditions (Consol. K=0.46)
Sample ID:	SA39	SA45
Test ID:	CK0Uc-21	CK0Uc-22
Depth:	17.98m - 18.11m	21.79m - 22.00m



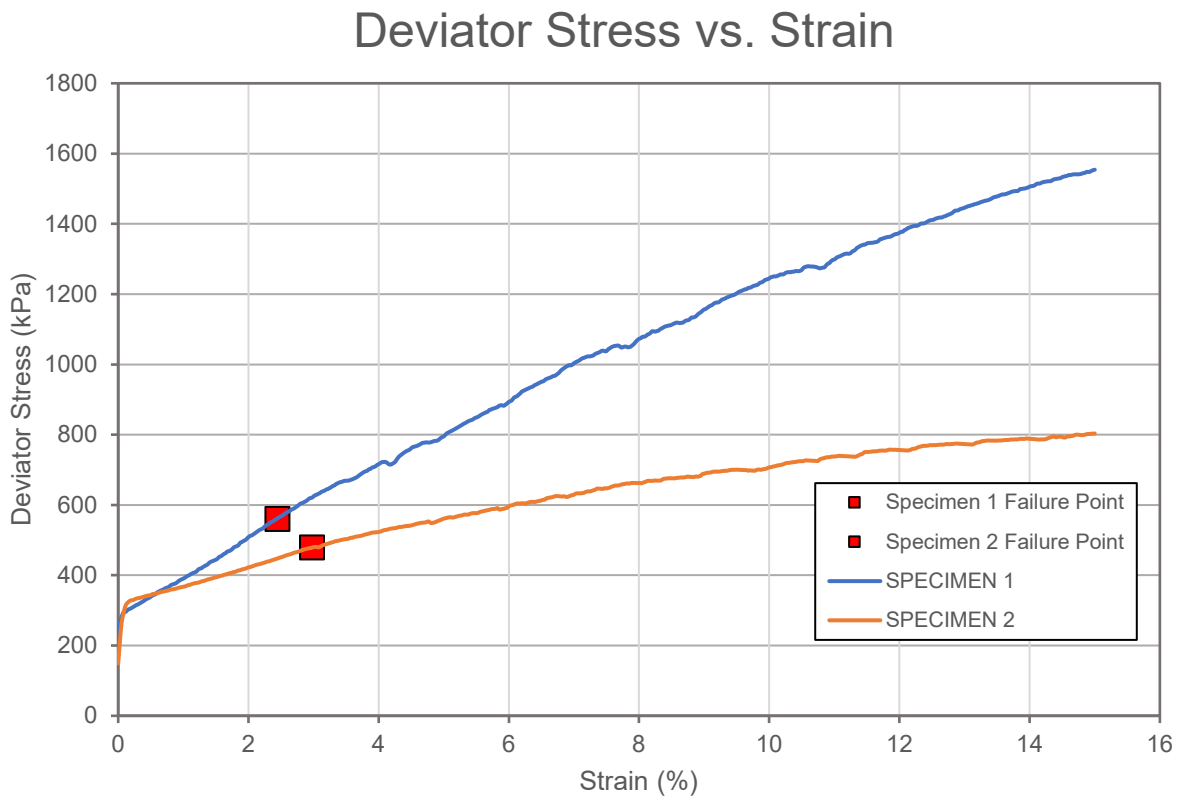
Note: Consolidation of Specimen 1 and 2 carried out under K0-conditions (zero lateral strain).

Figure No. I - 18.1

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.	21451329
BH ID	BH28S
Soil Unit:	5

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.30)	K_0-Conditions (Consol. K= 0.58)
Sample ID:	SA49	SA51-1
Test ID:	CK0Uc-16	CK0Uc-13
Depth:	26.11m - 26.24m	28.50m - 28.65m



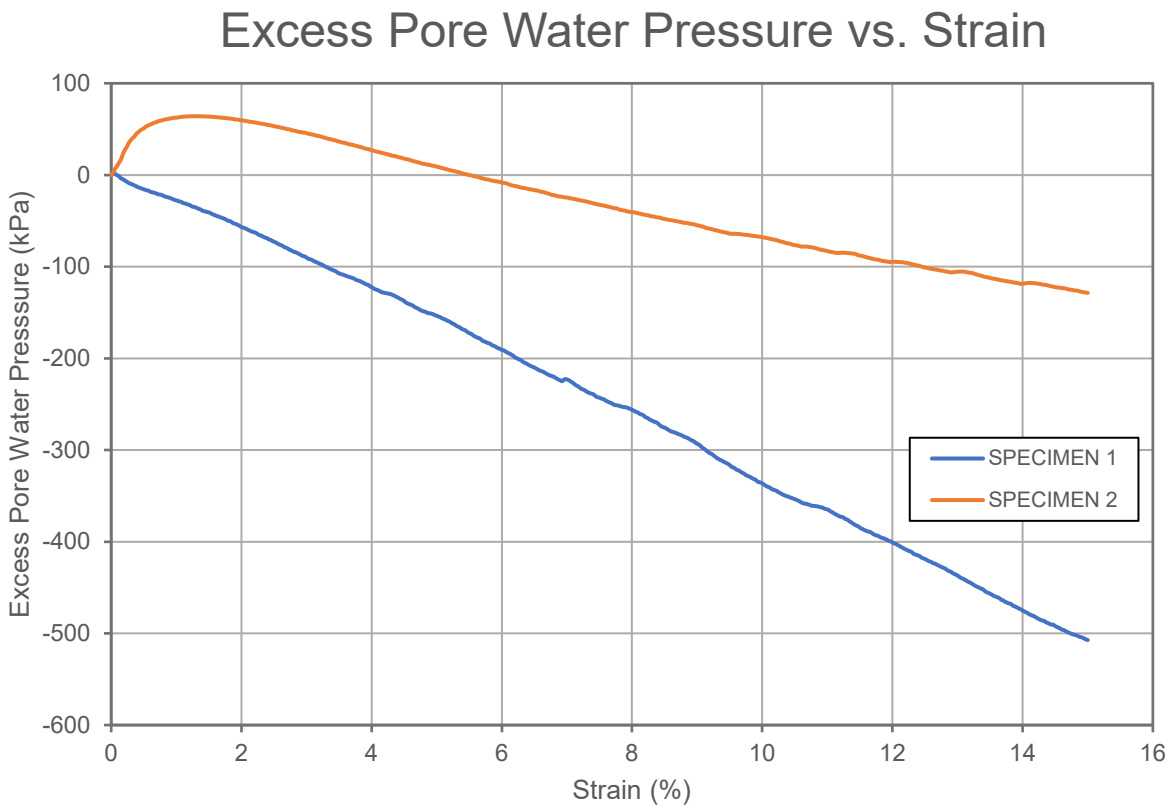
Note: Consolidation of Specimen 1 carried out under K_0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions, to end-of-consolidation stress ratio (K) indicated above.

Figure No. I - 18.2

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.	21451329
BH ID	BH28S
Soil Unit:	5

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.30)	K_0-Conditions (Consol. K= 0.58)
Sample ID:	SA49	SA51-1
Test ID:	CK0Uc-16	CK0Uc-13
Depth:	26.11m - 26.24m	28.50m - 28.65m

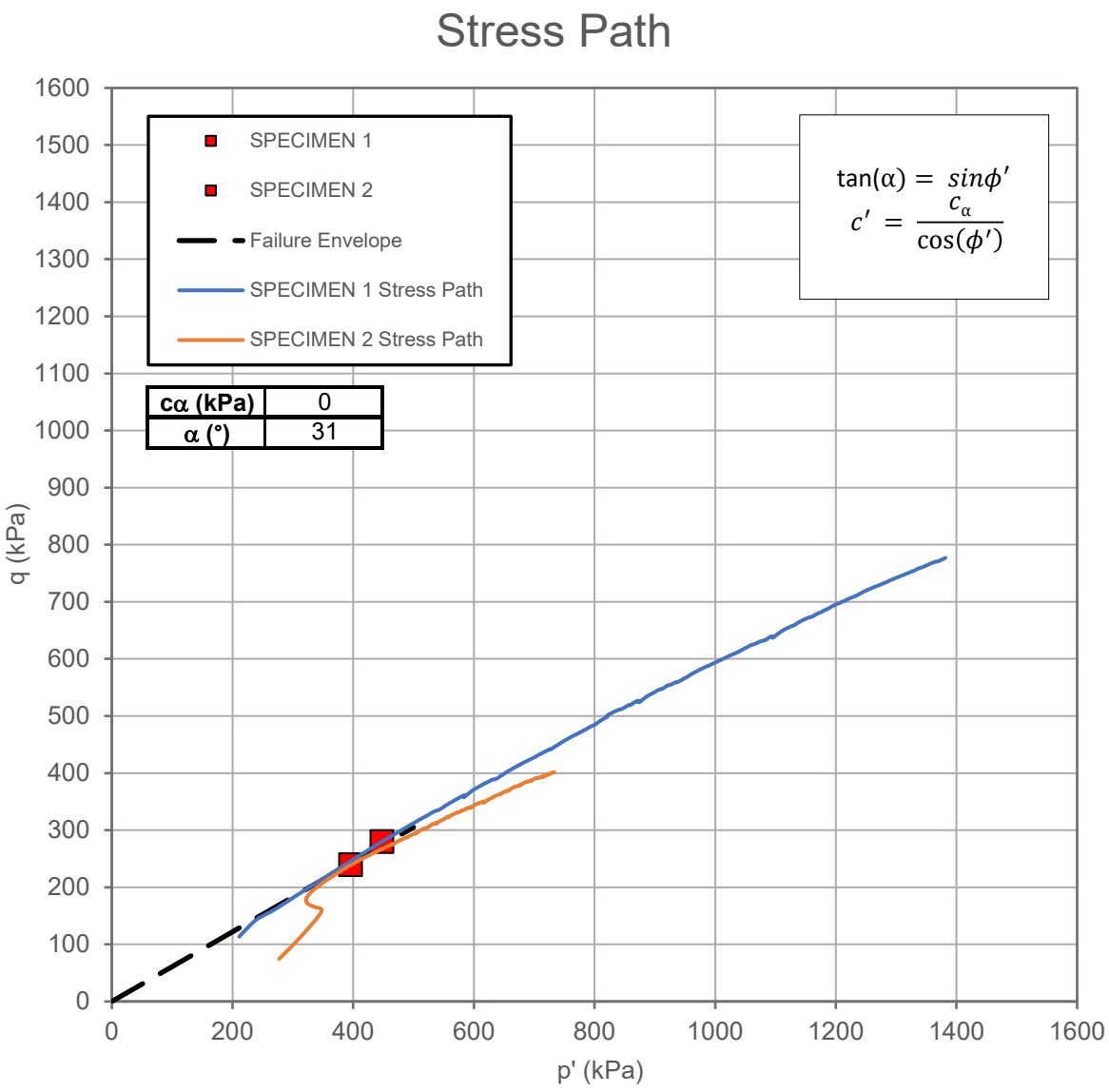


Note: Consolidation of Specimen 1 carried out under K_0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions, to end-of-consolidation stress ratio (K) indicated above.

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.	21451329
BH ID	BH28S
Soil Unit:	5

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.30)	K_0-Conditions (Consol. K= 0.58)
Sample ID:	SA49	SA51-1
Test ID:	CK0Uc-16	CK0Uc-13
Depth:	26.11m - 26.24m	28.50m - 28.65m



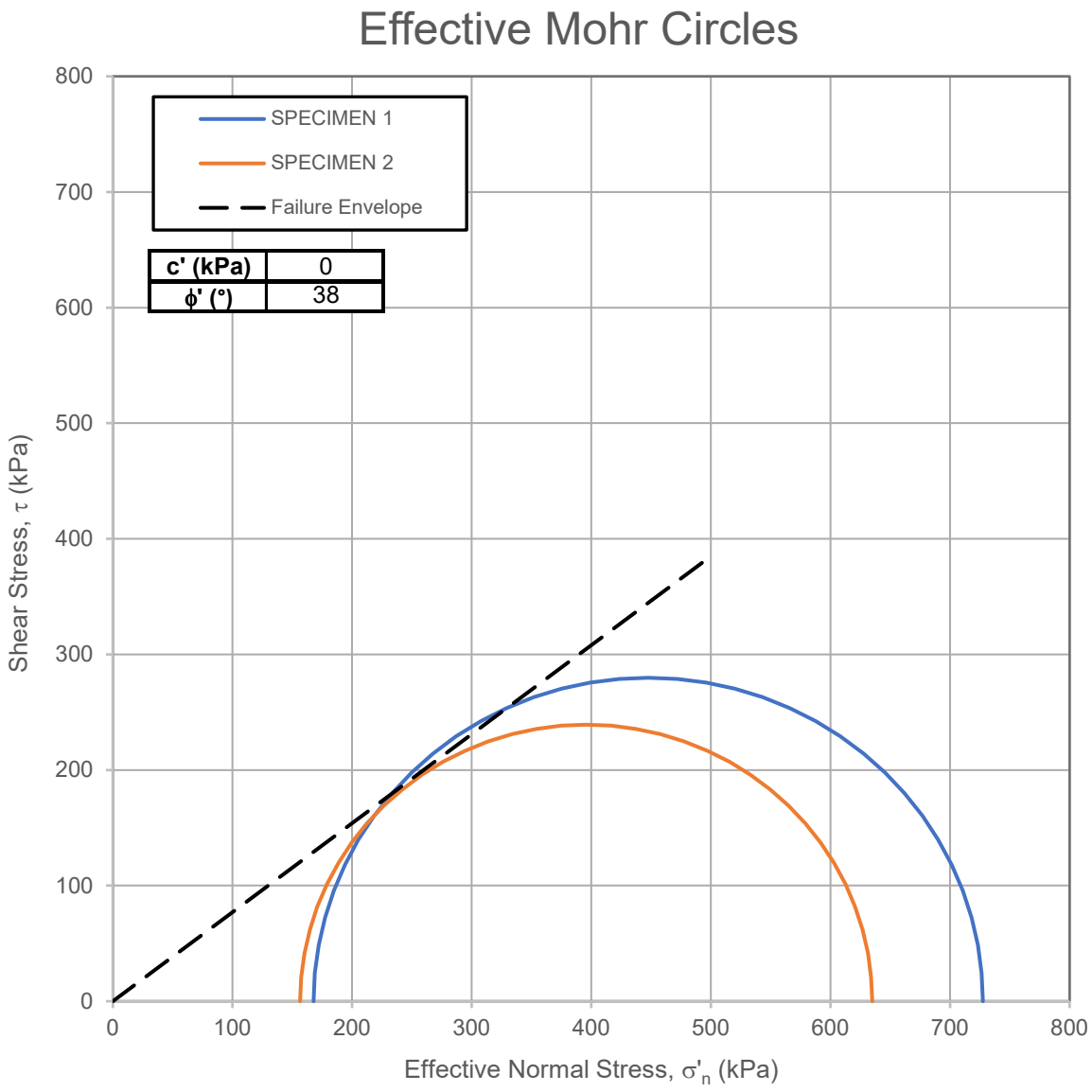
Note: Consolidation of Specimen 1 carried out under K_0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions, to end-of-consolidation stress ratio (K) indicated above.

Figure No. I - 18.4

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.	21451329
BH ID	BH28S
Soil Unit:	5

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.30)	K_0-Conditions (Consol. K= 0.58)
Sample ID:	SA49	SA51-1
Test ID:	CK0Uc-16	CK0Uc-13
Depth:	26.11m - 26.24m	28.50m - 28.65m



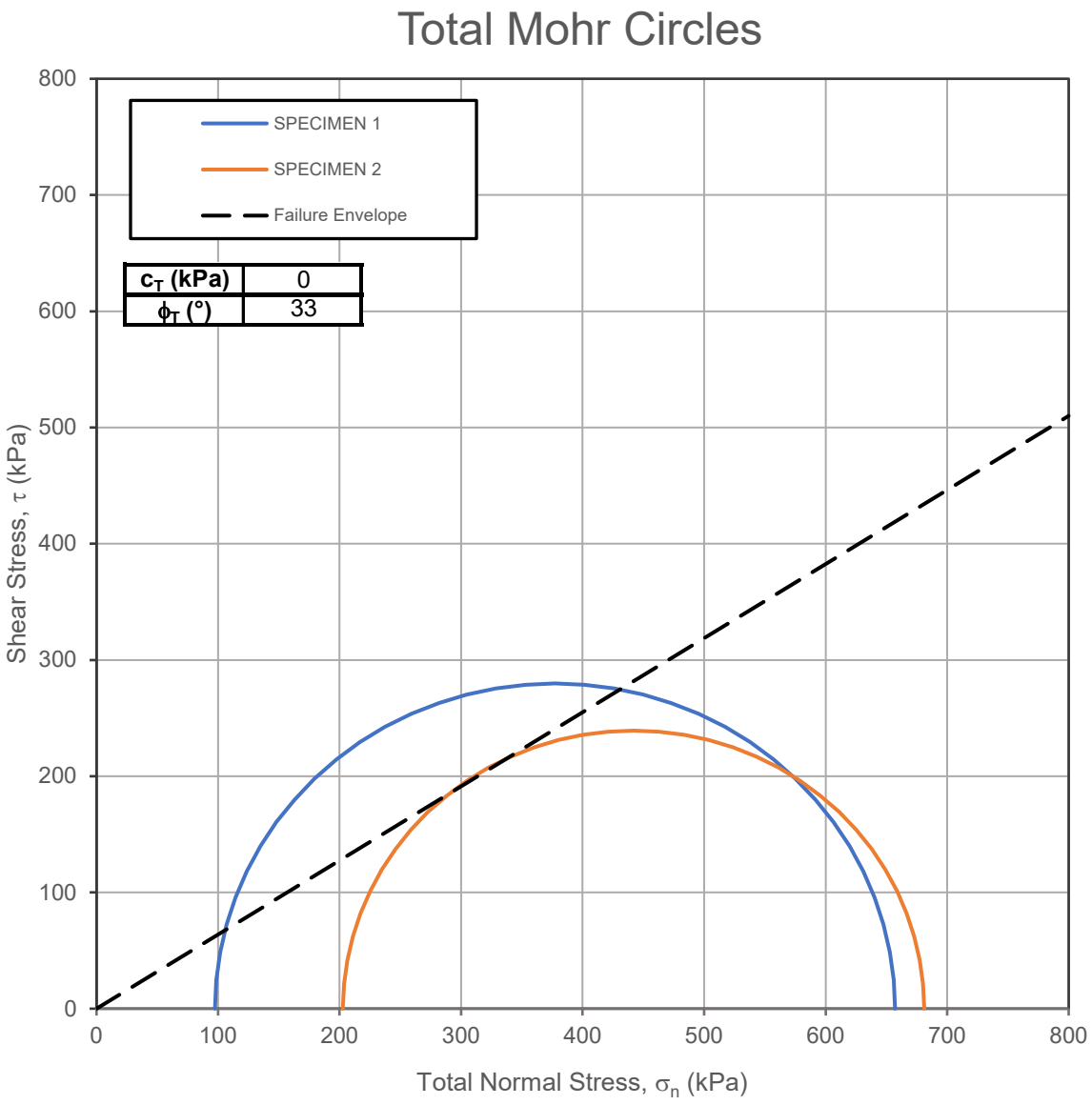
Note: Consolidation of Specimen 1 carried out under K_0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions, to end-of-consolidation stress ratio (K) indicated above.

Figure No. I - 18.5

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.	21451329
BH ID	BH28S
Soil Unit:	5

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K= 0.30)	K_0-Conditions (Consol. K= 0.58)
Sample ID:	SA49	SA51-1
Test ID:	CK0Uc-16	CK0Uc-13
Depth:	26.11m - 26.24m	28.50m - 28.65m



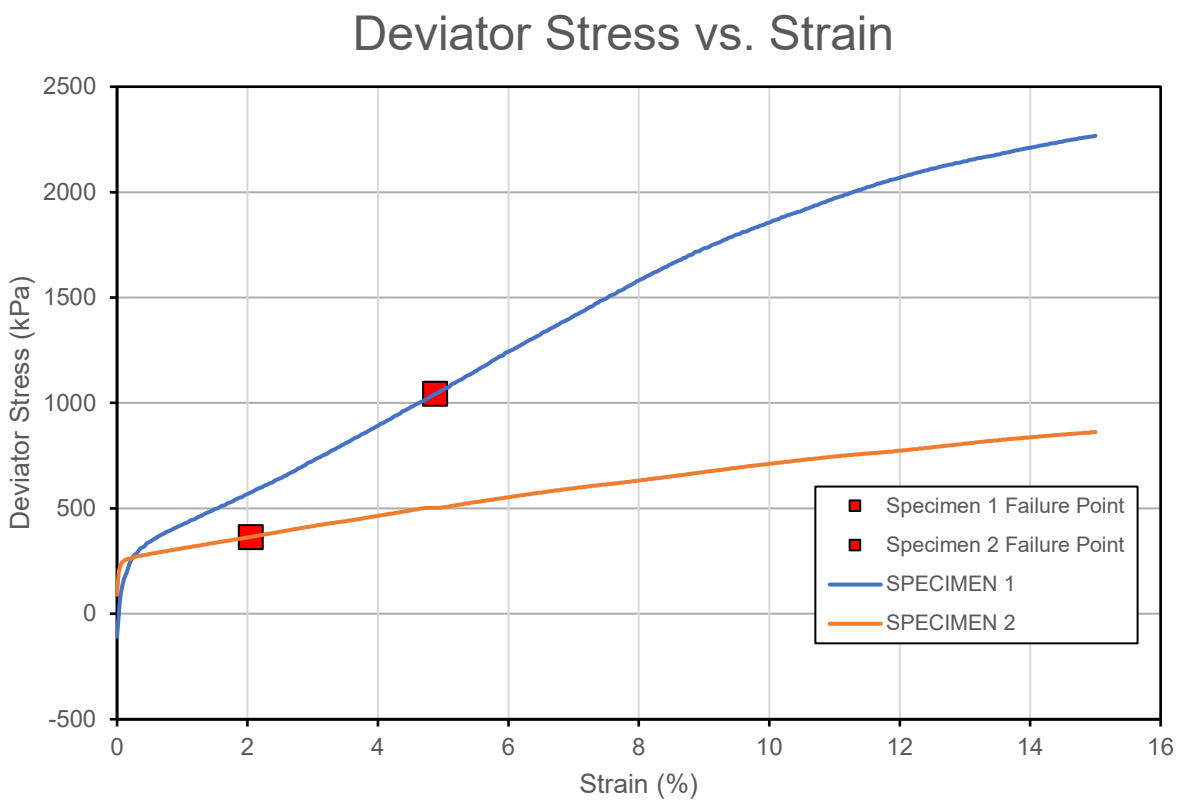
Note: Consolidation of Specimen 1 carried out under K_0-conditions (zero lateral strain). Consolidation of Specimen(s) 2 and 3 (if applicable) carried out under anisotropic conditions, to end-of-consolidation stress ratio (K) indicated above.

Figure No. I - 19.1

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	5

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K=1.44)	K_0-Conditions (Consol. K= 0.69)
Sample ID:	SA42	SA44-2
Test ID:	CK0Uc-15	CK0Uc-14
Depth:	22.59m - 22.72m	23.19m - 23.32m



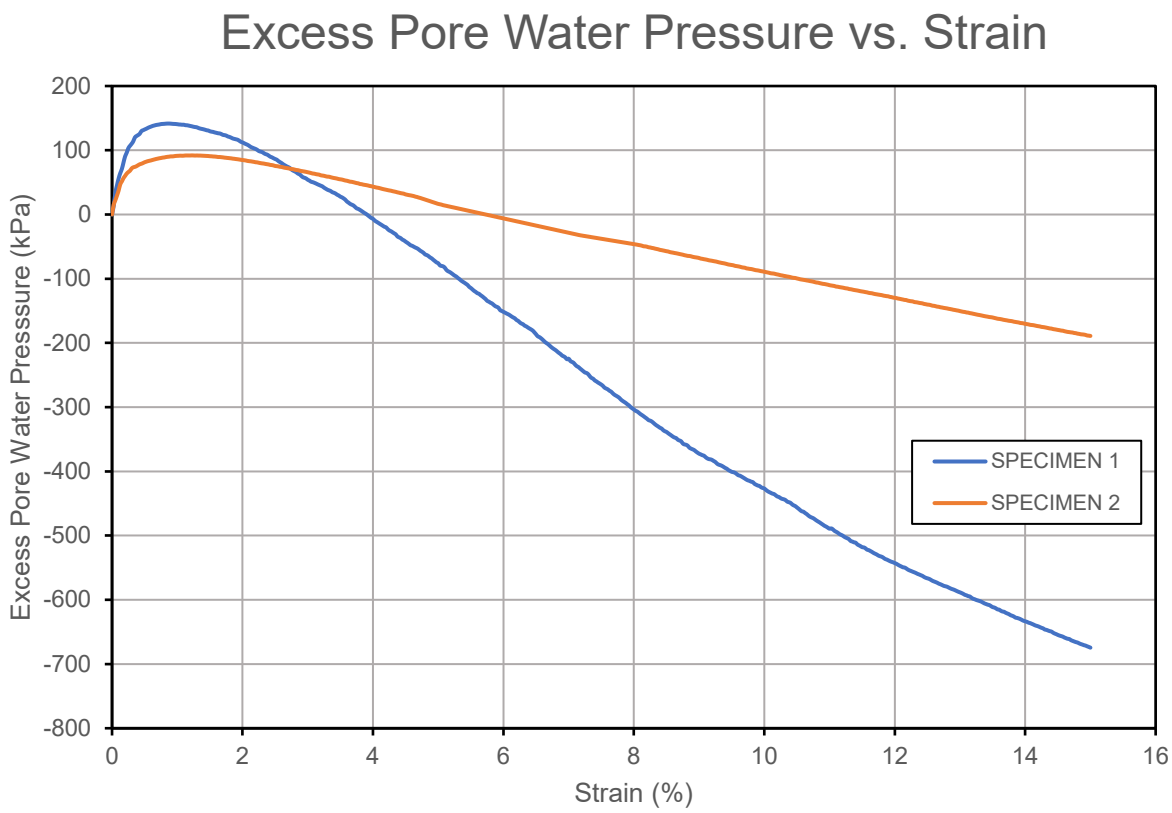
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 19.2

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	5

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K=1.44)	K_0-Conditions (Consol. K= 0.69)
Sample ID:	SA42	SA44-2
Test ID:	CK0Uc-15	CK0Uc-14
Depth:	22.59m - 22.72m	23.19m - 23.32m



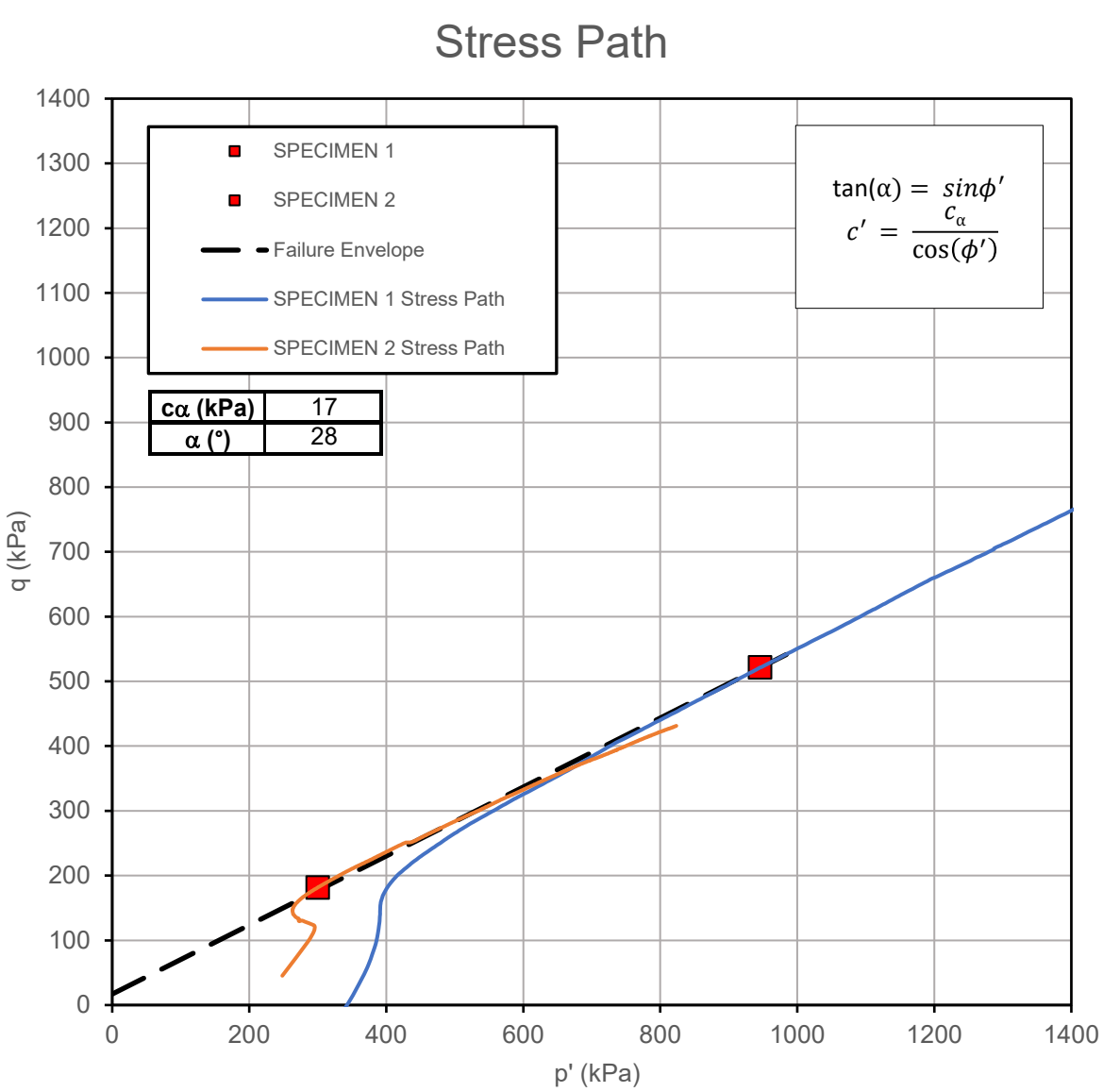
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 19.3

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	5

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K=1.44)	K_0-Conditions (Consol. K= 0.69)
Sample ID:	SA42	SA44-2
Test ID:	CK0Uc-15	CK0Uc-14
Depth:	22.59m - 22.72m	23.19m - 23.32m



Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	5

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K=1.44)	K_0-Conditions (Consol. K= 0.69)
Sample ID:	SA42	SA44-2
Test ID:	CK0Uc-15	CK0Uc-14
Depth:	22.59m - 22.72m	23.19m - 23.32m



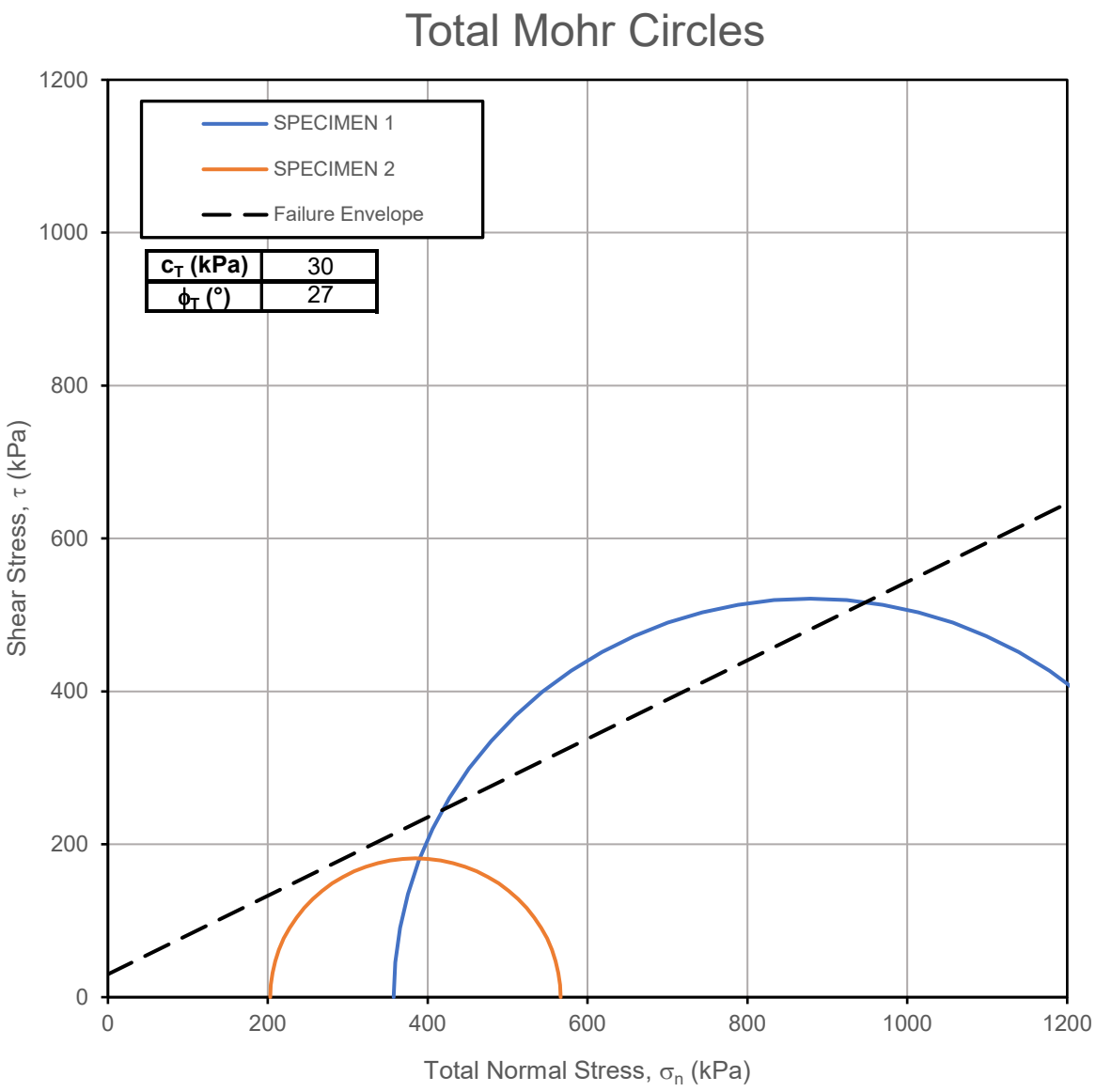
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 19.5

Consolidated Undrained (CK_0U and CAU) Triaxial Test

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	5

	Specimen 1	Specimen 2
Consolidation Stage:	K_0-Conditions (Consol. K=1.44)	K_0-Conditions (Consol. K= 0.69)
Sample ID:	SA42	SA44-2
Test ID:	CK0Uc-15	CK0Uc-14
Depth:	22.59m - 22.72m	23.19m - 23.32m



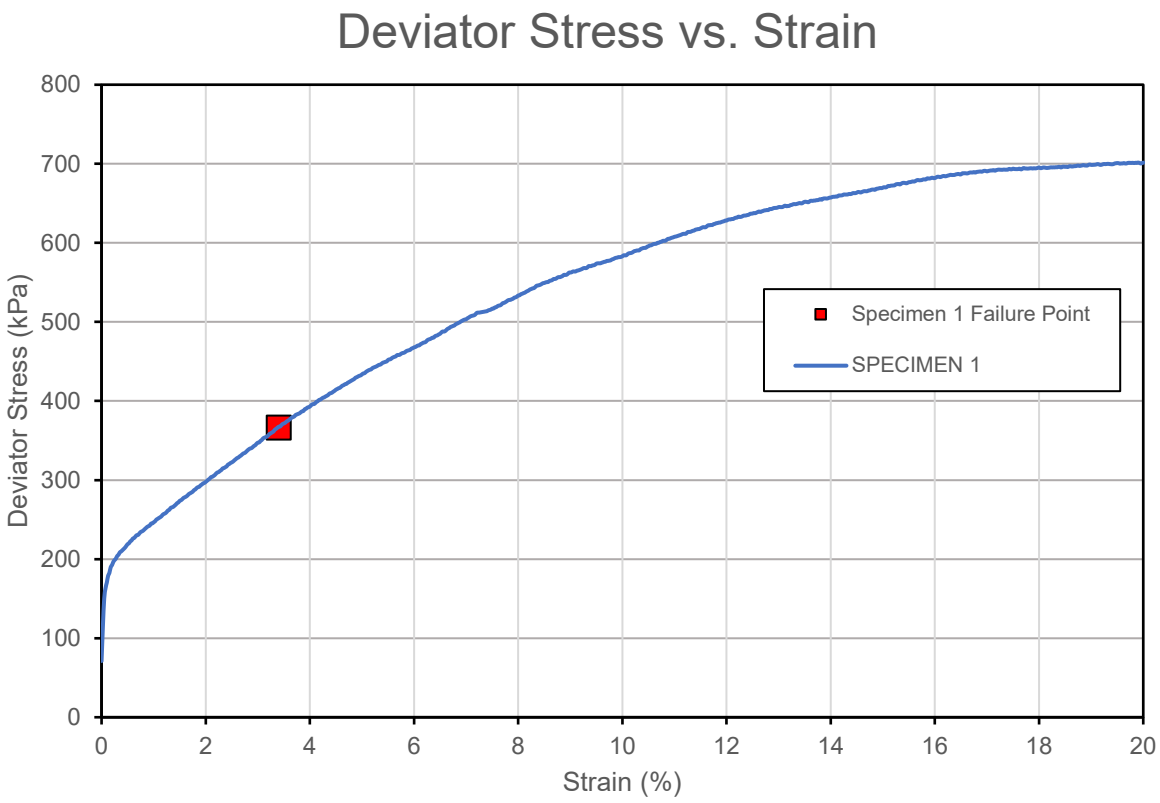
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 20.1

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH83S
Soil Unit:	5

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=0.73)
Sample ID:	SA15
Test ID:	CKoUc-33
Depth:	20.52m - 20.65m



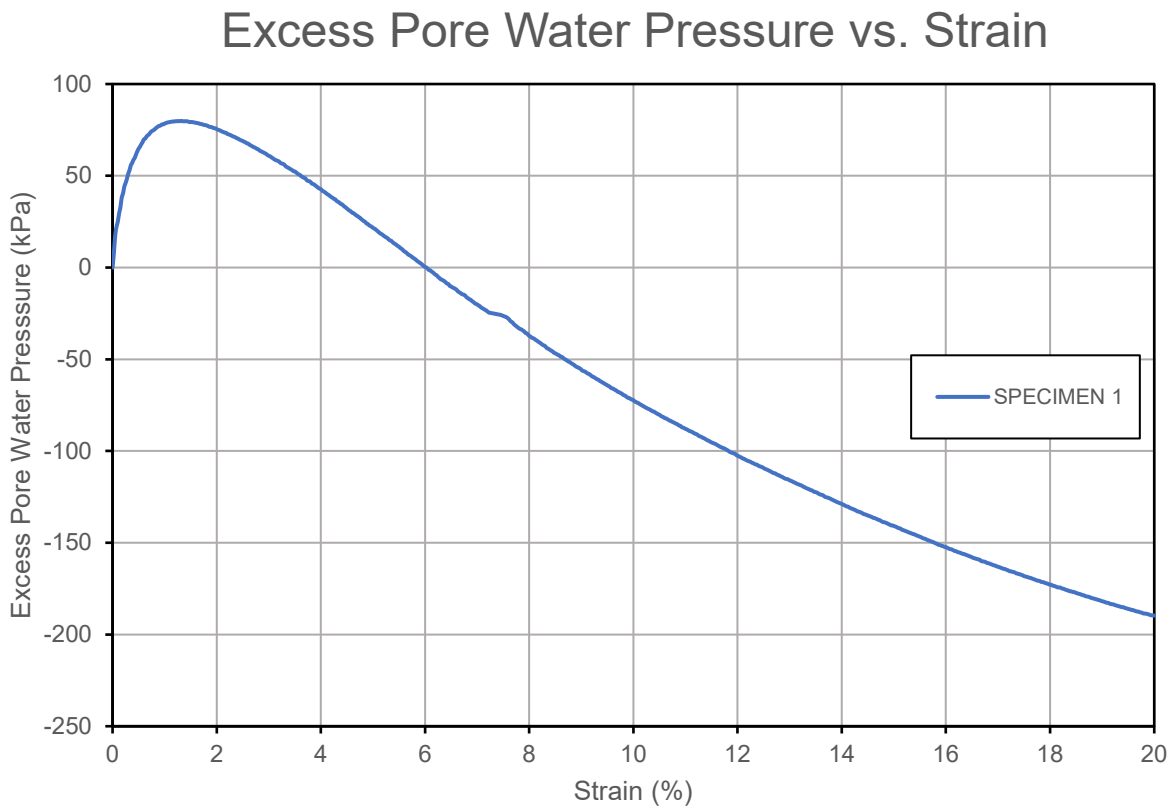
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 20.2

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH83S
Soil Unit:	5

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=0.73)
Sample ID:	SA15
Test ID:	CKoUc-33
Depth:	20.52m - 20.65m



Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH83S
Soil Unit:	5

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=0.73)
Sample ID:	SA15
Test ID:	CKoUc-33
Depth:	20.52m - 20.65m



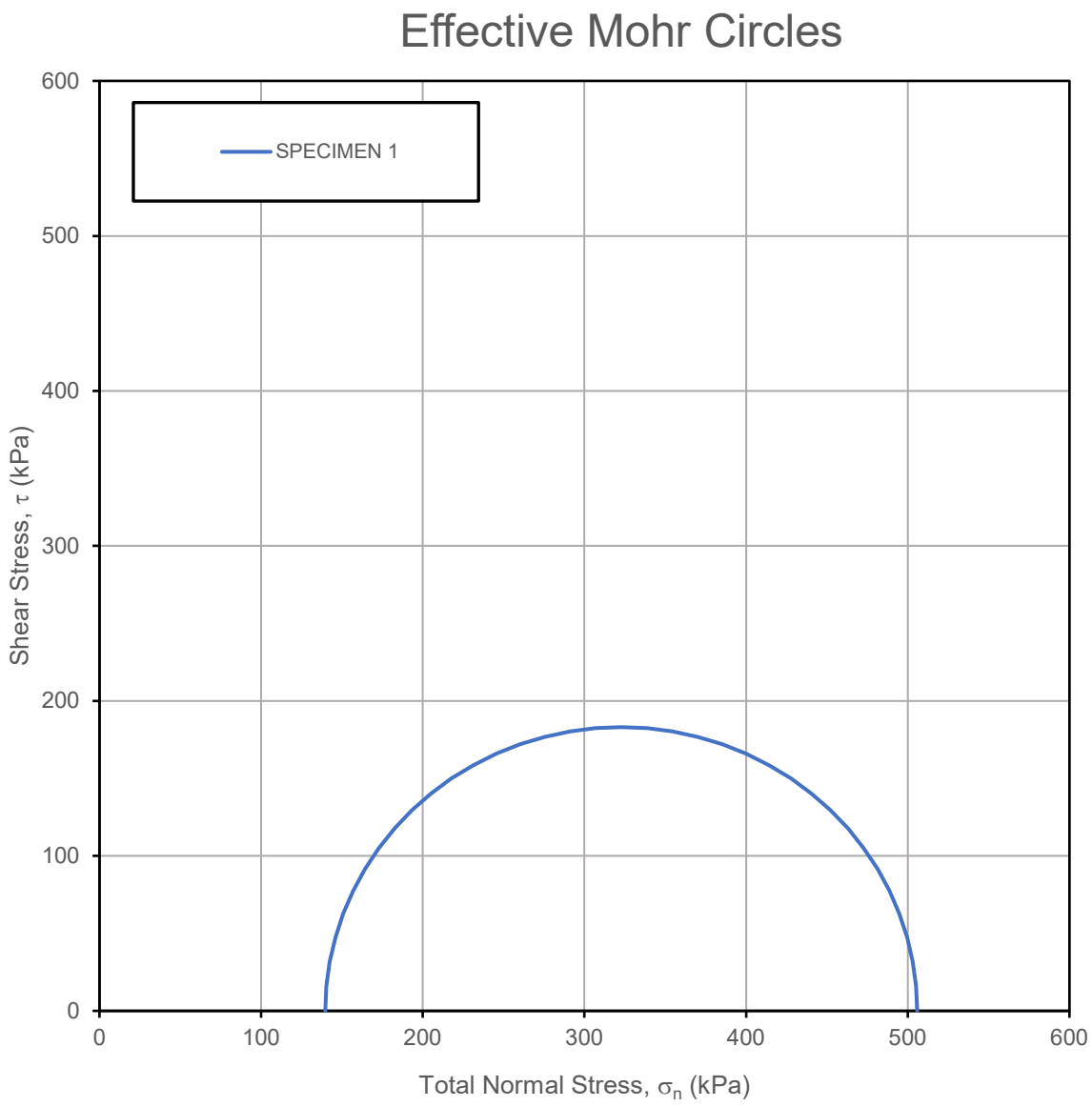
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 20.4

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH83S
Soil Unit:	5

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=0.73)
Sample ID:	SA15
Test ID:	CKoUc-33
Depth:	20.52m - 20.65m



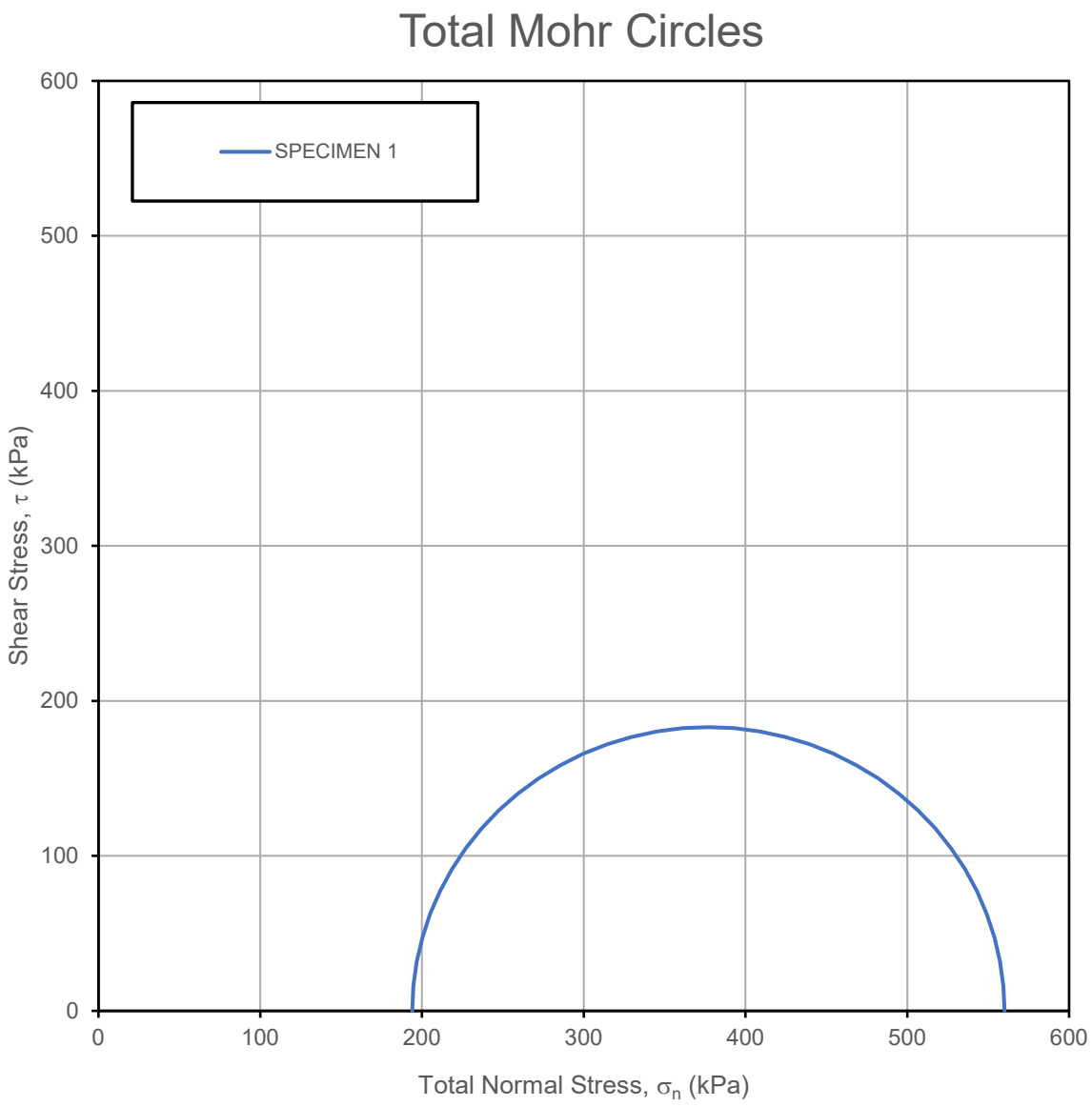
Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

Figure No. I - 20.5

Consolidated Undrained (CK_0U) Triaxial Test

Project No.:	21451329
BH ID:	BH83S
Soil Unit:	5

	Specimen 1
Consolidation Stage:	K_0-Conditions (Consol. K=0.73)
Sample ID:	SA15
Test ID:	CKoUc-33
Depth:	20.52m - 20.65m



Note: Consolidation of Specimen 1 carried out under K0-conditions (zero lateral strain).

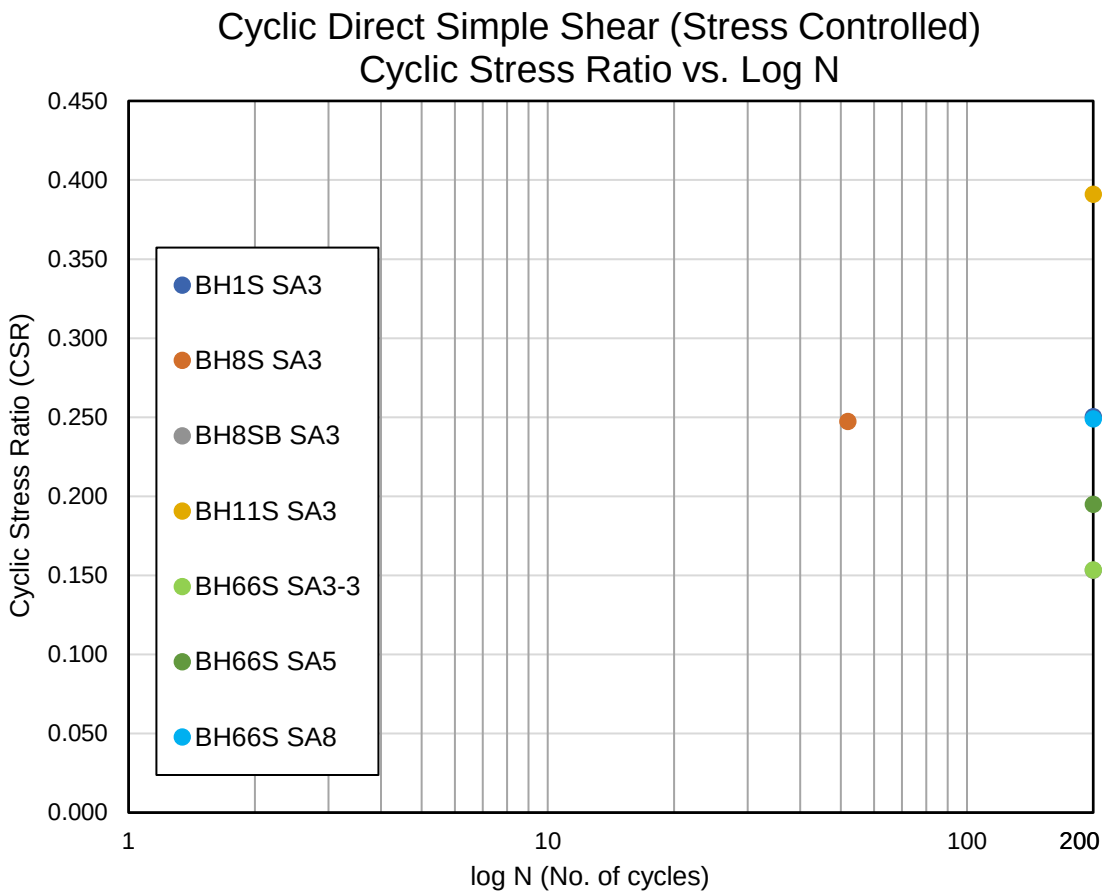
APPENDIX J

Stress-Controlled Cyclic Direct Simple Shear Testing Interpretations

Figure No. J1.1

Cyclic Direct Simple Shear (Stress Controlled)

Project No. 21451329 **Soil Unit** 2a



Borehole ID	Sample ID	Effective Vertical Consolidation Stress σ'c (kPa)	No. of Cycles	Cyclic Stress Ratio	Comments
BH1S	SA3	43	200	0.250	See Note 1
BH8S	SA3	40	52	0.247	-
BH8SB	SA3	41	200	0.153	See Note 1
BH11S	SA3	43	200	0.391	See Note 1
BH66S	SA3-3	59	200	0.153	See Note 1
BH66S	SA5	64	200	0.195	See Note 1
BH66S	SA8	73	200	0.249	See Note 1

Note:
1. Test results indicate that samples did not achieve single strain amplitude failure criteria before reaching threshold of N = 200 cycles.

Figure No. J1.2

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	2a
Sample ID:	SA3
Test ID:	CDSS-29
Depth:	1.79m - 1.87m

BH1S SA3 CDSS-29

Effective Consolidation Stress σ'c (kPa)	43
Sr/σ'c	0.86
Failure Criteria	5% single amplitude shear strain or N = 200
Cyclic Stress Ratio	0.250
Cycle	200
Shear Strain γ (%)	0.43
Shear Stress t (kPa)	10.82

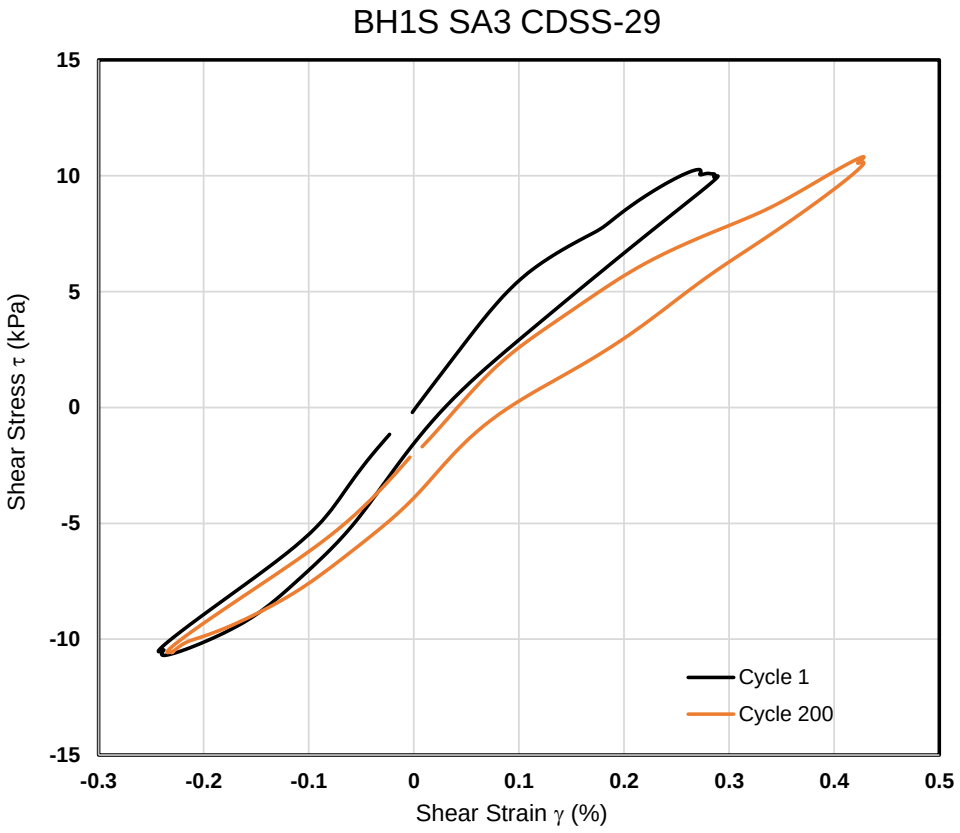


Figure No. J1.3

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH8S
Soil Unit:	2a
Sample ID:	SA3
Test ID:	CDSS-46
Depth:	1.75m - 2.03m

BH8S SA3 CDSS-46

Effective Consolidation Stress σ'c (kPa)	40
Sr/σ'c	0.95
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.247
Cycle	52
Shear Strain γ (%)	3.75
Shear Stress t (kPa)	9.82

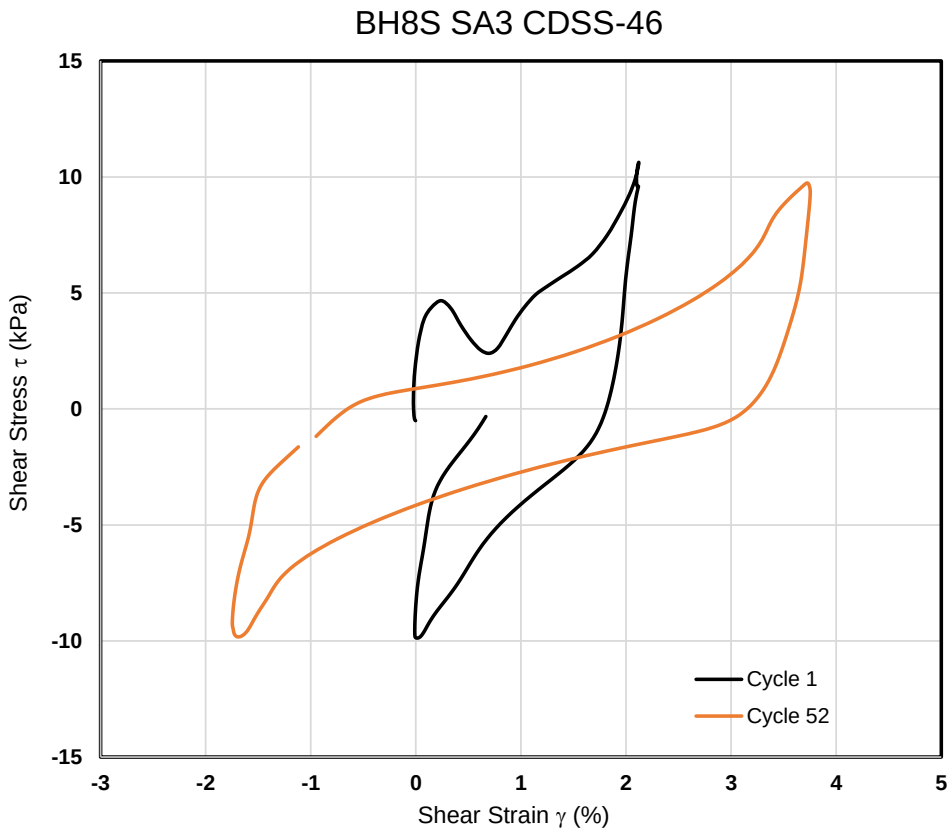


Figure No. J1.4

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH8SB
Soil Unit:	2a
Sample ID:	SA3
Test ID:	CDSS-47
Depth:	2.06m - 2.11m

BH8SB SA3 CDSS-47

Effective Consolidation Stress σ'c (kPa)	41
Sr/σ'c	1.59
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.153
Cycle	200
Shear Strain γ (%)	0.33
Shear Stress t (kPa)	6.27

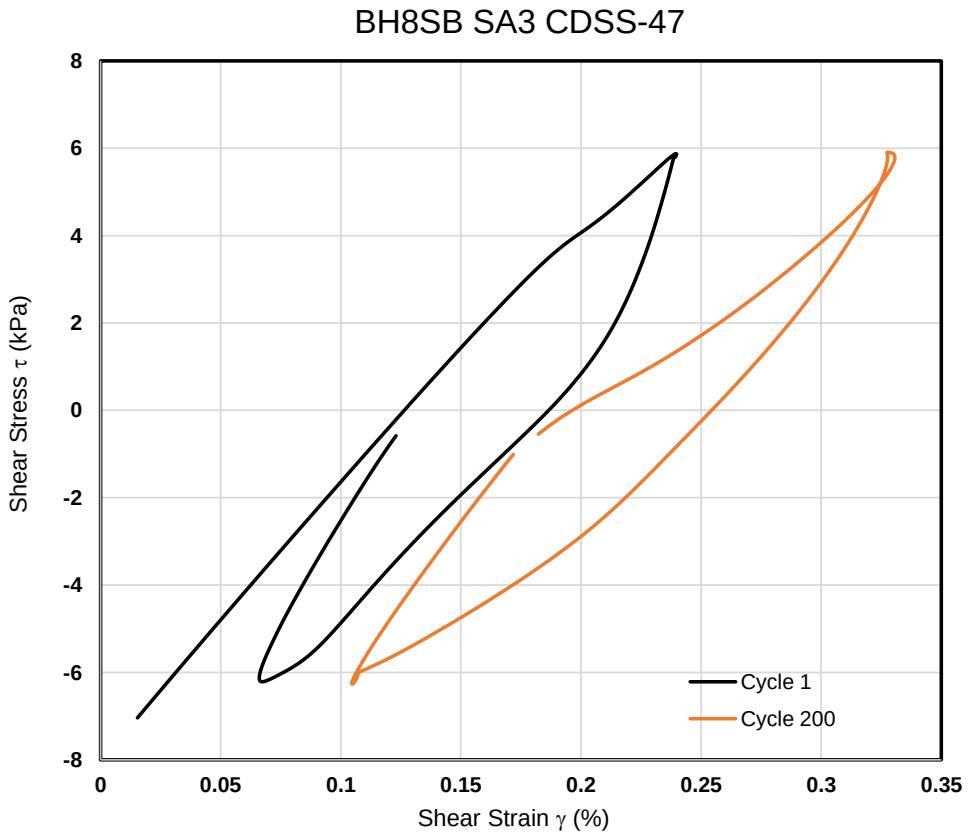


Figure No. J1.5

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH11S
Soil Unit:	2a
Sample ID:	SA3
Test ID:	CDSS-38
Depth:	1.96m - 2.01m

BH11S SA3 CDSS-38

Effective Consolidation Stress σ'c (kPa)	43
Sr/σ'c	0.66
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.391
Cycle	200
Shear Strain γ (%)	0.57
Shear Stress t (kPa)	16.65

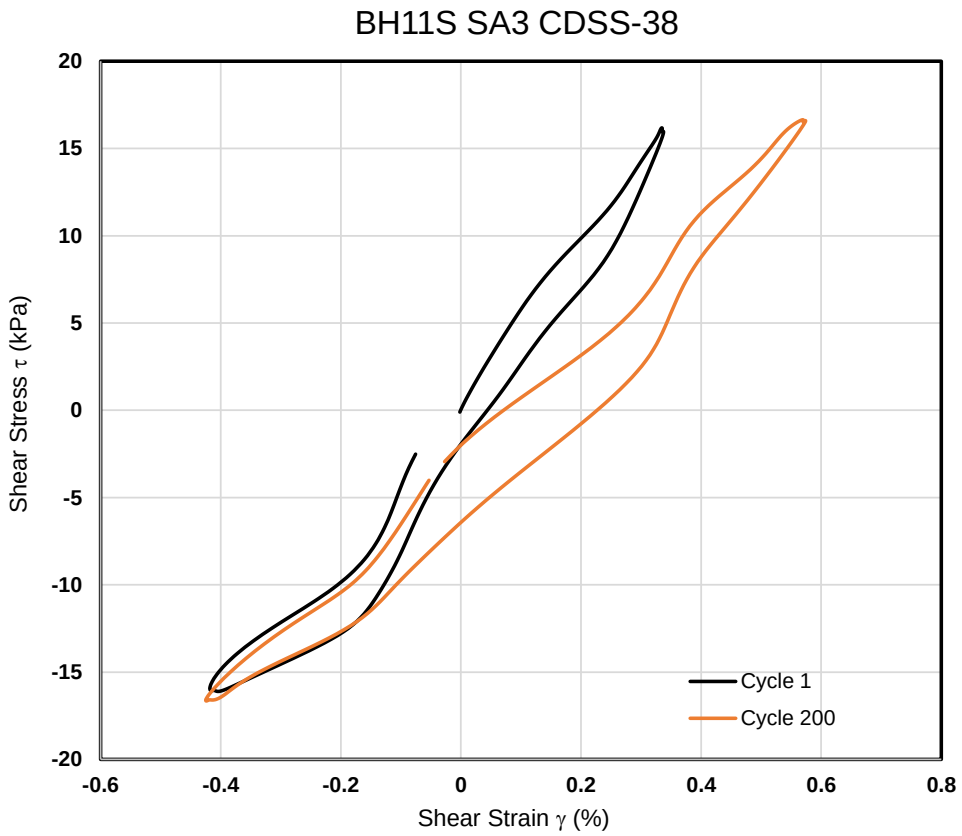


Figure No. J1.6

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	2a
Sample ID:	SA3-3
Test ID:	CDSS-5
Depth:	2.96m - 2.98m

BH66S SA3-3 CDSS-5

Effective Consolidation Stress σ'c (kPa)	59
Sr/σ'c	1.13
Failure Criteria	5% single strain amplitude or N=200
Cyclic Stress Ratio	0.153
Cycle	200
Shear Strain γ (%)	0.25
Shear Stress t (kPa)	9.07

.

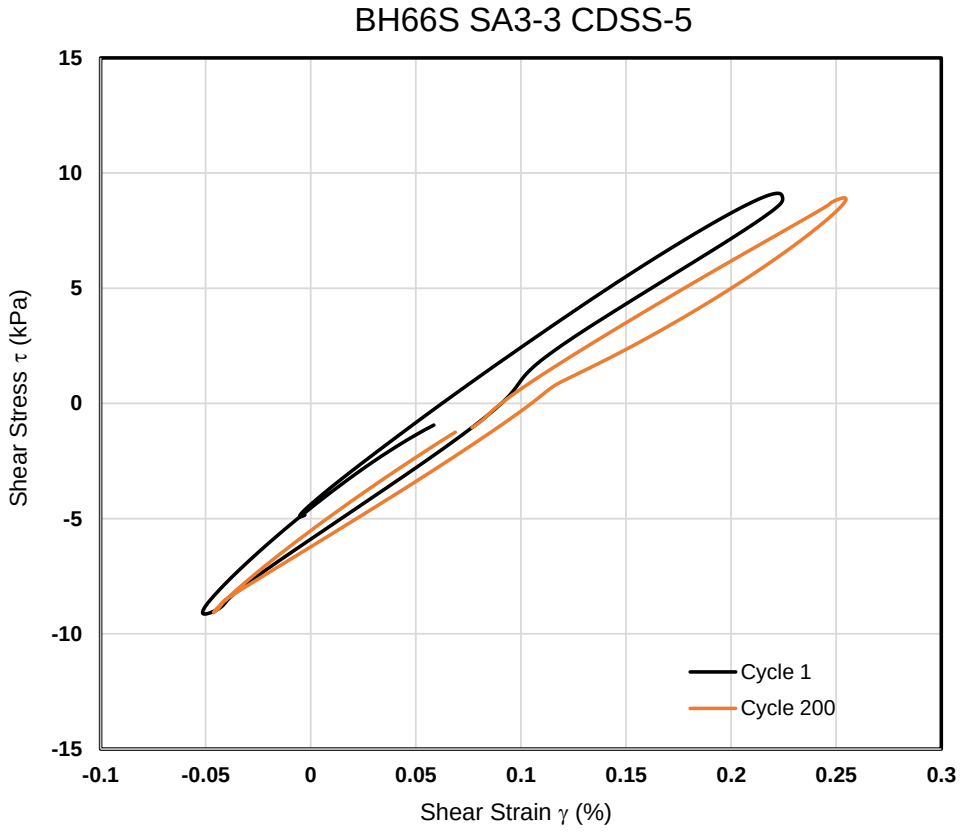


Figure No. J1.7

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	2a
Sample ID:	SA5
Test ID:	CDSS-3A
Depth:	3.42m - 3.45m

BH66S SA5 CDSS-3A

Effective Consolidation Stress σ'c (kPa)	64
Sr/σ'c	1.41
Failure Criteria	5% single strain amplitude or N=200
Cyclic Stress Ratio	0.195
Cycle	200
Shear Strain γ (%)	0.33
Shear Stress t (kPa)	12.53

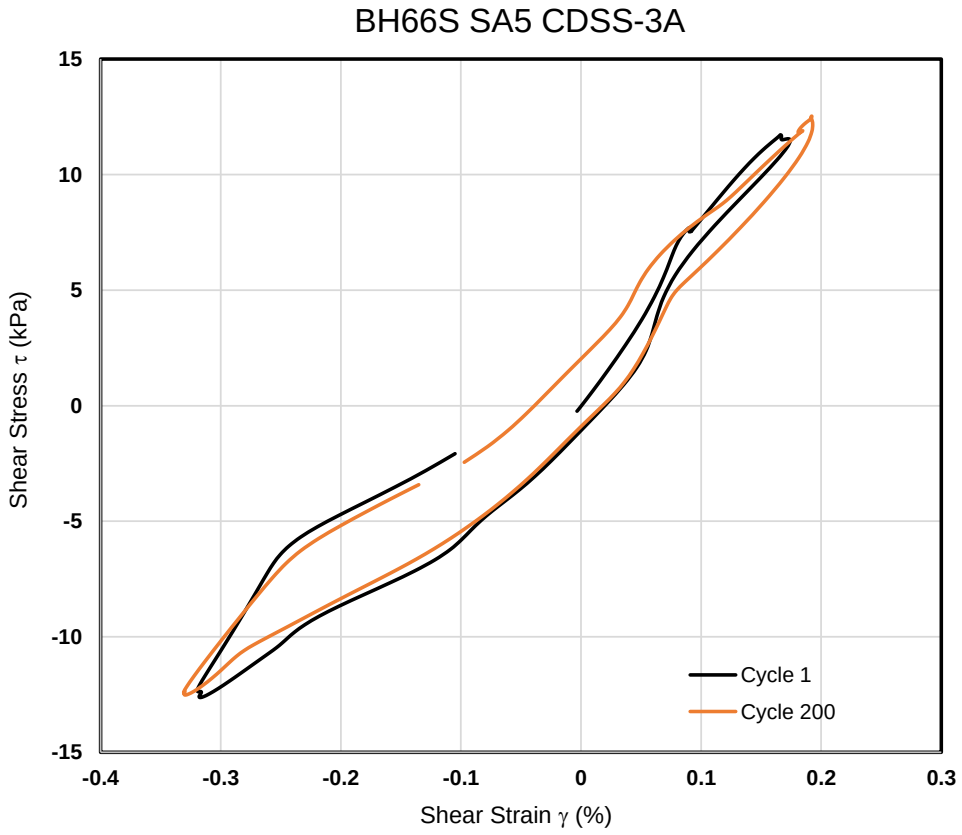


Figure No. J1.8

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	2a
Sample ID:	SA8
Test ID:	CDSS-6
Depth:	4.19m - 4.22m

BH66S SA8 CDSS-6

Effective Consolidation Stress σ'c (kPa)	73
Sr/σ'c	1.32
Failure Criteria	5% single strain amplitude or N=200
Cyclic Stress Ratio	0.249
Cycle	200
Shear Strain γ (%)	0.41
Shear Stress t (kPa)	18.15

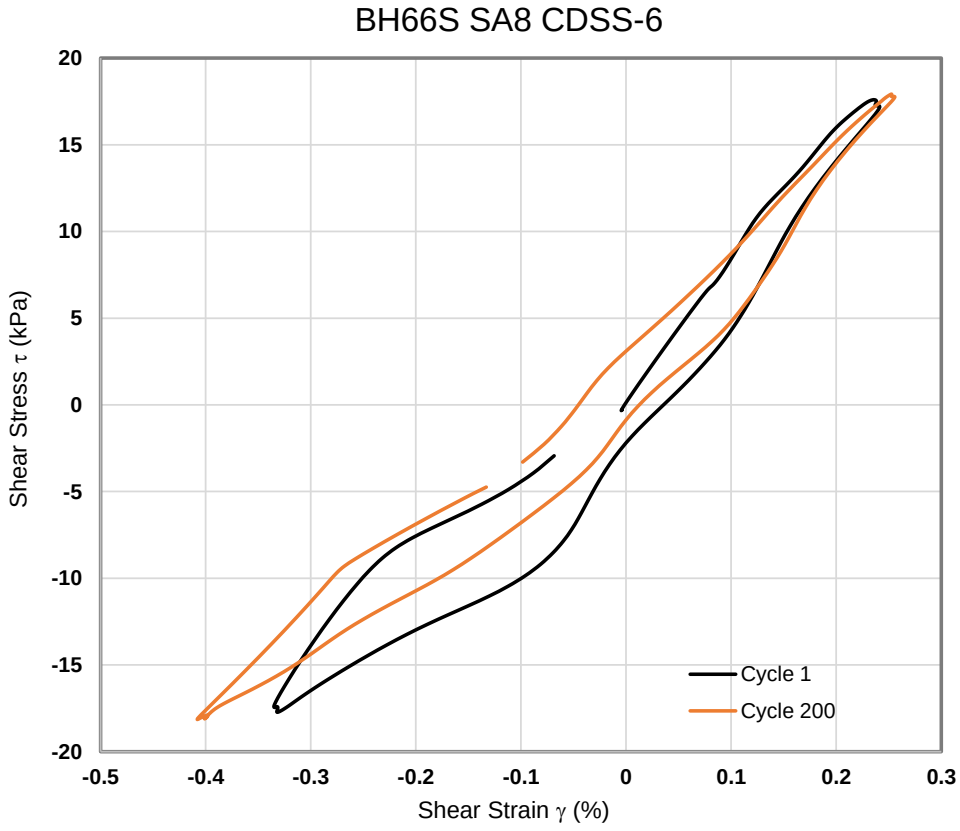
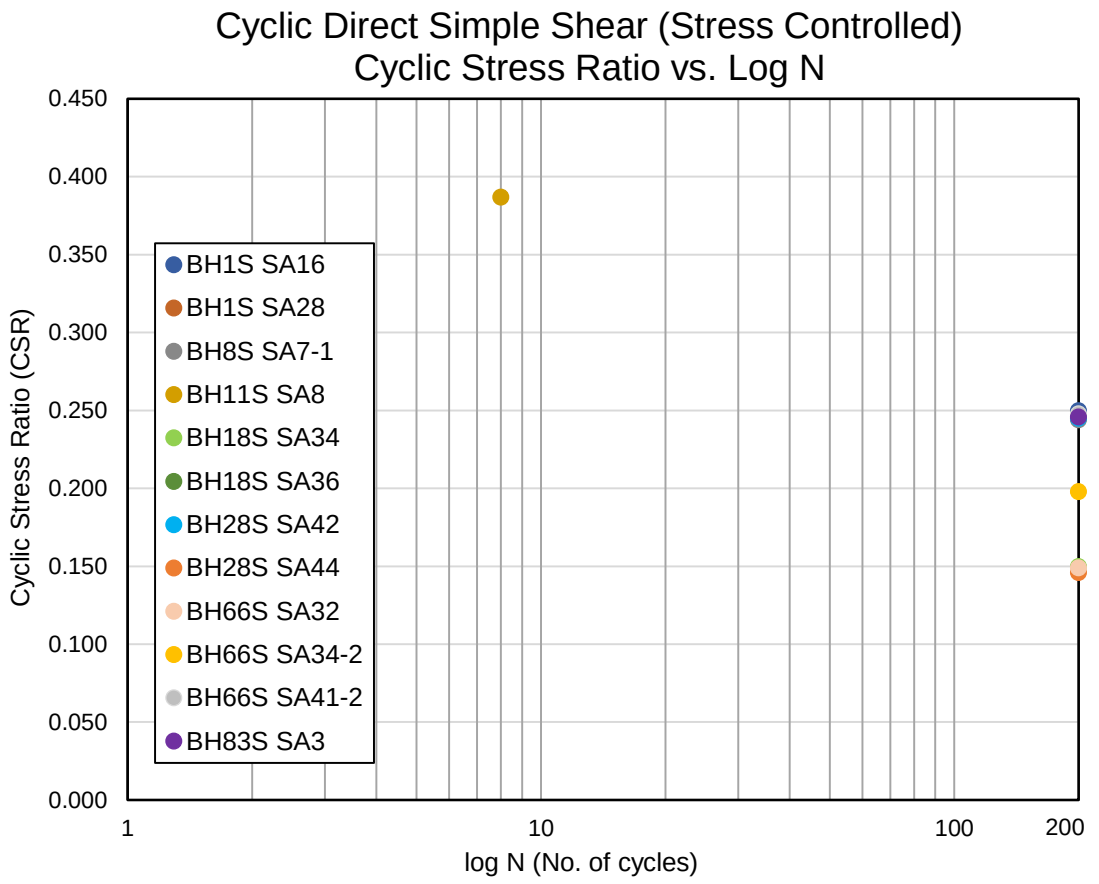


Figure No. J2.1

Cyclic Direct Simple Shear (Stress Controlled)

Project No. 21451329 **Soil Unit** 4B



Borehole ID	Sample ID	Effective Vertical Consolidation Stress σ'c (kPa)	No. of Cycles	Cyclic Stress Ratio	Comments
BH1S	SA16	129	200	0.250	See Note 1
BH1S	SA28	239	200	0.245	See Note 1
BH8S	SA7-1	216	200	0.244	See Note 1
BH11S	SA8	221	8	0.387	-
BH18S	SA34	217	200	0.150	See Note 1
BH18S	SA36	221	200	0.246	See Note 1
BH28S	SA42	300	200	0.245	See Note 1
BH28S	SA44	310	200	0.146	See Note 1
BH66S	SA32	211	200	0.149	See Note 1
BH66S	SA34-2	228	200	0.198	See Note 1
BH66S	SA41-2	249	200	0.248	See Note 1
BH83S	SA3	210	200	0.246	See Note 1

Note:
1. Test results indicate that samples did not achieve single strain amplitude failure criteria before reaching threshold of N = 200 cycles.

Figure No. J2.2

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	4b
Sample ID:	SA16
Test ID:	CDSS-31
Depth:	22.1m - 22.15m

BH1S SA16 CDSS-31

Effective Consolidation Stress σ'c (kPa)	129
Sr/σ'c	0.68
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.250
Cycle	200
Shear Strain γ (%)	0.97
Shear Stress t (kPa)	32.2

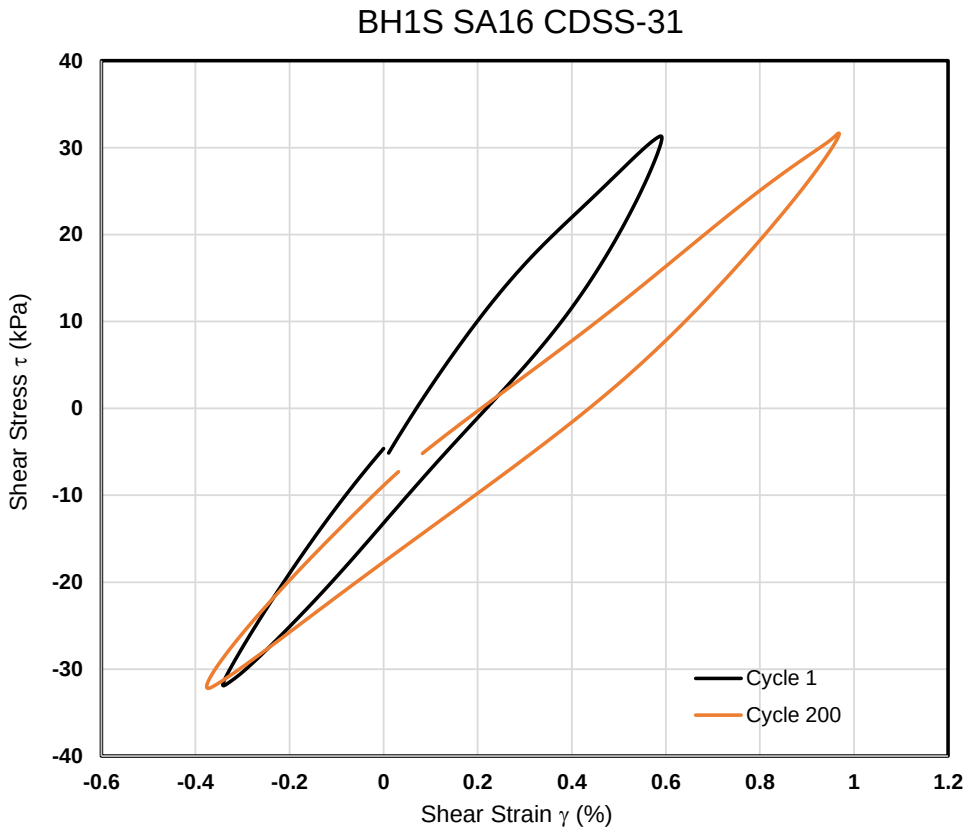


Figure No. J2.3

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	4b
Sample ID:	SA28
Test ID:	CDSS-33
Depth:	22.33m - 22.38m

BH1S SA28 CDSS-33

Effective Consolidation Stress σ'c (kPa)	239
Sr/σ'c	0.54
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.245
Cycle	200
Shear Strain γ (%)	1.10
Shear Stress t (kPa)	58.5

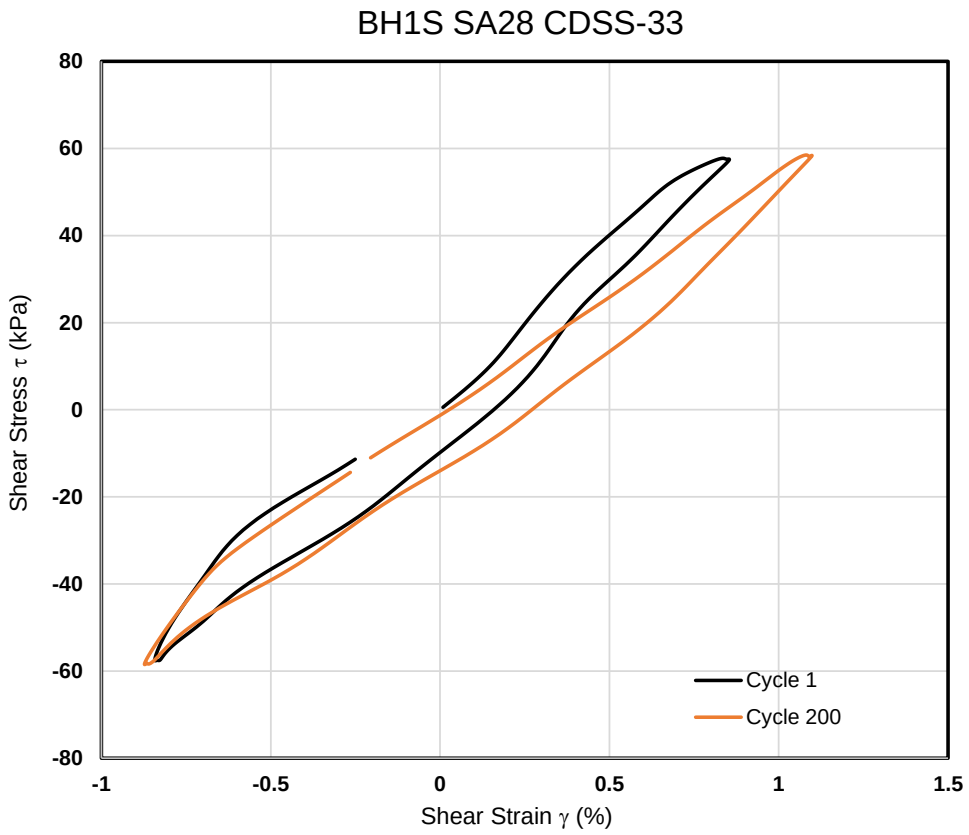


Figure No. J2.4

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH8S
Soil Unit:	4b
Sample ID:	SA7-1
Test ID:	CDSS-48
Depth:	18.29m - 18.34m

BH8S SA7-1 CDSS-48

Effective Consolidation Stress σ'c (kPa)	216
Sr/σ'c	0.44
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.244
Cycle	200
Shear Strain γ (%)	1.10
Shear Stress t (kPa)	52.8

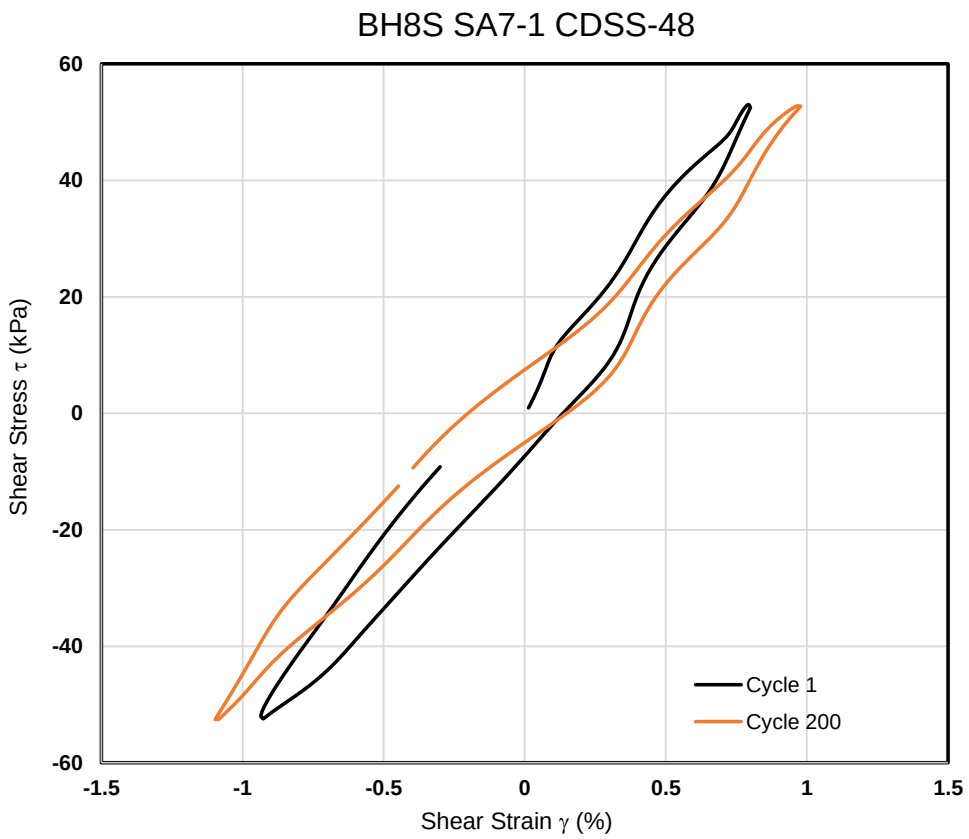


Figure No. J2.5

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH11S
Soil Unit:	4b
Sample ID:	SA8
Test ID:	CDSS-41
Depth:	18.34m - 18.39m

BH11S SA8 CDSS-41

Effective Consolidation Stress σ'c (kPa)	221
Sr/σ'c	0.47
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.387
Cycle	8
Shear Strain γ (%)	3.81
Shear Stress t (kPa)	85.5

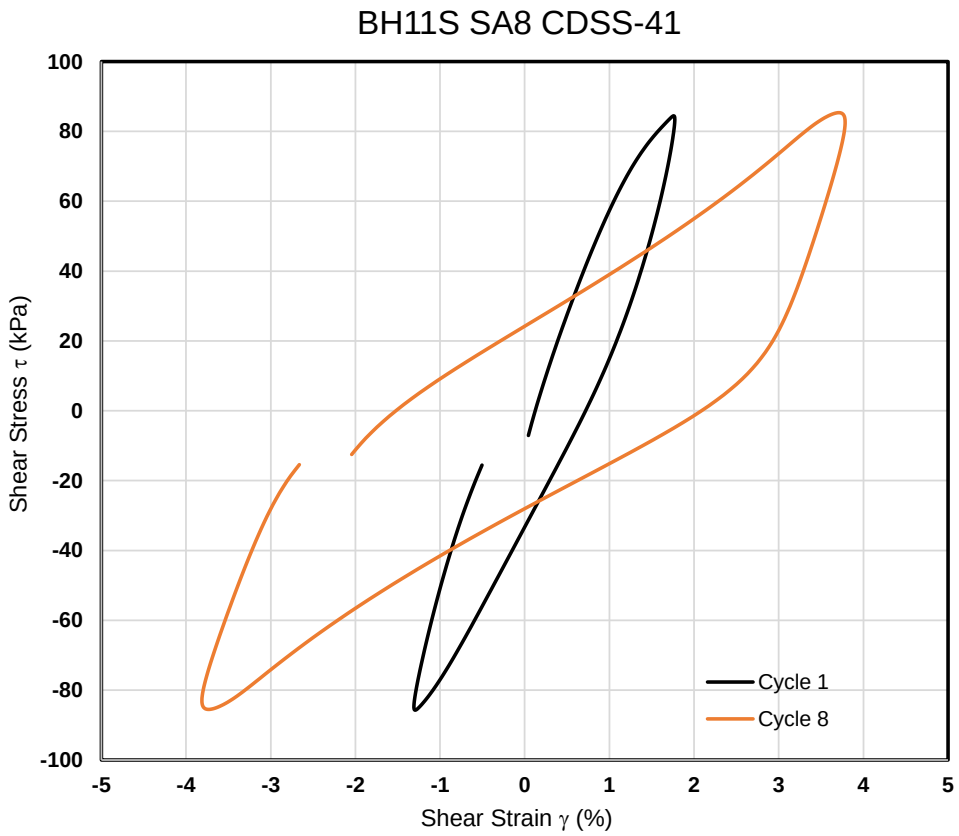


Figure No. J2.6

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	4b
Sample ID:	SA34
Test ID:	CDSS-21
Depth:	19.3m - 19.35m

BH18S SA34 CDSS-21

Effective Consolidation Stress σ'c (kPa)	217
Sr/σ'c	1.01
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.150
Cycle	200
Shear Strain γ (%)	0.62
Shear Stress t (kPa)	32.5

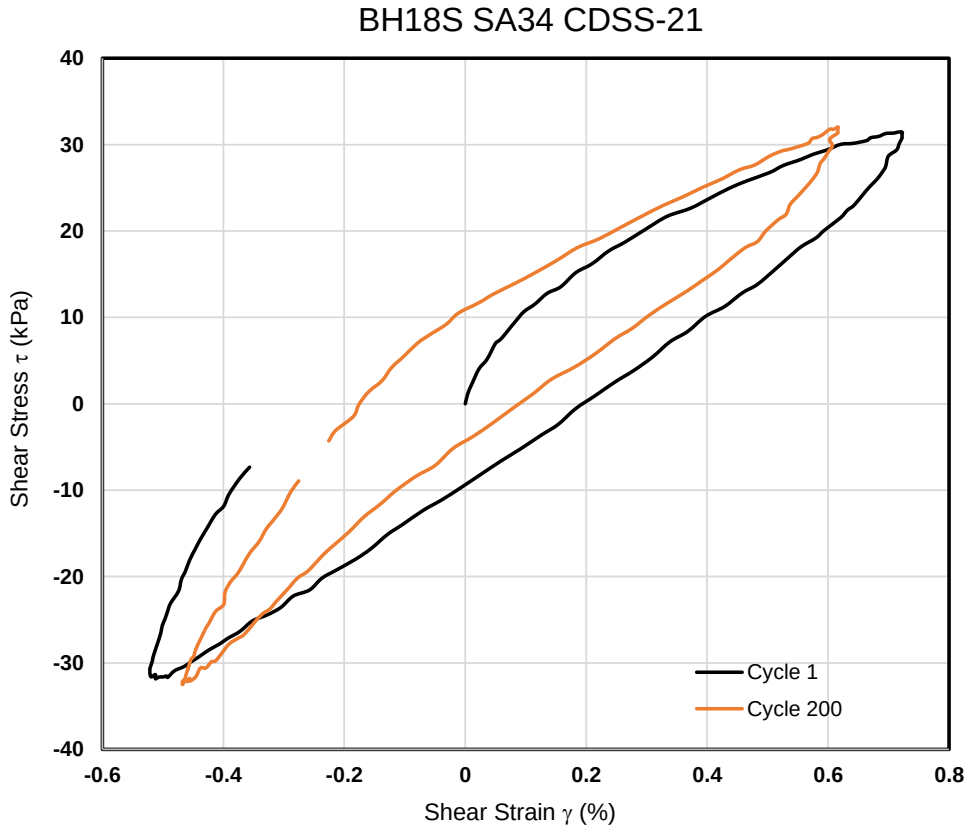


Figure No. J2.7

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	4b
Sample ID:	SA36
Test ID:	CDSS-22
Depth:	18.97m - 19.02m

BH18S SA36 CDSS-22

Effective Consolidation Stress σ'c (kPa)	221
Sr/σ'c	0.56
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.246
Cycle	200
Shear Strain γ (%)	1.23
Shear Stress t (kPa)	54.5

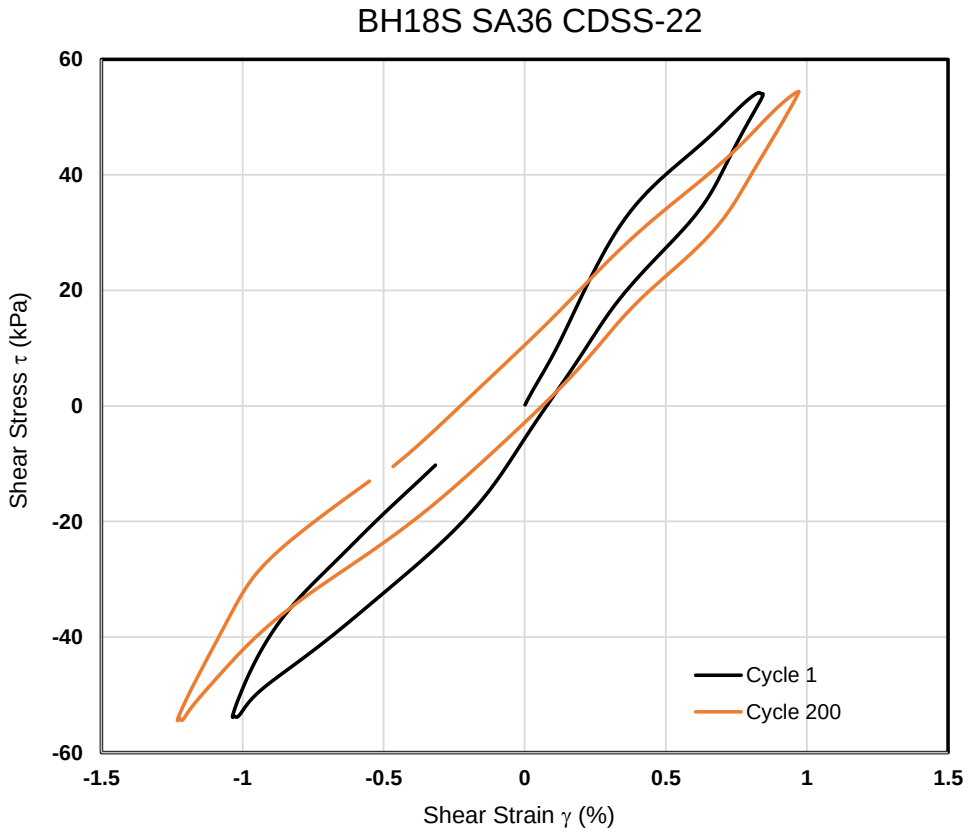


Figure No. J2.8

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	4b
Sample ID:	SA42
Test ID:	CDSS-16
Depth:	18.42m - 18.47m

BH28S SA42 CDSS-16

Effective Consolidation Stress σ'c (kPa)	300
Sr/σ'c	0.8
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.245
Cycle	200
Shear Strain γ (%)	1.43
Shear Stress t (kPa)	73.4

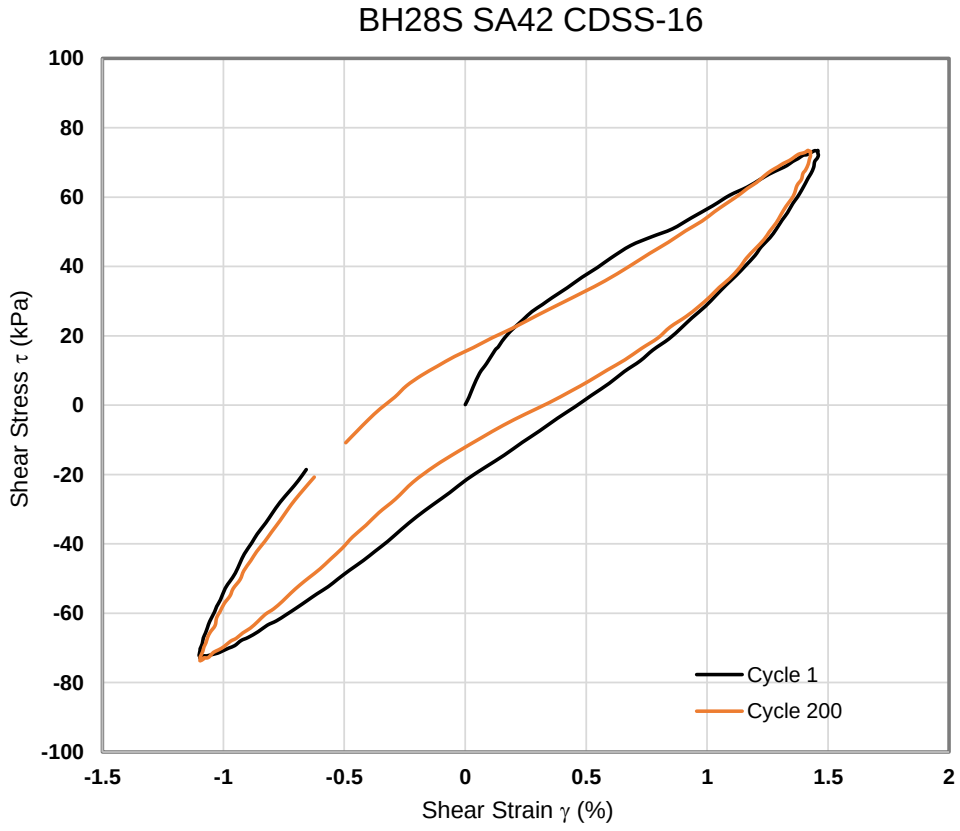


Figure No. J2.9

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	4b
Sample ID:	SA44
Test ID:	CDSS-17
Depth:	21.44m - 21.49m

BH28S SA44 CDSS-17

Effective Consolidation Stress σ'c (kPa)	310
Sr/σ'c	0.62
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.146
Cycle	200
Shear Strain γ (%)	0.85
Shear Stress t (kPa)	45.3

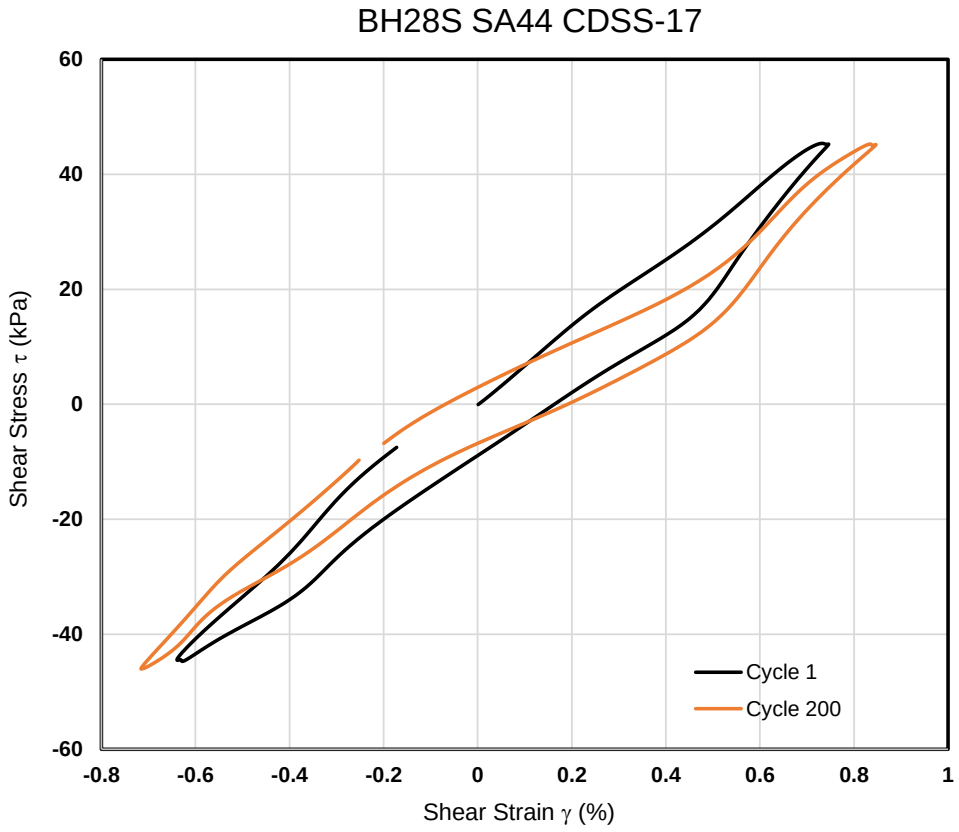


Figure No. J2.10

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	4b
Sample ID:	SA32
Test ID:	DSS-7
Depth:	28.47m - 28.5m

BH66S SA32 DSS-7

Effective Consolidation Stress σ'c (kPa)	211
Sr/σ'c	0.8
Failure Criteria	5% single strain amplitude or N=200
Cyclic Stress Ratio	0.149
Cycle	200
Shear Strain γ (%)	0.84
Shear Stress t (kPa)	31.5

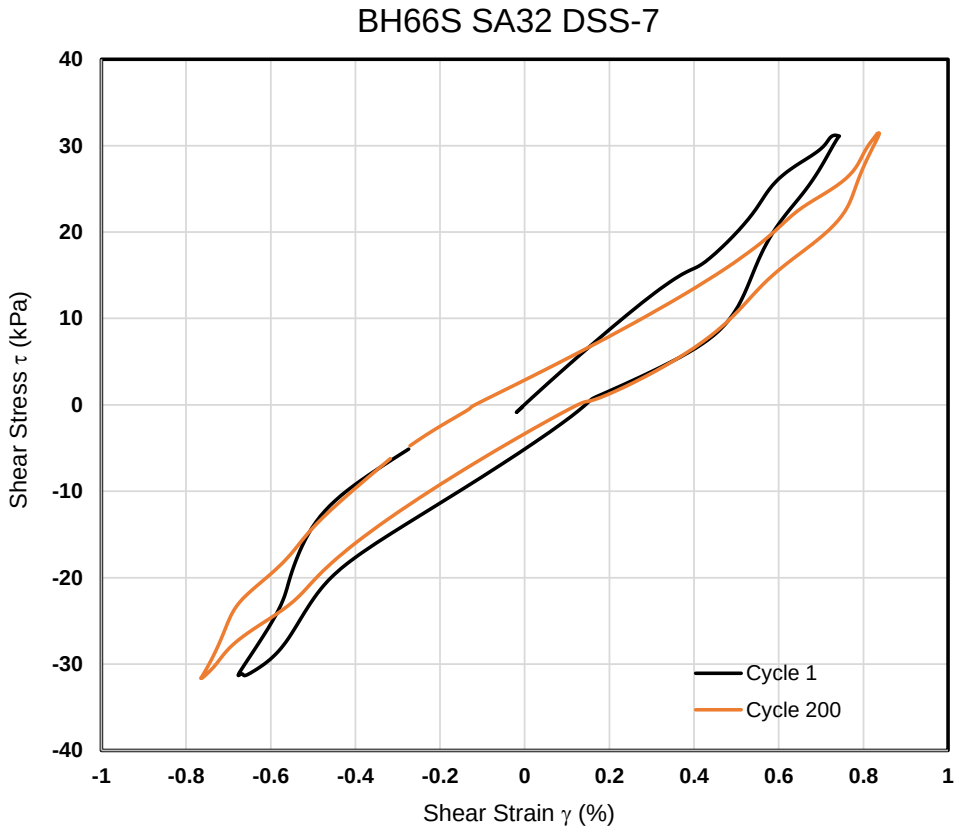


Figure No. J2.11

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	4b
Sample ID:	SA34-2
Test ID:	CDSS-12
Depth:	22.96m - 23.03m

BH66S SA34-2 CDSS-12

Effective Consolidation Stress σ'c (kPa)	228
Sr/σ'c	0.99
Failure Criteria	5% single strain amplitude or N=200
Cyclic Stress Ratio	0.198
Cycle	200
Shear Strain γ (%)	2.58
Shear Stress t (kPa)	45.3

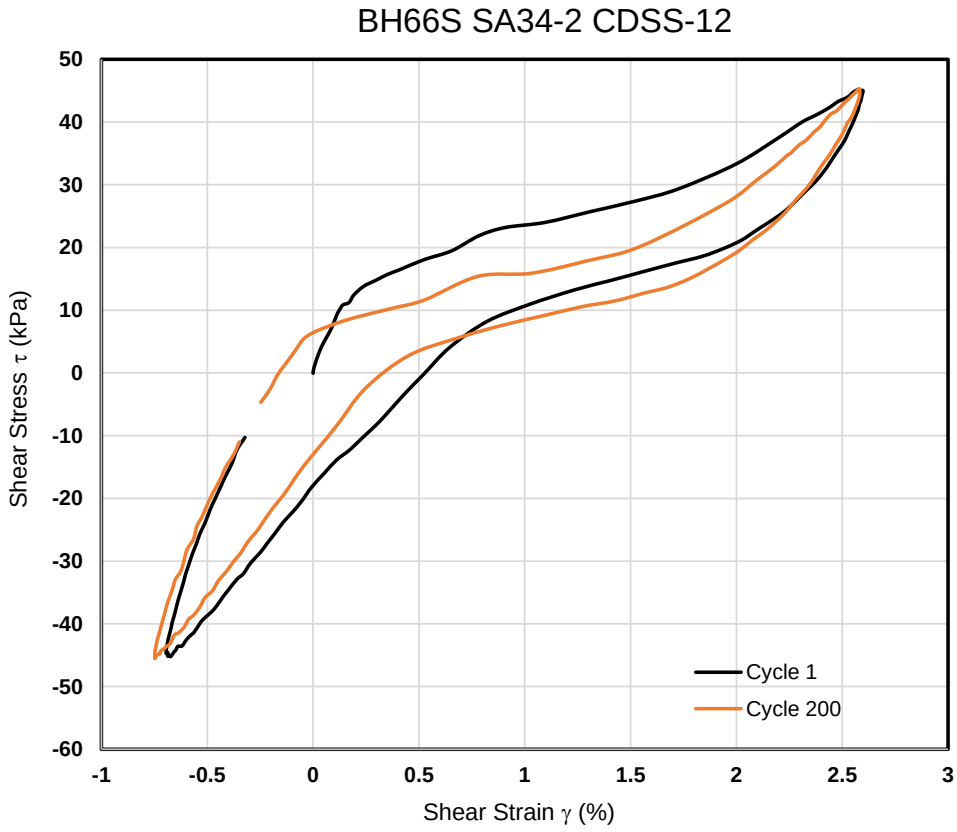


Figure No. J2.12

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	4b
Sample ID:	SA41-2
Test ID:	CDSS-11
Depth:	23.47m - 23.52m

BH66S SA41-2 CDSS-11

Effective Consolidation Stress σ'c (kPa)	249
Sr/σ'c	0.8
Failure Criteria	5% single strain amplitude or N=200
Cyclic Stress Ratio	0.248
Cycle	200
Shear Strain γ (%)	3.14
Shear Stress t (kPa)	61.6

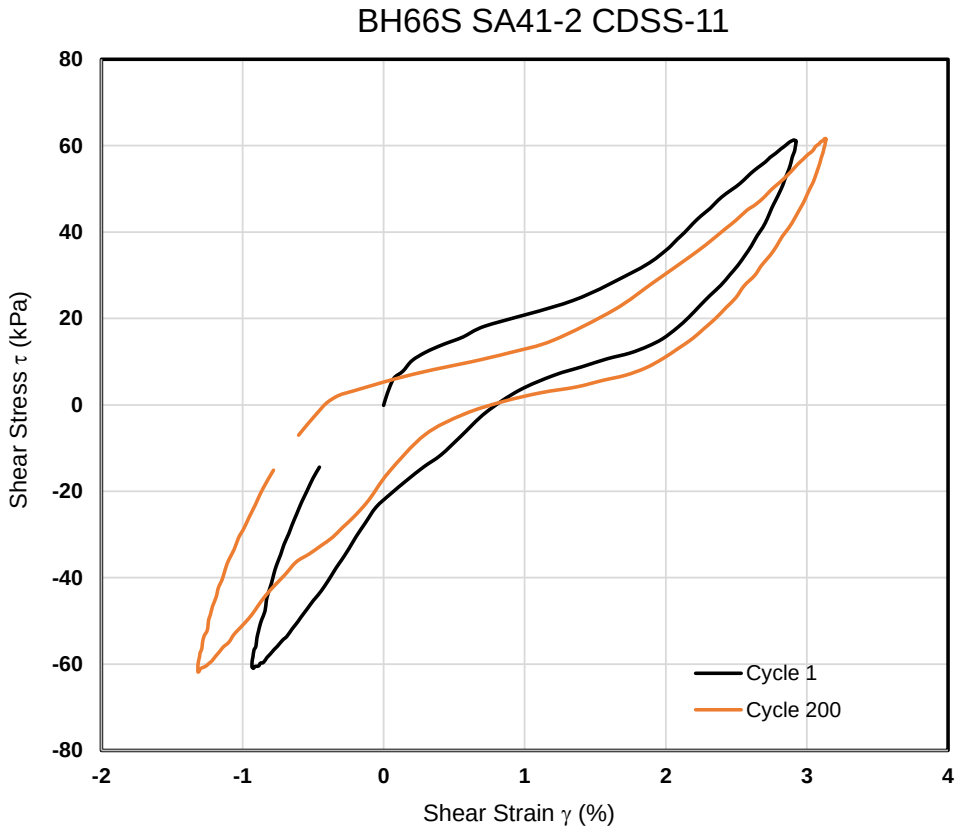


Figure No. J2.13

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH83S
Soil Unit:	4b
Sample ID:	SA3
Test ID:	CDSS-52
Depth:	15.9m - 15.95m

BH83S/SA3CDSS-52

Effective Consolidation Stress σ'c (kPa)	210
Sr/σ'c	0.54
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.246
Cycle	200
Shear Strain γ (%)	1.50
Shear Stress t (kPa)	51.6

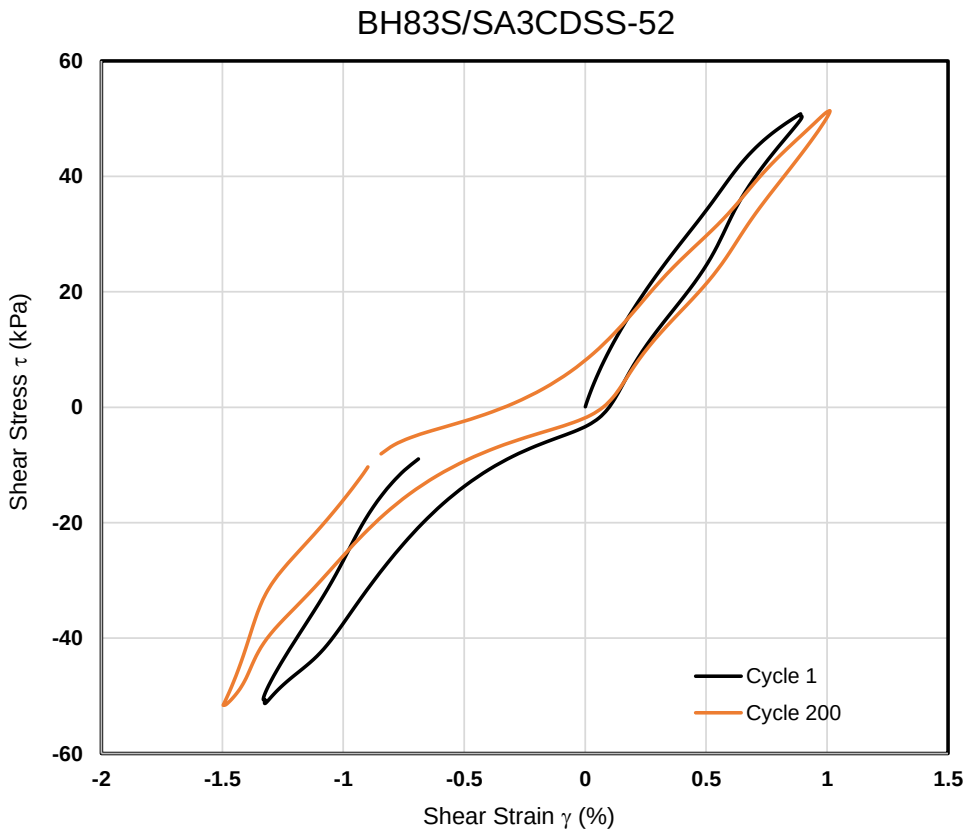
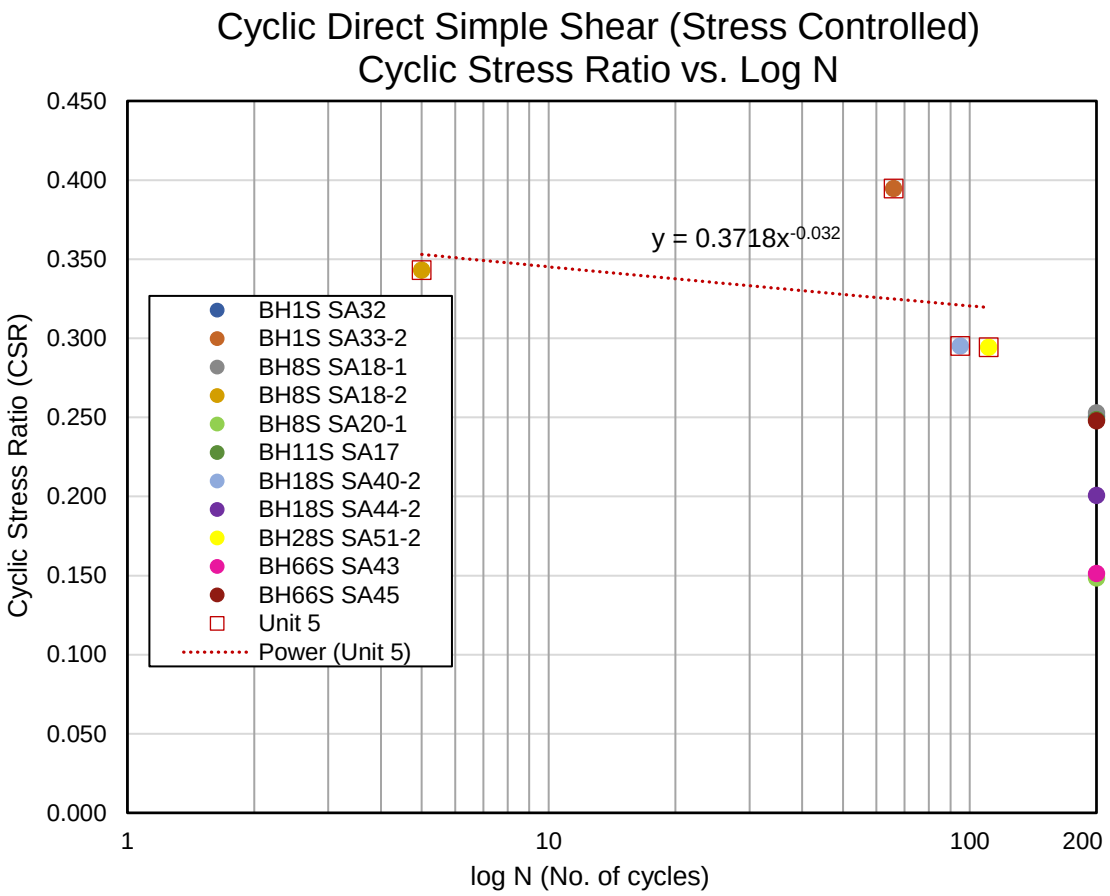


Figure No. J3.1

Cyclic Direct Simple Shear (Stress Controlled)

Project No. 21451329 **Soil Unit** 5



Borehole ID	Sample ID	Effective Vertical Consolidation Stress σ'c (kPa)	No. of Cycles	Cyclic Stress Ratio	Comments
BH1S	SA32	277	200	0.251	See Note 1
BH1S	SA33-2	277	66	0.395	-
BH8S	SA18-1	236	200	0.253	See Note 1
BH8S	SA18-2	236	5	0.343	-
BH8S	SA20-1	244	200	0.149	See Note 1
BH11S	SA17	243	200	0.249	See Note 1
BH18S	SA40-2	242	95	0.295	-
BH18S	SA44-2	277	200	0.201	See Note 1
BH28S	SA51-2	352	111	0.294	-
BH66S	SA43	291	200	0.151	See Note 1
BH66S	SA45	296	200	0.248	See Note 1

Note:
1. Test results indicate that samples did not achieve single strain amplitude failure criteria before reaching threshold of N = 200 cycles.

Figure No. J3.2

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	5
Sample ID:	SA32
Test ID:	CDSS-35R
Depth:	22.1m - 22.15m

BH1S SA32 CDSS-35R

Effective Consolidation Stress σ'c (kPa)	277
Sr/σ'c	1.13
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.251
Cycle	200
Shear Strain γ (%)	1.38
Shear Stress t (kPa)	69.4

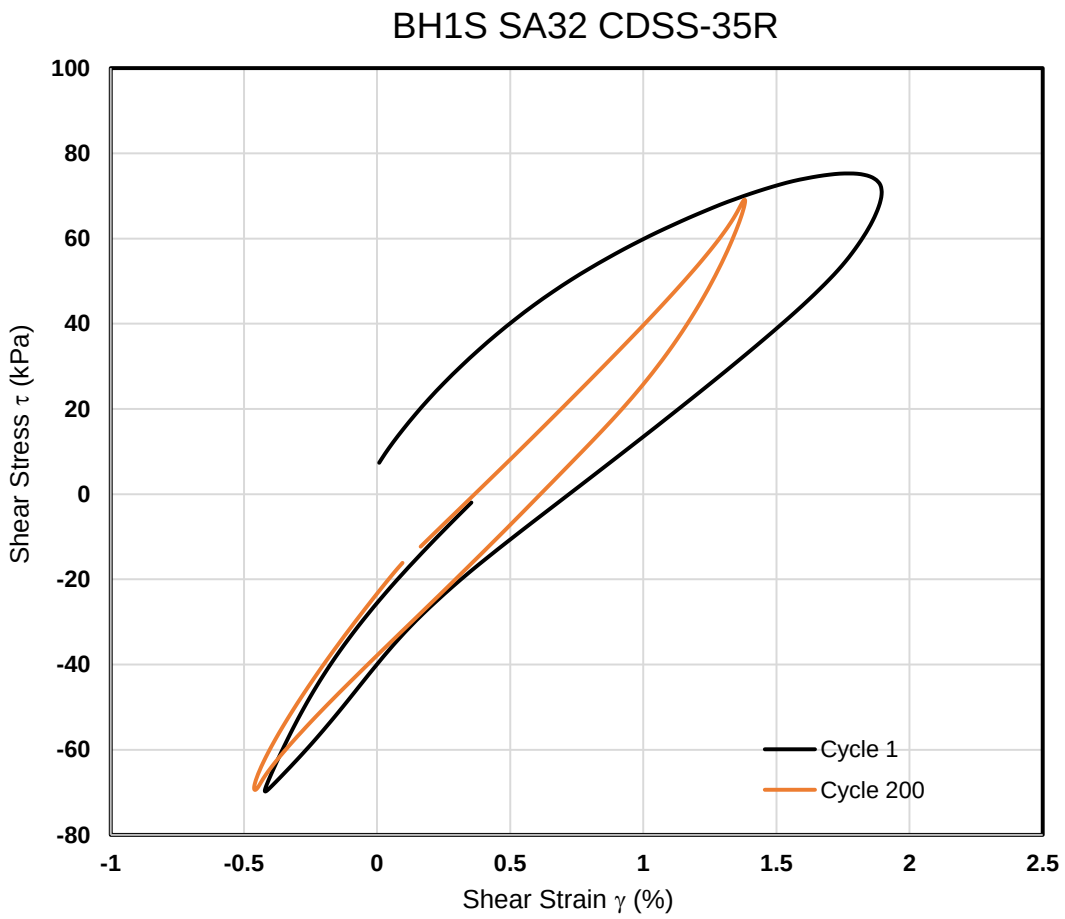


Figure No. J3.3

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH1S
Soil Unit:	5
Sample ID:	SA33-2
Test ID:	CDSS-37R
Depth:	22.33m - 22.38m

BH1S SA33-2 CDSS-37R

Effective Consolidation Stress σ'c (kPa)	277
Sr/σ'c	0.82
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.395
Cycle	66
Shear Strain γ (%)	3.92
Shear Stress t (kPa)	109.3

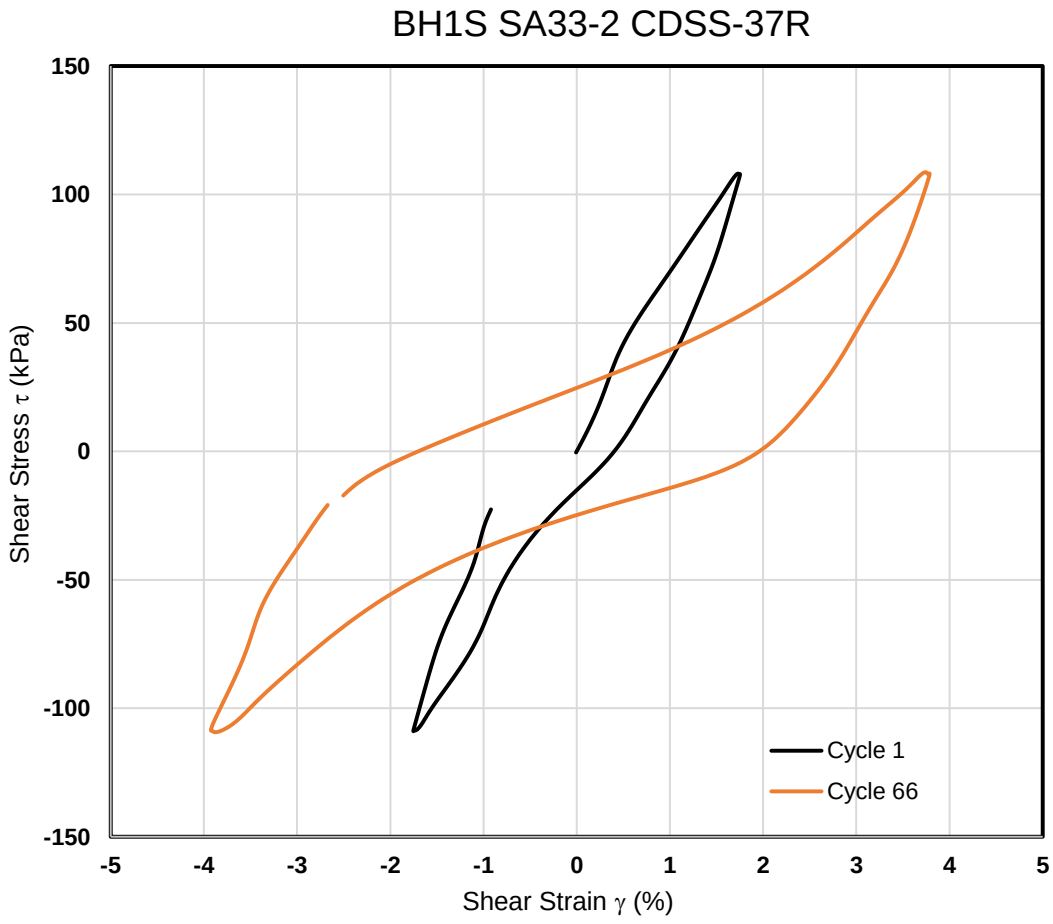


Figure No. J3.4

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH8S
Soil Unit:	5
Sample ID:	SA18-1
Test ID:	CDSS-49
Depth:	18.29m - 18.34m

BH8S SA18-1 CDSS-49

Effective Consolidation Stress σ'c (kPa)	236
Sr/σ'c	0.88
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.253
Cycle	200
Shear Strain γ (%)	1.2
Shear Stress t (kPa)	59.6

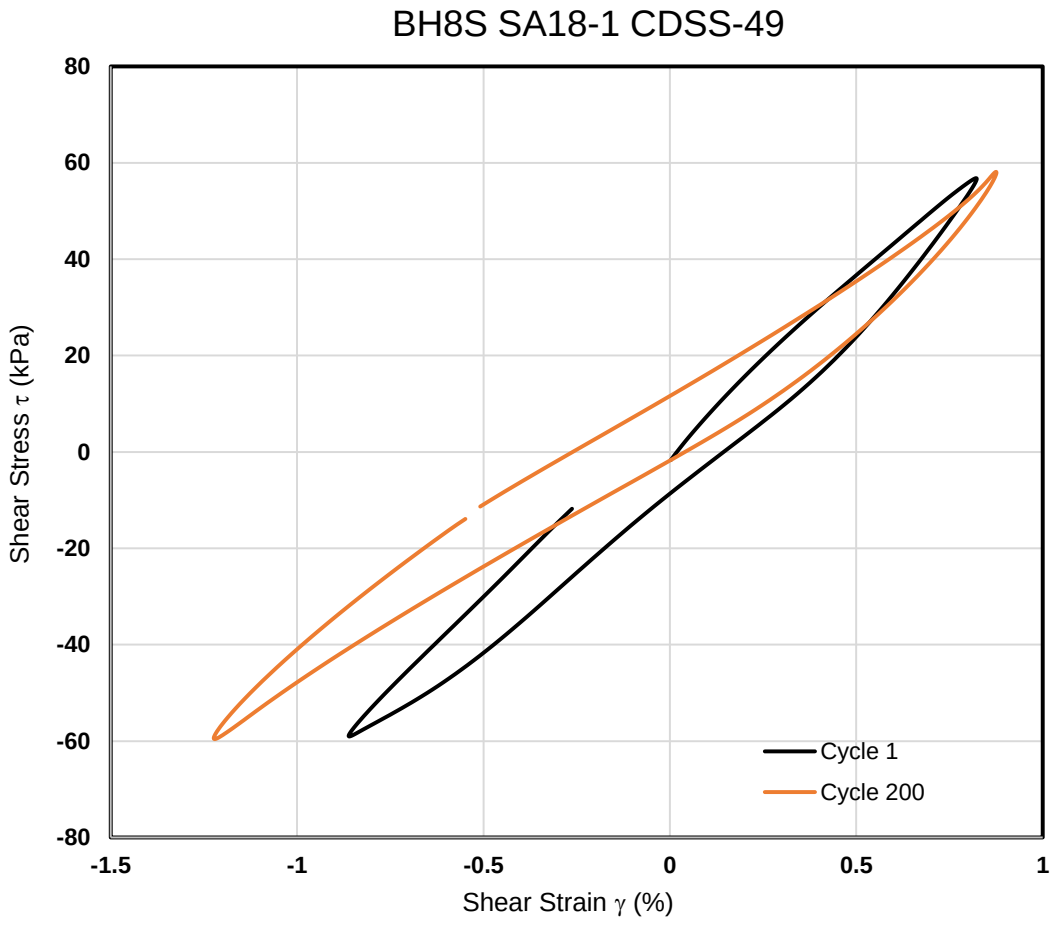


Figure No. J3.5

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH8S
Soil Unit:	5
Sample ID:	SA18-2
Test ID:	CDSS-50
Depth:	18.34m - 18.39m

BH8S SA18-2 CDSS-50

Effective Consolidation Stress σ'c (kPa)	236
Sr/σ'c	0.64
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.343
Cycle	5
Shear Strain γ (%)	3.78
Shear Stress t (kPa)	80.8

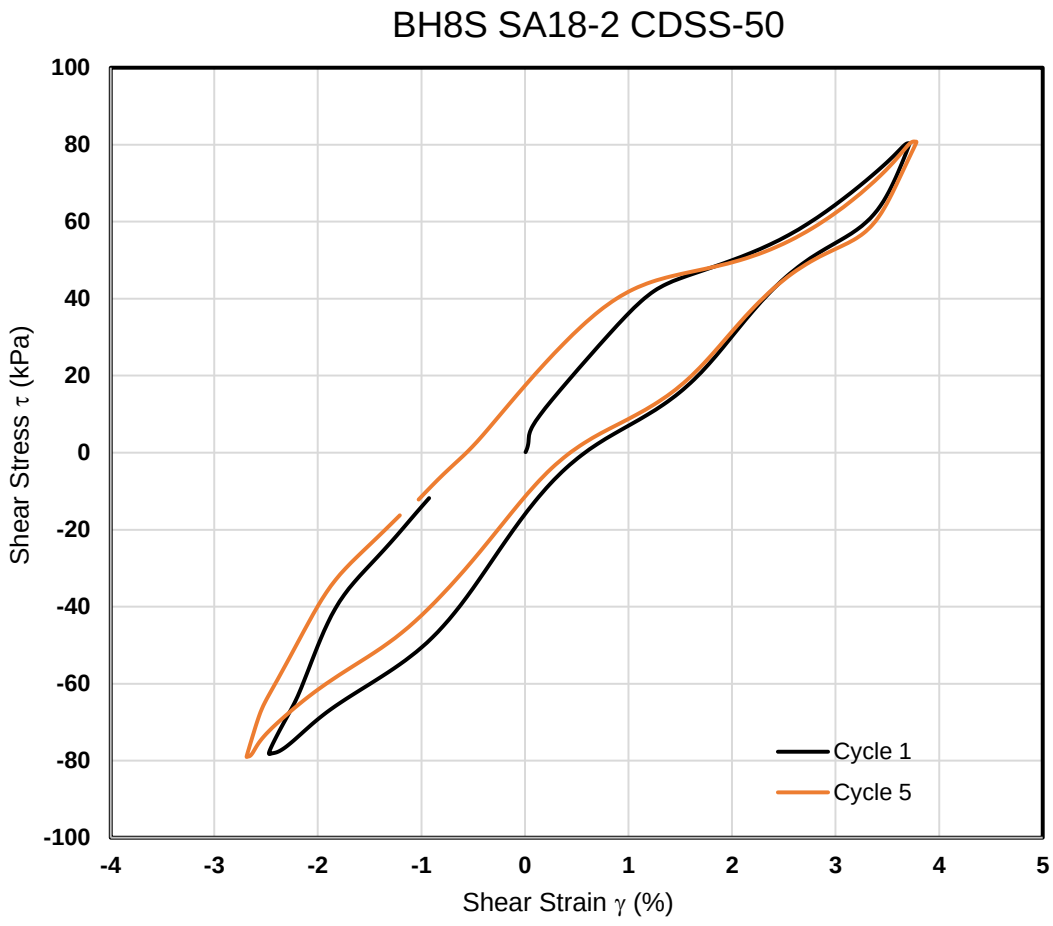


Figure No. J3.6

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH8S
Soil Unit:	5
Sample ID:	SA20-1
Test ID:	CDSS-51
Depth:	19.30m - 19.35m

BH8S SA20-1 CDSS-51

Effective Consolidation Stress σ'c (kPa)	244
Sr/σ'c	1.76
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.149
Cycle	200
Shear Strain γ (%)	1.36
Shear Stress t (kPa)	36.3

.

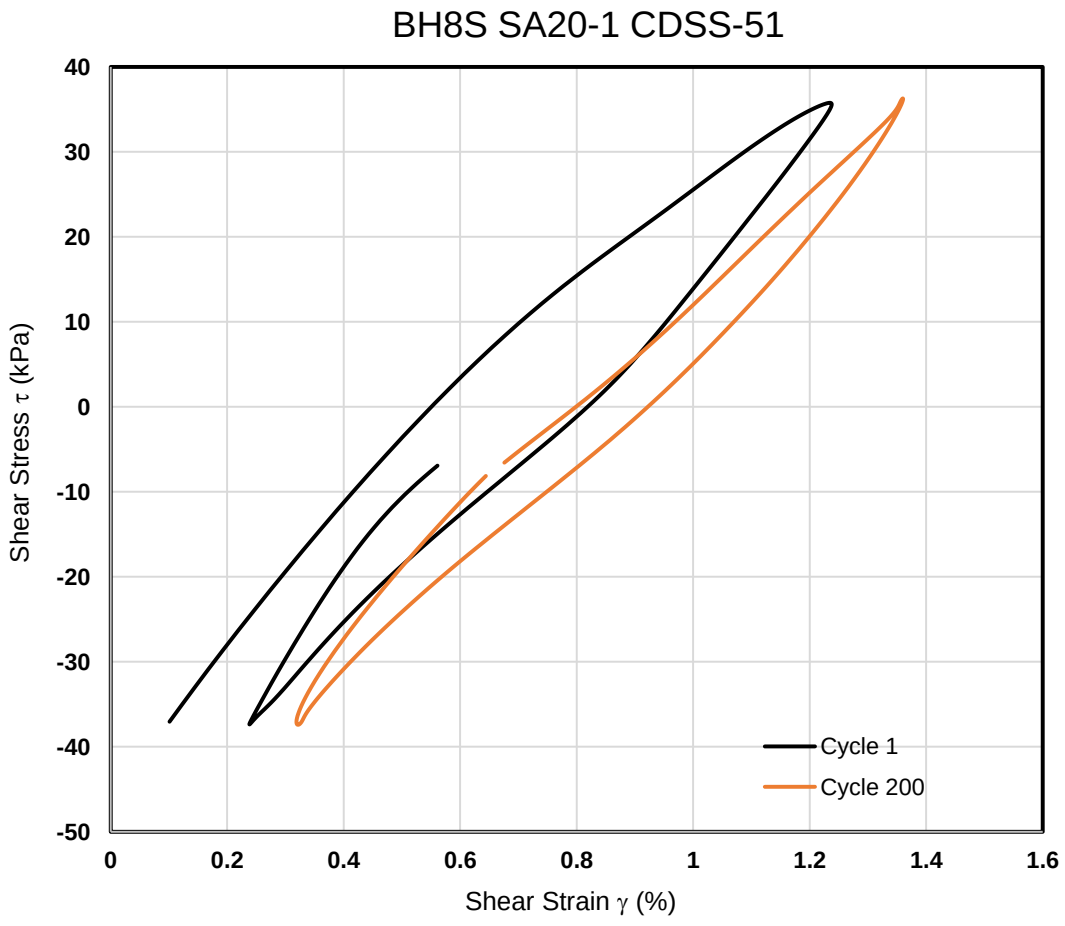


Figure No. J3.7

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH11S
Soil Unit:	5
Sample ID:	SA17
Test ID:	CDSS-43
Depth:	18.97m - 19.02m

BH11S SA17 CDSS-43

Effective Consolidation Stress σ'c (kPa)	243
Sr/σ'c	2.29
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.249
Cycle	200
Shear Strain γ (%)	1.46
Shear Stress t (kPa)	60.5

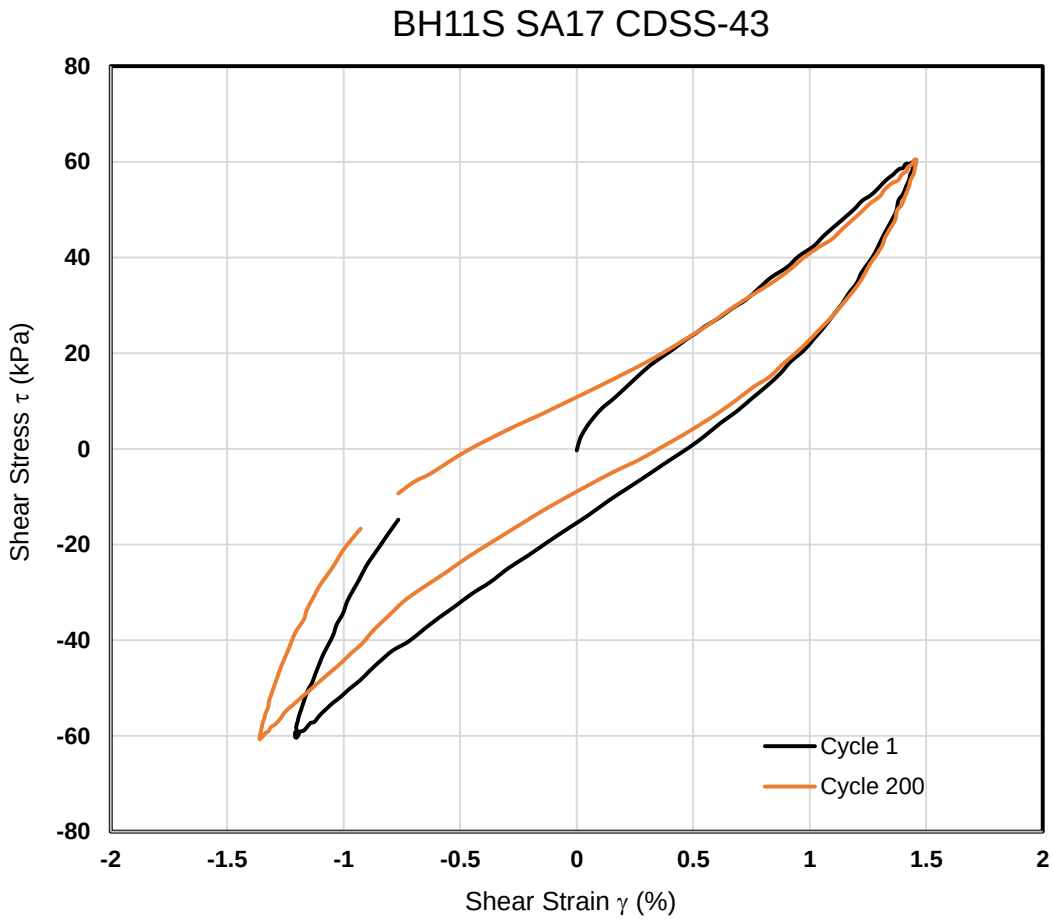


Figure No. J3.8

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	5
Sample ID:	SA40-2
Test ID:	CDSS-23A
Depth:	18.42m - 18.47m

BH18S SA40-2 CDSS-23A

Effective Consolidation Stress	242
Sr/σ'c	0.83
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.295
Cycle	95
Shear Strain γ (%)	3.94
Shear Stress t (kPa)	71.3

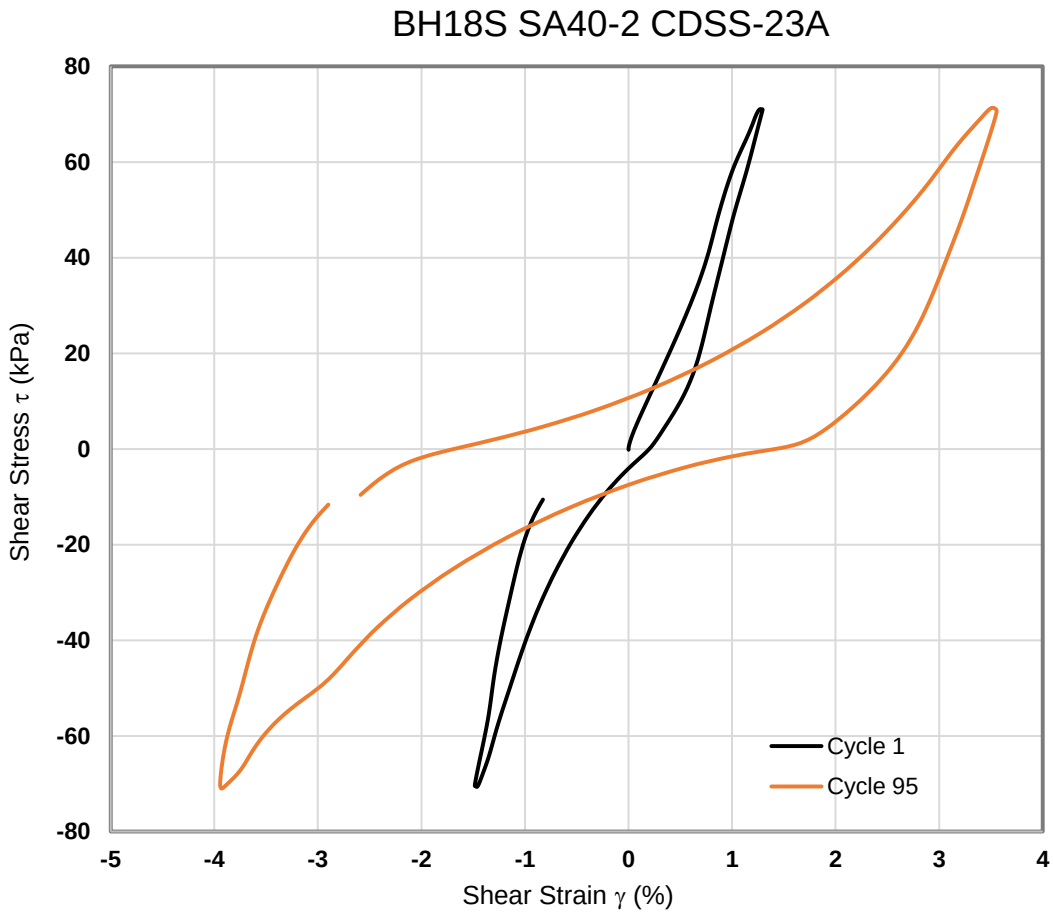


Figure No. J3.9

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH18S
Soil Unit:	5
Sample ID:	SA44-2
Test ID:	CDSS-26
Depth:	21.44m - 21.49m

BH18S SA44-2 CDSS-26

Effective Consolidation Stress	277
Sr/σ'c	1.19
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.201
Cycle	200
Shear Strain γ (%)	0.97
Shear Stress t (kPa)	55.7

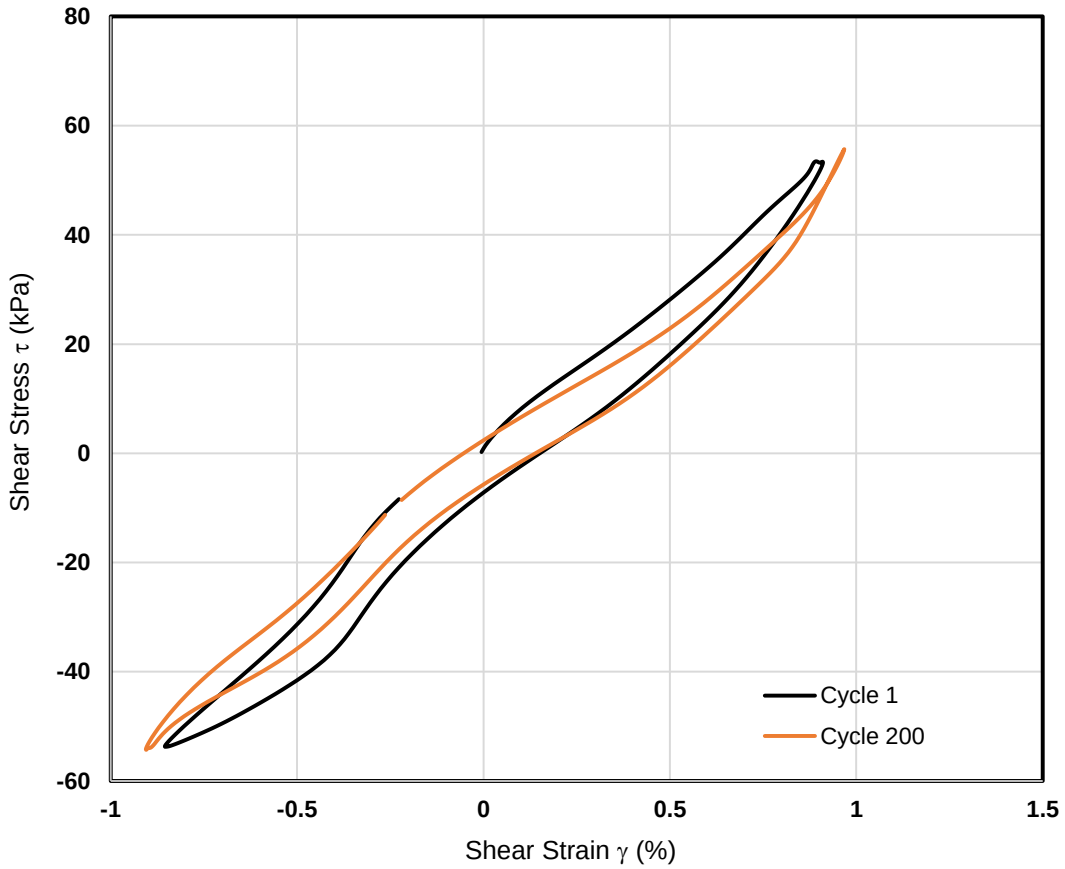


Figure No. J3.10

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH28S
Soil Unit:	5
Sample ID:	SA51-2
Test ID:	CDSS-20
Depth:	28.47m - 28.50m

BH28S SA51-2 CDSS-20

Effective Consolidation Stress	352
Sr/σ'c	0.54
Failure Criteria	3.75% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.294
Cycle	111
Shear Strain γ (%)	3.92
Shear Stress t (kPa)	103.6

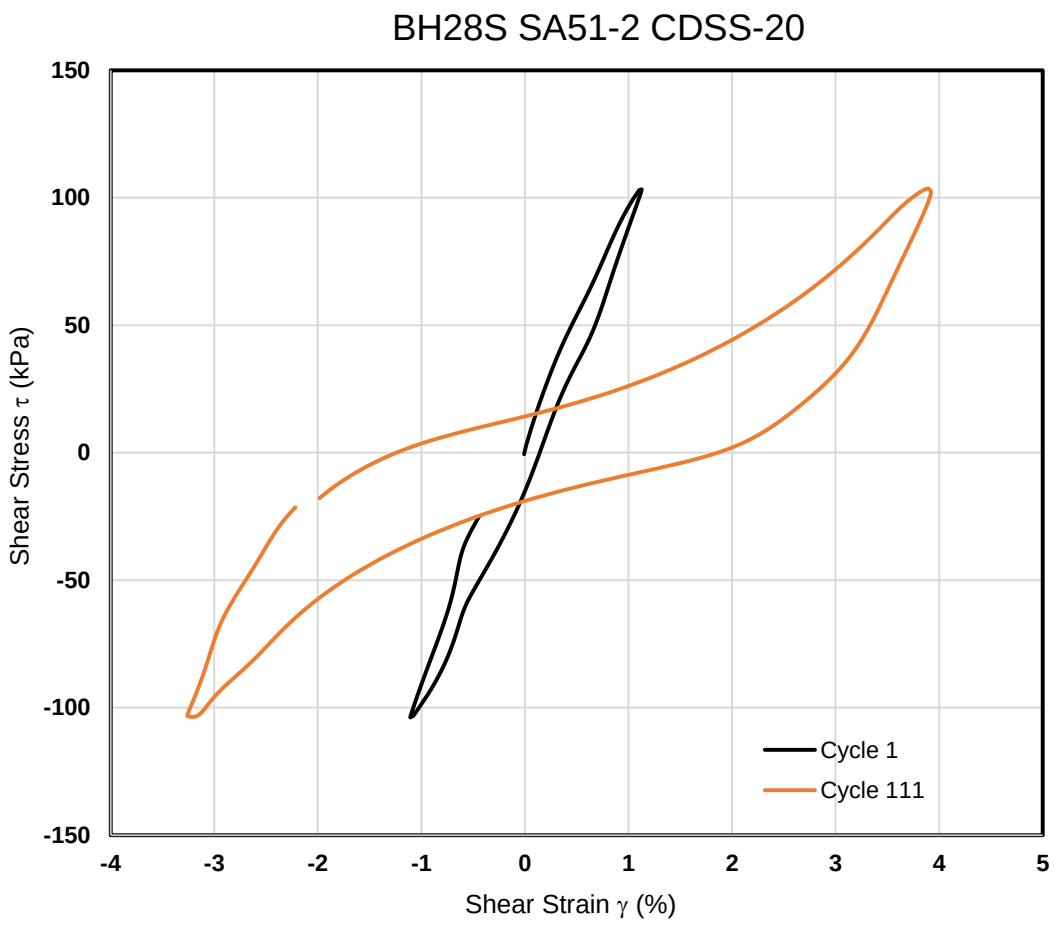


Figure No. J3.11

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	5
Sample ID:	SA43
Test ID:	CDSS-13
Depth:	22.96m - 23.03m

BH66S SA43 CDSS-13

Effective Consolidation Stress	291
Sr/σ'c	1.8
Failure Criteria	3.5% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.151
Cycle	200
Shear Strain γ (%)	1.90
Shear Stress t (kPa)	44.0

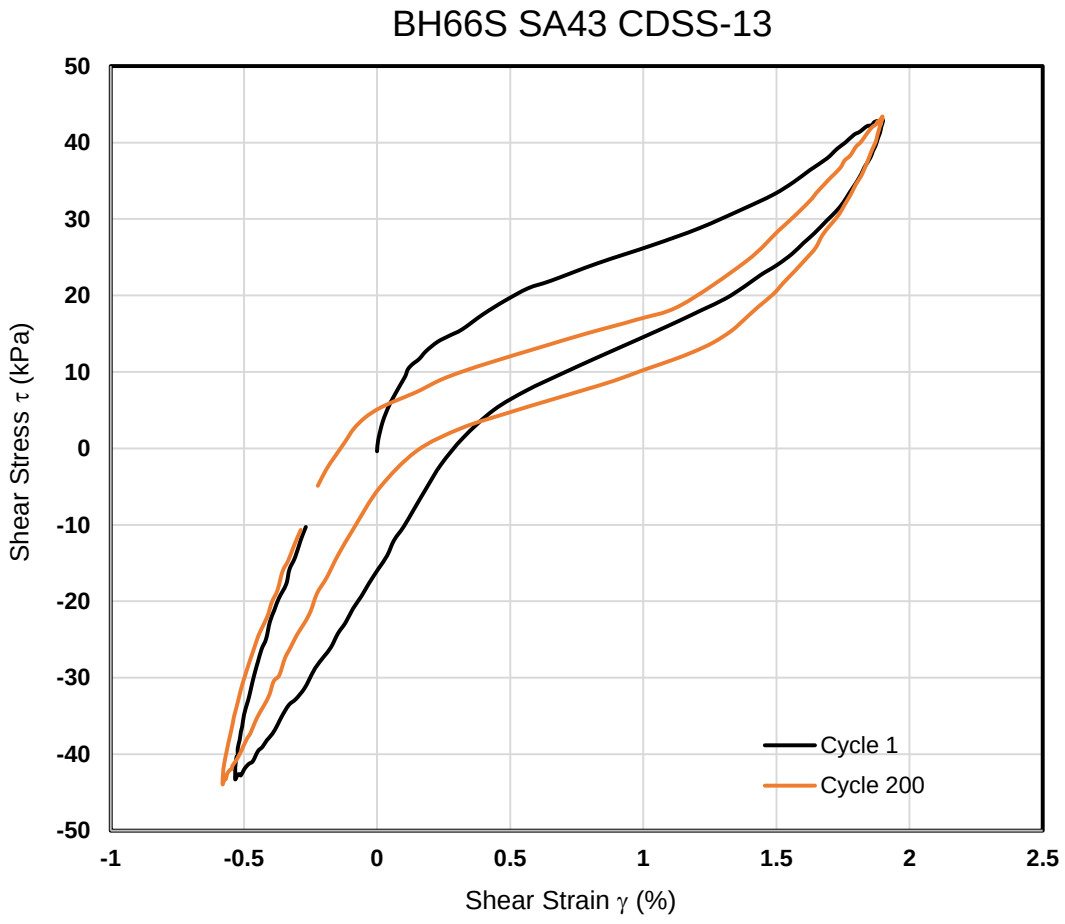


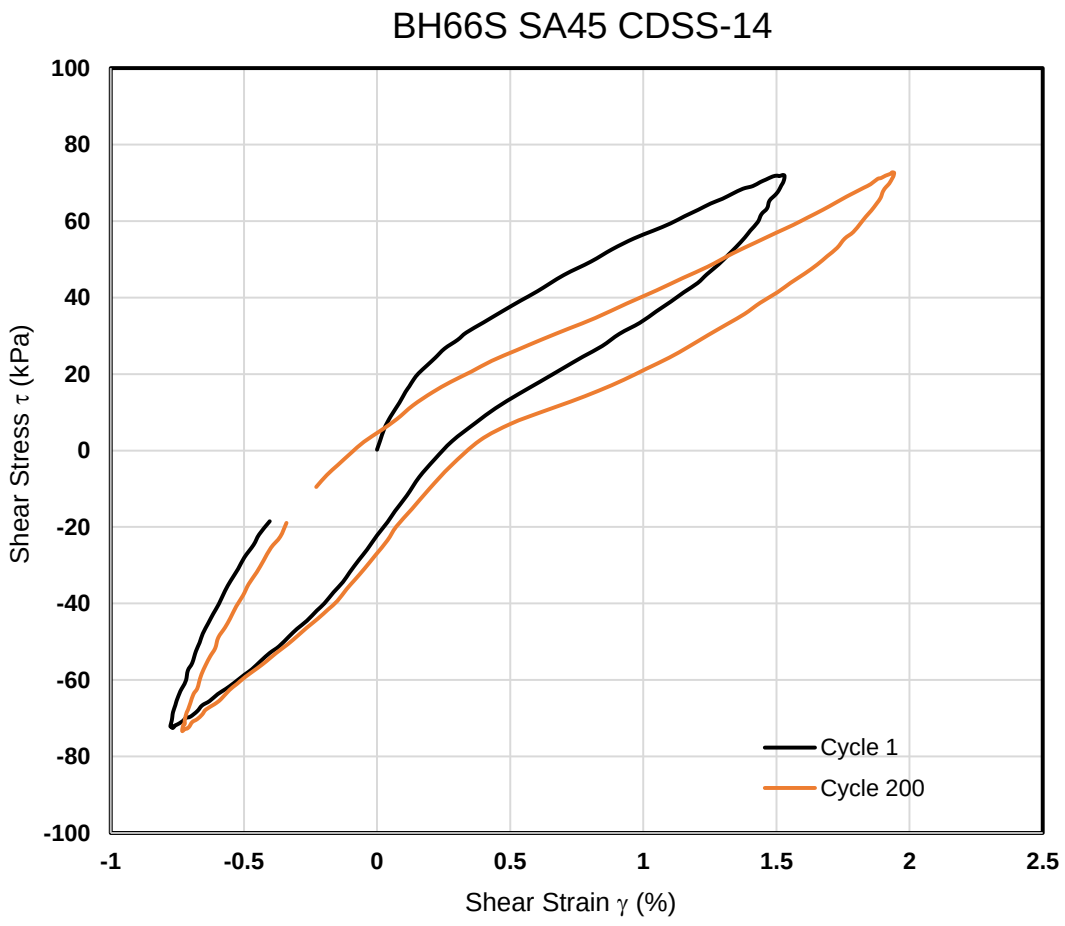
Figure No. J3.12

Cyclic Direct Simple Shear (Stress Controlled)

Project No.:	21451329
BH ID:	BH66S
Soil Unit:	5
Sample ID:	SA45
Test ID:	CDSS-14
Depth:	23.47m - 23.52m

BH66S SA45 CDSS-14

Effective Consolidation Stress	296
Sr/σ'c	1.24
Failure Criteria	3.5% single amplitude shear strain, 100% pp or N = 200
Cyclic Stress Ratio	0.248
Cycle	200
Shear Strain γ (%)	1.94
Shear Stress t (kPa)	73.4



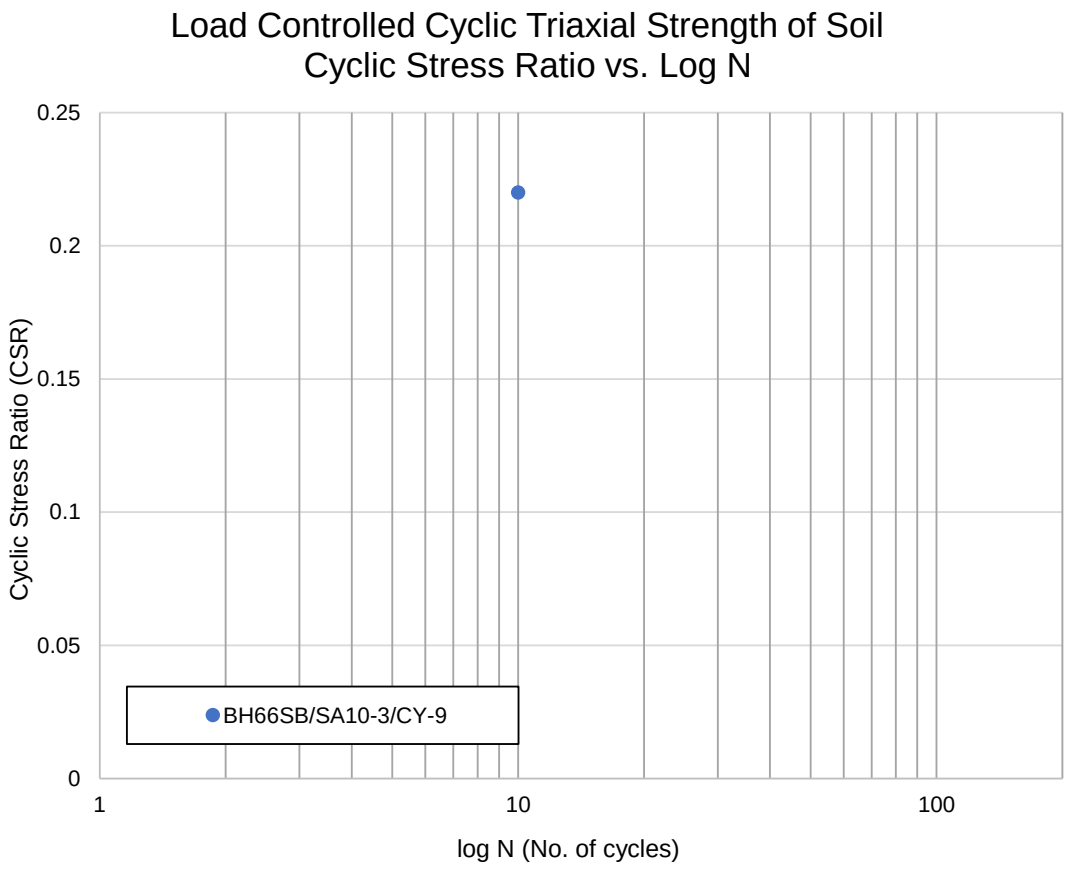
APPENDIX K

Stress-Controlled Cyclic Triaxial Testing Interpretations

Figure No. K1

Load Controlled Cyclic Triaxial Strength of Soil

Project No. 21451329 **Sample ID** SA10-3 CY-9
BH ID BH66SB **Depth Interval** **Soil Unit** 2B

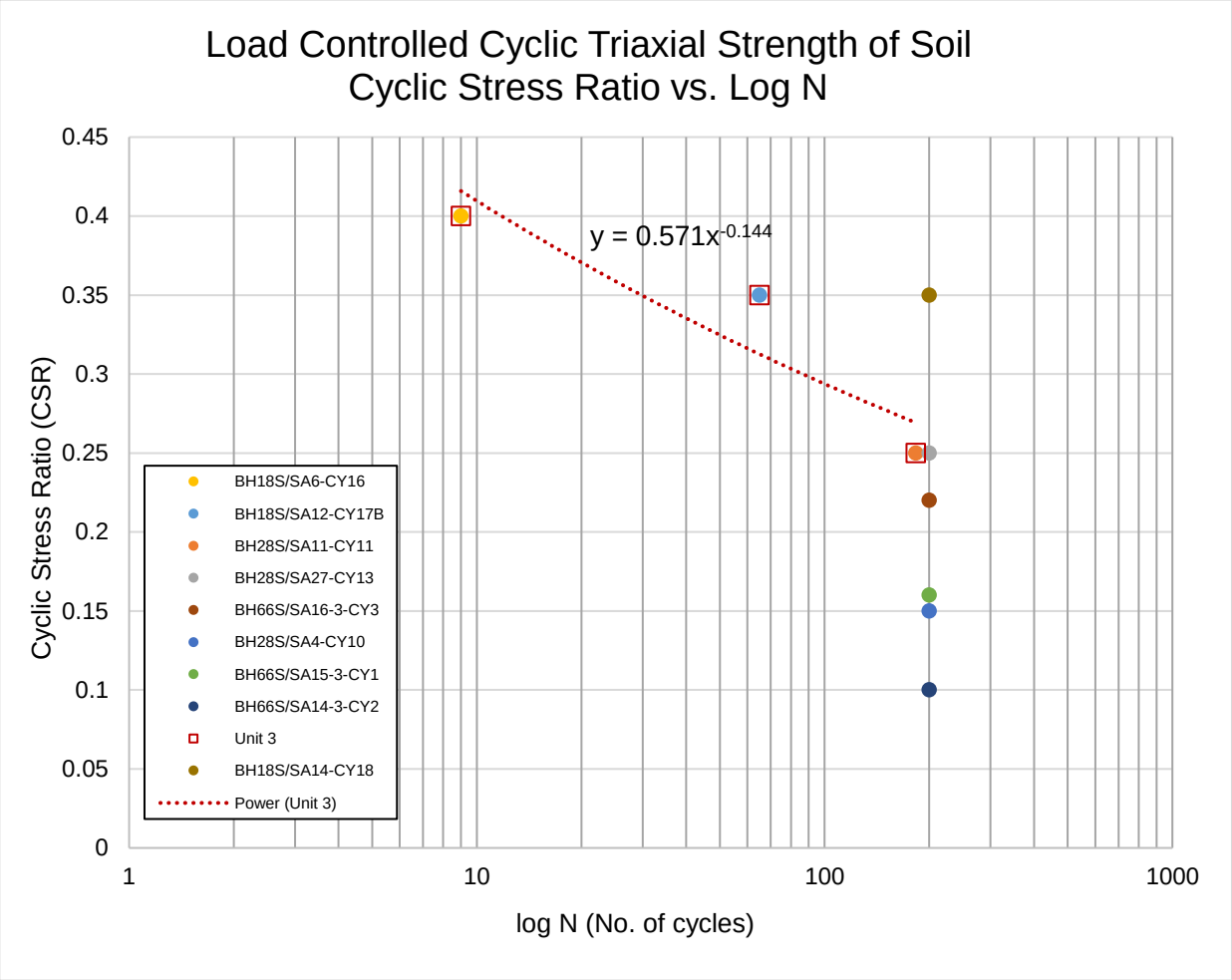


Borehole ID	Sample ID	Effective Vertical Consolidation Stress σ'c (kPa)	No. of Cycles	Post Cyclic Monotonic Undrained Shear Strength (kPa)	Cyclic Stress Ratio
BH66SB	SA10-3 CY-9	90	10	-	0.22

Figure No. K2

Load Controlled Cyclic Triaxial Strength of Soil

Project No. 21451329 **Soil Unit** 3



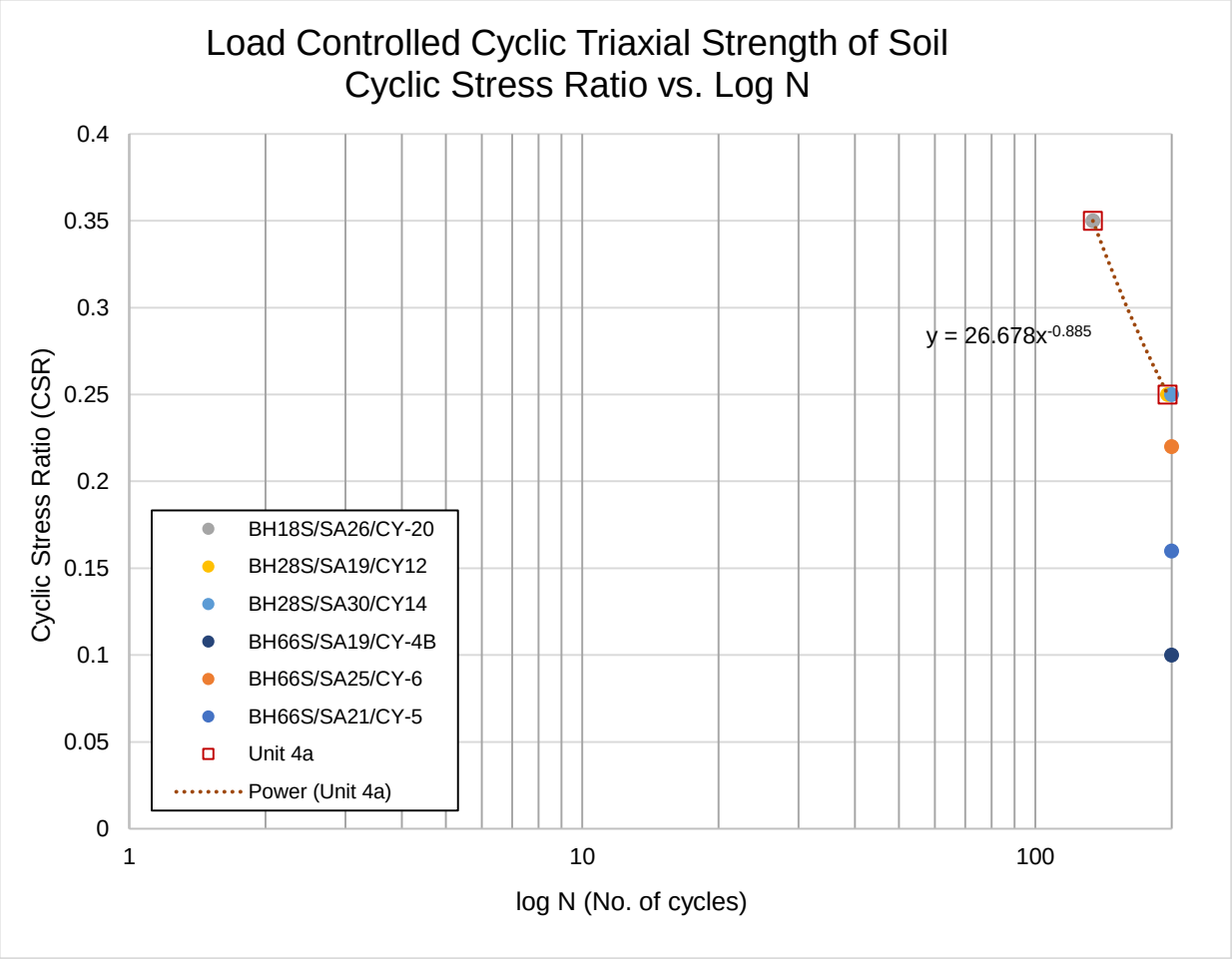
Borehole ID	Sample ID	Effective Vertical Consolidation Stress σ'c (kPa)	No. of Cycles	Post Cyclic Monotonic Undrained Shear Strength (kPa)	Cyclic Stress Ratio	Comments
BH18S	SA6-CY16	83	9	-	0.40	-
BH18S	SA12-CY17B	83	65	-	0.35	-
BH18S	SA14-CY18	83	200	70.70	0.35	See Note 1
BH28S	SA11-CY11	88	183	-	0.25	-
BH28S	SA27-CY13	210	200	97.02	0.25	See Note 1
BH66S	SA16-3-CY3	112.5	200	246.60	0.22	See Note 1
BH28S	SA4-CY10	88	200	53.45	0.15	See Note 1
BH66S	SA15-3-CY1	115	200	121.70	0.16	See Note 1
BH66S	SA14-3-CY2	144.6	200	72.70	0.10	See Note 1

Note:
1. Test results indicate that samples did not achieve failure criteria of γ = 3.5% single strain amplitude before reaching threshold of N = 200 cycles.

Figure No. K3

Load Controlled Cyclic Triaxial Strength of Soil

No. 21451329 **Soil Unit** 4a



Borehole ID	Sample ID	Effective Vertical Consolidation Stress σ'c (kPa)	No. of Cycles	Post Cyclic Monotonic Undrained Shear Strength (kPa)	Cyclic Stress Ratio	Comments
BH18S	CY-20	162	134	47.3	0.35	-
BH28S	CY12	171	196	-	0.25	-
BH28S	CY14	247	200	102.0	0.25	See Note 1
BH66S	CY-4B	166	200	96.3	0.10	See Note 1
BH66S	CY-5	166	200	280.9	0.16	See Note 1
BH66S	CY-6	166	200	225.5	0.22	See Note 1

Note:

1. Test results indicate that samples did not achieve failure criteria of γ = 3.5% single strain amplitude before reaching threshold of N = 200 cycles.

APPENDIX L

Resonant Column and Strain-Controlled Cyclic Direct Simple Shear Interpretations

Figure No. L1.1

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Project No. 21451329 **Sample ID** See legend
BH ID See legend **Depth Interval** **Soil Unit** 2A

Confining Pressure (kPa)	43.2	39.7	475
Average Max Shear Modulus G_{max} (kPa)	28333	58881	287000

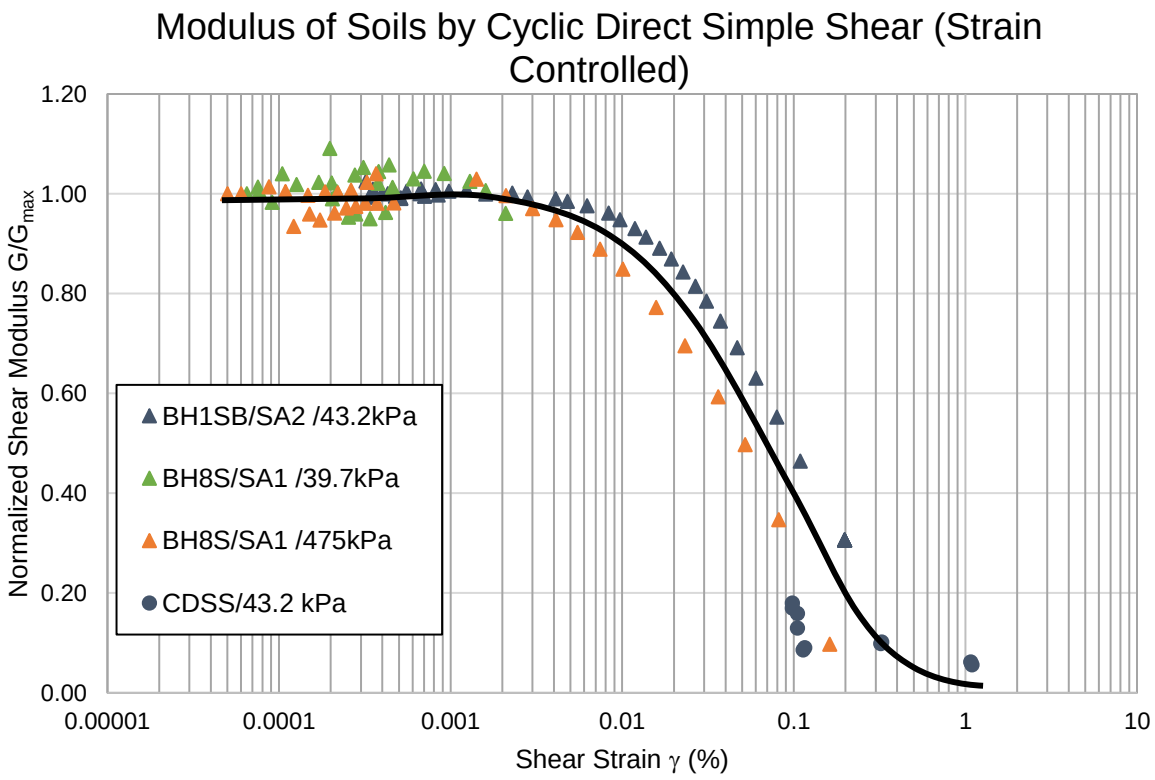


Figure No. L1.2

Damping Ratio of Soils Cyclic Direct Simple Shear (Strain Controlled)

Project No.	21451329	**Sample ID**	See legend		
BH ID	See legend	**Depth Interval**		**Soil Unit**	2A

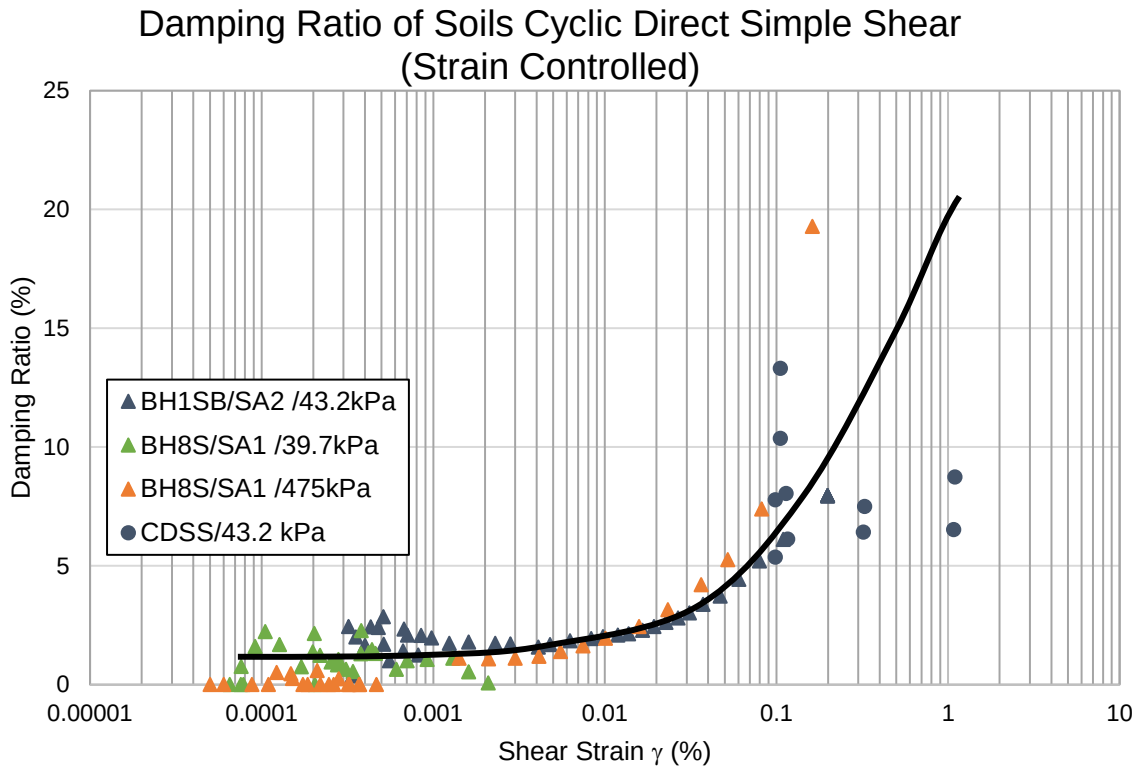


Figure No. L1.3

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	28333

Cycle 1

γ	τ
-0.1	-4.8
0.0	**0.0**
0.1	3.4

Shear Modulus G (kPa)	3671.0
Positive Shear Modulus G_pos (kPa)	3207.0
Negative Shear Modulus G_neg (kPa)	4082.5

Project No.	21451329
Soil Unit	2A
BH ID	BH1S
Sample ID	SA2-2
Test ID	CDSS-28
Depth Interval	1.49m - 1.54m
G/Gmax	0.1296

BH1S/SA2-2/Cycle 1

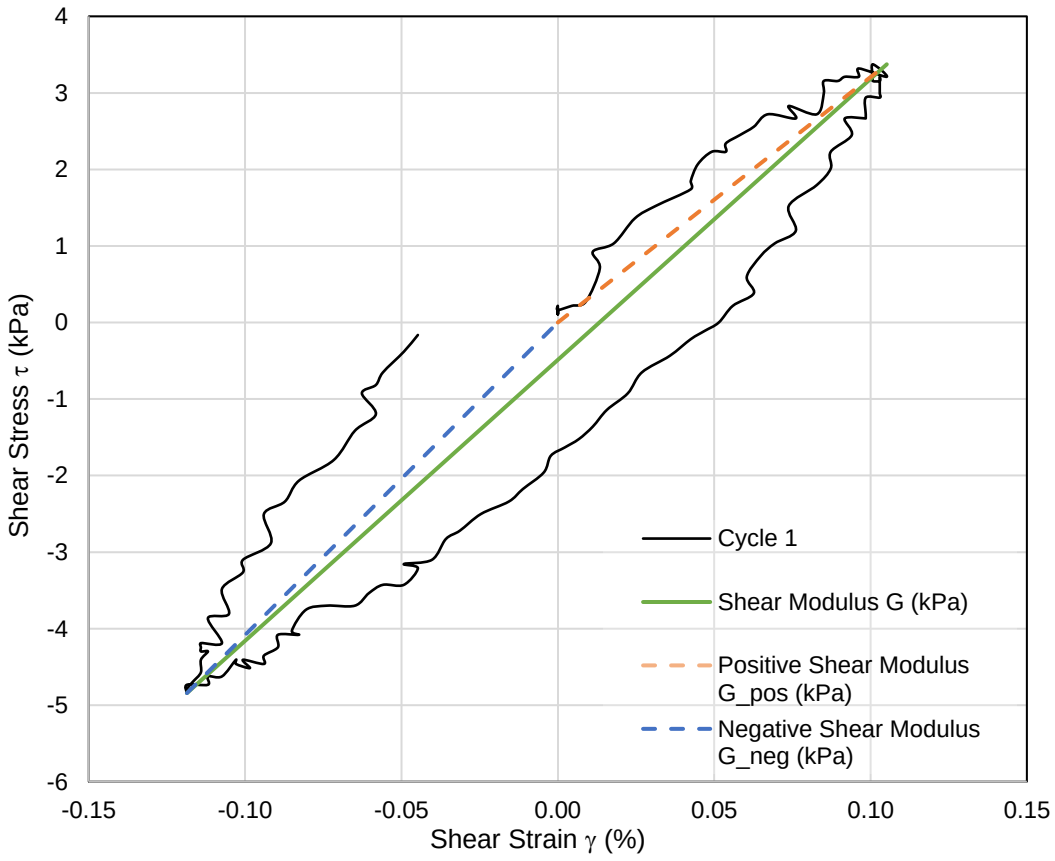


Figure No. L1.4

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	28333

Cycle 15

γ	τ
-0.1	-5.8
0.0	**0.0**
0.1	4.5

Shear Modulus G (kPa)	4504.8
Positive Shear Modulus G_pos (kPa)	4241.6
Negative Shear Modulus G_neg (kPa)	4729.7

Project No.	21451329
Soil Unit	2A
BH ID	BH1S
Sample ID	SA2-2
Test ID	CDSS-28
Depth Interval	1.49m - 1.54m
G/Gmax	0.1590

BH1S/SA2-2/Cycle 15

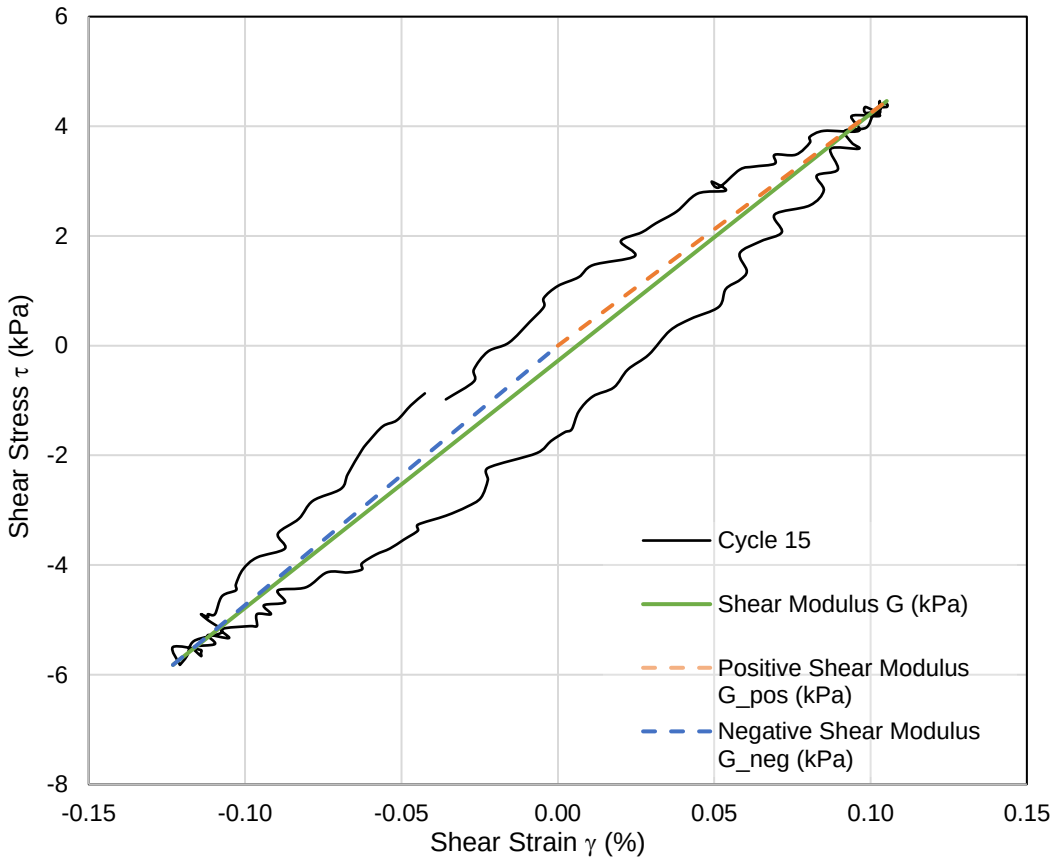


Figure No. L1.5

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	28333

Cycle 1

γ	τ
-0.1	-2.8
0.0	**0.0**
0.1	2.9

Shear Modulus G (kPa)	2437.1
Positive Shear Modulus G_pos (kPa)	2583.5
Negative Shear Modulus G_neg (kPa)	2299.2

Project No.	21451329
Soil Unit	2A
BH ID	BH11SB
Sample ID	SA3
Test ID	CDSS-39
Depth Interval	1.96m - 2.01m
G/Gmax	0.0860

BH11SB/SA3/Cycle 1

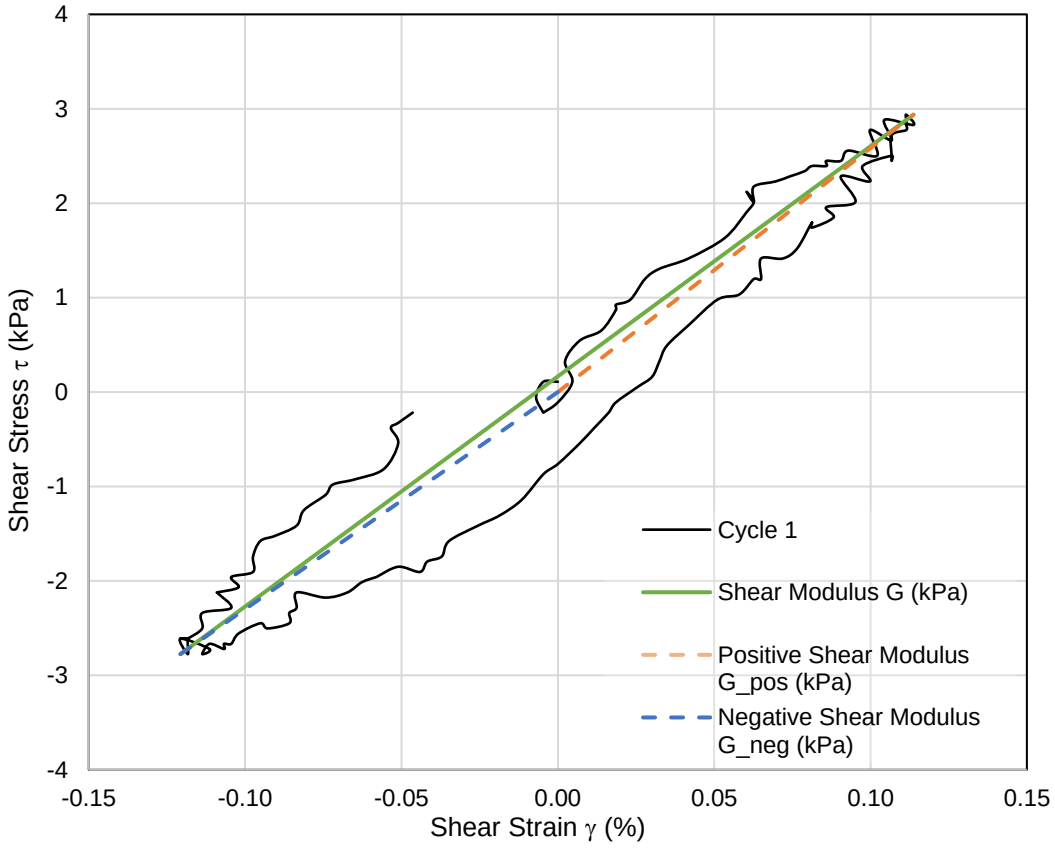


Figure No. L1.6

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	28333

Cycle 15

γ	τ
-0.1	-3.4
0.0	**0.0**
0.1	2.5

Shear Modulus G (kPa)	2557.4
Positive Shear Modulus G_pos (kPa)	2156.7
Negative Shear Modulus G_neg (kPa)	2966.3

Project No.	21451329
Soil Unit	2A
BH ID	BH11SB
Sample ID	SA3
Test ID	CDSS-39
Depth Interval	1.96m - 2.01m
G/Gmax	0.0903

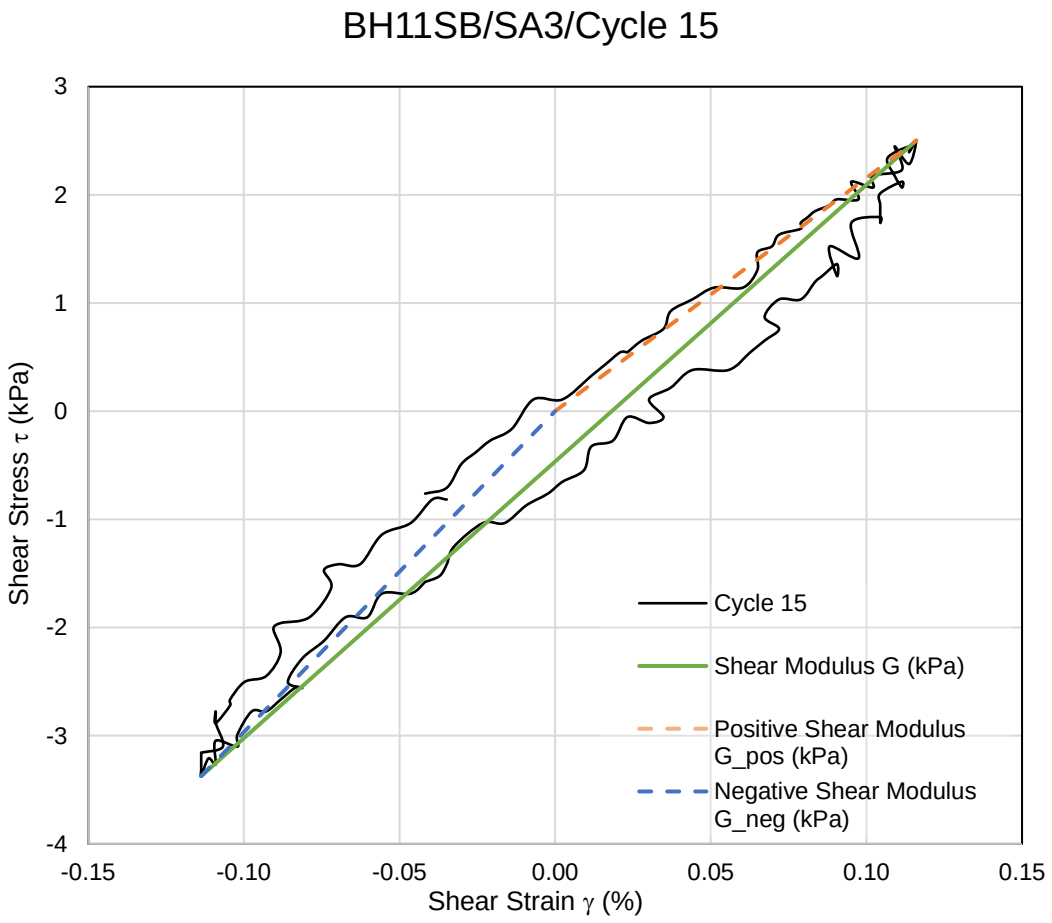


Figure No. L1.7

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	28333

Cycle 1

γ	τ
-0.1	-6.7
0.0	**0.0**
0.1	3.0

Shear Modulus G (kPa)	4808.7
Positive Shear Modulus G_pos (kPa)	3040.8
Negative Shear Modulus G_neg (kPa)	6498.0

Project No.	21451329
Soil Unit	2A
BH ID	BH66S
Sample ID	SA1
Test ID	CDSS-1A
Depth Interval	2.55m - 2.62m
G/Gmax	0.1697176

BH66S/SA1/Cycle 1

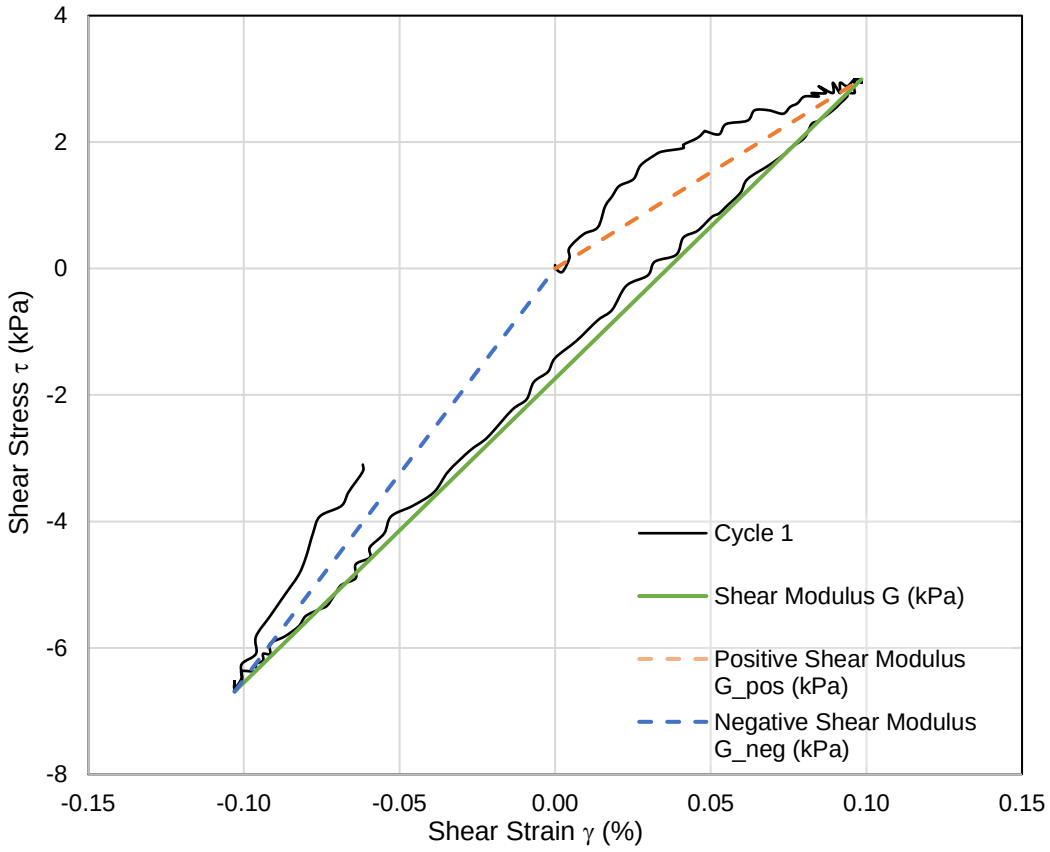


Figure No. L1.8

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	28333

Cycle 15

γ	τ
-0.1	-7.5
0.0	**0.0**
0.1	2.8

Shear Modulus G (kPa)	5105.8
Positive Shear Modulus G_pos (kPa)	2874.9
Negative Shear Modulus G_neg (kPa)	7237.6

Project No.	21451329
Soil Unit	2A
BH ID	BH66S
Sample ID	SA1
Test ID	CDSS-1A
Depth Interval	2.55m - 2.62m
G/Gmax	0.1802

BH66S/SA1/Cycle 15

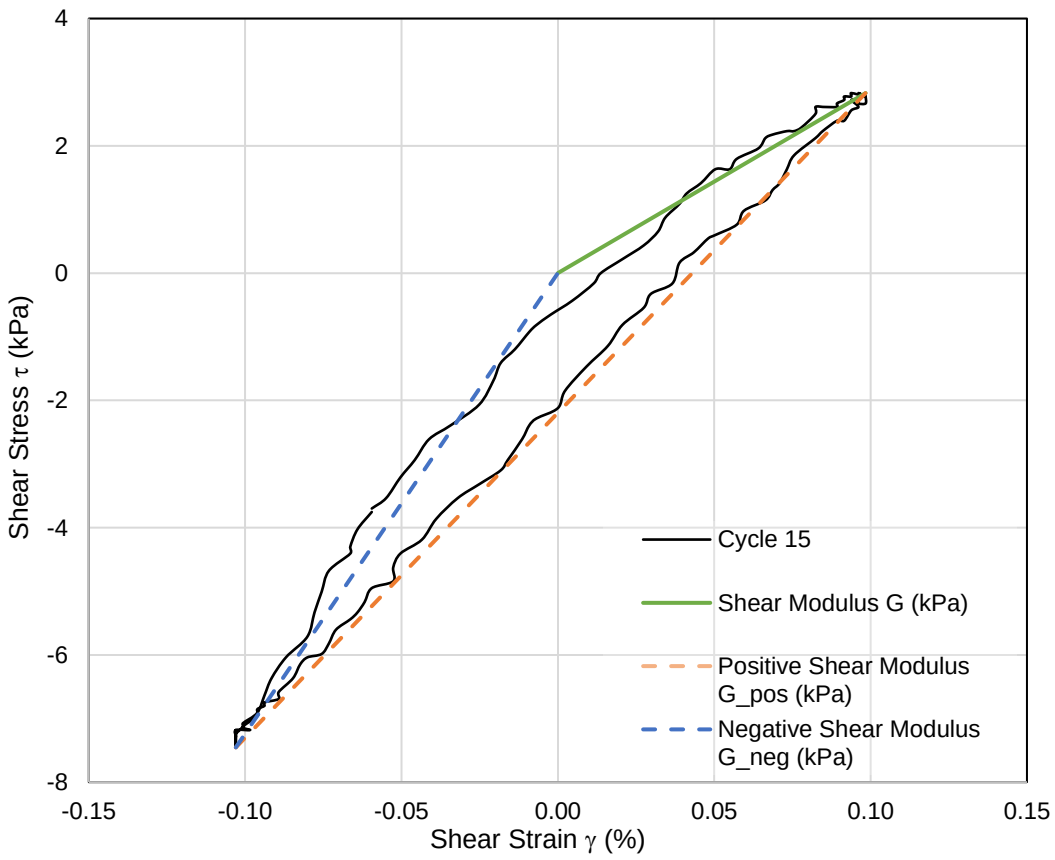


Figure No. L1.9

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	28333

Cycle 1

γ	τ
-0.3	-13.7
0.0	**0.0**
0.3	5.2

Shear Modulus G (kPa)	2895.1
Positive Shear Modulus G_pos (kPa)	1583.7
Negative Shear Modulus G_neg (kPa)	4216.5

Project No.	21451329
Soil Unit	2A
BH ID	BH66S
Sample ID	SA2
Test ID	DSS-2
Depth Interval	2.88m - 2.92m
G/Gmax	0.1022

BH66S/SA2/Cycle 1

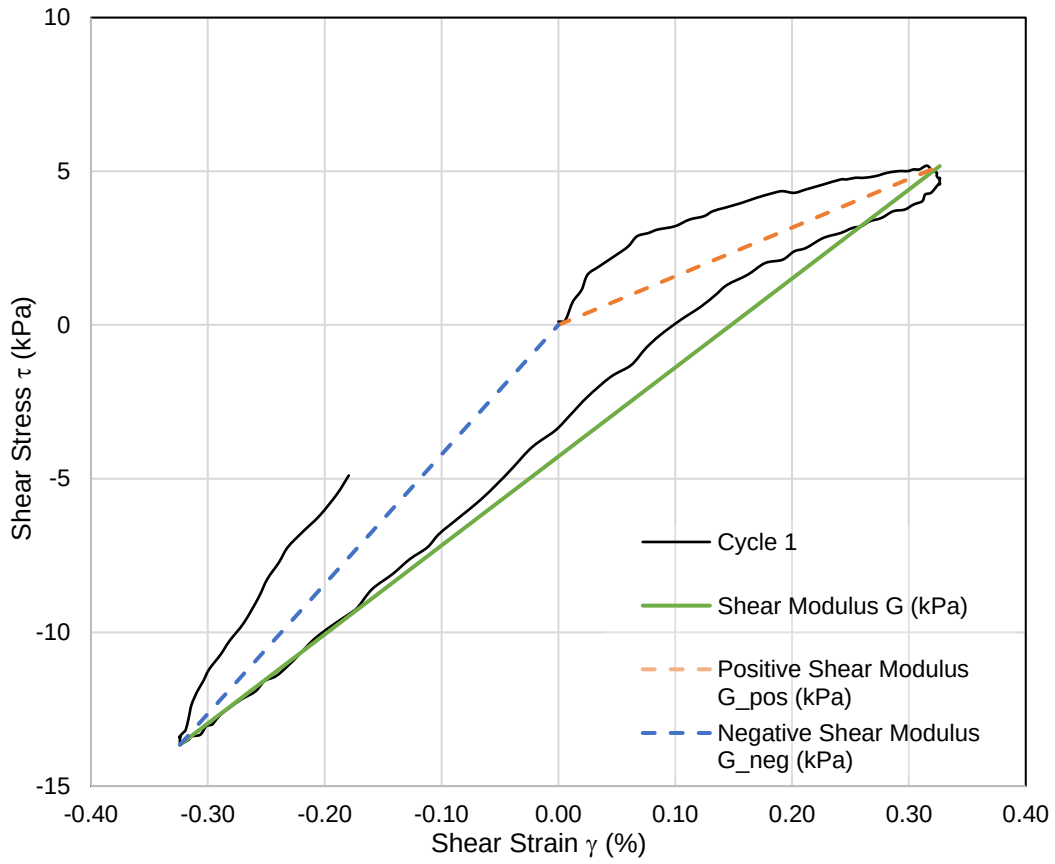


Figure No. L1.10

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	28333

Cycle 15

γ	τ
-0.3	-13.4
0.0	**0.0**
0.3	4.7

Shear Modulus G (kPa)	2797.0
Positive Shear Modulus G_pos (kPa)	1455.9
Negative Shear Modulus G_neg (kPa)	4117.7

Project No.	21451329
Soil Unit	2A
BH ID	BH66S
Sample ID	SA2
Test ID	DSS-2
Depth Interval	2.88m - 2.92m
G/Gmax	0.0987

BH66S/SA2/Cycle 15

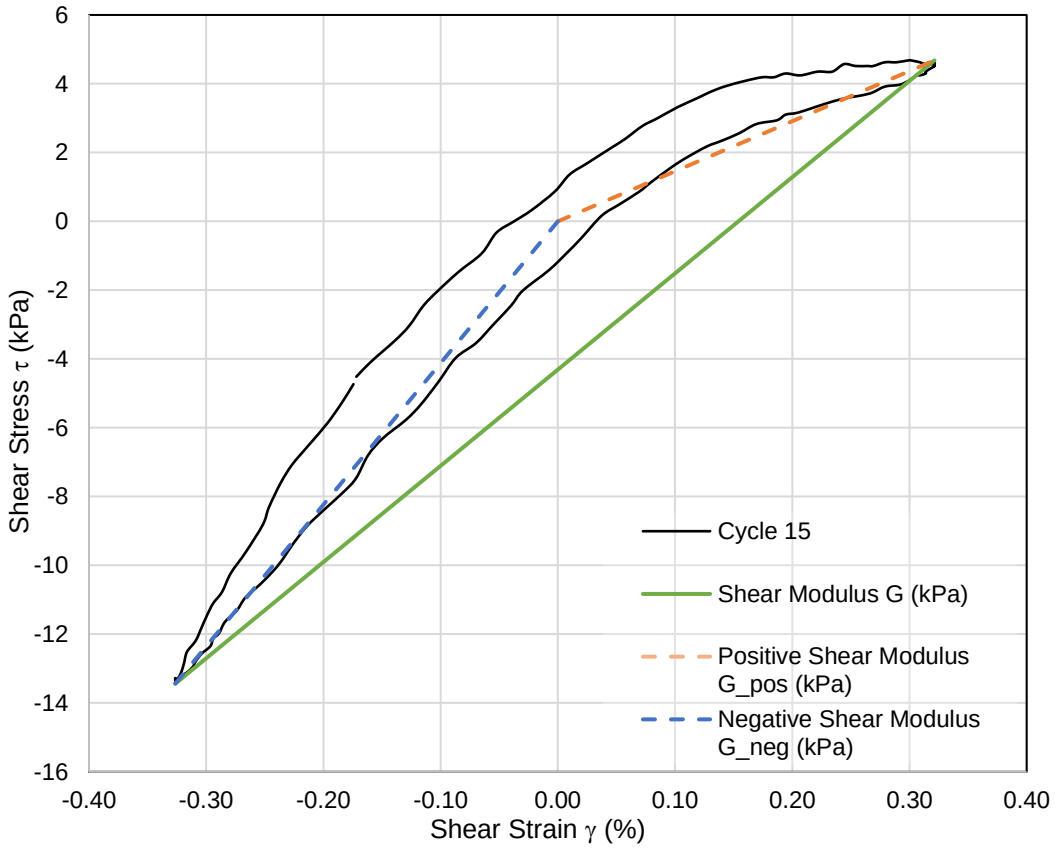


Figure No. L1.11

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	28333

Cycle 1

γ	τ
-1.1	-25.9
0.0	**0.0**
1.1	8.8

Shear Modulus G (kPa)	1595.0
Positive Shear Modulus G_pos (kPa)	800.8
Negative Shear Modulus G_neg (kPa)	2400.1

Project No.	21451329
Soil Unit	2A
BH ID	BH66S
Sample ID	SA3-1
Test ID	CDSS-4
Depth Interval	2.94m - 2.96m
G/Gmax	0.0563

BH66S/SA3-1/Cycle 1

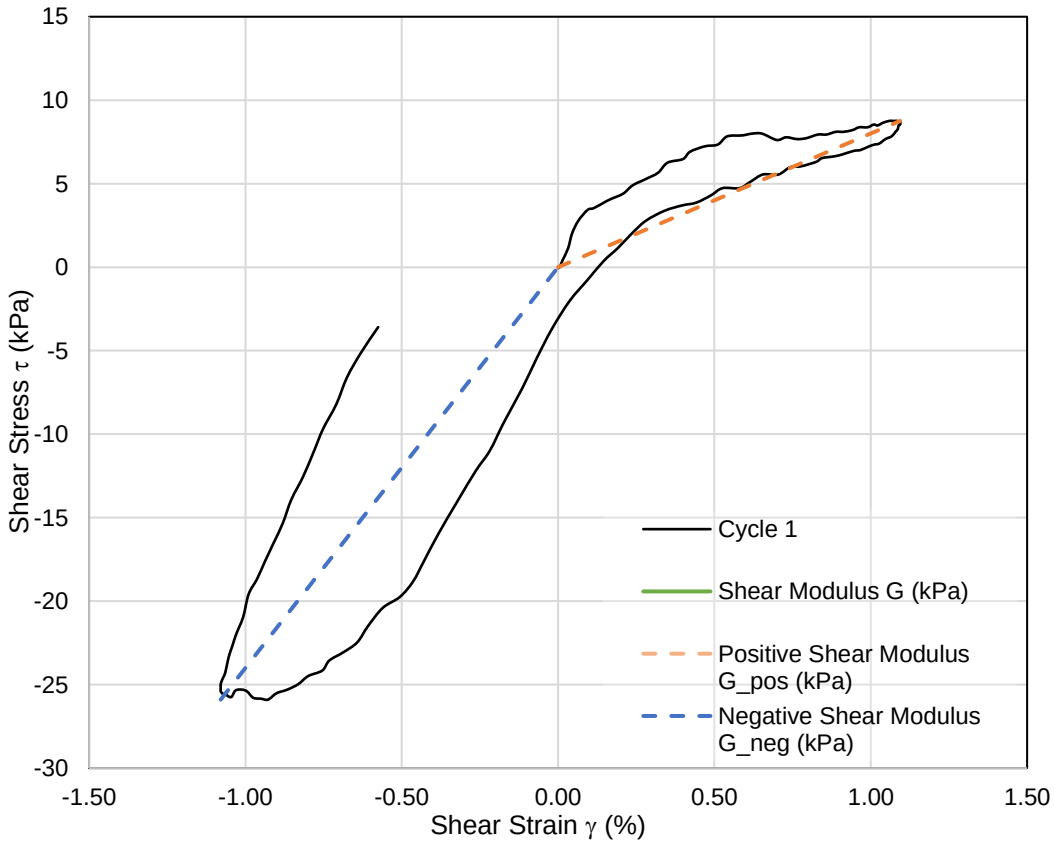


Figure No. L1.12

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	28333

Cycle 15

γ	τ
-1.1	-26.0
0.0	**0.0**
1.1	11.6

Shear Modulus G (kPa)	1746.7
Positive Shear Modulus G_pos (kPa)	1081.5
Negative Shear Modulus G_neg (kPa)	2410.2

Project No.	21451329
Soil Unit	2A
BH ID	BH66S
Sample ID	SA3-1
Test ID	CDSS-4
Depth Interval	2.94m - 2.96m
G/Gmax	0.0616

BH66S/SA3-1/Cycle 15

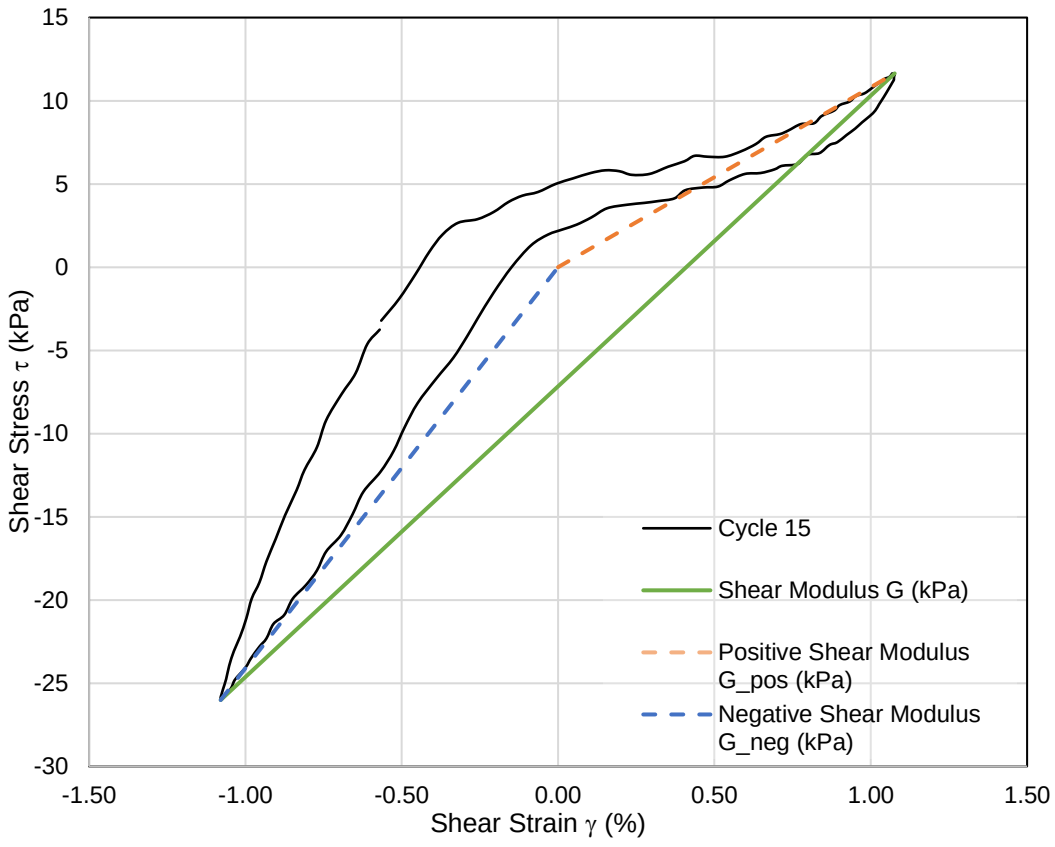


Figure No. L2.1

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Project No. 21451329 **Sample ID** See legend

BH ID See legend **Depth Interval** **Soil Unit** 4B

Confining Pressure (kPa)	217	247	277
Average Max Shear Modulus G_{max} (kPa)	171919	89905	60451

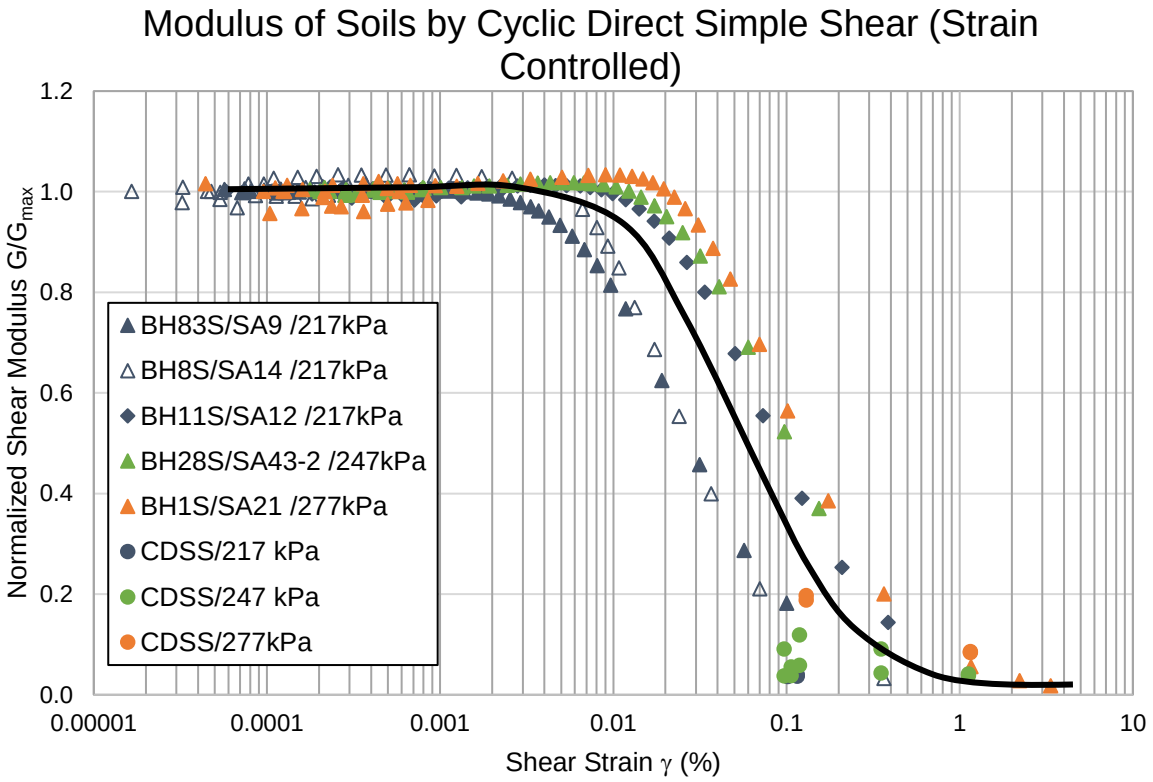


Figure No. L2.2

Damping Ratio of Soils Cyclic Direct Simple Shear (Strain Controlled)

Project No.	21451329	**Sample ID**	See legend		
BH ID	See legend	**Depth Interval**		**Soil Unit**	4B

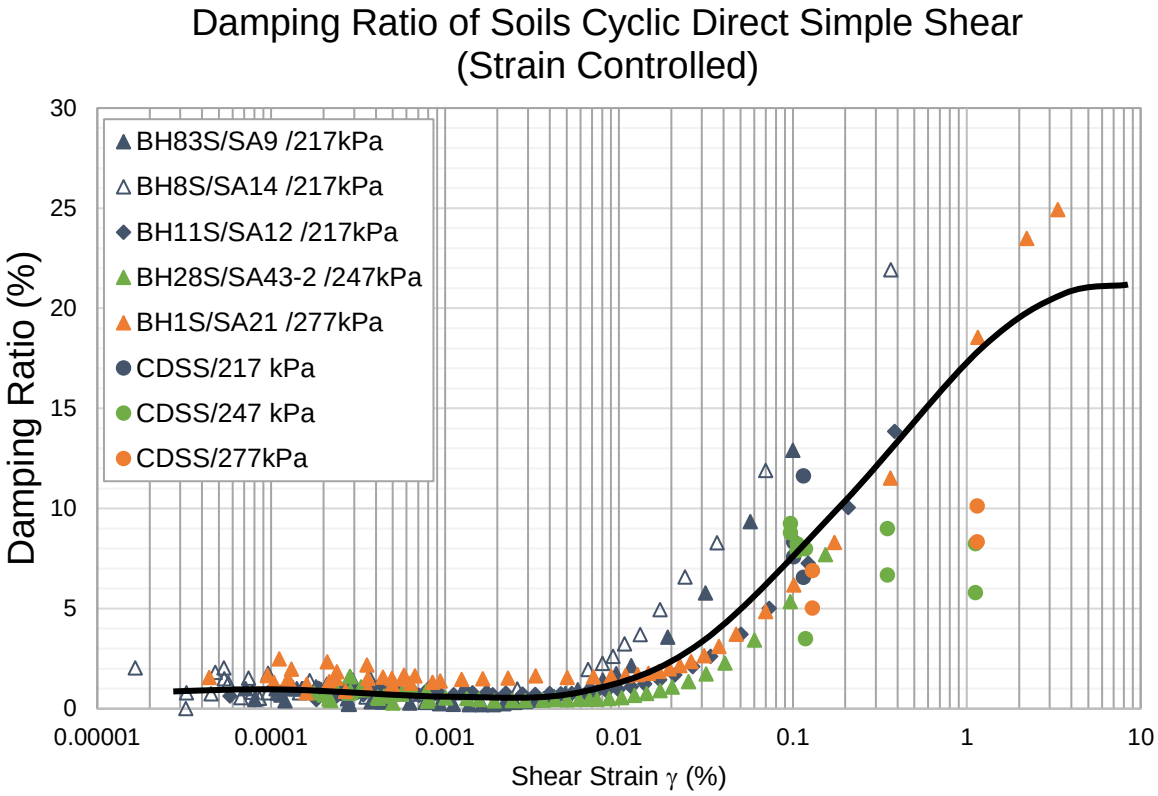


Figure No. L2.3

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 171919

Project No.	21451329
Soil Unit	3
BH ID	BH1S
Sample ID	SA15
Test ID	CDSS-30
Depth Interval	8.84m-8.89m

Cycle 1

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.1276	-9.2
0	0.0
0.1153	6.5

Shear Modulus G (kPa)	6450.5
itive Shear Modulus G_pos (kPa)	5614.1
ative Shear Modulus G_neg (kPa)	7206.4

G/Gmax 0.0375

BH1S/SA15/Cycle 1

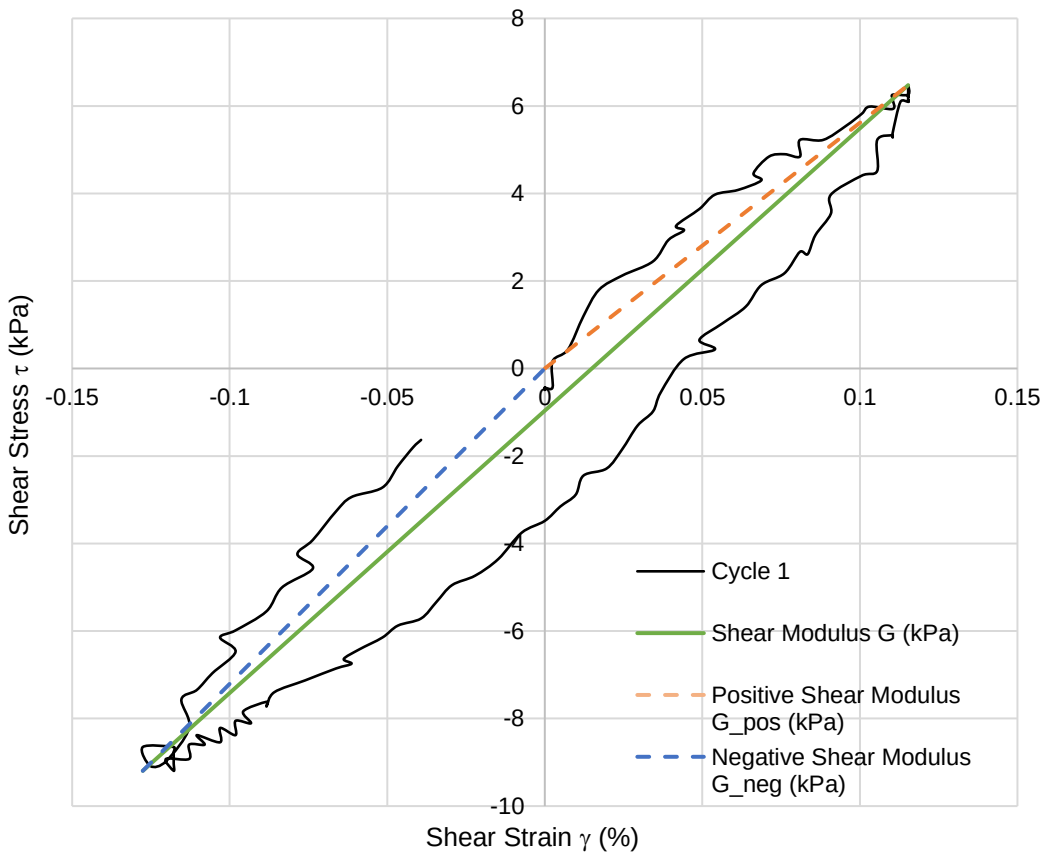


Figure No. L2.4

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 171919

Project No.	21451329
Soil Unit	3
BH ID	BH1S
Sample ID	SA15
Test ID	CDSS-30
Depth Interval	8.84m-8.89m

Cycle 15

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.1	-8.3
0	0.0
0.1	8.8

Shear Modulus G (kPa)	6984.7
itive Shear Modulus G_pos (kPa)	7184.2
ative Shear Modulus G_neg (kPa)	6785.1

G/Gmax 0.0406277

BH1S/SA15/Cycle 15

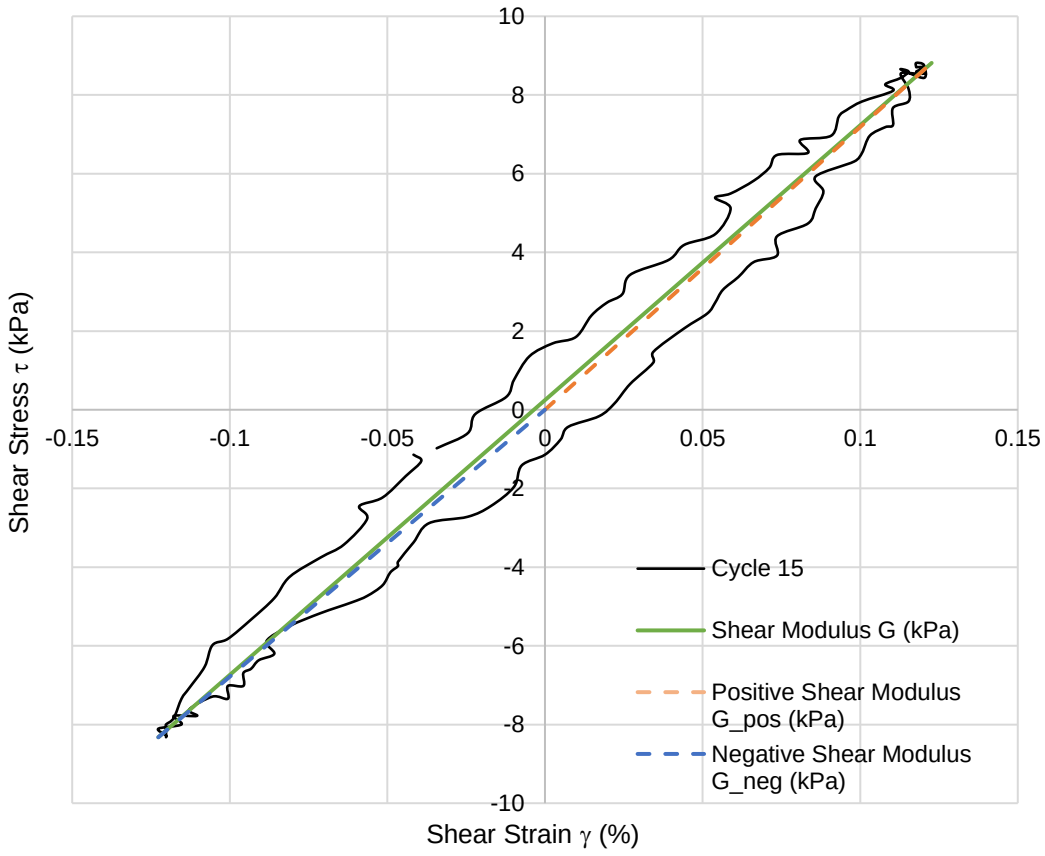


Figure No. L2.5

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 89905

Project No.	21451329
Soil Unit	3
BH ID	BH1S
Sample ID	SA27
Test ID	CDSS-32
Depth Interval	19.51m-19.56m

Cycle 1

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.1	-7.5
0	0.0
0.1	4.8

Shear Modulus G (kPa)	5217.4
itive Shear Modulus G_pos (kPa)	4040.4
ative Shear Modulus G_neg (kPa)	6418.5

Normalized Shear Modulus G (kPa) 0.0580323

BH1S/SA27/Cycle 1

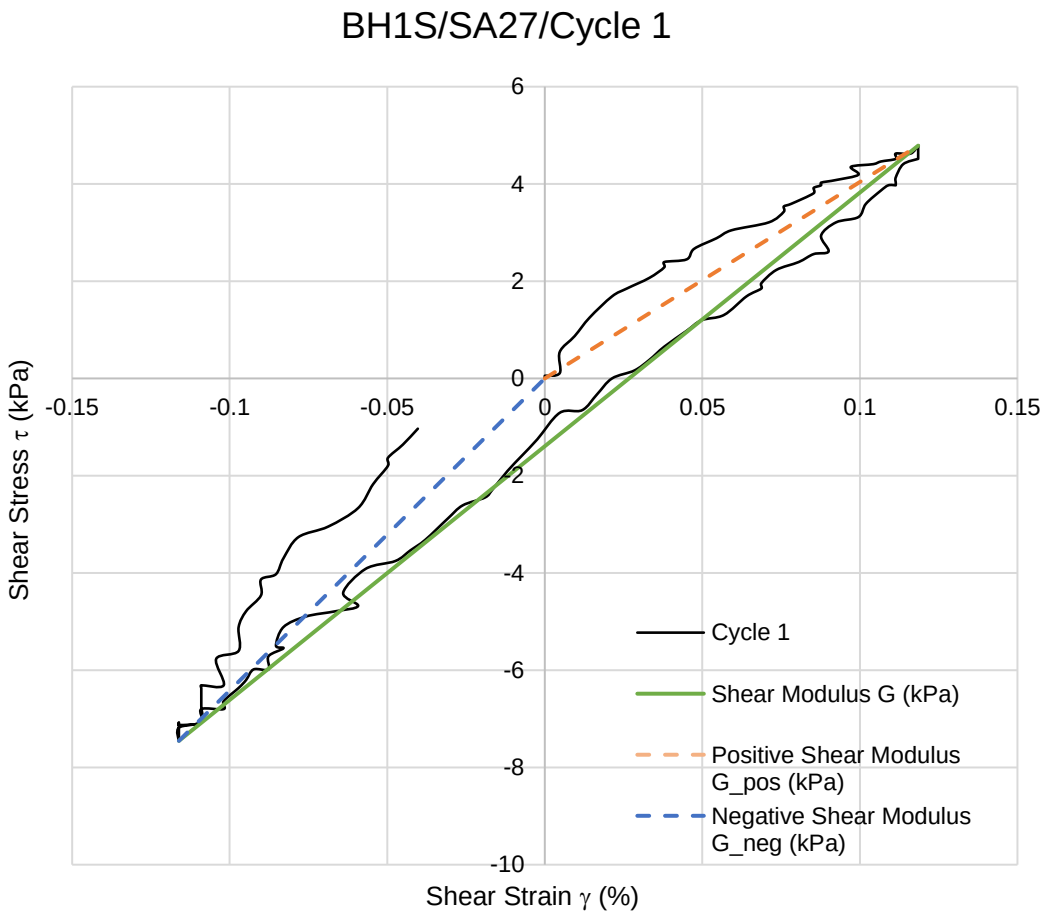


Figure No. L2.6

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 89905

Project No.	21451329
Soil Unit	3
BH ID	BH1S
Sample ID	SA27
Test ID	CDSS-32
Depth Interval	19.51m-19.56m

Cycle 15

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.1	-4.7
0	0.0
0.1	3.2

Shear Modulus G (kPa)	3328.7
itive Shear Modulus G_pos (kPa)	2610.8
ative Shear Modulus G_neg (kPa)	4076.0

G/Gmax 0.0370

BH1S/SA27/Cycle 15

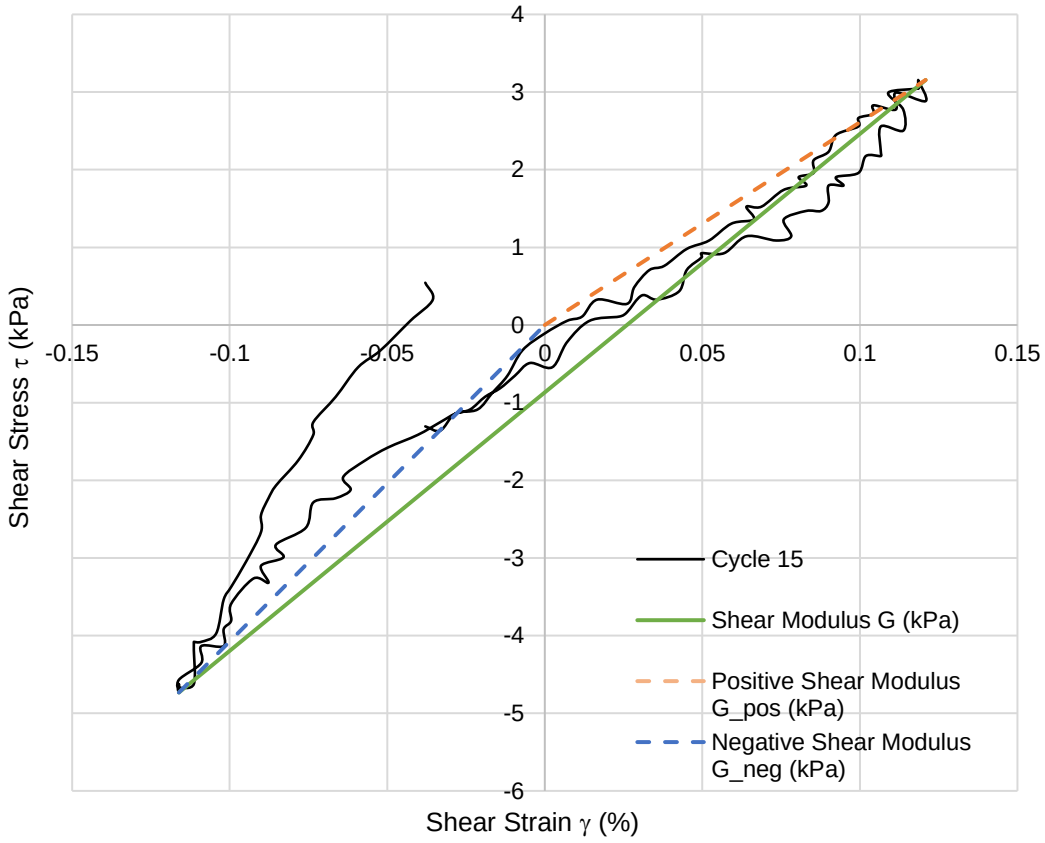


Figure No. L2.7

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 171919

Project No.	21451329
Soil Unit	3
BH ID	BH11S
Sample ID	SA7
Test ID	CDSS-40
Depth Interval	16.46m-16.51m

Cycle 1

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.1	-6.4
0	0.0
0.1	6.0

Shear Modulus G (kPa)	6289.8
itive Shear Modulus G_pos (kPa)	5964.9
ative Shear Modulus G_neg (kPa)	6629.3

G/Gmax 0.0366

BH11S/SA7/Cycle 1

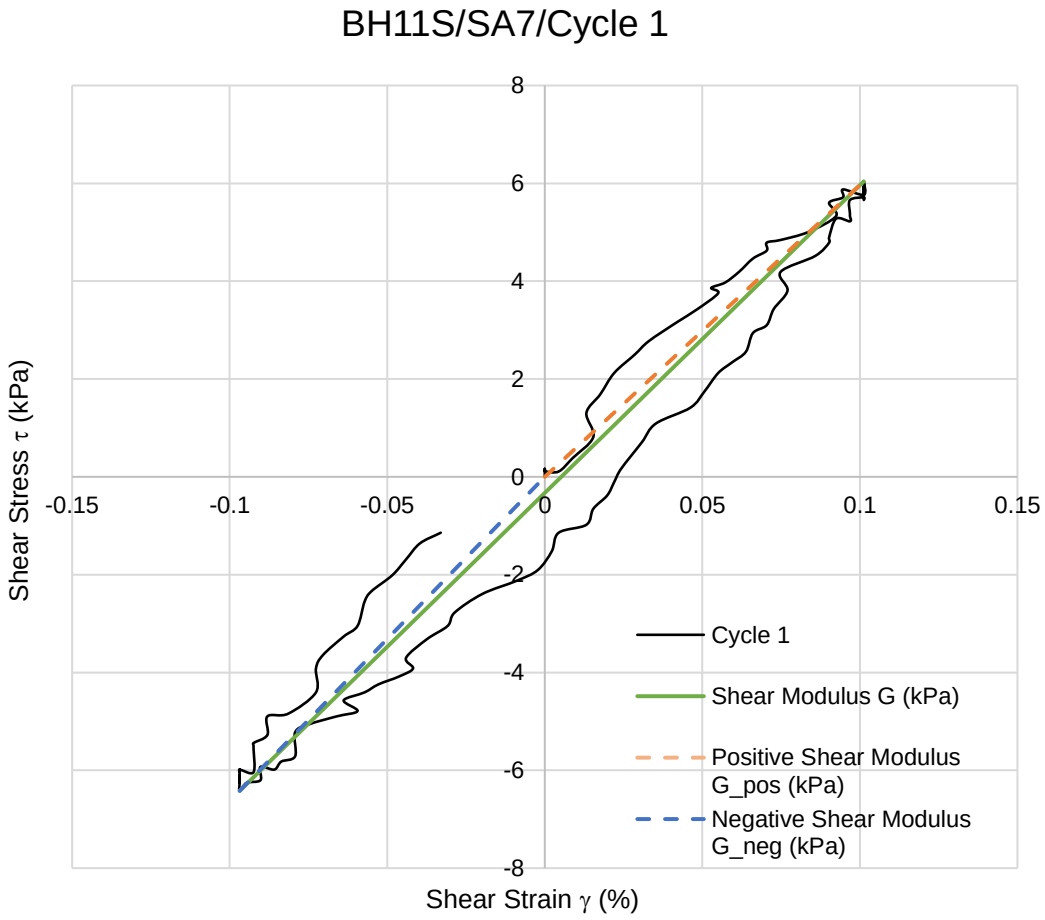


Figure No. L2.8

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 171919

Project No.	21451329
Soil Unit	3
BH ID	BH11S
Sample ID	SA7
Test ID	CDSS-40
Depth Interval	16.46m-16.51m

Cycle 15

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.1	-7.1
0	0.0
0.1	5.5

Shear Modulus G (kPa)	6166.6
itive Shear Modulus G_pos (kPa)	5095.3
ative Shear Modulus G_neg (kPa)	7359.7

G/Gmax 0.0359

BH11S/SA7/Cycle 15

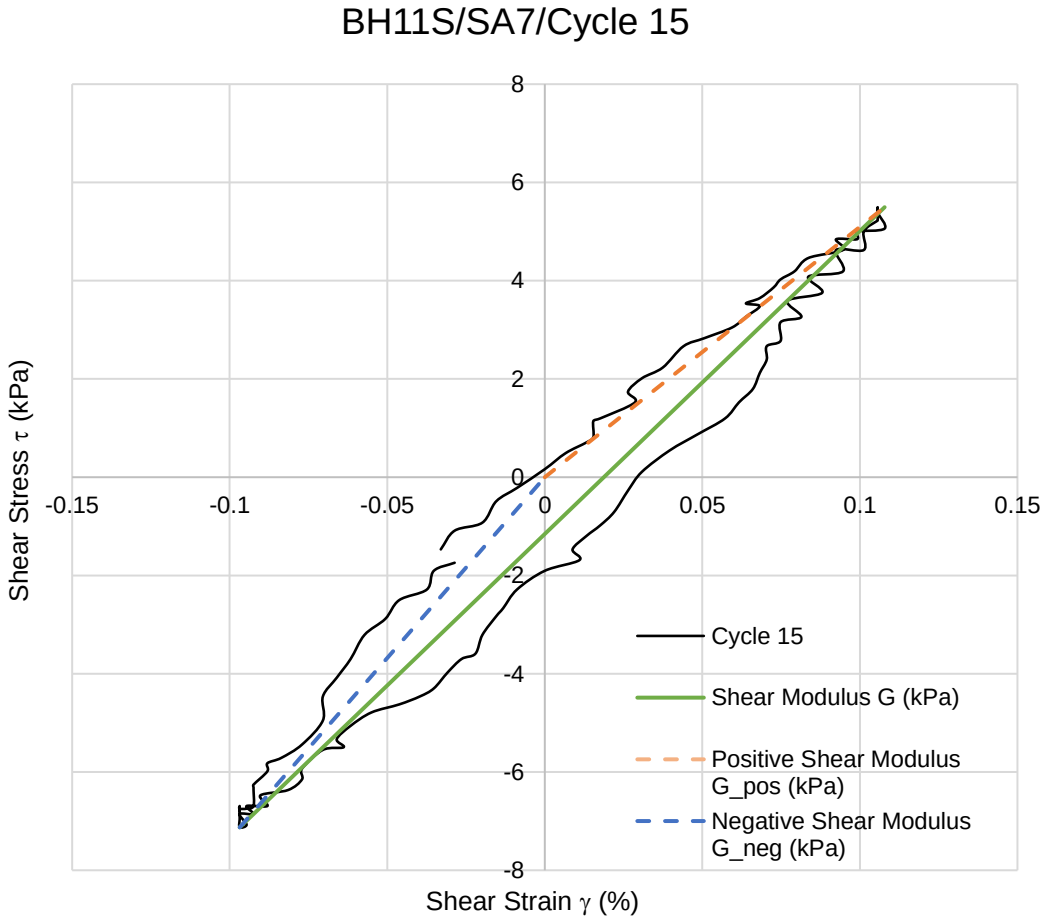


Figure No. L2.9

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 60451

Project No.	21451329
Soil Unit	3
BH ID	BH28S
Sample ID	SA41
Test ID	CDSS-15
Depth Interval	23.99m-24.04m

Cycle 1

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.12	-13.9
0	0.0
0.13	15.0

Shear Modulus G (kPa)	11372.6
itive Shear Modulus G_pos (kPa)	11548.6
ative Shear Modulus G_neg (kPa)	11189.5

Normalized Shear Modulus G (kPa) 0.1881

BH28S/SA41/Cycle 1

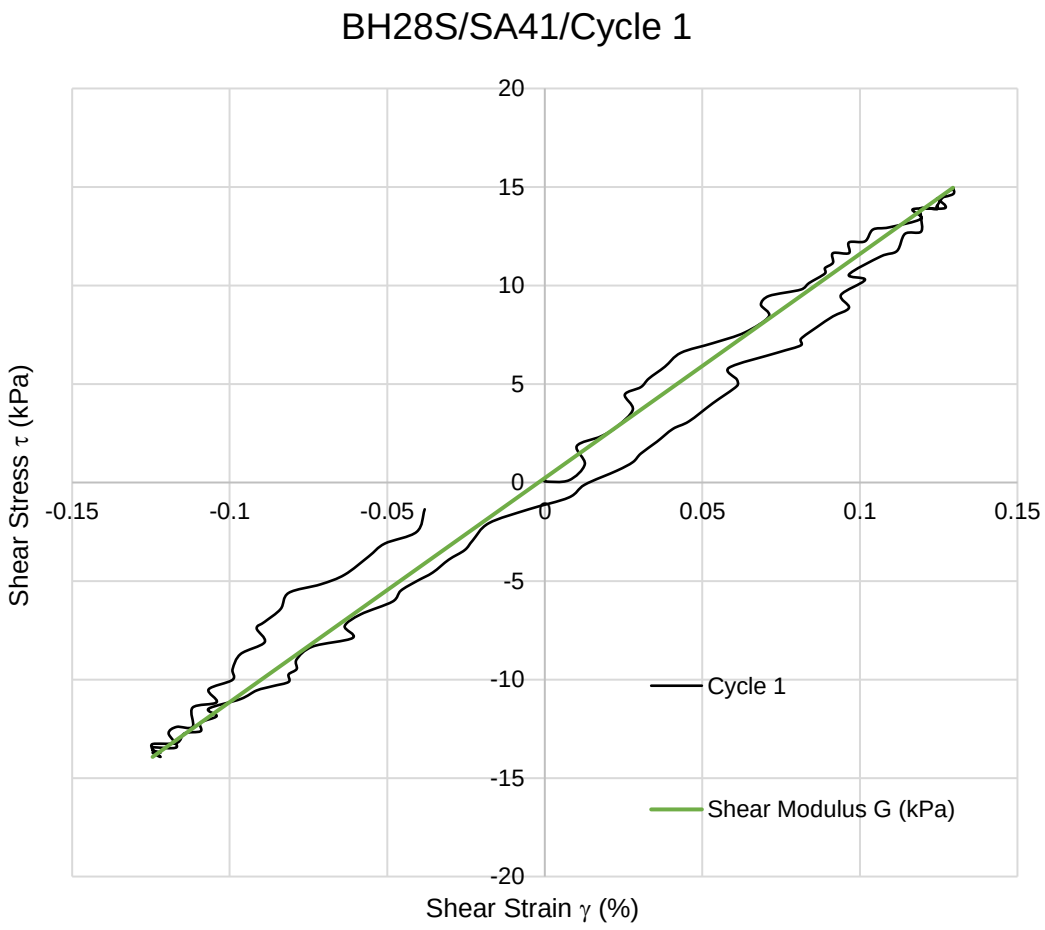


Figure No. L2.10

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 60451

Project No.	21451329
Soil Unit	3
BH ID	BH28S
Sample ID	SA41
Test ID	CDSS-15
Depth Interval	23.99m-24.04m

Cycle 15

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.1	-9.5
0	0.0
0.1	19.8

Shear Modulus G (kPa)	11901.0
itive Shear Modulus G_pos (kPa)	15591.8
ative Shear Modulus G_neg (kPa)	7974.5

G/Gmax 0.1969

BH28S/SA41/Cycle 15

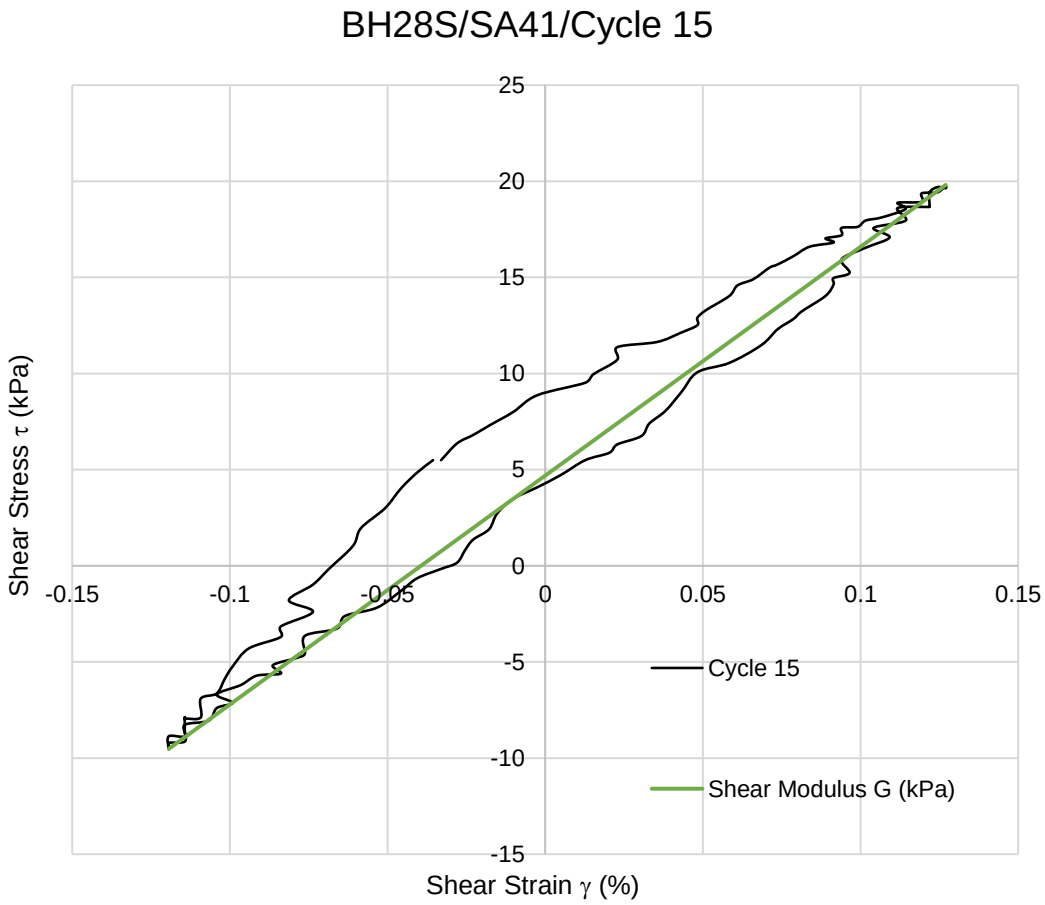


Figure No. L2.11

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 60451

Project No.	21451329
Soil Unit	3
BH ID	BH28S
Sample ID	SA46
Test ID	CDSS-18
Depth Interval	25.39m-25.44m

Cycle 1

Shear Strain γ (%)	Shear Stress τ (kPa)
-1.2	-70.0
0	0.0
1.2	46.8

Shear Modulus G (kPa)	5056.9
itive Shear Modulus G_pos (kPa)	4063.6
ative Shear Modulus G_neg (kPa)	6044.0

G/Gmax 0.0837

BH28S/SA46/Cycle 1

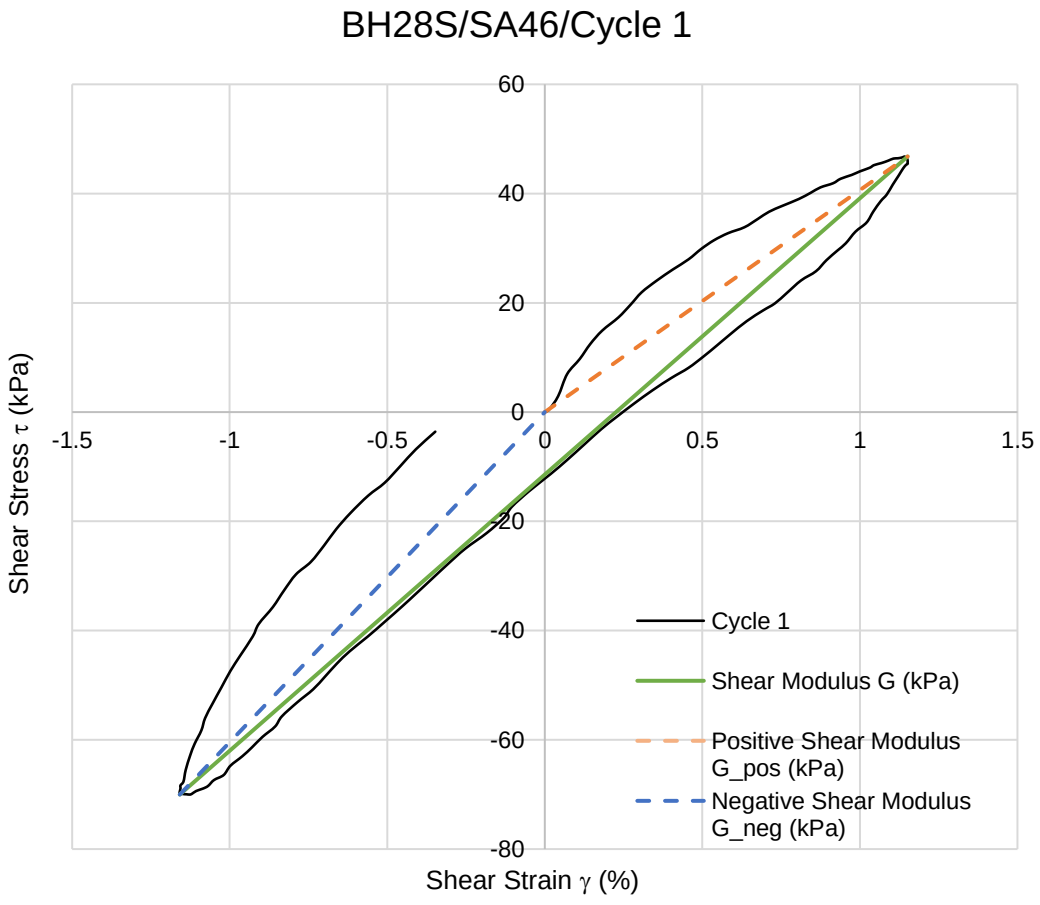


Figure No. L2.12

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 60451

Project No.	21451329
Soil Unit	3
BH ID	BH28S
Sample ID	SA46
Test ID	CDSS-18
Depth Interval	25.39m-25.44m

Cycle 15

Shear Strain γ (%)	Shear Stress τ (kPa)
-1.2	-70.5
0	0.0
1.2	48.6

Shear Modulus G (kPa)	5171.7
itive Shear Modulus G_pos (kPa)	4219.6
ative Shear Modulus G_neg (kPa)	6123.8

G/Gmax 0.0856

BH28S/SA46/Cycle 15

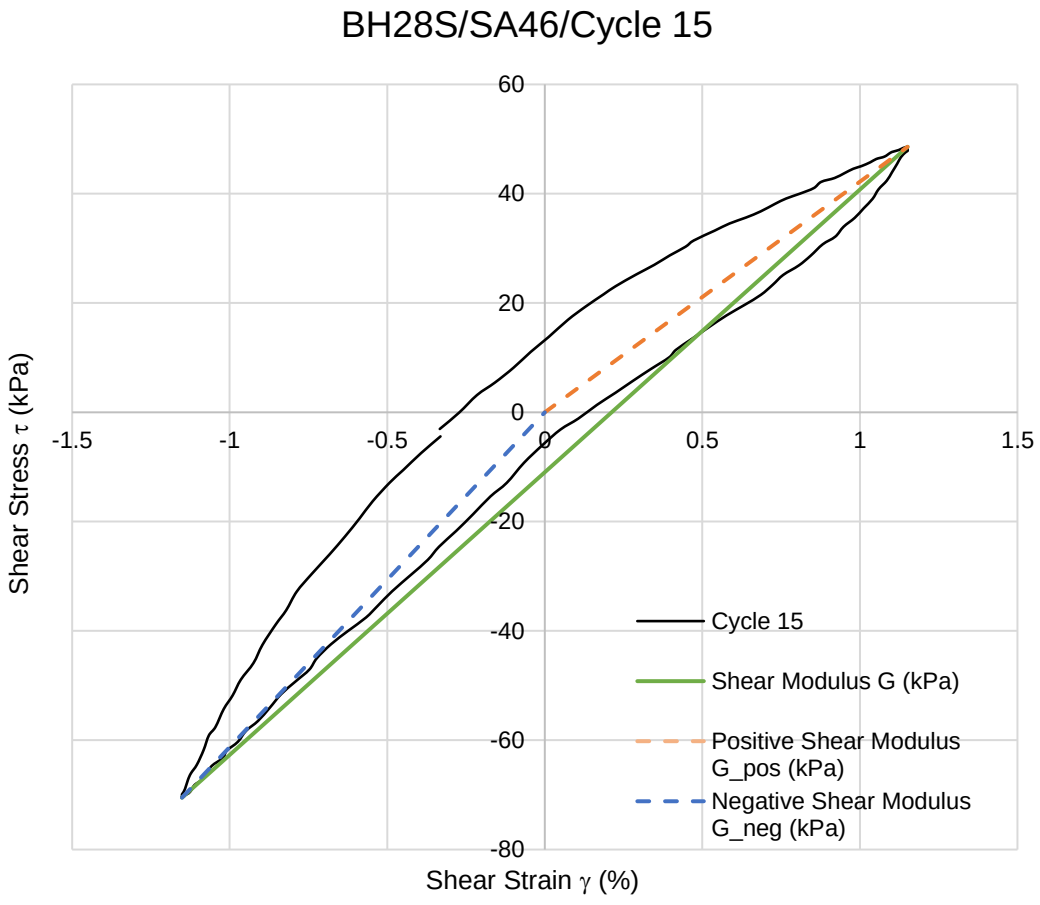


Figure No. L2.13

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 89905

Project No.	21451329
Soil Unit	3
BH ID	BH66S
Sample ID	SA35
Test ID	CDSS-8
Depth Interval	17.89m-17.93m

Cycle 1

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.1	-8.3
0	0.0
0.1	7.5

Shear Modulus G (kPa)	8174.3
itive Shear Modulus G_pos (kPa)	7753.0
ative Shear Modulus G_neg (kPa)	8595.7

G/Gmax 0.0909

BH66S/SA35/Cycle 1

BH28S/SA41/Cycle 1

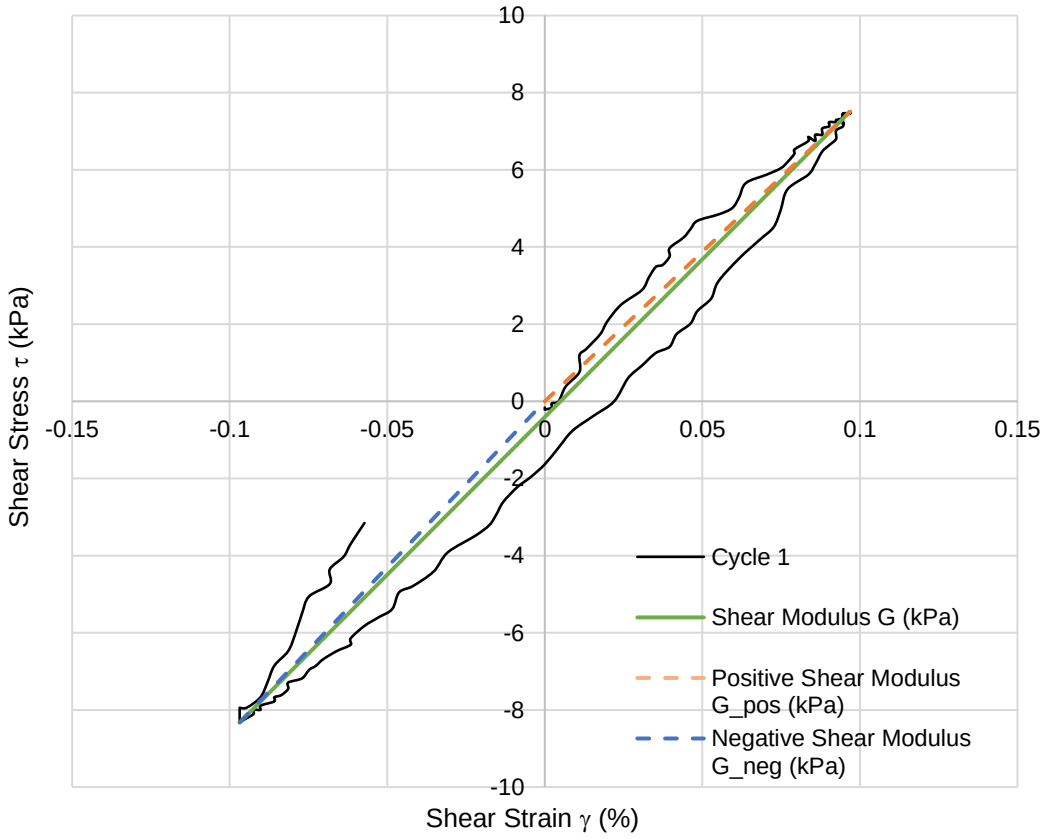


Figure No. L2.14

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (MPa) 89905

Project No.	21451329
Soil Unit	3
BH ID	BH66S
Sample ID	SA35
Test ID	CDSS-8
Depth Interval	17.89m-17.93m

Cycle 15

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.1	-4.7
0	0.0
0.1	10.7

Shear Modulus G (kPa)	8134.5
itive Shear Modulus G_pos (kPa)	11325.0
ative Shear Modulus G_neg (kPa)	4943.9

G/Gmax 0.0905

BH66S/SA35/Cycle 15

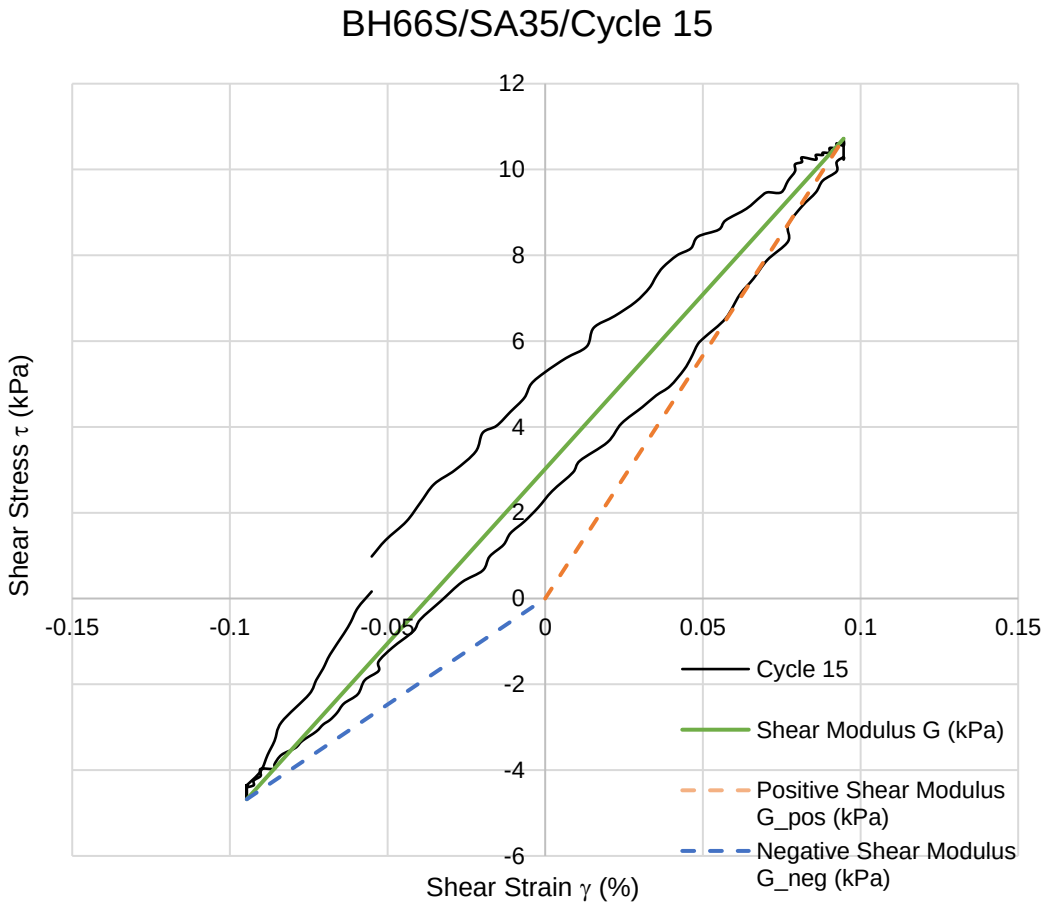


Figure No. L2.15

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 89905

Project No.	21451329
Soil Unit	3
BH ID	BH66S
Sample ID	SA36
Test ID	CDSS-10
Depth Interval	18.08m-18.12m

Cycle 1

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.4	-18.2
0	0.0
0.4	8.9

Shear Modulus G (kPa)	3851.9
itive Shear Modulus G_pos (kPa)	2545.6
ative Shear Modulus G_neg (kPa)	5149.5

G/Gmax 0.0428

BH66S/SA36/Cycle 1

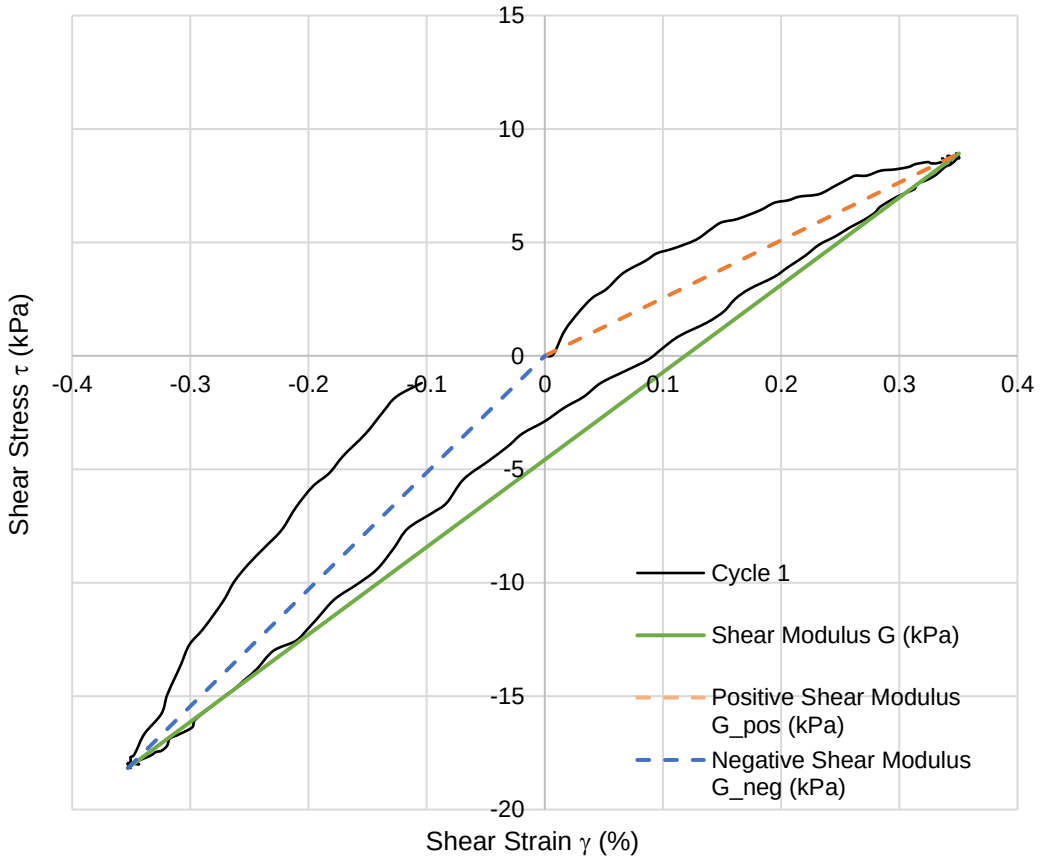


Figure No. L2.16

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 89905

Project No.	21451329
Soil Unit	3
BH ID	BH66S
Sample ID	SA36
Test ID	CDSS-10
Depth Interval	18.08m-18.12m

Cycle 15

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.4	-17.4
0	0.0
0.3	8.4

Shear Modulus G (kPa)	3699.0
itive Shear Modulus G_pos (kPa)	2438.9
ative Shear Modulus G_neg (kPa)	4933.7

G/Gmax 0.0411

BH66S/SA36/Cycle 15

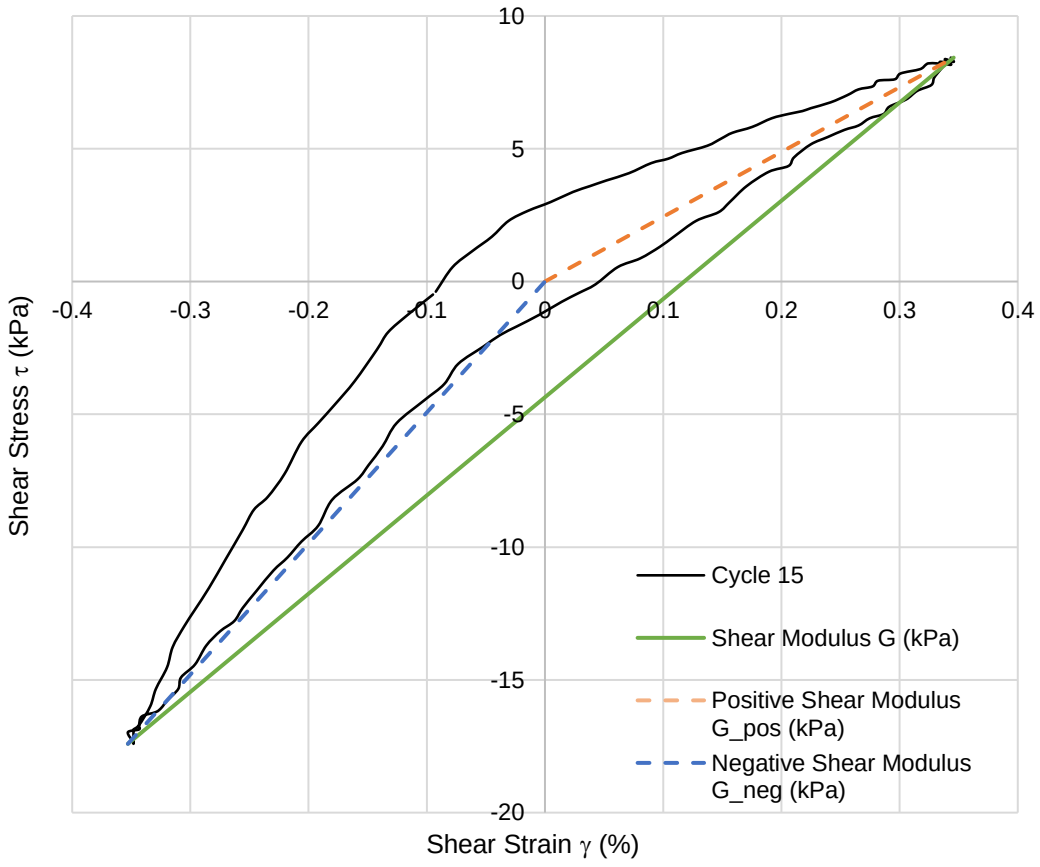


Figure No. L2.17

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 89905

Project No.	21451329
Soil Unit	3
BH ID	BH66S
Sample ID	SA38
Test ID	CDSS-9
Depth Interval	18.8m-18.83m

Cycle 1

Shear Strain γ (%)	Shear Stress τ (kPa)
-1.1	-55.6
0	0.0
1.1	21.1

Shear Modulus G (kPa)	3426.8
itive Shear Modulus G_pos (kPa)	1882.1
ative Shear Modulus G_neg (kPa)	4977.8

G/Gmax 0.0381

BH66S/SA38/Cycle 1

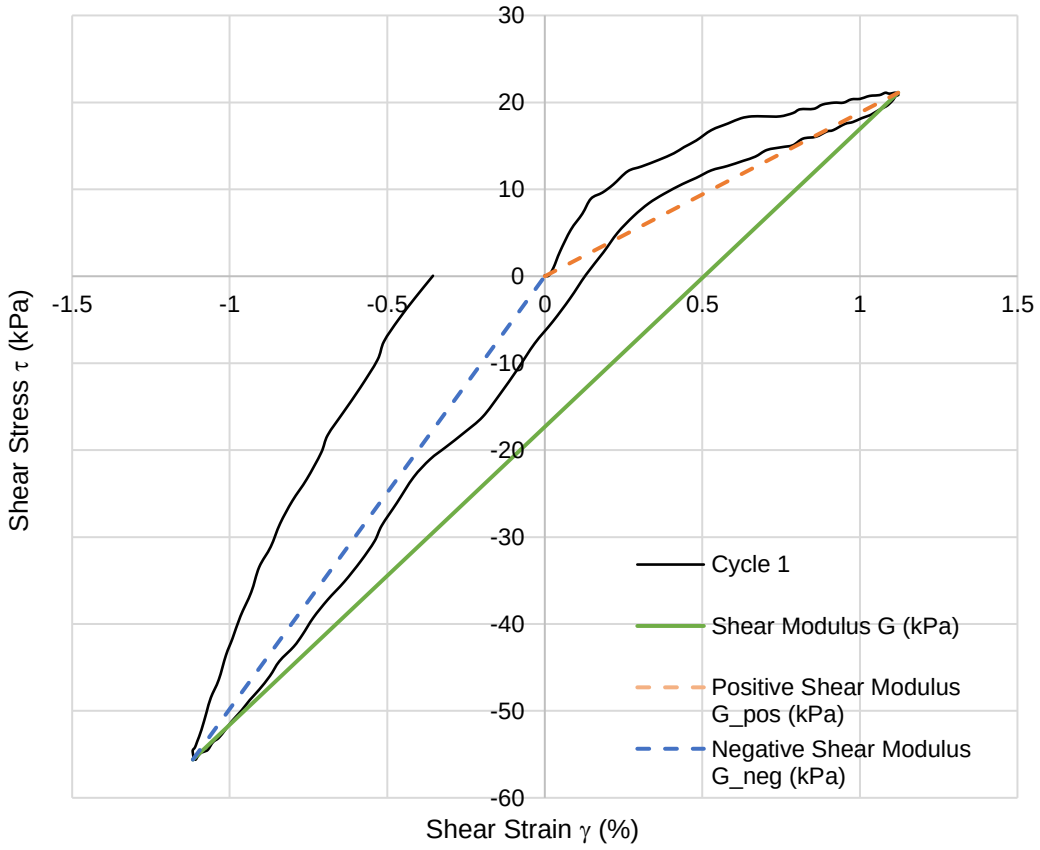


Figure No. L2.18

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 89905

Project No.	21451329
Soil Unit	3
BH ID	BH66S
Sample ID	SA38
Test ID	CDSS-9
Depth Interval	18.8m-18.83m

Cycle 15

Shear Strain γ (%)	Shear Stress τ (kPa)
-1.1	-54.4
0	0.0
1.1	21.7

Shear Modulus G (kPa)	3404.6
itive Shear Modulus G_pos (kPa)	1943.4
ative Shear Modulus G_neg (kPa)	4865.7

G//Gmax 0.0198

BH66S/SA38/Cycle 15

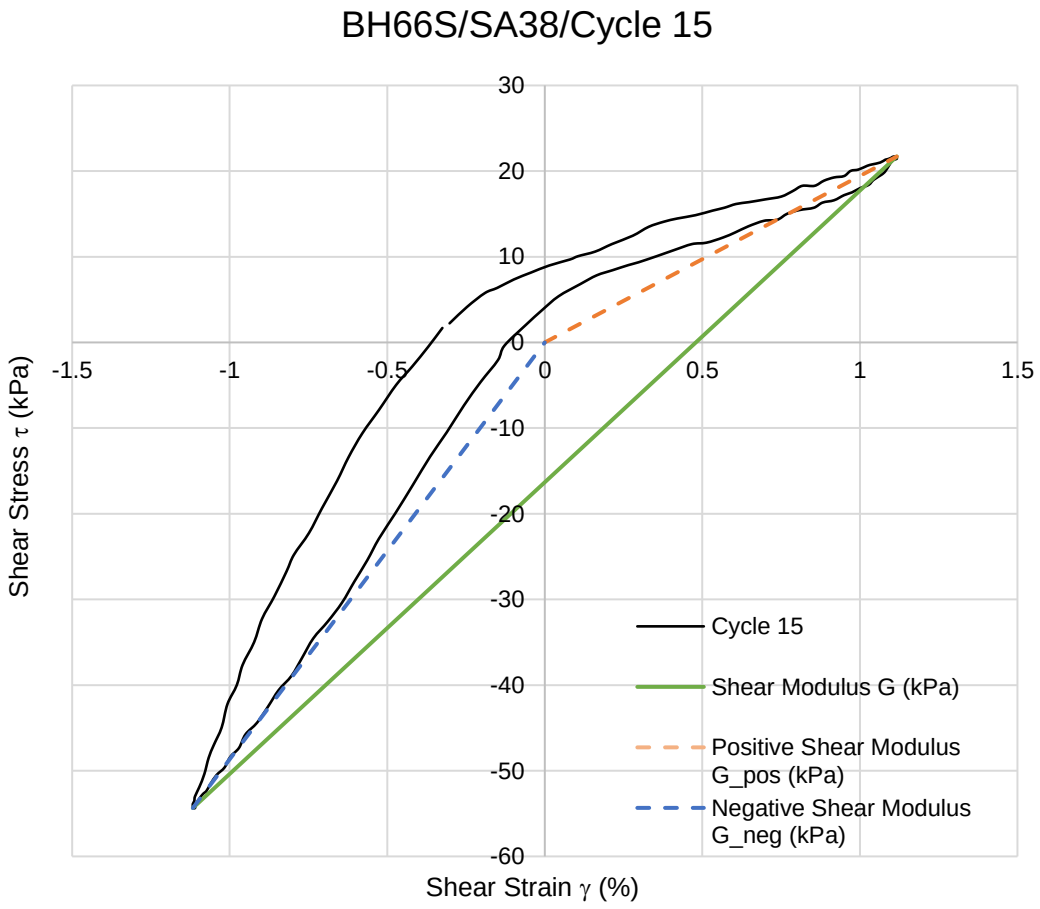


Figure No. L2.19

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 89905

Project No.	21451329
Soil Unit	3
BH ID	BH83S
Sample ID	SA5
Test ID	CDSS-53
Depth Interval	16.46m-16.51m

Cycle 1

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.1	-5.3
0	0.0
0.1	5.2

Shear Modulus G (kPa)	4974.9
itive Shear Modulus G_pos (kPa)	4923.6
ative Shear Modulus G_neg (kPa)	5026.2

G/Gmax 0.0289

BH83S/SA5/Cycle 1

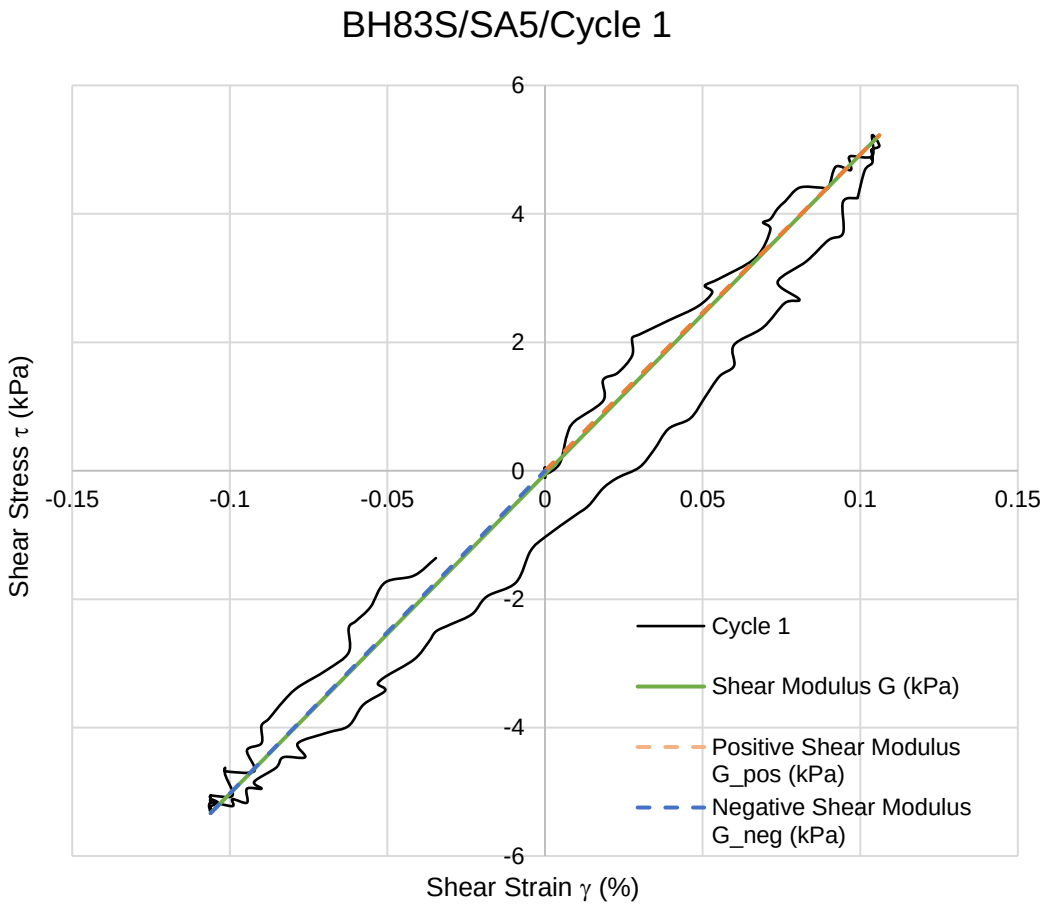


Figure No. L2.20

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 89905

Project No.	21451329
Soil Unit	3
BH ID	BH83S
Sample ID	SA5
Test ID	CDSS-53
Depth Interval	16.46m-16.51m

Cycle 15

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.1	-6.8
0	0.0
0.1	3.8

Shear Modulus G (kPa)	5029.5
itive Shear Modulus G_pos (kPa)	3617.5
ative Shear Modulus G_neg (kPa)	6410.9

G/Gmax 0.0293

BH83S/SA5/Cycle 15

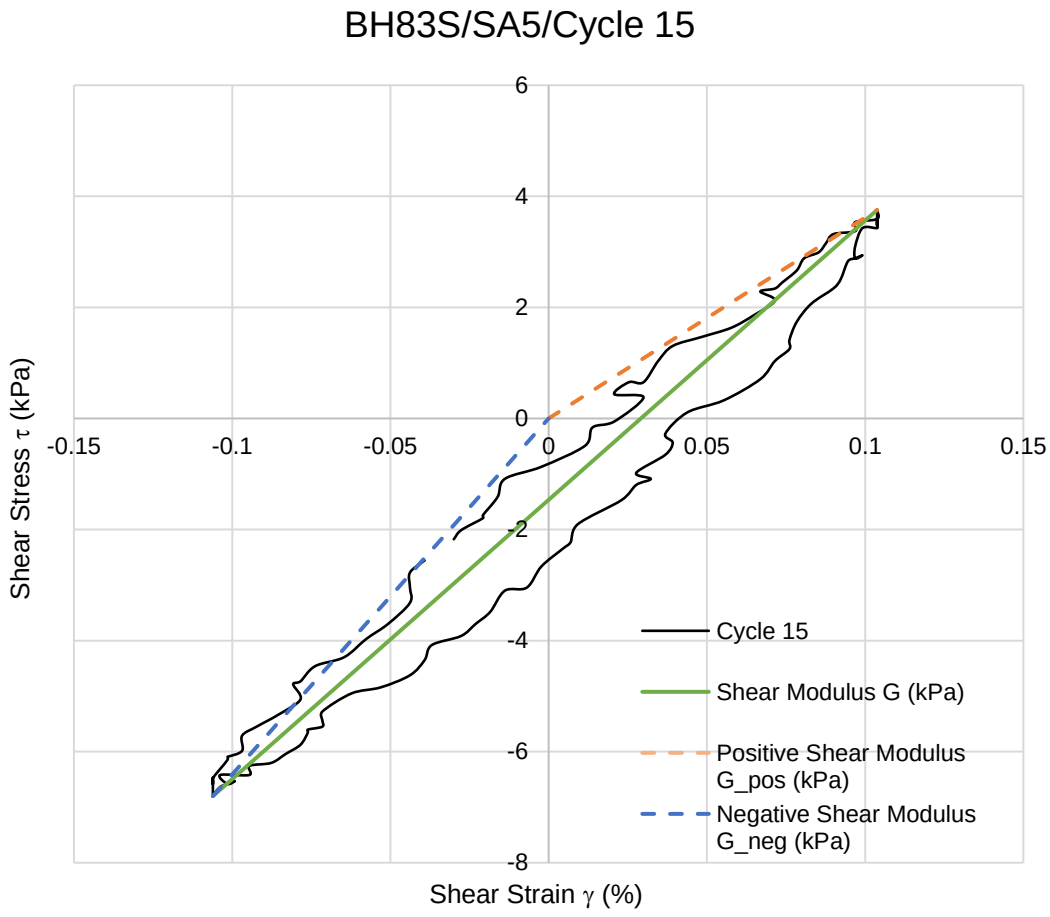


Figure No. L3.1

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Project No. 21451329 **Sample ID** See legend

BH ID See legend **Depth Interval** **Soil Unit** 5

Confining Pressure (kPa)	255	277	285	300	667
Average Max Shear Modulus G_{max} (kPa)	236648	347436	301690	338710	350553

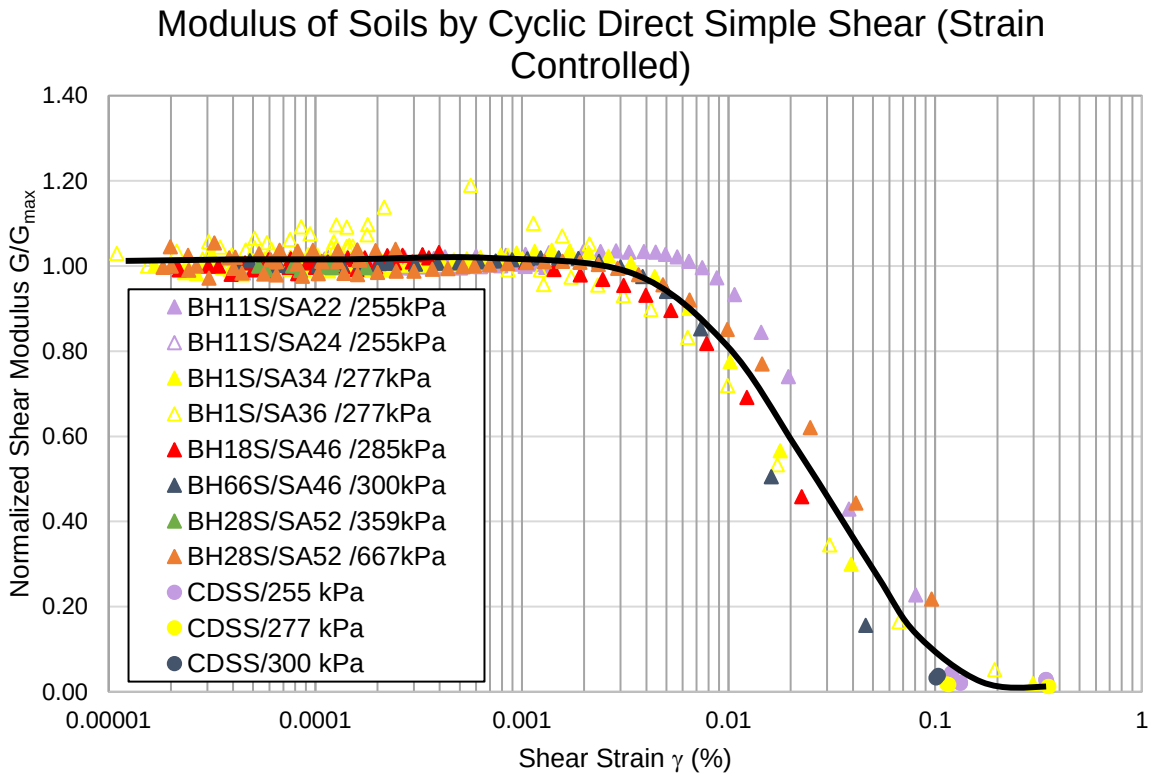


Figure No. L3.2

Damping Ratio of Soils Cyclic Direct Simple Shear (Strain Controlled)

Project No.	21451329	**Sample ID**	See legend		
BH ID	See legend	**Depth Interval**		**Soil Unit**	5

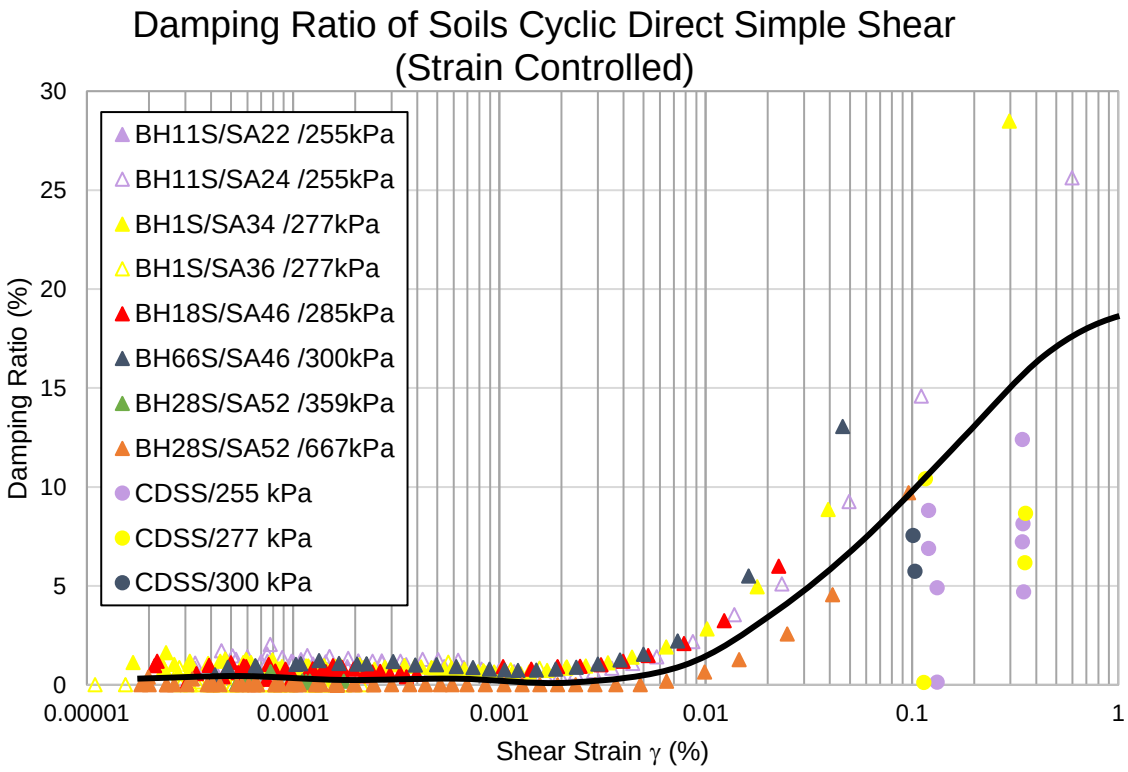


Figure No. L3.3

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	338710

Cycle 1

γ	τ
-0.1071	**-6.9**
0	**0.0**
0.1140	**7.2**

Shear Modulus G (kPa)	6373.2
itive Shear Modulus G_pos (kPa)	6301.3
ative Shear Modulus G_neg (kPa)	6449.7

Project No.	21451329
Soil Unit	5
BH ID	BH1S
Sample ID	SA31
Test ID	CDSS-34
Depth Interval	20.93m-20.98m

G/Gmax 0.0188

BH1S/SA31/Cycle 1

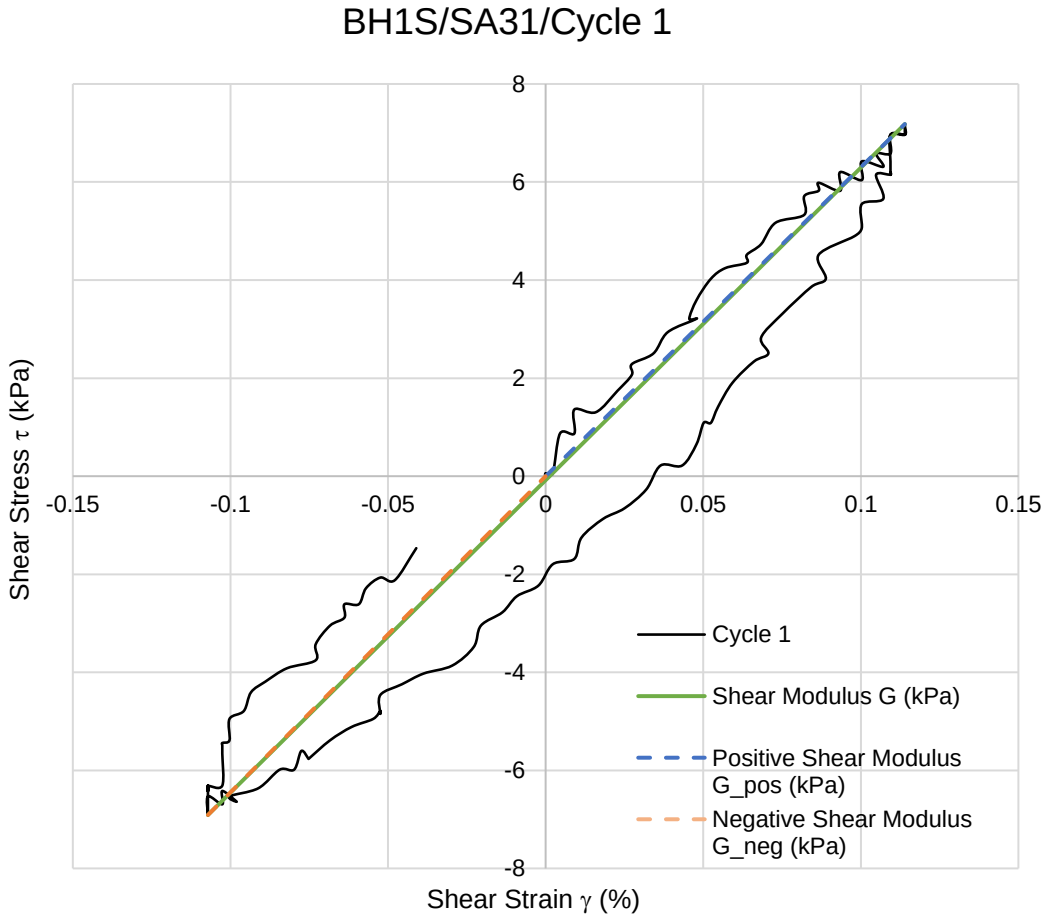


Figure No. L3.4

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	338710

Cycle 15

γ	τ
-0.1117	**-6.2**
0	**0.0**
0.1163	**7.1**

Shear Modulus G (kPa)	5847.9
itive Shear Modulus G_pos (kPa)	6131.0
tive Shear Modulus G_neg (kPa)	5553.2

Project No.	21451329
Soil Unit	5
BH ID	BH1S
Sample ID	SA31
Test ID	CDSS-34
Depth Interval	20.93m-20.98m

G/Gmax 0.0173

BH1S/SA31/Cycle 15

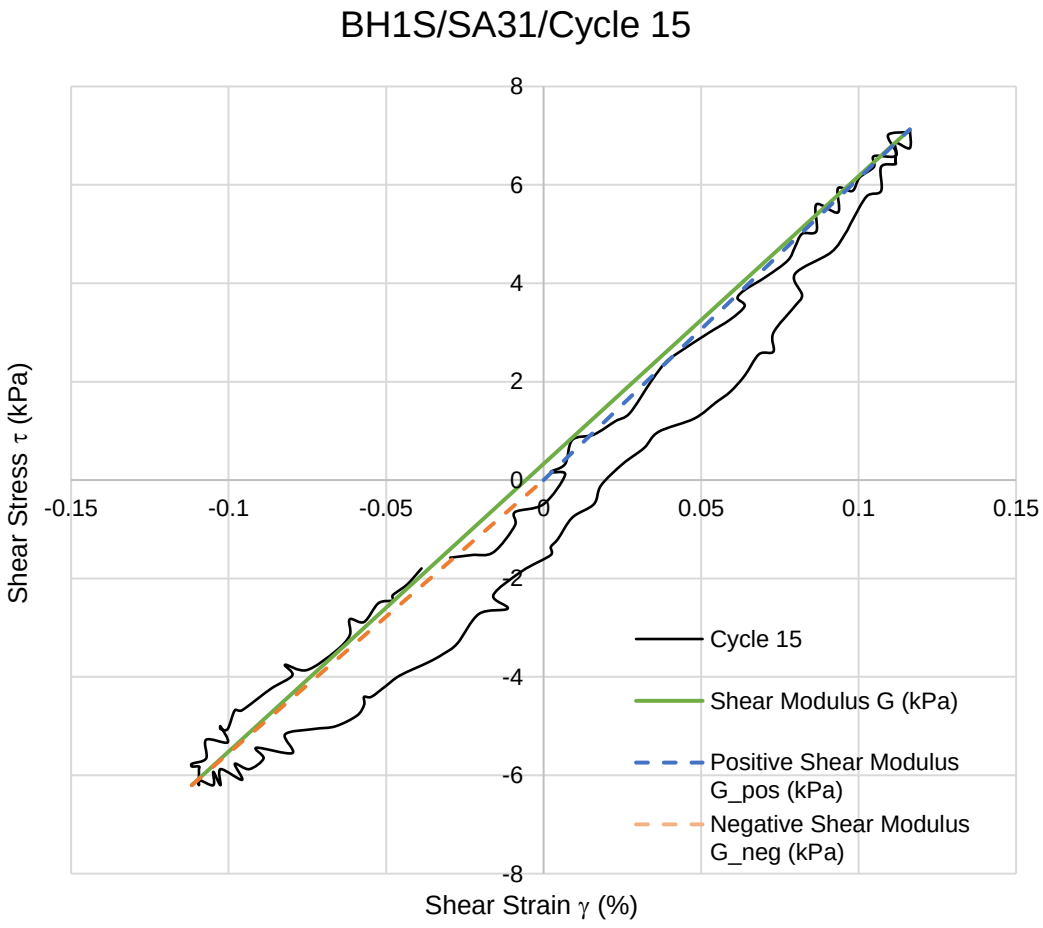


Figure No. L3.5

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	338710

Cycle 1

γ	τ
-0.3576	-12.0239
0	**0.0**
0.3527	17.5734

Shear Modulus G (kPa)	4166.6
itive Shear Modulus G_pos (kPa)	4981.9
tive Shear Modulus G_neg (kPa)	3362.3

Project No.	21451329
Soil Unit	5
BH ID	BH1S
Sample ID	SA33-1
Test ID	CDSS-36
Depth Interval	22.28m-22.33m

G/Gmax 0.0123

BH1S/SA33-1/Cycle 1

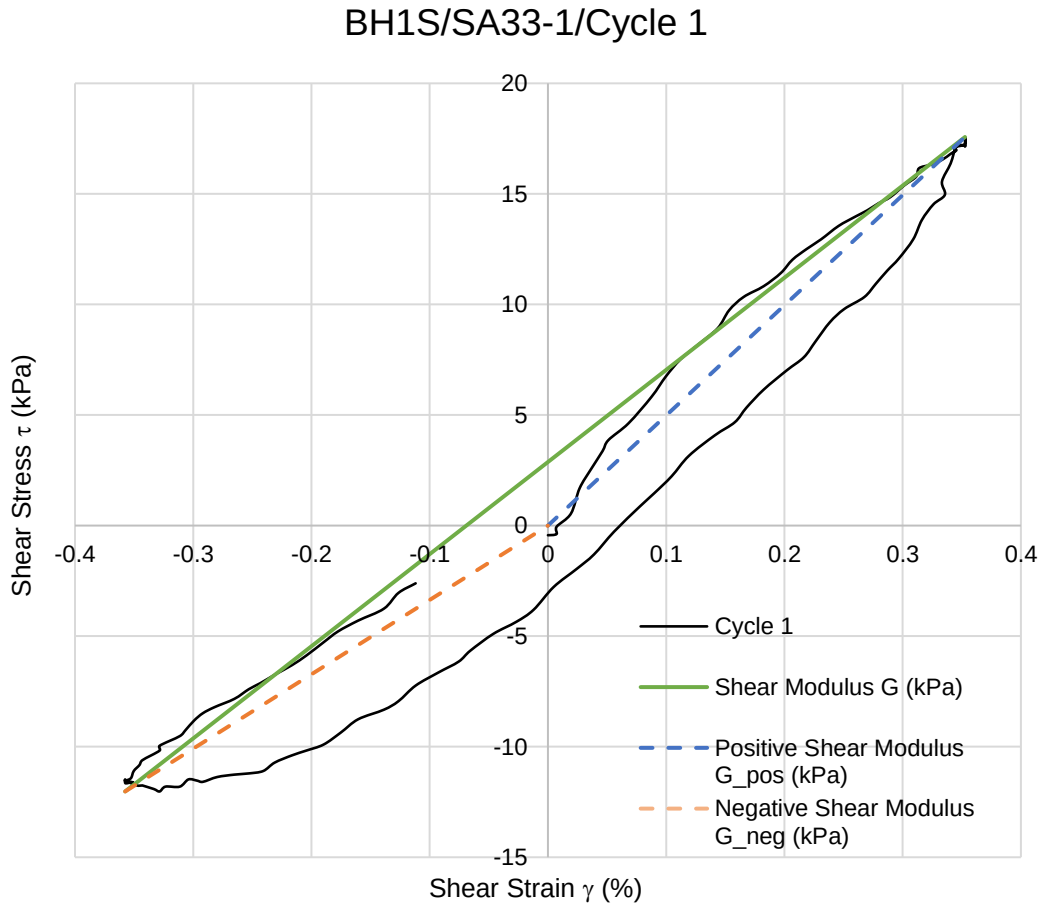


Figure No. L3.6

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	338710

Cycle 15

γ	τ
-0.4	**-13.1**
0	**0.0**
0.4	**16.5**

Shear Modulus G (kPa)	4160.0
itive Shear Modulus G_pos (kPa)	4656.7
tive Shear Modulus G_neg (kPa)	3666.6

Project No.	21451329
Soil Unit	5
BH ID	BH1S
Sample ID	SA33-1
Test ID	CDSS-36
Depth Interval	22.28m-22.33m

G/Gmax 0.0123

BH1S/SA33-1/Cycle 15

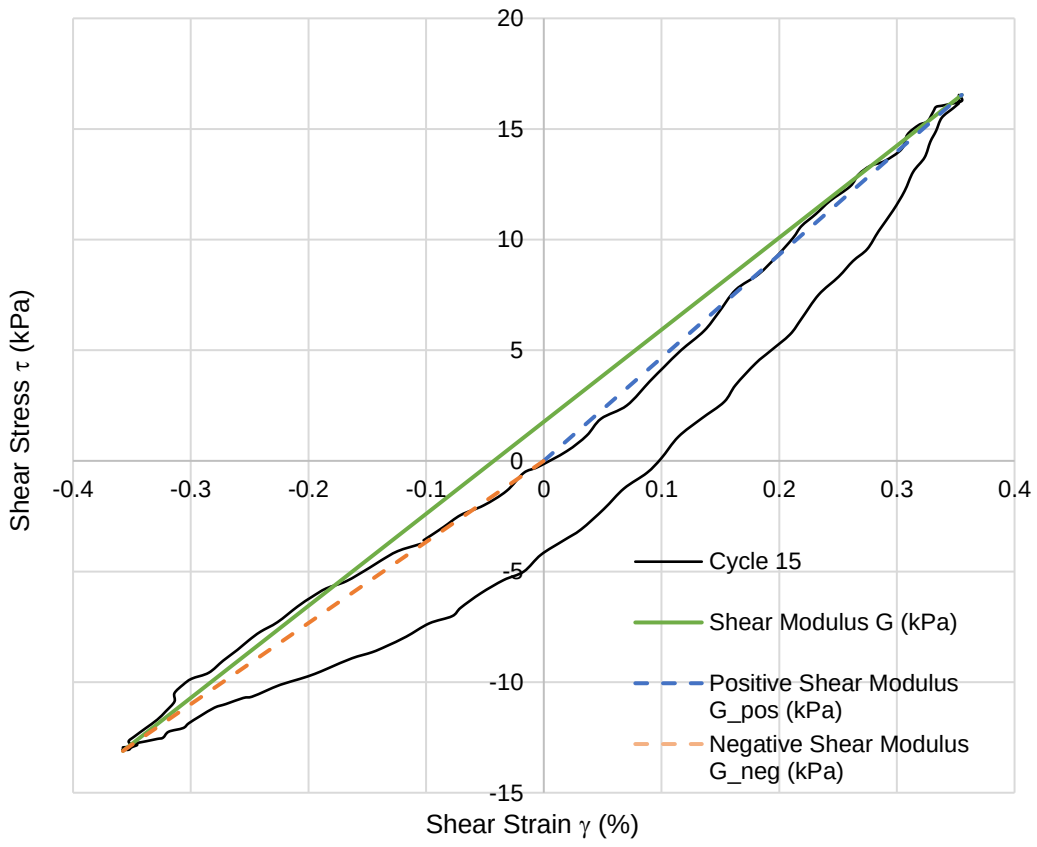


Figure No. L3.7

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	236648

Cycle 1

γ	τ
-0.1104	-5.7671
0	**0.0**
0.1325	7.0729

Shear Modulus G (kPa)	5284.7
itive Shear Modulus G_pos (kPa)	5337.0
tive Shear Modulus G_neg (kPa)	5222.0

Project No.	21451329
Soil Unit	5
BH ID	BH11S
Sample ID	SA19
Test ID	CDSS-44
Depth Interval	19.37m-19.42m

G/Gmax 0.0223315

BH11S/SA19/Cycle 1

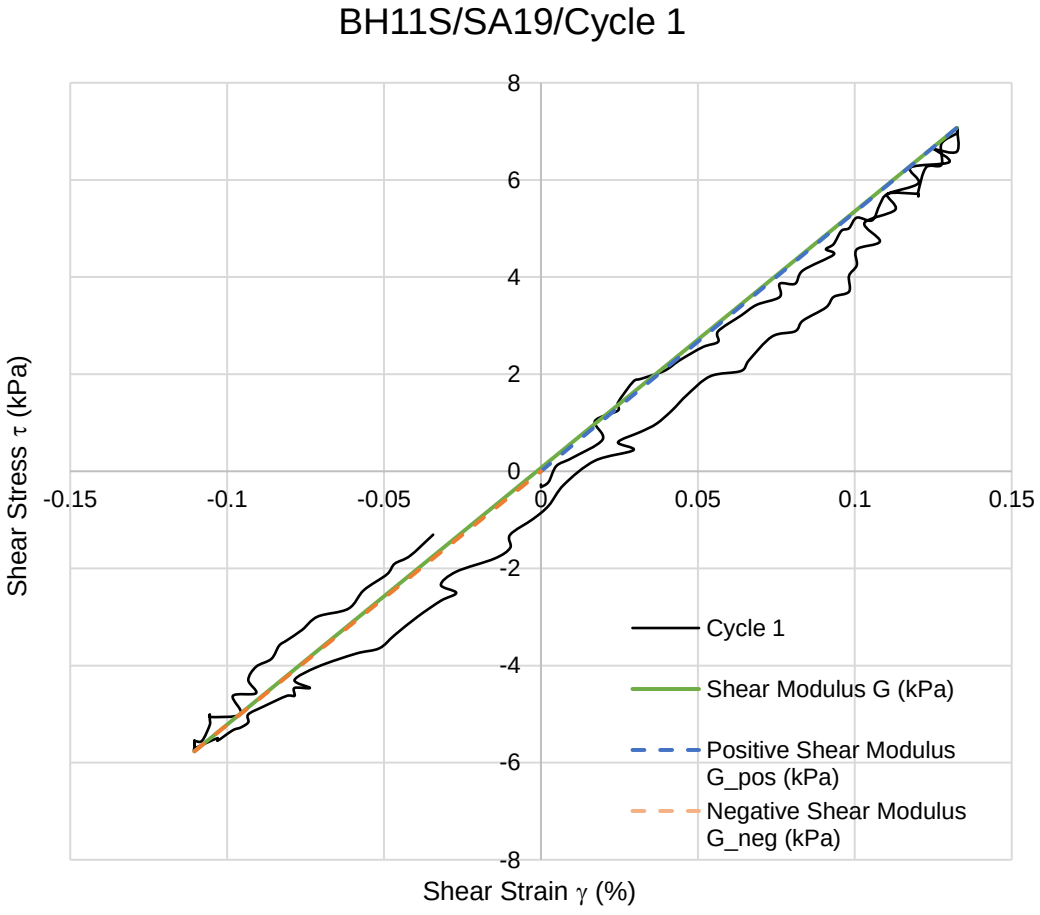


Figure No. L3.8

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	236648

Cycle 15

γ	τ
-0.1	**-5.3**
0	**0.0**
0.1	**6.6**

Shear Modulus G (kPa)	4759.8
itive Shear Modulus G_pos (kPa)	5008.5
tive Shear Modulus G_neg (kPa)	4480.0

Project No.	21451329
Soil Unit	5
BH ID	BH11S
Sample ID	SA19
Test ID	CDSS-44
Depth Interval	19.37m-19.42m

G/Gmax 0.0201

BH11S/SA19/Cycle 15

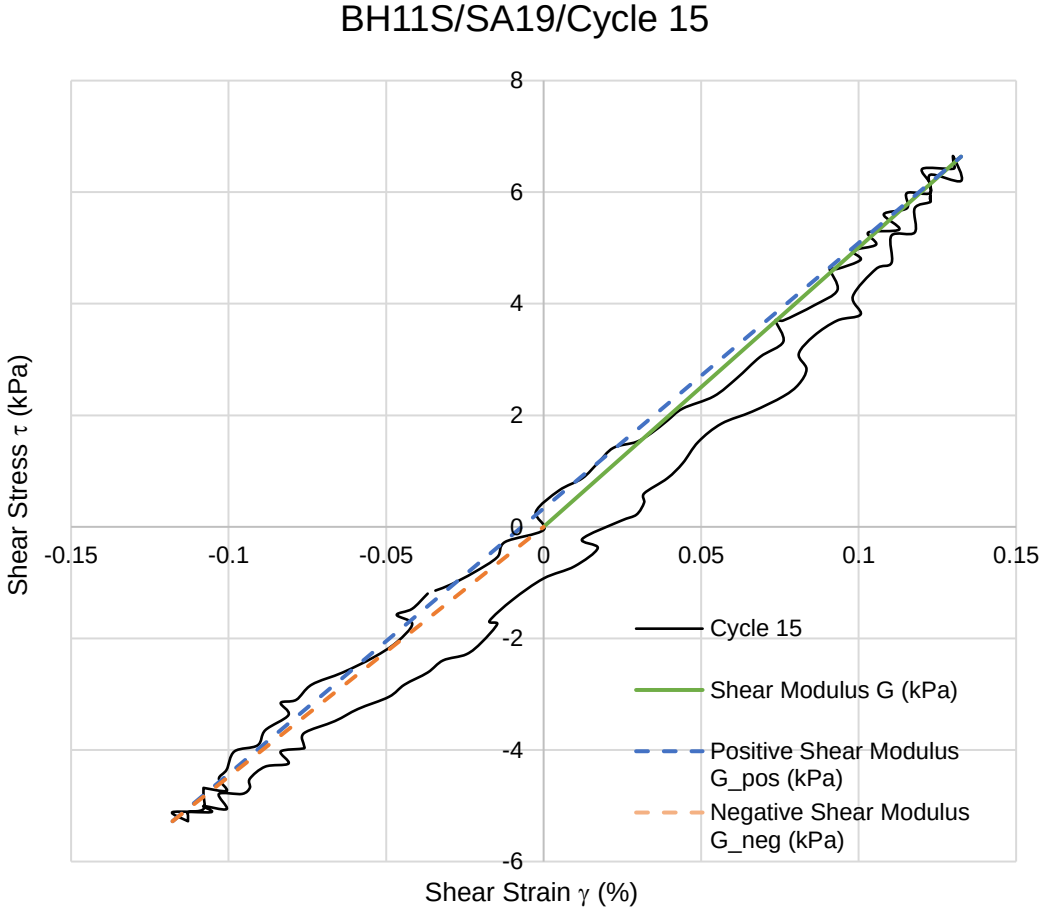


Figure No. L3.9

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	236648

Cycle 1

γ	τ
-0.4	**-16.9**
0	**0.0**
0.3	**20.4**

Shear Modulus G (kPa)	5275.4
itive Shear Modulus G_pos (kPa)	5867.0
tive Shear Modulus G_neg (kPa)	4703.5

Project No.	21451329
Soil Unit	5
BH ID	BH11S
Sample ID	SA23-2
Test ID	CDSS-45
Depth Interval	22.2m-22.25m

G/Gmax 0.0223

BH11S/SA23-2/Cycle 1

BH11S/SA23/Cycle 1

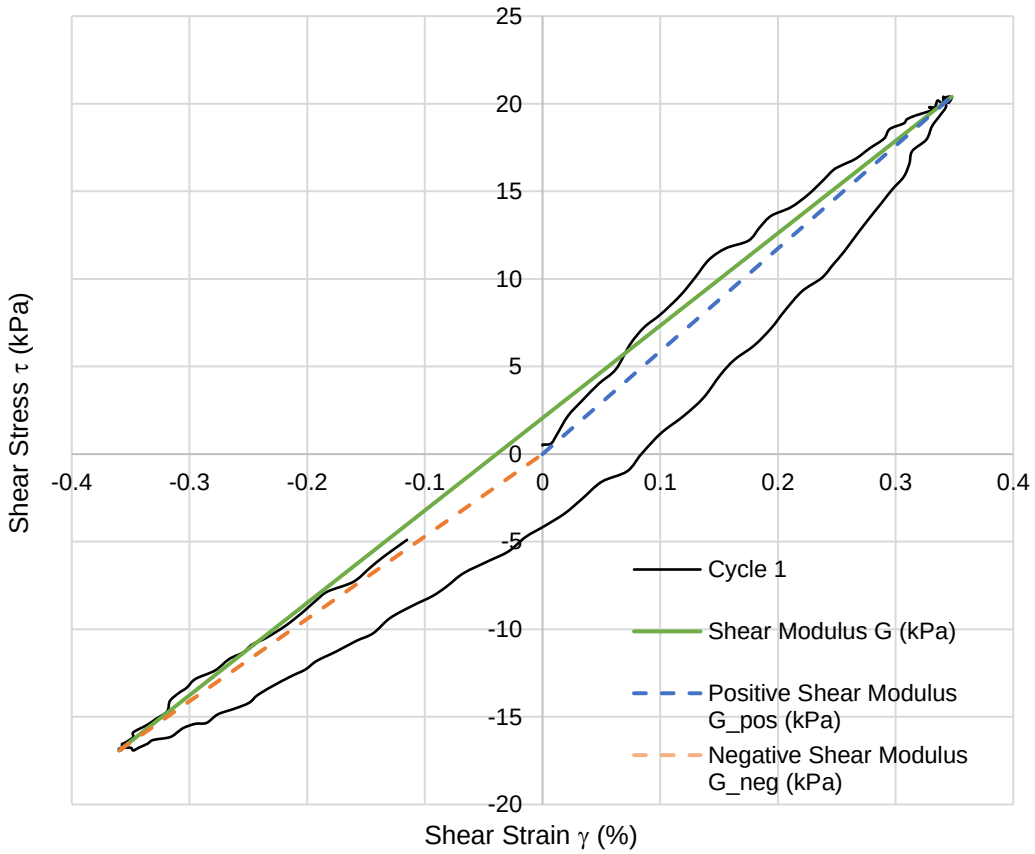


Figure No. L3.10

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	236648

Cycle 15

γ	τ
-0.4	**-18.2**
0	**0.0**
0.3	**17.7**

Shear Modulus G (kPa)	5127.6
itive Shear Modulus G_pos (kPa)	5120.1
ative Shear Modulus G_neg (kPa)	5135.0

Project No.	21451329
Soil Unit	5
BH ID	BH11S
Sample ID	SA23-2
Test ID	CDSS-45
Depth Interval	22.2m-22.25m

G/Gmax 0.0217

BH11S/SA23-2/Cycle 15

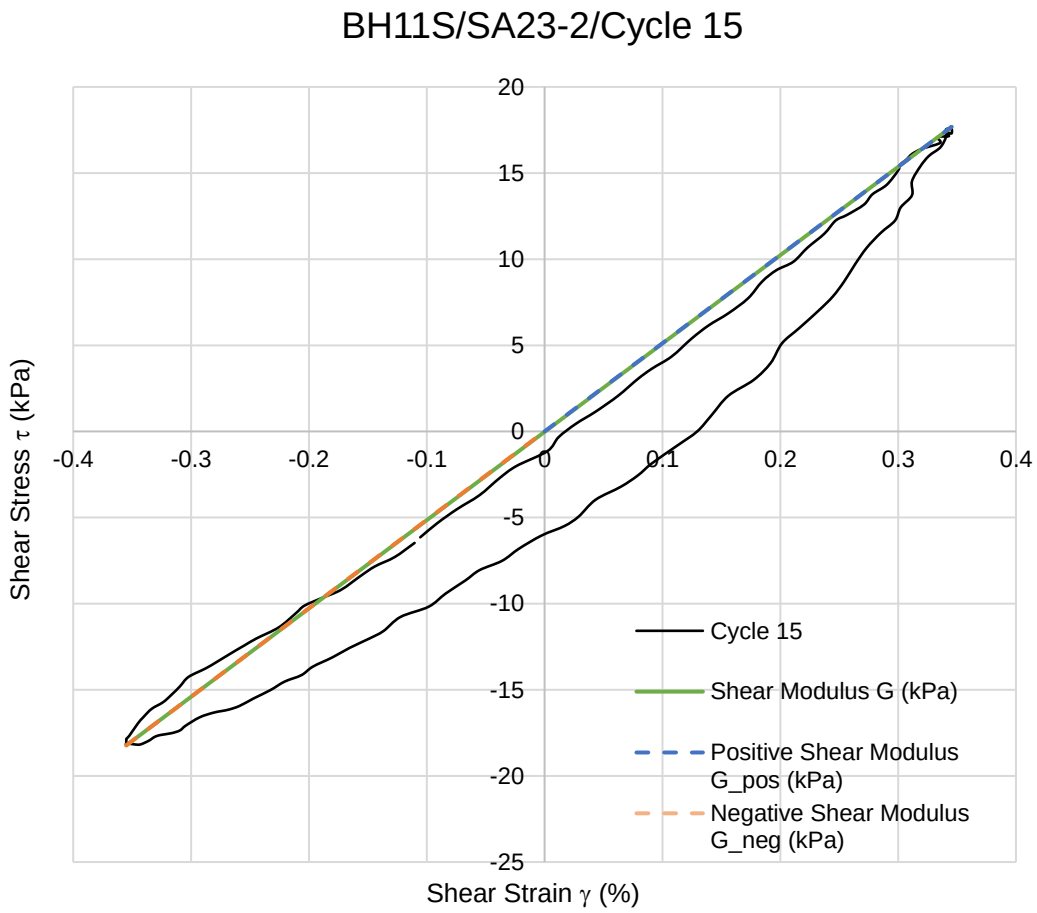


Figure No. L3.11

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	236648

Cycle 1

γ	τ
-0.1227	-13.0032
0	**0.0**
0.1202	11.2622

Shear Modulus G (kPa)	9986.6
itive Shear Modulus G_pos (kPa)	9366.7
tive Shear Modulus G_neg (kPa)	10593.9

Project No.	21451329
Soil Unit	5
BH ID	BH18S
Sample ID	SA42
Test ID	CDSS-24B
Depth Interval	19.02m-19.08m
G/Gmax	0.0422

BH18S/SA42/Cycle 1

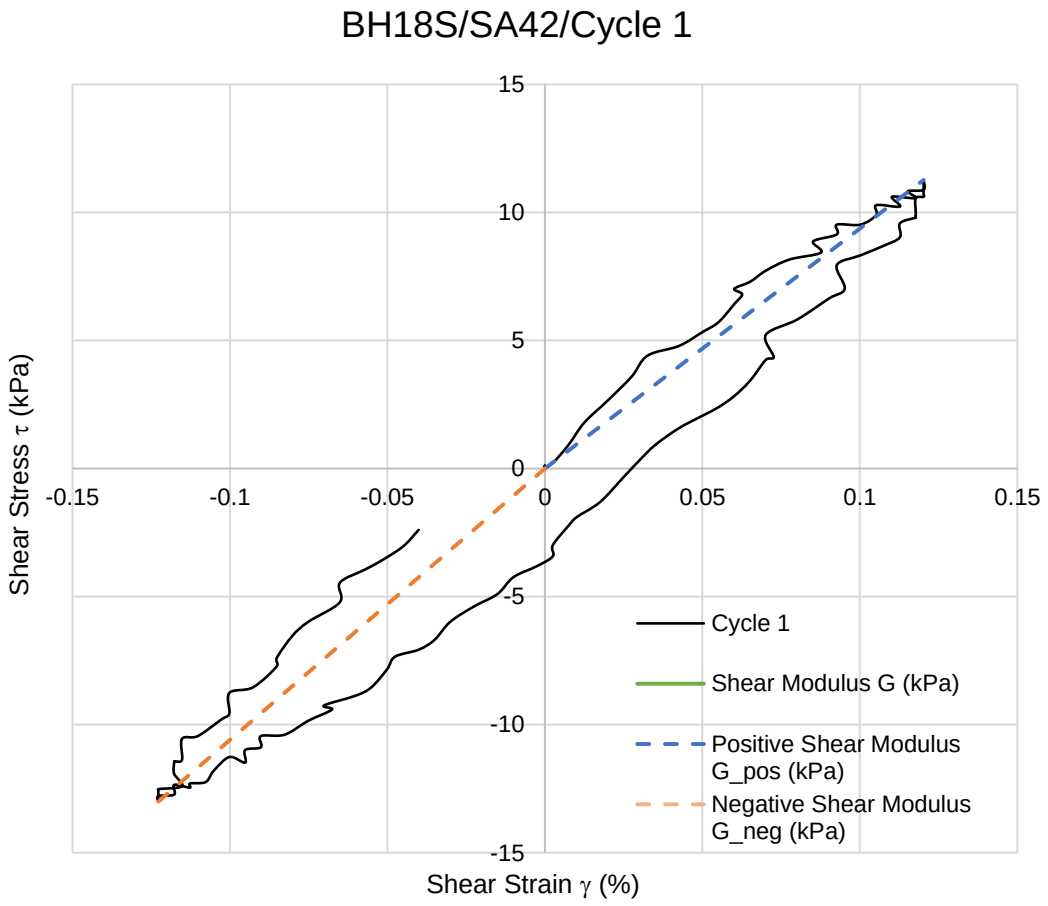


Figure No. L3.12

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	236648

Cycle 15

γ	τ
-0.1	**-14.4**
0	**0.0**
0.1	**11.7**

Shear Modulus G (kPa)	10530.8
itive Shear Modulus G_pos (kPa)	9728.6
ative Shear Modulus G_neg (kPa)	11285.8

Project No.	21451329
Soil Unit	5
BH ID	BH18S
Sample ID	SA42
Test ID	CDSS-24B
Depth Interval	19.02m-19.08m

G/Gmax 0.0445

BH18S/SA42/Cycle 15

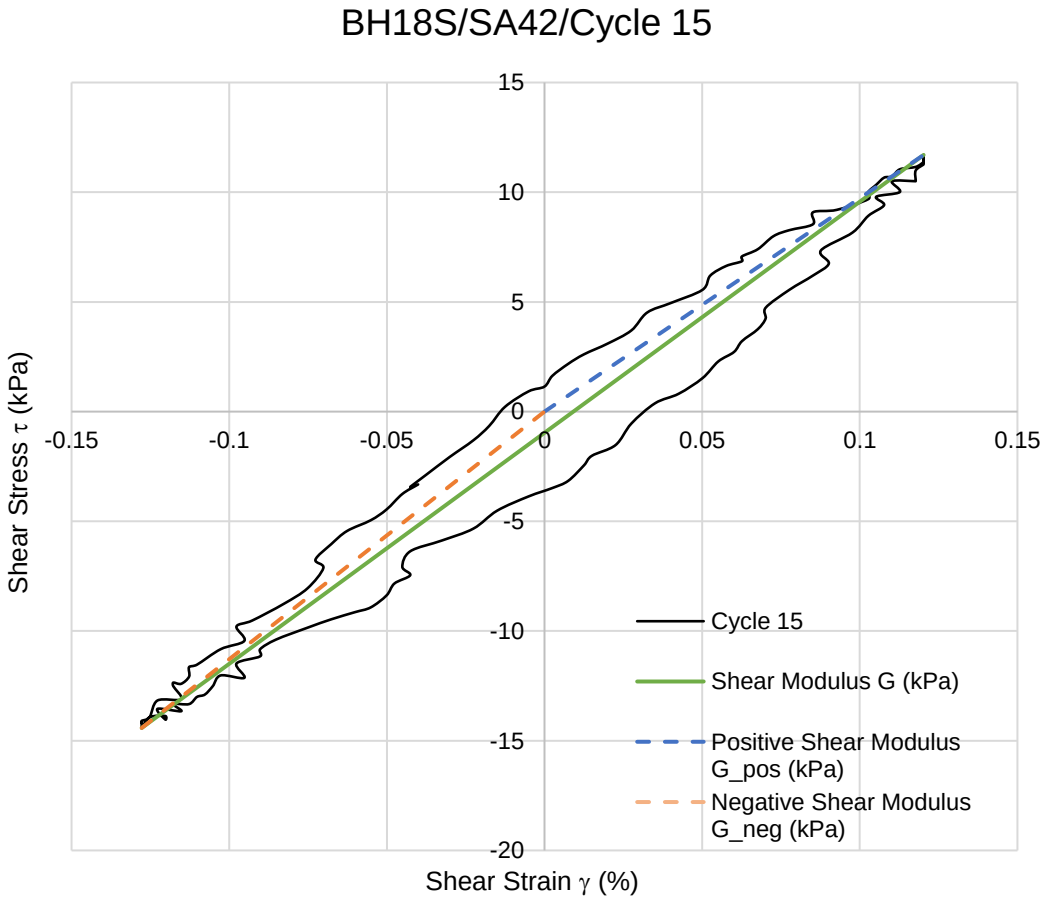


Figure No. L3.13

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	236648

Cycle 1

γ	τ
-0.3432	-23.8301
0	**0.0**
0.3432	23.1773

Shear Modulus G (kPa)	6847.9
itive Shear Modulus G_pos (kPa)	6752.8
tive Shear Modulus G_neg (kPa)	6943.0

Project No.	21451329
Soil Unit	5
BH ID	BH18S
Sample ID	SA43
Test ID	CDSS-25
Depth Interval	19.28m-19.33m

G/Gmax 0.0289

BH18S/SA43/Cycle 1

BH11S/SA23-2/Cycle 1

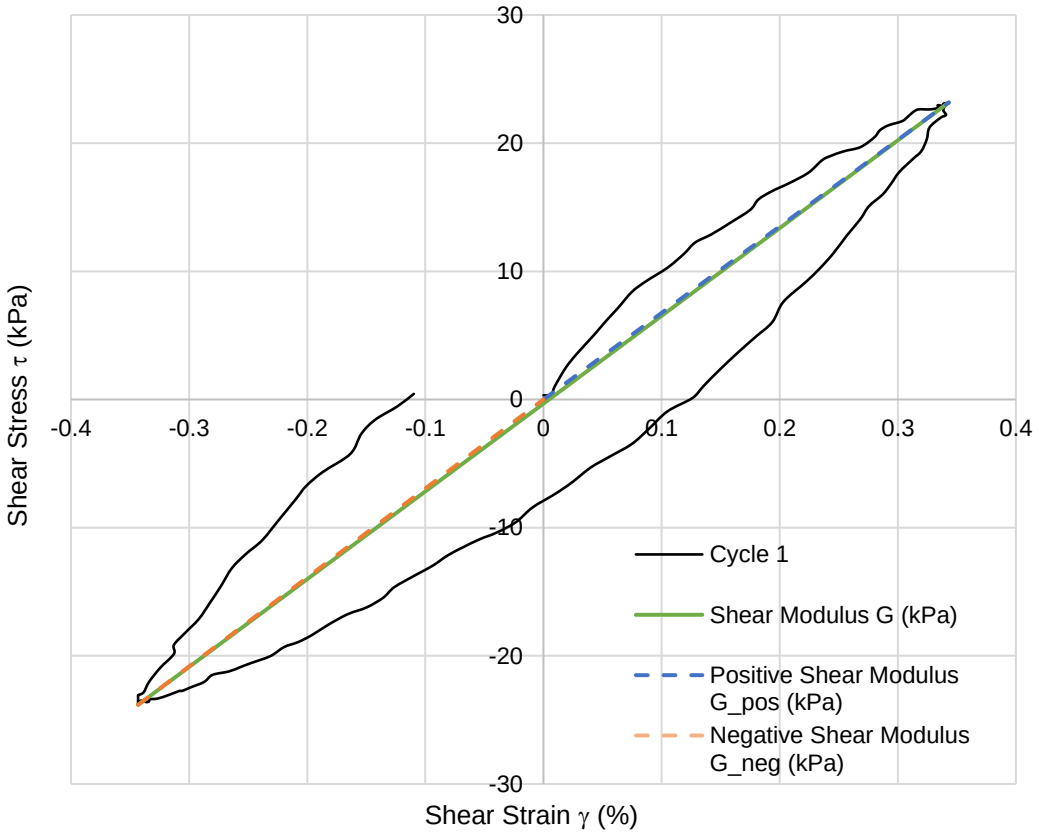


Figure No. L3.14

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (MPa)	236648

Cycle 15

γ	τ
-0.3432	-23.0685
0	**0.0**
0.3432	24.6462

Shear Modulus G (kPa)	6950.9
itive Shear Modulus G_pos (kPa)	7180.7
ative Shear Modulus G_neg (kPa)	6721.1

Project No.	21451329
Soil Unit	5
BH ID	BH18S
Sample ID	SA43
Test ID	CDSS-25
Depth Interval	19.28m-19.33m

G/Gmax 0.0294

BH18S/SA43/Cycle 15

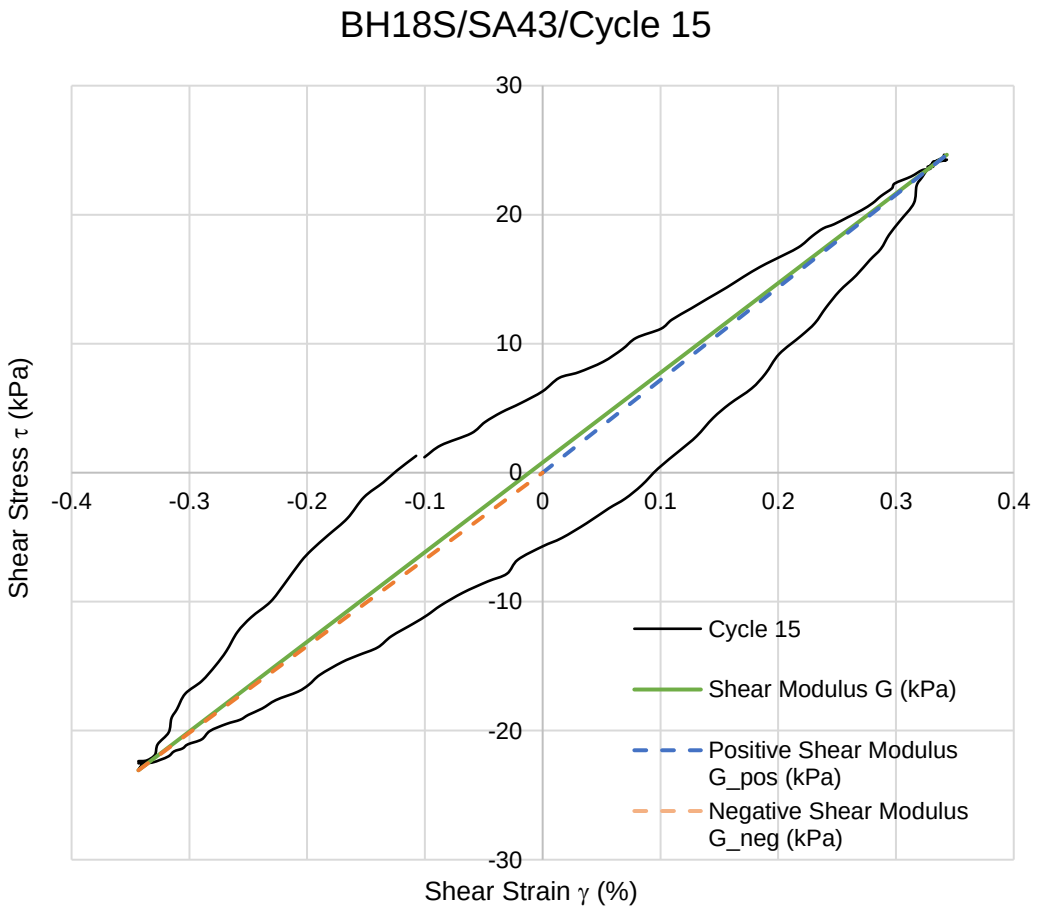


Figure No. L3.15

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	338710

Cycle 1

γ	τ
-0.1034	-13.1120
0	**0.0**
0.1011	9.7932

Shear Modulus G (kPa)	11202.7
itive Shear Modulus G_pos (kPa)	9688.4
tive Shear Modulus G_neg (kPa)	12683.3

Project No.	21451329
Soil Unit	5
BH ID	BH28S
Sample ID	SA50
Test ID	CDSS-19A
Depth Interval	26.3m-26.35m

G/Gmax 0.0330745

BH28S/SA50/Cycle 1

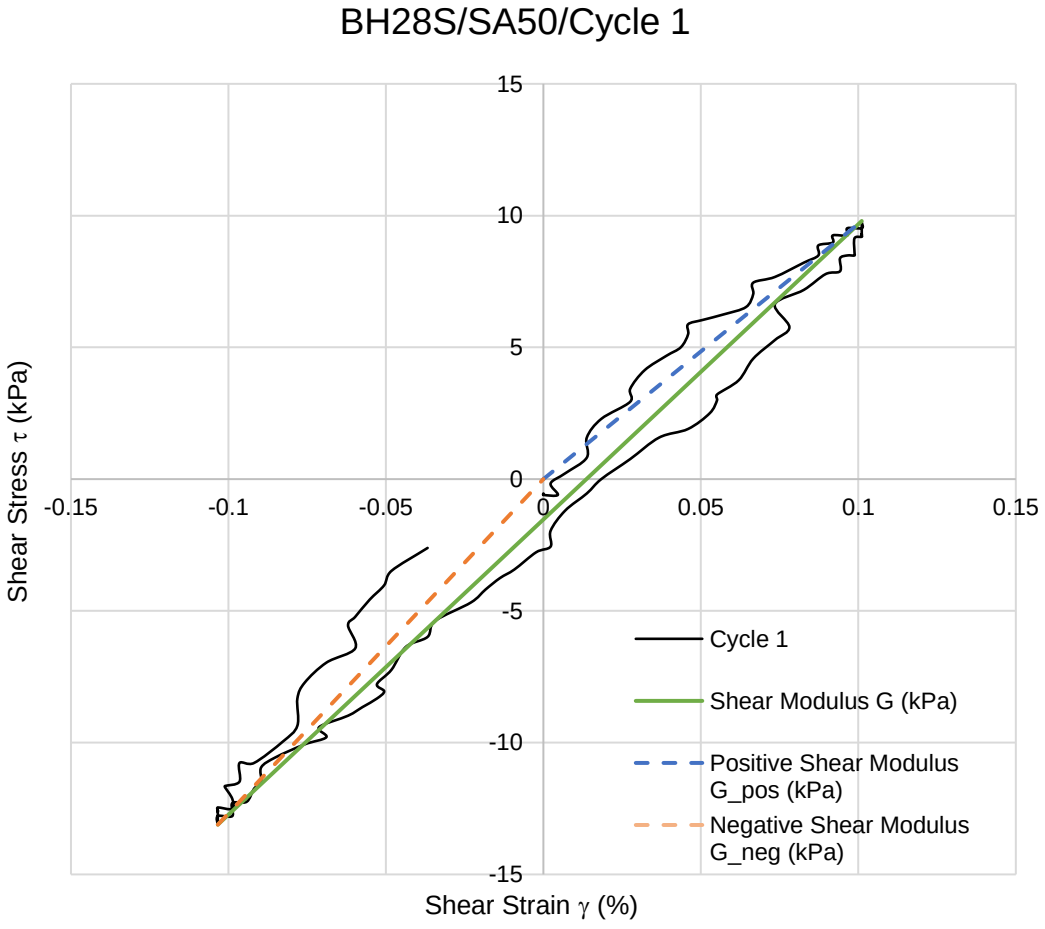


Figure No. L3.16

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	338710

Cycle 15

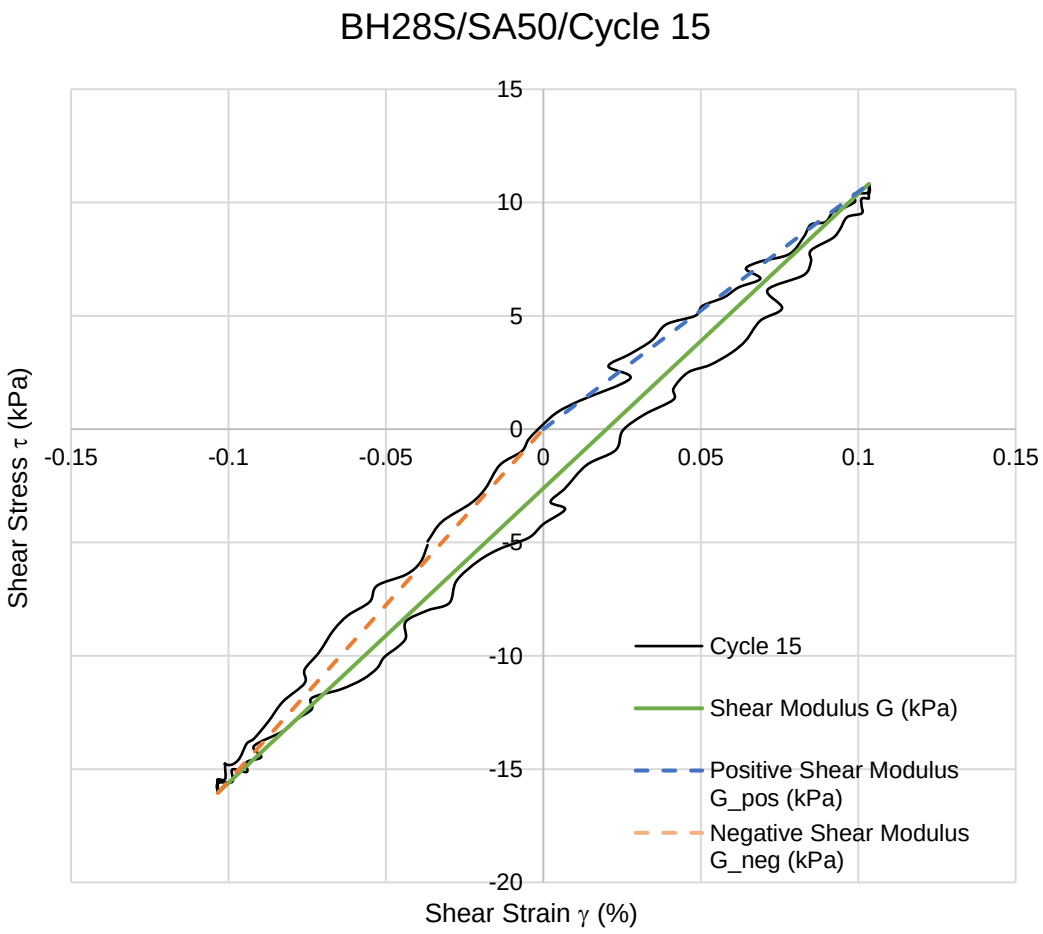
γ	τ
-0.1	**-16.1**
0	**0.0**
0.1	**10.8**

Shear Modulus G (kPa)	12999.1
itive Shear Modulus G_pos (kPa)	10472.9
ative Shear Modulus G_neg (kPa)	15525.2

Project No.	21451329
Soil Unit	5
BH ID	BH28S
Sample ID	SA50
Test ID	CDSS-19A
Depth Interval	26.3m-26.35m

G/Gmax 0.0383782

BH28S/SA50/Cycle 15



APPENDIX M

Resonant Column and Torsional Shear Testing Interpretations

Figure No. M1.1

Modulus of Soils by Resonant-Column Method and Torsional Shear

Project No. 21451329 **Sample ID** See Legend

BH ID See Legend **Depth Interval** **Soil Unit** 2A

Confining Pressure (kPa)	43.2	39.7	475
Average Max Shear Modulus G_{max} (kPa)	28333	58881	287000

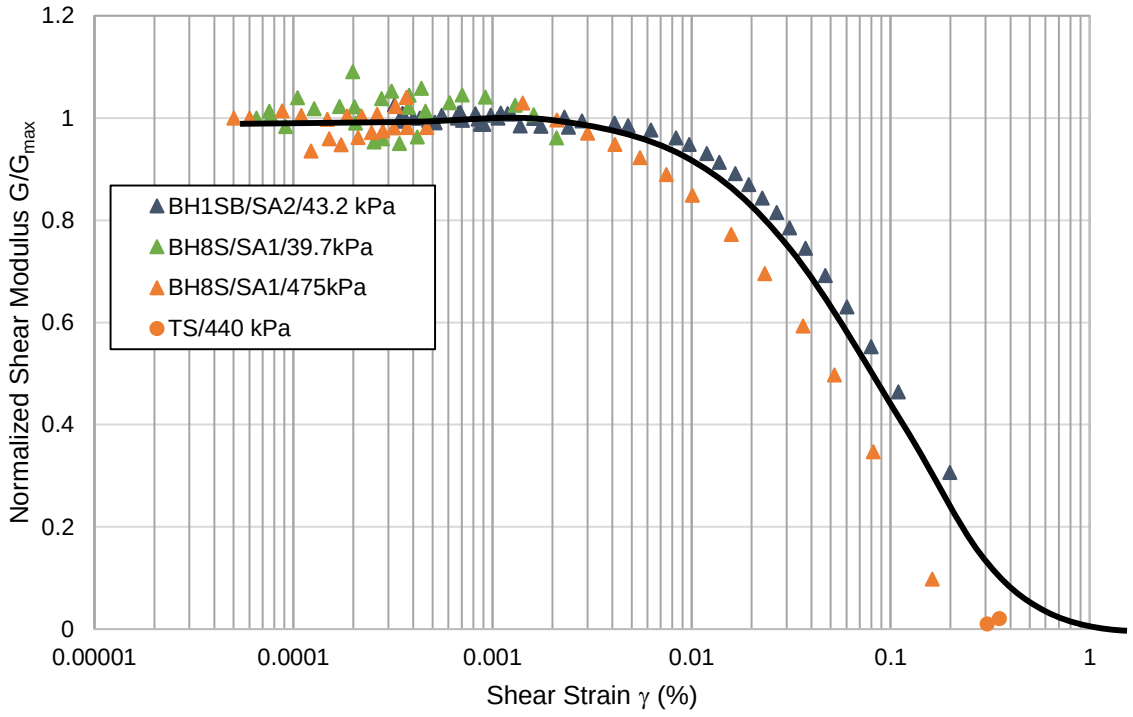


Figure No. M1.2

Damping Ratio of Soils by Resonant-Column Method and Torsional Shear

Project No.	21451329	**Sample ID**	See Legend		
BH ID	See Legend	**Depth Interval**		**Soil Unit**	2A

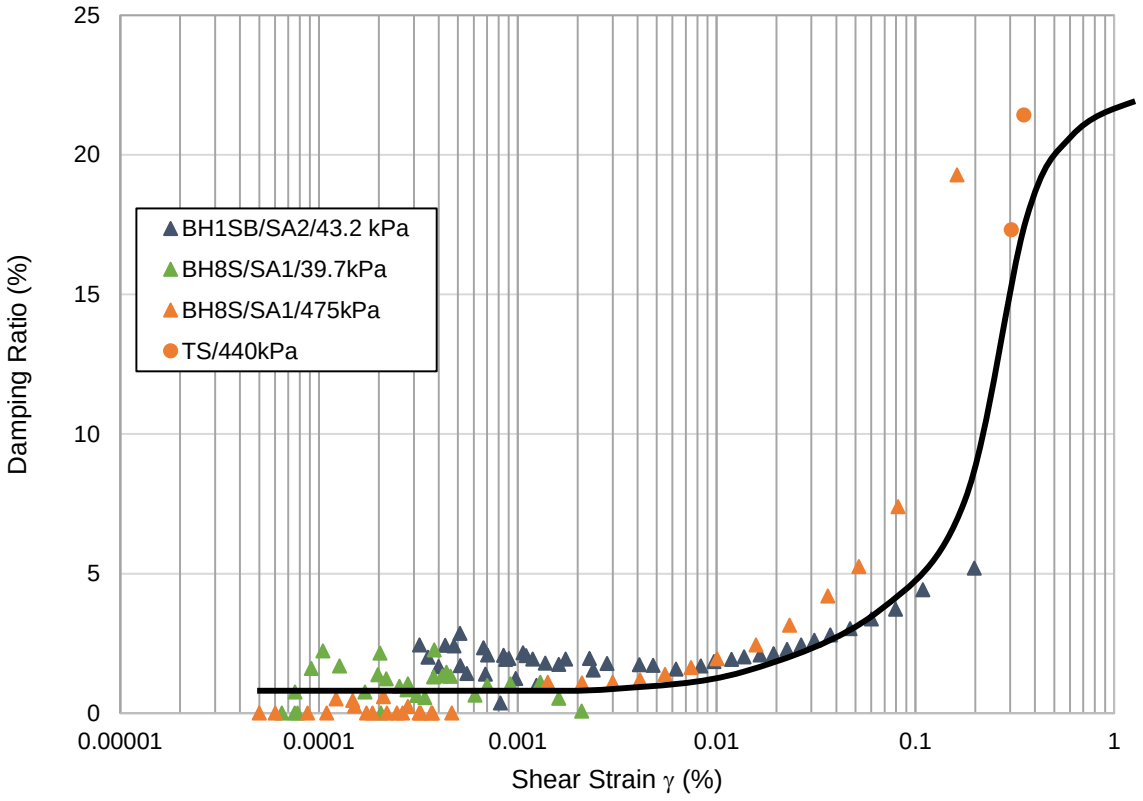


Figure No. M1.3

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 287000

Project No. 21451329
BH ID BH66S
Soil Unit 2A
Sample ID SA4-1
Test ID TS-2
Depth Interval 3.14m - 3.33m

Cycle 1

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.341	-22.2
0	0
0.362	19.0

G/Gmax 0.0204

Shear Modulus G (kPa) 5861.2
Positive Shear Modulus G_pos (kPa) 5254.4
Negative Shear Modulus G_neg (kPa) 6503.7

BH66S/SA4-1/Cycle 1

BH66S/SA10-4/Cycle 1

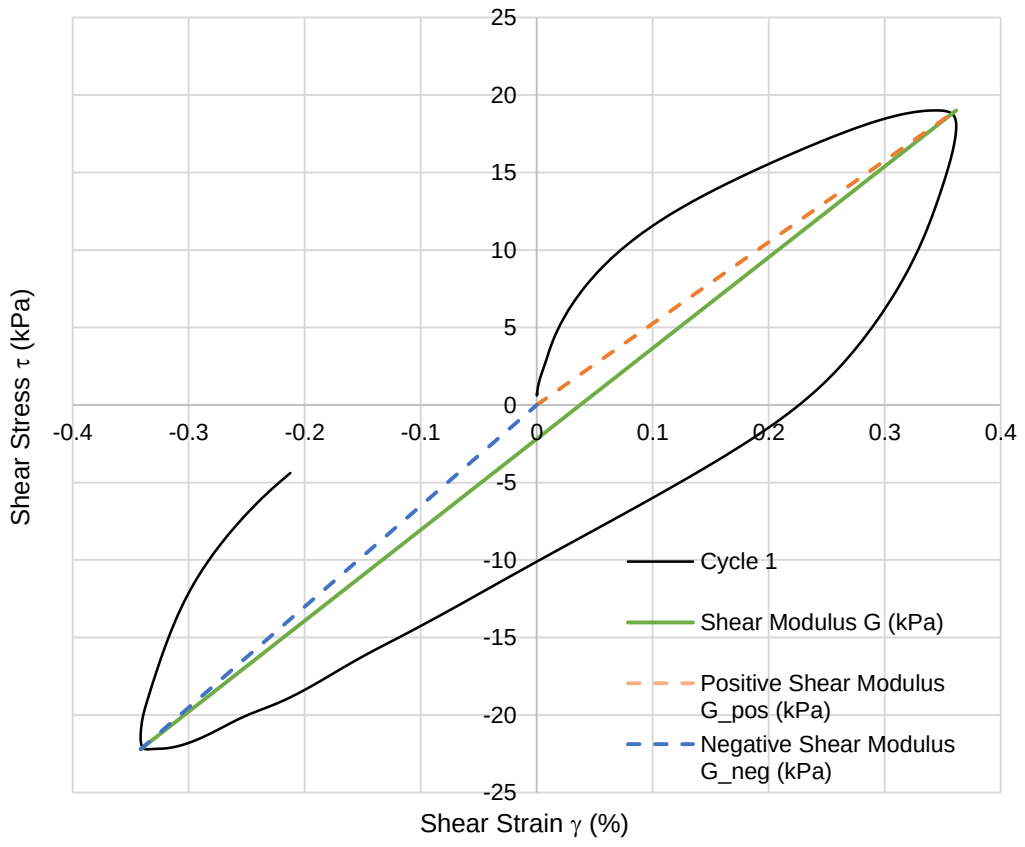


Figure No. M1.4

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 287000

Cycle 15

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.310	-10.5
0	0
0.299	7.1

Shear Modulus G (kPa)	2897.1
Positive Shear Modulus G_pos (kPa)	2382.9
Negative Shear Modulus G_neg (kPa)	3393.5

Project No.	21451329
BH ID	BH66S
Soil Unit	2A
Sample ID	SA4-1
Test ID	TS-2
Depth Interval	3.14m - 3.33m

G/Gmax 0.01009

BH66S/SA4-1/Cycle 15

BH66S/SA10-4/Cycle 15

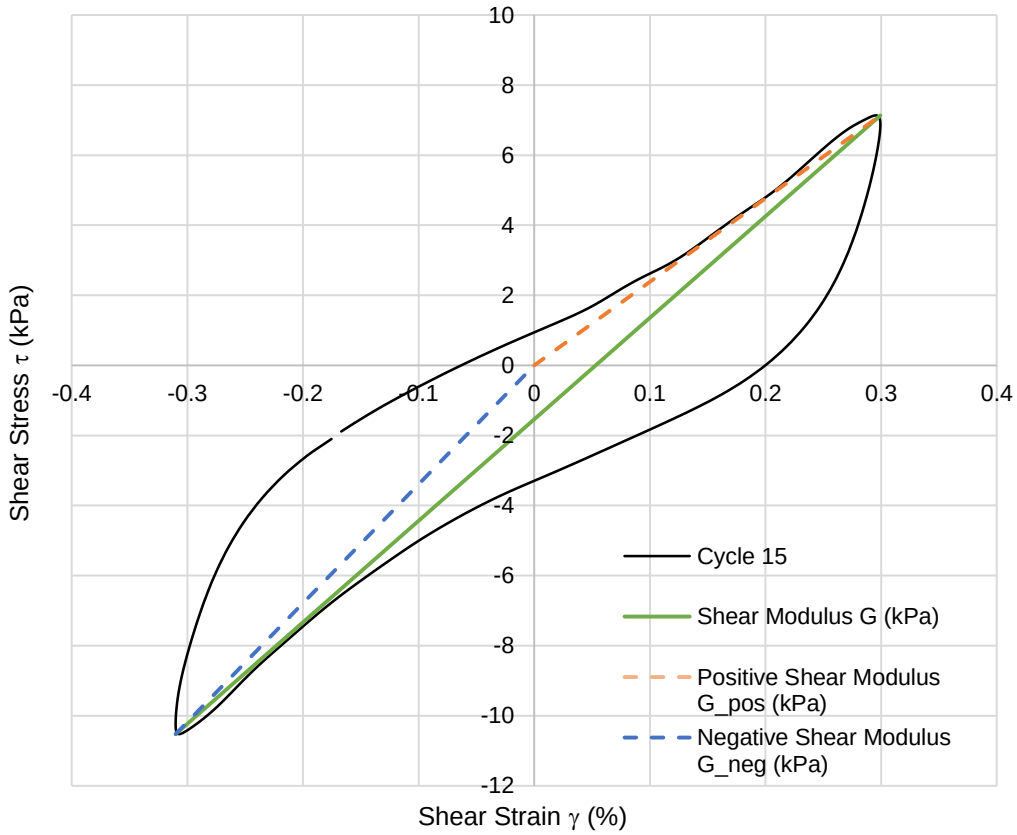


Figure No. M2.1

Modulus of Soils by Resonant-Column Method and Torsional Shear

Project No. 21451329 **Sample ID** See Legend

BH ID See Legend **Depth Interval** **Soil Unit** 2B

Confining Pressure (kPa)	90	60
Average Max Shear Modulus G_{max} (kPa)	113200	163960

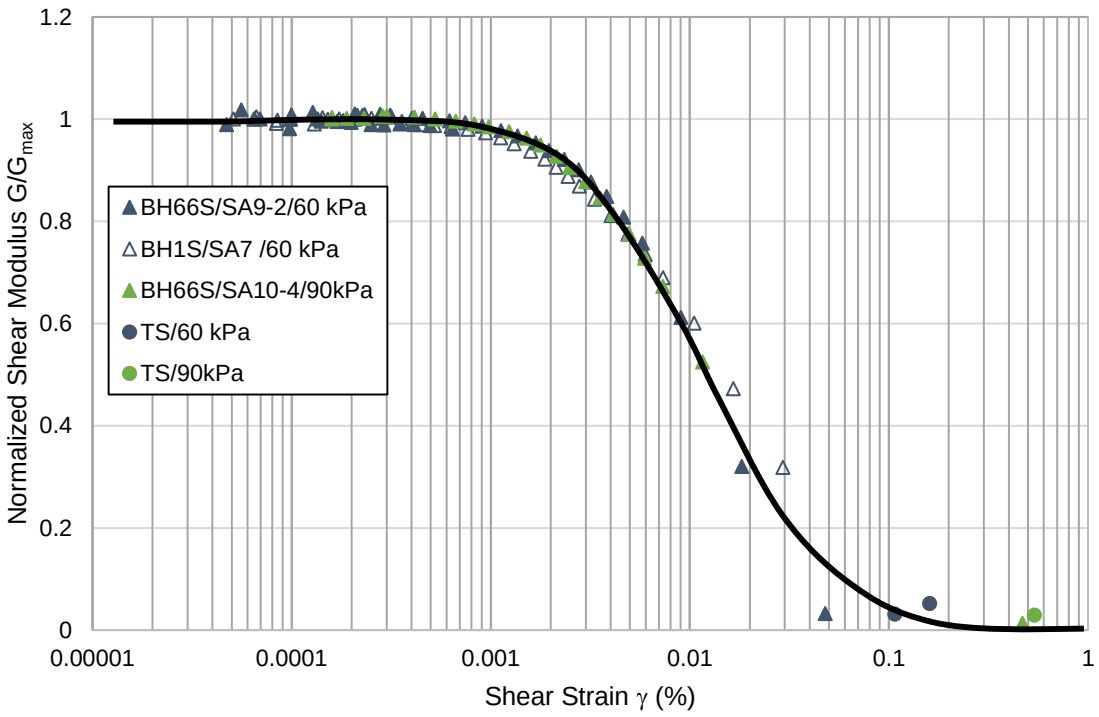


Figure No. M2.2

Damping Ratio of Soils by Resonant-Column Method and Torsional Shear

Project No.	21451329	**Sample ID**	See Legend		
BH ID	See Legend	**Depth Interval**		**Soil Unit**	2B

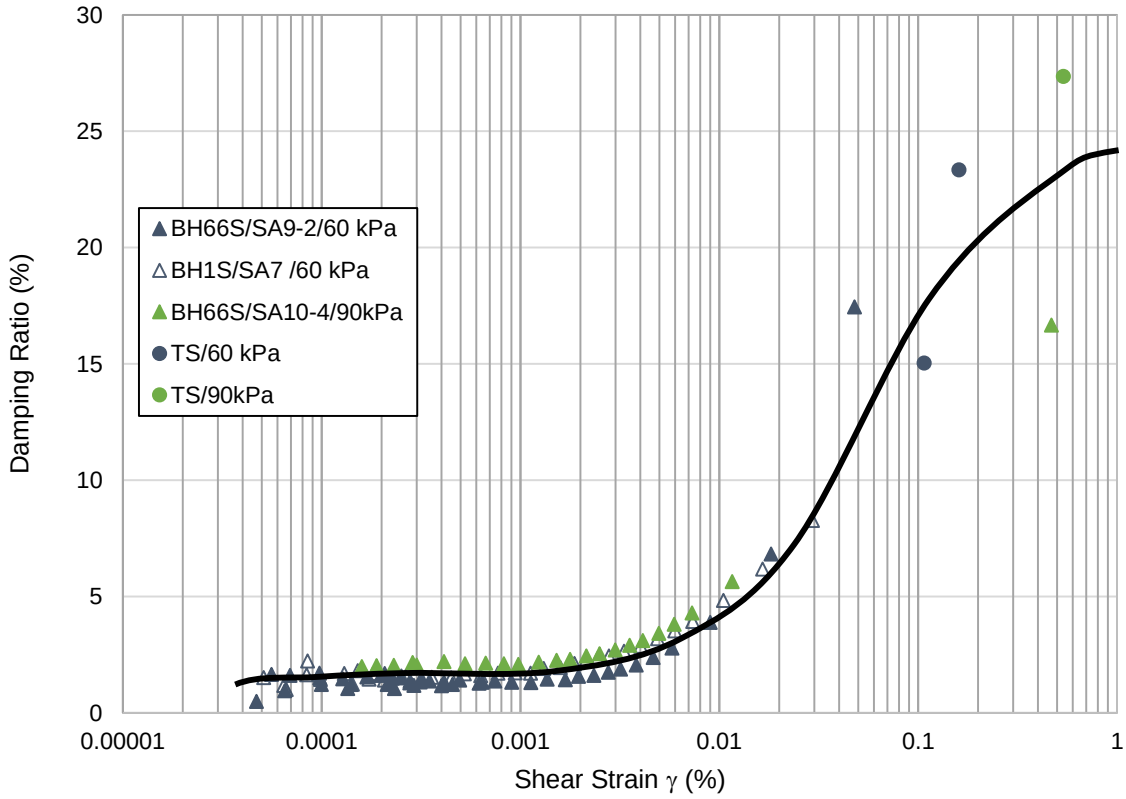


Figure No. M2.3

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 113200

Project No. 21451329
BH ID BH66S
Soil Unit 2B
Sample ID SA10-4
Test ID RC-TS-5
Depth Interval 5.33m - 5.54m

Cycle 1

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.493	-17.3
0	0
0.583	18.1

G/Gmax 0.0291

Shear Modulus G (kPa) 3298.5
tive Shear Modulus G_pos (kPa) 3110.8
tive Shear Modulus G_neg (kPa) 3520.5

BH66S/SA10-4/Cycle 1

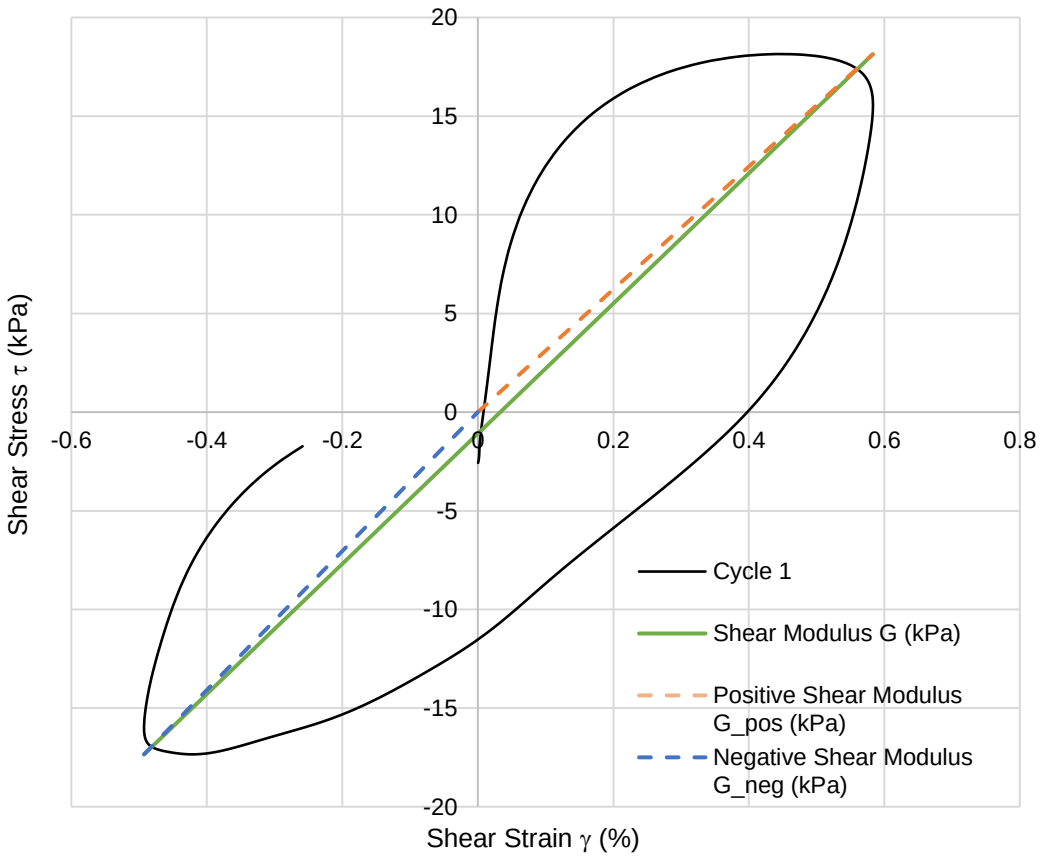


Figure No. M2.4

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 113200

Project No. 21451329
BH ID BH66S
Soil Unit 2B
Sample ID SA10-4
Test ID RC-TS-5
Depth Interval 5.33m - 5.54m

Cycle 15

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.466	-7.5
0	0
0.459	4.3

G/Gmax 0.01128

Shear Modulus G (kPa)	1277.4
tive Shear Modulus G_pos (kPa)	943.7
tive Shear Modulus G_neg (kPa)	1605.8

BH66S/SA10-4/Cycle 15

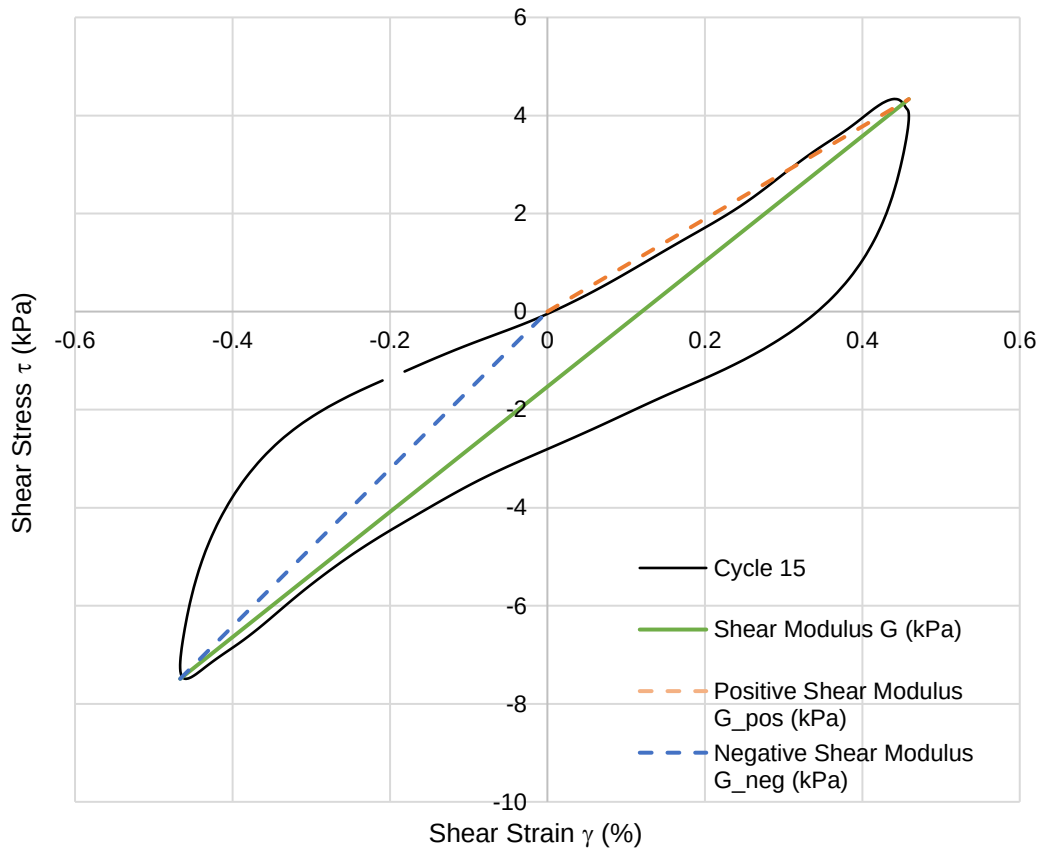


Figure No. M2.5

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	113200

Cycle 1

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.818	-17.1
0	0
0.946	26.9

Shear Modulus G (kPa)	2494.0
tive Shear Modulus G_pos (kPa)	2839.6
tive Shear Modulus G_neg (kPa)	2094.2

Project No.	21451329
BH ID	BH66SB
Soil Unit	2B
Sample ID	SA10-2
Test ID	TS-7
Depth Interval	6.71m - 7.01m

G/Gmax 0.0220

BH66SB/SA10-2/Cycle 1

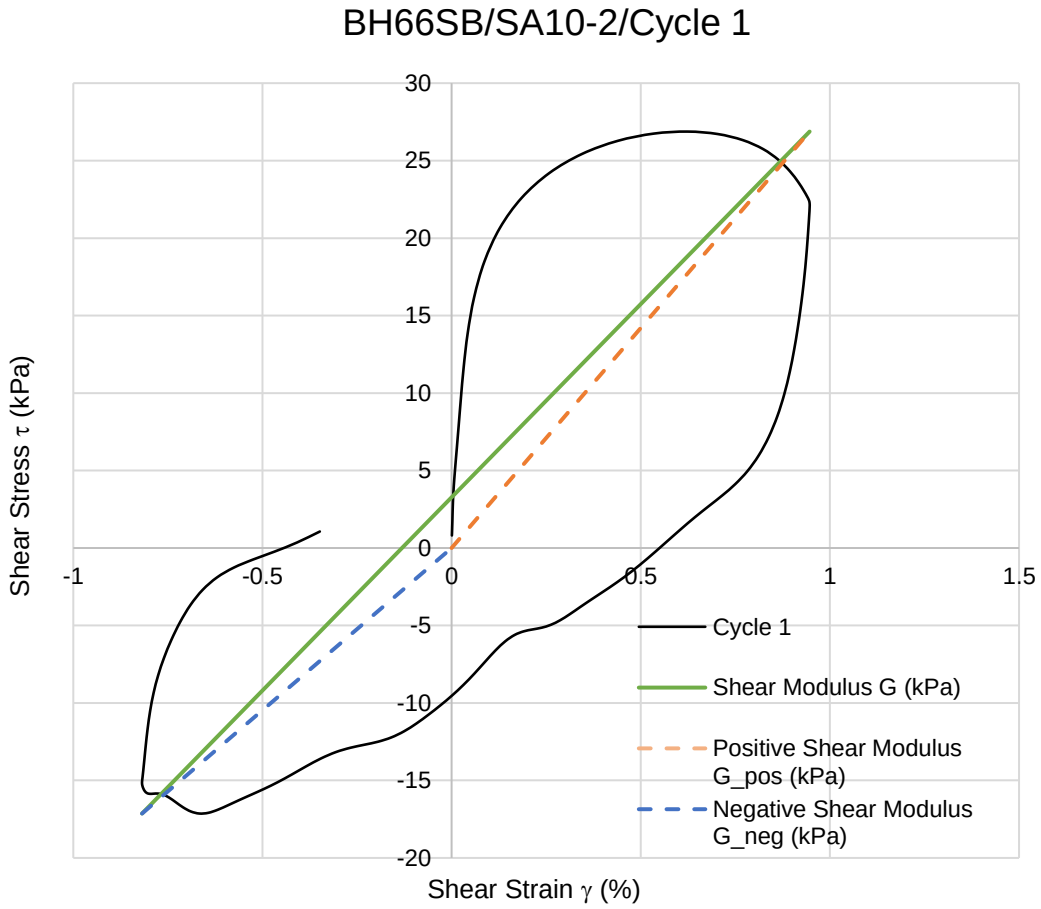


Figure No. M2.6

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	113200

Project No.	21451329
BH ID	BH66SB
Soil Unit	2B
Sample ID	SA10-2
Test ID	TS-7
Depth Interval	22'-23'

Cycle 15

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.787	-5.3
0	0
0.784	7.5

Shear Modulus G (kPa)	819.2
tive Shear Modulus G_pos (kPa)	959.3
tive Shear Modulus G_neg (kPa)	679.7

G/Gmax 0.00724

BH66SB/SA10-2/Cycle 15

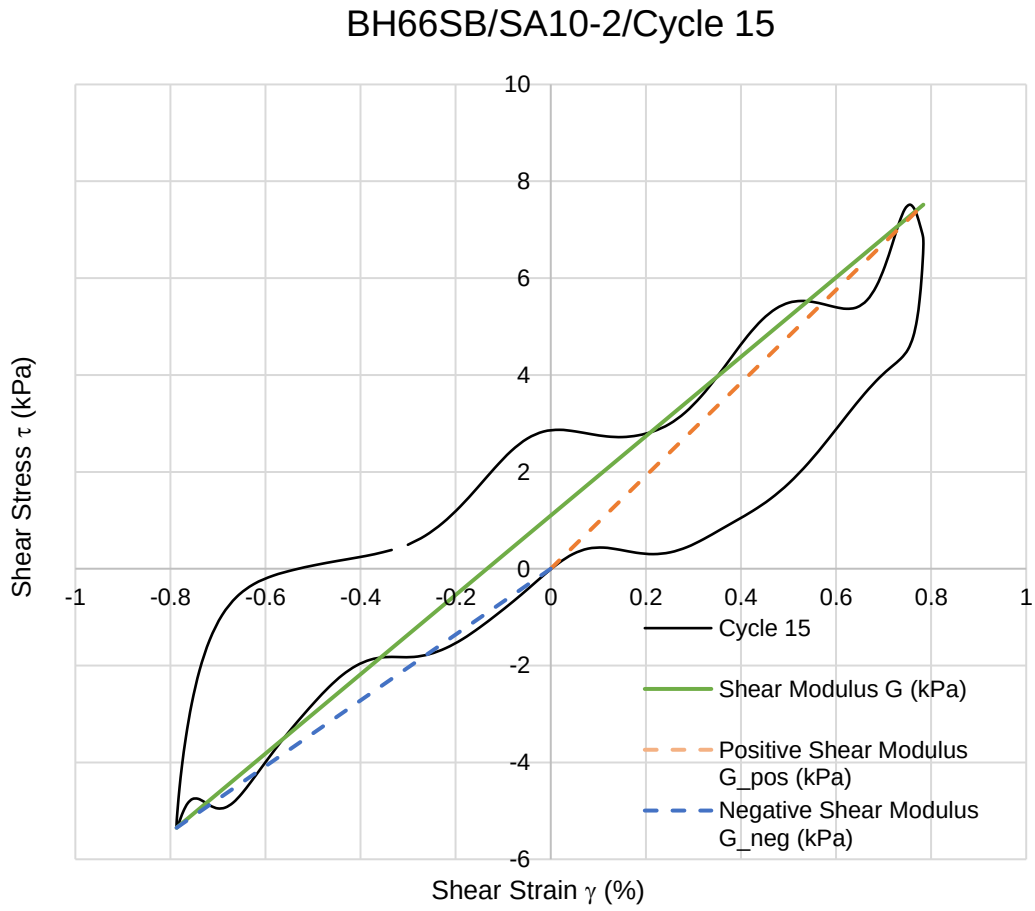


Figure No. M2.7

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	113200

Project No.	21451329
BH ID	BH66S
Soil Unit	2B
Sample ID	SA10-2
Test ID	TS-6A
Depth Interval	5.33m - 5.54m

Cycle 1

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.395	-29.0
0	0
0.530	40.4

G/Gmax	0.0663
Shear Modulus G (kPa)	7505.9
tive Shear Modulus G_pos (kPa)	7632.9
tive Shear Modulus G_neg (kPa)	7335.7

BH66S/SA10-2/Cycle 1

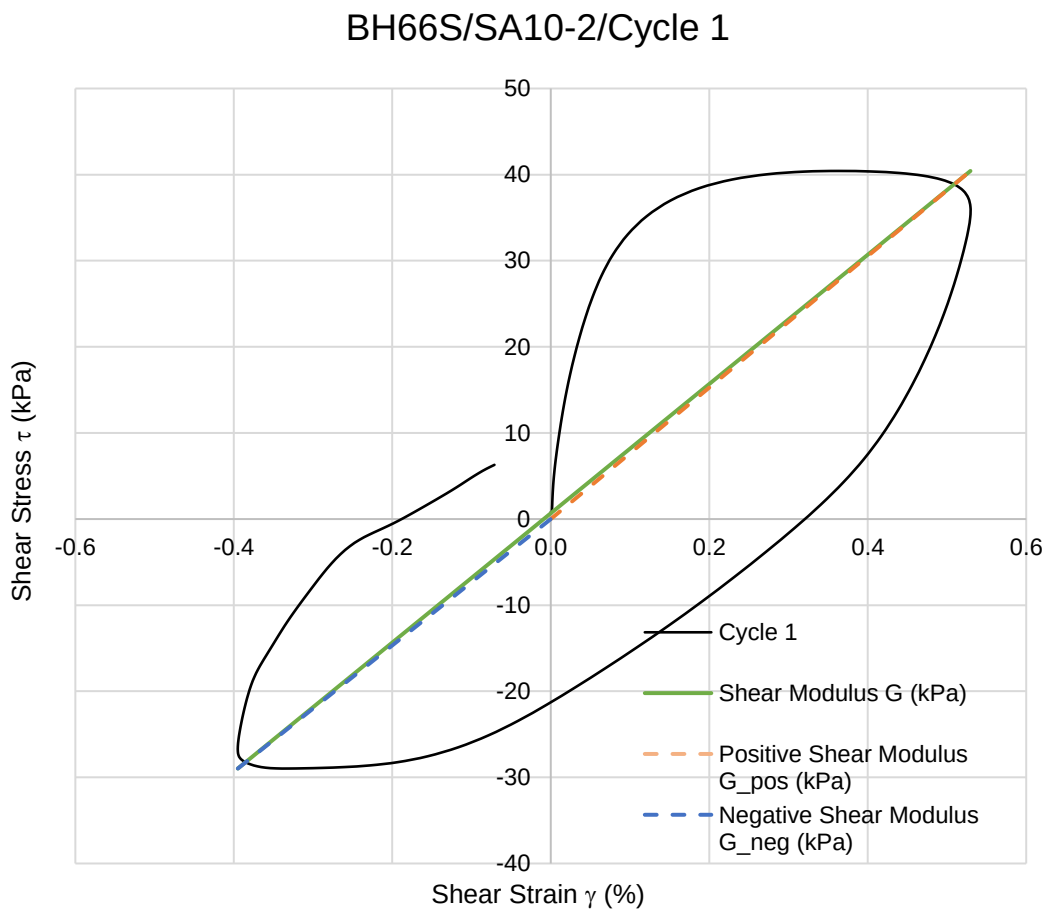


Figure No. M2.8

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (MPa) 113200

Project No. 21451329
BH ID BH66S
Soil Unit 2B
Sample ID SA10-2
Test ID TS-6A
Depth Interval 5.33m - 5.54m

Cycle 15

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.286	-6.3
0	0
0.278	6.7

G/Gmax 0.0203

Shear Modulus G (kPa)	2303.4
tive Shear Modulus G_pos (kPa)	2422.0
tive Shear Modulus G_neg (kPa)	2188.2

BH66S/SA10-2/Cycle 15

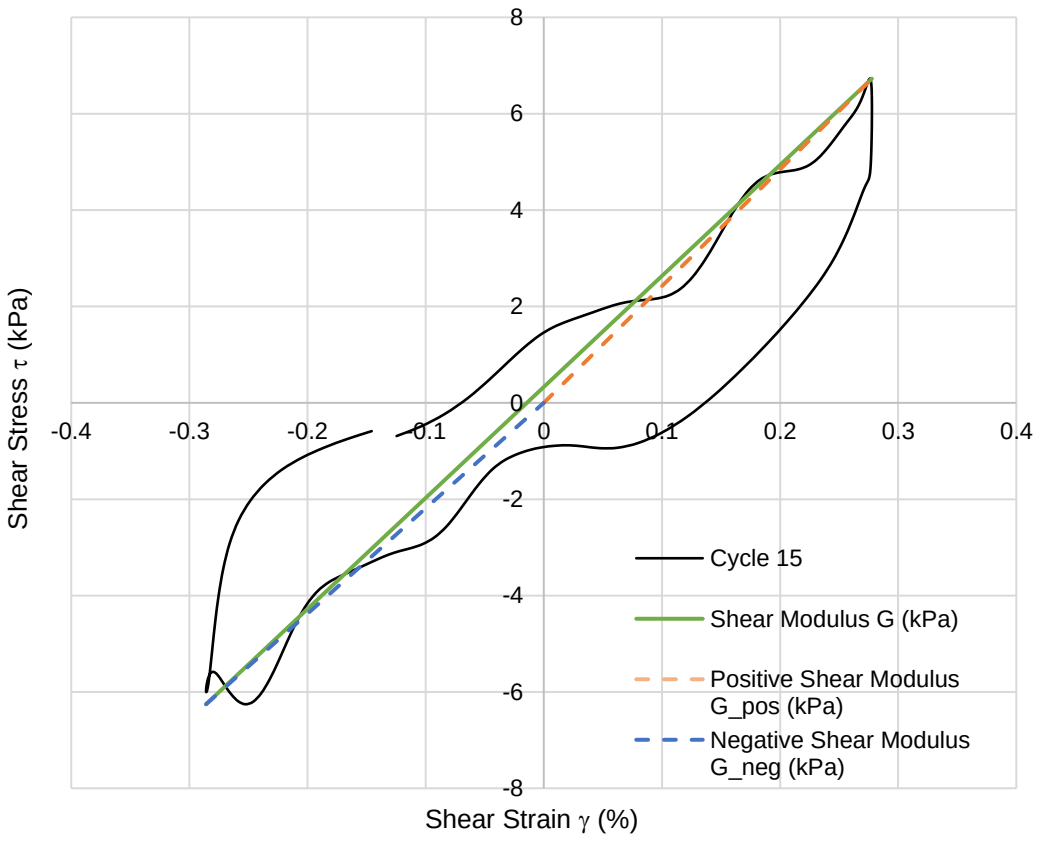


Figure No. M2.9

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 163960

Project No. 21451329
BH ID BH66S
Soil Unit 2B
Sample ID SA9-3
Test ID TS-5B
Depth Interval 4.27m - 5.31m

Cycle 1

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.137	14.1
0	0
0.184	-13.1

G/Gmax 0.0751

Shear Modulus G (kPa)	8505.2
tive Shear Modulus G_pos (kPa)	7681.2
tive Shear Modulus G_neg (kPa)	9611.1

BH66S/SA9-3/Cycle 1

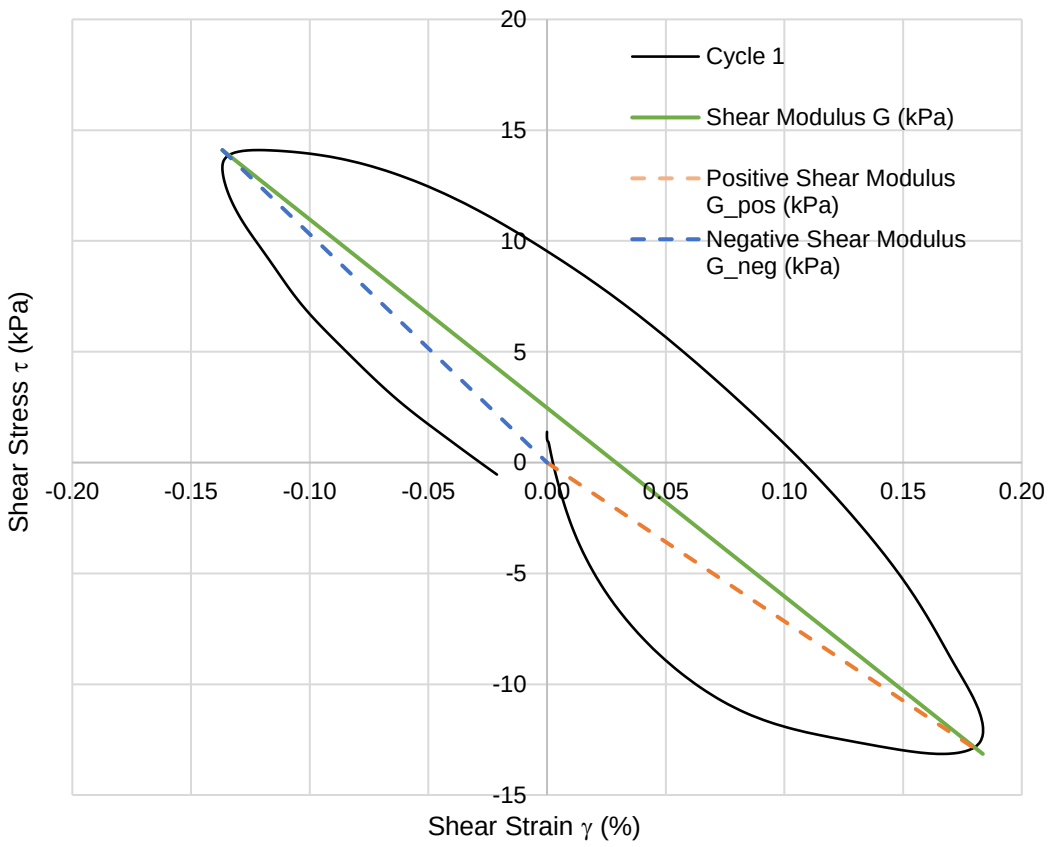


Figure No. M2.10

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (MPa)	163960

Project No.	21451329
BH ID	BH66S
Soil Unit	2B
Sample ID	SA9-3
Test ID	TS-5B
Depth Interval	4.27m - 5.31m

Cycle 15

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.094	6.7
0	0
0.120	-4.1

G/Gmax	0.0446
Shear Modulus G (kPa)	5043.7
tive Shear Modulus G_pos (kPa)	5575.2
tive Shear Modulus G_neg (kPa)	4363.5

BH66S/SA9-3/Cycle 15

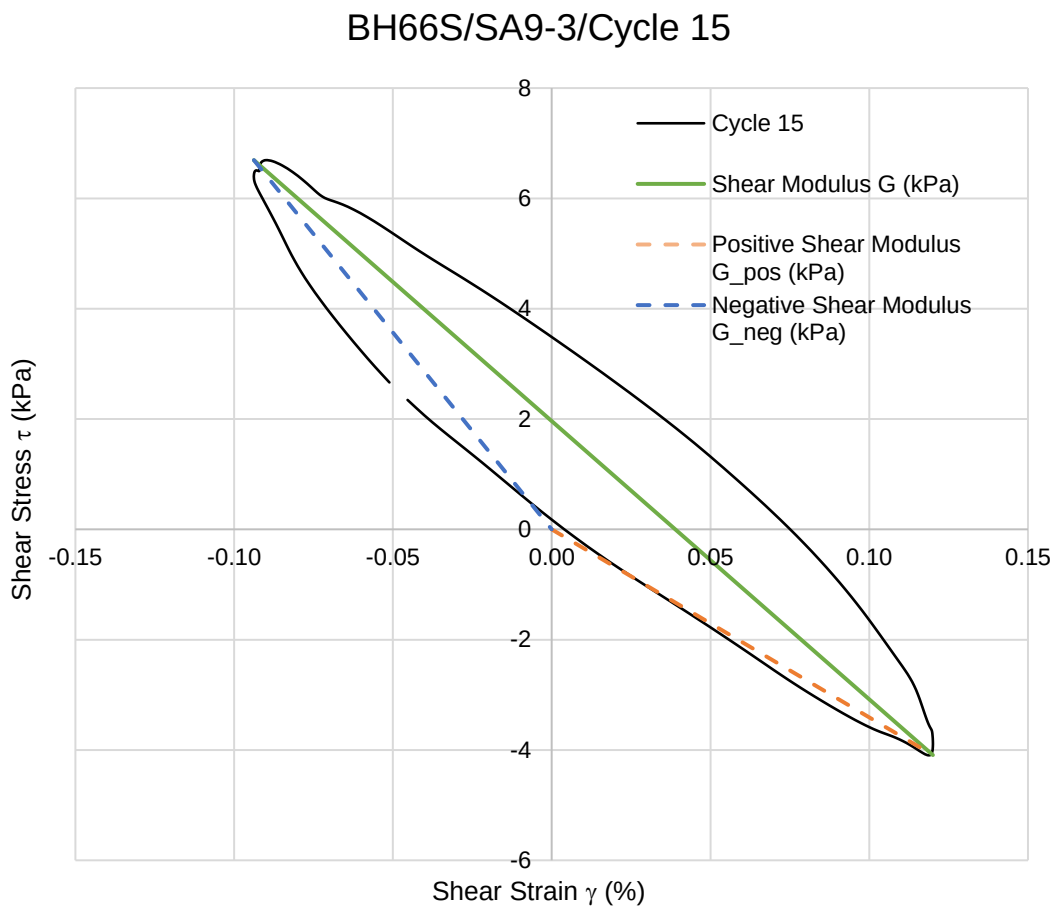


Figure No. M3.1

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Project No. 21451329 **Sample ID** See Legend

BH ID See Legend **Depth Interval** **Soil Unit** 3

Confining Pressure (kPa)	83	115	360	554
Average Max Shear Modulus G_{max} (kPa)	142570	192355	324863	535545

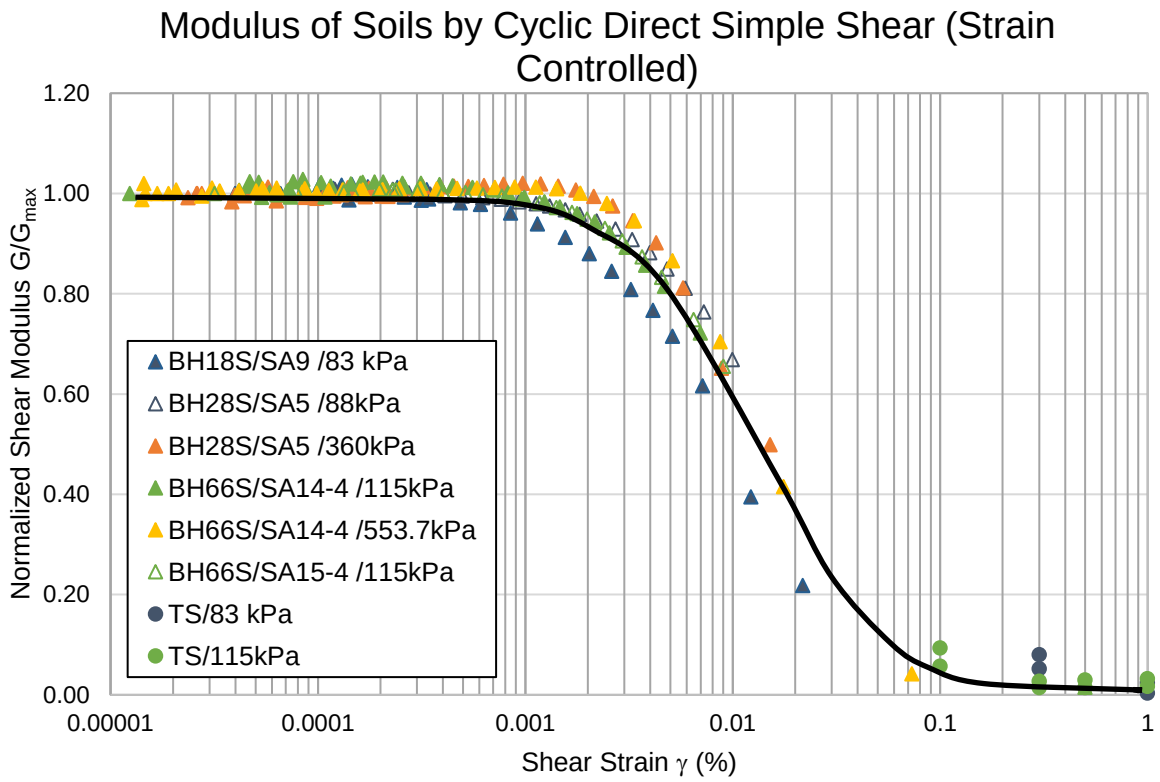


Figure No. M3.2

Damping Ratio of Soils Cyclic Direct Simple Shear (Strain Controlled)

Project No.	21451329	**Sample ID**	See Legend		
BH ID	See Legend	**Depth Interval**		**Soil Unit**	3

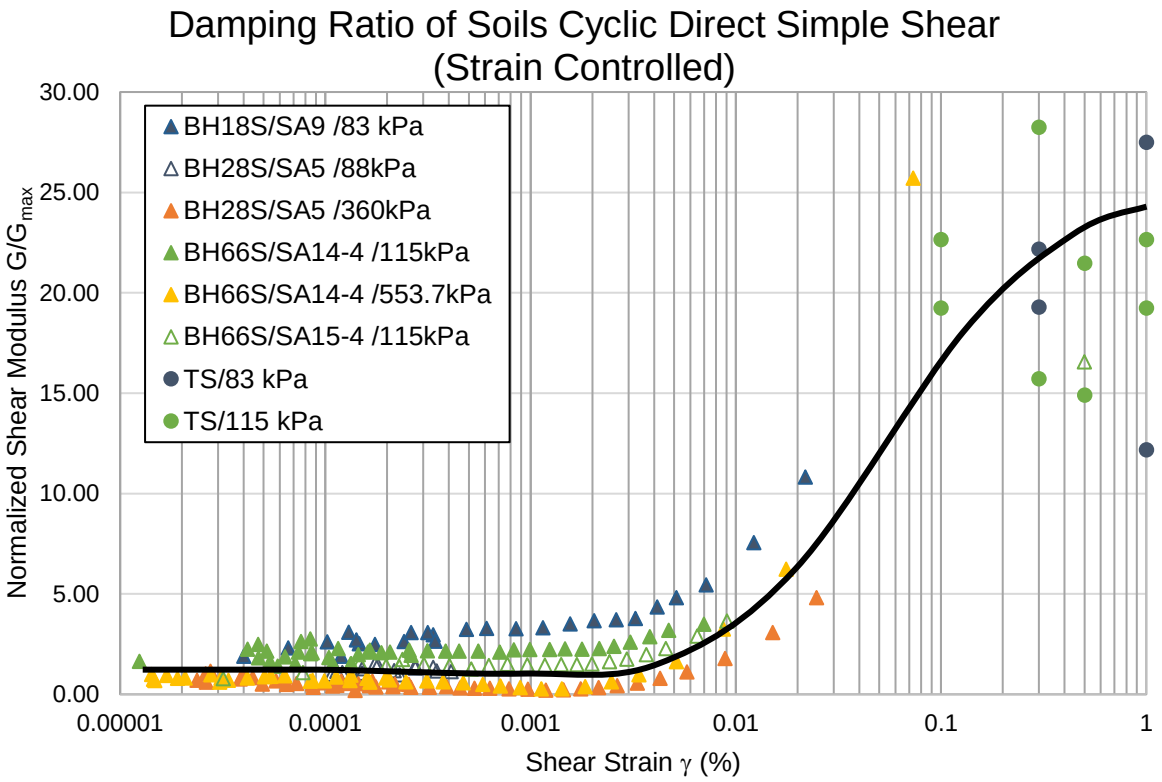


Figure No. M3.3

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 142570

Cycle 1

γ	τ
-1.0	**-23.5**
0	**0.0**
1.3	**43.0**

Shear Modulus G (kPa) 2873.2

tive Shear Modulus G_pos (kPa) 3301.1

tive Shear Modulus G_neg (kPa) 2322.1

Project No.	21451329
BH ID	BH18S
Soil Unit	3
Sample ID	SA3
Test ID	TS-19
Depth Interval	2.16m - 2.44m

Normalized Shear Modulus G (kPa) 0.0202

BH18S/ SA3/Cycle 1

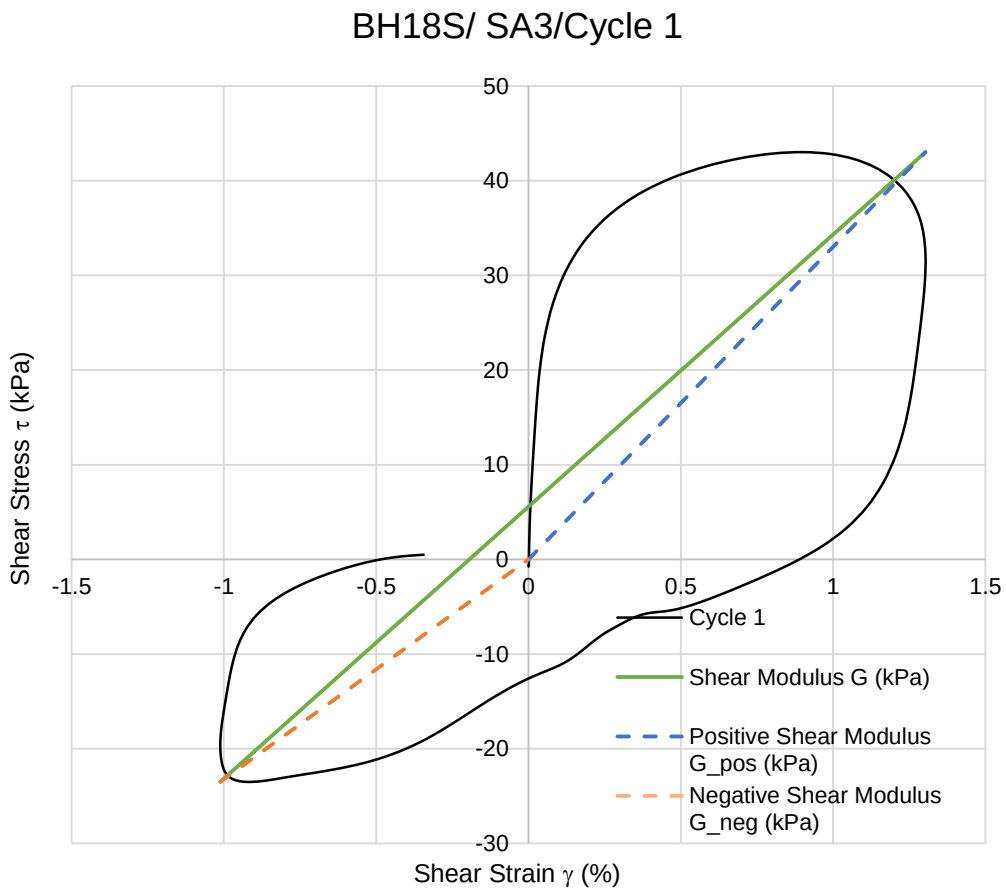


Figure No. M3.4

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	142570

Cycle 15

γ	τ
-0.94	**-7.5**
0.00	**0.0**
0.94	**6.6**

Shear Modulus G (kPa)	748.9
tive Shear Modulus G_pos (kPa)	703.0
tive Shear Modulus G_neg (kPa)	795.0

Project No.	21451329
BH ID	BH18S
Soil Unit	3
Sample ID	SA3
Test ID	TS-19
Depth Interval	2.16m - 2.44m

Normalized Shear Modulus G (kPa) 0.00525

BH18S/ SA3/Cycle 15

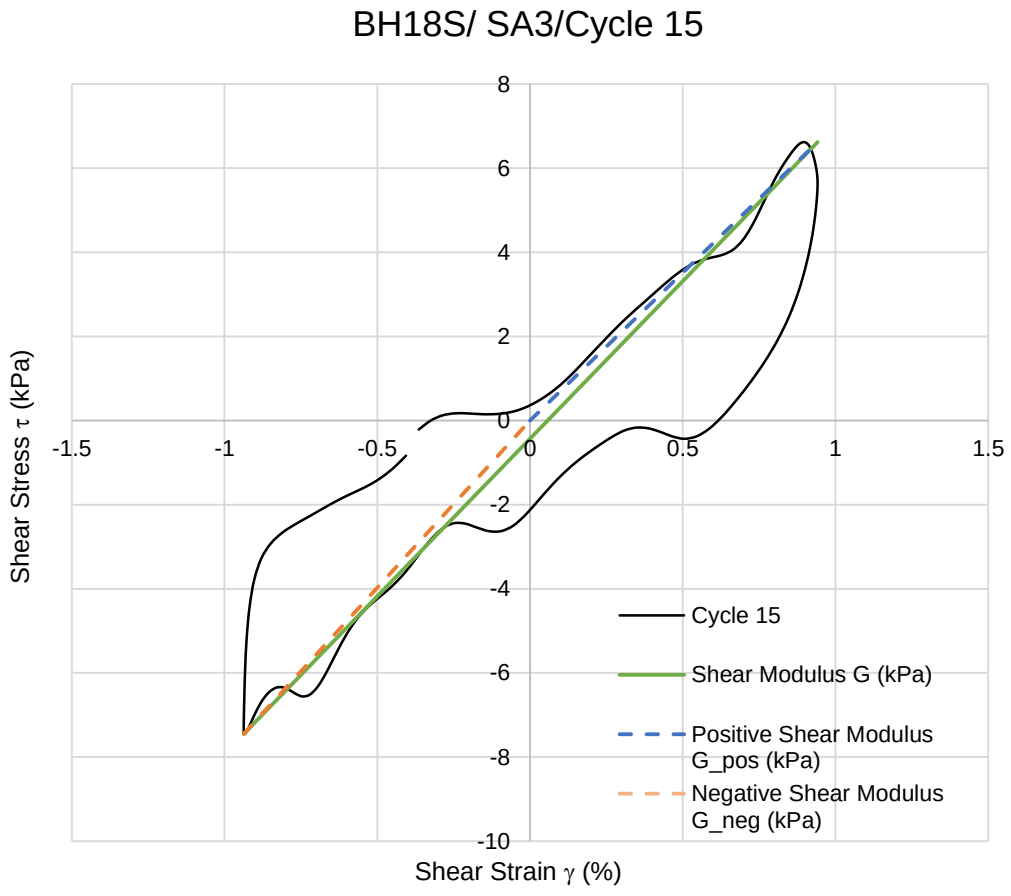


Figure No. M3.5

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 142570

Cycle 1

γ	τ
-0.22	**-21.7**
0.0	**0.0**
0.19	**18.9**

Shear Modulus G (kPa) 9833.1
tive Shear Modulus G_pos (kPa) 9689.2
tive Shear Modulus G_neg (kPa) 9961.8

Project No. 21451329
BH ID BH18S
Soil Unit 3
Sample ID SA10
Test ID TS-20
Depth Interval 4.88m - 5.16m

Normalized Shear Modulus G (kPa) 0.0690

BH18S/ SA10/Cycle 1

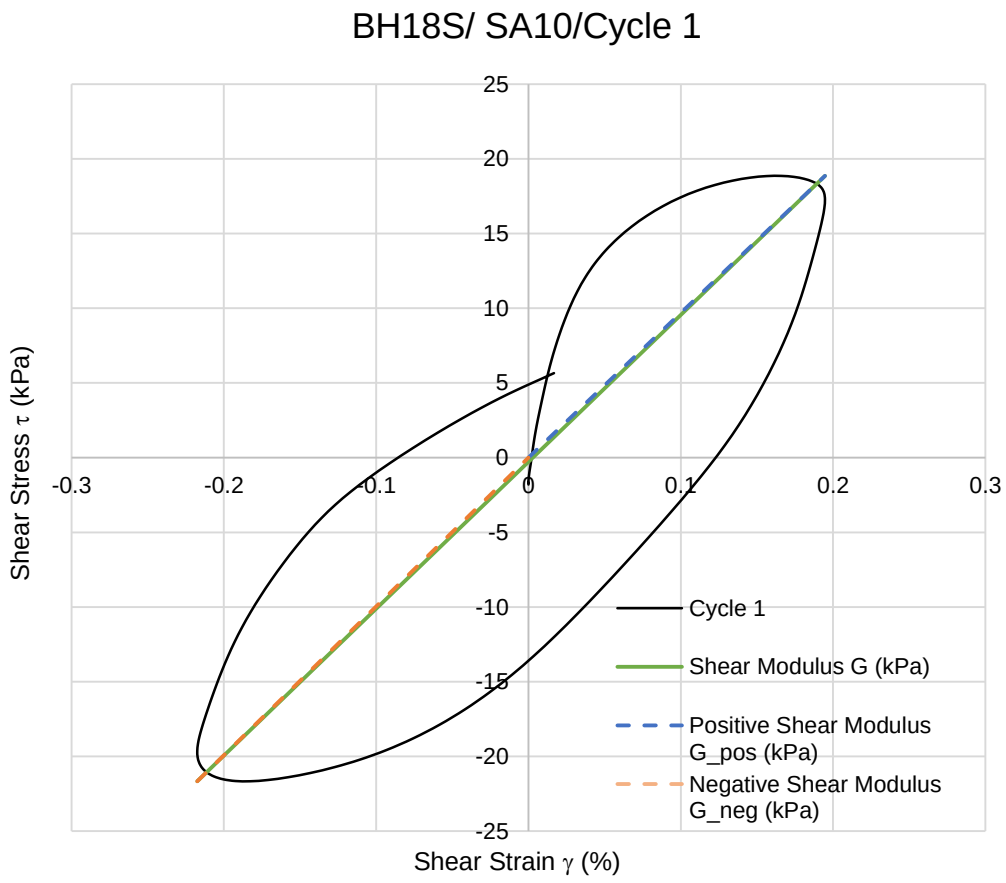


Figure No. M3.6

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 142570

Cycle 15

γ	τ
-0.11	-8.6
0.0	0.0
0.12	5.1

Shear Modulus G (kPa) 5816.1

tive Shear Modulus G_pos (kPa) 4162.6

tive Shear Modulus G_neg (kPa) 7591.3

Project No. 21451329
BH ID BH18S
Soil Unit 3
Sample ID SA10
Test ID TS-20
Depth Interval 4.88m - 5.16m

Normalized Shear Modulus G (kPa) 0.0408

BH18S/ SA10/Cycle 15

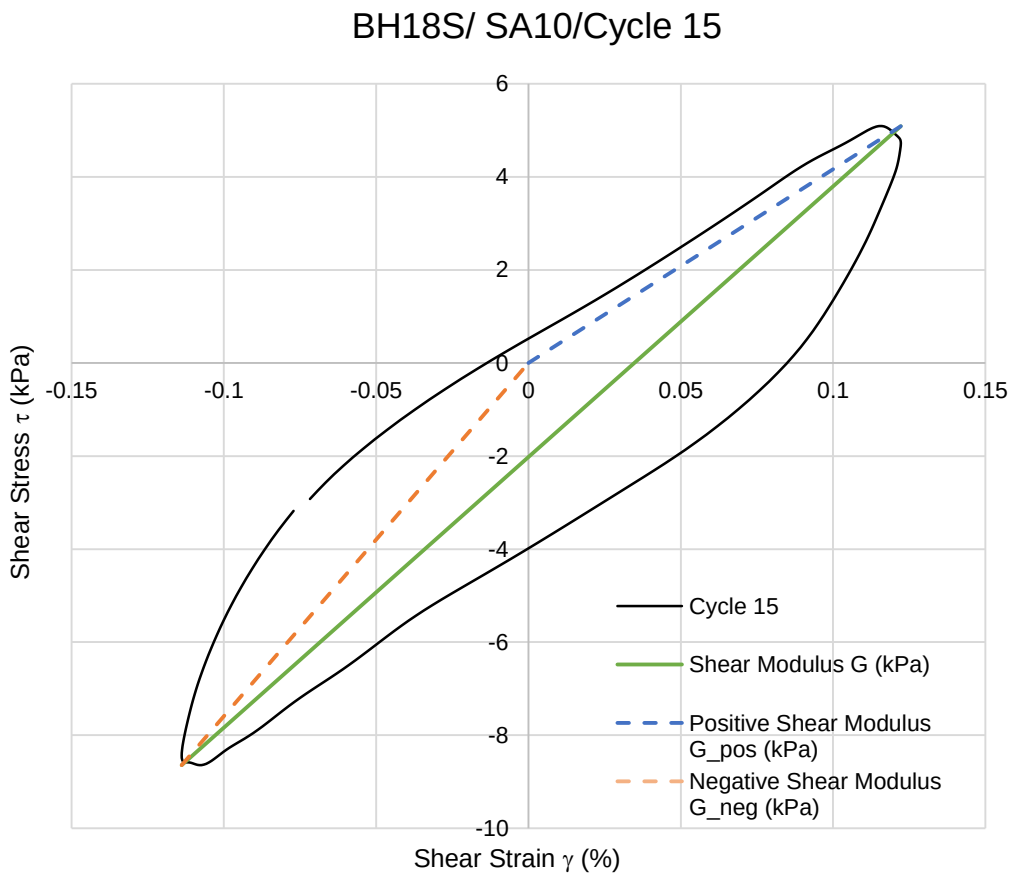


Figure No. M3.7

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 142570

Cycle 1

γ	τ
-0.48	**-38.9**
0.0	**0.0**
0.45	**39.8**

Shear Modulus G (kPa) 8469.7
tive Shear Modulus G_pos (kPa) 8865.1
tive Shear Modulus G_neg (kPa) 8099.7

Project No. 21451329
BH ID BH18S
Soil Unit 3
Sample ID SA15
Test ID TS-21
Depth Interval 7.32m - 7.62m

Normalized Shear Modulus G (kPa) 0.0594

BH18S/ SA15/Cycle 1

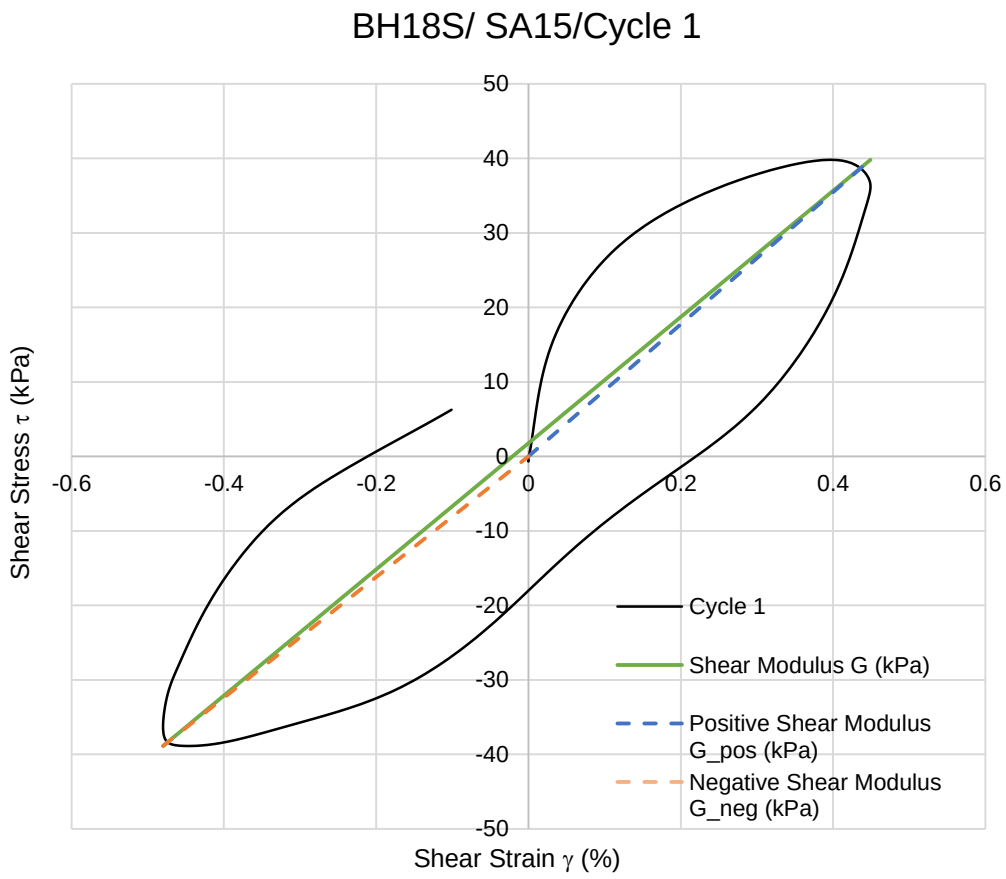


Figure No. M3.8

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 142570

Cycle 15

γ	τ
-0.34	**-21.4**
0.0	**0.0**
0.32	**19.6**

Shear Modulus G (kPa) 6174.8
tive Shear Modulus G_pos (kPa) 6113.5
tive Shear Modulus G_neg (kPa) 6232.0

Project No. 21451329
BH ID BH18S
Soil Unit 3
Sample ID SA15
Test ID TS-21
Depth Interval 7.32m - 7.62m

Normalized Shear Modulus G (kPa) 0.0433

BH18S/ SA15/Cycle 15

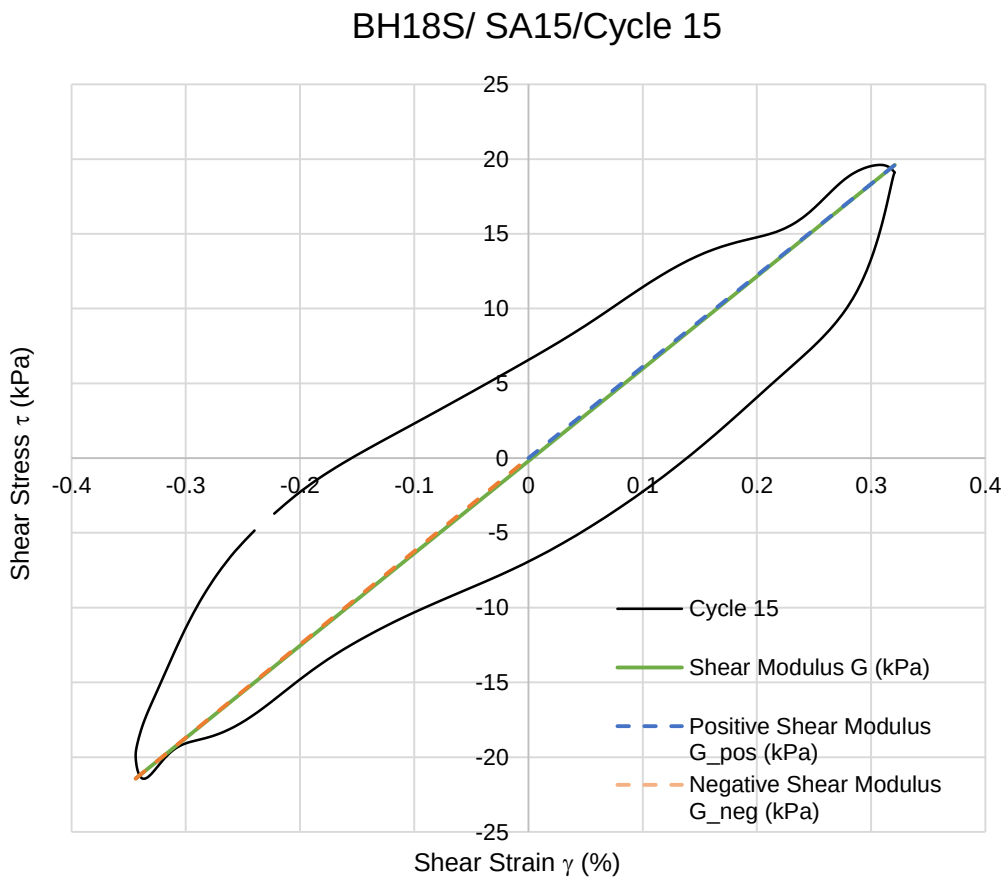


Figure No. M3.9

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 142570

Cycle 1

γ	τ
-0.31	**-39.2**
0.0	**0.0**
0.12	**22.1**

Shear Modulus G (kPa) 14332.4
tive Shear Modulus G_pos (kPa) 18232.7
tive Shear Modulus G_neg (kPa) 12787.7

Project No. 21451329
BH ID BH28S
Soil Unit 3
Sample ID SA2
Test ID TS-11A
Depth Interval 2.44m - 2.74m

Normalized Shear Modulus G (kPa) 0.101

BH28S/ SA2/Cycle 1

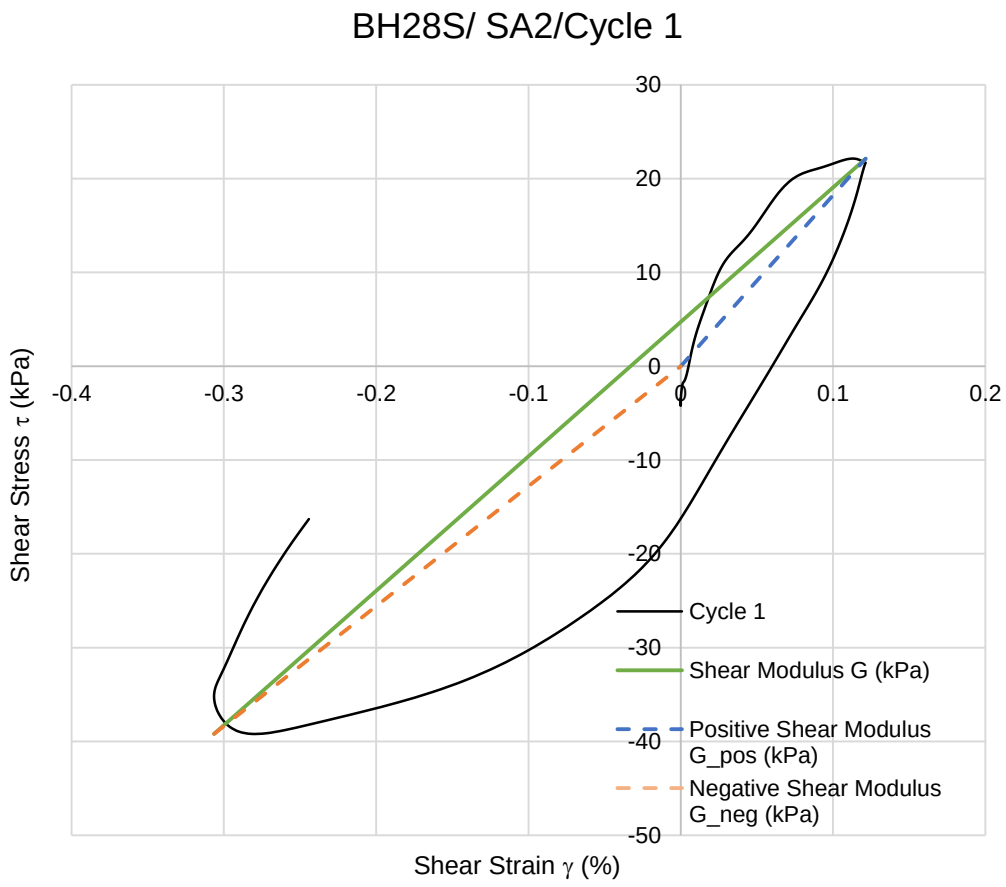


Figure No. M3.10

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 142570

Cycle 15

γ	τ
-0.15	**-16.0**
0.0	**0.0**
0.13	**11.6**

Shear Modulus G (kPa) 9918.2
tive Shear Modulus G_pos (kPa) 8934.3
tive Shear Modulus G_neg (kPa) 10777.4

Project No. 21451329
BH ID BH28S
Soil Unit 3
Sample ID SA2
Test ID TS-11A
Depth Interval 2.44m - 2.74m

Normalized Shear Modulus G (kPa) 0.0696

BH28S/ SA2/Cycle 15

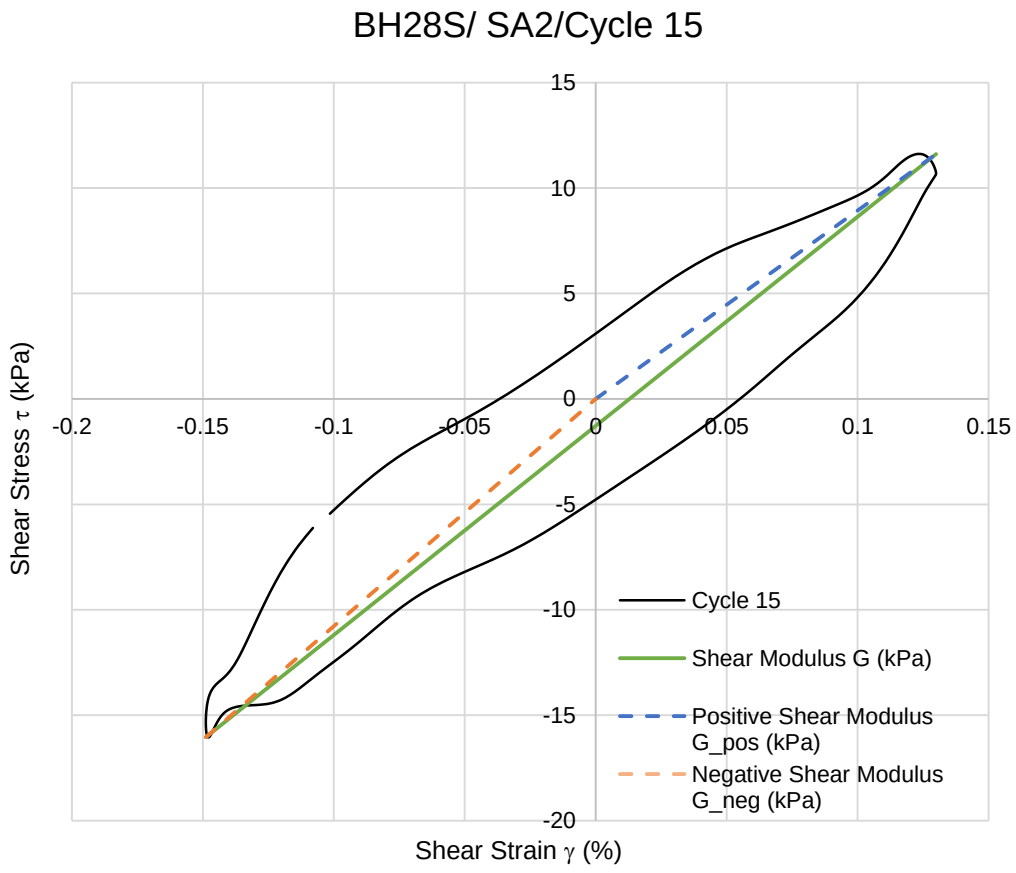


Figure No. M3.11

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	142570

Cycle 1

γ	τ
-0.26	**-25.5**
0.0	**0.0**
0.15	**21.9**

Shear Modulus G (kPa)	11471.9
tive Shear Modulus G_pos (kPa)	14754.6
tive Shear Modulus G_neg (kPa)	9627.5

Project No.	21451329
BH ID	BH28S
Soil Unit	3
Sample ID	SA6
Test ID	TS-12
Depth Interval	4.27m - 4.57m

Normalized Shear Modulus G (kPa) 0.0805

BH28S/ SA6/Cycle 1

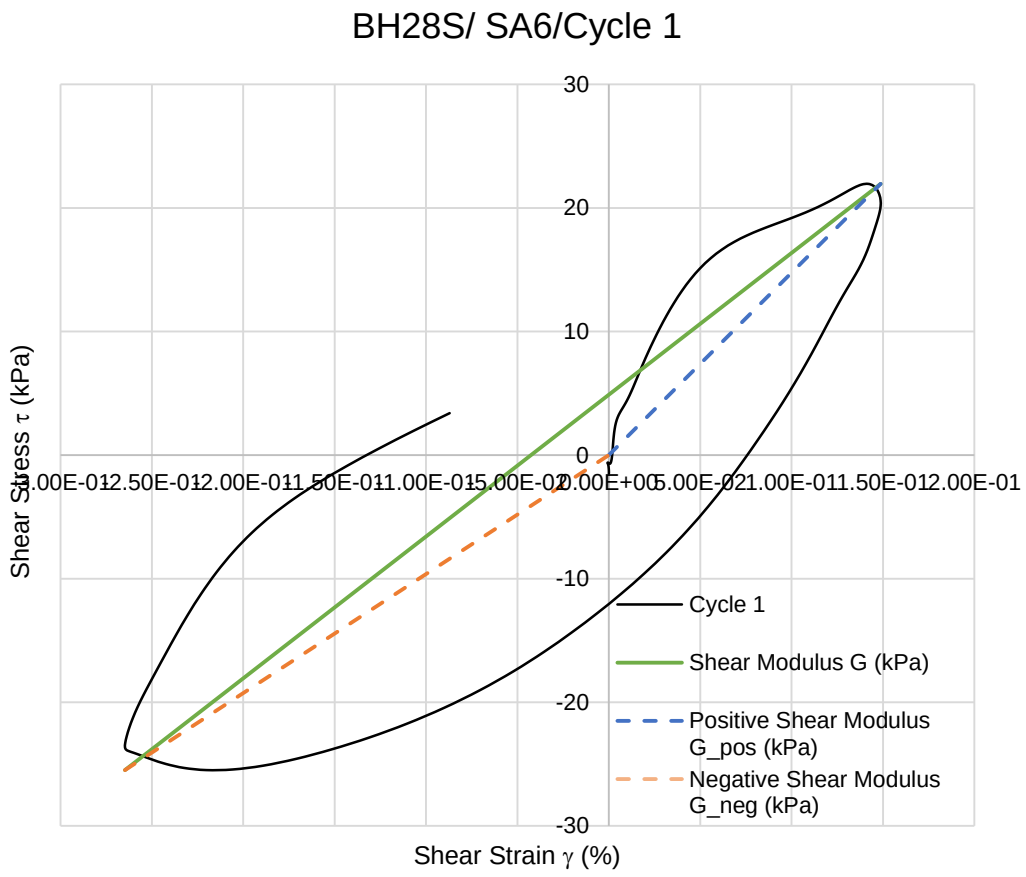


Figure No. M3.12

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 142570

Cycle 15

γ	τ
-0.13	**-10.2**
0.0	**0.0**
0.13	**8.9**

Shear Modulus G (kPa) 7470.0
tive Shear Modulus G_pos (kPa) 6843.0
tive Shear Modulus G_neg (kPa) 8114.0

Project No. 21451329
BH ID BH28S
Soil Unit 3
Sample ID SA6
Test ID TS-12
Depth Interval 4.27m - 4.57m

Normalized Shear Modulus G (kPa) 0.0524

BH28S/ SA6/Cycle 15

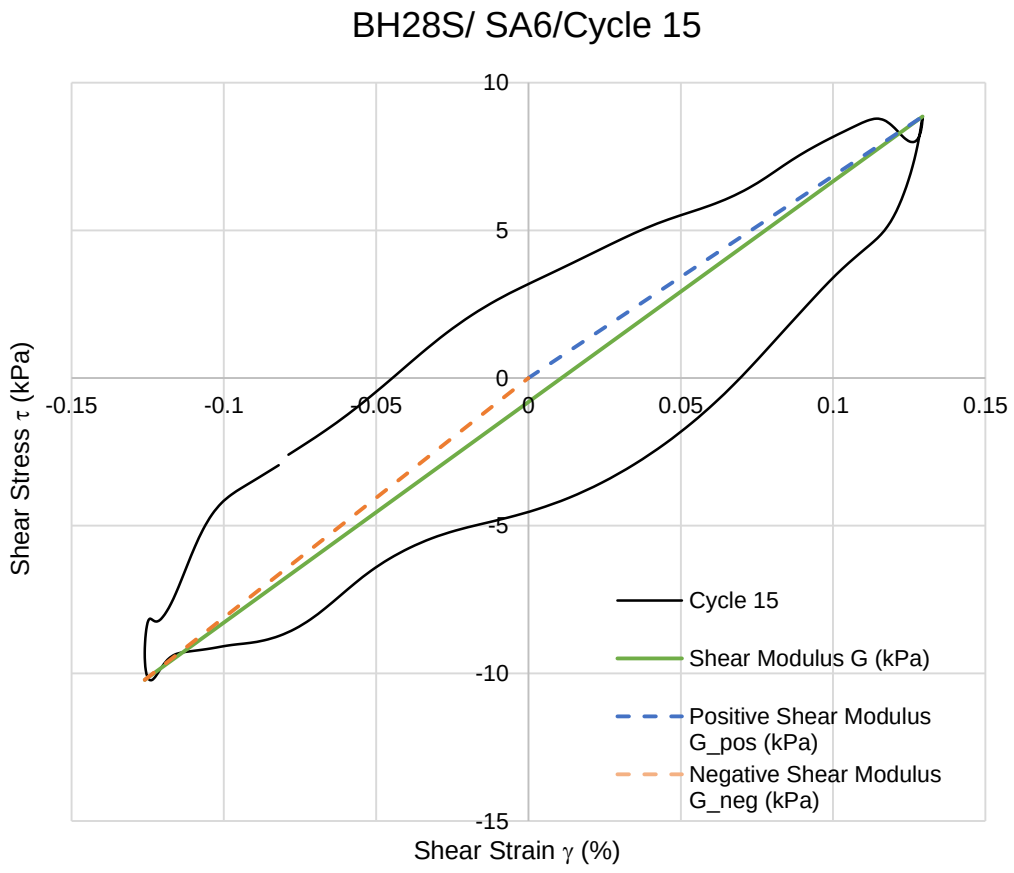


Figure No. M3.13

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 142570

Cycle 1

γ	τ
-1.0	-32.8
0.0	0.0
1.2	42.3

Shear Modulus G (kPa) 3379.4

tive Shear Modulus G_pos (kPa) 3516.6

tive Shear Modulus G_neg (kPa) 3217.2

Project No.	21451329
BH ID	BH28S
Soil Unit	3
Sample ID	SA13
Test ID	TS-13
Depth Interval	9.45m - 9.75m

Normalized Shear Modulus G (kPa) 0.0237

BH28S/ SA13/Cycle 1

BH28S/ SA2/Cycle 1

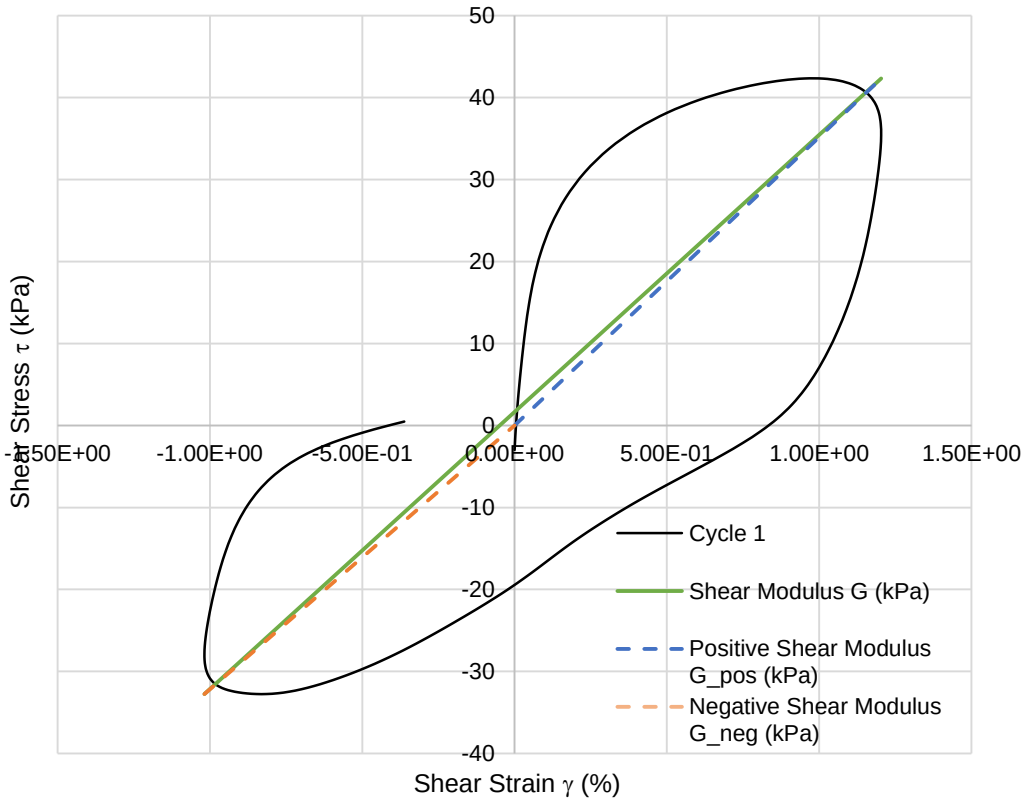


Figure No. M3.14

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (MPa)	192355

Cycle 15

γ	τ
-0.90854	**-6.0**
0	**0.0**
0.91322	**3.1**
Shear Strain γ (%)	
Shear Modulus G (kPa)	499.7
tive Shear Modulus G_pos (kPa)	340.8
tive Shear Modulus G_neg (kPa)	659.4

Project No.	21451329
BH ID	BH28S
Soil Unit	3
Sample ID	SA13
Test ID	TS-13
Depth Interval	9.45m - 9.75m

Normalized Shear Modulus G (kPa) 0.0035048

BH28S/ SA13/Cycle 15

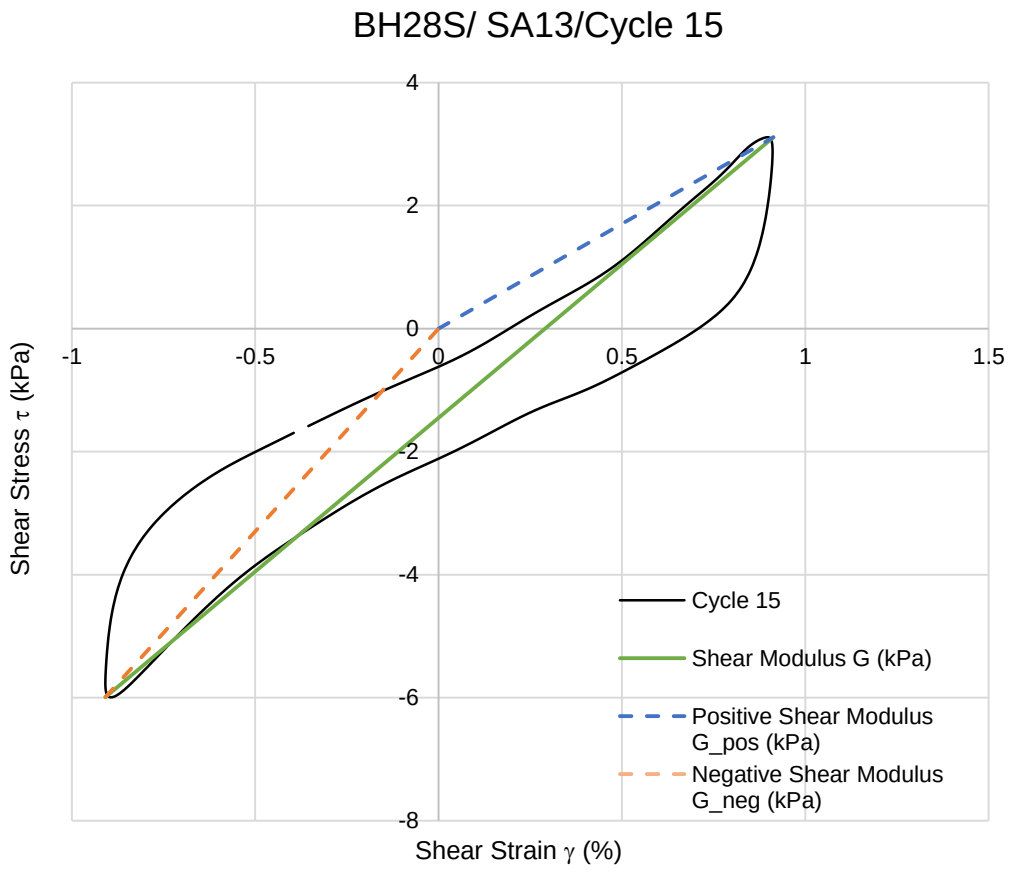


Figure No. M3.15

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	192355

Cycle 1

γ	τ
-3.43E-01	**-35.6**
0	**0.0**
1.58E-01	**33.0**
Shear Strain γ (%)	
Shear Modulus G (kPa)	13687.3
tive Shear Modulus G_pos (kPa)	20875.3
tive Shear Modulus G_neg (kPa)	10371.4

Project No.	21451329
BH ID	BH66S
Soil Unit	3
Sample ID	SA14-2
Test ID	TS-3
Depth Interval	7.01m - 7.29m

Normalized Shear Modulus G (kPa) 0.0960043

BH66S/ SA14-2/Cycle 1

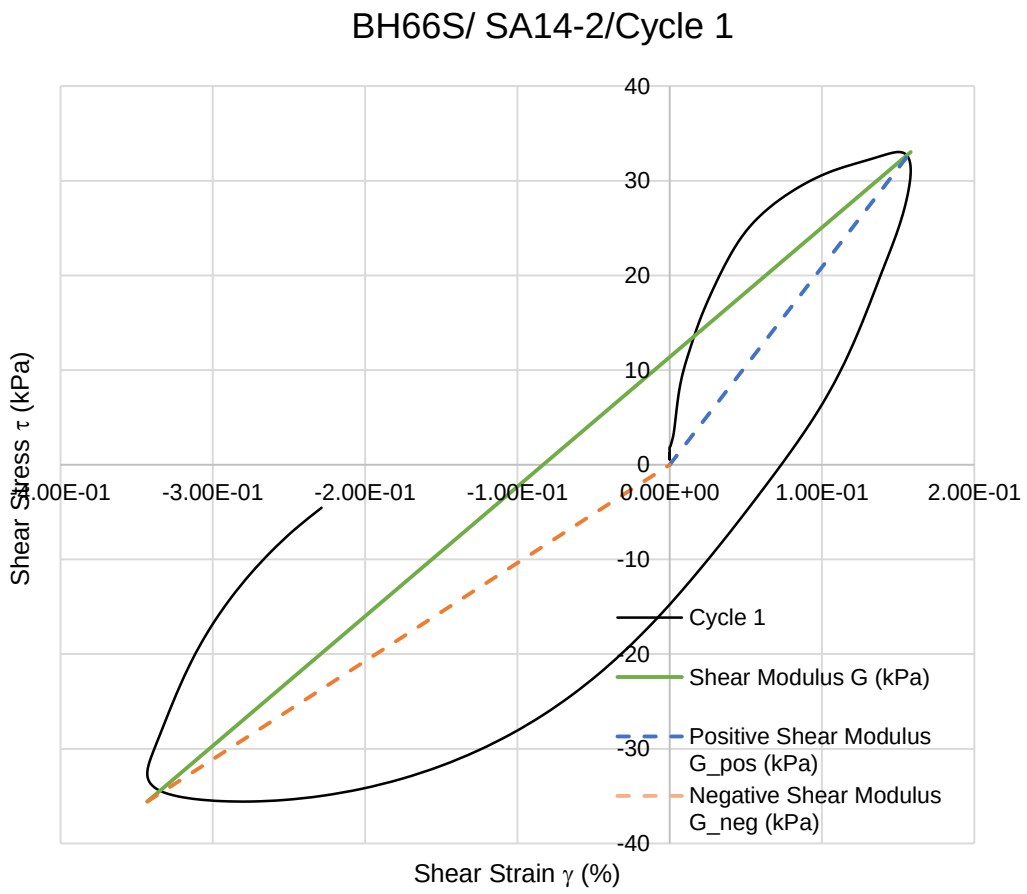


Figure No. M3.16

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	192355

Cycle 15

γ	τ
-0.14961	**-15.9**
0	**0.0**
0.14928	**17.5**

Shear Strain γ (%)	
Shear Modulus G (kPa)	11153.9
tive Shear Modulus G_pos (kPa)	11704.2
tive Shear Modulus G_neg (kPa)	10604.9

Project No.	21451329
BH ID	BH66S
Soil Unit	3
Sample ID	SA14-2
Test ID	TS-3
Depth Interval	7.01m - 7.29m

Normalized Shear Modulus G (kPa) 0.0782348

BH66S/ SA14-2/Cycle 15

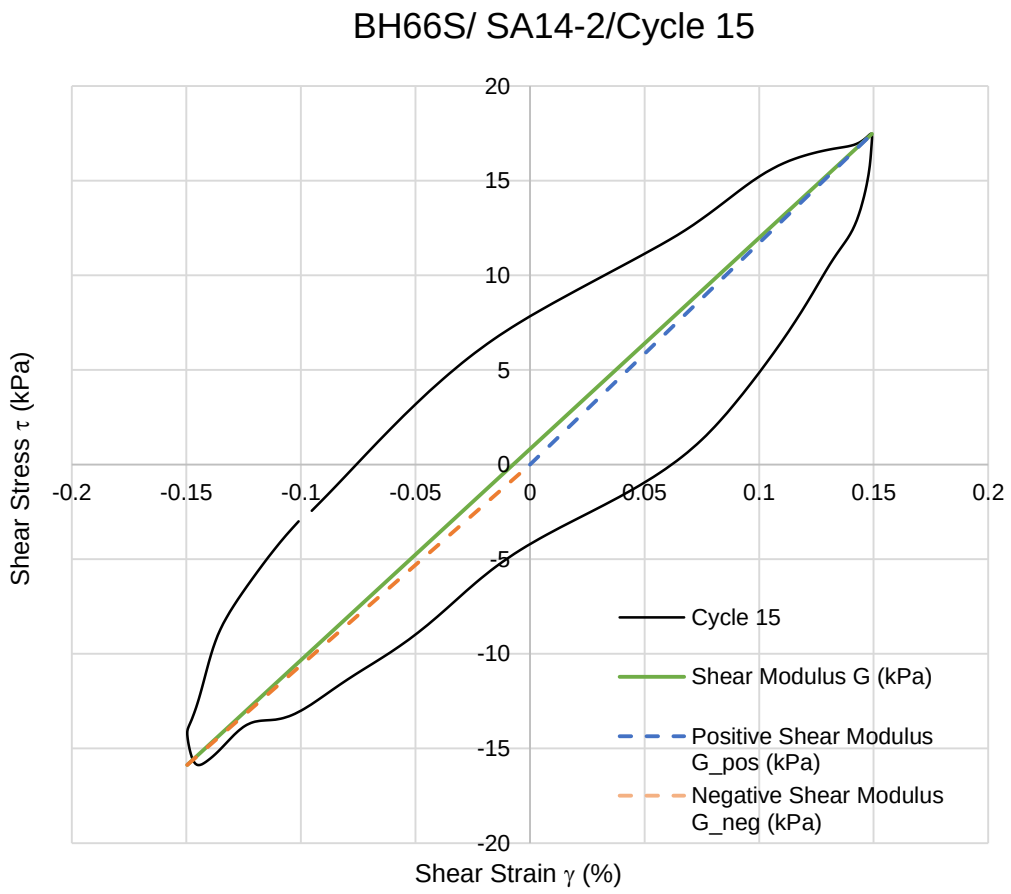


Figure No. M3.17

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	192355

Cycle 1

γ	τ
-3.46E-01	**-22.2**
0	**0.0**
3.67E-01	**19.0**
Shear Strain γ (%)	
Shear Modulus G (kPa)	5780.1
tive Shear Modulus G_pos (kPa)	5181.8
tive Shear Modulus G_neg (kPa)	6413.8

Project No.	21451329
BH ID	BH66S
Soil Unit	3
Sample ID	SA15-2
Test ID	TS-1
Depth Interval	7.32m - 8.36m

Normalized Shear Modulus G (kPa) 0.0405422

BH66S/ SA15-2/Cycle 1

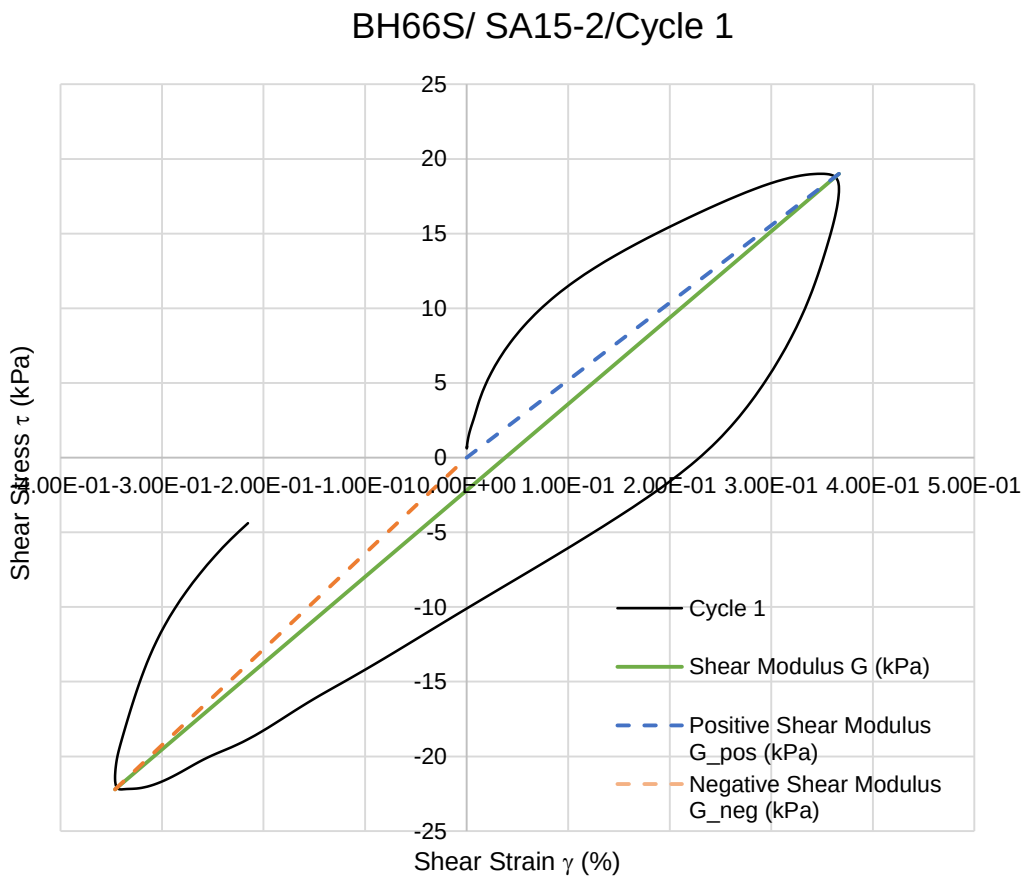


Figure No. M3.18

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	192355

Cycle 15

γ	τ
-0.31444	**-10.5**
0	**0.0**
0.30359	**7.1**

Shear Strain γ (%)	
Shear Modulus G (kPa)	2857.0
tive Shear Modulus G_pos (kPa)	2349.9
tive Shear Modulus G_neg (kPa)	3346.6

Project No.	21451329
BH ID	BH66S
Soil Unit	3
Sample ID	SA15-2
Test ID	TS-1
Depth Interval	7.32m - 8.36m

Normalized Shear Modulus G (kPa) 0.0200393

BH66S/ SA15-2/Cycle 15

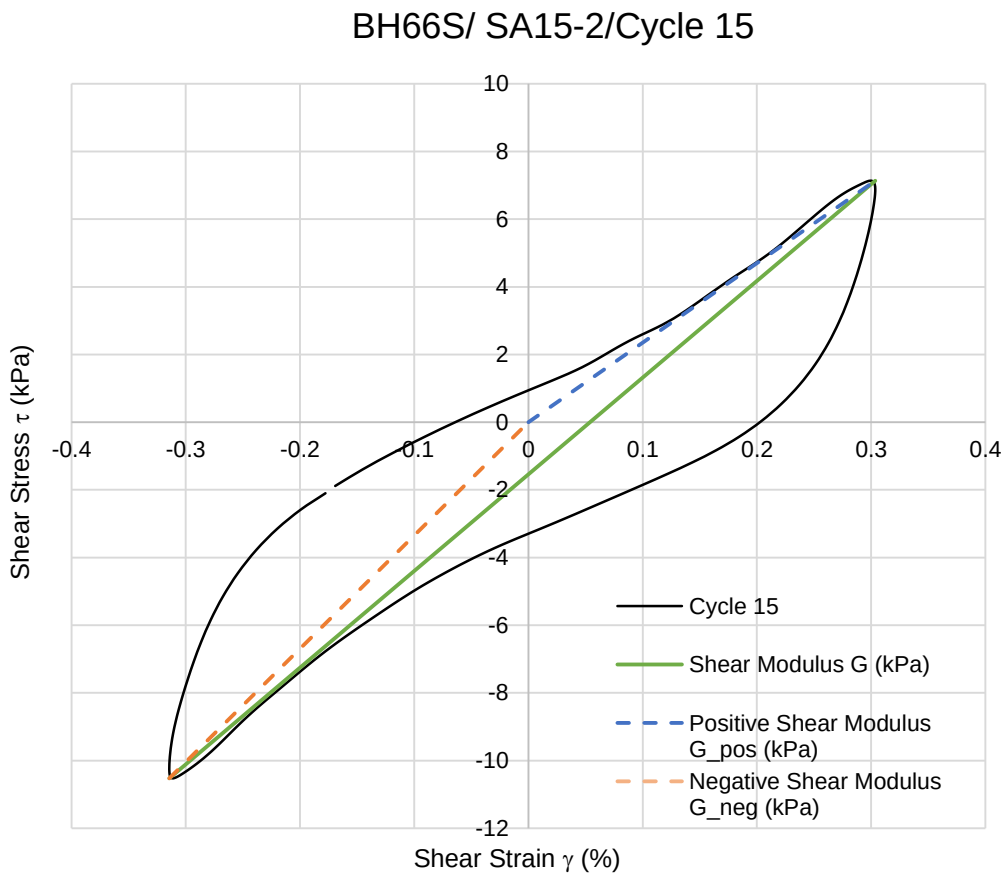


Figure No. M3.19

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	192355

Cycle 1

γ	τ
-5.14E-01	**-27.2**
0	**0.0**
7.45E-01	**39.2**
Shear Strain γ (%)	
Shear Modulus G (kPa)	5279.1
tive Shear Modulus G_pos (kPa)	5268.3
tive Shear Modulus G_neg (kPa)	5294.8

Project No.	21451329
BH ID	BH66S
Soil Unit	3
Sample ID	SA15-4
Test ID	RC-TS-3
Depth Interval	7.32m - 8.36m

Normalized Shear Modulus G (kPa) 0.0370284

BH66S/ SA15-4/Cycle 1

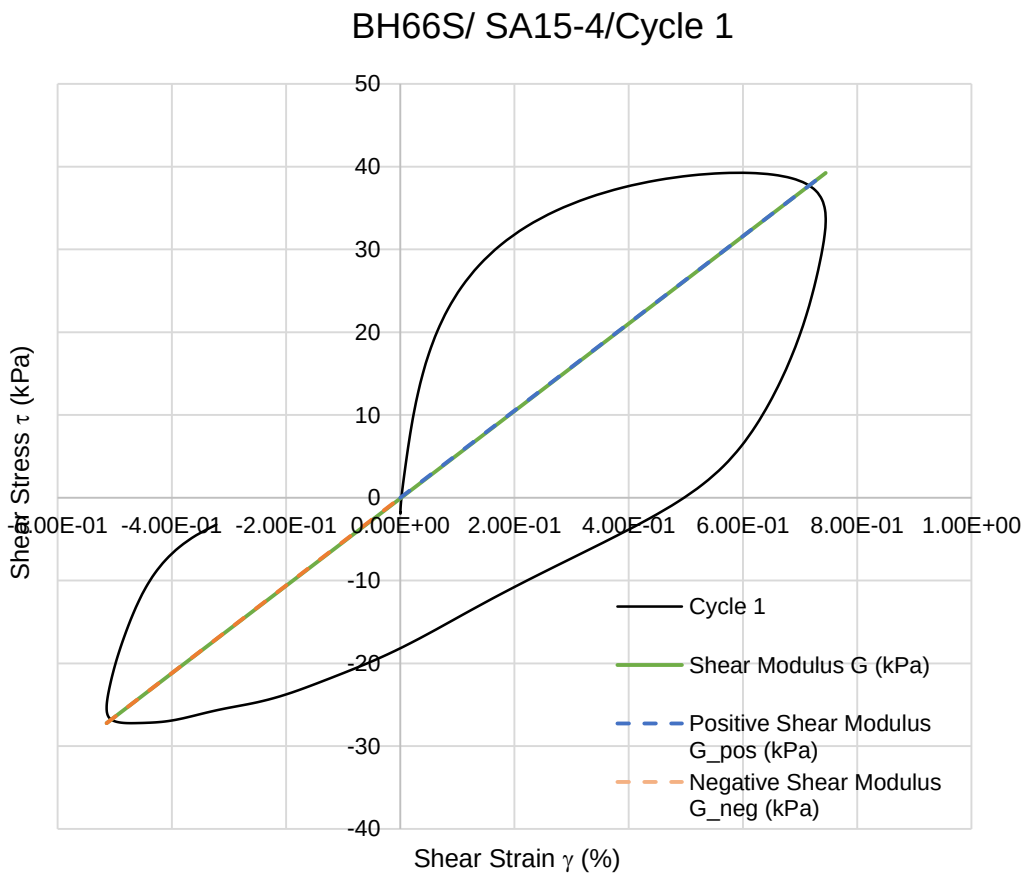


Figure No. M3.20

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	192355

Cycle 15

γ	τ
-0.48949	**-14.8**
0	**0.0**
0.48889	**12.4**

Shear Strain γ (%)	
Shear Modulus G (kPa)	2781.2
tive Shear Modulus G_pos (kPa)	2530.6
tive Shear Modulus G_neg (kPa)	3031.5

Project No.	21451329
BH ID	BH66S
Soil Unit	3
Sample ID	SA15-4
Test ID	RC-TS-3
Depth Interval	7.32m - 8.36m

Normalized Shear Modulus G (kPa) 0.0195078

BH66S/ SA15-4/Cycle 15

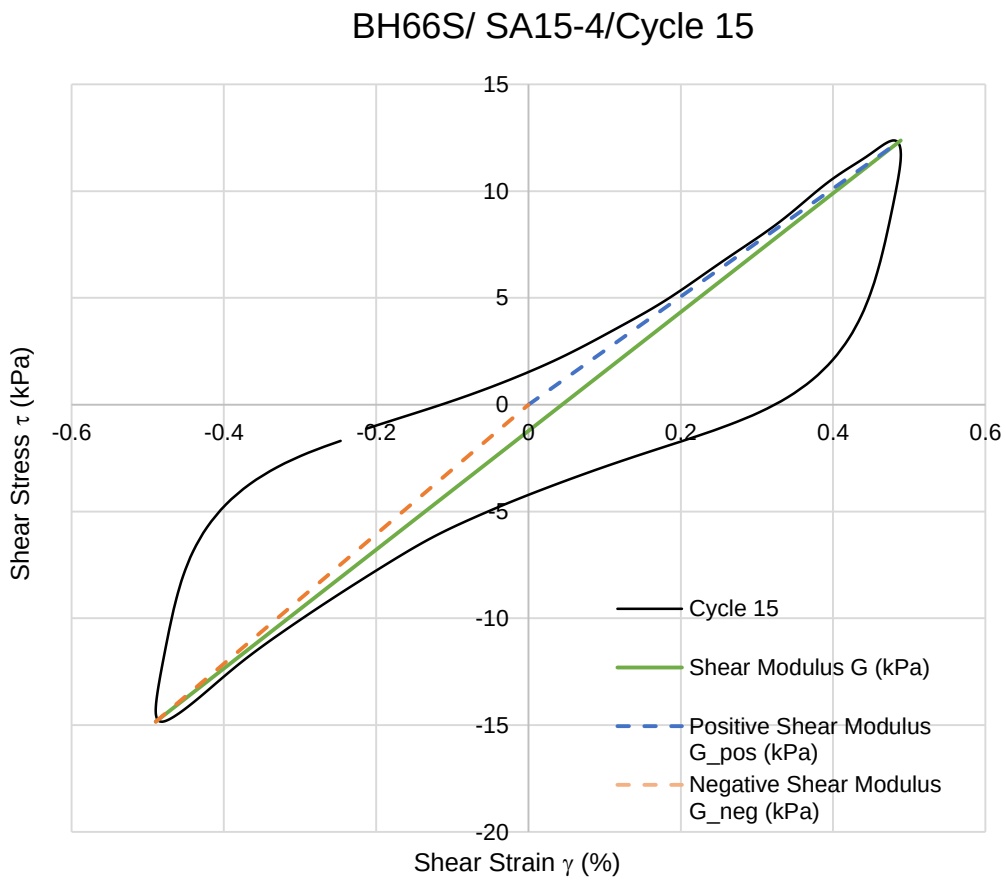


Figure No. M3.21

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	192355

Cycle 1

γ	τ
-7.18E-01	**-46.4**
0	**0.0**
7.62E-01	**46.1**

Shear Strain γ (%)	
Shear Modulus G (kPa)	6246.8
tive Shear Modulus G_pos (kPa)	6041.6
tive Shear Modulus G_neg (kPa)	6464.5

Project No.	21451329
BH ID	BH66S
Soil Unit	3
Sample ID	SA16-2
Test ID	TS-4
Depth Interval	8.84m - 9.14m

Normalized Shear Modulus G (kPa) 0.0438155

BH66S/ SA16-2/Cycle 1

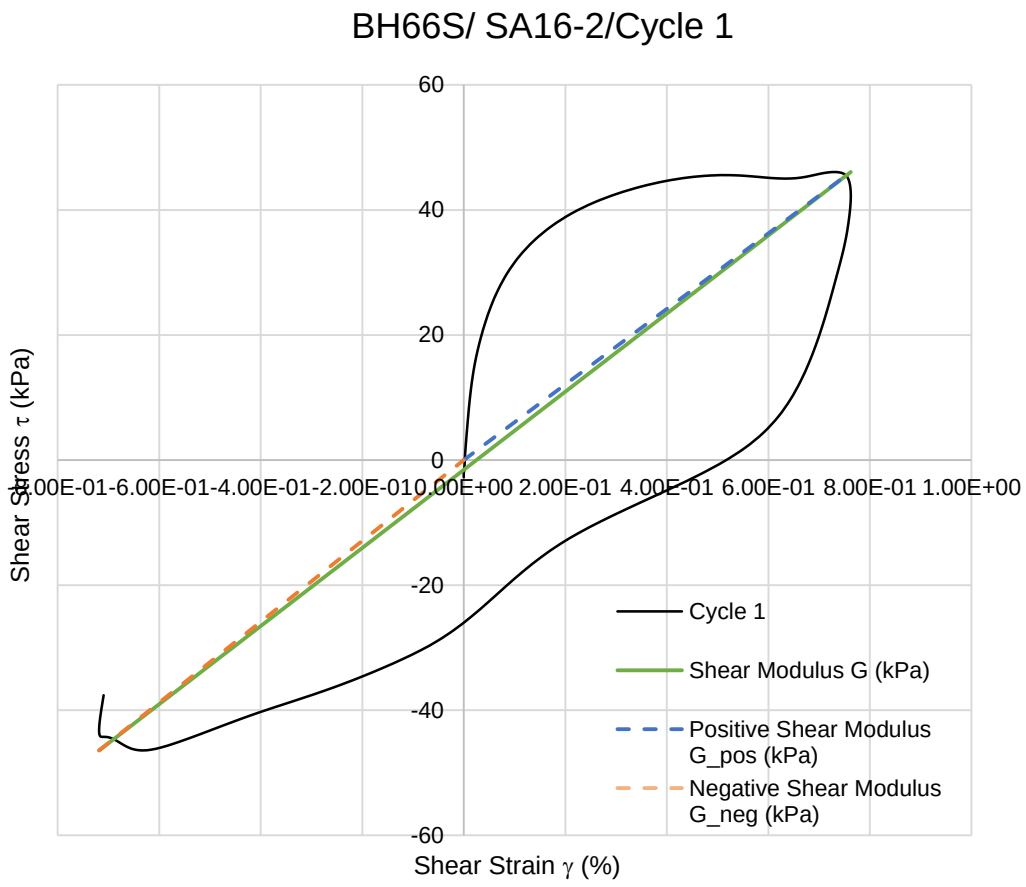


Figure No. M3.22

Modulus of Soils by Cyclic Direct Simple Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	192355

Cycle 15

γ	τ
-0.5887	**-21.0**
0	**0.0**
0.56114	**16.9**

Shear Strain γ (%)	
Shear Modulus G (kPa)	3290.5
tive Shear Modulus G_pos (kPa)	3002.8
tive Shear Modulus G_neg (kPa)	3564.8

Project No.	21451329
BH ID	BH66S
Soil Unit	3
Sample ID	SA16-2
Test ID	TS-4
Depth Interval	8.84m - 9.14m

Normalized Shear Modulus G (kPa) 0.0230802

BH66S/ SA16-2/Cycle 15

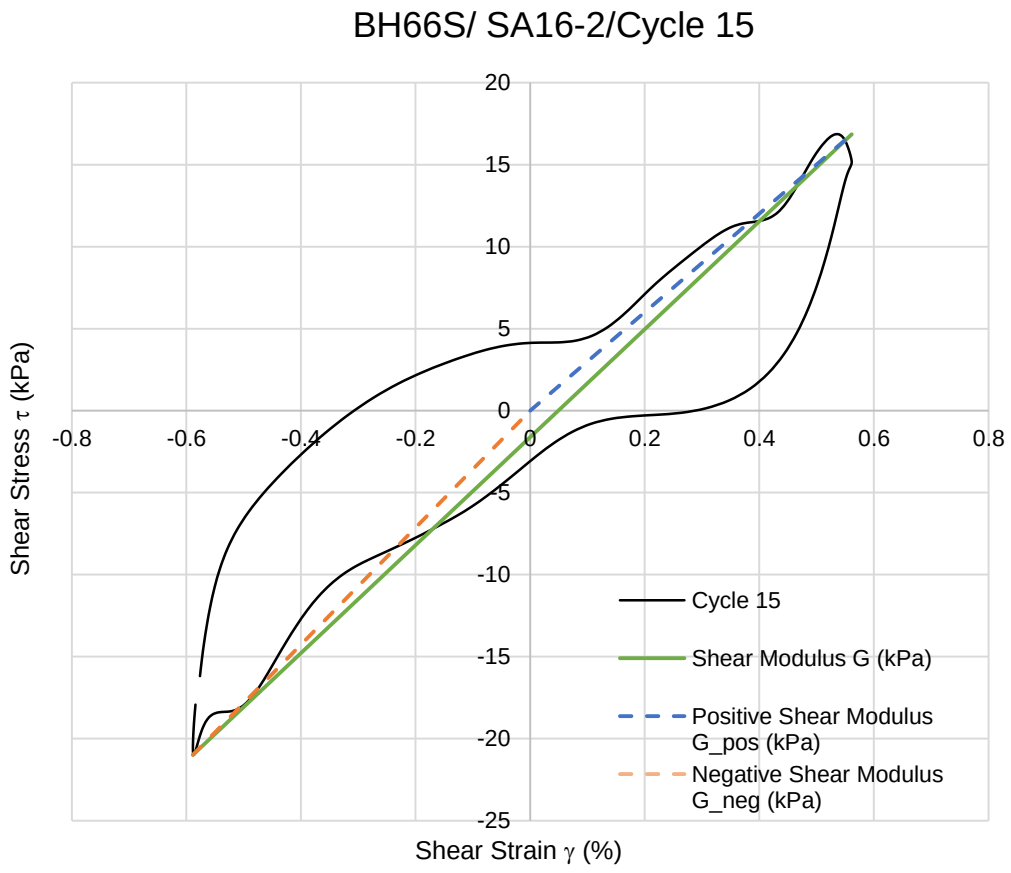


Figure No. M4.1

Modulus of Soils by Resonant-Column Method and Torsional Shear

Project No. 21451329 **Sample ID** See legend

BH ID See legend **Depth Interval** **Soil Unit** 4A

Confining Pressure (kPa)	166	171	247	483
Average Max Shear Modulus G_{max} (kPa)	88489	90670	145995	209913

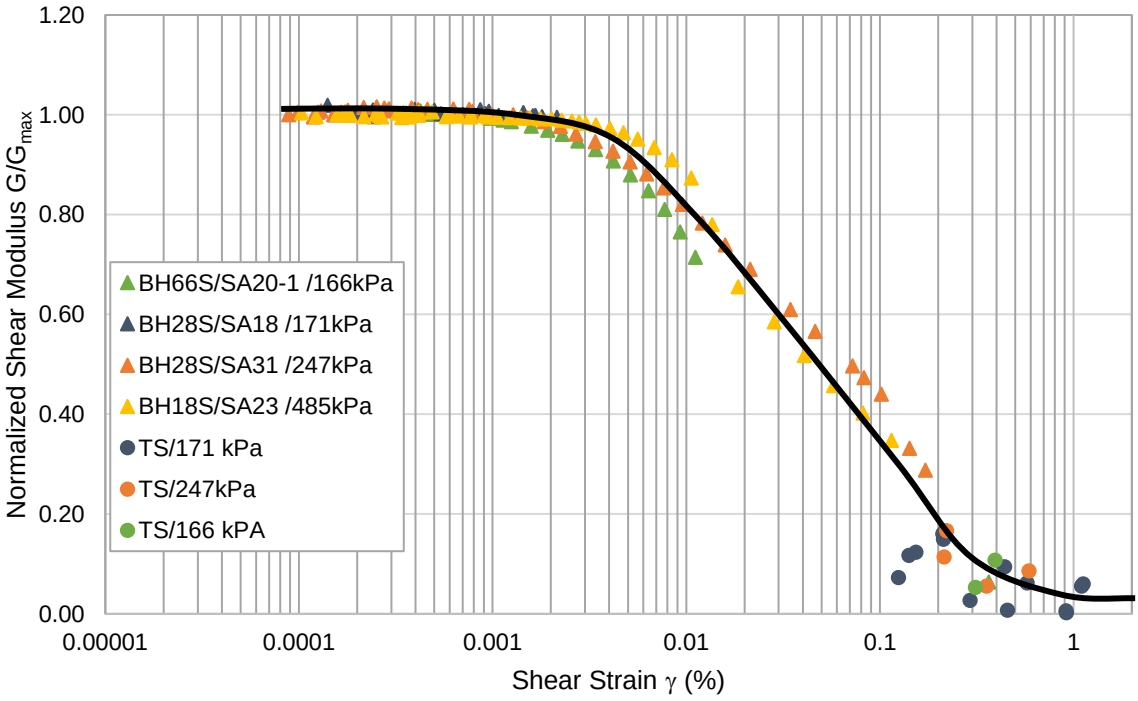


Figure No. M4.2

Damping Ratio of Soils by Resonant-Column Method and Torsional Shear

Project No.	21451329	**Sample ID**	See legend		
BH ID	See legend	**Depth Interval**		**Soil Unit**	4A

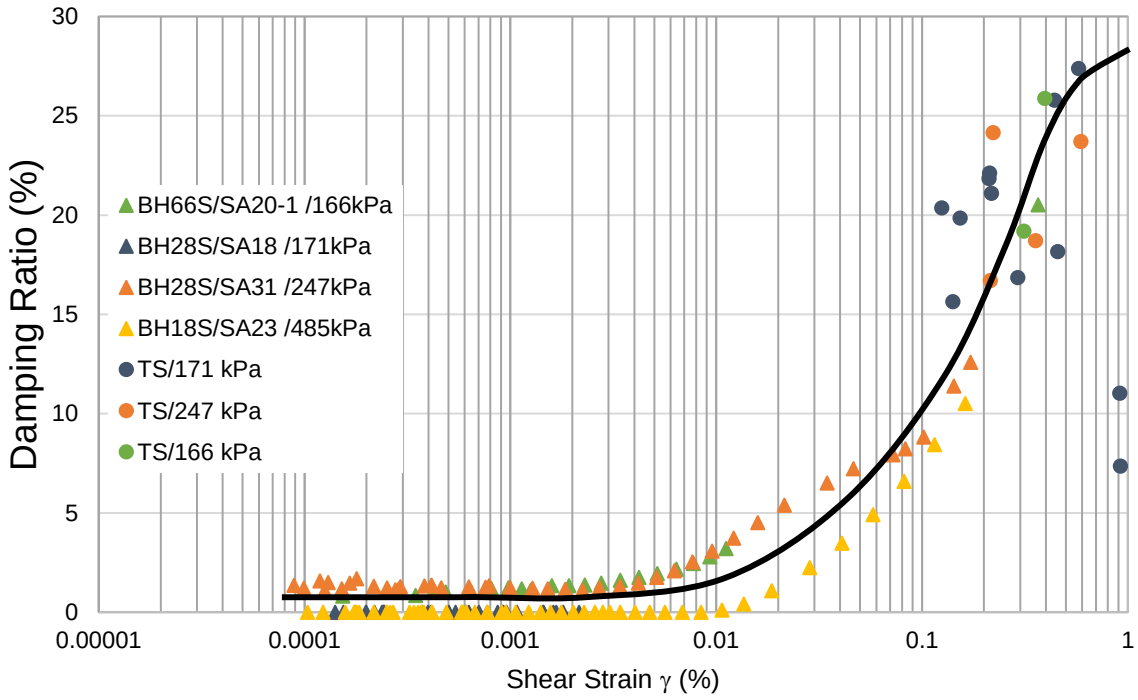


Figure No. M4.3

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	90670

Cycle 1

γ	τ
-0.3	**-34.5**
0	**0.0**
0.2	**25.5**

Shear Modulus G (kPa)	14172.2
tive Shear Modulus G_pos (kPa)	16531.4
tive Shear Modulus G_neg (kPa)	12820.4

Project No.	21451329
BH ID	BH18S
Soil Unit	3
Sample ID	SA21
Test ID	TS-22
Depth Interval	10.36m - 10.67m
G/Gmax	0.156

BH18S/ SA21/Cycle 1

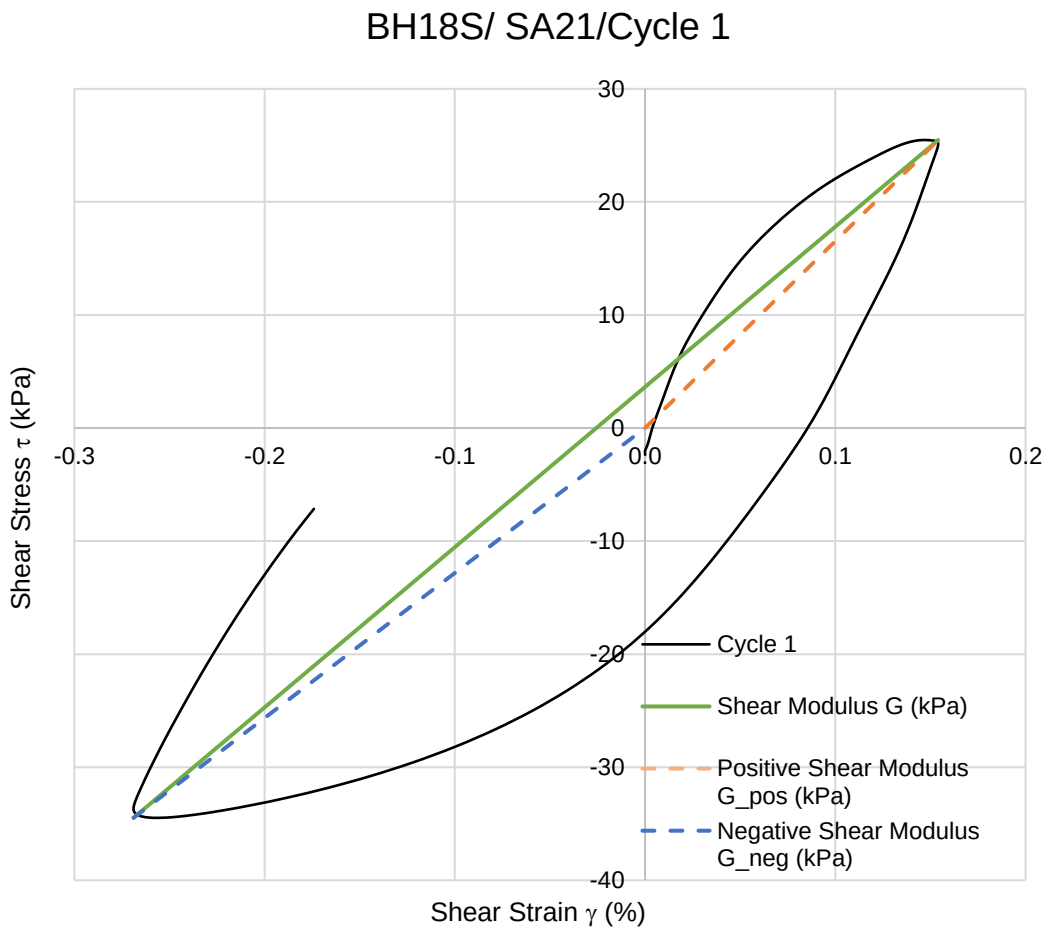


Figure No. M4.4

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	90670

Cycle 15

γ	τ
-0.1	**-18.8**
0.0	**0.0**
0.2	**14.8**

Shear Modulus G (kPa)	10954.5
tive Shear Modulus G_pos (kPa)	9085.5
tive Shear Modulus G_neg (kPa)	13062.8

Project No.	21451329
BH ID	BH18S
Soil Unit	3
Sample ID	SA21
Test ID	TS-22
Depth Interval	10.36m - 10.67m
G/Gmax	0.121

BH18S/ SA21/Cycle 15

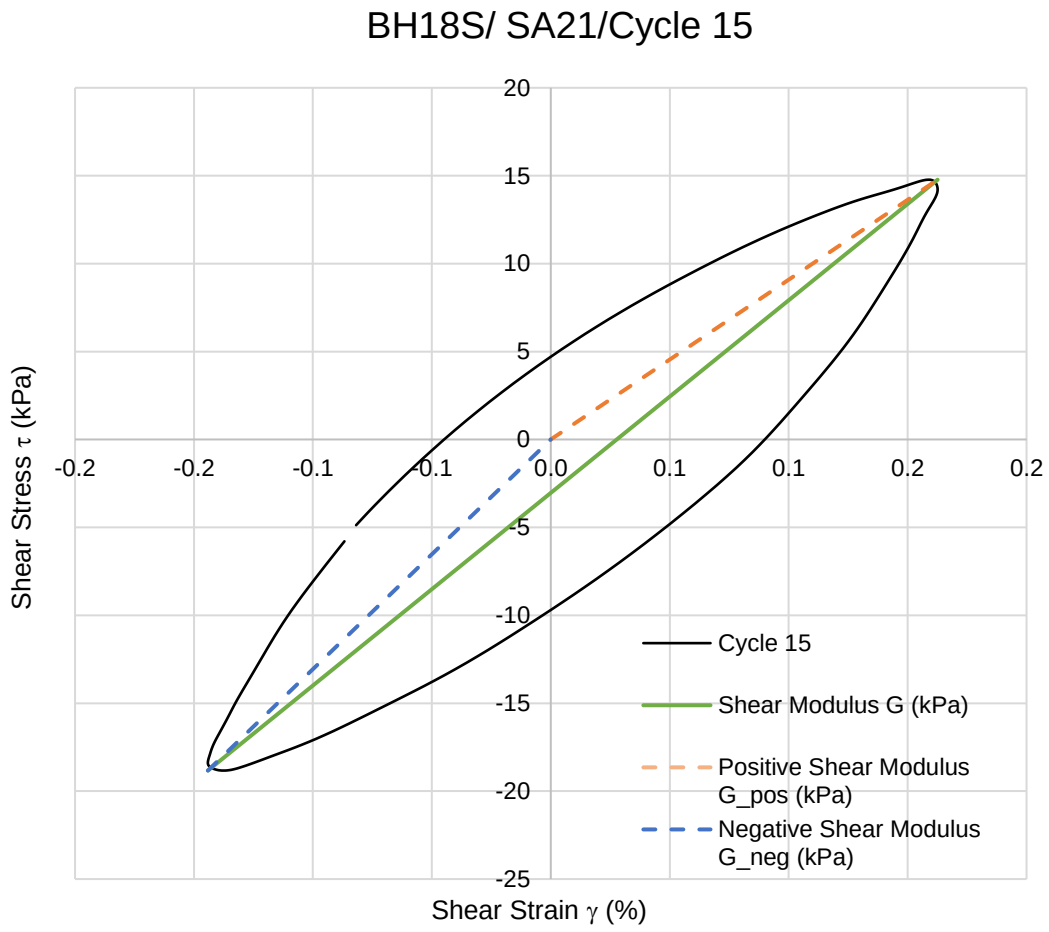


Figure No. M4.5

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	90670

Cycle 1

γ	τ
-1.0	**-51.5**
0	**0.0**
1.2	**70.4**

Shear Modulus G (kPa)	5419.3
tive Shear Modulus G_pos (kPa)	5835.6
tive Shear Modulus G_neg (kPa)	4937.8

Project No.	21451329
BH ID	BH18S
Soil Unit	3
Sample ID	SA28
Test ID	TS-23
Depth Interval	12.80m - 13.08m

G/Gmax 0.060

BH18S/ SA28/Cycle 1

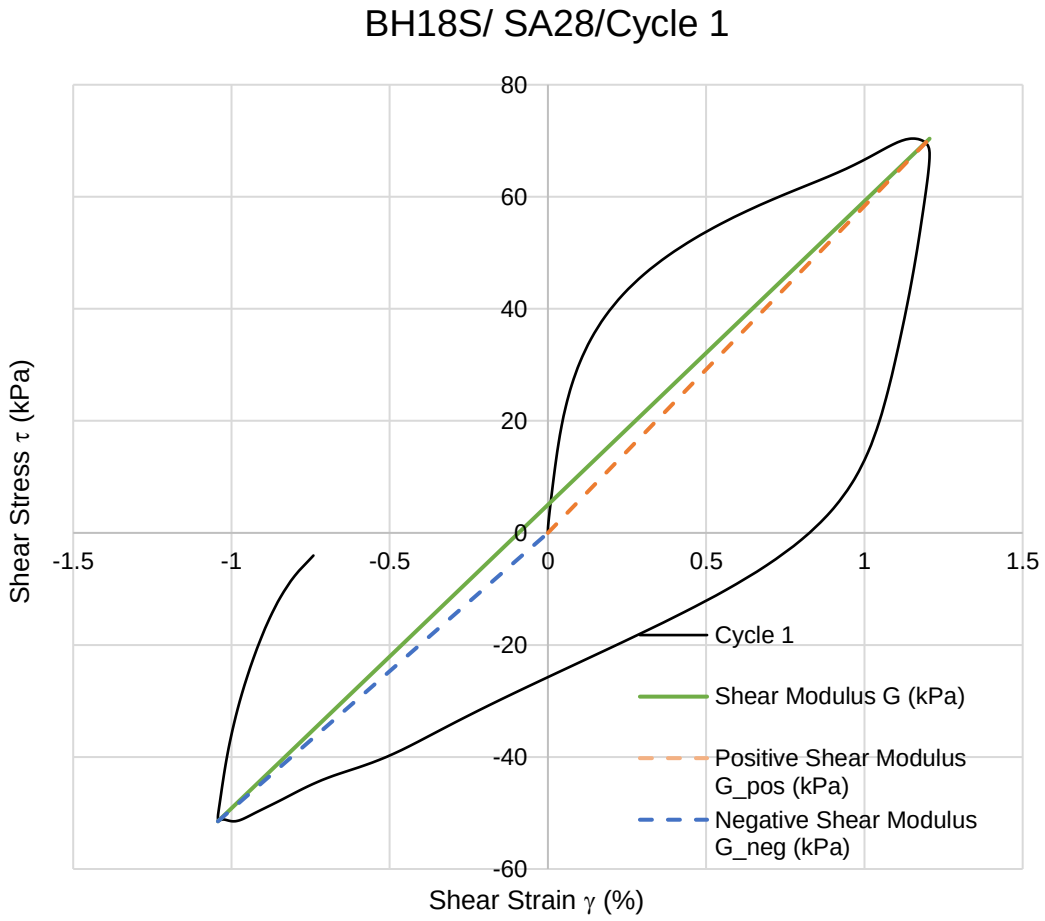


Figure No. M4.6

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	90670

Cycle 15

γ	τ
-0.9	**-1.1**
0	**0.0**
0.9271	**3.1**

Shear Modulus G (kPa)	230.2
tive Shear Modulus G_pos (kPa)	335.4
tive Shear Modulus G_neg (kPa)	123.6

Project No.	21451329
BH ID	BH18S
Soil Unit	3
Sample ID	SA28
Test ID	TS-23
Depth Interval	12.80m - 13.08m

G/Gmax 0.00254

BH18S/ SA28/Cycle 15

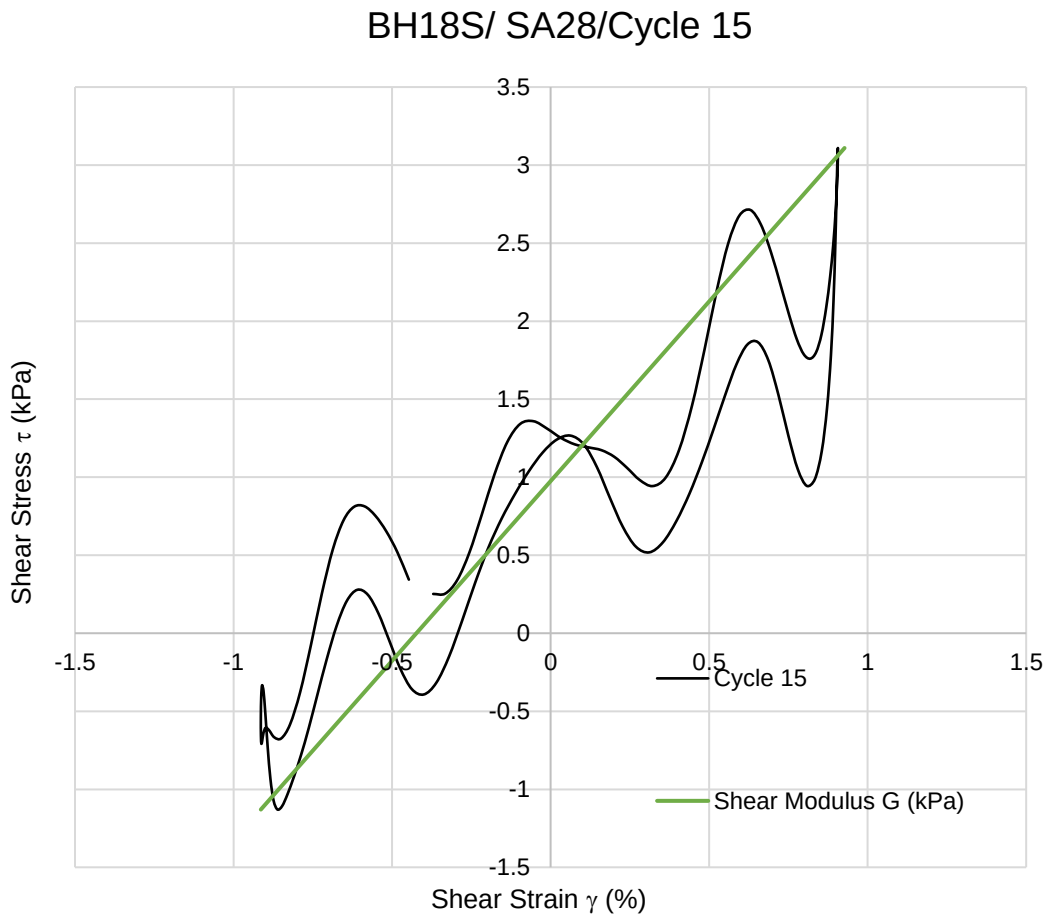


Figure No. M4.7

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	90670

Cycle 1

γ	τ
-0.5	**-31.2**
0	**0.0**
0.6	**33.4**

Shear Modulus G (kPa)	5600.3
tive Shear Modulus G_pos (kPa)	5141.8
tive Shear Modulus G_neg (kPa)	6191.5

Project No.	21451329
BH ID	BH18S
Soil Unit	3
Sample ID	SA30
Test ID	TS-24C
Depth Interval	14.48m - 14.94m
G/Gmax	0.0618

BH18S/ SA30/Cycle 1

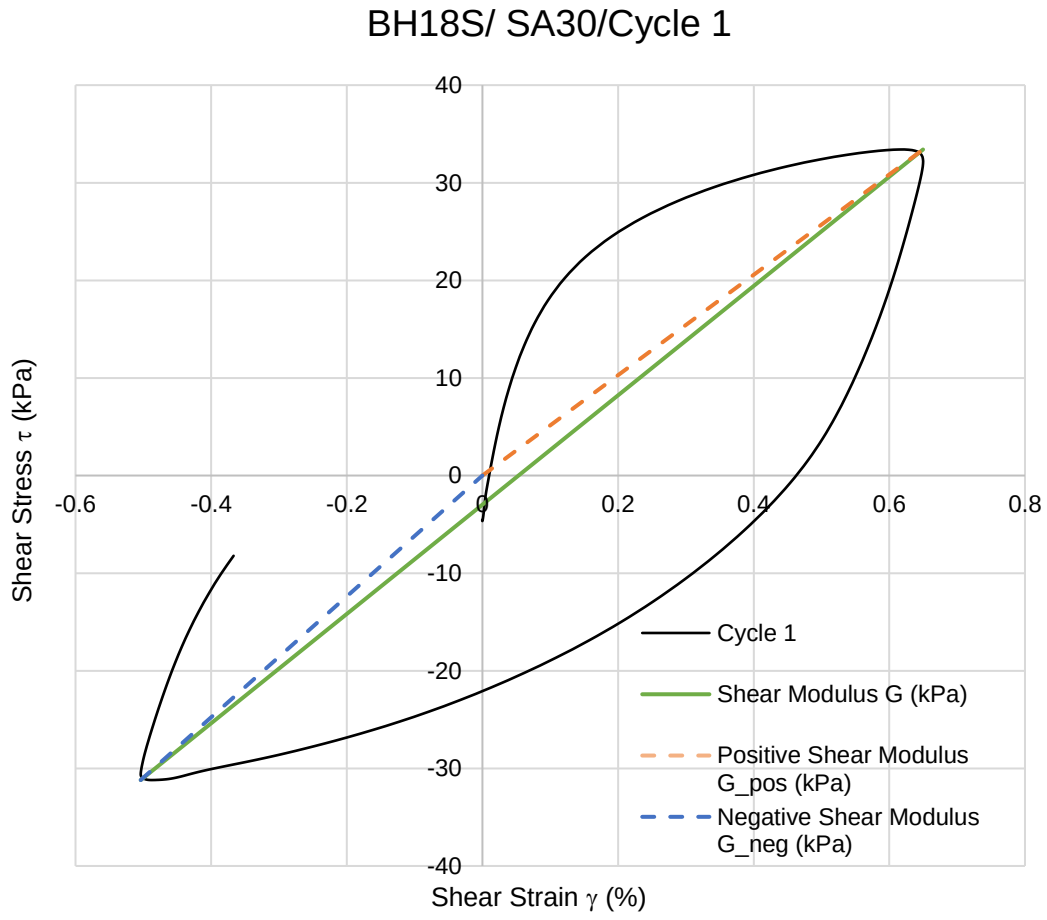


Figure No. M4.8

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	90670

Cycle 15

γ	τ
-0.5	**-4.7**
0	**0.0**
0.5	**1.5**

Shear Modulus G (kPa)	669.0
tive Shear Modulus G_pos (kPa)	322.9
tive Shear Modulus G_neg (kPa)	1010.8

Project No.	21451329
BH ID	BH18S
Soil Unit	3
Sample ID	SA30
Test ID	TS-24C
Depth Interval	14.48m - 14.94m
G/Gmax	0.00738

BH18S/ SA30/Cycle 15

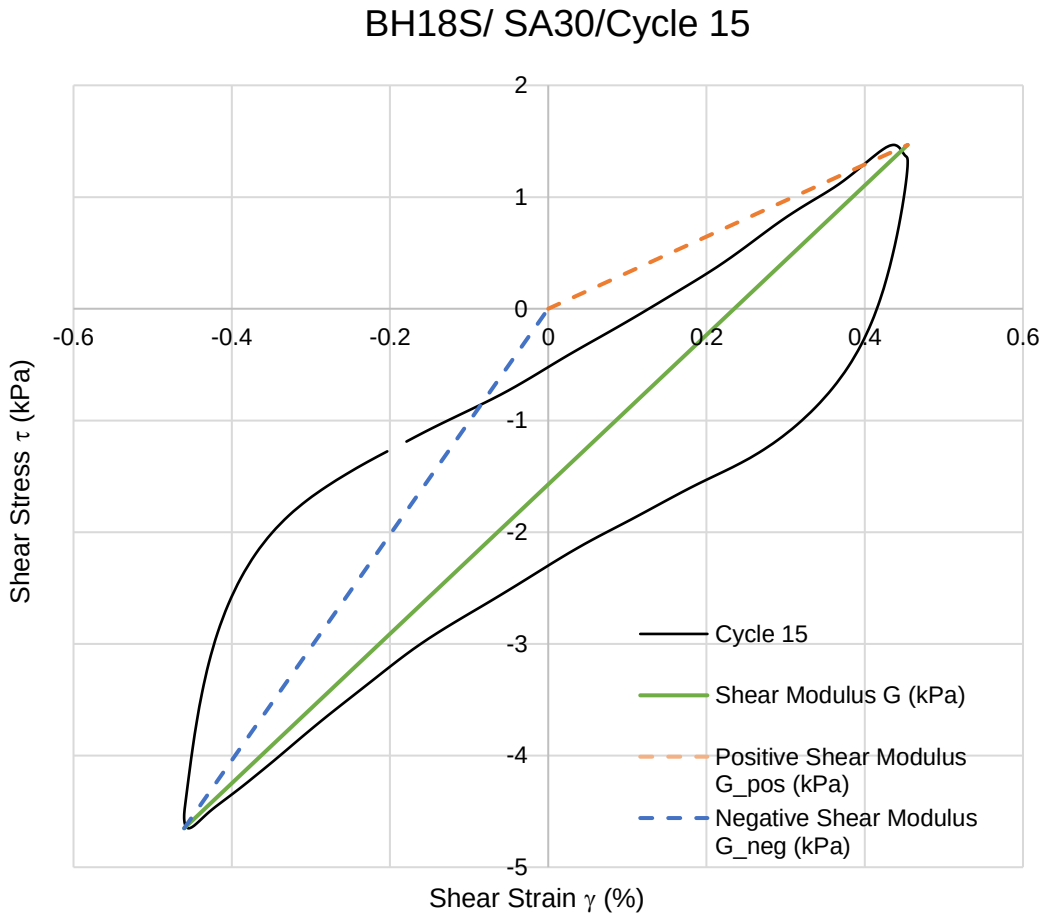


Figure No. M4.9

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	90670

Cycle 1

γ	τ
-0.3	**-32.0**
0	**0.0**
0.2	**25.8**

Shear Modulus G (kPa)	13527.9
tive Shear Modulus G_pos (kPa)	16475.8
tive Shear Modulus G_neg (kPa)	11821.6

Project No.	21451329
BH ID	BH28S
Soil Unit	3
Sample ID	SA17
Test ID	TS-14
Depth Interval	11.89m - 12.19m

G/Gmax 0.149

BH28S/ SA17/Cycle 1

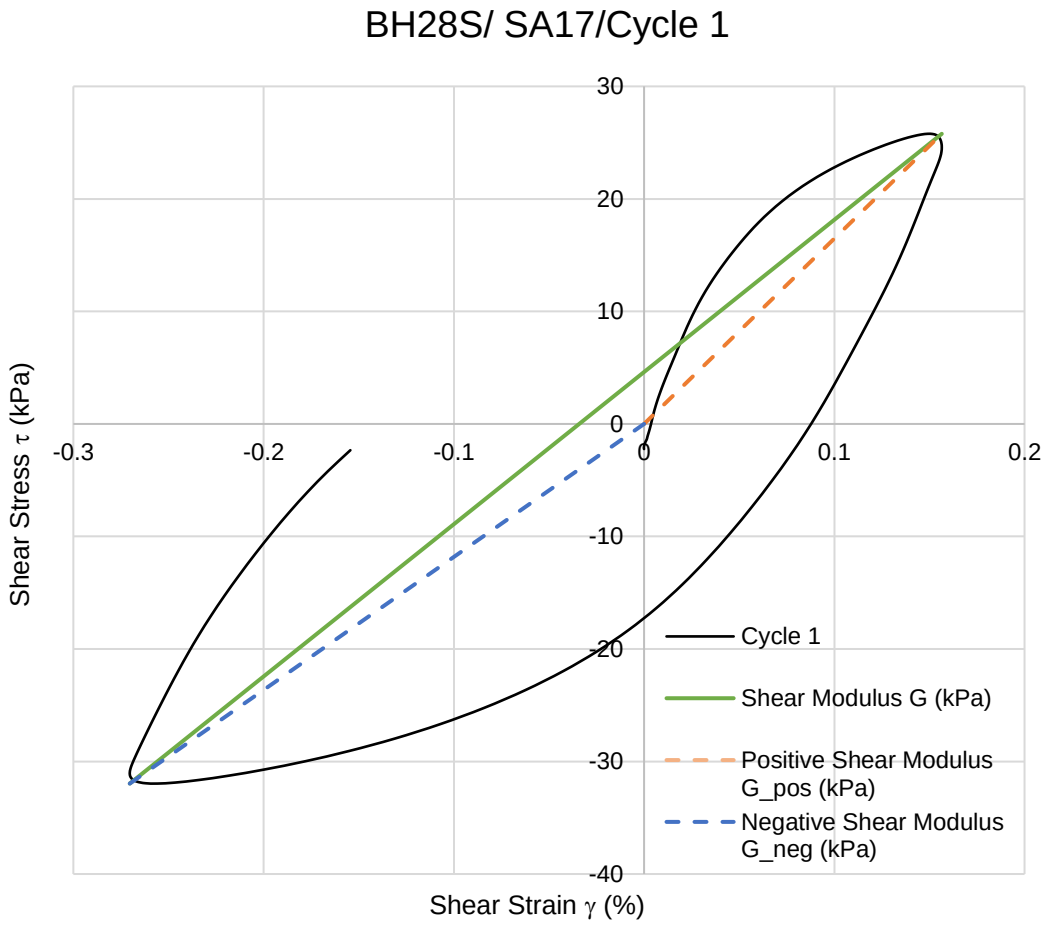


Figure No. M4.10

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 90670

Cycle 15

γ	τ
-0.1	-9.8
0	0.0
0.1	6.7

Shear Modulus G (kPa)	6606.3
tive Shear Modulus G_pos (kPa)	5146.9
tive Shear Modulus G_neg (kPa)	8175.0

Project No.	21451329
BH ID	BH28S
Soil Unit	3
Sample ID	SA17
Test ID	TS-14
Depth Interval	11.89m - 12.19m

G/Gmax 0.0728611

BH28S/ SA17/Cycle 15

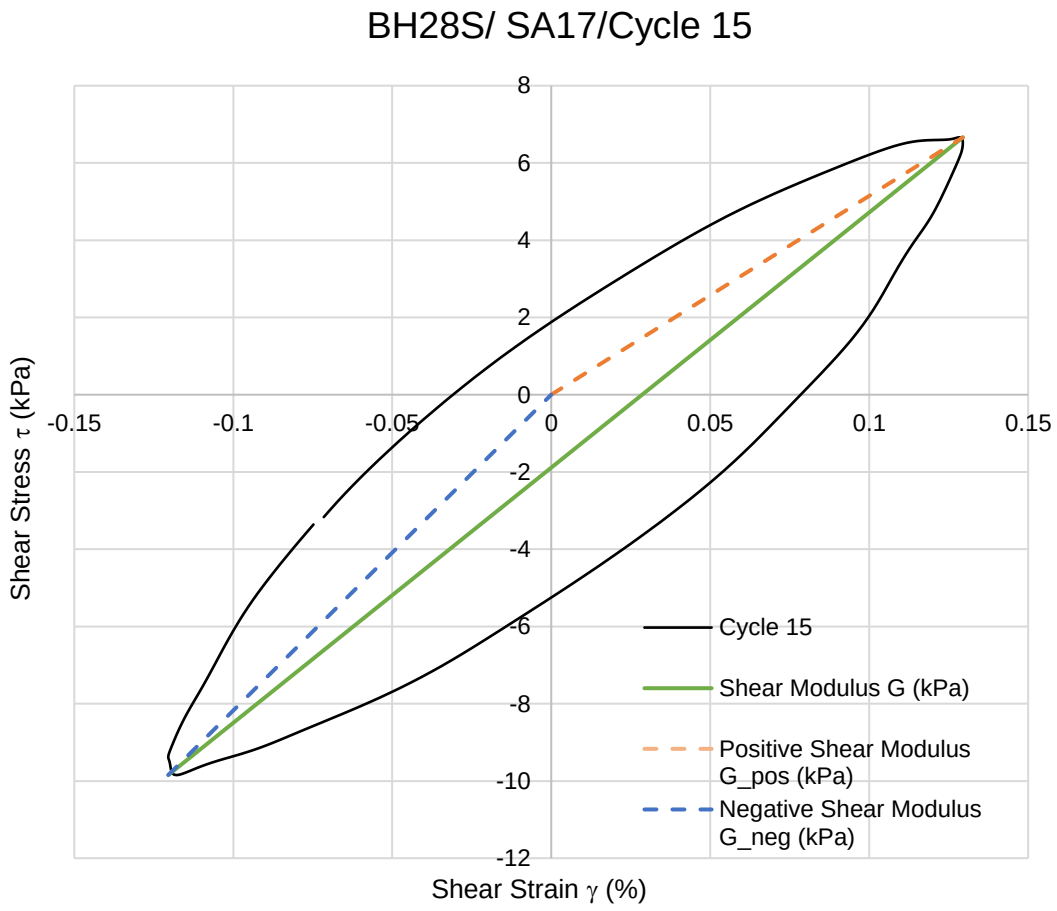


Figure No. M4.11

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	145995

Cycle 1

γ	τ
-0.3	**-60.1**
0	**0.0**
0.1	**47.7**

Shear Modulus G (kPa)	24370.6
tive Shear Modulus G_pos (kPa)	32618.5
tive Shear Modulus G_neg (kPa)	20295.0

Project No.	21451329
BH ID	BH28S
Soil Unit	3
Sample ID	SA32
Test ID	TS-15
Depth Interval	19.51m - 19.81m

G/Gmax 0.2687834

BH28S/ SA32/Cycle 1

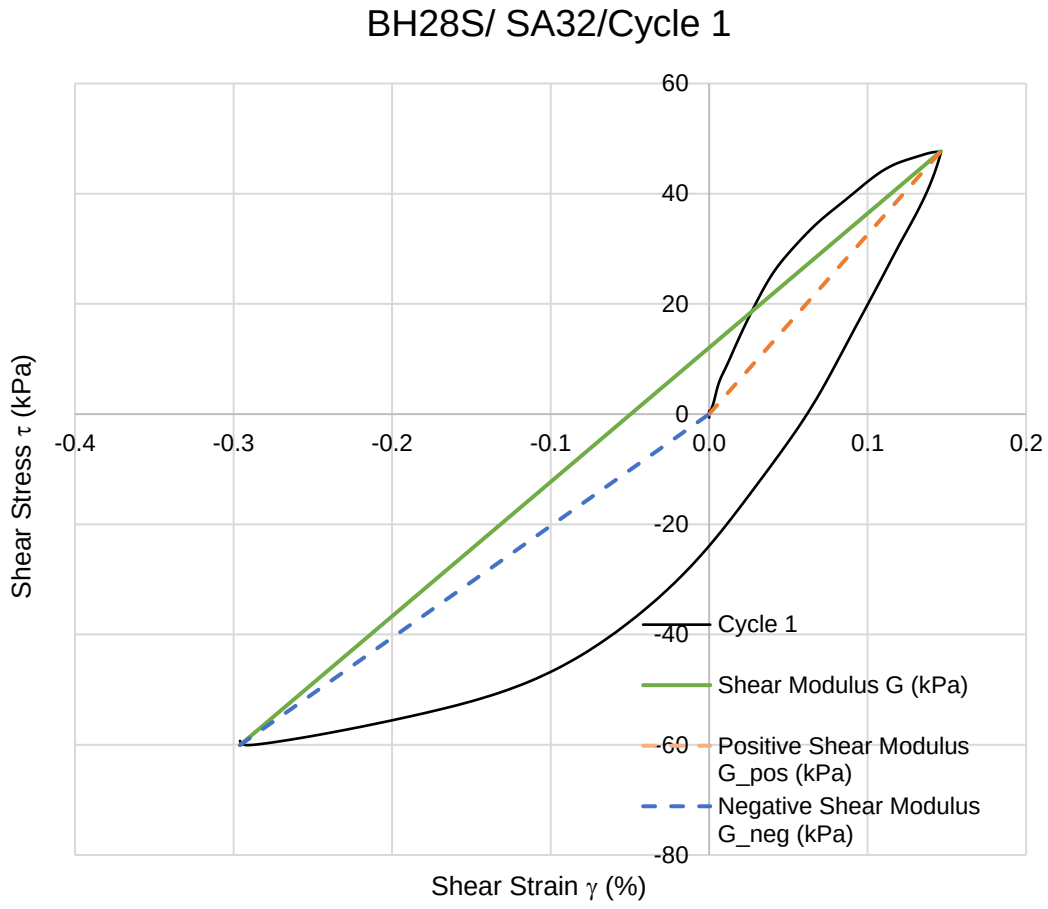


Figure No. M4.12

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	145995

Cycle 15

γ	τ
-0.2	**-37.0**
0	**0.0**
0.2	**34.4**

Shear Modulus G (kPa)	16638.7
tive Shear Modulus G_pos (kPa)	15564.1
tive Shear Modulus G_neg (kPa)	17780.9

Project No.	21451329
BH ID	BH28S
Soil Unit	3
Sample ID	SA32
Test ID	TS-15
Depth Interval	19.51m - 19.81m
G/Gmax	0.184

BH28S/ SA32/Cycle 15

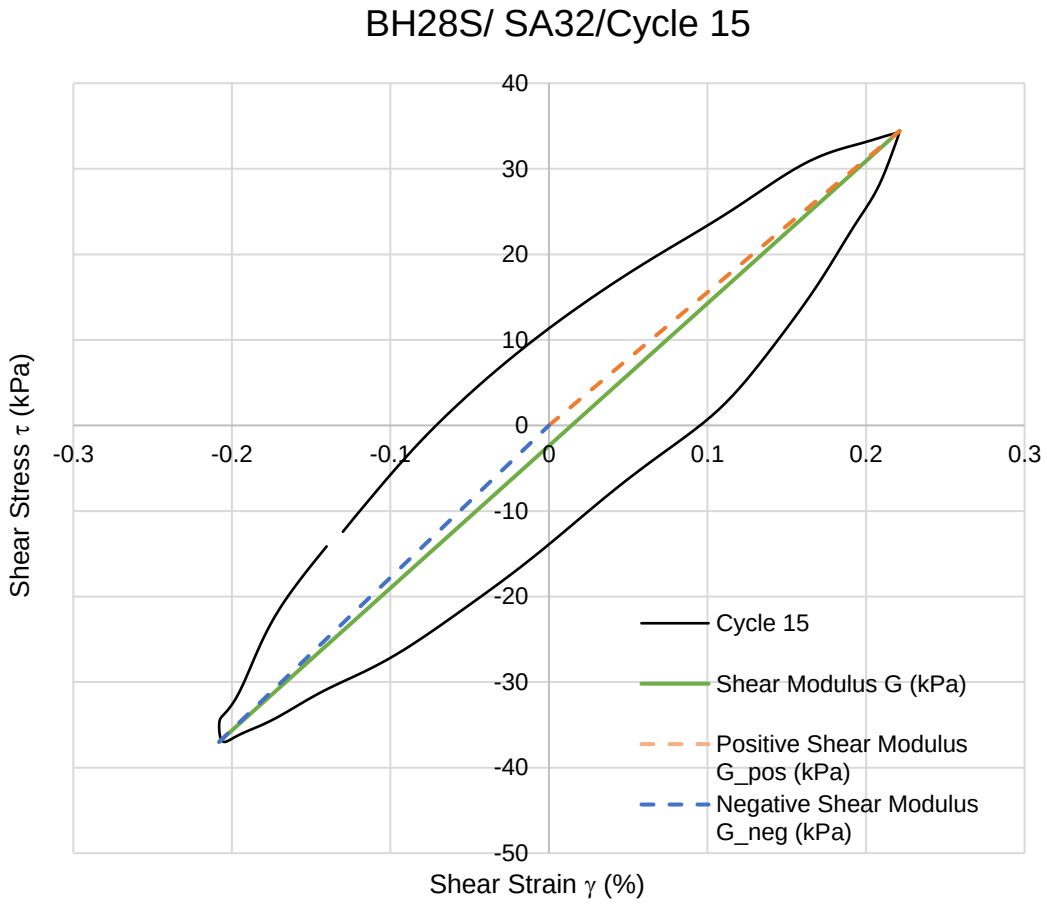


Figure No. M4.13

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	145995

Cycle 1

γ	τ
-0.7	**-72.9**
0	**0.0**
0.5	**74.9**

Shear Modulus G (kPa)	12528.1
tive Shear Modulus G_pos (kPa)	15823.5
tive Shear Modulus G_neg (kPa)	10320.5

Project No.	21451329
BH ID	BH28S
Soil Unit	3
Sample ID	SA33
Test ID	TS-16
Depth Interval	19.81m - 20.12m
G/Gmax	0.138

BH28S/ SA33/Cycle 1

BH28S/ SA17/Cycle 1

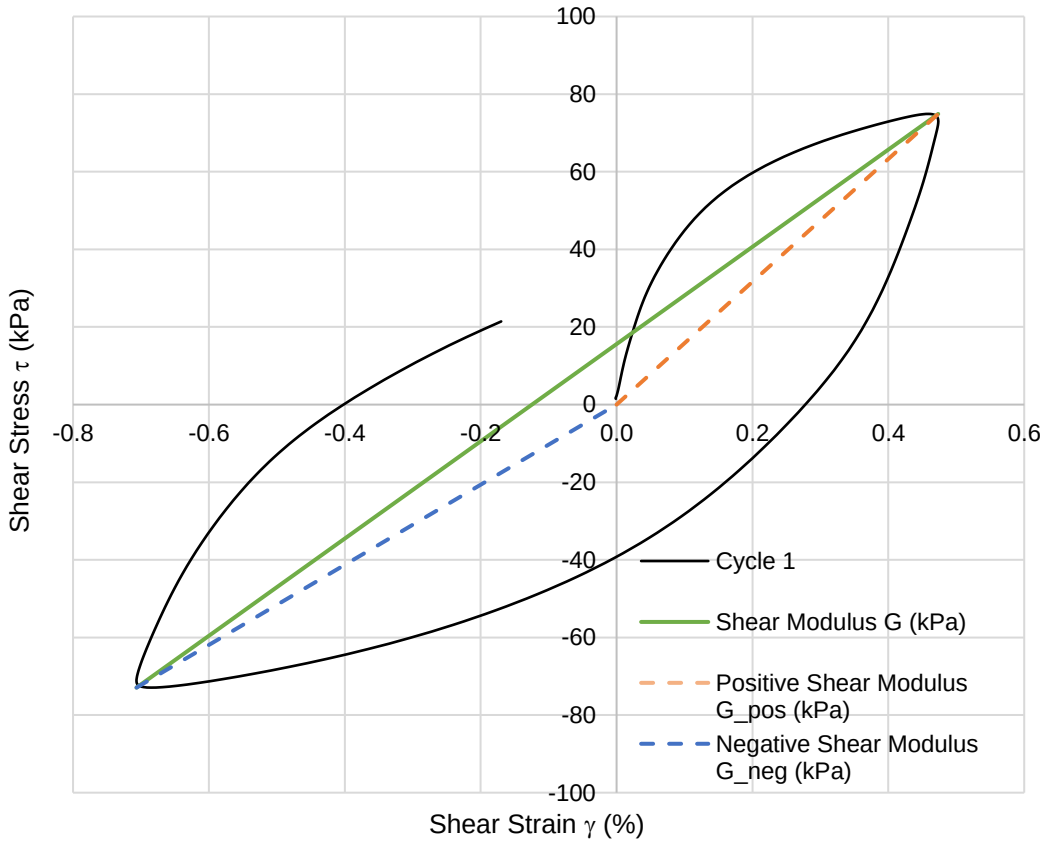


Figure No. M4.14

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (MPa)	145995

Cycle 15

γ	τ
-0.4	**-28.8**
0	**0.0**
0.4	**28.7**

Shear Modulus G (kPa)	8080.9
tive Shear Modulus G_pos (kPa)	8016.9
tive Shear Modulus G_neg (kPa)	8145.8

Project No.	21451329
BH ID	BH28S
Soil Unit	3
Sample ID	SA33
Test ID	TS-16
Depth Interval	19.81m - 20.12m
G/Gmax	0.0891

BH28S/ SA33/Cycle 15

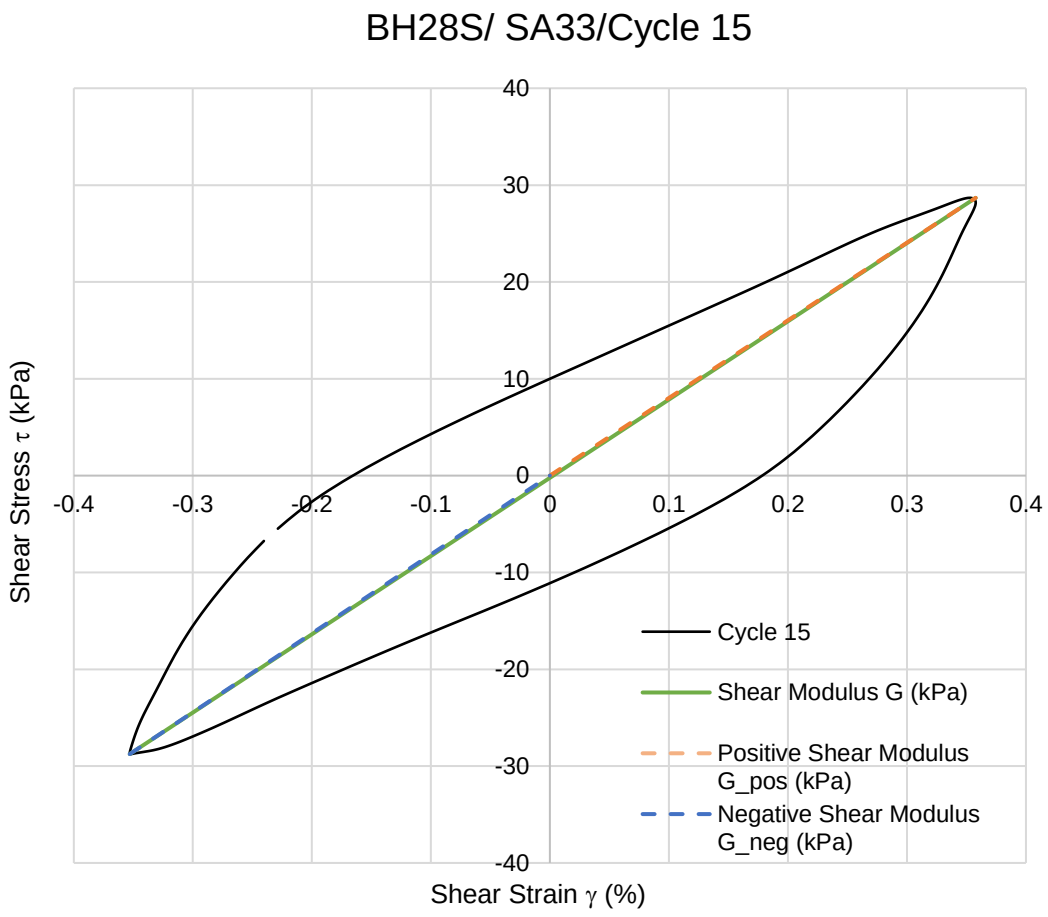


Figure No. M4.15

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	90670

Cycle 1

γ	τ
-0.3	**35.6**
0	**0.0**
0.2	**-29.8**

Shear Modulus G (kPa)	15024.0
tive Shear Modulus G_pos (kPa)	21395.5
tive Shear Modulus G_neg (kPa)	11089.5

Project No.	21451329
BH ID	BH66S
Soil Unit	3
Sample ID	SA20-2
Test ID	TS-8
Depth Interval	10.36m - 10.67m
G/Gmax	0.166

BH66S/ SA20-2/Cycle 1

BH28S/ SA17/Cycle 1

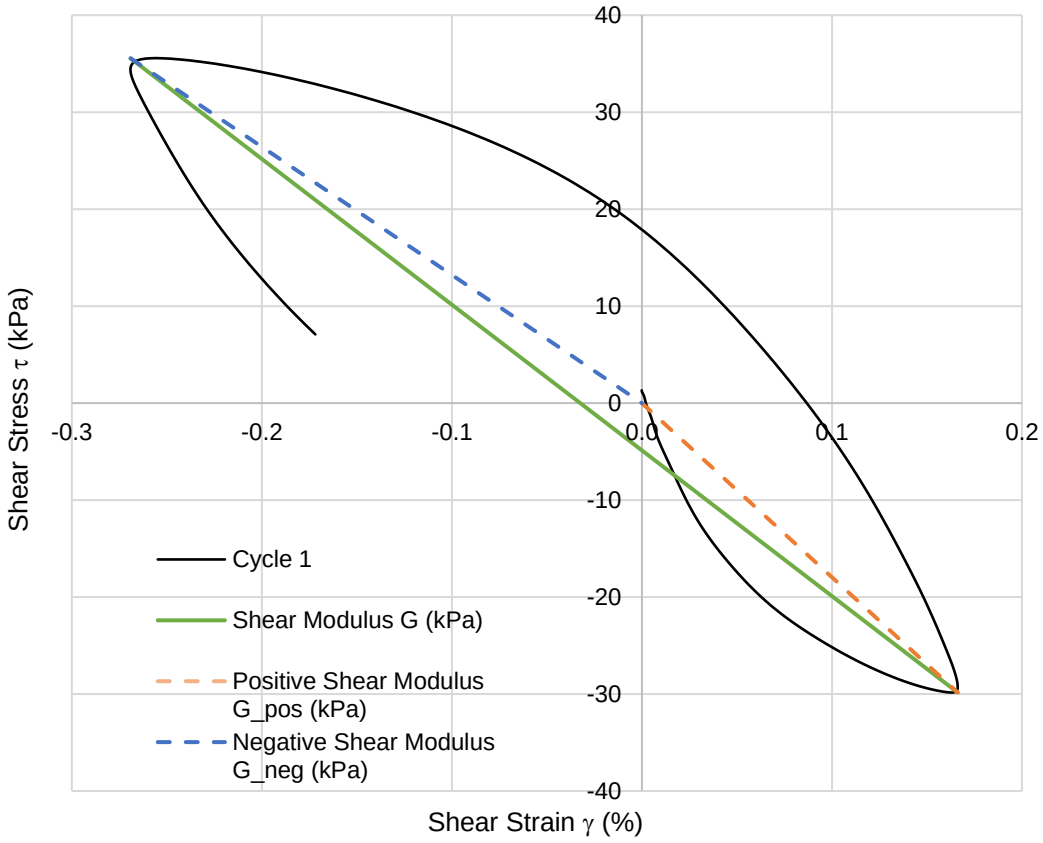


Figure No. M4.16

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	90670

Cycle 15

γ	τ
-0.1	**16.5**
0	**0.0**
0.2	**-13.5**

Shear Modulus G (kPa)	10619.4
tive Shear Modulus G_pos (kPa)	10922.2
tive Shear Modulus G_neg (kPa)	10271.1

Project No.	21451329
BH ID	BH66S
Soil Unit	3
Sample ID	SA20-2
Test ID	TS-8
Depth Interval	10.36m - 10.67m
G/Gmax	0.117

BH66S/ SA20-2/Cycle 15

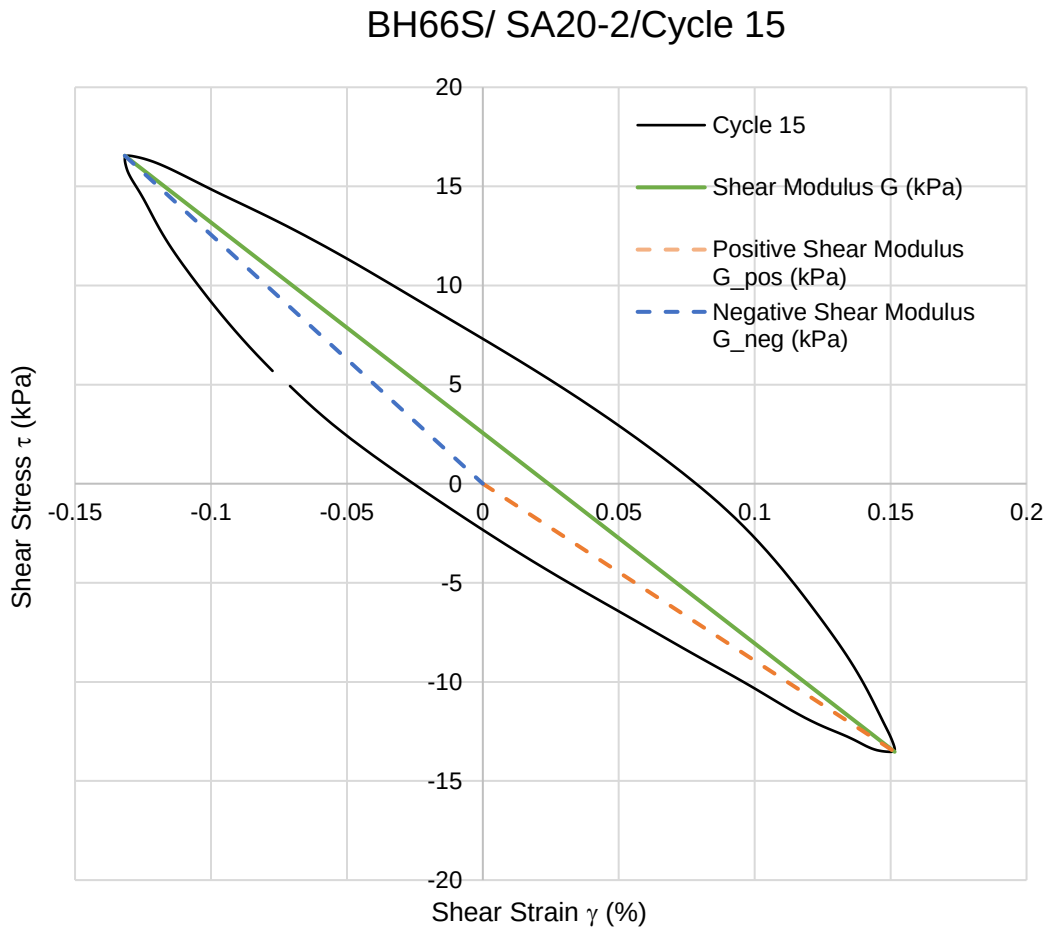


Figure No. M4.17

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	90670

Cycle 1

γ	τ
-0.4	**-35.8**
0	**0.0**
0.5	**39.9**

Shear Modulus G (kPa)	8571.8
tive Shear Modulus G_pos (kPa)	8364.6
tive Shear Modulus G_neg (kPa)	8815.3

Project No.	21451329
BH ID	BH66S
Soil Unit	3
Sample ID	SA23
Test ID	TS-9A
Depth Interval	11.89m - 12.17m

G/Gmax 0.0945

BH66S/ SA23/Cycle 1

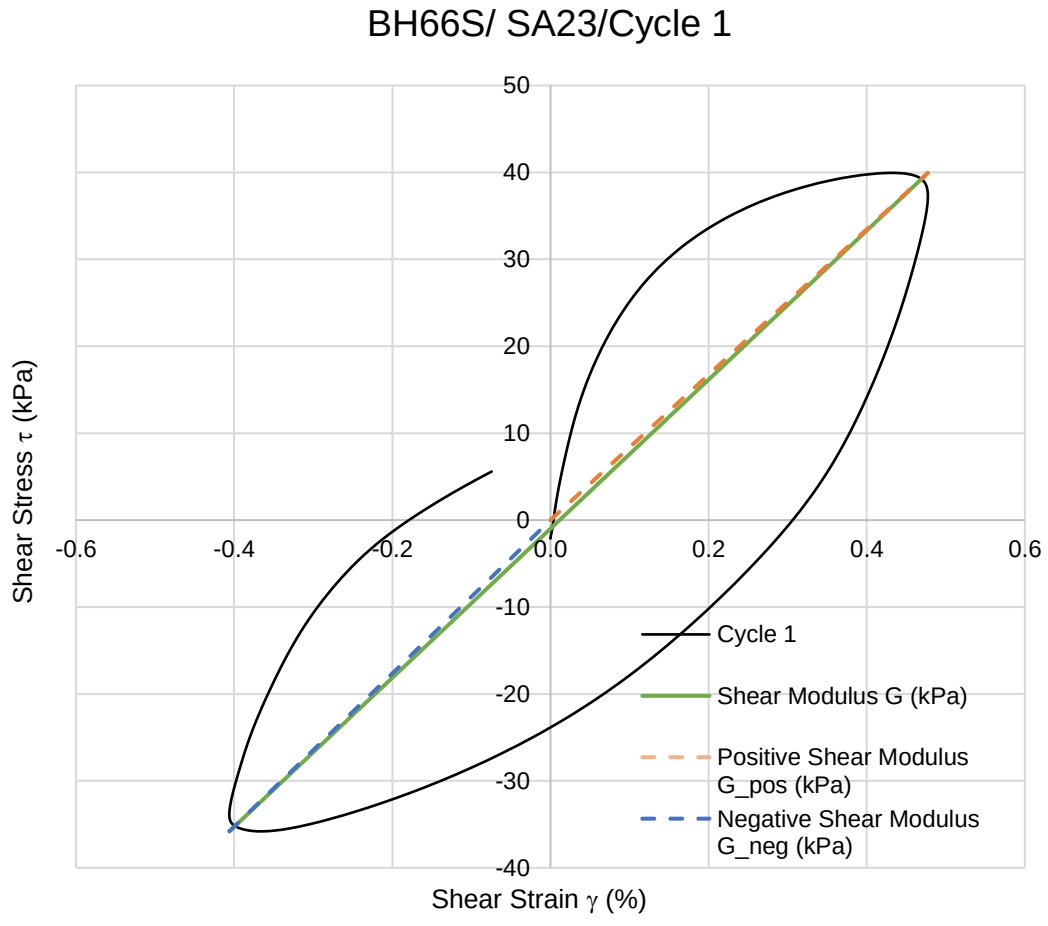


Figure No. M4.18

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	90670

Cycle 15

γ	τ
-0.3	**-9.0**
0	**0.0**
0.3	**5.5**

Shear Modulus G (kPa)	2473.0
tive Shear Modulus G_pos (kPa)	1833.6
tive Shear Modulus G_neg (kPa)	3135.7

Project No.	21451329
BH ID	BH66S
Soil Unit	3
Sample ID	SA23
Test ID	TS-9A
Depth Interval	11.89m - 12.17m

G/Gmax 0.0273

BH66S/ SA23/Cycle 15

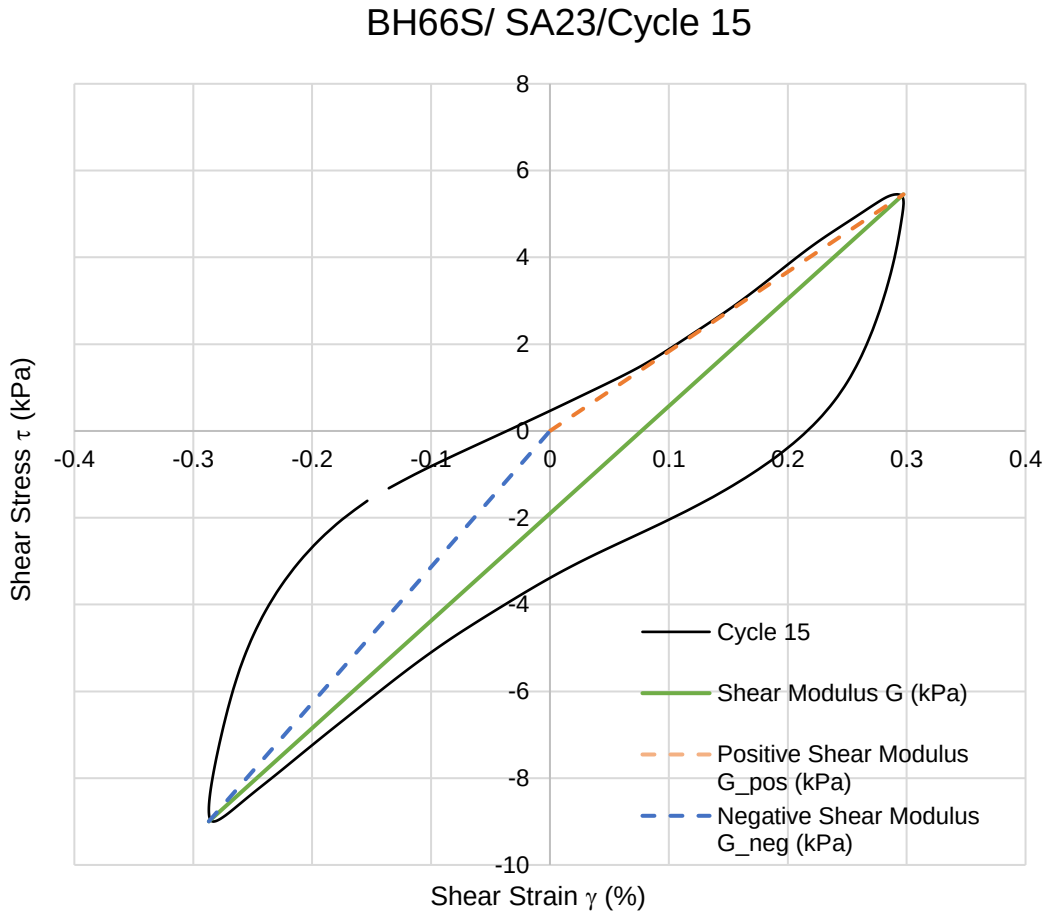


Figure No. M4.19

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	90670

Cycle 1

γ	τ
-1.0	**-44.2**
0	**0.0**
1.2	**67.1**

Shear Modulus G (kPa)	5048.4
tive Shear Modulus G_pos (kPa)	5599.8
tive Shear Modulus G_neg (kPa)	4391.9

Project No.	21451329
BH ID	BH66S
Soil Unit	3
Sample ID	SA29
Test ID	TS-10
Depth Interval	14.94m - 15.24m

G/Gmax 0.0557

BH66S/ SA29/Cycle 1

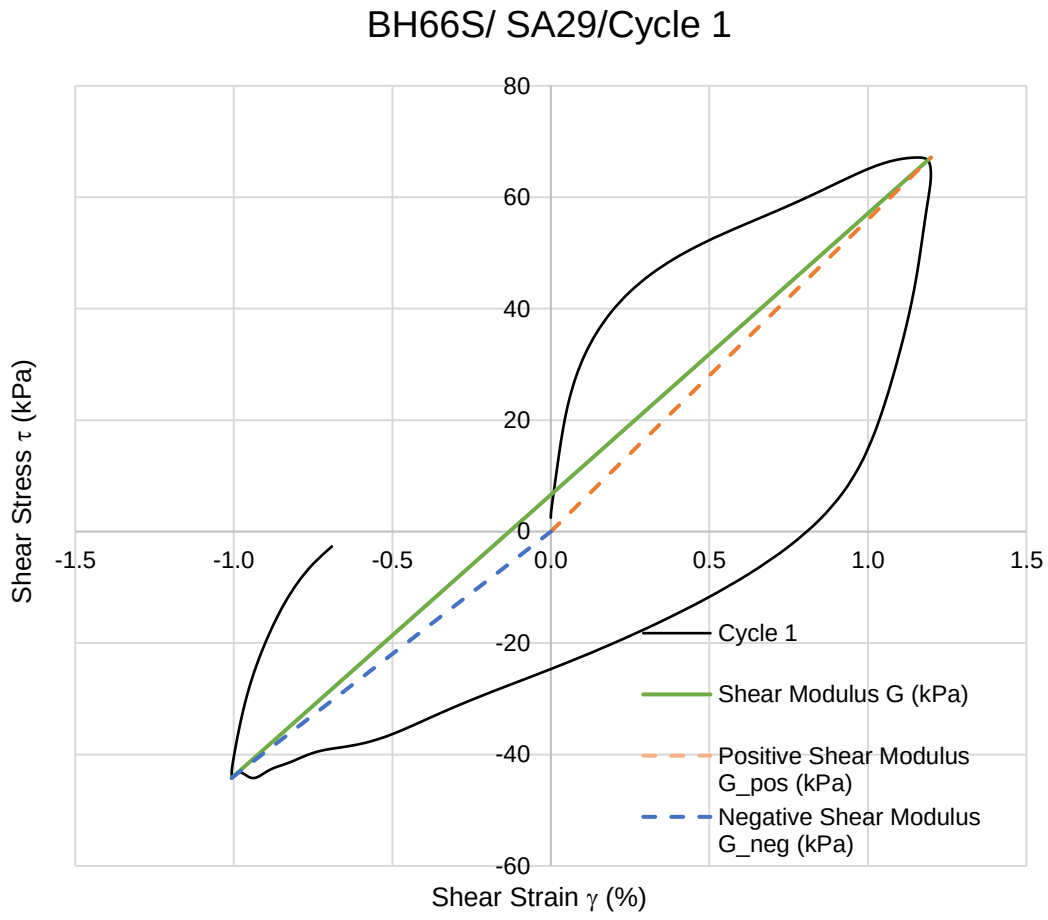


Figure No. M4.20

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	90670

Cycle 15

γ	τ
-0.9	**-4.7**
0.0	**0.0**
0.9	**4.9**

Shear Modulus G (kPa)	525.1
tive Shear Modulus G_pos (kPa)	533.5
tive Shear Modulus G_neg (kPa)	516.8

Project No.	21451329
BH ID	BH66S
Soil Unit	3
Sample ID	SA29
Test ID	TS-10
Depth Interval	14.94m - 15.24m
G/Gmax	0.00579

BH66S/ SA29/Cycle 15

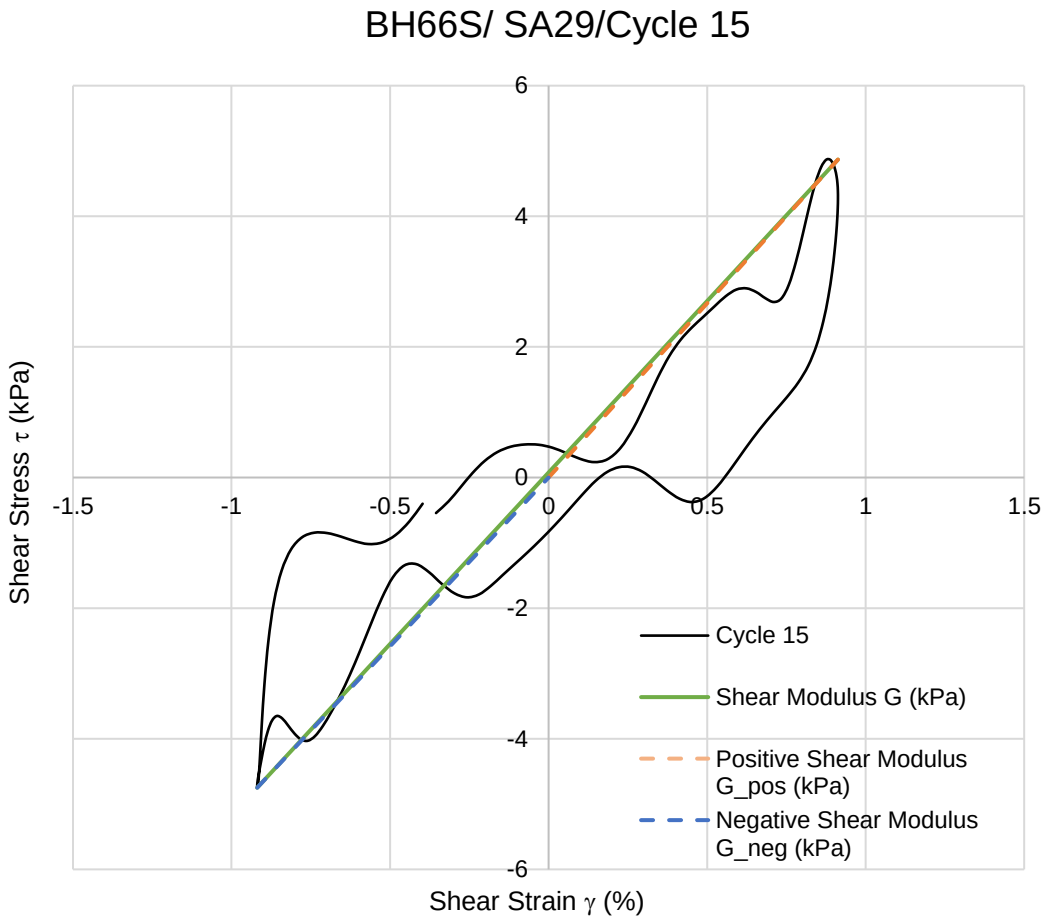


Figure No. M4.21

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	88489

Cycle 1

γ	τ
-0.4	**-35.5**
0.0	**0.0**
0.4	**39.9**

Shear Modulus G (kPa)	9539.2
tive Shear Modulus G_pos (kPa)	9208.8
tive Shear Modulus G_neg (kPa)	9940.3

Project No.	21451329
BH ID	BH66S
Soil Unit	4a
Sample ID	SA20-1
Test ID	RC-TS-6
Depth Interval	10.36m - 10.67m

G/Gmax 0.108

BH66S/ SA20-1/Cycle 1

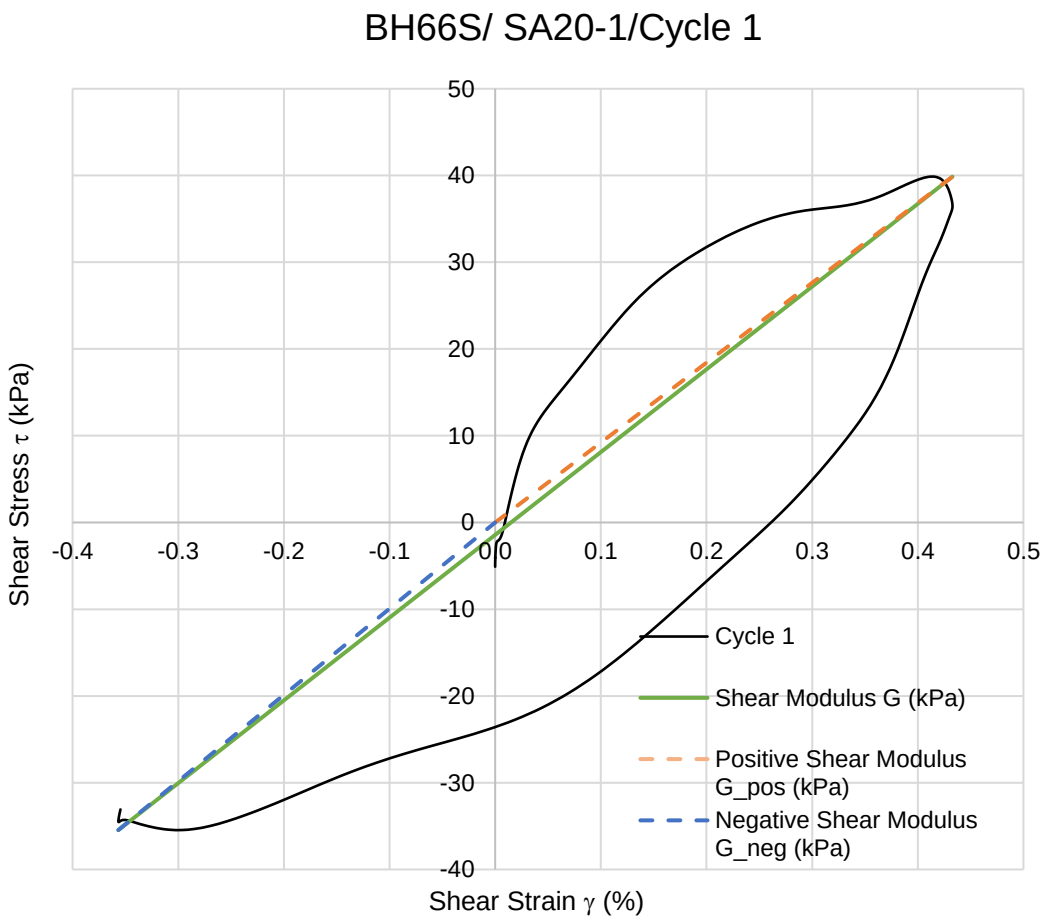


Figure No. M4.22

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa)	88489

Cycle 15

γ	τ
-0.3	**-15.5**
0.0	**0.0**
0.4	**13.9**

Shear Modulus G (kPa)	4705.3
tive Shear Modulus G_pos (kPa)	3969.2
tive Shear Modulus G_neg (kPa)	5649.0

Project No.	21451329
BH ID	BH66S
Soil Unit	4a
Sample ID	SA20-1
Test ID	RC-TS-6
Depth Interval	10.36m - 10.67m
G/Gmax	0.0532

BH66S/ SA20-1/Cycle 15

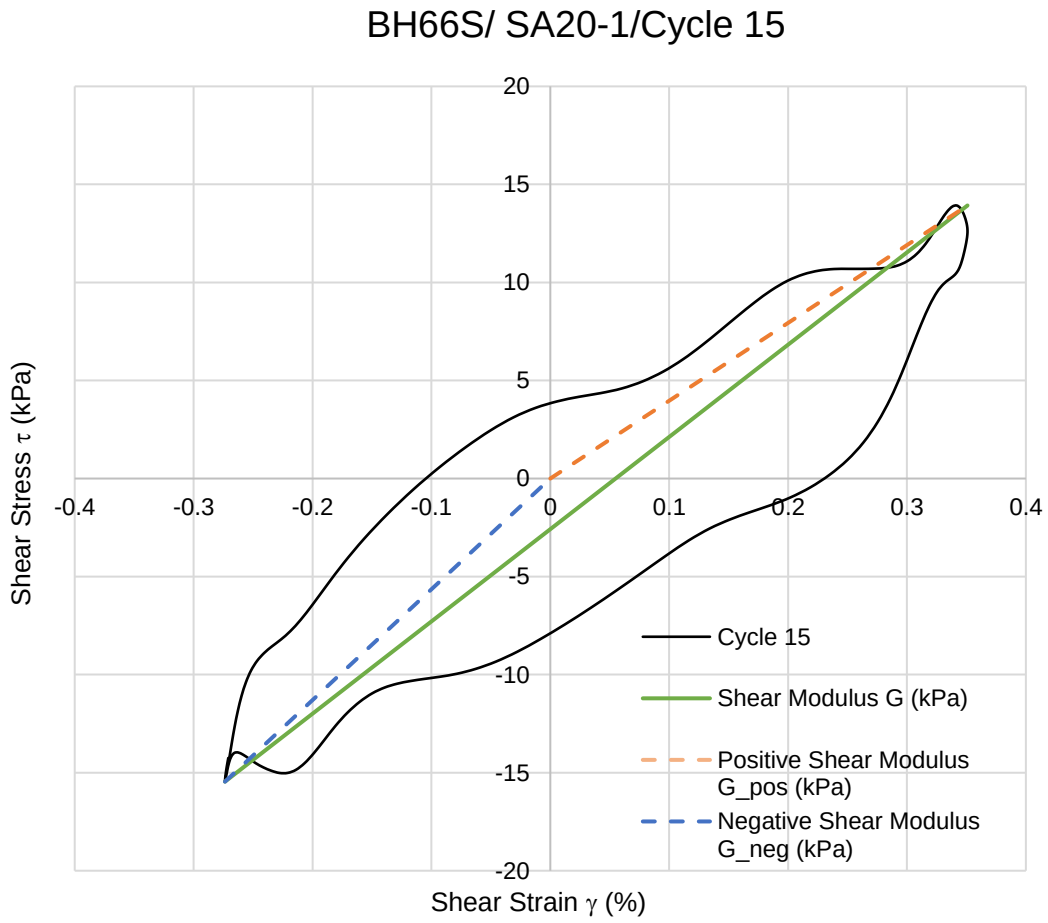


Figure No. M5.1

Modulus of Soils by Resonant-Column Method and Torsional Shear

Project No. 21451329 **Sample ID** See legend

BH ID See legend **Depth Interval** **Soil Unit** 4B

Confining Pressure (kPa)	217	247	277
Average Max Shear Modulus G_{max} (kPa)	171919	89905	60451

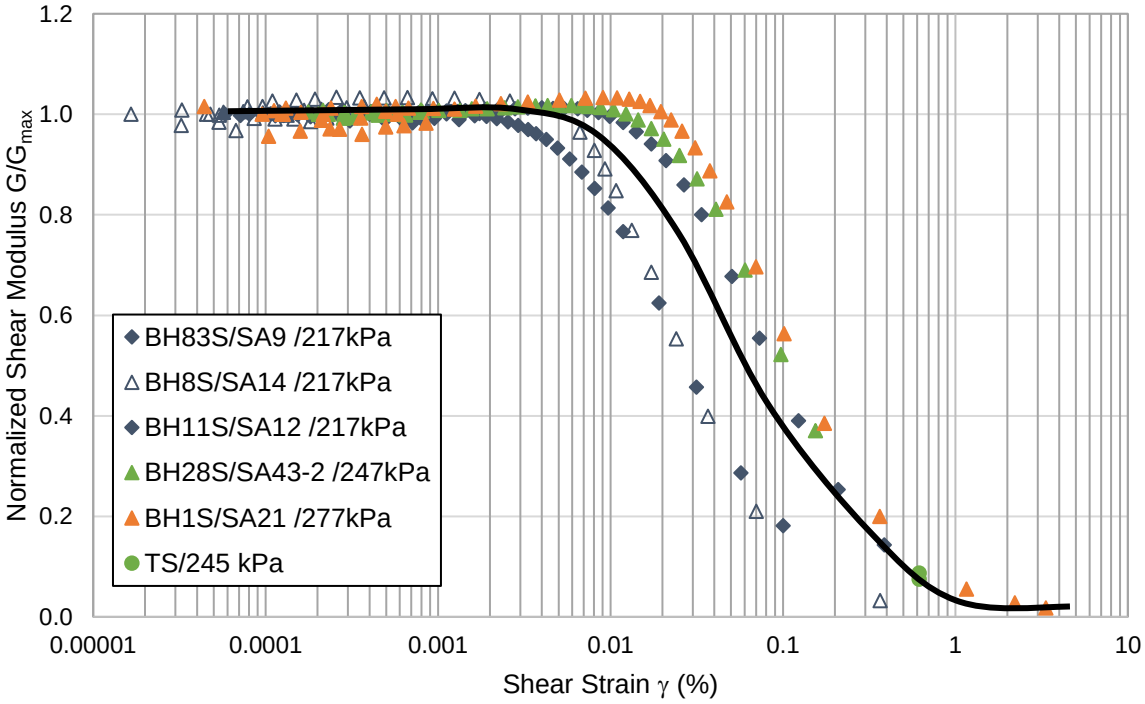


Figure No. M5.2

Damping Ratio of Soils by Resonant-Column Method and Torsional Shear

Project No.	21451329	**Sample ID**	See legend		
BH ID	See legend	**Depth Interval**		**Soil Unit**	4B

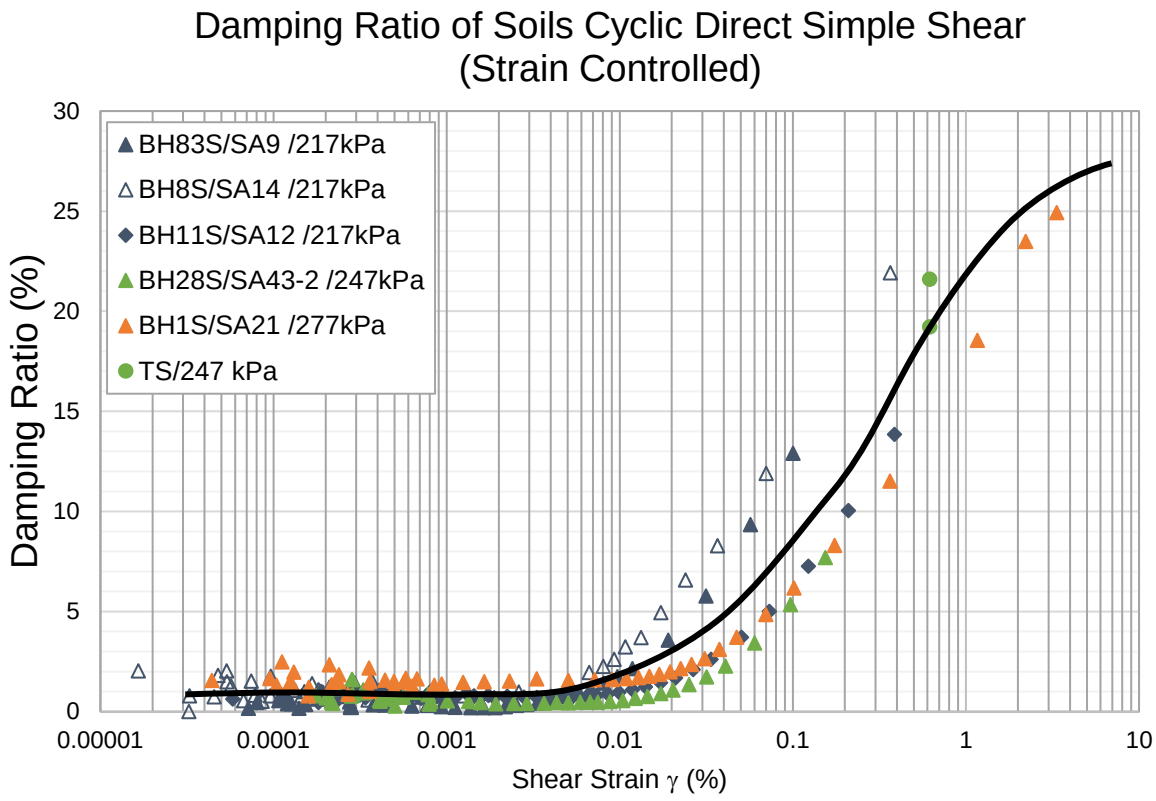


Figure No. M5.3

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 89905

Project No.	21451329
Soil Unit	BH28S
BH ID	4B
Sample ID	SA45
Test ID	TS-18
Depth Interval	24.88m - 25.11m

Cycle 1

Shear Strain γ (%)	Shear Stress τ (kPa)
-0.6	-42.4
0.0	0.0
0.6	54.1

Shear Modulus G (kPa)	7835.8
itive Shear Modulus G_pos (kPa)	8369.3
ative Shear Modulus G_neg (kPa)	7245.5

G/Gmax 0.087

BH28S/SA45/Cycle 1

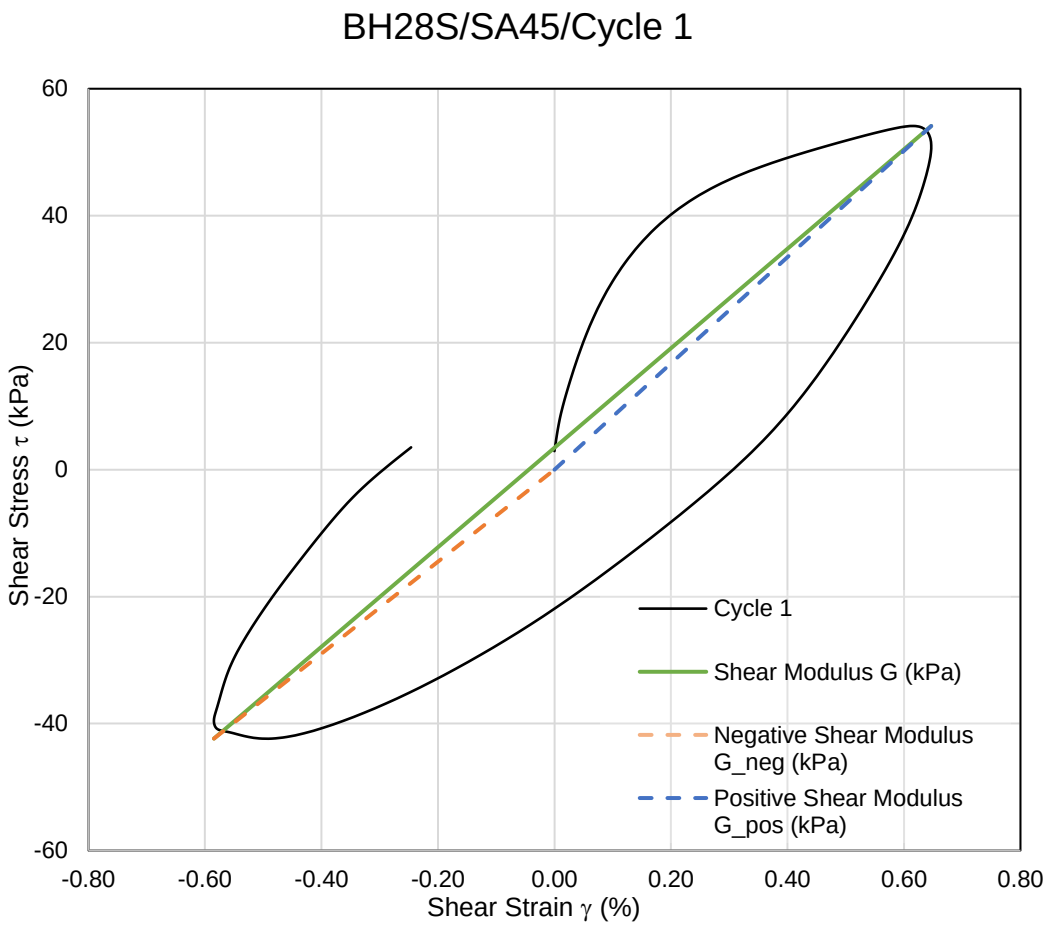


Figure No. M5.4

Modulus of Soils by Torsional Shear (Strain Controlled)

Max Shear Modulus G_{max} (kPa) 89905

Project No.	21451329
Soil Unit	BH28S
BH ID	4B
Sample ID	SA45
Test ID	TS-18
Depth Interval	24.88m - 25.11m

Cycle 15

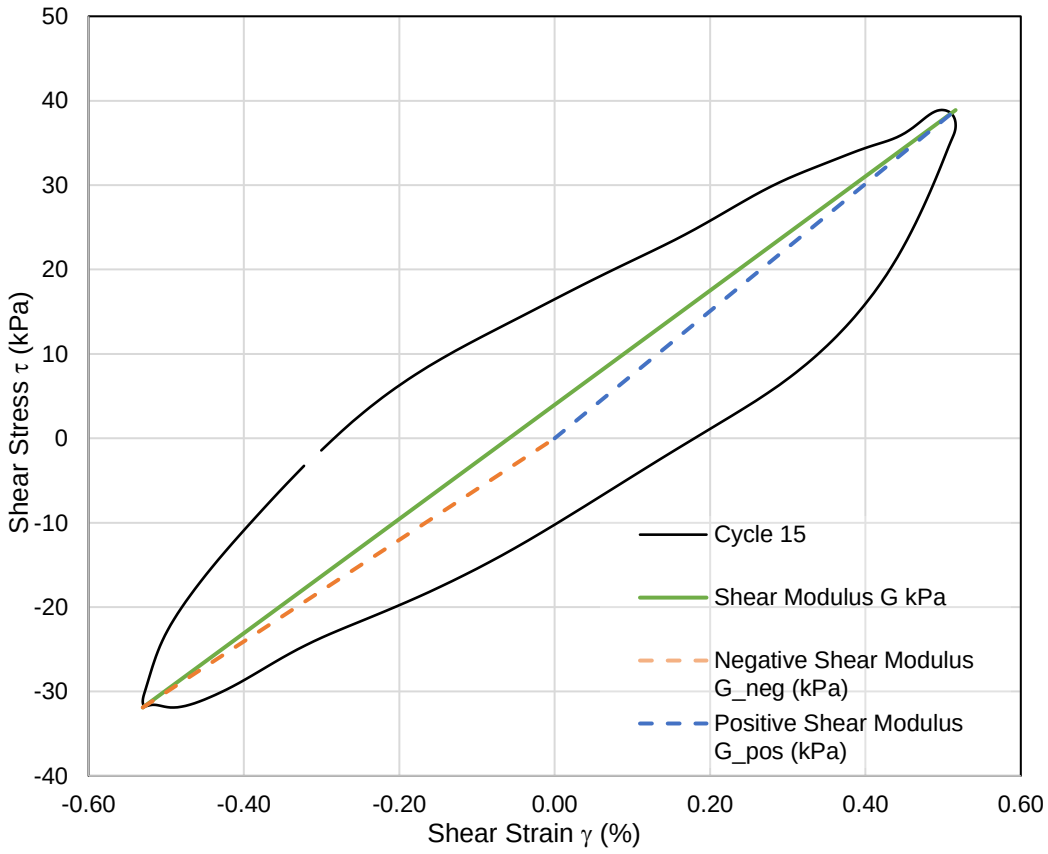
Shear Strain γ (%)	Shear Stress τ (kPa)
-0.5	-31.9
0.0	0.0
0.5	38.9

Shear Modulus G (kPa)	6765.5
itive Shear Modulus G_pos (kPa)	7535.7
ative Shear Modulus G_neg (kPa)	6015.8

G/Gmax 0.075

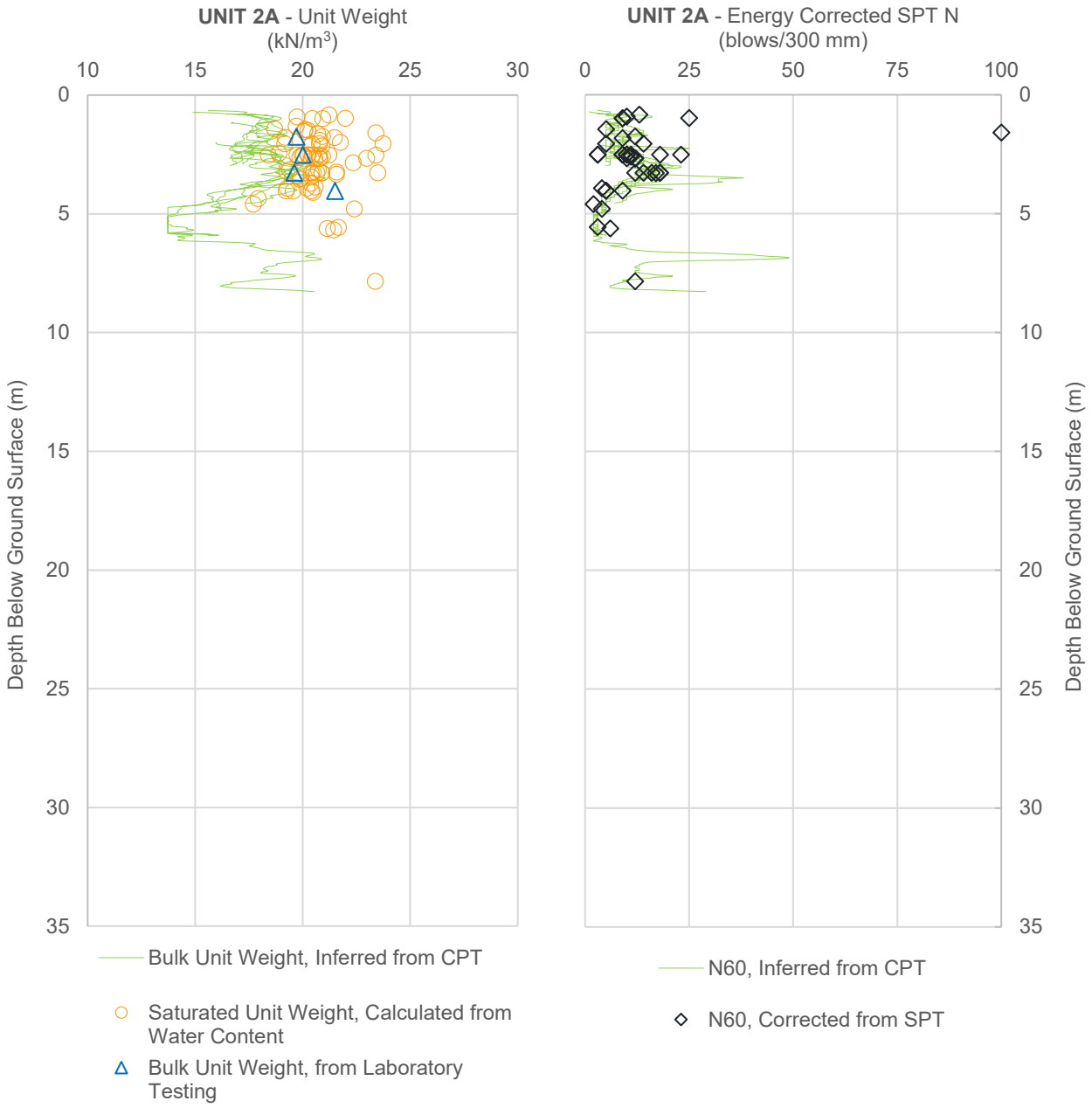
BH28S/SA45/Cycle 15

BH28S/SA45/Cycle 1



APPENDIX N

Interpreted Soil Parameter Profiles, By Stratigraphic Unit



NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. Saturated unit weight calculated from specific gravity and water content measured in laboratory (assumes 100% saturation).
3. SPT N_{60} represents the SPT N value corrected to 60% of the theortetical free-fall hammer energy.
4. SPT N_{60} value of 100 indicates practical refusal of split spoon sampler.

PROJECT:	**PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DNNP**
PROJECT NO.:	**21451329**
TITLE:	**INTERPRETED SOIL PARAMETER PROFILES, BASIC MATERIAL CHARACTERISTICS – UNIT 2A**

PREPARED BY: KG DATE: April 2022 CHECKED BY: SB DATE: April 2022

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100 Scotia Court, Whitby, ON, L1N 8Y6, Canada
Tel: 905-723-2727 www.golder.com



NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. Saturated unit weight calculated from specific gravity and water content measured in laboratory (assumes 100% saturation).
3. SPT N_{60} represents the SPT N value corrected to 60% of the theortetical free-fall hammer energy.
4. SPT N_{60} value of 100 indicates practical refusal of split spoon sampler.

PROJECT:	**PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DNNP**
PROJECT NO.:	**21451329**
TITLE:	**INTERPRETED SOIL PARAMETER PROFILES, BASIC MATERIAL CHARACTERISTICS – UNIT 2B**

PREPARED BY: KG DATE: April 2022 CHECKED BY: SB DATE: April 2022

Golder Associates Ltd.
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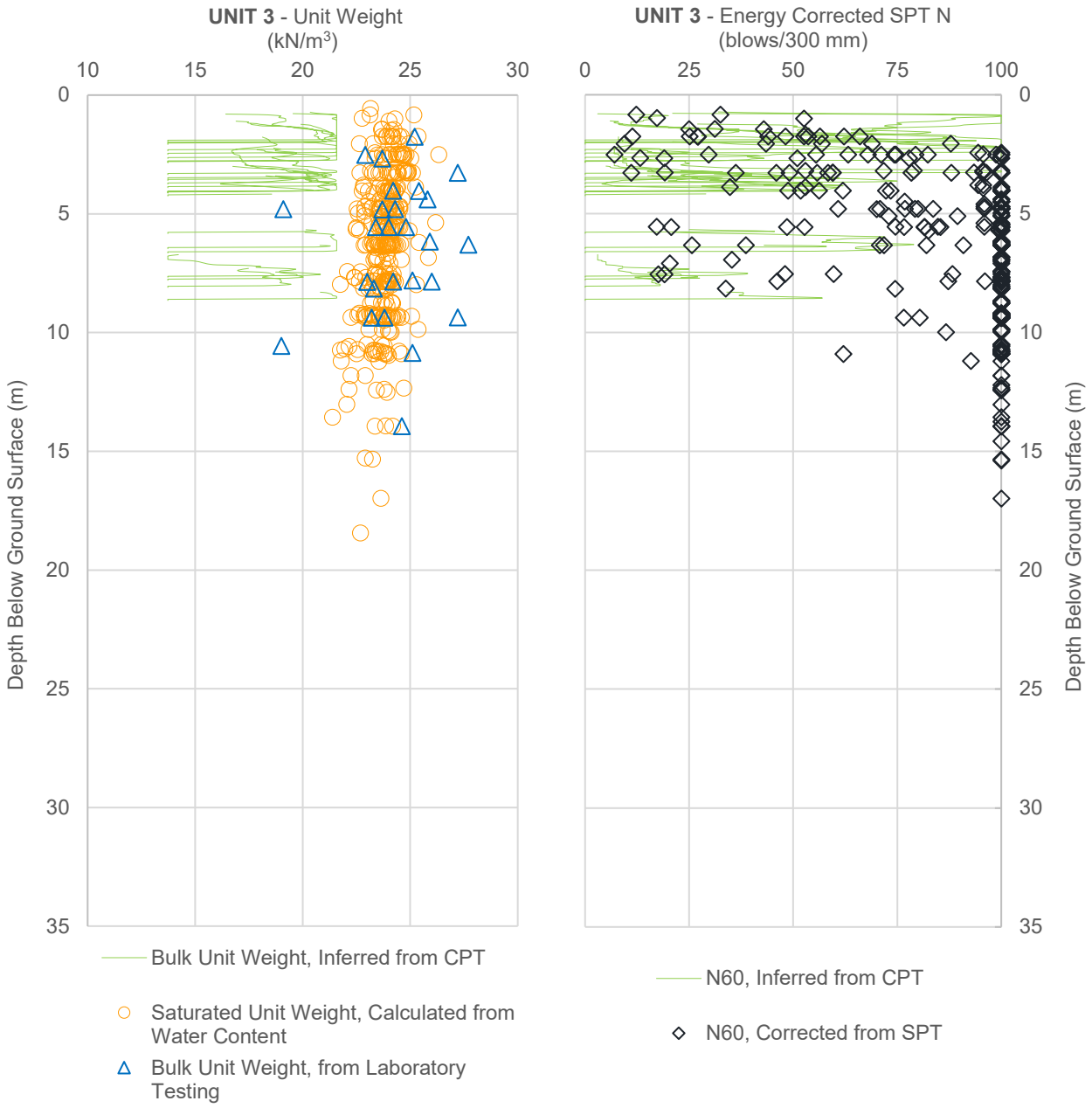

NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. Saturated unit weight calculated from specific gravity and water content measured in laboratory (assumes 100% saturation).
3. SPT N_{60} represents the SPT N value corrected to 60% of the theortetical free-fall hammer energy.
4. SPT N_{60} value of 100 indicates practical refusal of split spoon sampler.

PROJECT:	**PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DNNP**
PROJECT NO.:	**21451329**
TITLE:	**INTERPRETED SOIL PARAMETER PROFILES, BASIC MATERIAL CHARACTERISTICS – UNIT 3**

PREPARED BY: KG DATE: April 2022 CHECKED BY: SB DATE: April 2022

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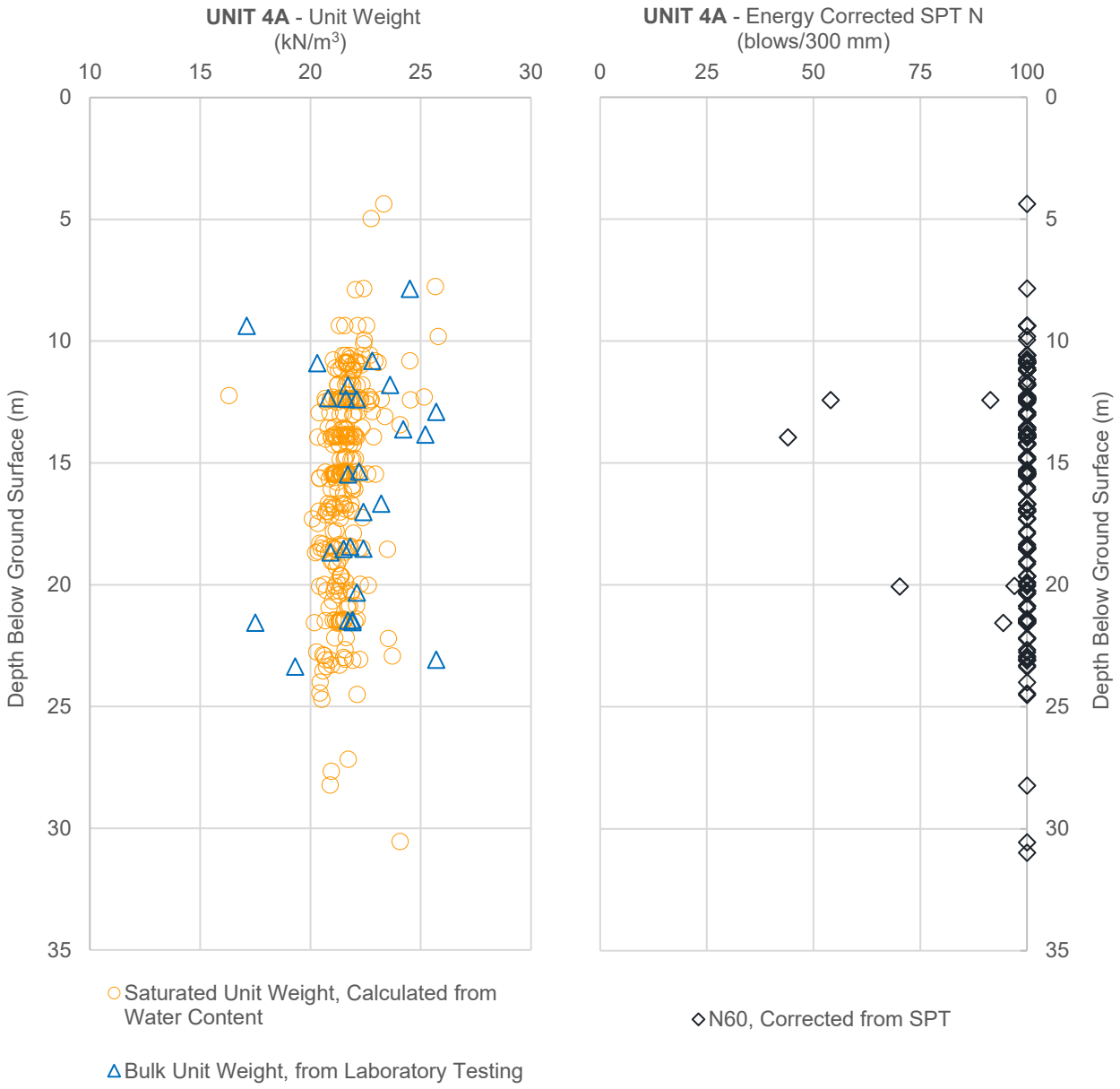

NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. Saturated unit weight calculated from specific gravity and water content measured in laboratory (assumes 100% saturation).
3. SPT N_{60} represents the SPT N value corrected to 60% of the theortetical free-fall hammer energy.
4. SPT N_{60} value of 100 indicates practical refusal of split spoon sampler.

PROJECT:	**PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DNNP**
PROJECT NO.:	**21451329**
TITLE:	**INTERPRETED SOIL PARAMETER PROFILES, BASIC MATERIAL CHARACTERISTICS – UNIT 4A**

PREPARED BY: KG DATE: April 2022 CHECKED BY: SB DATE: April 2022

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Tel: 905-723-2727 www.golder.com



NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. Saturated unit weight calculated from specific gravity and water content measured in laboratory (assumes 100% saturation).
3. SPT N_{60} represents the SPT N value corrected to 60% of the theortetical free-fall hammer energy.
4. SPT N_{60} value of 100 indicates practical refusal of split spoon sampler.

PROJECT:	**PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DNNP**
PROJECT NO.:	**21451329**
TITLE:	**INTERPRETED SOIL PARAMETER PROFILES, BASIC MATERIAL CHARACTERISTICS – UNIT 4B**

PREPARED BY: KG DATE: April 2022 CHECKED BY: SB DATE: April 2022

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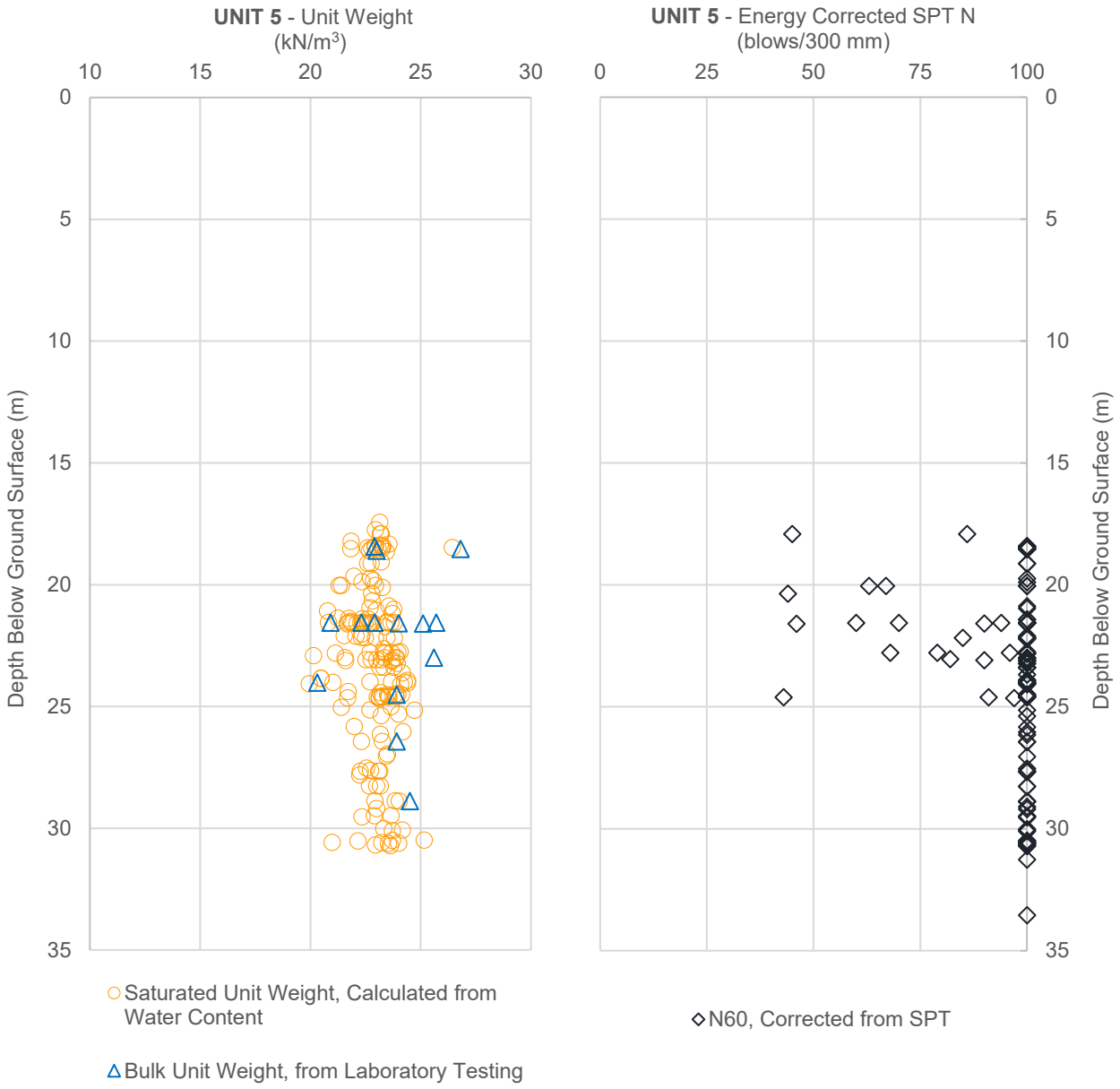

NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. Saturated unit weight calculated from specific gravity and water content measured in laboratory (assumes 100% saturation).
3. SPT N_{60} represents the SPT N value corrected to 60% of the theortetical free-fall hammer energy.
4. SPT N_{60} value of 100 indicates practical refusal of split spoon sampler.

PROJECT:	**PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DNNP**
PROJECT NO.:	**21451329**
TITLE:	**INTERPRETED SOIL PARAMETER PROFILES, BASIC MATERIAL CHARACTERISTICS – UNIT 5**

PREPARED BY: KG DATE: April 2022 CHECKED BY: SB DATE: April 2022

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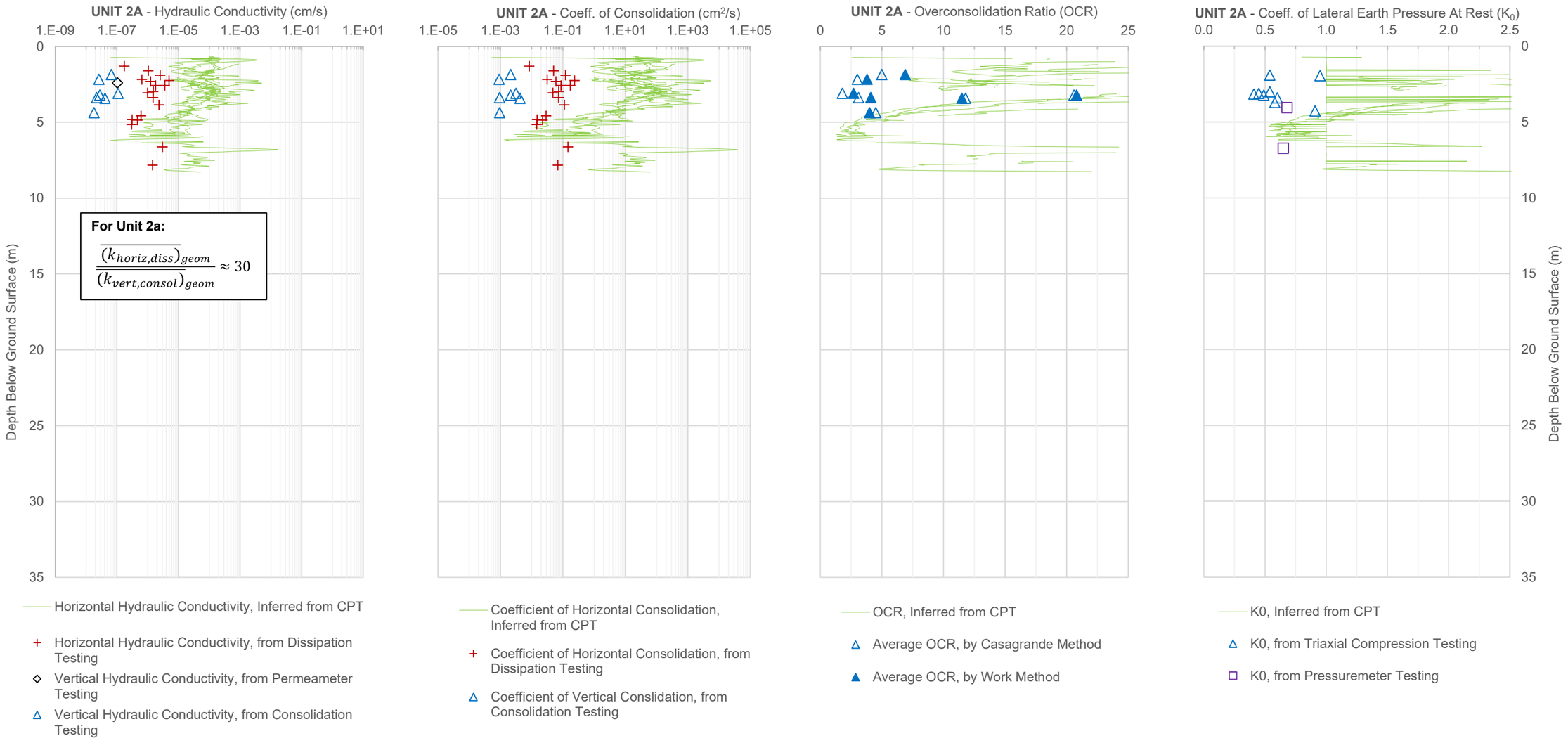

NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. Horizontal hydraulic conductivity and coefficient of horizontal consolidation from CPT based on Soil Behaviour Type.
3. Horizontal hydraulic conductivity from dissipation testing calculated using coefficient of volume compressibility from laboratory consolidation testing.
4. Vertical hydraulic conductivity and coefficient of vertical consolidation from one-dimensional consolidation testing taken at a stress level of 100 kPa in excess of the estimated in situ vertical effective stress for each tested specimen.
5. For Unit 2a, the ratio of the geometric mean of the horizontal hydraulic conductivity (from dissipations) to the geometric mean of the vertical hydraulic conductivity (from consolidation testing) is approximately equal to 30.
6. Coefficient of lateral earth pressure at rest interpreted from consolidated undrained triaxial testing, where specimen consolidated to approximate in situ vertical effective stress under no lateral strain conditions (i.e., K_0-consolidation).

PROJECT: **PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DARLINGTON NEW NUCLEAR PROJECT**

TITLE: **INTERPRETED SOIL PARAMETER PROFILES, HYDRAULIC AND VOLUME CHANGE BEHAVIOUR – UNIT 2A**

PROJECT NO.: **21451329**

PREPARED BY: YW	DATE: July 2022	CHECKED BY: SB	DATE: July 2022

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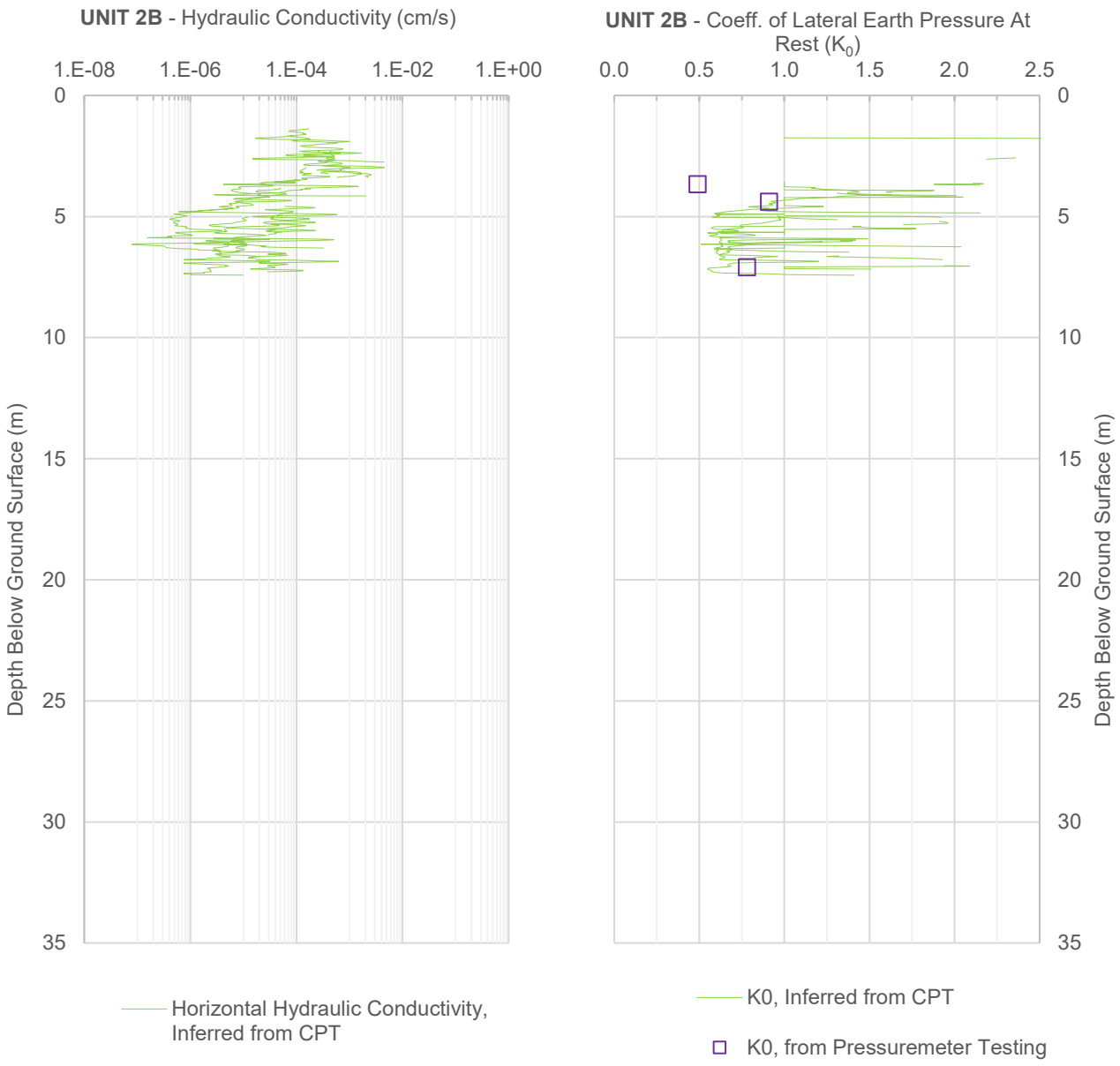

NOTE(S)
1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. Horizontal hydraulic conductivity from CPT based on Soil Behaviour Type.

PROJECT:	**PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DNNP**
PROJECT NO.:	**21451329**
TITLE:	**INTERPRETED SOIL PARAMETER PROFILES, HYDRAULIC BEHAVIOUR – UNIT 2B**

PREPARED BY: YW DATE: July 2022 CHECKED BY: SB DATE: July 2022

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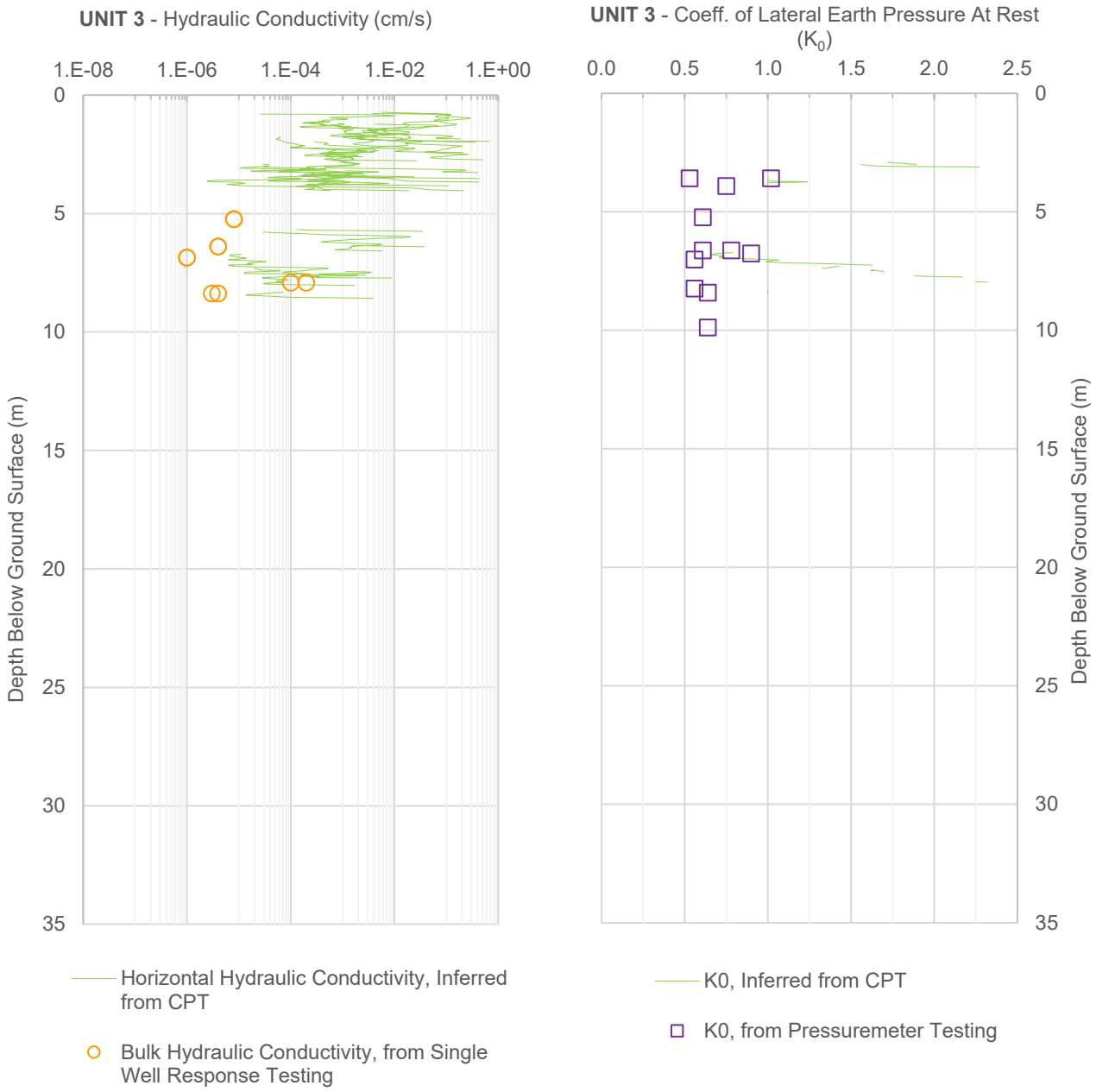

NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. Horizontal hydraulic conductivity from CPT based on Soil Behaviour Type.
3. Bulk hydraulic conductivity from single well response testing by rising head or falling head method, reported at the average screen depth.

PROJECT:	**PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DNNP**
PROJECT NO.:	**21451329**
TITLE:	**INTERPRETED SOIL PARAMETER PROFILES, HYDRAULIC BEHAVIOUR – UNIT 3**

PREPARED BY: YW DATE: July 2022 CHECKED BY: SB DATE: July 2022

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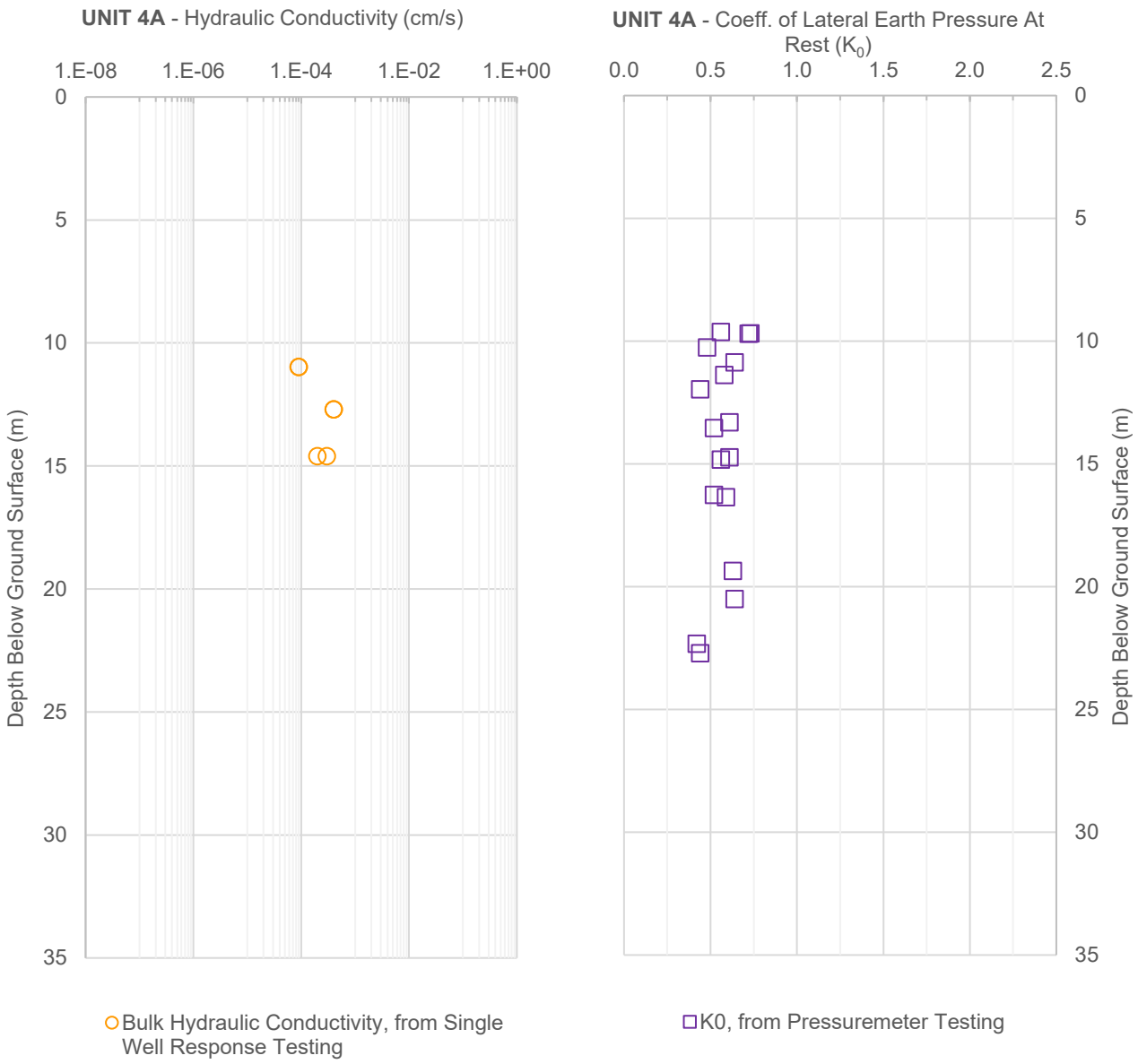

NOTE(S)
1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. Bulk hydraulic conductivity from single well response testing by rising head or falling head method, reported at the average screen depth.

PROJECT:	**PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DNNP**
PROJECT NO.:	**21451329**
TITLE:	**INTERPRETED SOIL PARAMETER PROFILES, HYDRAULIC BEHAVIOUR – UNIT 4A**

PREPARED BY: YW DATE: July 2022 CHECKED BY: SB DATE: July 2022

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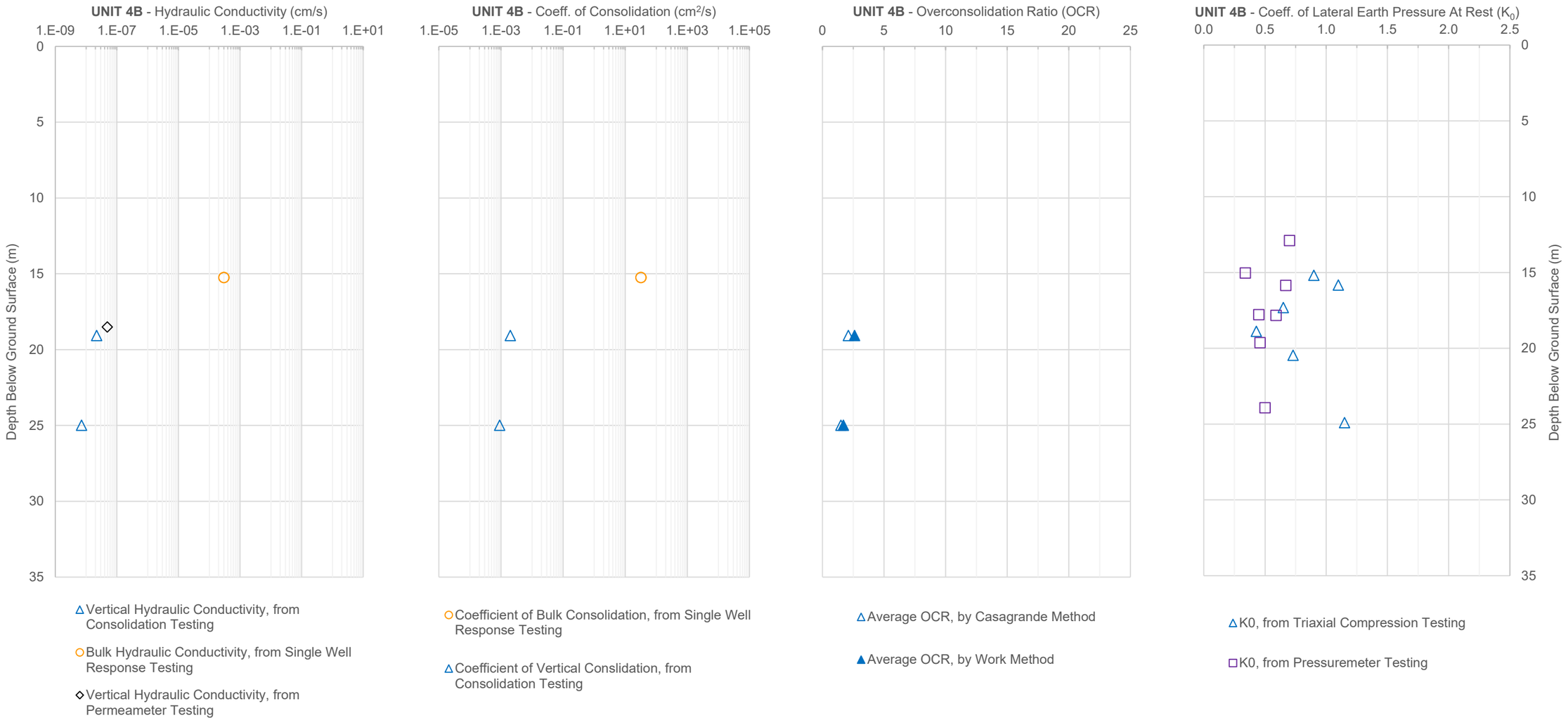

NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. Bulk hydraulic conductivity from single well response testing by rising head or falling head method, reported at the average screen depth.
3. Coefficient of bulk consolidation from single well response testing calculated using coefficient of volume compressibility assumed from laboratory consolidation testing.
4. Vertical hydraulic conductivity and coefficient of vertical consolidation from one-dimensional consolidation testing taken at a stress level of 100 kPa in excess of the estimated in situ vertical effective stress for each tested specimen.
5. Coefficient of lateral earth pressure at rest interpreted from consolidated undrained triaxial testing, where specimen consolidated to approximate in situ vertical effective stress under no lateral strain conditions (i.e., K_0-consolidation).

PROJECT: **PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DARLINGTON NEW NUCLEAR PROJECT**

TITLE: **INTERPRETED SOIL PARAMETER PROFILES, HYDRAULIC AND VOLUME CHANGE BEHAVIOUR – UNIT 4B**

PROJECT NO.: **21451329**

PREPARED BY: YW	DATE: July 2022	CHECKED BY: SB	DATE: July 2022

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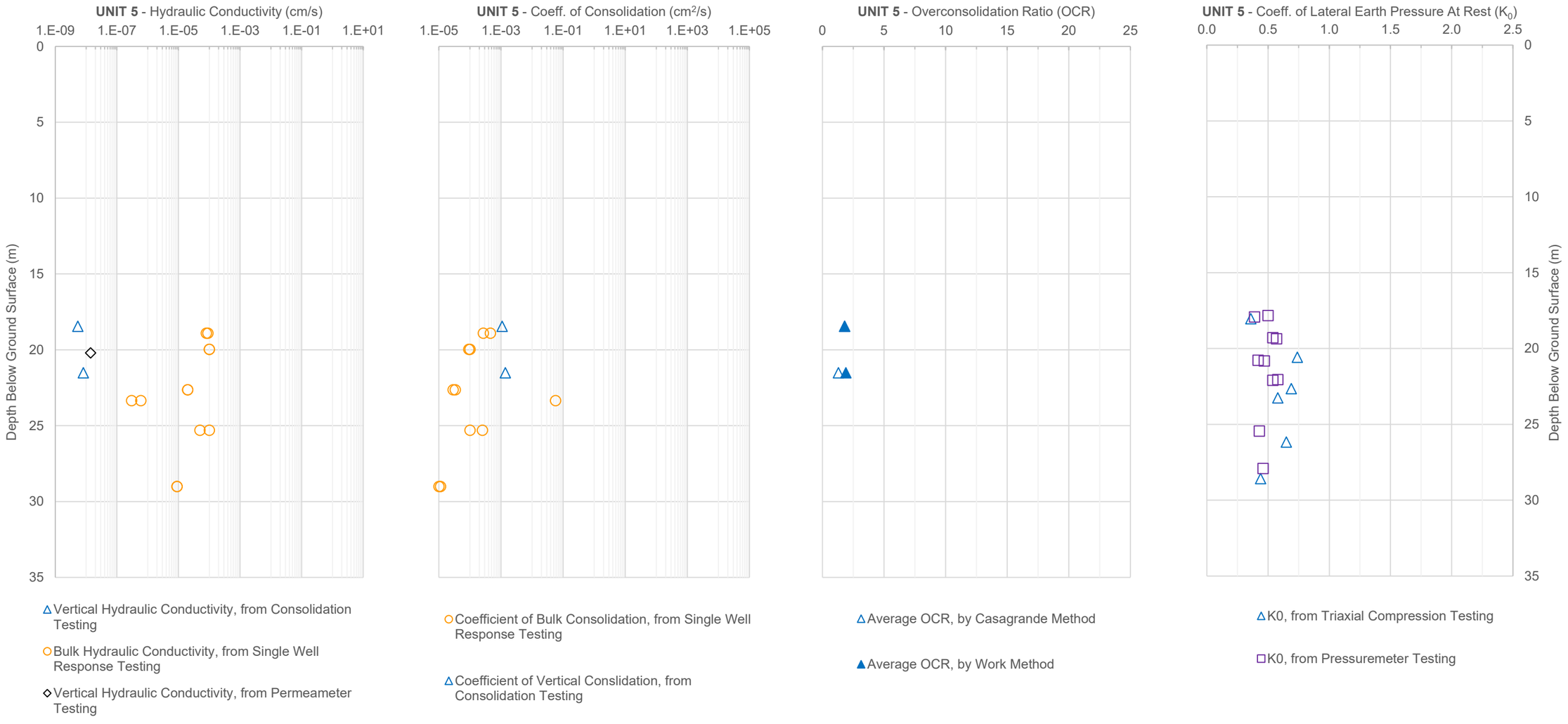

NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. Coefficient of bulk hydraulic conductivity from single well response testing by rising head or falling head method, reported at the average screen depth.
3. Coefficient of bulk consolidation from single well response testing calculated using coefficient of volume compressibility assumed from laboratory consolidation testing.
4. Vertical hydraulic conductivity and coefficient of vertical consolidation from one-dimensional consolidation testing taken at a stress level of 100 kPa in excess of the estimated in situ vertical effective stress for each tested specimen.
5. Coefficient of lateral earth pressure at rest interpreted from consolidated undrained triaxial testing, where specimen consolidated to approximate in situ vertical effective stress under no lateral strain conditions (i.e., K_0-consolidation).

PROJECT: **PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DARLINGTON NEW NUCLEAR PROJECT**

TITLE: **INTERPRETED SOIL PARAMETER PROFILES, HYDRAULIC AND VOLUME CHANGE BEHAVIOUR – UNIT 5**

PROJECT NO.: **21451329**

PREPARED BY: YW	DATE: July 2022	CHECKED BY: SB	DATE: July 2022

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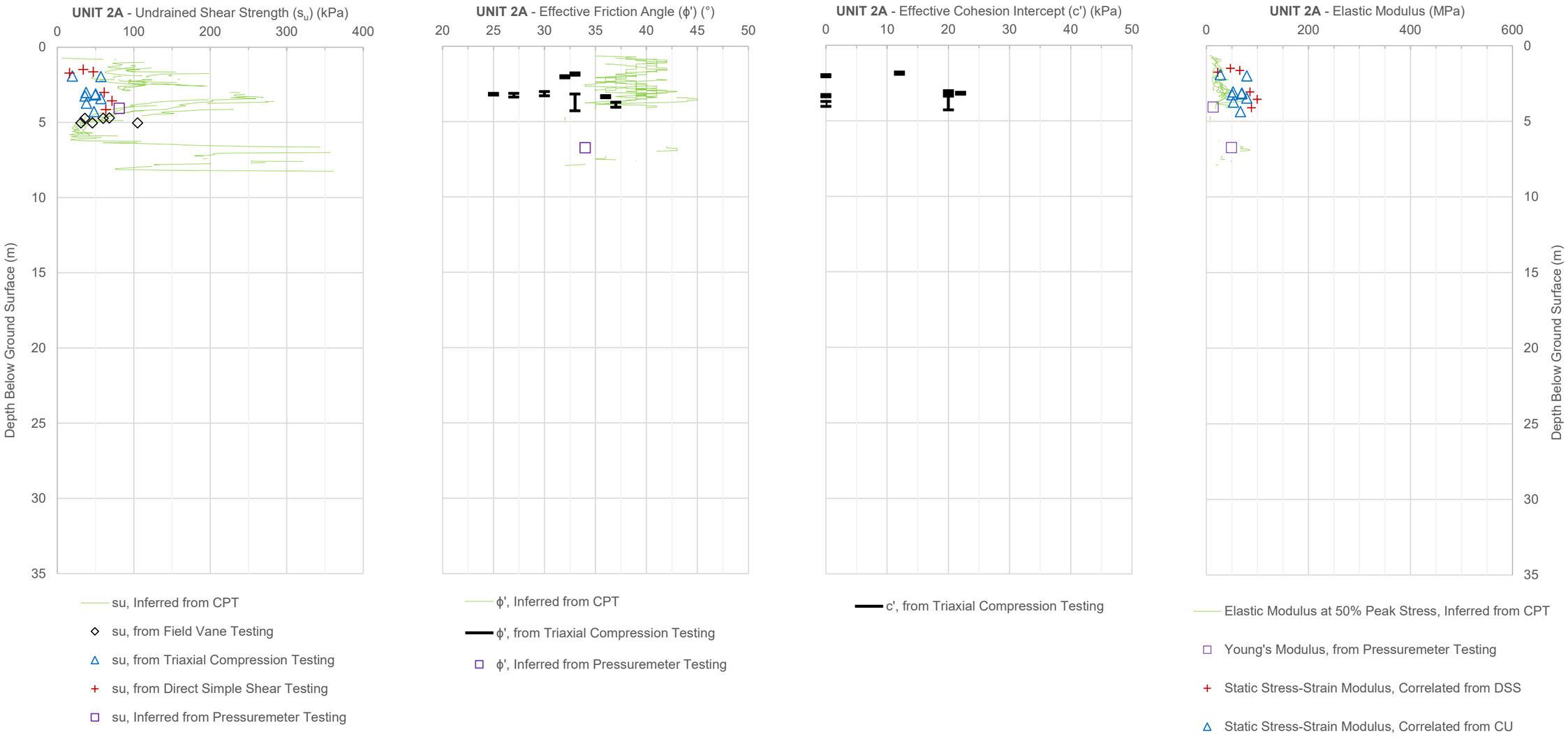

NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. Undrained shear strength from field vane testing corrected for plasticity.
3. Undrained shear strength interpreted from consolidated undrained triaxial testing, where specimen consolidated to approximate in situ vertical effective stress.
4. Undrained shear strength interpreted from direct simple shear testing, where specimen consolidated to approximate in situ preconsolidation pressure, then unloaded to approximate in situ vertical effective stress for shearing stage.
5. From consolidated undrained triaxial testing, effective friction angle and effective cohesion intercept interpreted from Mohr-Coulomb failure envelope constructed from two to three specimen results. Effective friction angle and effective cohesion intercept from triaxial testing plotted as constant value over depth range of samples used to construct failure envelope.
6. Stress-Strain Elastic Moduli correlated from undrained shear strengths from direct simple shear (DSS) and consolidated undrained (CU) triaxial testing (representative of in situ conditions), where $E_s = 500 s_u (OCR)^{0.5}$ (see Table 5-6 in Bowles, 1997).

PROJECT: **PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DARLINGTON NEW NUCLEAR PROJECT**

TITLE: **INTERPRETED SOIL PARAMETER PROFILES, SHEAR STRENGTH AND DEFORMATION BEHAVIOUR – UNIT 2A**

PROJECT NO.: **21451329**

PREPARED BY: YW	DATE: July 2022	CHECKED BY: SB	DATE: July 2022

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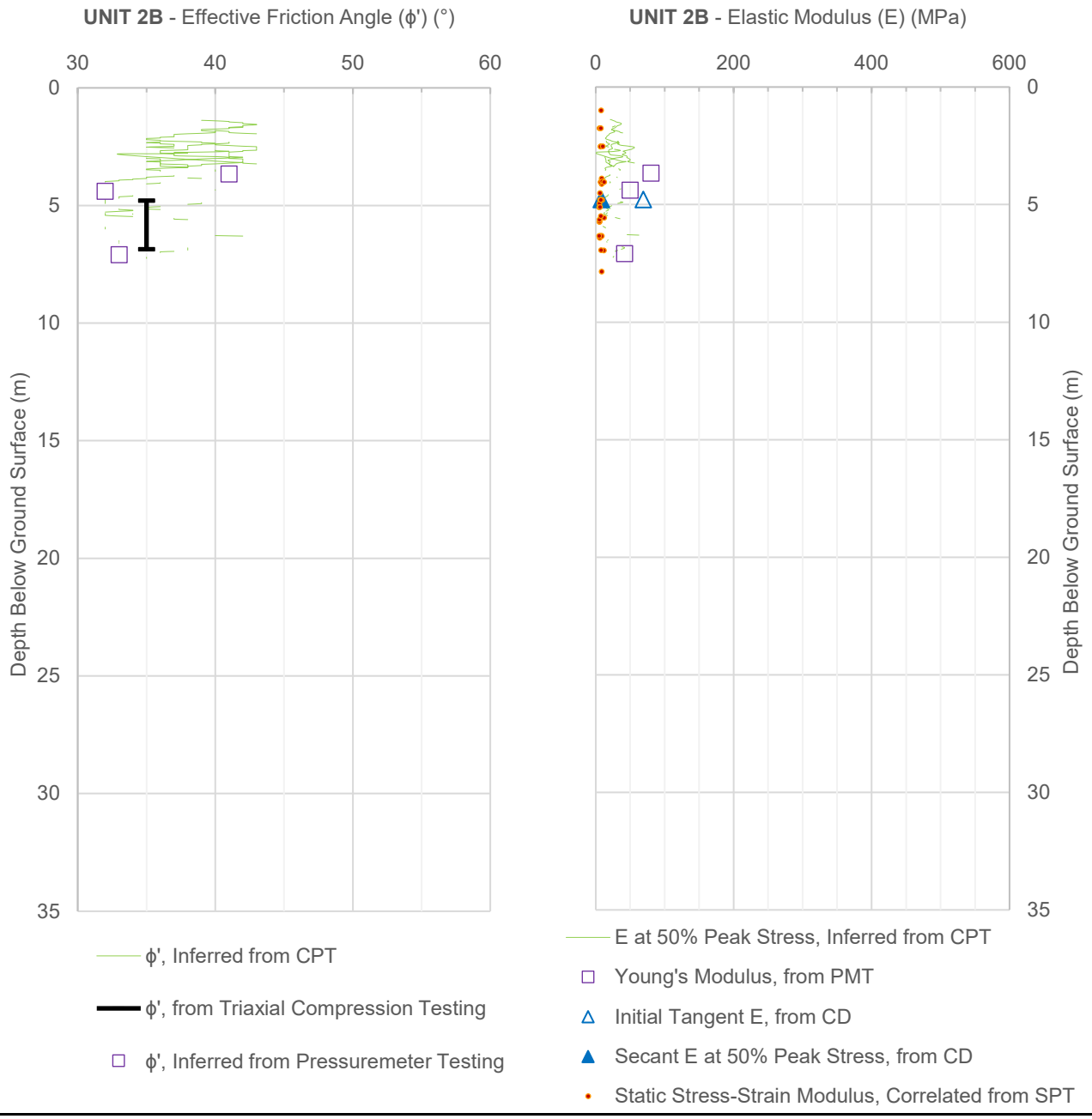

NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. From consolidated drained (CD) triaxial testing, ϕ' interpreted from Mohr-Coulomb failure envelope constructed from 2 - 3 reconstituted specimens and plotted as constant over depth range of samples (assumes c'=0).
3. Initial tangent E and secant E at 50% peak stress interpreted from CD triaxials (reconstituted to ≈ in situ conditions).
4. Static Stress-Strain Modulus correlated from SPT N values for clayey sand (see Table 5-6 in Bowles, 1997).

PROJECT:	**PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DNNP**
PROJECT NO.:	**21451329**
TITLE:	**INTERPRETED SOIL PARAMETER PROFILES, SHEAR STRENGTH AND DEFORMATION BEHAVIOUR – UNIT 2B**

PREPARED BY: YW DATE: July 2022 CHECKED BY: SB DATE: July 2022

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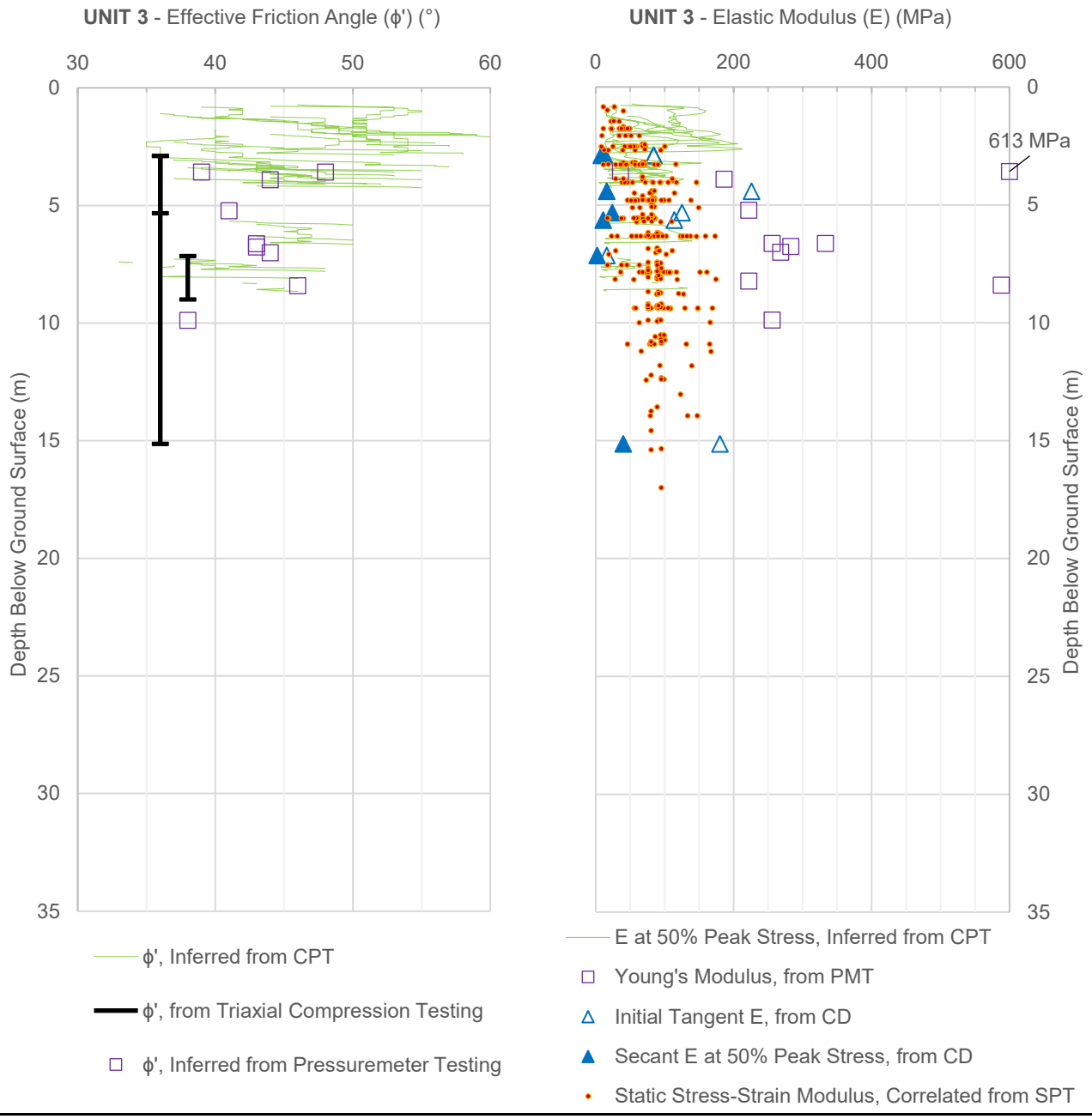

NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. From consolidated drained (CD) triaxial testing, ϕ' interpreted from Mohr-Coulomb failure envelope constructed from 2 - 3 reconstituted specimens and plotted as constant over depth range of samples (assumes c'=0).
3. Initial tangent E and secant E at 50% peak stress interpreted from CD triaxials (reconstituted to ≈ in situ conditions).
4. Static Stress-Strain Modulus correlated from SPT N values for clayey sand (see Table 5-6 in Bowles, 1997).

PROJECT:	**PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DNNP**
PROJECT NO.:	**21451329**
TITLE:	**INTERPRETED SOIL PARAMETER PROFILES, SHEAR STRENGTH AND DEFORMATION BEHAVIOUR – UNIT 3**

PREPARED BY: YW DATE: July 2022 CHECKED BY: SB DATE: July 2022

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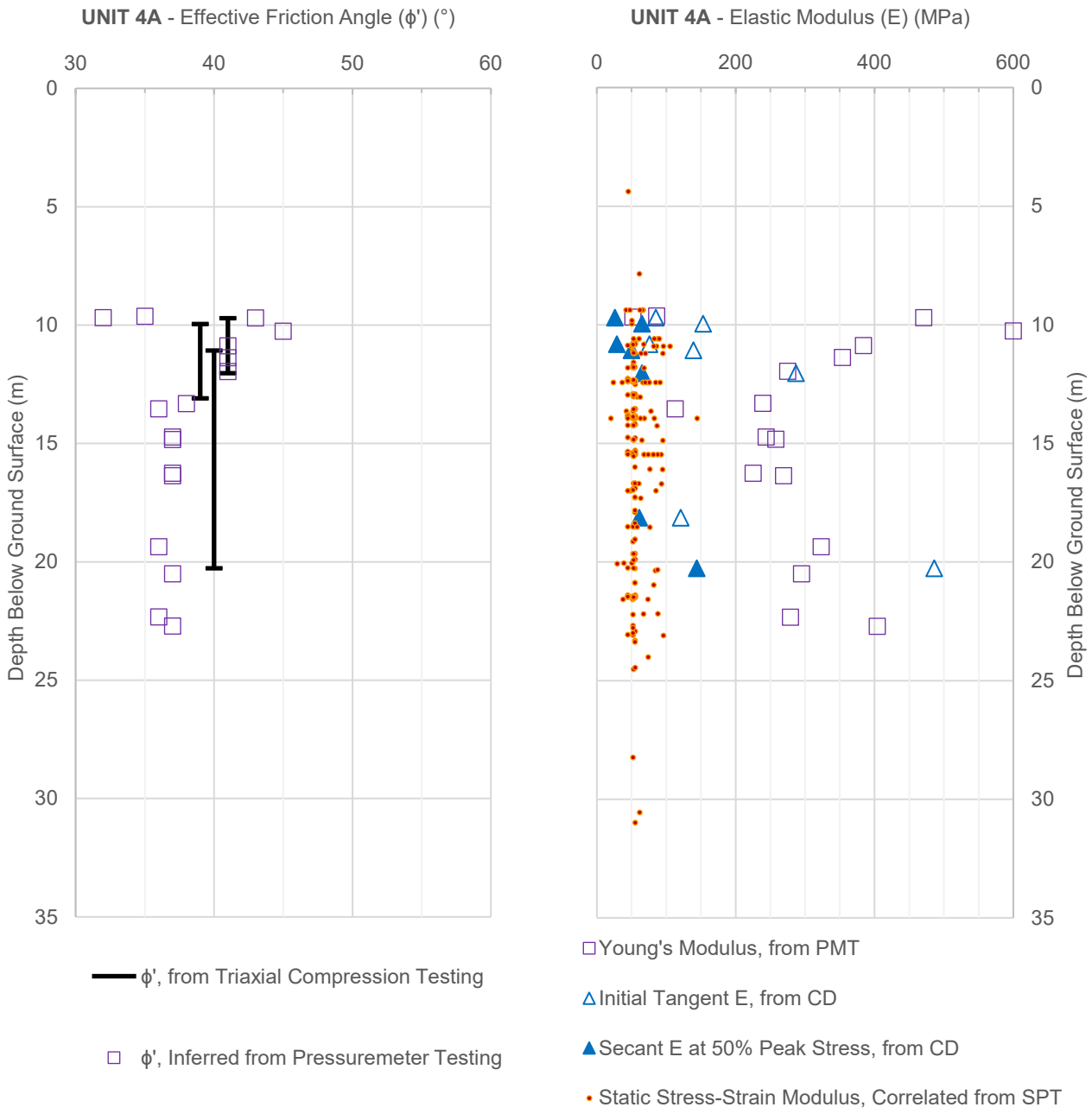

NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. From consolidated drained (CD) triaxial testing, ϕ' interpreted from Mohr-Coulomb failure envelope constructed from 2 - 3 reconstituted specimens and plotted as constant over depth range of samples (assumes c'=0).
3. Initial tangent E and secant E at 50% peak stress interpreted from CD triaxials (reconstituted to ≈ in situ conditions).
4. Static Stress-Strain Modulus correlated from SPT N values for clayey sand (see Table 5-6 in Bowles, 1997).

PROJECT:	**PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DNNP**
PROJECT NO.:	**21451329**
TITLE:	**INTERPRETED SOIL PARAMETER PROFILES, SHEAR STRENGTH AND DEFORMATION BEHAVIOUR – UNIT 4A**

PREPARED BY: YW DATE: July 2022 CHECKED BY: SB DATE: July 2022

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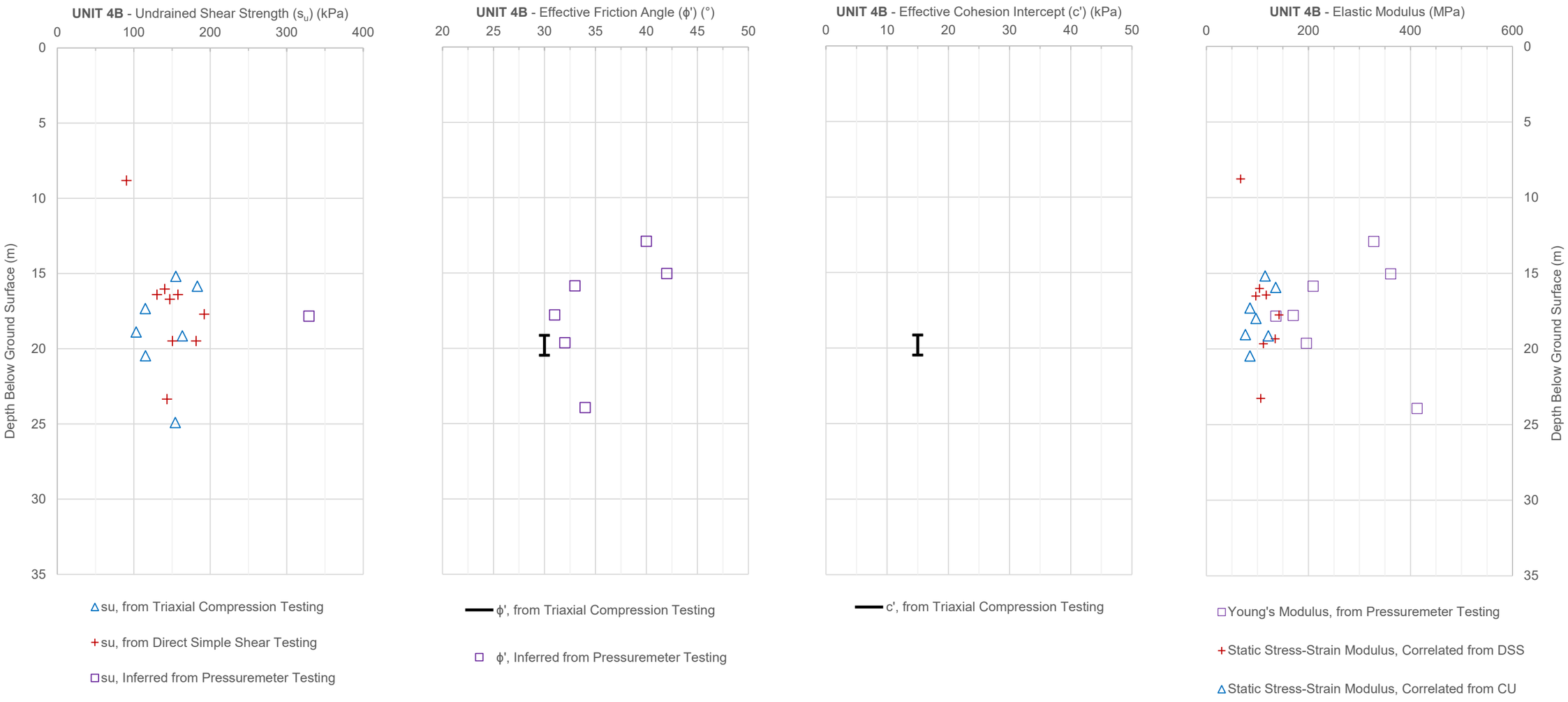

NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. Undrained shear strength interpreted from consolidated undrained triaxial testing, where specimen consolidated to approximate in situ vertical effective stress.
3. Undrained shear strength interpreted from direct simple shear testing, where specimen consolidated to approximate in situ preconsolidation pressure, then unloaded to approximate in situ vertical effective stress for shearing stage.
4. From consolidated undrained triaxial testing, effective friction angle and effective cohesion intercept interpreted from Mohr-Coulomb failure envelope constructed from two to three specimen results. Effective friction angle and effective cohesion intercept from triaxial testing plotted as constant value over depth range of samples used to construct failure envelope.
5. Stress-Strain Elastic Moduli correlated from undrained shear strengths from direct simple shear (DSS) and consolidated undrained (CU) triaxial testing (representative of in situ conditions), where $E_s = 500 s_u (OCR)^{0.5}$ (see Table 5-6 in Bowles, 1997).

PROJECT: **PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DARLINGTON NEW NUCLEAR PROJECT**

TITLE: **INTERPRETED SOIL PARAMETER PROFILES, SHEAR STRENGTH AND DEFORMATION BEHAVIOUR – UNIT 4B**

PROJECT NO.: **21451329**

PREPARED BY: YW	DATE: July 2022	CHECKED BY: SB	DATE: July 2022

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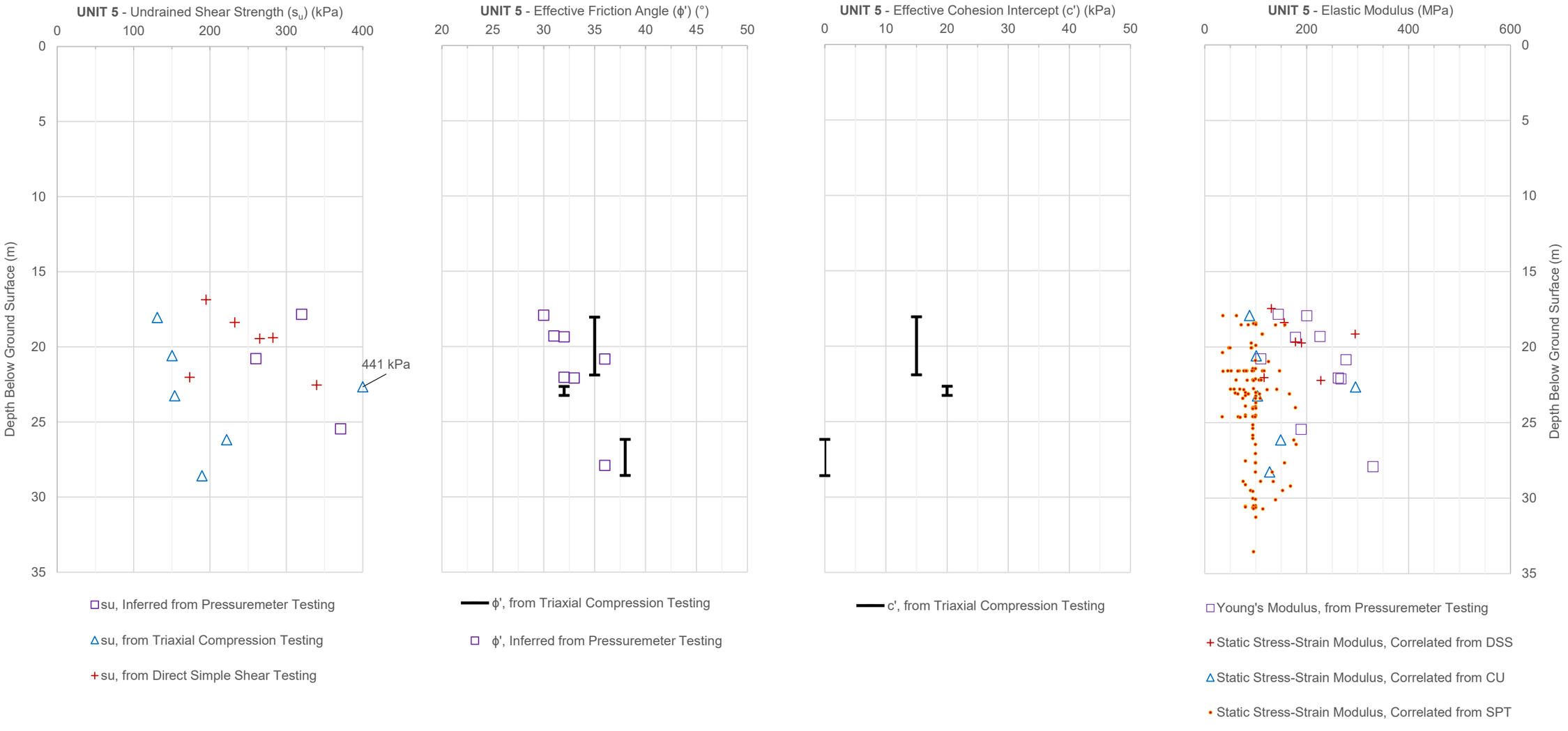
Tel: 905-723-2727 www.golder.com



NOTE(S)

1. This figure is to be read in conjunction with the accompanying Golder Associates Ltd. Report No. 21451329-002.
2. Undrained shear strength interpreted from consolidated undrained triaxial testing, where specimen consolidated to approximate in situ vertical effective stress.
3. Undrained shear strength interpreted from direct simple shear testing, where specimen consolidated to approximate in situ preconsolidation pressure, then unloaded to approximate in situ vertical effective stress for shearing stage.
4. From consolidated undrained triaxial testing, effective friction angle and effective cohesion intercept interpreted from Mohr-Coulomb failure envelope constructed from two to three specimen results. Effective friction angle and effective cohesion intercept from triaxial testing plotted as constant value over depth range of samples used to construct failure envelope.
5. Static Stress-Strain Modulus correlated from SPT N values for gravelly sand (see Table 5-6 in Bowles, 1997).
6. Stress-Strain Elastic Moduli correlated from undrained shear strengths from direct simple shear (DSS) and consolidated undrained (CU) triaxial testing (representative of in situ conditions), where $E_s = 500 s_u (OCR)^{0.5}$ (see Table 5-6 in Bowles, 1997).

PROJECT: **PHASE I GEOTECHNICAL INVESTIGATION (POWER BLOCK), DARLINGTON NEW NUCLEAR PROJECT**

TITLE: **INTERPRETED SOIL PARAMETER PROFILES, SHEAR STRENGTH AND DEFORMATION BEHAVIOUR – UNIT 5**

PROJECT NO.: **21451329**

PREPARED BY: YW	DATE: July 2022	CHECKED BY: SB	DATE: July 2022

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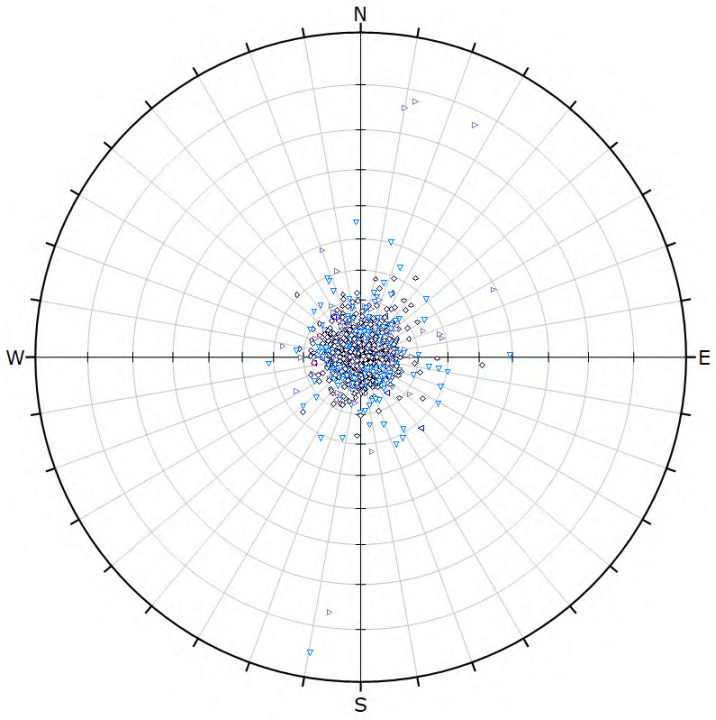
APPENDIX O

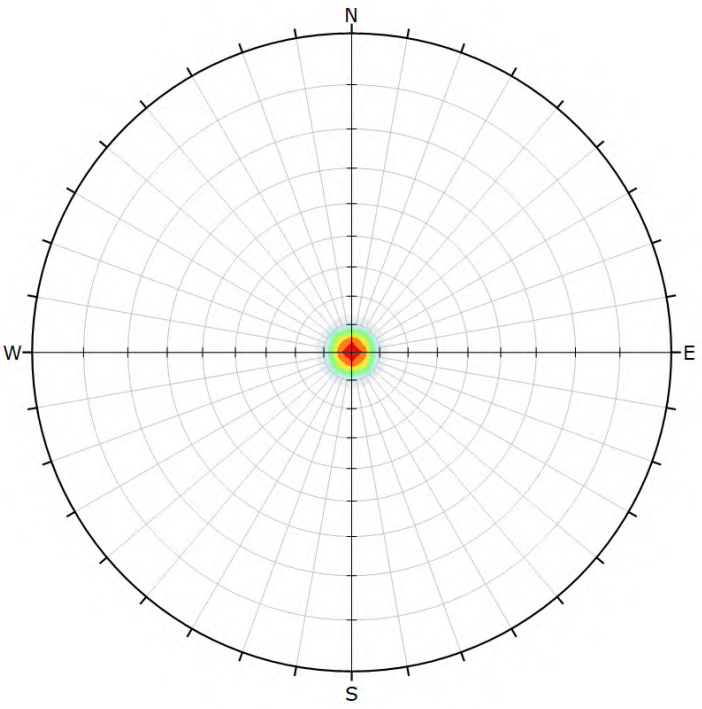
Stereoplots of Discontinuity Data

Stereographic Projection of all Televiewer Data Collected from Blue Mountain, Lindsay and Verulam Formations



Symbol	TYPE	Quantity
◇	Bedding	3909
×	Broken Zone	1
△	Casing	10
+	Contact	4
▽	Filled Joint	963
□	Induced Fracture	6
◁	Major Open Joint	12
○	Minor Open Joint	35
▷	Partially Open Joint	413

Plot Mode	Pole Vectors
Vector Count	5353 (5353 Entries)
Hemisphere	Lower
Projection	Equal Angle



Color	Density Concentrations
	0.00 - 8.50
	8.50 - 17.00
	17.00 - 25.50
	25.50 - 34.00
	34.00 - 42.50
	42.50 - 51.00
	51.00 - 59.50
	59.50 - 68.00
	68.00 - 76.50
	76.50 - 85.00

Contour Data	Pole Vectors
Maximum Density	84.71%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Pole Vectors
Vector Count	5353 (5353 Entries)
Hemisphere	Lower
Projection	Equal Angle

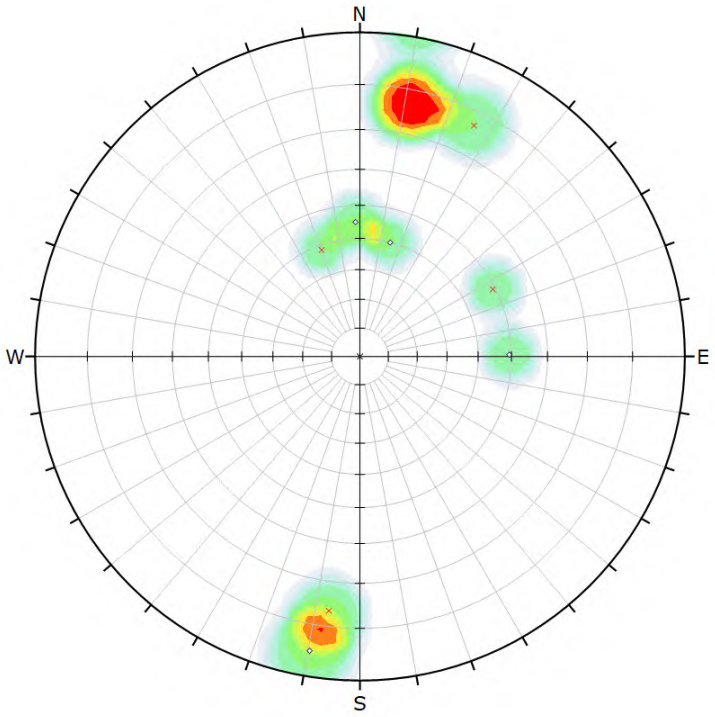
Date: July 22, 2022

Project: 21451329

Prepared By: PKS

Checked By: MJT

Stereographic Projection of all Joints Dipping more than 35º Collected from Blue Mountain, Lindsay and Verulam Formations



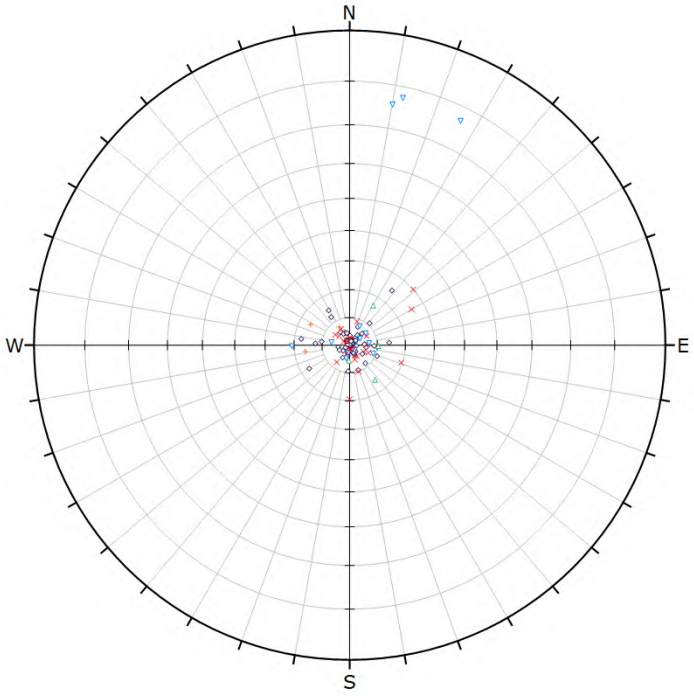
Symbol	TYPE	Quantity
◇	Filled Joint	4
×	Partially Open Joint	6

Color	Density Concentrations
	0.00 - 2.00
	2.00 - 4.00
	4.00 - 6.00
	6.00 - 8.00
	8.00 - 10.00
	10.00 - 12.00
	12.00 - 14.00
	14.00 - 16.00
	16.00 - 18.00
	18.00 - 20.00

Contour Data	Pole Vectors
Maximum Density	19.79%
Contour Distribution	Fisher
Counting Circle Size	1.0%

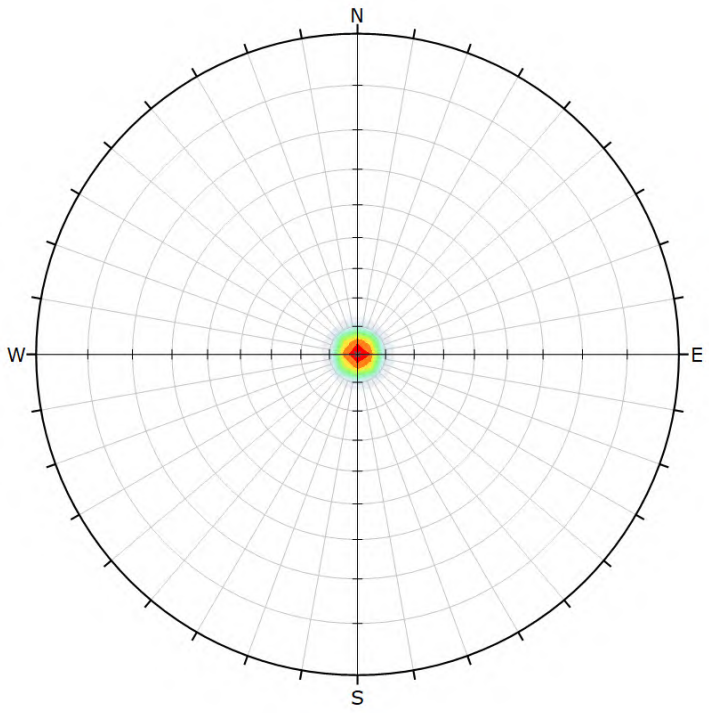
Plot Mode	Pole Vectors
Vector Count	10 (10 Entries)
Hemisphere	Lower
Projection	Equal Angle

Stereographic Projection of all Televiewer Data Collected from Blue Mountain Formation



Symbol	TYPE	Quantity
◇	Bedding	133
×	Filled Joint	66
△	Major Open Joint	4
+	Minor Open Joint	4
▽	Partially Open Joint	17

Plot Mode	Pole Vectors
Vector Count	224 (224 Entries)
Hemisphere	Lower
Projection	Equal Angle

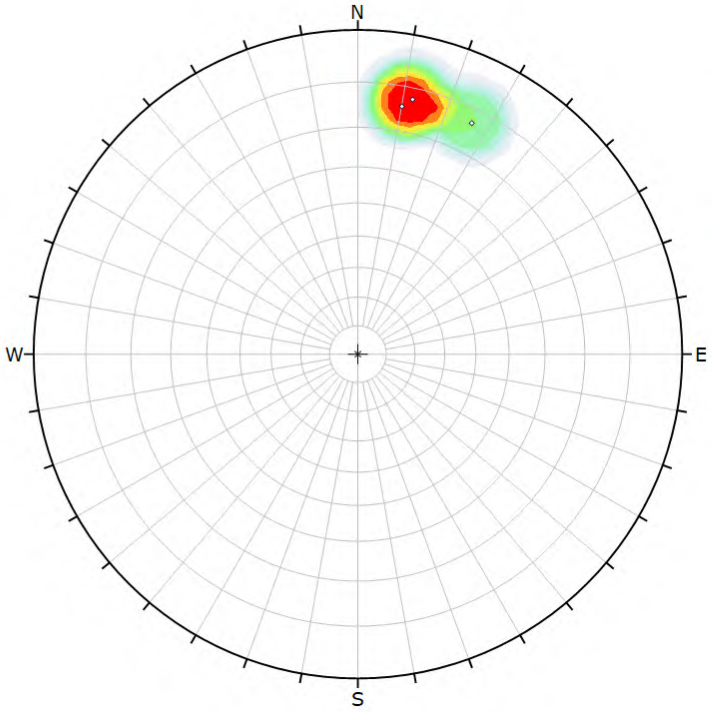


Color	Density Concentrations
	0.00 - 8.40
	8.40 - 16.80
	16.80 - 25.20
	25.20 - 33.60
	33.60 - 42.00
	42.00 - 50.40
	50.40 - 58.80
	58.80 - 67.20
	67.20 - 75.60
	75.60 - 84.00

Contour Data	Pole Vectors
Maximum Density	83.79%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Pole Vectors
Vector Count	224 (224 Entries)
Hemisphere	Lower
Projection	Equal Angle

Stereographic Projection of all Joints Dipping more than 35º Collected from Blue Mountain Formation



Symbol	TYPE	Quantity
◇	Partially Open Joint	3

Color	Density Concentrations
	0.00 - 6.60
	6.60 - 13.20
	13.20 - 19.80
	19.80 - 26.40
	26.40 - 33.00
	33.00 - 39.60
	39.60 - 46.20
	46.20 - 52.80
	52.80 - 59.40
	59.40 - 66.00

Contour Data	Pole Vectors
Maximum Density	65.98%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Pole Vectors
Vector Count	3 (3 Entries)
Hemisphere	Lower
Projection	Equal Angle

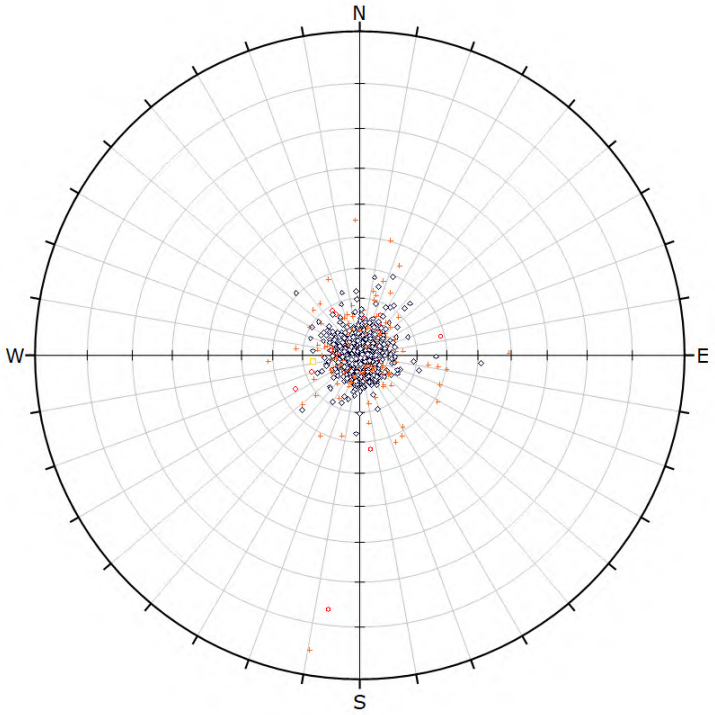
Date: July 22, 2022

Project: 21451329

Prepared By: PKS

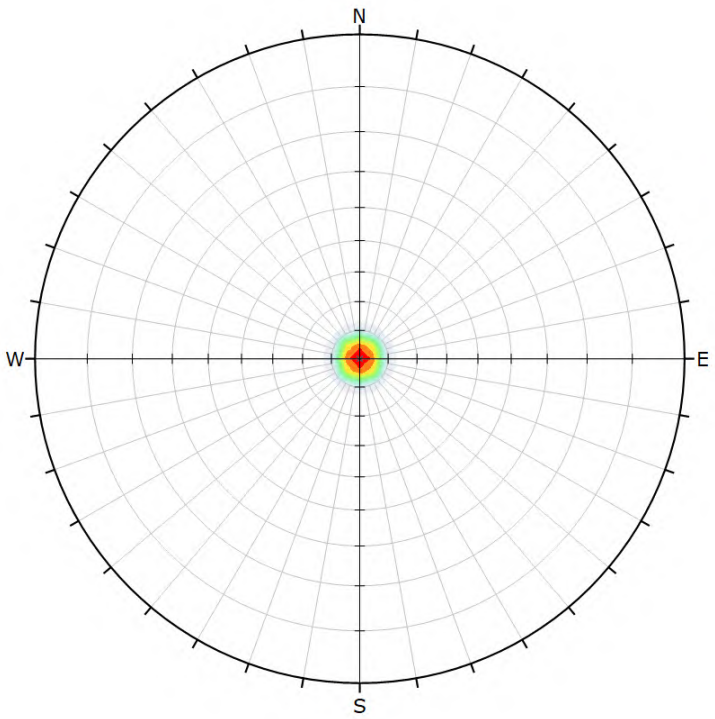
Checked By: MJT

Stereographic Projection of all Televiewer Data Collected from Lindsay Formation



Symbol	TYPE	Quantity
◇	Bedding	2491
×	Broken Zone	1
△	Contact	4
+	Filled Joint	534
▽	Induced Fracture	4
□	Major Open Joint	1
◁	Minor Open Joint	4
○	Partially Open Joint	46

Plot Mode	Pole Vectors
Vector Count	3085 (3085 Entries)
Hemisphere	Lower
Projection	Equal Angle

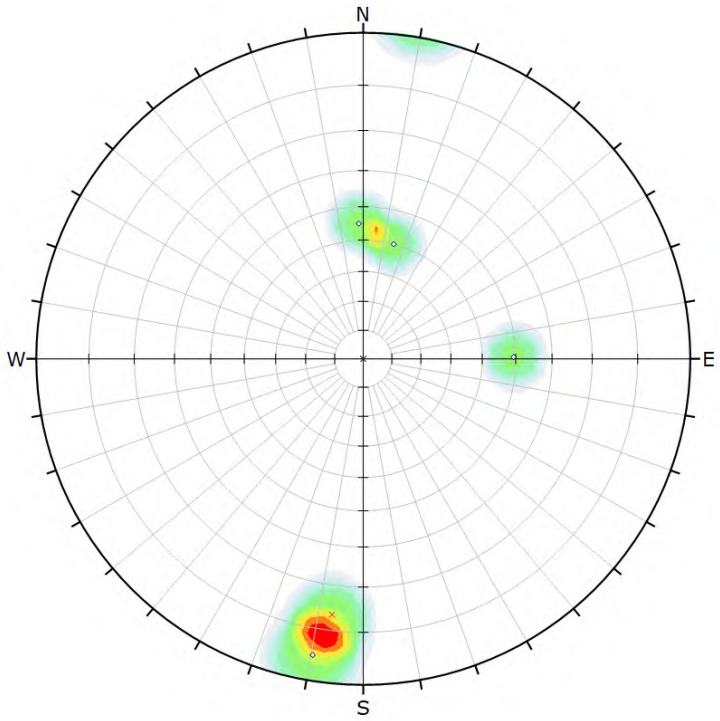


Color	Density Concentrations
	0.00 - 8.70
	8.70 - 17.40
	17.40 - 26.10
	26.10 - 34.80
	34.80 - 43.50
	43.50 - 52.20
	52.20 - 60.90
	60.90 - 69.60
	69.60 - 78.30
	78.30 - 87.00

Contour Data	Pole Vectors
Maximum Density	86.48%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Pole Vectors
Vector Count	3085 (3085 Entries)
Hemisphere	Lower
Projection	Equal Angle

Stereographic Projection of all Joints Dipping more than 35º Collected from Lindsay Formation



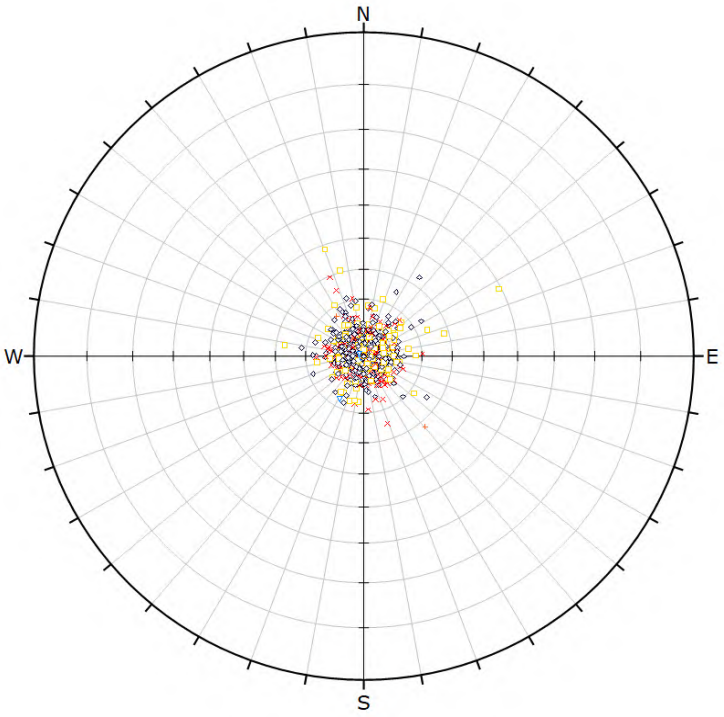
Symbol	TYPE	Quantity
◇	Filled Joint	4
×	Partially Open Joint	1

Color	Density Concentrations
	0.00 - 3.70
	3.70 - 7.40
	7.40 - 11.10
	11.10 - 14.80
	14.80 - 18.50
	18.50 - 22.20
	22.20 - 25.90
	25.90 - 29.60
	29.60 - 33.30
	33.30 - 37.00

Contour Data	Pole Vectors
Maximum Density	36.41%
Contour Distribution	Fisher
Counting Circle Size	1.0%

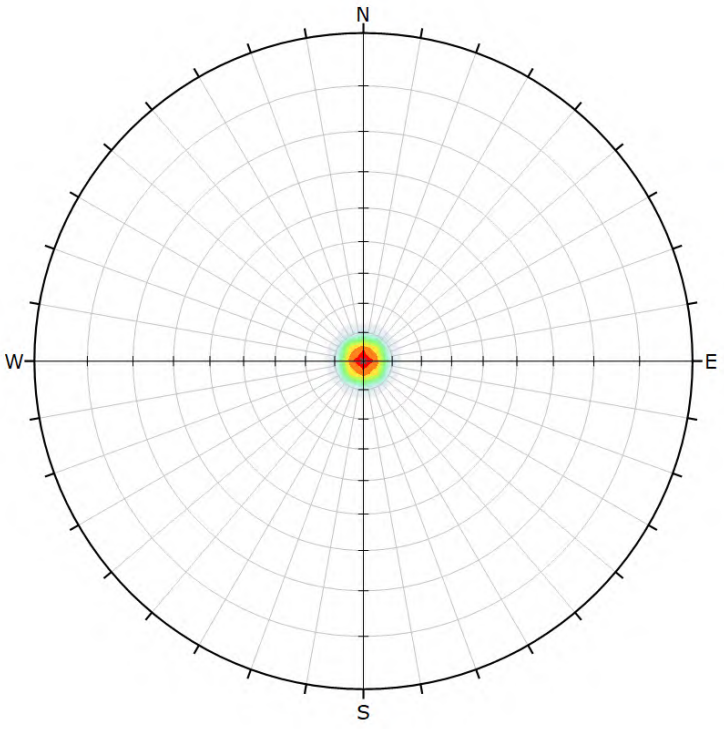
Plot Mode	Pole Vectors
Vector Count	5 (5 Entries)
Hemisphere	Lower
Projection	Equal Angle

Stereographic Projection of all Televiewer Data Collected from Verulam Formation



Symbol	TYPE	Quantity
◇	Bedding	1285
×	Filled Joint	363
△	Induced Fracture	2
+	Major Open Joint	7
▽	Minor Open Joint	27
□	Partially Open Joint	350

Plot Mode	Pole Vectors
Vector Count	2034 (2034 Entries)
Hemisphere	Lower
Projection	Equal Angle

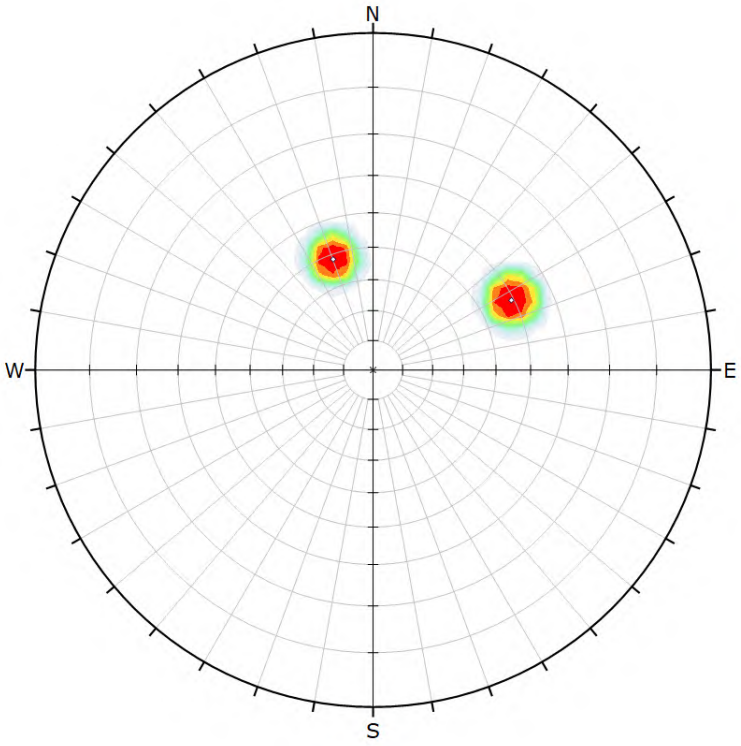


Color	Density Concentrations
	0.00 - 8.30
	8.30 - 16.60
	16.60 - 24.90
	24.90 - 33.20
	33.20 - 41.50
	41.50 - 49.80
	49.80 - 58.10
	58.10 - 66.40
	66.40 - 74.70
	74.70 - 83.00

Contour Data	Pole Vectors
Maximum Density	82.07%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Pole Vectors
Vector Count	2034 (2034 Entries)
Hemisphere	Lower
Projection	Equal Angle

Stereographic Projection of all Joints Dipping more than 35º Collected from Verulam Formation



Symbol	TYPE	Quantity
◇	Partially Open Joint	2

Color	Density Concentrations
	0.00 - 5.00
	5.00 - 10.00
	10.00 - 15.00
	15.00 - 20.00
	20.00 - 25.00
	25.00 - 30.00
	30.00 - 35.00
	35.00 - 40.00
	40.00 - 45.00
	45.00 - 50.00

Contour Data	Pole Vectors
Maximum Density	49.76%
Contour Distribution	Fisher
Counting Circle Size	1.0%

Plot Mode	Pole Vectors
Vector Count	2 (2 Entries)
Hemisphere	Lower
Projection	Equal Angle



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Enclosure 2

Darlington New Nuclear Project Soil Characterization Report

NK054-REP-07730-00053

September 23, 2021

GOLDER
MEMBER OF WSP

REPORT

Soil Characterization Report
NK054-REP-07330-00053

Darlington New Nuclear Project, Clarington, Ontario

Submitted to:

Ontario Power Generation Inc.

Attention: Shirley Leung

Submitted by:

Golder Associates Ltd.
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Whitby, Ontario, L1N 8Y6, Canada
+1 905 723 2727

20368429

September, 2021

ONTARIO**POWER**
GENERATION

ACCEPTED ..... ☑
ACCEPTED AS NOTED ..... ☐
REVISE AND RESUBMIT ..... ☐

Cammie Cheng — Signature
Sept 23, 2021 — Date

Name : Cammie Cheng

Department : Nuclear Environment Projects

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1.0 INTRODUCTION

This report has been prepared for the Ontario Power Generation (OPG) Darlington New Nuclear Project (DNNP) to meet the objectives described in Section 2.1. The DNNP site location is presented in Figure 1.

2.0 SOIL CHARACTERIZATION PROGRAM DESCRIPTION

2.1 Objectives

The objectives of this investigation are the following:

- To plan and conduct a comprehensive soil characterization program for the DNNP lands to support future preparation of the Hazardous Waste management Plan/Procedure by satisfying the relevant commitments documented under Deliverable D-P-3.6 in the DNNP Commitment Report[1] ("Commitment Report"). Specifically, the commitments are described as the following:
  - *"Prior to site preparation, OPG (Ontario Power Generation) to conduct a comprehensive soils characterization program. In particular, the potentially impacted soils in the areas OPG identifies as the spoils disposal area, cement plant area and asphalt storage area must be sampled to identify the nature and extent of potential contamination."*

  and

- "The presence of contaminated soil or rock will be assessed and managed if encountered to meet regulatory requirements."
- To plan and collect baseline soil quality data at the proposed northeast waste stockpile/landfill area ("NE Landfill Area), as well as south of the CN railway tracks on the DNNP lands as shown on Figure 3 (in case the proposed location of the stockpile/landfill area needs to be changed to the south side of the tracks in the future) to support the relevant commitment document under Deliverable D-P-9.1 of the Commitment Report. Specifically, the commitments are described as the following:
  - *"Prior to Excavation/Stockpiling*
    The geologic elements of a detailed site geotechnical investigation include, but not be limited, to:
    - *Collecting baseline soil quality data at the proposed northeast waste stockpile/landfill area prior to the placement of non-radiological waste."*

2.2 Background

2.2.1 Site Preparation Licence and Commitment

OPG currently maintains Nuclear Power Reactor Site Preparation Licence ("PRSL") 18.00/2022 for the DNNP. The DNNP is located in the Municipality of Clarington, in the Region of Durham, approximately 70 km east of the city of Toronto. The PRSL expires on August 17, 2022 and its renewal is underway.

OPG made a number of commitments during the environmental assessment and licensing process. OPG's commitment statements are organized and grouped into key commitments presented as deliverables and

[1] Darlington New Nuclear Project Commitments Report, NK054-REP-01210-00078

documented in the DNNP Commitment Report (OPG Document NK054-REP-01210-00078). Deliverables are organized in accordance with the licensing phase in which they must be completed.

A Hazardous Waste Management Plan/Procedure (Deliverable D-P-3.6 in the Commitment Report) will be prepared and submitted to the Canadian Nuclear Safety Commission ("CNSC") for review and acceptance no later than three months prior to commencement of PRSL licensed activities. The comprehensive soils characterization program completed as described herein will support the preparation of the Hazardous Waste Management Plan/Procedure prior to site preparation. To support the completion of the comprehensive soils characterization program, soil sampling at the south of the CN railway tracks on the DNNP land (Figure 2) was conducted.

Additionally, OPG will also develop a Site Geotechnical and Seismic Hazard Investigation Program as described under Deliverable D-P-9.1 in the Commitment Report and provide to CNSC, for information, prior to implementation of the program during the site preparation phase. Baseline soil quality data at the proposed northeast waste stockpile/landfill area, as well as at the south of the CN railway tracks on the DNNP lands (Figures 2 and 3) were collected as part of this investigation, as required, prior to the placement of the non-radiological waste to support the geologic elements of a detailed site geotechnical investigation.

2.2.2 DNNP Lands

The DNNP Lands comprise the eastern one third of the Darlington Nuclear ("DN") site and consist of approximately 176 hectares (ha) (436 acres) of land, as measured through this work program, and is bounded by Lake Ontario to the south, Holt Road to the west, St. Mary's Cement to the east and South Service Road of Highway 401 (now Energy Drive) to the north. The DNNP Lands are bisected by the Canadian National ("CN") railway into a southern and northern half of similar size. The area south of the railway tracks, referred to herein as the DNNP Lands South, is 95 ha and generally slopes towards Lake Ontario, while the area north of the tracks, referred to as the DNNP Lands NE Landfill Area, is 81 ha and slopes toward the east. The locations of the DNNP Lands South and the DNNP Lands NE Landfill Area are provided in Figure 1.

The overburden geology at the Site generally consists of fill materials at surface, underlain by the Upper Till (Newmarket Till), Interglacial Deposits (Thorncliffe Formation), and the Sunnybrooke Till overlying shale or limestone bedrock.[2]

3.0 INVESTIGATION SCOPE AND METHODS

Deliverable D-P-3.6 of the *Commitment Report* includes the planning and execution of a comprehensive soil characterization program for the DNNP site, and deliverable D-P-9.1 of the *Commitment Report* includes the collection of baseline soil quality data for the DNNP Lands NE Landfill Area.

The investigation activities included herein were completed between March 25 and May 14, 2021 and included the following tasks:

- **Health and Safety Plan**: Preparation of a Health and Safety / Safe Work Plan.

[2] CH2M Hill Canada Limited and Kinetrics Inc. 2009. Geological and Hydrogeological Environmental Existing Conditions Technical Support Document New Nuclear – Darlington Environmental Assessment. OPG document NK054-REP-07730-00005.

- **Utility Clearances**: Coordination of utility clearances with OPG and/or local utility companies, as appropriate, along with retaining the services of a private locator to assess for possible services in the areas of the proposed test locations.
- **Borehole Advancement**: The borehole drilling program included drilling of 56 boreholes. The locations of the boreholes are provided on Figures 2 and 3.
- **Soil Sampling**: Select soil samples were collected throughout the drilling program from 56 boreholes and from 53 shallow (0.00-0.15m) hand-dug test pits throughout the Site, to supplement the borehole drilling program.
- **Soil Sample Analysis:** Soil samples were submitted for chemical analysis of one or more of the following: petroleum hydrocarbons ("PHCs"), volatile organic compounds ("VOCs"), polycyclic aromatic hydrocarbons ("PAHs"), metals, hydride-forming metals, polychlorinated biphenyls ("PCBs"), and/or other regulated parameters, as noted in Table 8.
- **Reporting**: Golder compiled and assessed the field and laboratory results from the above noted activities into this report.

The locations of samples collected as part of this investigation in the DNNP Lands South are provided in Figure 2. The locations of samples collected as part of this investigation in the DNNP Lands NE Landfill Area are provided in Figure 3. Prior to this investigation, soil samples have not been collected at the sample locations indicated in Figure 2 and Figure 3. The scope of the field work completed as part of this investigation took into consideration the results and recommendations of the *Soil Gap Analysis*[3], which included field observations/walkdowns and a desktop review of relevant environmental reports to identify current and past uses of the DNNP lands with the potential to cause impacts to soil quality. The *Soil Gap Analysis* identified 20 areas of potential environmental concern ("APEC") with corresponding contaminants of concern and to further evaluate the soil conditions in each APEC, relevant environmental reports were reviewed to identify whether any prior investigations of soil quality had been completed that were relevant to an APEC. The intent of this investigation was to collect representation of soil quality data where there was none previously identified. A summary and the location of the APECs is provided on Figure 1. It is noted that no APECs were identified in the DNNP Lands NE Landfill Area.

The *Soil Gap Analysis* recommended conducting a preliminary investigation of soil quality to determine if any significant soil impacts were present, in support of the requirements of D-P-3.6. Additionally as part of this field program, the requirements for baseline soil quality data in support of commitment D-P-9.1 for the DNNP NE Landfill Area were taken into consideration. Accordingly, the scope for the field work completed as part of this investigation included the following:

- Completion of a borehole drilling program on the DNNP Lands South, to further evaluate soil quality for each APEC where a data gap was identified in the *Soil Gap Analysis*. The field work to support this objective included advancing 51 boreholes across the DNNP Lands South to collect the supplemental soil quality information, including 40 boreholes advanced to a depth of approximately 3 metres below ground surface ("mbgs"), 5 boreholes advanced to 6 mbgs, and 6 boreholes advanced to 10 mbgs;

[3] *"Soil Characterization Gap Analysis – Darlington New Nuclear Project"* prepared by Golder for OPG and dated August 13, 2020 (Golder File No. 20137285).

- Borehole locations and depths were determined based on the location and nature of the potentially contaminating activities ("PCAs") and APECs as identified in the *Soil Gap Analysis*, as well as physical access conditions and/or constraints identified in the field during the work. As part of this field work, samples were collected from the most likely zone to be impacted based on the specific PCAs, as well as to provide additional baseline evaluation of the underlying soil quality; and
- Completion of a borehole drilling program in the DNNP Lands NE Landfill Area to provide a preliminary assessment of soil quality in this area, including five boreholes advanced to depths of up to 3 mbgs.

In the absence of an APEC in the DNNP Lands NE Landfill Area, and based on Golder's understanding that this property has primarily been used for agricultural uses that pose a relatively low risk of causing impacts to soil quality, the borehole locations and depths were determined to provide general areal coverage within the proposed NE Landfill stockpile footprint in the most likely zone to be impacted (i.e., the upper fill) based on the known use of the property.

It is noted that OPG may consider a "south" landfill area (located generally on the north and east portions of the DNNP Lands South. Should this be the case, the soil sampling and analysis completed to address D-P-3.6 is also intended to satisfy the intent of D-P-9.1 for collection of baseline soil quality data. Specifically, the sampling program included the collection of soil samples targeting the most likely areas of the Site to contain contamination (i.e., the APEC areas), and the investigation included 32 sampling locations across potential "south" landfill areas, providing general areal coverage as well. Based on current information, the sampling and analysis completed for the DNNP Lands NE Landfill Area and DNNP Lands South will provide baseline soil quality data for their respective areas.

3.1 Field Investigation

The following sections describe the field investigation methods employed during this investigation. Borehole layout was completed on March 25, 2021. Soil sample collection was completed April 8 and May 14, 2021.

Prior to initiating the field work, Golder developed and implemented Site-specific protocols to protect the health and safety of its employees and subcontractors through the preparation of a Site-specific Health and Safety Plan ("Safe Work Plan"). An assessment of potential health and safety hazards at the Site and those associated with the proposed work was completed each day of the field program. A health and safety tail gate meeting was held with OPG staff and Golder's subcontractors each day prior to completion of the field work. The document was reviewed and signed on-Site by field personnel prior to commencing work. Additionally, prior to any intrusive investigations, including drilling, Golder completed public and private utility clearances as appropriate.

A total of 56 boreholes were advanced at the Site (51 on the DNNP Lands South, and five on the DNNP Lands NE Landfill Area). The boreholes were completed by Walker Drilling Ltd. ("Walker") using a Diedrich D120 track-mounted drill rig with 108 mm outside diameter ("OD") solid stem augers. Continuous soil samples (i.e., samples collected at repeating 60-cm intervals for the entire length of the borehole) were collected using a 50 mm diameter stainless steel split-spoon sampler.

3.1.1 Soil Sampling

During borehole advancement, soil samples were collected for visual characterization, headspace screening of combustible and organic vapour concentrations using a portable, intrinsically safe gas detector, and select soil samples were collected directly into pre-cleaned, laboratory-supplied sampling containers and submitted to Bureau Veritas Laboratories ("BVL") for analysis, as per the requirements in the attached Table 8 (Contaminants

of Concern in Soil, Darlington New Nuclear Project). The samples collected from the boreholes were supplemented with 53 shallow (0.00 to 0.15 mbgs) hand-dug test pits completed throughout the project area to further assess surficial soil quality.

A sampling and analysis plan was developed by a team of qualified people based on the information provided in this report. Table 8 following the text of this report was used to develop the sampling plan, and provides information regarding the number of samples and analysis required. In addition to the bulk soil analysis, 10% of the total volume of samples were to be collected for leachate analysis.

Soil samples were obtained from a combination of boreholes and shallow test pits, depending on the required depth of sample collection.

The quality assurance/quality control measures undertaken as part of this field program meet the requirements of O.Reg. 153/04, O.Reg. 406/19 and industry standard protocol. The quality assurance/quality control measures undertaken as part of this field program also meet the requirements of CSA N288.4 (*Environmental Monitoring Programs at Class I Nuclear Facilities and Uranium Mines and Mills*).

Maintaining a database of soil quality data is recommended for the management of data and for future integration into a soil tracking program. Golder has entered all available data into EQuIS and provided an electronic data deliverable.."

3.1.2 Field Screening Measurements

Field measurements of sample headspace concentrations were made using the following equipment:

Equipment	Parameters Detected	Operating Range	Precision	Accuracy	Calibration Standard
RKI Eagle 2	Combustible gas	0-50,000 ppm	NA	±5%	Hexane (100 ppm)
RKI Eagle 2	Total organic vapour	0-2,000 ppm	NA	±5%	Isobutylene (100 ppm)

Instruments were calibrated by Maxim Environmental Equipment prior to delivery to the Site, as well as daily, with the daily calibration checks completed by Golder. The results of soil headspace screening measurements are provided in the Record of Borehole Sheets in Appendix A.

3.1.3 Residue Management Procedures

All residues produced during the investigation (i.e., soil cuttings from drilling) were placed on the ground surface in the general area of the borehole being investigated, unless obvious evidence of environmental impact was noted, in which case the cuttings were placed in sealed drums and stored on Site for subsequent disposal in accordance with OPG's Waste Disposal Guidelines[4]. Two sealed drums of soil cuttings were ultimately generated as part of this investigation and removed from the Site by Ground Force Environmental ("GFL") to one of their treatment facilities as a non-hazardous waste.

[4] Section 3.9.6 *Solid Excavated Materials (such as Soil, Gravel, Asphalt and Concrete* of OPG's "Waste Disposal Guidelines for Solid Waste and Recycling at Darlington" (OPG No. D-INS-79000-10002 R0003)

3.2 Quality Assurance and Quality Control Measures

Golder's quality assurance program for environmental investigations was implemented to ensure that analytical data obtained by the investigation were valid and representative. The quality assurance program included the following measures:

- The use of Golder's standard operating procedures for all field investigation activities;
- The collection of field duplicate samples at a minimum frequency of one duplicate for every ten samples;
- Initial calibration of field equipment was performed at the start of each field day, with a daily checks of calibration, as needed, using a standard of known concentration;
- Soil samples were handled and stored in accordance with the sample collection and preservation requirement of the Ontario Ministry of the Environment, Conservation and Park's ("MECP") "*Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.I of the Environmental Protection Act"*, July 1, 2011. Samples were collected directly into pre-cleaned, laboratory-supplied sample containers with the appropriate preservative for the analyte group. Upon collection, samples were placed in insulated coolers with ice for storage and transport to the analytical laboratory under chain-of-custody;
- Dedicated sampling equipment and clean disposable Nitrile™ gloves were used at each sampling location to prevent cross-contamination. All non-dedicated sampling equipment (e.g., split-spoons) were decontaminated between sampling locations. Sampling equipment in contact with soil was: cleaned by mechanical means; washed with a phosphate-free, laboratory-grade detergent or equivalent (e.g., LiquiNox) where possible and, if necessary, an appropriate desorbing wash solution; and thoroughly rinsed with analyte-free water;
- Detailed field records documenting the methods and circumstances of collection for each field sample were prepared at the time of sample collection. Each sample was assigned a unique sample identification number recorded in the field notes, along with the date and time of sample collection, the sample matrix, and the requested analyses; and
- The submission of samples to the analytical laboratory in accordance with standard chain of custody procedures.

4.0 REVIEW AND EVALUATION

This section of the report presents a review and evaluation of the results of the drilling and soil sampling activities conducted as part of this investigation.

4.1 Soil Conditions

The soil conditions encountered during the borehole drilling program are presented in the Record of Borehole sheets provided in Appendix A. In general, overburden material consisted of surficial fill, underlain by variable native soils including sandy silt, silty sand, clayey silt and silty clay and gravel.

4.2 Field Screening

The results of headspace vapour measurements are presented in the Record of Borehole sheets in Appendix A, and were used to supplement the soil selection requirements in the attached Table 8 (Contaminants of Concern in Soil, Darlington New Nuclear Project). Headspace readings were measured as part of the investigation, and were used to supplement the soil sampling requirements outlined in Table 8. Headspace readings ranged from non-detect to 60 parts per million ("ppm") at BH21-08 (0.61-1.22 mbgs) for combustible gas vapour, and from non-detect to 25 ppm at BH21-08 (0.00-0.61 mbgs) for organic vapour. No evidence of objectionable odour or obvious evidence of staining or environmental impact was observed throughout the investigation, with the exception of soil samples collected from BH21-7, BH21-8, BH21-14, BH21-17, BH21-18, BH21-19, BH21-20, which exhibited objectionable PHC-like odours and staining within the surficial gravel and/or shallow fill (i.e., within approximately 0.00-1.20 mbgs). The objectionable soil was contained in drums and subsequently removed from the property as a non-hazardous waste as corresponding analytical data did not exceed the threshold for hazardous waste, and was accepted by GFL as such based on their review of the data.

4.3 Applicable Site Condition Standards

The analytical results of the soil samples collected for this investigation were compared to the Table 3 site condition standards (industrial property use, coarse soil texture) presented in the MECP document "*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*", dated April 15, 2011 (the "MECP Table 3 Standards"). The site condition standards were selected based on the following rationale:

- The DNNP Lands are considered to be an industrial property use;
- The DNNP Lands are supplied by the municipal drinking water system and does not include any wells that are used or intended for use as a source of potable water;
- The DNNP Lands are not located in an area designated in a municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of ground water;
- The native soil materials were qualitatively observed to consist of coarse textured materials and accordingly, the more stringent coarse textured site condition standards were conservatively assumed to apply;
- The closest water body is Lake Ontario (adjacent to the south); however, there is no intention to reuse any soil at the DNNP Lands at any location that is within 30 metres of Lake Ontario. Water bodies appear to be present on both the DNNP Lands NE Landfill Area and the DNNP Lands South as shown in Figure 3; however, these features appear to primarily be intermittent drainage features, rather than permanent water bodies representing habitat for aquatic receptors. Should soil reuse be anticipated within 30 metres of a water body, more stringent review of the soil quality data will be required as MECP Table 8 standards would apply as well as potentially other restrictions (e.g. CLOCA);
- There are no features on the DNNP Lands that would meet the conditions of an environmentally sensitive site of O.Reg. 153/04;
- In general, the pH of surface soil is greater than 5 and less than 9 and the pH of sub-surface soil meets the requirement that the pH fall within this range. One sample (BH21-30 collected from 1.82-2.44 mbgs) had a reported pH of 11.7. This localized, shallow soil sample is not considered a concern (there is no

associated risk to human health); however, additional assessment of the pH of any excess soil generated during construction in this area may be appropriate to confirm this localized result;

- The intended use of the DNNP Lands is and will continue to be industrial (power generation); and
- The overburden thickness is greater than 2 metres over more than one-third of the DNNP Lands.

In general, the MECP Table 3 Standards (industrial property use, coarse soil texture) are appropriately protective for reuse of excess soil at the DNNP Lands, provided that excess soil is not reused within 30 metres of water body.

4.4 Soil Quality

The analytical results of soil samples are presented in Tables 2 to 7, and the locations of soil samples collected as part of this investigation are represented in Figures 4.1 through 4.10 and Figures 5.1 through 5.7. Laboratory certificates of analysis for the soil samples are included in Appendix B. A total of 217 soil samples (including 29 duplicate soil samples) were collected and submitted for analytical testing. The reported concentrations for 204 out of the 217 samples submitting for testing met the MECP Table 3 Standards. Specifically, the following are of note:

- The reported concentrations for all samples collected from the DNNP Lands South met the MECP Table 3 Standards, with the exception of the following samples:
  - GS21-39 (0.00-0.32 mbgs) in APEC 19b and 19d – the reported concentrations of copper, zinc and arsenic were above the MECP Table 3 Standards;
  - BH21-18-1 (0.00-0.61 mbgs) in APEC 15a - the reported concentration of PHC F1 was above the MECP Table 3 Standards;
  - BH21-19-1 (0.00-0.61 mbgs) in APEC 15a - the reported concentration of PHC F1 was above the MECP Table 3 Standards;
  - BH21-20-1 (0.00-0.61 mbgs) in APEC 15a- the reported concentrations of PHC F1 and PHC F2 were above the MECP Table 3 Standards;
  - BH21-21-1 (0.00-0.61 mbgs) in APEC 15b - the reported concentration of PHC F1 was above the MECP Table 3 Standards;
  - BH21-7-1 (0.00-0.61 mbgs) in APEC 8 - the reported concentration of PHC F1 was above the MECP Table 3 Standards; and
  - BH21-8-1 (0.00-0.61 mbgs) in APEC 8 - the reported concentration of PHC F1 was above the MECP Table 3 Standards.
- The reported concentrations for all samples collected from the DNNP NE Landfill Area met the MECP Table 3 Standards.

The maximum identified depth of soil impacts (i.e., soil samples exceeding the MECP Table 3 Standards, as noted above) in the DNNP Lands South is 0.61 mbgs. The reported concentrations for submitted soil samples at a greater depth (i.e., from 0.61 mbgs to 3.05 mbgs) satisfied the MECP Table 3 Standards.

Golder is not aware of the need to take any immediate action to address soil identified as exceeding the MECP Table 3 Standards; rather, the impacts represented by these samples would only require additional assessment in the context of the soil management and proposed reuse for the soil, should the soil be excavated in the future. Based on the information contained herein, it is likely that the soil could be reused as planned within the DNNP lands; however, site-specific excess soil standards may have to be developed in order to confirm this, prior to placement.

4.5 Data Quality Review

The quality assurance assessment of the field duplicate sample results was conducted considering the MECP document "*Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act*", March 9, 2004 (amended in July 2009 and effective as of July 1, 2011) ("Analytical Protocol") and other relevant technical guidance from the United States Environmental Protection Agency.

The data quality review included the review of field notes, the results of field quality control samples, the result of laboratory quality control samples, noting that the field quality control program is supported by the analytical laboratory's internal quality assurance program that includes the analysis of laboratory blanks, spikes, surrogates and duplicate samples. The findings of the data quality review are presented in Appendix B.

The analytical laboratory did not identify any concerns with the quality of the analyses completed as part of this investigation. The data quality review conducted by Golder did not identify any relevant concerns with the quality of the analyses completed as part of this investigation. The quality assurance/quality control measures undertaken as part of this field program meet the requirements of O.Reg. 153/04, O.Reg. 406/19 and industry standard protocol. The quality assurance/quality control measures undertaken as part of this field program also meet the requirements of CSA N288.4 (*Environmental Monitoring Programs at Class I Nuclear Facilities and Uranium Mines and Mills)* and the requirements of the *Golder Associates Integrated Management System*, which complies with the ISO 9001:2015 quality management system standard.

Accordingly, the analytical data generated during the investigation are valid and representative and may be used in this evaluation without further qualification; it is therefore Golder's opinion that the data quality objectives for this scope of work have been satisfied.

5.0 CONCLUSIONS

The investigation included the collection and analysis of 217 soil samples (including 29 duplicate soil samples) from 109 sampling locations to assess soil quality in the DNNP Lands. Impacts to shallow soil (copper, zinc, arsenic, PHC F1, PHC F2) were identified at seven sampling locations in APECs 8, 15a, 15b, 17a, 19b and 19d in the DNNP Lands South. The maximum known depth of these impacts is 0.61 mbgs. The reported concentrations for all samples collected in the DNNP Lands NE Landfill Area met the MECP Table 3 Standards.

In general, the soil exceedances identified above were marginally above the Table 3 Standards, and would be considered a non-hazardous waste; however, these soils are potentially suitable for reuse at the Site.

The objectives of this investigation, as identified in Section 2.1 of this report in support of D-P-3.6 and D-P-9.1, in the context of the completion of a comprehensive soil characterization program, and the collection of baseline soil quality data at the proposed DNNP Lands NE Landfill Area have been completed; it is noted that the presence of contaminated soil has been assessed, and management practices for the impacted soil identified on-Site will be identified through the development of a project-specific soil management plan.

6.0 RECOMMENDATIONS

The following recommendations are provided, noting that the design of the DNNP project is not complete and that OPG intends, on a preliminary basis, to reuse excess soil generated in the course of these construction activities in an excess soil placement area (i.e., a soil berm, spoils area) located on either the DNNP Lands NE Landfill Area or portions of the DNNP Lands South:

- Further delineation of soil impacts should be completed at seven sampling locations in APECs 8, 15a, 15b, 17a, 19b and 19d, pending final excavation design, for the appropriate management of excavated soils from these areas, if required;
- The suitability of excess soil in the areas of soil impacts for reuse in an excess soil containment structure should be further evaluated through the development of excess soil standards for the containment structure; and,
- A soil management plan should be developed to guide soil management in the course of planned construction activities in the DNNP Lands. The soil management plan should include requirements for soil testing in advance of construction, requirements for construction and requirements for reuse of the excess fill in the containment structure (including requirements for any excess soil that is unsuitable for reuse in the containment structure).

7.0 LIMITATIONS

This report was prepared for the exclusive use of Ontario Power Generation and the Darlington New Nuclear Project. No third parties may rely upon this report. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, is the sole responsibility of such third party. This report is based on data and information collected during this investigation conducted by Golder Associates Ltd. in accordance with our proposal and is based solely on site conditions encountered at the time of the field investigation. In preparing this site assessment, Golder evaluated only conditions on the DNNP Lands and did not evaluate the operations on adjacent properties. Only limited chemical analyses of soil samples were carried out. Regulatory criteria are used for comparison purposes only and are not necessarily enforceable on the owner. It should be noted that the results of an investigation of this nature should, in no way, be construed as a warranty that the site is free from any and all contamination from past or current practices.

Golder did not perform a complete assessment of all possible conditions or circumstances that may exist at the site referenced in the Report. Conditions may therefore exist which were not detected given the limited nature of the assessment. In addition, it is recognized that the passage of time affects the information provided in the Report. Golder's opinions are based upon information available to Golder as of the date of the Report. It is understood that the report forms no more than an opinion of the actual conditions and requirements at the Site and cannot be used to assess the effect of any subsequent changes in any laws or regulations and the environmental quality of the Site or its surroundings.

The activities described and conclusions drawn within this report address only the geo-environmental (chemical) aspects of the subsurface conditions at the subject property. The geotechnical (physical) aspects, including, without limitation, the engineering recommendations for the design and construction of building foundations, pavements, underground servicing and the like are outside the terms of reference for this report and have not been investigated or addressed herein.

The scope and the period of Golder's assessment are described in this Report, and are subject to restrictions, assumptions and limitations. Except as noted herein, the work was conducted in accordance with the scope of work and terms and conditions under contract with OPG.

In evaluating the Site as described (i.e., the DNNP Lands), Golder Associates Ltd. has relied in good faith on information provided by others. We accept no responsibility for any deficiency, misstatements or inaccuracies contained in this report as a result of omission, errors, misinterpretations or fraudulent acts by others. Golder Associates Ltd. accepts no responsibility for any reduction in property value, either real or perceived, or for decisions made as a result of the reporting of factual information herein.

If additional information is obtained during future work at the Site, including excavations, borings, or other studies, and/or if conditions exposed during construction are different from those encountered in this assessment, Golder may be requested to re-evaluate the conclusions presented in this report and provide amendments as required.

Signature Page

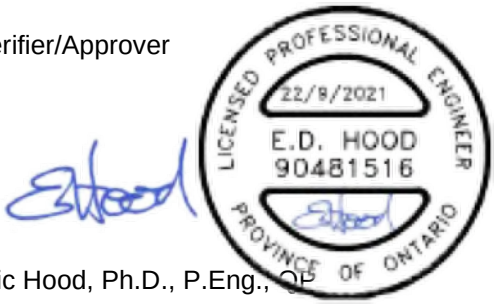
Golder Associates Ltd.

Preparer:



Kevan Browne, B.A.
Project Manager, Contaminated Sites

Verifier/Approver



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Tables

Table 1 - Borehole and Test Pit Sampling Summary
Darlington New Nuclear Project

Location ID	Area of Potential Environmental Concern	Easting	Northing	Sample ID	Sample Date	Sample Depth		Headspace		Soil Type / Observations	Analysis
						Start (mbgs)	End (mbgs)	Hexane (ppm)	Isobutylene (ppm)		
GS21-1	APEC 1	683605.15	4860560.60	GS21-01	2021-04-16	0	0.15	0	0	Brown silty sand with trace gravel - No Odours or Staining	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-2	APEC 1	683638.43	4860579.60	GS21-02	2021-04-16	0	0.15	0	0	Brown silty sand with trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-3	APEC 6, 7	684229.08	4861004.87	GS21-03	2021-04-19	0	0.15	0	1	Light brown sand	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-4	APEC 7	684101.51	4860823.26	GS21-04	2021-04-16	0	0.15	0	1	brown sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-5	APEC 7	684152.00	4860802.19	GS21-05	2021-04-19	0	0.15	0	0	Brown topsoil, tracel gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-6	APEC 7	684180.43	4860875.57	GS21-06	2021-04-19	0	0.15	0	0	Grey sand with gravel, trace clay	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-7	APEC 7	684157.79	4860916.23	GS21-07	2021-04-16	0	0.15	0	0	Brown sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-8	APEC 7	684200.45	4860925.29	GS21-08	2021-04-19	0	0.15	0	0	Light brown sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-9	APEC 7	684195.72	4860962.35	GS21-09	2021-04-16	0	0.15	0	0	Brown sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-10	APEC 7	684188.33	4861007.89	GS21-10	2021-04-16	0	0.15	0	1	Grey sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-11	APEC 7	684211.63	4861056.36	GS21-11	2021-04-16	0	0.15	0	0	Brown sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-12	APEC 7	684132.67	4860860.23	GS21-12	2021-04-16	0	0.15	0	1	Brown sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-13	APEC 11	683998.18	4860787.36	GS21-13	2021-04-16	0	0.15	0	0	Grey silty sand with trace gravel	PCBs, PAHs
GS21-14	APEC 11	684014.35	4860810.27	GS21-14	2021-04-16	0	0.15	0	1	Greyish brown sand with gravel	PCBs, PAHs
GS21-15	APEC 13, 19b	684260.06	4860090.33	GS21-15	2021-04-20	0	0.15	0	1	Brown topsoil	OCPs , PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-16	APEC 13, 19b	684288.95	4860121.32	GS21-16	2021-04-20	0	0.15	0	0	Brown to grey topsoil with trace clay	OCPs , PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-17	APEC 13, 19b	684332.42	4860136.47	GS21-17	2021-04-20	0	0.15	0	1	Greyish brown silty topsoil	OCPs , PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-18	APEC 13, 19b	684357.70	4860167.36	GS21-18	2021-04-20	0	0.15	5	0	Brown sandy topsoil	OCPs , PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-19	APEC 13, 19b	684403.24	4860174.09	GS21-19	2021-04-20	0	0.15	0	1	Brown topsoil	OCPs , PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-20	APEC 15a	683837.11	4859951.11	GS21-20	2021-04-15	0	0.15	0	0	Dark Brown Silty Sand, Some Gravel	BTEX, PAH
GS21-21	APEC 15a	683856.68	4859902.56	GS21-21	2021-04-15	0	0.15	5	0	Light Brown Sand, some gravel	BTEX, PAH
GS21-22	APEC 15a	683883.00	4859874.47	GS21-22	2021-04-15	0	0.15	0	0	Dark brown to black sandy topsoil	BTEX, PAH
GS21-23	APEC 15a	683934.38	4859851.68	GS21-23	2021-04-15	0	0.15	5	0	Light brown sand, trace gravel	BTEX, PAH
GS21-24	APEC 15a	683977.23	4859882.17	GS21-24	2021-04-15	0	0.15	5	0	Dark brown sand, some organics	BTEX, PAH
GS21-25	APEC 15a	684010.21	4859927.73	GS21-25	2021-04-15	0	0.15	0	0	Dark brown sand with trace gravel, organics	BTEX, PAH
GS21-26	APEC 15a	684014.52	4860011.92	GS21-26	2021-04-15	0	0.15	5	0	Brown sand with some gravel, trace organics	BTEX
GS21-27	APEC 15c	684297.58	4860277.32	GS21-27	2021-04-19	0	0.15	0	0	Grey sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-28	APEC 15c	684428.53	4860314.25	GS21-28	2021-04-19	0	0.15	0	0	Brown sandy topsoil	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-29	APEC 15c	684586.21	4860484.44	GS21-29	2021-04-19	0	0.15	0	0	Dark brown sand with trace organics	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-30	APEC 15c	684418.73	4860426.86	GS21-30	2021-04-19	0	0.15	0	0	Grey sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-31	APEC 15d	684377.81	4860555.42	GS21-31	2021-04-19	0	0.15	0	1	Grey sand with gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-32	APEC 15d	684406.56	4860657.29	GS21-32	2021-04-19	0	0.15	0	0	Greyish brown sand with gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-33	APEC 15d	684399.60	4860601.15	GS21-33	2021-04-19	0	0.15	0	1	Grey sand with gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-34	APEC 15d	683993.72	4860388.18	GS21-34	2021-04-19	0	0.15	0	0	Grey silty sand with trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-35	APEC 19a	683959.52	4860495.98	GS21-35	2021-04-19	0	0.15	0	0	Light brown sand with gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-36	APEC 19a	684000.92	4860648.34	GS21-36	2021-04-16	0	0.15	0	1	Light brown silt	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-37	APEC 19b	684272.02	4860064.94	GS21-37	2021-04-20	0	0.15	0	1	Grey gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-38	APEC 19b	684385.27	4860127.37	GS21-38	2021-04-20	0	0.15	0	1	Brown sandy topsoil	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-39	APEC 19b, 19d	684130.94	4860072.88	GS21-39	2021-04-20	0	0.15	0	0	Greyish brown topsoil with trace clay	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-40	APEC 19d	684097.07	4860085.59	GS21-40	2021-04-19	0	0.15	0	0	Light brown sand with trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-41	APEC 19d	684070.19	4860064.43	GS21-41	2021-04-20	0	0.15	0	0	Greyish brown sand with trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-42	APEC 19d	684095.50	4860027.52	GS21-42	2021-04-20	0	0.15	0	0	Brown topsoil with trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-43	APEC 20	684289.88	4861123.46	GS21-43	2021-04-19	0	0.15	0	1	Brownish black topsoil	PHCs, PCBs
GS21-44	APEC 20	683657.31	4860348.06	GS21-44	2021-04-16	0	0.15	0	0	Dark brown gravel with some sand	PHCs
GS21-45	APEC 20	683766.68	4860275.50	GS21-45	2021-04-16	0	0.15	0	0	Dark brown clayey sand, some organics	PHCs
GS21-46	APEC 20	683978.19	4860144.49	GS21-46	2021-04-16	0	0.15	0	0	Light brown clayey sand	PHCs, PCBs
GS21-47	APEC 20	684013.07	4860069.64	GS21-47	2021-04-15	0	0.15	0	0	Light brown sand with trace gravel	PHCs
GS21-48	APEC 20	683727.80	4860439.95	GS21-48	2021-04-16	0	0.15	0	0	Light brown sandy silt with trace gravel	PHCs
GS21-49	APEC 20	683820.20	4860527.41	GS21-49	2021-04-16	0	0.15	5	0	Light brown sandy silt with trace gravel	PHCs, PCBs
GS21-50	APEC 20	683941.91	4860638.19	GS21-50	2021-04-16	0	0.15	0	0	Greyish brown sand with gravel	PHCs
GS21-51	APEC 20	684089.71	4860747.45	GS21-51	2021-04-16	0	0.15	0	1	Greyish brown sand with gravel,	PHCs
GS21-52	APEC 20	684345.03	4861192.54	GS21-52	2021-04-19	0	0.15	0	1	Brown topsoil	PHCs, PCBs
GS21-53	APEC 20	683563.14	4860433.78	GS21-53	2021-04-16	0	0.15	0	0	Dark brown silty sand, trace organics	PHCs

Table 1 - Borehole and Test Pit Sampling Summary
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Location ID	Area of Potential Environmental Concern	Easting	Northing	Sample ID	Sample Date	Sample Depth		Headspace		Soil Type / Observations	Analysis
						Start (mbgs)	End (mbgs)	Hexane (ppm)	Isobutylene (ppm)		
BH21-1	APEC 1	683714.62	4860626.167	BH21-1-1	2021-05-04	0.00	0.61	0	1	Brown sand, tarce organics	-
	APEC 1			BH21-1-2	2021-05-04	0.61	1.22	0	1	Light brown sandy silt, trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 1			BH21-1-3	2021-05-04	1.22	1.52	0	1	Light brown silt, trace sand	N/A
	APEC 1			BH21-1-4	2021-05-04	1.83	2.13	0	0	Light brown silt, trace sand	N/A
	APEC 1			BH21-1-5	2021-05-04	2.44	3.05	0	0	Light brown silt, trace sand	N/A
BH21-2	APEC 1	683716.67	4860605.206	BH21-2-1	2021-05-05	0.00	0.61	0	1	Greyish brown sandy silt, trace gravel	N/A
	APEC 1			BH21-2-2	2021-05-05	0.61	1.22	0	1	Greyish brown sandy silt, trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 1			BH21-2-3	2021-05-05	1.22	1.83	0	1	Greyish brown sandy silt, trace gravel	N/A
	APEC 1			BH21-2-4	2021-05-05	1.83	2.44	0	1	Greyish brown sandy silt, trace gravel	N/A
	APEC 1			BH21-2-5	2021-05-05	2.44	3.05	0	1	Greyish brown sandy silt, trace gravel	N/A
BH21-3	APEC 2, 3, 4, 11	684004.84	4860797.891	BH21-3-1	2021-05-04	0	0.61	0	0	Grey sand, trace gravel	BTEX, PCBs, PAHs, VOCs
	APEC 2, 3, 4, 11			BH21-3-2	2021-05-04	0.61	1.22	0	0	Grey sand, trace gravel	N/A
	APEC 2, 3, 4, 11			BH21-3-3	2021-05-04	1.22	1.83	0	0	Light brown silty clay	N/A
	APEC 2, 3, 4, 11			BH21-3-4	2021-05-04	1.83	2.44	0	0	Light brown sandy silt	N/A
	APEC 2, 3, 4, 11			BH21-3-5	2021-05-04	2.44	2.9	0	0	Light brown silt, trace gravel	N/A
BH21-4	APEC 2, 3, 4	683989.41	4860833.938	BH21-4-1	2021-05-04	0.00	0.46	0	0	Grey, sandy gravel	BTEX, PCBs, PAHs
	APEC 2, 3, 4			BH21-4-2	2021-05-04	0.61	1.22	5	0	Dark brown to light brown silty clay	N/A
	APEC 2, 3, 4			BH21-4-3	2021-05-04	1.22	1.83	0	1	Dark brown to light brown silty clay	N/A
	APEC 2, 3, 4			BH21-4-4	2021-05-04	1.83	2.44	0	1	Light brown sandy silt, trace gravel	N/A
	APEC 2, 3, 4			BH21-4-5	2021-05-04	2.44	3.05	0	1	Light brown sandy silt, trace gravel	N/A
BH21-5	APEC 2, 3, 4	683950.93	4860841.25	BH21-5-1	2021-05-04	0	0.61	10	1	Light brown gravelly sand and gravelly clay	N/A
	APEC 2, 3, 4			BH21-5-2	2021-05-04	0.61	1.22	10	1	Light brown gravelly sand and gravelly clay	BTEX, PCBs, PAHs
	APEC 2, 3, 4			BH21-5-3	2021-05-04	1.22	1.83	5	1	Dark brown clay, trace organics	-
BH21-6	APEC 6, 7	684258.09	4861029.647	BH21-6-1	2021-05-03	0	0.61	35	18	Brown to black sandy gravel	PCBs, PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 6, 7			BH21-6-1A	2021-05-14	0	0.61	-	-	Brown to black sandy gravel	Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 6, 7			BH21-6-2	2021-05-03	0.61	1.22	15	2	Greyish brown clayey silt, trace sand	-
	APEC 6, 7			BH21-6-3	2021-05-03	1.22	1.83	15	0	Greyish brown clayey silt, trace sand	-
	APEC 6, 7			BH21-6-4	2021-05-03	1.83	2.44	5	0	Greyish brown clayey silt, trace sand	-
	APEC 6, 7			BH21-6-5	2021-05-03	2.44	3.05	5	0	Grey silt, trace sand	PCBs, PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-7	APEC 8	683845.84	4860014.543	BH21-7-1	2021-05-12	0	0.61	10	9	Blackish brown sandy gravel	PHC, BTEX
	APEC 8			BH21-7-2	2021-05-12	0.61	1.22	0	3	Brown to grey sandy silt	N/A
	APEC 8			BH21-7-3	2021-05-12	1.22	1.83	0	9	Brown to grey sandy silt	N/A
	APEC 8			BH21-7-4	2021-05-12	1.83	2.44	0	0	Greyish brown silty clay, trace sand	N/A
	APEC 8			BH21-7-5	2021-05-12	2.44	3.05	0	0	Greyish brown silty clay, trace sand	N/A
BH21-8	APEC 8	683872.92	4860023.675	BH21-8-1	2021-05-11	0	0.61	45	25	Blackish brown sandy gravel	PHC, BTEX
	APEC 8			BH21-8-2	2021-05-11	0.61	1.22	60	16	Light brown silty sand, trace gravel	N/A
	APEC 8			BH21-8-3	2021-05-11	1.22	1.83	5	0	Light brown silty sand, trace gravel	N/A
	APEC 8			BH21-8-4	2021-05-11	1.83	2.44	5	0	Greyish brown silty clay, trace sand	N/A
	APEC 8			BH21-8-5	2021-05-11	2.44	3.05	0	0	Greyish brown silty clay, trace sand	PHC, BTEX
	APEC 8			BH21-8-6	2021-05-11	3.05	3.66	-	-	Greyish brown silty clay, trace sand	N/A
	APEC 8			BH21-8-7	2021-05-11	3.66	4.27	0	0	Greyish brown silty clay, trace sand	N/A
	APEC 8			BH21-8-8	2021-05-11	4.27	4.88	5	0	Grey sandy silt	N/A
	APEC 8			BH21-8-9	2021-05-11	4.88	5.49	0	0	Grey sandy silt	N/A
	APEC 8			BH21-8-10	2021-05-11	5.49	6.1	0	0	Grey sandy silt	N/A
	APEC 8			BH21-8-11	2021-05-11	6.1	6.71	0	0	Grey sandy silt	N/A
	APEC 8			BH21-8-12	2021-05-11	6.71	7.32	0	0	Grey sandy silt	N/A
	APEC 8			BH21-8-13	2021-05-11	7.32	7.92	5	0	Grey sandy silt	N/A
	APEC 8			BH21-8-14	2021-05-11	7.92	8.53	0	0	Grey sandy silt	N/A
	APEC 8			BH21-8-15	2021-05-11	8.53	9.14	0	1	Grey sandy silt	N/A
BH21-9	APEC 9	683714.4	4860164.661	BH21-9-1	2021-05-07	0	0.61	5	1	Light brown sand, trace gravel	PHCs, VOCs, BTEX, PAHs, ABN, OCP
	APEC 9			BH21-9-2	2021-05-07	0.61	1.22	15	1	Greyish brown clayey silt, trace sand trace gravel	N/A
	APEC 9			BH21-9-3	2021-05-07	1.22	1.83	0	1	Greyish brown clayey silt, trace sand trace gravel	N/A
	APEC 9			BH21-9-4	2021-05-07	1.83	2.36	5	1	Greyish brown clayey silt, trace sand trace gravel	N/A
	APEC 9			BH21-9-5	2021-05-07	2.44	3.05	0	1	Greyish brown clayey silt, trace sand trace gravel	N/A
BH21-10	APEC 9	683700.29	4860137.907	BH21-10-1	2021-05-10	0	0.61	0	1	Brown sand, trace silt	PHCs, VOCs, BTEX, PAHs, ABN, OCP

Table 1 - Borehole and Test Pit Sampling Summary
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Location ID	Area of Potential Environmental Concern	Easting	Northing	Sample ID	Sample Date	Sample Depth		Headspace		Soil Type / Observations	Analysis
						Start (mbgs)	End (mbgs)	Hexane (ppm)	Isobutylene (ppm)		
	APEC 9			BH21-10-2	2021-05-10	0.61	1.22	-	-	Brownish grey sandy silt	N/A
	APEC 9			BH21-10-3	2021-05-10	1.22	1.83	5	1	Brownish grey sandy silt	PHCs, VOCs, BTEX, PAHs, ABN, OCP
	APEC 9			BH21-10-4	2021-05-10	1.83	2.44	15	1	Light brown to grey silty clay	N/A
	APEC 9			BH21-10-5	2021-05-10	2.44	3.05	5	1	Light brown to grey silty clay	N/A
	APEC 9			BH21-10-6	2021-05-10	3.05	3.66	5	0	Light brown to grey silty clay	N/A
	APEC 9			BH21-10-7	2021-05-10	3.66	4.27	5	0	Light brown to grey silty clay	N/A
	APEC 9			BH21-10-8	2021-05-10	4.27	4.88	5	1	Light brown to grey silty clay	N/A
	APEC 9			BH21-10-9	2021-05-10	4.88	5.49	5	1	Grey sandy silt, trace gravel	N/A
	APEC 9			BH21-10-10	2021-05-10	5.49	6.1	-	-	Grey sandy silt, trace gravel	N/A
	APEC 9			BH21-10-11	2021-05-10	6.1	6.71	10	0	Grey sandy silt, trace gravel	N/A
	APEC 9			BH21-10-12	2021-05-10	6.71	7.32	15	0	Grey sandy silt, trace gravel	N/A
	APEC 9			BH21-10-13	2021-05-10	7.32	7.92	10	0	Grey sandy silt, trace gravel	N/A
	APEC 9			BH21-10-14	2021-05-10	7.92	8.53	5	1	Grey sandy silt, trace gravel	N/A
	APEC 9			BH21-10-15	2021-05-10	8.53	9.14	0	1	Grey sandy silt, trace gravel	N/A
BH21-11	APEC 10, 15b, 17c, 19c	684107.53	4860220.944	BH21-11-1	2021-04-26	0	0.61	5	2	Grey to brown gravelly sand, topsoil from 0-0.1m	PHCs, VOCs, BTEX, PAHs, ABN
	APEC 10, 15b, 17c, 19c			BH21-11-2	2021-04-26	0.61	1.22	5	3	Light brown sandy silt, trace gravel	PHCs, VOCs, BTEX, PAHs, ABN
	APEC 10, 15b, 17c, 19c			BH21-11-3	2021-04-26	1.22	1.83	0	1	Light brown sandy silt, trace gravel	N/A
	APEC 10, 15b, 17c, 19c			BH21-11-4	2021-04-26	1.83	2.29	0	1	Light brown sandy silt, trace gravel	N/A
	APEC 10, 15b, 17c, 19c			BH21-11-5	2021-04-26	2.44	2.74	0	0	Light brown sandy silt, trace gravel	N/A
BH21-12	APEC 10, 15b	684090.47	4860191.21	BH21-12-1	2021-04-26	0	0.31	0	1	Grey gravel, topsoil from 0-0.1m	N/A
	APEC 10, 15b			BH21-12-2	2021-04-26	0.61	0.76	0	0	Grey gravel	N/A
	APEC 10, 15b			BH21-12-3	2021-04-26	1.22	1.83	0	1	Grey gravel	PHCs, VOCs, BTEX, PAHs, ABN
	APEC 10, 15b			BH21-12-4	2021-04-26	1.83	2.44	0	1	Dark brown clayey silt	N/A
	APEC 10, 15b			BH21-12-5	2021-04-26	2.44	3.05	0	0	Light brown silt, trace gravel	PHCs, VOCs, BTEX, PAHs, ABN
BH21-13	APEC 10, 15b, 17c, 19c	684129.36	4860182.236	BH21-13-1	2021-04-28	0	0.61	0	2	Brown gravelly sand, topsoil from 0-0.1m	PHCs, VOCs, BTEX, PAHs, ABN
	APEC 10, 15b, 17c, 19c			BH21-13-2	2021-04-28	0.61	1.22	0	1	Light brown sandy silt, trace gravel	N/A
	APEC 10, 15b, 17c, 19c			BH21-13-3	2021-04-28	1.22	1.83	0	2	Light brown sandy silt, trace gravel	N/A
	APEC 10, 15b, 17c, 19c			BH21-13-4	2021-04-28	1.83	2.29	0	0	Light brown sandy silt, trace gravel	PHCs, VOCs, BTEX, PAHs, ABN
	APEC 10, 15b, 17c, 19c			BH21-13-5	2021-04-28	2.44	2.74	0	0	Light brown sandy silt, trace gravel	N/A
	APEC 10, 15b, 17c, 19c			BH21-13-6	2021-04-28	3.05	3.35	0	0	Light brown sandy silt, trace gravel	N/A
	APEC 10, 15b, 17c, 19c			BH21-13-7	2021-04-28	3.66	3.81	0	0	Light brown sandy silt, trace gravel	N/A
	APEC 10, 15b, 17c, 19c			BH21-13-8	2021-04-28	4.27	4.42	0	0	Light brown sandy silt, trace gravel	N/A
	APEC 10, 15b, 17c, 19c			BH21-13-9	2021-04-28	4.88	5.03	-	-	Light brown sandy silt, trace gravel	N/A
	APEC 10, 15b, 17c, 19c			BH21-13-10	2021-04-28	5.49	5.79	0	0	Light brown sandy silt, trace gravel	N/A
	APEC 10, 15b, 17c, 19c			BH21-13-11	2021-04-28	6.1	6.25	0	0	Light brown sandy silt, trace gravel	N/A
	APEC 10, 15b, 17c, 19c			BH21-13-12	2021-04-28	6.71	7.01	15	0	Light brown sandy silt, trace gravel	N/A
	APEC 10, 15b, 17c, 19c			BH21-13-13	2021-04-28	7.32	7.77	5	0	Light brown sandy silt, trace gravel	N/A
	APEC 10, 15b, 17c, 19c			BH21-13-14	2021-04-28	7.92	8.38	10	0	Light brown to grey fine sand, trace silt	PHCs, VOCs, BTEX, PAHs, ABN

Table 1 - Borehole and Test Pit Sampling Summary
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Location ID	Area of Potential Environmental Concern	Easting	Northing	Sample ID	Sample Date	Sample Depth		Headspace		Soil Type / Observations	Analysis
						Start (mbgs)	End (mbgs)	Hexane (ppm)	Isobutylene (ppm)		
	APEC 10, 15b, 17c, 19c			BH21-13-15	2021-04-28	8.53	9.14	0	0	Light brown to grey fine sand, trace silt	N/A
BH21-14	APEC 12, 14	683743.19	4860017.727	BH21-14-1	2021-05-10	0	0.61	25	11	Light to dark brown gravelly sand	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, EC, SAR
	APEC 12, 14			BH21-14-2	2021-05-10	0.61	1.22	20	10	Greyish brown sandy silt, trace gravel	N/A
	APEC 12, 14			BH21-14-3	2021-05-10	1.22	1.83	0	1	Light brown to grey clayey silt	N/A
	APEC 12, 14			BH21-14-4	2021-05-10	1.83	2.44	0	0	Grey sandy silt	N/A
	APEC 12, 14			BH21-14-5	2021-05-10	2.44	3.05	0	0	Grey sandy silt	N/A
	APEC 12, 14			BH21-14-6	2021-05-11	3.05	3.51	0	0	Grey sandy silt	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, EC, SAR
	APEC 12, 14			BH21-14-7	2021-05-11	3.66	3.96	0	1	Grey sandy silt	N/A
	APEC 12, 14			BH21-14-8	2021-05-11	4.27	4.42	0	0	Grey sandy silt	N/A
	APEC 12, 14			BH21-14-9	2021-05-11	4.88	5.49	0	0	Grey sandy silt	N/A
	APEC 12, 14			BH21-14-10	2021-05-11	5.49	6.1	0	0	Grey sandy silt	N/A
	APEC 12, 14			BH21-14-11	2021-05-11	6.1	6.71	0	0	Grey sandy silt	N/A
	APEC 12, 14			BH21-14-12	2021-05-11	6.71	7.32	0	0	Grey sandy silt	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, EC, SAR
	APEC 12, 14			BH21-14-13	2021-05-11	7.32	7.77	5	0	Grey sandy silt	N/A
	APEC 12, 14			BH21-14-14	2021-05-11	7.92	8.53	0	0	Grey sandy silt	N/A
	APEC 12, 14			BH21-14-15	2021-05-11	8.53	9.14	0	0	Grey sandy silt	N/A
BH21-15	APEC 13	684179.69	4860097.639	BH21-15-1	2021-04-29	0	0.61	5	0	Dark brown clayey silt, topsoil from 0-0.1m	OCPs, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 13			BH21-15-2	2021-04-29	0.61	1.22	0	0	Light brown sandy silt	N/A
	APEC 13			BH21-15-3	2021-04-29	1.22	1.68	0	0	Light brown sandy silt	N/A
	APEC 13			BH21-15-4	2021-04-29	1.83	2.13	10	0	Light brown sandy silt	OCPs, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 13			BH21-15-5	2021-04-29	2.44	2.59	5	0	Light brown sandy silt	N/A
BH21-16	APEC 13	684390.16	4860204.889	BH21-16-1	2021-04-29	0	0.61	0	0	Light brown sand, trace organics, trace silt, topsoil from 0-0.1m	OCPs, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 13			BH21-16-2	2021-04-29	0.61	1.22	0	0	Light brown sand, trace organics, trace silt	N/A
	APEC 13			BH21-16-3	2021-04-29	1.22	1.83	0	0	Light brown silty sand	N/A
	APEC 13			BH21-16-4	2021-04-29	1.83	2.44	0	0	Light brown sandy silt, trace gravel	OCPs, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 13			BH21-16-5	2021-04-29	2.44	2.9	0	0	Light brown sandy silt, trace gravel	N/A
BH21-17	APEC 15a, 17a	683908.47	4859978.537	BH21-17-1	2021-05-07	0	0.61	25	17	Black to brown sandy gravel	BTEX, PAH, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15a, 17a			BH21-17-2	2021-05-07	0.61	1.22	0	3	Black to brown clay, trace gravel	N/A
	APEC 15a, 17a			BH21-17-3	2021-05-07	1.22	1.83	0	0	light brown to grey clayey silt, trace sand	BTEX, PHCs
	APEC 15a, 17a			BH21-17-4	2021-05-07	1.83	2.44	0	0	Greyish brown sandy silt	N/A
	APEC 15a, 17a			BH21-17-5	2021-05-07	2.44	3.05	0	0	Greyish brown sandy silt	BTEX, PAH, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-18	APEC 15a	683972.86	4859956.219	BH21-18-1	2021-05-06	0	0.61	0	9	Black sandy gravel	BTEX, PAH
	APEC 15a			BH21-18-2	2021-05-06	0.61	1.22	0	6	Brown sandy silt	BTEX, PAH
	APEC 15a			BH21-18-3		1.22	1.83	0	3	Greyish brown clayey silt	N/A
	APEC 15a			BH21-18-4	2021-05-06	1.83	2.44	0	2	Greyish brown sandy silt	BTEX, PAH
	APEC 15a			BH21-18-5	2021-05-06	2.44	3.05	0	1	Greyish brown sandy silt	BTEX, PAH
BH21-19	APEC 15a	683915.17	4859897.672	BH21-19-1	2021-05-07	0	0.61	0	17	Brown to black sandy gravel	PHCs, BTEX, PAH, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15a			BH21-19-2	2021-05-07	0.61	1.22	0	4	Dark brown clayey silt, trace sand	PHCs, BTEX, PAH
	APEC 15a			BH21-19-3	2021-05-07	1.22	1.83	0	0	Grey sandy silt, trace gravel	N/A
	APEC 15a			BH21-19-4	2021-05-07	1.83	2.13	0	1	Grey sandy silt, trace gravel	PHCs, BTEX, PAH, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15a			BH21-19-5	2021-05-07	2.44	2.74	0	0	Grey sandy silt, trace gravel	PHCs, BTEX, PAH
BH21-20	APEC 15s	683871.03	4859837.973	BH21-20-1	2021-05-07	0	0.61	25	19	Blackish brown sandy gravel	PHCs, BTEX, PAH, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15a			BH21-20-2	2021-05-07	0.61	1.22	30	11	Dark brown to grey sandy silt	PHCs, BTEX, PAH, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15a			BH21-20-3	2021-05-07	1.22	1.83	10	1	Dark brown to grey sandy silt	N/A
	APEC 15a			BH21-20-4	2021-05-07	1.83	2.44	15	0	Dark brown to grey sandy silt	N/A
	APEC 15a			BH21-20-5	2021-05-07	2.44	2.9	15	1	Dark brown to grey sandy silt	PHCs, BTEX, PAH
BH21-21	APEC 15b	684067.2	4860235.401	BH21-21-1	2021-04-26	0	0.61	-	-	Grey gravelly sand, trace silt	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-21-2	2021-04-26	0.61	1.22	20	8	Light brown sandy silt, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-21-3	2021-04-26	1.22	1.68	0	3	Light brown sandy silt, trace gravel	N/A

Table 1 - Borehole and Test Pit Sampling Summary
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Location ID	Area of Potential Environmental Concern	Easting	Northing	Sample ID	Sample Date	Sample Depth		Headspace		Soil Type / Observations	Analysis
						Start (mbgs)	End (mbgs)	Hexane (ppm)	Isobutylene (ppm)		
	APEC 15b			BH21-21-4	2021-04-26	1.83	2.13	0	1	Light brown sandy silt, trace gravel	N/A
	APEC 15b			BH21-21-5	2021-04-26	2.44	2.77	5	2	Light brown sandy silt, trace gravel	N/A
BH21-22	APEC 15b	684019.26	4860351.86	BH21-22-1	2021-04-22	0	0.61	-	0	Brown to grey silty sand, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-22-2	2021-04-22	0.61	1.22	-	0	Brown to grey silty sand, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-22-3	2021-04-22	1.22	1.37	-	0	Brown to grey silty sand, trace gravel	N/A
	APEC 15b			BH21-22-4	2021-04-22	1.83	2.44	-	0	Brown to grey silty sand, trace gravel	N/A
	APEC 15b			BH21-22-5	2021-04-22	2.44	3.05	-	0	Brown to grey silty sand, trace gravel	N/A
BH21-23	APEC 15b	684187.61	4860426.427	BH21-23-1	2021-05-03	0	0.61	0	0	Dark brown clayey silt, trace sand	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-23-1A	2021-05-14	0	0.61	-	-	Dark brown clayey silt, trace sand	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-23-2	2021-05-03	0.61	1.22	15	0	Brownish black to greyish brown silty clay	N/A
	APEC 15b			BH21-23-3	2021-05-03	1.22	1.83	0	0	Brownish black to greyish brown silty clay	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-23-4	2021-05-03	1.83	2.44	0	1	Greyish brown clayey silt	N/A
	APEC 15b			BH21-23-5	2021-05-03	2.44	3.05	5	0	Grey clay	N/A
BH21-24	APEC 15b	684162.27	4860492.818	BH21-24-1	2021-05-03	0	0.61	30	2	Grey sandy gravel, trace organics	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-24-1A	2021-05-14	0	0.61	-	-	Grey sandy gravel, trace organics	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-24-2	2021-05-03	0.61	1.22	0	0	Dark brown to greyish brown clayey silt, trace san	N/A
	APEC 15b			BH21-24-3	2021-05-03	1.22	1.83	15	0	Dark brown to greyish brown clayey silt, trace san	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-24-4	2021-05-03	1.83	2.44	0	0	Brown to grey silty clay	N/A
	APEC 15b			BH21-24-5	2021-05-03	2.44	3.05	0	0	Brown to grey silty clay	N/A
BH21-25	APEC 15b	684120.35	4860412.28	BH21-25-1	2021-04-27	0	0.61	0	0	Dark brown clayey sand, some organics	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-25-2	2021-04-27	0.61	1.22	5	0	Dark brown gravelly sand	N/A
	APEC 15b			BH21-25-3	2021-04-27	1.22	1.83	0	0	Greyish brown clayey silt	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-25-4	2021-04-27	1.83	2.44	0	1	Greyish brown clayey silt	N/A
	APEC 15b			BH21-25-5	2021-04-27	2.44	3.05	0	1	Light brown silt, trace sand	N/A
BH21-26	APEC 15b, 19a	683992.45	4860424.249	BH21-26-1	2021-04-23	0	0.61	5	0	Brown silty sand, trace gravel, trace organics	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b, 19a			BH21-26-2	2021-04-23	0.61	1.22	10	1	Brown silty sand, trace gravel, trace organics	N/A
	APEC 15b, 19a			BH21-26-3	2021-04-23	1.22	1.83	30	3	Grey silt, trace sand, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b, 19a			BH21-26-4	2021-04-23	1.83	2.44	5	0	Grey silt, trace sand, trace gravel	N/A
	APEC 15b, 19a			BH21-26-5	2021-04-23	2.44	3.05	15	1	Grey silt, trace sand, trace gravel	N/A
BH21-27	APEC 15b, 17c, 19c	684124.89	4860300.321	BH21-27-1	2021-04-27	0	0.61	0	2	Grey sandy gravel, topsoil from 0-0.1m	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b, 17c, 19c			BH21-27-1A	2021-05-14	0	0.61	-	-	Grey sandy gravel, topsoil from 0-0.1m	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b, 17c, 19c			BH21-27-2	2021-04-27	0.61	1.22	15	15	Grey to black clayey silt, trace gravel	N/A
	APEC 15b, 17c, 19c			BH21-27-3	2021-04-27	1.22	1.83	0	1	Light brown clayey sand	N/A
	APEC 15b, 17c, 19c			BH21-27-4	2021-04-27	1.83	2.44	0	0	Light brown silty sand	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b, 17c, 19c			BH21-27-5	2021-04-27	2.44	2.74	0	0	Light brown silty sand	N/A
BH21-28	APEC 15b, 17c, 19c	684219.32	4860243.191	BH21-28-1	2021-04-27	0	0.61	40	13	Brown silty sand, trace gravel, topsoil from 0-0.1m	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b, 17c, 19c			BH21-28-2	2021-04-27	0.61	1.22	10	3	Brown clayey silt, trace sand	N/A
	APEC 15b, 17c, 19c			BH21-28-3	2021-04-27	1.22	1.83	15	2	Light brown silt, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b, 17c, 19c			BH21-28-4	2021-04-27	1.83	2.29	15	1	Light brown silt, trace gravel	N/A
	APEC 15b, 17c, 19c			BH21-28-5	2021-04-27	2.44	2.9	5	1	Light brown silt, trace gravel	N/A

Table 1 - Borehole and Test Pit Sampling Summary
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Location ID	Area of Potential Environmental Concern	Easting	Northing	Sample ID	Sample Date	Sample Depth		Headspace		Soil Type / Observations	Analysis
						Start (mbgs)	End (mbgs)	Hexane (ppm)	Isobutylene (ppm)		
BH21-29	APEC 15b, 17c, 19c	684179.43	4860277.974	BH21-29-1	2021-04-27	0	0.61	10	2	Dark brown gravelly sand	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b, 17c, 19c			BH21-29-2	2021-04-27	0.61	1.22	0	0	Black clayey gravel	N/A
	APEC 15b, 17c, 19c			BH21-29-3	2021-04-27	1.22	1.83	0	1	Light brown silt, trace gravel	N/A
	APEC 15b, 17c, 19c			BH21-29-4	2021-04-27	1.83	2.44	5	0	Light brown silt, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b, 17c, 19c			BH21-29-5	2021-04-27	2.44	3.05	0	0	Light brown silt, trace gravel	N/A
BH21-30	APEC 15b	684079.02	4860358.598	BH21-30-1	2021-04-23	0	0.61	0	0	Dark brown sand, trace organics, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-30-2	2021-04-23	0.61	1.22	0	1	Dark brown sand, trace organics, trace gravel	N/A
	APEC 15b			BH21-30-3	2021-04-23	1.22	1.83	0	0	Grey sandy silt, trace organics, trace gravel	N/A
	APEC 15b			BH21-30-4	2021-04-23	1.83	2.44	0	0	Grey sandy silt, trace organics, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-30-5	2021-04-23	2.44	3.05	15	3	Blackish grey sandy silt, trace gravel	N/A
	APEC 15b			BH21-30-6	2021-04-23	3.05	3.66	0	2	Blackish grey sandy silt, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-30-7	2021-04-23	3.66	4.27	10	2	Light brown to grey sandy silt, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15b			BH21-30-8	2021-04-23	4.27	4.57	0	0	Light brown to grey sandy silt, trace gravel	N/A
	APEC 15b			BH21-30-9	2021-04-23	4.88	5.18	0	1	Light brown to grey sandy silt, trace gravel	N/A
	APEC 15b			BH21-30-10	2021-04-23	5.49	5.79	0	1	Light brown to grey sandy silt, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-31	APEC 15c	684263.43	4860360.734	BH21-31-1	2021-05-03	0	0.61	0	1	Grey sand, trace gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15c			BH21-31-2	2021-05-03	0.61	1.22	5	1	Light brown to grey silty clay, trace sand	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15c			BH21-31-3	2021-05-03	1.22	1.83	5	0	Light brown to grey silty clay, trace sand	N/A
	APEC 15c			BH21-31-4	2021-05-03	1.83	2.44	0	1	Light brown to grey silty clay, trace sand	N/A
	APEC 15c			BH21-31-5	2021-05-03	2.44	3.05	0	1	Grey sandy silt	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-32	APEC 15c	684496.21	4860464.317	BH21-32-1A	2021-04-30	0	0.61	-	-	Topsoil from 0-0.1m	N/A
	APEC 15c			BH21-32-1A	2021-05-14	0	0.61	-	-	Topsoil from 0-0.1m	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15c			BH21-32-2	2021-04-30	0.61	1.22	20	0	Light brown to grey sandy silt, trace gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15c			BH21-32-3	2021-04-30	1.22	1.68	20	0	Light brown to grey sandy silt, trace gravel	N/A
	APEC 15c			BH21-32-4	2021-04-30	1.83	2.29	0	0	Light brown to grey sandy silt, trace gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15c			BH21-32-5	2021-04-30	2.44	2.74	5	0	Light brown to grey sandy silt, trace gravel	N/A
BH21-33	APEC 15c	684591.24	4860387.289	BH21-33-1	2021-04-30	0	0.61	0	0	Dark brown sand, some topsoil	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15c			BH21-33-2	2021-04-30	0.61	1.22	0	0	Dark brown silty clay	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15c			BH21-33-3	2021-04-30	1.22	1.83	0	0	Sandy silt, trace gravel	N/A
	APEC 15c			BH21-33-4	2021-04-30	1.83	2.44	5	1	Sandy silt, trace gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15c			BH21-33-5	2021-04-30	2.44	2.82	0	0	Sandy silt, trace gravel	N/A
BH21-34	APEC 15d	684349.4	4860624.198	BH21-34-1	2021-04-30	0	0.61	10	0	Brown gravelly sand, topsoil from 0-0.1m	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15d			BH21-34-2	2021-04-30	0.61	1.22	20	1	Brown silty clay	N/A
	APEC 15d			BH21-34-3	2021-04-30	1.22	1.83	15	0	Light brown sandy silt, trace gravel	N/A
	APEC 15d			BH21-34-4	2021-04-30	1.83	2.29	15	0	Light brown sandy silt, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15d			BH21-34-5	2021-04-30	2.44	2.74	0	0	Light brown sandy silt, trace gravel	N/A
BH21-35	APEC 15d	684478.75	4860584.402	BH21-35-1	2021-04-30	0	0.61	0	0	Topsoil from 0-0.1m	N/A
	APEC 15d			BH21-35-2	2021-04-30	0.61	1.22	0	0	Dark brown silty clay, trace gravel	N/A
	APEC 15d			BH21-35-3A	2021-04-30	1.22	1.83	0	0	Light brown to grey sandy silt, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15d			BH21-35-4	2021-04-30	1.83	2.13	0	0	Light brown to grey sandy silt, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15d			BH21-35-5	2021-04-30	2.44	2.59	0	0	Light brown to grey sandy silt, trace gravel	N/A
BH21-36	APEC 15e	683807.19	4860306.804	BH21-36-1	2021-04-08	0	0.61	0	0	Light brown silty sand, trace gravel	N/A
	APEC 15e			BH21-36-2	2021-04-08	0.61	1.22	0	0	Light brown silty sand, trace clay	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e			BH21-36-3	2021-04-08	1.22	1.83	0	0	Light brown to grey silty sand, trace cobbles	N/A

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Location ID	Area of Potential Environmental Concern	Easting	Northing	Sample ID	Sample Date	Sample Depth		Headspace		Soil Type / Observations	Analysis
						Start (mbgs)	End (mbgs)	Hexane (ppm)	Isobutylene (ppm)		
	APEC 15e			BH21-36-4	2021-04-08	1.83	2.29	0	0	Light brown to grey silty sand, trace cobbles	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e			BH21-36-5	2021-04-08	2.29	2.84	0	0	Greyish brown silty sand, trace cobbles	N/A
BH21-37	APEC 15e	683969.56	4860290.316	BH21-37-1	2021-04-22	0	0.61	0	1	Greyish brown silty sand, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e			BH21-37-2	2021-04-22	0.61	1.22	0	1	Greyish brown silty sand, trace gravel	N/A
	APEC 15e			BH21-37-3	2021-04-22	1.22	1.52	0	1	Greyish brown silt, trace sand, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e			BH21-37-4	2021-04-22	1.83	2.13	0	1	Greyish brown silt, trace sand, trace gravel	N/A
	APEC 15e			BH21-37-5	2021-04-22	2.44	2.9	0	0	Greyish brown silt, trace sand, trace gravel	N/A
	APEC 15e			BH21-37-6	2021-04-22	3.05	3.66	0	1	Greyish brown silt, trace sand, trace gravel	N/A
	APEC 15e			BH21-37-7	2021-04-22	3.66	3.96	0	0	Greyish brown silt, trace sand, trace gravel	N/A
	APEC 15e			BH21-37-8	2021-04-22	4.27	4.88	0	1	Greyish brown silt, trace sand, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e			BH21-37-9	2021-04-22	4.88	5.18	0	1	Greyish brown silt, trace sand, trace gravel	N/A
	APEC 15e			BH21-37-10	2021-04-22	5.49	5.94	0	1	Greyish brown silt, trace sand, trace gravel	N/A
	APEC 15e			BH21-37-11	2021-04-22	6.1	6.55	5	1	Greyish brown silt, trace sand, trace gravel	N/A
	APEC 15e			BH21-37-12	2021-04-22	6.71	7.16	0	1	Greyish brown silt, trace sand, trace gravel	N/A
	APEC 15e			BH21-37-13	2021-04-22	7.32	7.62	0	0	Greyish brown silt, trace sand, trace gravel	N/A
	APEC 15e			BH21-37-14	2021-04-22	7.92	8.08	0	0	Greyish brown to brown silty gravel	N/A
	APEC 15e			BH21-37-15	2021-04-22	8.53	8.84	0	1	Greyish brown to brown silty gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-38	APEC 15e	683912.4	4860281.142	BH21-38-1	2021-04-21	0	0.61	0	1	Greyish brown sand, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e			BH21-38-2	2021-04-21	0.61	1.22	0	1	Lightr brown sandy silt, trace gravel	N/A
	APEC 15e			BH21-38-3	2021-04-21	1.22	1.83	0	1	Lightr brown sandy silt, trace gravel	N/A
	APEC 15e			BH21-38-4	2021-04-21	1.83	2.44	0	1	Lightr brown sandy silt, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e			BH21-38-5	2021-04-21	2.44	3.05	-	-	Dark brown coarse sand	N/A
	APEC 15e			BH21-38-6	2021-04-21	3.05	3.66	0	0	Light brown to grey silt, trace sand, trace gravel	N/A
	APEC 15e			BH21-38-7	2021-04-21	3.66	4.27	0	1	Light brown to grey silt, trace sand, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e			BH21-38-8	2021-04-21	4.27	4.88	0	1	Light brown to grey silt, trace sand, trace gravel	N/A
	APEC 15e			BH21-38-9	2021-04-21	4.88	5.49	0	1	Light brown to grey silt, trace sand, trace gravel	N/A
	APEC 15e			BH21-38-10	2021-04-21	5.49	6.1	0	1	Light brown to grey silt, trace sand, trace gravel	N/A
	APEC 15e			BH21-38-11	2021-04-21	6.1	6.71	0	1	Light brown to grey silt, trace sand, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-39	APEC 15e	683756.28	4860398.202	BH21-39-1	2021-04-09	0	0.61	0	0	Greyish brown silty clay, trace sand	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e			BH21-39-2	2021-04-09	0.61	1.17	0	0	Greyish brown sandy silt, trace clay, trace gravel	N/A
	APEC 15e			BH21-39-3	2021-04-09	1.22	1.65	15	0	Greyish brown sandy silt, trace clay, trace gravel	N/A
	APEC 15e			BH21-39-4	2021-04-09	1.83	2.24	0	0	Greyish brown sandy silt, trace clay, trace gravel	N/A
	APEC 15e			BH21-39-5	2021-04-09	2.44	2.55	10	1	Greyish brown sandy silt, trace clay, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-40	APEC 15e	683911.12	4860397.634	BH21-40-1	2021-04-08	0	0.61	0	1	Dark brown silty sand, trace organics	N/A
	APEC 15e			BH21-40-2	2021-04-08	0.61	1.22	40	7	Dark brown silty sand, trace organics	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e			BH21-40-3	2021-04-08	1.22	1.75	5	3	Grey silty sand, trace cobbles	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e			BH21-40-4	2021-04-08	1.83	2.39	0	6	Grey silty sand, trace cobbles	N/A
	APEC 15e			BH21-40-5	2021-04-08	2.44	2.67	0	3	Brownish grey silty sand, trace cobbles	N/A
BH21-41	APEC 15e, 17b	683826.87	4860388.784	BH21-41-1	2021-04-09	0	0.61	0	0	Light brown silty sand, trace cobbles, trace gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e, 17b			BH21-41-2	2021-04-09	0.61	1.22	0	1	Light brown silty sand, trace cobbles, trace gravel	N/A
	APEC 15e, 17b			BH21-41-3	2021-04-09	1.22	1.75	0	1	Grey silty sand, trace gravel, trace cobbles	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR

Table 1 - Borehole and Test Pit Sampling Summary
Darlington New Nuclear Project

Location ID	Area of Potential Environmental Concern	Easting	Northing	Sample ID	Sample Date	Sample Depth		Headspace		Soil Type / Observations	Analysis
						Start (mbgs)	End (mbgs)	Hexane (ppm)	Isobutylene (ppm)		
	APEC 15e, 17b			BH21-41-4	2021-04-09	1.83	2.26	0	2	Grey silty sand, trace gravel, trace cobbles	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e, 17b			BH21-41-5	2021-04-09	2.44	2.84	0	2	Grey silty sand, trace gravel, trace cobbles	N/A
	APEC 15e, 17b			BH21-41-6	2021-04-09	3.05	3.33	0	1	Grey silty sand, trace gravel, trace cobbles	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e, 17b			BH21-41-7	2021-04-09	3.66	3.84	0	1	Grey silty sand, trace gravel, trace cobbles	N/A
BH21-42	APEC 16	683720.58	4860271.82	BH21-42-1	2021-05-05	0	0.61	0	0	Brown gravel, trace organics	N/A
	APEC 16			BH21-42-2	2021-05-05	0.61	1.22	0	0	Light brown clayey silt, trace gravel, trace organic	PHCs, BTEX
	APEC 16			BH21-42-3	2021-05-05	1.22	1.83	0	0	Light brown to grey sandy silt, trace gravel	N/A
	APEC 16			BH21-42-4	2021-05-05	1.83	2.29	0	0	Light brown to grey sandy silt, trace gravel	N/A
	APEC 16			BH21-42-5	2021-05-05	2.44	2.9	0	1	Light brown to grey sandy silt, trace gravel	N/A
	APEC 16			BH21-42-6	2021-05-05	3.05	3.35	0	1	Light brown to grey sandy silt, trace gravel	N/A
	APEC 16			BH21-42-7	2021-05-05	3.66	3.96	0	0	Light brown to grey sandy silt, trace gravel	N/A
	APEC 16			BH21-42-8	2021-05-05	4.27	4.42	0	1	Light brown to grey sandy silt, trace gravel	PHCs, BTEX
	APEC 16			BH21-42-9	2021-05-05	4.877	5.03	0	1	Light brown to grey sandy silt, trace gravel	N/A
	APEC 16			BH21-42-10	2021-05-05	5.49	5.64	-	-	Light brown to grey sandy silt, trace gravel	N/A
	APEC 16			BH21-42-11	2021-05-05	6.1	6.25	0	1	Light brown to grey sandy silt, trace gravel	N/A
	APEC 16			BH21-42-12	2021-05-05	6.71	7.01	0	1	Light brown to grey sandy silt, trace gravel	N/A
	APEC 16			BH21-42-13	2021-05-05	7.32	7.62	0	1	Light brown to grey sandy silt, trace gravel	N/A
	APEC 16			BH21-42-14	2021-05-05	7.92	8.38	5	0	Grey silt, trace sand	N/A
	APEC 16			BH21-42-15	2021-05-05	8.53	8.84	0	0	Grey silt, trace sand	N/A
BH21-43	APEC 16	683688.68	4860295.917	BH21-43-1	2021-05-06	0	0.61	0	0	Grey to brown sand, traec gravel	N/A
	APEC 16			BH21-43-2	2021-05-06	0.61	1.22	0	1	Light brown silty clay, trace sand	PHCs, BTEX
	APEC 16			BH21-43-3	2021-05-06	1.22	1.83	0	1	Light brown to grey sandy silt	N/A
	APEC 16			BH21-43-4	2021-05-06	1.83	2.44	5	1	Light brown to grey sandy silt	N/A
	APEC 16			BH21-43-5	2021-05-06	2.44	3.05	5	1	Light brown to grey sandy silt	N/A
	APEC 16			BH21-43-6	2021-05-06	3.05	3.51	5	1	Light brown to grey sandy silt	N/A
	APEC 16			BH21-43-7	2021-05-06	3.66	3.96	10	1	Light brown to grey sandy silt	N/A
	APEC 16			BH21-43-8	2021-05-06	4.27	4.88	10	1	Light brown to grey sandy silt	PHCs, BTEX
	APEC 16			BH21-43-9	2021-05-06	4.88	5.18	25	1	Light brown to grey sandy silt	N/A
	APEC 16			BH21-43-10	2021-05-06	5.49	5.64	10	1	Light brown to grey sandy silt	N/A
BH21-44	APEC 17d	683725.75	4860067.133	BH21-44-1	2021-05-10	0	0.61	0	1	Brown sand, trace gravel	PHCs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 17d			BH21-44-2	2021-05-10	0.61	1.22	0	1	Brown silty sand, trace gravel	N/A
	APEC 17d			BH21-44-3	2021-05-10	1.22	1.83	0	1	Greyish brown silty clay, trace sand, trace gravel	N/A
	APEC 17d			BH21-44-4	2021-05-10	1.83	2.44	0	1	Grey sandy silt, trace clay	N/A
	APEC 17d			BH21-44-5	2021-05-10	2.44	3.05	0	1	Grey sandy silt, trace clay	PHCs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 17d			BH21-44-6	2021-05-10	3.05	3.66	0	1	Grey sandy silt, trace clay	N/A
	APEC 17d			BH21-44-7	2021-05-10	3.66	4.27	0	1	Grey sandy silt, trace clay	N/A
	APEC 17d			BH21-44-8	2021-05-10	4.27	4.72	0	1	Grey sandy silt, trace clay	N/A
	APEC 17d			BH21-44-9	2021-05-10	4.88	5.49	0	1	Grey sandy silt, trace clay	PHCs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 17d			BH21-44-10	2021-05-10	5.49	6.1	0	1	Grey sandy silt, trace clay	N/A
BH21-45	APEC 19a	684064.71	4860664.821	BH21-45-1	2021-05-12	0	0.61	0	1	Light brown sandy silt, trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
	APEC 19a			BH21-45-2	2021-05-12	0.61	1.22	0	2	Light brown sandy silt, trace gravel	N/A
	APEC 19a			BH21-45-3	2021-05-12	1.22	1.83	0	1	Brown sand, trace gravel	N/A
	APEC 19a			BH21-45-4	2021-05-12	1.83	2.44	0	1	Brown to grey sandy silt, trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
	APEC 19a			BH21-45-5	2021-05-12	2.44	3.05	0	1	Brown to grey sandy silt, trace gravel	N/A
BH21-46	APEC 19a	683936.01	4860567.749	BH21-46-1	2021-05-12	0	0.61	0	1	Brown to greyish brown clay, trace sand, trace gravel, trace organics	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
	APEC 19a			BH21-46-2	2021-05-12	0.61	1.22	0	1	Brown to greyish brown clay, trace sand, trace gravel, trace organics	N/A
	APEC 19a			BH21-46-3	2021-05-12	1.22	1.83	0	1	Brown to greyish brown clay, trace sand, trace gravel, trace organics	N/A
	APEC 19a			BH21-46-4	2021-05-12	1.83	2.44	0	1	Brown fine sand	N/A
	APEC 19a			BH21-46-5A	2021-05-12	2.44	2.69	-	-	Brown fine sand	N/A
	APEC 19a			BH21-46-5B	2021-05-12	2.69	3.05	-	-	Greyish brown sandy silt	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-47	APEC 19a	684016.11	4860518.707	BH21-47-1	2021-05-12	0	0.61	0	0	Greyish brown silty sand, trace organics	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
	APEC 19a			BH21-47-2	2021-05-12	0.61	1.22	0	0	Greyish brown silty sand, trace organics	N/A

Table 1 - Borehole and Test Pit Sampling Summary
Darlington New Nuclear Project

Location ID	Area of Potential Environmental Concern	Easting	Northing	Sample ID	Sample Date	Sample Depth		Headspace		Soil Type / Observations	Analysis
						Start (mbgs)	End (mbgs)	Hexane (ppm)	Isobutylene (ppm)		
	APEC 19a			BH21-47-3	2021-05-12	1.22	1.83	0	1	Brown to grey silty clay, trace sand	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
	APEC 19a			BH21-47-4	2021-05-12	1.83	2.44	0	1	Brown to grey silty clay, trace sand	N/A
	APEC 19a			BH21-47-5	2021-05-12	2.44	3.05	0	0	Brown to grey silty clay, trace sand	N/A
	APEC 19a			BH21-47-6	2021-05-12	3.05	3.66	0	1	Light brown sandy gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
	APEC 19a			BH21-47-7	2021-05-12	3.66	4.27	0	1	Brown to greyish brown silty clay	N/A
	APEC 19a			BH21-47-8	2021-05-12	4.27	4.8	0	1	Brown to greyish brown silty clay	N/A
	APEC 19a			BH21-47-9	2021-05-12	4.88	5.33	0	0	Brown to grey sandy silt, trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
	APEC 19a			BH21-47-10	2021-05-12	5.49	5.79	0	1	Brown to grey sandy silt, trace gravel	N/A
BH21-48	APEC 13, 19b	684453.79	4860193.647	BH21-48-1	2021-04-29	0	0.61	5	0	Light brown sand, topsoil from 0-0.1m	OCP, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
	APEC 13, 19b			BH21-48-2	2021-04-29	0.61	1.22	5	0	Light brown to grey fine sand	OCP, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
	APEC 13, 19b			BH21-48-3	2021-04-29	1.22	1.83	0	0	Light brown silty sand	N/A
	APEC 13, 19b			BH21-48-4	2021-04-29	1.83	2.29	0	0	Light brown silty sand	N/A
	APEC 13, 19b			BH21-48-5	2021-04-29	2.44	2.9	0	0	Light brown to grey sandy silt	OCP, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-49	ABEC 19b, 19d	684145.48	4860045.18	BH21-49-1	2021-04-28	0	0.61	0	3	Light brown silty sand, trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
	ABEC 19b, 19d			BH21-49-2	2021-04-28	0.61	1.22	0	2	Dark brown clayey silt, trace sand	N/A
	ABEC 19b, 19d			BH21-49-3	2021-04-28	1.22	1.83	0	0	Light brown sandy silt, trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
	ABEC 19b, 19d			BH21-49-4	2021-04-28	1.83	2.29	0	0	Light brown sandy silt, trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
	ABEC 19b, 19d			BH21-49-5	2021-04-28	2.44	2.59	0	0	Light brown sandy silt, trace gravel	N/A
BH21-50	APEC 13, 19b	684202.54	4860052.971	BH21-50-1	2021-04-29	0	0.61	0	1	Greyish brown sand, some clay	OCP, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
	APEC 13, 19b			BH21-50-2	2021-04-29	0.61	1.07	0	11	Grey sandy silt, trace gravel	N/A
	APEC 13, 19b			BH21-50-3	2021-04-29	1.22	1.83	0	5	Grey sandy silt, trace gravel	OCP, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
	APEC 13, 19b			BH21-50-4	2021-04-29	1.83	2.44	0	2	Grey sandy silt, trace gravel	N/A
	APEC 13, 19b			BH21-50-5	2021-04-29	2.44	3.05	0	1	Grey sandy silt, trace gravel	OCP, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-51	APEC 15e	683812.76	4860466.71	BH21-51-1	2021-04-21	0	0.61	0	2	Greyish brown sandy gravel, topsoil from 0-0.1m	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e			BH21-51-2	2021-04-21	0.61	0.91	0	1	Brown sandy silt	N/A
	APEC 15e			BH21-51-3	2021-04-21	1.22	1.37	-	-	Brown sandy silt	N/A
	APEC 15e			BH21-51-4	2021-04-21	1.83	2.13	0	0	Brown sandy silt	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
	APEC 15e			BH21-51-5	2021-04-21	2.44	2.79	-	-	Brown sandy silt	N/A
BH21-52	DNNP NE Landfill Area	683177.99	4861230.232	BH21-52-1	2021-05-14	0	0.61	0	1	Dark brown sand, some organics, topsoil	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
	DNNP NE Landfill Area				2021-05-14	0.61	1.22	0	0	Brown sandy silt	N/A
	DNNP NE Landfill Area				2021-05-14	1.22	1.83	0	0	Brown fine sand	N/A
	DNNP NE Landfill Area				2021-05-14	1.83	2.44	0	0	Brown fine sand	N/A
	DNNP NE Landfill Area			BH21-52-5	2021-05-14	2.44	2.9	5	0	Brown sandy silt, trace gravel	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
BH21-53	DNNP NE Landfill Area	683465.81	4861198.911	BH21-53-1	2021-05-14	0	0.61	10	0	Dark brown sand, trace organics, trace silt, topsoil	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
	DNNP NE Landfill Area			BH21-53-2	2021-05-14	0.61	1.22	5	0	Light brown fine sand, trace organics	N/A
	DNNP NE Landfill Area			BH21-53-3	2021-05-14	1.22	1.83	5	0	Light brown to grey sandy silt	N/A
	DNNP NE Landfill Area			BH21-53-4	2021-05-14	1.83	2.29	10	0	Light brown to grey sandy silt	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
	DNNP NE Landfill Area			BH21-53-5	2021-05-14	2.44	2.74	15	0	Light brown to grey sandy silt	N/A
BH21-54	DNNP NE Landfill Area	684071.03	4861387.706	BH21-54-1	2021-05-13	0	0.61	0	1	Blackish brown clay, some organics, topsoil	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
	DNNP NE Landfill Area			BH21-54-2	2021-05-13	0.61	1.22	0	1	Light brown silty clay	N/A
	DNNP NE Landfill Area			BH21-54-3	2021-05-13	1.22	1.83	-	-	Greyish brown sandy silt, trace gravel	N/A
	DNNP NE Landfill Area			BH21-54-4	2021-05-13	1.83	2.29	0	2	Greyish brown sandy silt, trace gravel	N/A
	DNNP NE Landfill Area			BH21-54-5	2021-05-13	2.44	2.74	0	1	Greyish brown sandy silt, trace gravel	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
BH21-55	DNNP NE Landfill Area	683876.57	4861542.558	BH21-55-1	2021-05-13	0	0.61	0	1	Dark brown clay, some organics, trace sand, topsoil	N/A
	DNNP NE Landfill Area			BH21-55-2	2021-05-13	0.61	1.22	0	1	Light brown to grey sandy silt, trace gravel	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
	DNNP NE Landfill Area			BH21-55-3	2021-05-13	1.22	1.83	0	1	Light brown to grey sandy silt, trace gravel	N/A
	DNNP NE Landfill Area			BH21-55-4	2021-05-13	1.83	2.44	0	1	Light brown to grey sandy silt, trace gravel	N/A
	DNNP NE Landfill Area			BH21-55-5	2021-05-13	2.44	2.74	0	1	Light brown to grey sandy silt, trace gravel	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
BH21-56	DNNP NE Landfill Area	683625.84	4861416.129	BH21-56-1	2021-05-14	0	0.61	0	1	Black silty clay, topsoil	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
	DNNP NE Landfill Area			BH21-56-2	2021-05-14	0.61	1.22	0	1	Brown silty clay	N/A
	DNNP NE Landfill Area			BH21-56-3	2021-05-14	1.22	1.83	0	1	Brown silty clay	N/A
	DNNP NE Landfill Area			BH21-56-4	2021-05-14	1.83	2.44	-	-	Brown silty clay	N/A
	DNNP NE Landfill Area			BH21-56-5	2021-05-14	2.44	3.05	-	-	Brown silty clay	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-

Table 1 - Borehole and Test Pit Sampling Summary
Darlington New Nuclear Project

Location ID	Area of Potential Environmental Concern	Easting	Northing	Sample ID	Sample Date	Sample Depth		Headspace		Soil Type / Observations	Analysis
						Start (mbgs)	End (mbgs)	Hexane (ppm)	Isobutylene (ppm)		

Notes
1 Easting/northing presented NAD83, Zone 17
mbgs metres below ground surface
ppm parts per million

Table 2 - Summary of Soil Analytical Data - Volatile Organic Compounds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-1 (3m)	BH21-10 (10m)	BH21-10 (10m)	BH21-11 (3m)	BH21-11 (3m)	BH21-12 (3m)	BH21-12 (3m)	BH21-13 (10m)	BH21-13 (10m)	BH21-13 (10m)
			Sample Name	BH21-1-2	BH21-10-1	BH21-10-3	BH21-11-1	BH21-11-2	BH21-12-3	BH21-12-5	BH21-13-1	BH21-13-14	BH21-13-4
			Sample Date	2021-05-04	2021-05-10	2021-05-10	2021-04-26	2021-04-26	2021-04-26	2021-04-26	2021-04-28	2021-04-28	2021-04-28
			Sample Depth	0.6-1.22 m	0-0.61 m	1.21-1.83 m	0-0.61 m	0.6-1.22 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	7.92-8.53 m	1.82-2.44 m
VOCs - BTEX													
Benzene	0.32	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ethylbenzene	9.5	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Toluene	68	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenes, Total	26	ug/g		< 0.040	< 0.040	< 0.040	0.056	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Chlorophenols													
2-Chlorophenol	3.1	ug/g		-	< 0.08	< 0.08	< 0.2	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
2,4-Dichlorophenol	3.4	ug/g		-	< 0.1	< 0.1	< 0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	2.9	ug/g		-	< 0.1	< 0.1	< 0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	10	ug/g		-	< 0.08	< 0.08	< 0.2	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
2,4,6-Trichlorophenol	3.8	ug/g		-	< 0.1	< 0.1	< 0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetone	16	ug/g		-	< 0.49	< 0.49	-	-	-	-	-	-	-
trans-1,3-Dichloropropene		ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g		-	< 0.030	< 0.030	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
Carbon Tetrachloride	0.21	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
n-Hexane	46	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
Chlorobenzene	2.4	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
2-Butanone	70	ug/g		-	< 0.40	< 0.40	-	-	-	-	-	-	-
Chloroform	0.47	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
4-Methyl-2-pentanone	31	ug/g		-	< 0.40	< 0.40	-	-	-	-	-	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
Methyl tert-Butyl Ether	11	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
Methylene Chloride	1.6	ug/g		-	< 0.049	< 0.049	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
Styrene	34	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
Tetrachloroethene	4.5	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
1,1-Dichloroethane	17	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	ug/g		-	< 0.049	< 0.049	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
1,1-Dichloroethene	0.064	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	55	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
Trichloroethene	0.91	ug/g		-	< 0.010	< 0.010	-	-	-	-	-	-	-
1,2-Dichloropropane	0.16	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
Trichlorofluoromethane	4	ug/g		-	< 0.040	< 0.040	-	-	-	-	-	-	-
Vinyl Chloride	0.032	ug/g		-	< 0.019	< 0.019	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected in excess of soil criteria
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Table 2 - Summary of Soil Analytical Data - Volatile Organic Compounds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-14 (10m)	BH21-14 (10m)	BH21-14 (10m)	BH21-15 (3m)	BH21-15 (3m)	BH21-16 (3m)	BH21-16 (3m)	BH21-17 (3m)	BH21-17 (3m)	BH21-17 (3m)	BH21-17 (3M)	BH21-17 (3M)	BH21-17 (3m)	BH21-18 (3m)
			Sample Name	BH21-14-1	BH21-14-12	BH21-14-6	BH21-15-1	BH21-15-4	BH12-16-4	BH21-16-1	BH21-17-1	BH21-17-3	BH21-17-5	Dup 27	Dup 29	Dup 31	BH21-18-1
			Sample Date	2021-05-10	2021-05-11	2021-05-11	2021-04-29	2021-04-29	2021-04-29	2021-04-29	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-06
			Sample Depth	0-0.61 m	6.7-7.32 m	3.04-3.66 m	0-0.61 m	1.82-2.44 m	1.82-2.44 m	0-0.61 m	0-0.61 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m
VOCs - BTEX																	
Benzene	0.32	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.053	< 0.020	< 0.020	< 0.020
Ethylbenzene	9.5	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.17	< 0.020	< 0.020	0.12
Toluene	68	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.065	< 0.020	< 0.020	0.028
Xylenes, Total	26	ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.14	< 0.040	< 0.040	1.3	< 0.040	< 0.040	0.42
Chlorophenols																	
2-Chlorophenol	3.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	3.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	2.9	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	10	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	3.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Hexane	46	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	2.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	70	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	0.47	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	31	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-Butyl Ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	34	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	4.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	17	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	0.064	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	55	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.91	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	0.16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	0.032	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected in excess of soil criteria
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Table 2 - Summary of Soil Analytical Data - Volatile Organic Compounds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3M)	BH21-18 (3M)	BH21-18 (3m)	BH21-19 (3m)	BH21-19 (3m)	BH21-19 (3m)	BH21-19 (3m)	BH21-19 (3M)	BH21-19 (3M)	BH21-19 (3m)	BH21-19 (3M)
			Sample Name	BH21-18-2	BH21-18-4	BH21-18-5	Dup 22	Dup21	Dup24	BH21-19-1	BH21-19-2	BH21-19-4	BH21-19-5	Dup 32	Dup33	Dup35	Dup36
			Sample Date	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07
			Sample Depth	0.6-1.22 m	1.82-2.44 m	2.43-3.05 m	0.6-1.22 m	0-0.61 m	1.82-2.44 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m	2.43-3.05 m
VOCs - BTEX																	
Benzene	0.32	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.062	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ethylbenzene	9.5	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	0.090	< 0.020	0.19	< 0.020	< 0.020	< 0.020	0.091	< 0.020	< 0.020	< 0.020
Toluene	68	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	0.024	< 0.020	< 0.020	< 0.020	0.031	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenes, Total	26	ug/g		< 0.040	< 0.040	< 0.040	< 0.040	0.51	< 0.040	0.43	< 0.040	< 0.050	< 0.040	0.55	< 0.040	< 0.040	< 0.040
Chlorophenols																	
2-Chlorophenol	3.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	3.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	2.9	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	10	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	3.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Hexane	46	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	2.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	70	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	0.47	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	31	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-Butyl Ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	34	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	4.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	17	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	0.064	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	55	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.91	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	0.16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	0.032	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.
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Output generated by GalReport.

Table 2 - Summary of Soil Analytical Data - Volatile Organic Compounds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-20 (3m)	BH21-20 (3m)	BH21-20 (3m)	BH21-20 (3M)	BH21-20 (3M)	BH21-21 (3m)	BH21-21 (3m)	BH21-21 (3m)	BH21-21 (3M)	BH21-22 (3m)	BH21-22 (3m)	BH21-23 (3m)	BH21-23 (3m)	BH21-23 (3m)
			Sample Name	BH21-20-1	BH21-20-2	BH21-20-5	Dup 37	Dup38	BH21-21-1	BH21-21-2	BH21-2-2	Dup 19	BH21-22-1	BH21-22-2	BH21-23-1	BH21-23-1A	BH21-23-3
			Sample Date	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-04-26	2021-04-26	2021-05-05	2021-05-05	2021-04-22	2021-04-22	2021-05-03	2021-05-14	2021-05-03
			Sample Depth	0-0.61 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	0-0.61 m	0.6-1.22 m	0.6-1.22 m	0.6-1.22 m	0-0.61 m	0.6-1.22 m	0-0.61 m	0-0.61 m	1.21-1.83 m
VOCs - BTEX																	
Benzene	0.32	ug/g		0.025	< 0.020	< 0.020	0.13	< 0.020	0.029	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	-	< 0.020
Ethylbenzene	9.5	ug/g		0.10	< 0.020	< 0.020	0.48	< 0.020	0.11	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	-	< 0.020
Toluene	68	ug/g		0.026	< 0.020	< 0.020	0.45	< 0.020	0.040	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	-	< 0.020
Xylenes, Total	26	ug/g		0.93	< 0.040	< 0.040	5.2	< 0.040	0.97	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	-	< 0.040
Chlorophenols																	
2-Chlorophenol	3.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	3.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	2.9	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	10	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	3.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Hexane	46	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	2.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	70	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	0.47	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	31	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-Butyl Ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	34	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	4.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	17	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	0.064	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	55	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.91	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	0.16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	0.032	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected in excess of soil criteria
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Table 2 - Summary of Soil Analytical Data - Volatile Organic Compounds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-24 (3m)	BH21-24 (3m)	BH21-24 (3m)	BH21-25 (3m)	BH21-25 (3m)	BH21-26 (3m)	BH21-26 (3m)	BH21-27 (3m)	BH21-27 (3m)	BH21-27 (3m)	BH21-28 (3m)	BH21-28 (3m)	BH21-29 (3m)	BH21-29 (3m)
			Sample Name	BH21-24-1	BH21-24-1A	BH21-24-3	BH21-25-1	BH21-25-3	BH21-26-1	BH21-26-3	BH21-27-1	BH21-27-1A	BH21-27-4	BH21-28-1	BH21-28-3	BH21-29-1	BH21-29-4
			Sample Date	2021-05-03	2021-05-14	2021-05-03	2021-04-27	2021-04-27	2021-04-23	2021-04-23	2021-04-27	2021-05-14	2021-04-27	2021-04-27	2021-04-27	2021-04-27	2021-04-27
			Sample Depth	0-0.61 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.21-1.83 m	0-0.61 m	0-0.61 m	1.82-2.44 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.82-2.44 m
VOCs - BTEX																	
Benzene	0.32	ug/g		< 0.020	-	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	-	-	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ethylbenzene	9.5	ug/g		< 0.020	-	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	-	-	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Toluene	68	ug/g		< 0.020	-	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	-	-	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenes, Total	26	ug/g		< 0.040	-	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	-	-	< 0.040	< 0.040	< 0.040	0.046	< 0.040
Chlorophenols																	
2-Chlorophenol	3.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	3.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	2.9	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	10	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	3.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Hexane	46	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	2.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	70	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	0.47	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	31	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-Butyl Ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	34	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	4.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	17	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	0.064	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	55	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.91	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	0.16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	0.032	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected in excess of soil criteria
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Table 2 - Summary of Soil Analytical Data - Volatile Organic Compounds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-29 (3M)	BH21-3 (3m)	BH21-3 (3M)	BH21-30 (6m)	BH21-30 (6m)	BH21-30 (6m)	BH21-30 (6m)	BH21-30 (6m)	BH21-31 (3m)	BH21-31 (3m)	BH21-31 (3m)	BH21-32 (3m)	BH21-32 (3m)	BH21-32 (3m)
			Sample Name	Dup 6	BH21-3-1	Dup 13	BH21-30-1	BH21-30-10	BH21-30-4	BH21-30-6	BH21-30-7	BH21-31-1	BH21-31-2	BH21-31-5	BH21-32-1A	BH21-32-2	BH21-32-4
			Sample Date	2021-04-27	2021-05-04	2021-05-04	2021-04-23	2021-04-23	2021-04-23	2021-04-23	2021-04-23	2021-05-03	2021-05-03	2021-05-03	2021-05-14	2021-04-30	2021-04-30
			Sample Depth	1.82-2.44 m	0-0.61 m	0-0.6 m	0-0.61 m	5.48-6.1 m	1.82-2.44 m	3.04-3.66 m	3.65-4.27 m	0-0.61 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m
VOCs - BTEX																	
Benzene	0.32	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ethylbenzene	9.5	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Toluene	68	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenes, Total	26	ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Chlorophenols																	
2-Chlorophenol	3.1	ug/g		-	< 0.08	< 0.08	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	3.4	ug/g		-	< 0.1	< 0.1	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	2.9	ug/g		-	< 0.1	< 0.1	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	10	ug/g		-	< 0.08	< 0.08	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	3.8	ug/g		-	< 0.1	< 0.1	-	-	-	-	-	-	-	-	-	-	-
Acetone	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Hexane	46	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	2.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	70	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	0.47	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	31	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-Butyl Ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	34	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	4.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	17	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	0.064	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	55	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.91	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	0.16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	0.032	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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Table 2 - Summary of Soil Analytical Data - Volatile Organic Compounds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-33 (3m)	BH21-33 (3m)	BH21-33 (3m)	BH21-34 (3m)	BH21-34 (3m)	BH21-35 (3m)	BH21-35 (3m)	BH21-37 (3m)	BH21-37 (3m)	BH21-37 (3m)	BH21-37 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-38 (3m)
			Sample Name	BH21-33-1	BH21-33-2	BH21-33-4	BH21-34-1	BH21-34-4	BH21-35-3A	BH21-35-4	BH21-37-1	BH21-37-15	BH21-37-3	BH21-37-8	BH21-38-1	BH21-38-11	BH21-38-4
			Sample Date	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-22	2021-04-22	2021-04-22	2021-04-22	2021-04-21	2021-04-21	2021-04-21
			Sample Depth	0-0.61 m	0.6-1.22 m	1.82-2.44 m	0-0.61 m	1.82-2.44 m	0.91-1.52 m	1.82-2.44 m	0-0.61 m	8.53-9.14 m	1.21-1.83 m	4.26-4.88 m	0-0.61 m	6.09-6.71 m	1.82-2.44 m
VOCs - BTEX																	
Benzene	0.32	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ethylbenzene	9.5	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Toluene	68	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenes, Total	26	ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Chlorophenols																	
2-Chlorophenol	3.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	3.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	2.9	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	10	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	3.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Hexane	46	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	2.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	70	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	0.47	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	31	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-Butyl Ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	34	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	4.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	17	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	0.064	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	55	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.91	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	0.16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	0.032	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected in excess of soil criteria
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Table 2 - Summary of Soil Analytical Data - Volatile Organic Compounds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-38 (3m)	BH21-4 (3m)	BH21-4 (3M)	BH21-42 (10m)	BH21-42 (10m)	BH21-43 (6m)	BH21-43 (6m)	BH21-43 (6M)	BH21-44 (6m)	BH21-44 (6m)	BH21-44 (6m)	BH21-45 (3m)	BH21-45 (3m)	BH21-46 (3m)
			Sample Name	BH21-38-7	BH21-4-1	Dup 15	BH21-42-2	BH21-42-8	BH21-43-2	BH21-43-8	Dup 20	BH21-44-1	BH21-44-5	BH21-44-9	BH21-45-1	BH21-45-4	BH21-46-1
			Sample Date	2021-04-21	2021-05-04	2021-05-04	2021-05-05	2021-05-05	2021-05-06	2021-05-06	2021-05-06	2021-05-10	2021-05-10	2021-05-10	2021-05-12	2021-05-12	2021-05-12
			Sample Depth	3.65-4.27 m	0-0.61 m	0-0.61 m	0.6-1.22 m	4.26-4.88 m	0.6-1.22 m	4.26-4.88 m	0.6-1.22 m	0-0.61 m	2.43-3.05 m	4.87-5.49 m	0-0.61 m	1.82-2.44 m	0-0.61 m
VOCs - BTEX																	
Benzene	0.32	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ethylbenzene	9.5	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Toluene	68	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenes, Total	26	ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Chlorophenols																	
2-Chlorophenol	3.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	3.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	2.9	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	10	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	3.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Hexane	46	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	2.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	70	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	0.47	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	31	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-Butyl Ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	34	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	4.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	17	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	0.064	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	55	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.91	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	0.16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	0.032	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected in excess of soil criteria
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Table 2 - Summary of Soil Analytical Data - Volatile Organic Compounds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-46 (3m)	BH21-47 (6m)	BH21-47 (6m)	BH21-47 (6m)	BH21-47 (6m)	BH21-47 (6M)	BH21-48 (3m)	BH21-48 (3m)	BH21-48 (3m)	BH21-49 (3m)	BH21-49 (3m)	BH21-49 (3m)	BH21-49 (3M)	BH21-5 (3m)
			Sample Name	BH21-46-5B	BH21-47-1	BH21-47-3	BH21-47-6	BH21-47-9	Dup 49	BH21-48-1	BH21-48-2	BH21-48-5	BH21-49-1	BH21-49-3	BH21-49-4	Dup 8	BH21-5-2
			Sample Date	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-04-29	2021-04-29	2021-04-29	2021-04-28	2021-04-28	2021-04-28	2021-04-28	2021-05-04
			Sample Depth	2.81-3.05 m	0-0.61 m	1.21-1.83 m	3.04-3.66 m	4.87-5.49 m	1.21-1.83 m	0-0.61 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	1.21-1.83 m	1.82-2.44 m	1.21-1.83 m	0.6-1.22 m
VOCs - BTEX																	
Benzene	0.32	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.030	< 0.020	< 0.020	< 0.020	< 0.020	< 0.040
Ethylbenzene	9.5	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.040
Toluene	68	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.043	< 0.020	< 0.020	< 0.020	< 0.020	< 0.040
Xylenes, Total	26	ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.080
Chlorophenols																	
2-Chlorophenol	3.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	3.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	2.9	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	10	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	3.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Hexane	46	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	2.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	70	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	0.47	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	31	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-Butyl Ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	34	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	4.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	17	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	0.064	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	55	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.91	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	0.16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	0.032	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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Output generated by GalReport.

Table 2 - Summary of Soil Analytical Data - Volatile Organic Compounds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-50 (3m)	BH21-50 (3m)	BH21-50 (3m)	BH21-51 (3m)	BH21-51 (3m)	BH21-52	BH21-52	BH21-53	BH21-53	BH21-54	BH21-54	BH21-55	BH21-55	BH21-56
			Sample Name	BH12-50-1	BH12-50-3	BH21-50-5	BH21-51-1	BH21-51-4	BH21-52-1	BH21-52-5	BH21-53-1	BH21-53-4	BH21-54-1	BH21-54-5	BH21-55-2	BH21-55-5	BH21-56-1
			Sample Date	2021-04-29	2021-04-29	2021-04-29	2021-04-21	2021-04-21	2021-05-14	2021-05-14	2021-05-14	2021-05-14	2021-05-13	2021-05-13	2021-05-13	2021-05-13	2021-05-14
			Sample Depth	0-0.61 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	1.82-2.44 m	0-0.61 m	9.39-10 m	0-0.61 m	1.82-2.44 m	0-0.61 m	2.43-3.05 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m
VOCs - BTEX																	
Benzene	0.32	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ethylbenzene	9.5	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Toluene	68	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenes, Total	26	ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Chlorophenols																	
2-Chlorophenol	3.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	3.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	2.9	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	10	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	3.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Hexane	46	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	2.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	70	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	0.47	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	31	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-Butyl Ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	34	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	4.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	17	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	0.064	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	55	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.91	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	0.16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	0.032	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected in excess of soil criteria
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Table 2 - Summary of Soil Analytical Data - Volatile Organic Compounds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-56	BH21-6 (3m)	BH21-6 (3m)	BH21-6 (3m)	BH21-6 (3M)	BH21-7 (3m)	BH21-7 (3M)	BH21-8 (10m)	BH21-8 (10m)	BH21-8 (10M)	BH21-8 (10M)	BH21-9 (3m)	BH21-9 (3M)	GS21-1
			Sample Name	BH21-56-5	BH21-6-1	BH21-6-1A	BH21-6-5	Dup 11	BH21-7-1	Dup47	BH21-8-1	BH21-8-5	Dup45	Dup46	BH21-9-1	Dup42	GS21-01
			Sample Date	2021-05-14	2021-05-03	2021-05-14	2021-05-03	2021-05-03	2021-05-12	2021-05-12	2021-05-11	2021-05-11	2021-05-11	2021-05-11	2021-05-07	2021-05-07	2021-04-16
			Sample Depth	2.43-3.05 m	0-0.61 m	0-0.61 m	2.43-3.05 m	2.39-3 m	0-0.61 m	0-0.61 m	0-0.61 m	2.43-3.05 m	0-0.61 m	2.43-3.05 m	0-0.61 m	0-0.61 m	0-0.18 m
VOCs - BTEX																	
Benzene	0.32	ug/g		< 0.020	< 0.020	-	< 0.020	< 0.020	0.21	0.13	0.19	< 0.020	0.028	< 0.020	< 0.020	< 0.020	< 0.020
Ethylbenzene	9.5	ug/g		< 0.020	0.028	-	< 0.020	< 0.020	0.55	0.33	0.56	< 0.020	0.11	< 0.020	< 0.020	< 0.020	< 0.020
Toluene	68	ug/g		< 0.020	0.058	-	< 0.020	< 0.020	0.41	0.39	0.021	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenes, Total	26	ug/g		< 0.040	0.43	-	< 0.040	< 0.040	5.0	3.2	4.0	< 0.040	0.73	< 0.040	< 0.040	< 0.040	< 0.040
Chlorophenols																	
2-Chlorophenol	3.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.08	< 0.08	-
2,4-Dichlorophenol	3.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.1	< 0.1	-
Pentachlorophenol	2.9	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.1	< 0.1	-
2,4,5-Trichlorophenol	10	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.08	< 0.08	-
2,4,6-Trichlorophenol	3.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.1	< 0.1	-
Acetone	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.49	-	-
trans-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
cis-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.030	-	-
Bromomethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
1,2-Dibromoethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
Carbon Tetrachloride	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
n-Hexane	46	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
Chlorobenzene	2.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
2-Butanone	70	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.40	-	-
Chloroform	0.47	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
4-Methyl-2-pentanone	31	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.40	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
Methyl tert-Butyl Ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
Methylene Chloride	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.049	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
Styrene	34	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
Dichlorodifluoromethane	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
Tetrachloroethene	4.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
1,1-Dichloroethane	17	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
1,2-Dichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.049	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
1,1-Dichloroethene	0.064	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
cis-1,2-Dichloroethene	55	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
Trichloroethene	0.91	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.010	-	-
1,2-Dichloropropane	0.16	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
Trichlorofluoromethane	4	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.040	-	-
Vinyl Chloride	0.032	ug/g		-	-	-	-	-	-	-	-	-	-	-	< 0.019	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.
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- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Table 2 - Summary of Soil Analytical Data - Volatile Organic Compounds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-10	GS21-11	GS21-12	GS21-13	GS21-14	GS21-15	GS21-16	GS21-16	GS21-17	GS21-18	GS21-19	GS21-2	GS21-20	GS21-20
			Sample Name	GS21-10	GS21-11	GS21-12	GS21-13	GS21-14	GS21-15	DUP 4	GS21-16	GS21-17	GS21-18	GS21-19	GS21-02	DUP 1	GS21-20
			Sample Date	2021-04-16	2021-04-16	2021-04-16	2021-04-16	2021-04-16	2021-04-20	2021-04-20	2021-04-20	2021-04-20	2021-04-20	2021-04-20	2021-04-16	2021-04-15	2021-04-15
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
VOCs - BTEX																	
Benzene	0.32	ug/g		< 0.020	< 0.020	< 0.020	-	-	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ethylbenzene	9.5	ug/g		< 0.020	< 0.020	< 0.020	-	-	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Toluene	68	ug/g		< 0.020	< 0.020	< 0.020	-	-	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenes, Total	26	ug/g		< 0.040	< 0.040	< 0.040	-	-	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Chlorophenols																	
2-Chlorophenol	3.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	3.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	2.9	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	10	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	3.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Hexane	46	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	2.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	70	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	0.47	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	31	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-Butyl Ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	34	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	4.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	17	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	0.064	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	55	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.91	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	0.16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	0.032	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.
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Output generated by GalReport.

Table 2 - Summary of Soil Analytical Data - Volatile Organic Compounds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-21	GS21-22	GS21-23	GS21-24	GS21-25	GS21-26	GS21-27	GS21-28	GS21-29	GS21-3	GS21-30	GS21-31	GS21-32	GS21-33
			Sample Name	GS21-21	GS21-22	GS21-23	GS21-24	GS21-25	GS21-26	GS21-27	GS21-28	GS21-29	GS21-03	GS21-30	GS21-31	GS21-32	GS21-33
			Sample Date	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
VOCs - BTEX																	
Benzene	0.32	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ethylbenzene	9.5	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Toluene	68	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenes, Total	26	ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Chlorophenols																	
2-Chlorophenol	3.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	3.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	2.9	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	10	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	3.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Hexane	46	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	2.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	70	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	0.47	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	31	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-Butyl Ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	34	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	4.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	17	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	0.064	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	55	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.91	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	0.16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	0.032	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected in excess of soil criteria
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Table 2 - Summary of Soil Analytical Data - Volatile Organic Compounds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-34	GS21-35	GS21-36	GS21-37	GS21-38	GS21-39	GS21-4	GS21-40	GS21-41	GS21-42	GS21-42	GS21-43	GS21-43	GS21-44
			Sample Name	GS21-34	GS21-35	GS21-36	GS21-37	GS21-38	GS21-39	GS21-04	GS21-40	GS21-41	DUP 5	GS21-42	DUP 3	GS21-43	GS21-44
			Sample Date	2021-04-19	2021-04-19	2021-04-16	2021-04-20	2021-04-20	2021-04-20	2021-04-16	2021-04-19	2021-04-20	2021-04-20	2021-04-20	2021-04-19	2021-04-19	2021-04-16
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
VOCs - BTEX																	
Benzene	0.32	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ethylbenzene	9.5	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Toluene	68	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenes, Total	26	ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Chlorophenols																	
2-Chlorophenol	3.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	3.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	2.9	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	10	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	3.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Hexane	46	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	2.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	70	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	0.47	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	31	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-Butyl Ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	34	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	4.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	17	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	0.064	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	55	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.91	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	0.16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	0.032	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.
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Output generated by GalReport.

Table 2 - Summary of Soil Analytical Data - Volatile Organic Compounds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-45	GS21-46	GS21-47	GS21-47	GS21-48	GS21-49	GS21-5	GS21-50	GS21-51	GS21-52	GS21-53	GS21-6	GS21-7	GS21-8
			Sample Name	GS21-45	GS21-46	DUP 2	GS21-47	GS21-48	GS21-49	GS21-05	GS21-50	GS21-51	GS21-52	GS21-53	GS21-06	GS21-07	GS21-08
			Sample Date	2021-04-16	2021-04-16	2021-04-15	2021-04-15	2021-04-16	2021-04-16	2021-04-19	2021-04-16	2021-04-16	2021-04-19	2021-04-16	2021-04-19	2021-04-16	2021-04-19
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
VOCs - BTEX																	
Benzene	0.32	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ethylbenzene	9.5	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Toluene	68	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenes, Total	26	ug/g		0.33	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Chlorophenols																	
2-Chlorophenol	3.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	3.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	2.9	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	10	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	3.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Hexane	46	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	2.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	70	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	0.47	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	31	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-Butyl Ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	34	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	4.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	17	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	0.064	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	55	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.91	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	0.16	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	0.032	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.
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Output generated by GalReport.

Table 2 - Summary of Soil Analytical Data - Volatile Organic Compunds, BTEX, Trihalomethanes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-9	BH21-36 (3M)	BH21-36 (3M)	BH21-39 (6M)	BH21-39 (6M)	BH21-40 (3M)	BH21-40 (3M)	BH21-41 (10M)	BH21-41 (10M)	BH21-41 (10M)	BH21-41 (10M)
			Sample Name	GS21-09	BH21-36-2	BH21-36-4	BH21-39-1	BH21-39-5	BH21-40-2	BH21-40-3	BH21-41-1	BH21-41-3	BH21-41-4	BH21-41-6
			Sample Date	2021-04-16	2021-04-08	2021-04-08	2021-02-09	2021-02-09	2021-04-08	2021-04-08	2021-04-09	2021-04-09	2021-04-09	2021-04-09
			Sample Depth	0-0.18 m	0.6-1.2 m	1.8-2.4 m	0-0.6 m	2.4-3 m	0.6-1.2 m	1.2-1.8 m	0-0.6 m	1.2-1.8 m	1.8-2.4 m	3-3.7 m
VOCs - BTEX														
Benzene	0.32	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ethylbenzene	9.5	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Toluene	68	ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenes, Total	26	ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Chlorophenols														
2-Chlorophenol	3.1	ug/g		-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	3.4	ug/g		-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	2.9	ug/g		-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	10	ug/g		-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	3.8	ug/g		-	-	-	-	-	-	-	-	-	-	-
Acetone	16	ug/g		-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g		-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-
n-Hexane	46	ug/g		-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	2.4	ug/g		-	-	-	-	-	-	-	-	-	-	-
2-Butanone	70	ug/g		-	-	-	-	-	-	-	-	-	-	-
Chloroform	0.47	ug/g		-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	31	ug/g		-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	6.8	ug/g		-	-	-	-	-	-	-	-	-	-	-
Methyl tert-Butyl Ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.2	ug/g		-	-	-	-	-	-	-	-	-	-	-
Styrene	34	ug/g		-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	ug/g		-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	4.5	ug/g		-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	17	ug/g		-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.087	ug/g		-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	0.064	ug/g		-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	6.1	ug/g		-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.3	ug/g		-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	55	ug/g		-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.91	ug/g		-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	0.16	ug/g		-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	4	ug/g		-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	0.032	ug/g		-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected in excess of soil criteria
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-1 (3m)	BH21-10 (10m)	BH21-10 (10m)	BH21-11 (3m)	BH21-11 (3m)	BH21-12 (3m)	BH21-12 (3m)	BH21-13 (10m)	BH21-13 (10m)	BH21-13 (10m)
			Sample Name	BH21-1-2	BH21-10-1	BH21-10-3	BH21-11-1	BH21-11-2	BH21-12-3	BH21-12-5	BH21-13-1	BH21-13-14	BH21-13-4
			Sample Date	2021-05-04	2021-05-10	2021-05-10	2021-04-26	2021-04-26	2021-04-26	2021-04-26	2021-04-28	2021-04-28	2021-04-28
			Sample Depth	0.6-1.22 m	0-0.61 m	1.21-1.83 m	0-0.61 m	0.6-1.22 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	7.92-8.53 m	1.82-2.44 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 10	< 10	20	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	< 10	< 10	13	< 10	13	< 10	74	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	220	< 50	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	75	< 50	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		-	< 0.03	< 0.03	< 0.06	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo[g,h,i]perylene	9.6	ug/g		-	< 0.1	< 0.1	< 0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno[1,2,3-cd]pyrene	0.76	ug/g		-	< 0.08	< 0.08	< 0.2	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Acenaphthylene	0.15	ug/g		-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo[k]fluoranthene	0.96	ug/g		-	< 0.03	< 0.03	< 0.06	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
1- & 2-Methylnaphthalene	76	ug/g		-	< 0.042	< 0.042	0.31	< 0.042	< 0.042	< 0.042	0.083	< 0.042	< 0.042
Anthracene	0.67	ug/g		-	< 0.03	< 0.03	< 0.06	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chrysene	9.6	ug/g		-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	9.6	ug/g		-	< 0.03	< 0.03	< 0.06	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo[a]anthracene	0.96	ug/g		-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzo[a,h]anthracene	0.1	ug/g		-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	12	ug/g		-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo[a]pyrene	0.3	ug/g		-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	9.6	ug/g		-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	96	ug/g		-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	62	ug/g		-	< 0.03	< 0.03	< 0.06	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-14 (10m)	BH21-14 (10m)	BH21-14 (10m)	BH21-15 (3m)	BH21-15 (3m)	BH21-16 (3m)	BH21-16 (3m)	BH21-17 (3m)	BH21-17 (3m)	BH21-17 (3m)
			Sample Name	BH21-14-1	BH21-14-12	BH21-14-6	BH21-15-1	BH21-15-4	BH12-16-4	BH21-16-1	BH21-17-1	BH21-17-3	BH21-17-5
			Sample Date	2021-05-10	2021-05-11	2021-05-11	2021-04-29	2021-04-29	2021-04-29	2021-04-29	2021-05-07	2021-05-07	2021-05-07
			Sample Depth	0-0.61 m	6.7-7.32 m	3.04-3.66 m	0-0.61 m	1.82-2.44 m	1.82-2.44 m	0-0.61 m	0-0.61 m	1.21-1.83 m	2.43-3.05 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		39	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		100	< 50	< 50	< 50	< 50	< 50	< 50	59	< 50	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		-	-	-	-	-	-	-	< 0.0070	-	< 0.0050
Benzo[g,h,i]perylene	9.6	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Indeno[1,2,3-cd]pyrene	0.76	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Acenaphthylene	0.15	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Benzo[k]fluoranthene	0.96	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
1- & 2-Methylnaphthalene	76	ug/g		-	-	-	-	-	-	-	0.022	-	< 0.0071
Anthracene	0.67	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Chrysene	9.6	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Naphthalene	9.6	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Benzo[a]anthracene	0.96	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Dibenzo[a,h]anthracene	0.1	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Phenanthrene	12	ug/g		-	-	-	-	-	-	-	0.0078	-	< 0.0050
Benzo[a]pyrene	0.3	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Fluoranthene	9.6	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Pyrene	96	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Fluorene	62	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-17 (3M)	BH21-17 (3M)	BH21-17 (3m)	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3M)	BH21-18 (3M)	BH21-18 (3m)
			Sample Name	Dup 27	Dup 29	Dup 31	BH21-18-1	BH21-18-2	BH21-18-4	BH21-18-5	Dup 22	Dup21	Dup24
			Sample Date	2021-05-07	2021-05-07	2021-05-07	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06
			Sample Depth	0-0.61 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m	2.43-3.05 m	0.6-1.22 m	0-0.61 m	1.82-2.44 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		**92**	< 10	< 10	**110**	< 10	< 10	< 10	< 10	**94**	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		12	< 10	< 10	22	15	< 10	< 10	< 10	**350**	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		< 50	< 50	< 50	76	54	< 50	< 50	< 50	780	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	230	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		-	-	-	< 0.0050	< 0.0070	< 0.0050	< 0.0050	< 0.0050	< 0.30	< 0.0050
Benzo[g,h,i]perylene	9.6	ug/g		-	-	-	0.0064	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0055	< 0.0050
Indeno[1,2,3-cd]pyrene	0.76	ug/g		-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Acenaphthylene	0.15	ug/g		-	-	-	< 0.020	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.030	< 0.0050
Benzo[k]fluoranthene	0.96	ug/g		-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
1- & 2-Methylnaphthalene	76	ug/g		-	-	-	0.064	0.018	< 0.0071	< 0.0071	< 0.0071	0.69	< 0.0071
Anthracene	0.67	ug/g		-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.077	< 0.0050
Chrysene	9.6	ug/g		-	-	-	0.017	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.031	< 0.0050
Naphthalene	9.6	ug/g		-	-	-	< 0.0090	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.055	< 0.0050
Benzo[a]anthracene	0.96	ug/g		-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Dibenzo[a,h]anthracene	0.1	ug/g		-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Phenanthrene	12	ug/g		-	-	-	0.051	0.012	< 0.0050	< 0.0050	< 0.0050	0.27	< 0.0050
Benzo[a]pyrene	0.3	ug/g		-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Fluoranthene	9.6	ug/g		-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.040	< 0.0050
Pyrene	96	ug/g		-	-	-	0.0059	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.030	< 0.0050
Fluorene	62	ug/g		-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.070	< 0.0050

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-19 (3m)	BH21-19 (3m)	BH21-19 (3m)	BH21-19 (3m)	BH21-19 (3M)	BH21-19 (3M)	BH21-19 (3m)	BH21-19 (3M)	BH21-20 (3m)	BH21-20 (3m)
			Sample Name	BH21-19-1	BH21-19-2	BH21-19-4	BH21-19-5	Dup 32	Dup33	Dup35	Dup36	BH21-20-1	BH21-20-2
			Sample Date	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07
			Sample Depth	0-0.61 m	0.6-1.22 m	1.82-2.44 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		**110**	< 10	< 10	< 10	**92**	< 10	< 10	< 10	**75**	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		200	< 10	< 10	< 10	220	< 10	< 10	< 10	**460**	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		450	< 50	< 50	< 50	480	< 50	< 50	< 50	1000	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		150	< 50	< 50	< 50	150	< 50	< 50	< 50	350	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		< 0.30	< 0.0050	< 0.0050	< 0.0050	< 0.30	< 0.0050	< 0.0050	< 0.0050	< 0.40	< 0.0050
Benzo[g,h,i]perylene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Indeno[1,2,3-cd]pyrene	0.76	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Acenaphthylene	0.15	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.030	< 0.0050
Benzo[k]fluoranthene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
1- & 2-Methylnaphthalene	76	ug/g		0.45	< 0.0071	< 0.0071	< 0.0071	0.64	< 0.0071	< 0.0071	< 0.0071	1.1	< 0.0071
Anthracene	0.67	ug/g		0.040	< 0.0050	< 0.0050	< 0.0050	0.049	< 0.0050	< 0.0050	< 0.0050	0.075	< 0.0050
Chrysene	9.6	ug/g		0.024	< 0.0050	< 0.0050	< 0.0050	0.025	< 0.0050	< 0.0050	< 0.0050	0.030	< 0.0050
Naphthalene	9.6	ug/g		0.039	< 0.0050	< 0.0050	< 0.0050	0.062	< 0.0050	< 0.0050	< 0.0050	0.12	< 0.0050
Benzo[a]anthracene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Dibenzo[a,h]anthracene	0.1	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Phenanthrene	12	ug/g		0.14	< 0.0050	< 0.0050	< 0.0050	0.17	< 0.0050	< 0.0050	< 0.0050	0.22	< 0.0050
Benzo[a]pyrene	0.3	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Fluoranthene	9.6	ug/g		< 0.020	< 0.0050	< 0.0050	< 0.0050	< 0.030	< 0.0050	< 0.0050	< 0.0050	< 0.030	< 0.0050
Pyrene	96	ug/g		< 0.020	< 0.0050	< 0.0050	< 0.0050	< 0.020	< 0.0050	< 0.0050	< 0.0050	< 0.030	< 0.0050
Fluorene	62	ug/g		< 0.040	< 0.0050	< 0.0050	< 0.0050	< 0.050	< 0.0050	< 0.0050	< 0.0050	< 0.060	< 0.0050

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-20 (3m)	BH21-20 (3M)	BH21-20 (3M)	BH21-21 (3m)	BH21-21 (3m)	BH21-21 (3m)	BH21-21 (3M)	BH21-22 (3m)	BH21-22 (3m)	BH21-23 (3m)
			Sample Name	BH21-20-5	Dup 37	Dup38	BH21-21-1	BH21-21-2	BH21-2-2	Dup 19	BH21-22-1	BH21-22-2	BH21-23-1
			Sample Date	2021-05-07	2021-05-07	2021-05-07	2021-04-26	2021-04-26	2021-05-05	2021-05-05	2021-04-22	2021-04-22	2021-05-03
			Sample Depth	2.43-3.05 m	0-0.61 m	0.6-1.22 m	0-0.61 m	0.6-1.22 m	0.6-1.22 m	0.6-1.22 m	0-0.61 m	0.6-1.22 m	0-0.61 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	**230**	< 10	**77**	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	70	< 10	19	< 10	< 10	< 10	10	11	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		< 50	200	< 50	63	< 50	< 50	< 50	< 50	< 50	77
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	75	< 50	< 50	< 50	< 50	< 50	< 50	< 50	61
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		< 0.0050	< 0.050	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050
Benzo[g,h,i]perylene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050
Indeno[1,2,3-cd]pyrene	0.76	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050
Acenaphthylene	0.15	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050
Benzo[k]fluoranthene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050
1- & 2-Methylnaphthalene	76	ug/g		< 0.0071	0.11	0.032	0.031	0.034	-	-	< 0.0071	< 0.0071	< 0.0071
Anthracene	0.67	ug/g		< 0.0050	0.0095	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050
Chrysene	9.6	ug/g		< 0.0050	0.0072	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050
Naphthalene	9.6	ug/g		< 0.0050	0.010	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050
Benzo[a]anthracene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050
Dibenzo[a,h]anthracene	0.1	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050
Phenanthrene	12	ug/g		< 0.0050	0.031	0.0094	0.0099	0.0071	-	-	< 0.0050	< 0.0050	< 0.0050
Benzo[a]pyrene	0.3	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050
Fluoranthene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050
Pyrene	96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050
Fluorene	62	ug/g		< 0.0050	< 0.0080	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-23 (3m)	BH21-23 (3m)	BH21-24 (3m)	BH21-24 (3m)	BH21-24 (3m)	BH21-25 (3m)	BH21-25 (3m)	BH21-26 (3m)	BH21-26 (3m)	BH21-27 (3m)
			Sample Name	BH21-23-1A	BH21-23-3	BH21-24-1	BH21-24-1A	BH21-24-3	BH21-25-1	BH21-25-3	BH21-26-1	BH21-26-3	BH21-27-1
			Sample Date	2021-05-14	2021-05-03	2021-05-03	2021-05-14	2021-05-03	2021-04-27	2021-04-27	2021-04-23	2021-04-23	2021-04-27
			Sample Depth	0-0.61 m	1.21-1.83 m	0-0.61 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.21-1.83 m	0-0.61 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		-	< 10	14	-	< 10	< 10	< 10	< 10	< 10	-
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		-	< 10	< 10	-	< 10	< 10	< 10	< 10	25	-
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		-	< 50	< 50	-	< 50	< 50	< 50	< 50	88	-
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		-	< 50	< 50	-	< 50	< 50	< 50	< 50	< 50	-
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		-	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-
Benzo[g,h,i]perylene	9.6	ug/g		-	< 0.0050	< 0.0050	-	< 0.0050	0.011	< 0.0050	< 0.0050	< 0.0050	-
Indeno[1,2,3-cd]pyrene	0.76	ug/g		-	< 0.0050	< 0.0050	-	< 0.0050	0.0088	< 0.0050	< 0.0050	< 0.0050	-
Acenaphthylene	0.15	ug/g		-	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-
Benzo[k]fluoranthene	0.96	ug/g		-	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-
1- & 2-Methylnaphthalene	76	ug/g		-	< 0.0071	< 0.0071	-	< 0.0071	< 0.0071	< 0.0071	< 0.0071	0.030	-
Anthracene	0.67	ug/g		-	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-
Chrysene	9.6	ug/g		-	< 0.0050	< 0.0050	-	< 0.0050	0.0053	< 0.0050	< 0.0050	< 0.0050	-
Naphthalene	9.6	ug/g		-	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-
Benzo[a]anthracene	0.96	ug/g		-	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-
Dibenzo[a,h]anthracene	0.1	ug/g		-	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-
Phenanthrene	12	ug/g		-	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.014	-
Benzo[a]pyrene	0.3	ug/g		-	< 0.0050	< 0.0050	-	< 0.0050	0.0085	< 0.0050	< 0.0050	< 0.0050	-
Fluoranthene	9.6	ug/g		-	< 0.0050	< 0.0050	-	< 0.0050	0.0098	< 0.0050	< 0.0050	< 0.0050	-
Pyrene	96	ug/g		-	< 0.0050	< 0.0050	-	< 0.0050	0.0085	< 0.0050	< 0.0050	< 0.0050	-
Fluorene	62	ug/g		-	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-27 (3m)	BH21-27 (3m)	BH21-28 (3m)	BH21-28 (3m)	BH21-29 (3m)	BH21-29 (3m)	BH21-29 (3M)	BH21-3 (3m)	BH21-3 (3M)	BH21-30 (6m)
			Sample Name	BH21-27-1A	BH21-27-4	BH21-28-1	BH21-28-3	BH21-29-1	BH21-29-4	Dup 6	BH21-3-1	Dup 13	BH21-30-1
			Sample Date	2021-05-14	2021-04-27	2021-04-27	2021-04-27	2021-04-27	2021-04-27	2021-04-27	2021-05-04	2021-05-04	2021-04-23
			Sample Depth	0-0.61 m	1.82-2.44 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.82-2.44 m	1.82-2.44 m	0-0.61 m	0-0.6 m	0-0.61 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		-	< 10	< 10	< 10	11	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		-	< 10	< 10	< 10	71	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		-	< 50	< 50	< 50	400	< 50	< 50	< 50	< 50	100
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		-	< 50	< 50	< 50	180	< 50	< 50	< 50	< 50	69
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.030	< 0.0050	< 0.0050	< 0.03	< 0.03	< 0.0050
Benzo[g,h,i]perylene	9.6	ug/g		0.0052	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.1	< 0.1	0.0099
Indeno[1,2,3-cd]pyrene	0.76	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.08	< 0.08	0.0058
Acenaphthylene	0.15	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.05	< 0.05	< 0.0050
Benzo[k]fluoranthene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.03	< 0.03	< 0.0050
1- & 2-Methylnaphthalene	76	ug/g		< 0.0071	< 0.0071	0.024	< 0.0071	0.070	< 0.0071	< 0.0071	< 0.042	< 0.042	< 0.0071
Anthracene	0.67	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0068	< 0.0050	< 0.0050	< 0.03	< 0.03	< 0.0050
Chrysene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.034	< 0.0050	< 0.0050	< 0.05	< 0.05	0.0061
Naphthalene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0060	< 0.0050	< 0.0050	< 0.03	< 0.03	< 0.0050
Benzo[a]anthracene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.05	< 0.05	< 0.0050
Dibenzo[a,h]anthracene	0.1	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.05	< 0.05	< 0.0050
Phenanthrene	12	ug/g		< 0.0050	< 0.0050	0.0061	< 0.0050	0.040	< 0.0050	< 0.0050	< 0.05	< 0.05	0.012
Benzo[a]pyrene	0.3	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.05	< 0.05	0.0057
Fluoranthene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.010	< 0.0050	< 0.0050	< 0.05	< 0.05	0.016
Pyrene	96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0070	< 0.0050	< 0.0050	< 0.05	< 0.05	0.012
Fluorene	62	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0070	< 0.0050	< 0.0050	< 0.03	< 0.03	< 0.0050

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-30 (6m)	BH21-30 (6m)	BH21-30 (6m)	BH21-30 (6m)	BH21-31 (3m)	BH21-31 (3m)	BH21-31 (3m)	BH21-32 (3m)	BH21-32 (3m)	BH21-32 (3m)
			Sample Name	BH21-30-10	BH21-30-4	BH21-30-6	BH21-30-7	BH21-31-1	BH21-31-2	BH21-31-5	BH21-32-1A	BH21-32-2	BH21-32-4
			Sample Date	2021-04-23	2021-04-23	2021-04-23	2021-04-23	2021-05-03	2021-05-03	2021-05-03	2021-05-14	2021-04-30	2021-04-30
			Sample Depth	5.48-6.1 m	1.82-2.44 m	3.04-3.66 m	3.65-4.27 m	0-0.61 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[g,h,i]perylene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Indeno[1,2,3-cd]pyrene	0.76	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Acenaphthylene	0.15	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[k]fluoranthene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
1- & 2-Methylnaphthalene	76	ug/g		< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071
Anthracene	0.67	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Chrysene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Naphthalene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[a]anthracene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Dibenzo[a,h]anthracene	0.1	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Phenanthrene	12	ug/g		< 0.0050	0.0057	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[a]pyrene	0.3	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Fluoranthene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Pyrene	96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Fluorene	62	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-33 (3m)	BH21-33 (3m)	BH21-33 (3m)	BH21-34 (3m)	BH21-34 (3m)	BH21-35 (3m)	BH21-35 (3m)	BH21-37 (3m)	BH21-37 (3m)	BH21-37 (3m)
			Sample Name	BH21-33-1	BH21-33-2	BH21-33-4	BH21-34-1	BH21-34-4	BH21-35-3A	BH21-35-4	BH21-37-1	BH21-37-15	BH21-37-3
			Sample Date	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-22	2021-04-22	2021-04-22
			Sample Depth	0-0.61 m	0.6-1.22 m	1.82-2.44 m	0-0.61 m	1.82-2.44 m	0.91-1.52 m	1.82-2.44 m	0-0.61 m	8.53-9.14 m	1.21-1.83 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	< 10	< 10	27	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		< 50	< 50	< 50	77	< 50	< 50	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[g,h,i]perylene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Indeno[1,2,3-cd]pyrene	0.76	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Acenaphthylene	0.15	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[k]fluoranthene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
1- & 2-Methylnaphthalene	76	ug/g		< 0.0071	< 0.0071	< 0.0071	0.045	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071
Anthracene	0.67	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Chrysene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Naphthalene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	0.0052	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[a]anthracene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Dibenzo[a,h]anthracene	0.1	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Phenanthrene	12	ug/g		< 0.0050	< 0.0050	< 0.0050	0.0091	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[a]pyrene	0.3	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Fluoranthene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Pyrene	96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Fluorene	62	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-37 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-4 (3m)	BH21-4 (3M)	BH21-42 (10m)	BH21-42 (10m)	BH21-43 (6m)
			Sample Name	BH21-37-8	BH21-38-1	BH21-38-11	BH21-38-4	BH21-38-7	BH21-4-1	Dup 15	BH21-42-2	BH21-42-8	BH21-43-2
			Sample Date	2021-04-22	2021-04-21	2021-04-21	2021-04-21	2021-04-21	2021-05-04	2021-05-04	2021-05-05	2021-05-05	2021-05-06
			Sample Depth	4.26-4.88 m	0-0.61 m	6.09-6.71 m	1.82-2.44 m	3.65-4.27 m	0-0.61 m	0-0.61 m	0.6-1.22 m	4.26-4.88 m	0.6-1.22 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	< 10	< 10	< 10	11	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		< 50	55	< 50	< 50	< 50	300	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-
Benzo[g,h,i]perylene	9.6	ug/g		< 0.0050	0.0076	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-
Indeno[1,2,3-cd]pyrene	0.76	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-
Acenaphthylene	0.15	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-
Benzo[k]fluoranthene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-
1- & 2-Methylnaphthalene	76	ug/g		< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	-	-	-
Anthracene	0.67	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-
Chrysene	9.6	ug/g		< 0.0050	0.0076	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-
Naphthalene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-
Benzo[a]anthracene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-
Dibenzo[a,h]anthracene	0.1	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-
Phenanthrene	12	ug/g		< 0.0050	0.0061	< 0.0050	< 0.0050	< 0.0050	0.035	< 0.0050	-	-	-
Benzo[a]pyrene	0.3	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-
Fluoranthene	9.6	ug/g		< 0.0050	0.0075	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-
Pyrene	96	ug/g		< 0.0050	0.0080	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-
Fluorene	62	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-43 (6m)	BH21-43 (6M)	BH21-44 (6m)	BH21-44 (6m)	BH21-44 (6m)	BH21-45 (3m)	BH21-45 (3m)	BH21-46 (3m)	BH21-46 (3m)	BH21-47 (6m)
			Sample Name	BH21-43-8	Dup 20	BH21-44-1	BH21-44-5	BH21-44-9	BH21-45-1	BH21-45-4	BH21-46-1	BH21-46-5B	BH21-47-1
			Sample Date	2021-05-06	2021-05-06	2021-05-10	2021-05-10	2021-05-10	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-05-12
			Sample Depth	4.26-4.88 m	0.6-1.22 m	0-0.61 m	2.43-3.05 m	4.87-5.49 m	0-0.61 m	1.82-2.44 m	0-0.61 m	2.81-3.05 m	0-0.61 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		-	-	-	-	-	-	-	-	-	-
Benzo[g,h,i]perylene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-cd]pyrene	0.76	ug/g		-	-	-	-	-	-	-	-	-	-
Acenaphthylene	0.15	ug/g		-	-	-	-	-	-	-	-	-	-
Benzo[k]fluoranthene	0.96	ug/g		-	-	-	-	-	-	-	-	-	-
1- & 2-Methylnaphthalene	76	ug/g		-	-	-	-	-	-	-	-	-	-
Anthracene	0.67	ug/g		-	-	-	-	-	-	-	-	-	-
Chrysene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-
Naphthalene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-
Benzo[a]anthracene	0.96	ug/g		-	-	-	-	-	-	-	-	-	-
Dibenzo[a,h]anthracene	0.1	ug/g		-	-	-	-	-	-	-	-	-	-
Phenanthrene	12	ug/g		-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	0.3	ug/g		-	-	-	-	-	-	-	-	-	-
Fluoranthene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-
Pyrene	96	ug/g		-	-	-	-	-	-	-	-	-	-
Fluorene	62	ug/g		-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-47 (6m)	BH21-47 (6m)	BH21-47 (6m)	BH21-47 (6M)	BH21-48 (3m)	BH21-48 (3m)	BH21-48 (3m)	BH21-49 (3m)	BH21-49 (3m)	BH21-49 (3m)
			Sample Name	BH21-47-3	BH21-47-6	BH21-47-9	Dup 49	BH21-48-1	BH21-48-2	BH21-48-5	BH21-49-1	BH21-49-3	BH21-49-4
			Sample Date	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-04-29	2021-04-29	2021-04-29	2021-04-28	2021-04-28	2021-04-28
			Sample Depth	1.21-1.83 m	3.04-3.66 m	4.87-5.49 m	1.21-1.83 m	0-0.61 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	1.21-1.83 m	1.82-2.44 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		-	-	-	-	-	-	-	-	-	-
Benzo[g,h,i]perylene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-cd]pyrene	0.76	ug/g		-	-	-	-	-	-	-	-	-	-
Acenaphthylene	0.15	ug/g		-	-	-	-	-	-	-	-	-	-
Benzo[k]fluoranthene	0.96	ug/g		-	-	-	-	-	-	-	-	-	-
1- & 2-Methylnaphthalene	76	ug/g		-	-	-	-	-	-	-	-	-	-
Anthracene	0.67	ug/g		-	-	-	-	-	-	-	-	-	-
Chrysene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-
Naphthalene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-
Benzo[a]anthracene	0.96	ug/g		-	-	-	-	-	-	-	-	-	-
Dibenzo[a,h]anthracene	0.1	ug/g		-	-	-	-	-	-	-	-	-	-
Phenanthrene	12	ug/g		-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	0.3	ug/g		-	-	-	-	-	-	-	-	-	-
Fluoranthene	9.6	ug/g		-	-	-	-	-	-	-	-	-	-
Pyrene	96	ug/g		-	-	-	-	-	-	-	-	-	-
Fluorene	62	ug/g		-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-49 (3M)	BH21-5 (3m)	BH21-50 (3m)	BH21-50 (3m)	BH21-50 (3m)	BH21-51 (3m)	BH21-51 (3m)	BH21-52	BH21-52	BH21-53
			Sample Name	Dup 8	BH21-5-2	BH12-50-1	BH12-50-3	BH21-50-5	BH21-51-1	BH21-51-4	BH21-52-1	BH21-52-5	BH21-53-1
			Sample Date	2021-04-28	2021-05-04	2021-04-29	2021-04-29	2021-04-29	2021-04-21	2021-04-21	2021-05-14	2021-05-14	2021-05-14
			Sample Depth	1.21-1.83 m	0.6-1.22 m	0-0.61 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	1.82-2.44 m	0-0.61 m	9.39-10 m	0-0.61 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	< 20	< 10	16	17	15	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		< 50	< 100	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	< 100	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		-	< 0.010	-	-	-	< 0.0050	< 0.0050	-	-	-
Benzo[g,h,i]perylene	9.6	ug/g		-	< 0.010	-	-	-	< 0.0050	< 0.0050	-	-	-
Indeno[1,2,3-cd]pyrene	0.76	ug/g		-	< 0.010	-	-	-	< 0.0050	< 0.0050	-	-	-
Acenaphthylene	0.15	ug/g		-	< 0.010	-	-	-	< 0.0050	< 0.0050	-	-	-
Benzo[k]fluoranthene	0.96	ug/g		-	< 0.010	-	-	-	< 0.0050	< 0.0050	-	-	-
1- & 2-Methylnaphthalene	76	ug/g		-	< 0.014	-	-	-	< 0.0071	< 0.0071	-	-	-
Anthracene	0.67	ug/g		-	< 0.010	-	-	-	< 0.0050	< 0.0050	-	-	-
Chrysene	9.6	ug/g		-	< 0.010	-	-	-	< 0.0050	< 0.0050	-	-	-
Naphthalene	9.6	ug/g		-	< 0.010	-	-	-	< 0.0050	< 0.0050	-	-	-
Benzo[a]anthracene	0.96	ug/g		-	< 0.010	-	-	-	< 0.0050	< 0.0050	-	-	-
Dibenzo[a,h]anthracene	0.1	ug/g		-	< 0.010	-	-	-	< 0.0050	< 0.0050	-	-	-
Phenanthrene	12	ug/g		-	< 0.010	-	-	-	< 0.0050	< 0.0050	-	-	-
Benzo[a]pyrene	0.3	ug/g		-	< 0.010	-	-	-	< 0.0050	< 0.0050	-	-	-
Fluoranthene	9.6	ug/g		-	< 0.010	-	-	-	< 0.0050	< 0.0050	-	-	-
Pyrene	96	ug/g		-	< 0.010	-	-	-	< 0.0050	< 0.0050	-	-	-
Fluorene	62	ug/g		-	< 0.010	-	-	-	< 0.0050	< 0.0050	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-53	BH21-54	BH21-54	BH21-55	BH21-55	BH21-56	BH21-56	BH21-6 (3m)	BH21-6 (3m)	BH21-6 (3m)
			Sample Name	BH21-53-4	BH21-54-1	BH21-54-5	BH21-55-2	BH21-55-5	BH21-56-1	BH21-56-5	BH21-6-1	BH21-6-1A	BH21-6-5
			Sample Date	2021-05-14	2021-05-13	2021-05-13	2021-05-13	2021-05-13	2021-05-14	2021-05-14	2021-05-03	2021-05-14	2021-05-03
			Sample Depth	1.82-2.44 m	0-0.61 m	2.43-3.05 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	2.43-3.05 m	0-0.61 m	0-0.61 m	2.43-3.05 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	23	-	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	17	-	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	55	-	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	-	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		-	-	-	-	-	-	-	< 0.020	-	< 0.0050
Benzo[g,h,i]perylene	9.6	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Indeno[1,2,3-cd]pyrene	0.76	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Acenaphthylene	0.15	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Benzo[k]fluoranthene	0.96	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
1- & 2-Methylnaphthalene	76	ug/g		-	-	-	-	-	-	-	0.047	-	< 0.0071
Anthracene	0.67	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Chrysene	9.6	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Naphthalene	9.6	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Benzo[a]anthracene	0.96	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Dibenzo[a,h]anthracene	0.1	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Phenanthrene	12	ug/g		-	-	-	-	-	-	-	0.012	-	< 0.0050
Benzo[a]pyrene	0.3	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Fluoranthene	9.6	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Pyrene	96	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Fluorene	62	ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-6 (3M)	BH21-7 (3m)	BH21-7 (3M)	BH21-8 (10m)	BH21-8 (10m)	BH21-8 (10M)	BH21-8 (10M)	BH21-9 (3m)	BH21-9 (3M)	GS21-1
			Sample Name	Dup 11	BH21-7-1	Dup47	BH21-8-1	BH21-8-5	Dup45	Dup46	BH21-9-1	Dup42	GS21-01
			Sample Date	2021-05-03	2021-05-12	2021-05-12	2021-05-11	2021-05-11	2021-05-11	2021-05-11	2021-05-07	2021-05-07	2021-04-16
			Sample Depth	2.39-3 m	0-0.61 m	0-0.61 m	0-0.61 m	2.43-3.05 m	0-0.61 m	2.43-3.05 m	0-0.61 m	0-0.61 m	0-0.18 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	**270**	**170**	**200**	< 10	**73**	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	< 10	170	150	< 10	**310**	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		< 50	< 50	370	350	< 50	520	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	< 50	120	110	< 50	150	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		< 0.0050	-	-	-	-	-	-	< 0.03	< 0.03	-
Benzo[g,h,i]perylene	9.6	ug/g		< 0.0050	-	-	-	-	-	-	< 0.1	< 0.1	-
Indeno[1,2,3-cd]pyrene	0.76	ug/g		< 0.0050	-	-	-	-	-	-	< 0.08	< 0.08	-
Acenaphthylene	0.15	ug/g		< 0.0050	-	-	-	-	-	-	< 0.05	< 0.05	-
Benzo[k]fluoranthene	0.96	ug/g		< 0.0050	-	-	-	-	-	-	< 0.03	< 0.03	-
1- & 2-Methylnaphthalene	76	ug/g		< 0.0071	-	-	-	-	-	-	< 0.042	< 0.042	-
Anthracene	0.67	ug/g		< 0.0050	-	-	-	-	-	-	< 0.03	< 0.03	-
Chrysene	9.6	ug/g		< 0.0050	-	-	-	-	-	-	< 0.05	< 0.05	-
Naphthalene	9.6	ug/g		< 0.0050	-	-	-	-	-	-	< 0.03	< 0.03	-
Benzo[a]anthracene	0.96	ug/g		< 0.0050	-	-	-	-	-	-	< 0.05	< 0.05	-
Dibenzo[a,h]anthracene	0.1	ug/g		< 0.0050	-	-	-	-	-	-	< 0.05	< 0.05	-
Phenanthrene	12	ug/g		< 0.0050	-	-	-	-	-	-	< 0.05	< 0.05	-
Benzo[a]pyrene	0.3	ug/g		< 0.0050	-	-	-	-	-	-	< 0.05	< 0.05	-
Fluoranthene	9.6	ug/g		< 0.0050	-	-	-	-	-	-	< 0.05	< 0.05	-
Pyrene	96	ug/g		< 0.0050	-	-	-	-	-	-	< 0.05	< 0.05	-
Fluorene	62	ug/g		< 0.0050	-	-	-	-	-	-	< 0.03	< 0.03	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-10	GS21-11	GS21-12	GS21-13	GS21-14	GS21-15	GS21-16	GS21-16	GS21-17	GS21-18
			Sample Name	GS21-10	GS21-11	GS21-12	GS21-13	GS21-14	GS21-15	DUP 4	GS21-16	GS21-17	GS21-18
			Sample Date	2021-04-16	2021-04-16	2021-04-16	2021-04-16	2021-04-16	2021-04-20	2021-04-20	2021-04-20	2021-04-20	2021-04-20
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 10	< 10	-	-	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	< 10	< 10	-	-	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		< 50	< 50	97	-	-	< 50	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	< 50	< 50	-	-	< 50	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Benzo[g,h,i]perylene	9.6	ug/g		0.0052	< 0.0050	0.061	< 0.0050	< 0.0050	-	-	-	-	-
Indeno[1,2,3-cd]pyrene	0.76	ug/g		< 0.0050	< 0.0050	0.046	< 0.0050	< 0.0050	-	-	-	-	-
Acenaphthylene	0.15	ug/g		< 0.0050	< 0.0050	0.0051	< 0.0050	< 0.0050	-	-	-	-	-
Benzo[k]fluoranthene	0.96	ug/g		< 0.0050	< 0.0050	0.014	< 0.0050	< 0.0050	-	-	-	-	-
1- & 2-Methylnaphthalene	76	ug/g		< 0.0071	< 0.0071	0.014	< 0.0071	< 0.0071	-	-	-	-	-
Anthracene	0.67	ug/g		< 0.0050	< 0.0050	0.012	< 0.0050	< 0.0050	-	-	-	-	-
Chrysene	9.6	ug/g		< 0.0050	< 0.0050	0.019	< 0.0050	< 0.0050	-	-	-	-	-
Naphthalene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-
Benzo[a]anthracene	0.96	ug/g		< 0.0050	< 0.0050	0.013	< 0.0050	< 0.0050	-	-	-	-	-
Dibenzo[a,h]anthracene	0.1	ug/g		< 0.0050	< 0.0050	0.0059	< 0.0050	< 0.0050	-	-	-	-	-
Phenanthrene	12	ug/g		< 0.0050	< 0.0050	0.014	< 0.0050	< 0.0050	-	-	-	-	-
Benzo[a]pyrene	0.3	ug/g		< 0.0050	< 0.0050	0.019	< 0.0050	< 0.0050	-	-	-	-	-
Fluoranthene	9.6	ug/g		0.0063	< 0.0050	0.015	< 0.0050	< 0.0050	-	-	-	-	-
Pyrene	96	ug/g		0.0058	< 0.0050	0.040	< 0.0050	< 0.0050	-	-	-	-	-
Fluorene	62	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-19	GS21-2	GS21-20	GS21-20	GS21-21	GS21-22	GS21-23	GS21-24	GS21-25	GS21-26
			Sample Name	GS21-19	GS21-02	DUP 1	GS21-20	GS21-21	GS21-22	GS21-23	GS21-24	GS21-25	GS21-26
			Sample Date	2021-04-20	2021-04-16	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	< 10	< 10	15	< 10	< 10	< 10	24	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		< 50	< 50	90	150	< 50	66	< 50	88	70	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	< 50	< 50	67	< 50	< 50	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-
Benzo[g,h,i]perylene	9.6	ug/g		-	-	0.012	0.0071	< 0.0050	0.014	< 0.0050	0.012	0.053	-
Indeno[1,2,3-cd]pyrene	0.76	ug/g		-	-	0.0097	< 0.0050	< 0.0050	0.012	< 0.0050	0.0093	0.048	-
Acenaphthylene	0.15	ug/g		-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.016	-
Benzo[k]fluoranthene	0.96	ug/g		-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.023	-
1- & 2-Methylnaphthalene	76	ug/g		-	-	< 0.0071	0.019	< 0.0071	< 0.0071	< 0.0071	< 0.076	< 0.0071	-
Anthracene	0.67	ug/g		-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.015	-
Chrysene	9.6	ug/g		-	-	0.0080	0.013	< 0.0050	0.0075	< 0.0050	0.011	0.034	-
Naphthalene	9.6	ug/g		-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-
Benzo[a]anthracene	0.96	ug/g		-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0085	0.027	-
Dibenzo[a,h]anthracene	0.1	ug/g		-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0078	-
Phenanthrene	12	ug/g		-	-	0.0063	0.016	< 0.0050	0.0061	< 0.0050	0.018	0.013	-
Benzo[a]pyrene	0.3	ug/g		-	-	0.0059	< 0.0050	< 0.0050	0.0072	< 0.0050	0.013	0.037	-
Fluoranthene	9.6	ug/g		-	-	0.0071	0.0079	< 0.0050	0.0095	< 0.0050	0.023	0.067	-
Pyrene	96	ug/g		-	-	0.0064	0.0058	< 0.0050	0.0094	< 0.0050	0.021	0.072	-
Fluorene	62	ug/g		-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-27	GS21-28	GS21-29	GS21-3	GS21-30	GS21-31	GS21-32	GS21-33	GS21-34	GS21-35
			Sample Name	GS21-27	GS21-28	GS21-29	GS21-03	GS21-30	GS21-31	GS21-32	GS21-33	GS21-34	GS21-35
			Sample Date	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		150	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		65	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-
Benzo[g,h,i]perylene	9.6	ug/g		0.0077	< 0.0050	< 0.0050	0.0051	0.0084	< 0.0050	< 0.0050	0.0063	-	-
Indeno[1,2,3-cd]pyrene	0.76	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-
Acenaphthylene	0.15	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-
Benzo[k]fluoranthene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-
1- & 2-Methylnaphthalene	76	ug/g		< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	-	-
Anthracene	0.67	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-
Chrysene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-
Naphthalene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-
Benzo[a]anthracene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-
Dibenzo[a,h]anthracene	0.1	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-
Phenanthrene	12	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-
Benzo[a]pyrene	0.3	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0065	< 0.0050	< 0.0050	< 0.0050	-	-
Fluoranthene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-
Pyrene	96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0051	< 0.0050	< 0.0050	< 0.0050	-	-
Fluorene	62	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-36	GS21-37	GS21-38	GS21-39	GS21-4	GS21-40	GS21-41	GS21-42	GS21-42	GS21-43
			Sample Name	GS21-36	GS21-37	GS21-38	GS21-39	GS21-04	GS21-40	GS21-41	DUP 5	GS21-42	DUP 3
			Sample Date	2021-04-16	2021-04-20	2021-04-20	2021-04-20	2021-04-16	2021-04-19	2021-04-20	2021-04-20	2021-04-20	2021-04-19
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	52	82
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		-	-	-	-	< 0.0050	-	-	-	-	-
Benzo[g,h,i]perylene	9.6	ug/g		-	-	-	-	< 0.0050	-	-	-	-	-
Indeno[1,2,3-cd]pyrene	0.76	ug/g		-	-	-	-	< 0.0050	-	-	-	-	-
Acenaphthylene	0.15	ug/g		-	-	-	-	< 0.0050	-	-	-	-	-
Benzo[k]fluoranthene	0.96	ug/g		-	-	-	-	< 0.0050	-	-	-	-	-
1- & 2-Methylnaphthalene	76	ug/g		-	-	-	-	< 0.0071	-	-	-	-	-
Anthracene	0.67	ug/g		-	-	-	-	< 0.0050	-	-	-	-	-
Chrysene	9.6	ug/g		-	-	-	-	< 0.0050	-	-	-	-	-
Naphthalene	9.6	ug/g		-	-	-	-	< 0.0050	-	-	-	-	-
Benzo[a]anthracene	0.96	ug/g		-	-	-	-	< 0.0050	-	-	-	-	-
Dibenzo[a,h]anthracene	0.1	ug/g		-	-	-	-	< 0.0050	-	-	-	-	-
Phenanthrene	12	ug/g		-	-	-	-	< 0.0050	-	-	-	-	-
Benzo[a]pyrene	0.3	ug/g		-	-	-	-	< 0.0050	-	-	-	-	-
Fluoranthene	9.6	ug/g		-	-	-	-	< 0.0050	-	-	-	-	-
Pyrene	96	ug/g		-	-	-	-	0.0054	-	-	-	-	-
Fluorene	62	ug/g		-	-	-	-	< 0.0050	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-43	GS21-44	GS21-45	GS21-46	GS21-47	GS21-47	GS21-48	GS21-49	GS21-5	GS21-50
			Sample Name	GS21-43	GS21-44	GS21-45	GS21-46	DUP 2	GS21-47	GS21-48	GS21-49	GS21-05	GS21-50
			Sample Date	2021-04-19	2021-04-16	2021-04-16	2021-04-16	2021-04-15	2021-04-15	2021-04-16	2021-04-16	2021-04-19	2021-04-16
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	14	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		< 50	130	< 50	< 50	66	< 50	< 50	< 50	150	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	55	< 50	< 50	51	< 50	< 50	< 50	99	< 50
Polycyclic Aromatic Hydrocarbons													
Acenaphthene	96	ug/g		-	-	-	-	-	-	-	-	< 0.0050	-
Benzo[g,h,i]perylene	9.6	ug/g		-	-	-	-	-	-	-	-	0.019	-
Indeno[1,2,3-cd]pyrene	0.76	ug/g		-	-	-	-	-	-	-	-	0.0099	-
Acenaphthylene	0.15	ug/g		-	-	-	-	-	-	-	-	< 0.0050	-
Benzo[k]fluoranthene	0.96	ug/g		-	-	-	-	-	-	-	-	< 0.0050	-
1- & 2-Methylnaphthalene	76	ug/g		-	-	-	-	-	-	-	-	0.021	-
Anthracene	0.67	ug/g		-	-	-	-	-	-	-	-	< 0.0050	-
Chrysene	9.6	ug/g		-	-	-	-	-	-	-	-	0.012	-
Naphthalene	9.6	ug/g		-	-	-	-	-	-	-	-	0.0067	-
Benzo[a]anthracene	0.96	ug/g		-	-	-	-	-	-	-	-	0.0084	-
Dibenzo[a,h]anthracene	0.1	ug/g		-	-	-	-	-	-	-	-	< 0.0050	-
Phenanthrene	12	ug/g		-	-	-	-	-	-	-	-	0.017	-
Benzo[a]pyrene	0.3	ug/g		-	-	-	-	-	-	-	-	0.015	-
Fluoranthene	9.6	ug/g		-	-	-	-	-	-	-	-	0.021	-
Pyrene	96	ug/g		-	-	-	-	-	-	-	-	0.019	-
Fluorene	62	ug/g		-	-	-	-	-	-	-	-	< 0.0050	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-51	GS21-52	GS21-53	GS21-6	GS21-7	GS21-8	GS21-9	BH21-36 (3M)	BH21-36 (3M)	BH21-39 (6M)	BH21-39 (6M)
			Sample Name	GS21-51	GS21-52	GS21-53	GS21-06	GS21-07	GS21-08	GS21-09	BH21-36-2	BH21-36-4	BH21-39-1	BH21-39-5
			Sample Date	2021-04-16	2021-04-19	2021-04-16	2021-04-19	2021-04-16	2021-04-19	2021-04-16	2021-04-08	2021-04-08	2021-02-09	2021-02-09
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0.6-1.2 m	1.8-2.4 m	0-0.6 m	2.4-3 m
Petroleum Hydrocarbons														
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	< 10	< 10	13	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		93	< 50	< 50	89	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		63	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons														
Acenaphthene	96	ug/g		-	-	-	0.023	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[g,h,i]perylene	9.6	ug/g		-	-	-	0.025	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Indeno[1,2,3-cd]pyrene	0.76	ug/g		-	-	-	0.022	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Acenaphthylene	0.15	ug/g		-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[k]fluoranthene	0.96	ug/g		-	-	-	0.016	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
1- & 2-Methylnaphthalene	76	ug/g		-	-	-	0.011	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071
Anthracene	0.67	ug/g		-	-	-	0.032	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Chrysene	9.6	ug/g		-	-	-	0.051	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Naphthalene	9.6	ug/g		-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[a]anthracene	0.96	ug/g		-	-	-	0.045	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Dibenzo[a,h]anthracene	0.1	ug/g		-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Phenanthrene	12	ug/g		-	-	-	0.14	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[a]pyrene	0.3	ug/g		-	-	-	0.039	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Fluoranthene	9.6	ug/g		-	-	-	0.13	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Pyrene	96	ug/g		-	-	-	0.092	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Fluorene	62	ug/g		-	-	-	0.023	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 3 - Summary of Soil Analytical Data - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-40 (3M)	BH21-40 (3M)	BH21-41 (10M)	BH21-41 (10M)	BH21-41 (10M)	BH21-41 (10M)
			Sample Name	BH21-40-2	BH21-40-3	BH21-41-1	BH21-41-3	BH21-41-4	BH21-41-6
			Sample Date	2021-04-08	2021-04-08	2021-04-09	2021-04-09	2021-04-09	2021-04-09
			Sample Depth	0.6-1.2 m	1.2-1.8 m	0-0.6 m	1.2-1.8 m	1.8-2.4 m	3-3.7 m
Petroleum Hydrocarbons									
Petroleum Hydrocarbons - F1 (C6-C10)	**55**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	**230**	ug/g		< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	1700	ug/g		70	< 50	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	3300	ug/g		< 50	< 50	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[g,h,i]perylene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Indeno[1,2,3-cd]pyrene	0.76	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Acenaphthylene	0.15	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[k]fluoranthene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
1- & 2-Methylnaphthalene	76	ug/g		< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.0071
Anthracene	0.67	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Chrysene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Naphthalene	9.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[a]anthracene	0.96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Dibenzo[a,h]anthracene	0.1	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Phenanthrene	12	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Benzo[a]pyrene	0.3	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Fluoranthene	9.6	ug/g		0.0058	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Pyrene	96	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Fluorene	62	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-1 (3m)	BH21-10 (10m)	BH21-10 (10m)	BH21-11 (3m)	BH21-11 (3m)	BH21-12 (3m)	BH21-12 (3m)	BH21-13 (10m)	BH21-13 (10m)	BH21-13 (10m)
			Sample Name	BH21-1-2	BH21-10-1	BH21-10-3	BH21-11-1	BH21-11-2	BH21-12-3	BH21-12-5	BH21-13-1	BH21-13-14	BH21-13-4
			Sample Date	2021-05-04	2021-05-10	2021-05-10	2021-04-26	2021-04-26	2021-04-26	2021-04-26	2021-04-28	2021-04-28	2021-04-28
			Sample Depth	0.6-1.22 m	0-0.61 m	1.21-1.83 m	0-0.61 m	0.6-1.22 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	7.92-8.53 m	1.82-2.44 m
Metals													
Barium	670	ug/g		30	-	-	72	34	49	42	73	11	30
Beryllium	8	ug/g		0.23	-	-	0.34	0.26	0.39	0.21	0.43	< 0.20	0.21
Boron	120	ug/g		< 5.0	-	-	10	< 5.0	< 5.0	< 5.0	12	< 5.0	< 5.0
Cadmium	1.9	ug/g		< 0.10	-	-	0.21	0.11	0.23	< 0.10	0.17	< 0.10	< 0.10
Chromium	160	ug/g		8.8	-	-	10	8.1	12	9.9	11	5.5	7.5
Cobalt	80	ug/g		2.7	-	-	3.8	2.8	3.7	3.4	4.6	1.2	2.7
Copper	**230**	ug/g		4.7	-	-	12	4.9	6.6	5.2	14	1.8	4.7
Lead	120	ug/g		2.5	-	-	8.9	3.0	7.7	3.1	12	1.3	2.6
Molybdenum	40	ug/g		< 0.50	-	-	0.56	< 0.50	< 0.50	< 0.50	0.89	< 0.50	< 0.50
Nickel	270	ug/g		5.2	-	-	20	6.5	8.0	27	18	2.2	4.6
Silver	40	ug/g		< 0.20	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	3.3	ug/g		< 0.050	-	-	0.061	0.061	0.076	0.063	0.068	< 0.050	0.054
Uranium	33	ug/g		0.47	-	-	0.97	0.47	0.41	0.40	1.1	0.38	0.50
Vanadium	86	ug/g		17	-	-	12	15	23	16	13	10	17
Zinc	**340**	ug/g		20	-	-	54	30	36	28	43	9.2	20
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Selenium	5.5	ug/g		< 0.50	-	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	**18**	ug/g		< 1.0	-	-	1.6	1.1	2.4	< 1.0	2.2	< 1.0	< 1.0
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		< 0.050	-	-	0.26	0.11	0.43	0.11	0.21	< 0.050	< 0.050
Hexavalent Chromium	8	ug/g		< 0.18	-	-	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
Cyanide (WAD)	0.051	ug/g		< 0.01	-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Conductivity	1.4	ms/cm		0.11	-	-	0.17	0.15	0.31	0.16	0.13	0.14	0.10
Mercury	3.9	ug/g		< 0.050	-	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium Adsorption Ratio	12	-		0.30	-	-	0.27	0.28	0.73	0.84	0.30	0.83	0.33
pH	5-9(11)	pH units		7.84	-	-	7.87	7.82	7.87	7.87	7.86	8.02	7.82

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-14 (10m)	BH21-14 (10m)	BH21-14 (10m)	BH21-15 (3m)	BH21-15 (3m)	BH21-16 (3m)	BH21-16 (3m)	BH21-17 (3m)	BH21-17 (3m)	BH21-17 (3m)
			Sample Name	BH21-14-1	BH21-14-12	BH21-14-6	BH21-15-1	BH21-15-4	BH12-16-4	BH21-16-1	BH21-17-1	BH21-17-3	BH21-17-5
			Sample Date	2021-05-10	2021-05-11	2021-05-11	2021-04-29	2021-04-29	2021-04-29	2021-04-29	2021-05-07	2021-05-07	2021-05-07
			Sample Depth	0-0.61 m	6.7-7.32 m	3.04-3.66 m	0-0.61 m	1.82-2.44 m	1.82-2.44 m	0-0.61 m	0-0.61 m	1.21-1.83 m	2.43-3.05 m
Metals													
Barium	670	ug/g		40	44	34	59	31	10	30	32	-	29
Beryllium	8	ug/g		0.23	< 0.20	< 0.20	0.49	0.20	< 0.20	0.27	0.22	-	< 0.20
Boron	120	ug/g		5.4	< 5.0	< 5.0	5.5	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0
Cadmium	1.9	ug/g		0.12	< 0.10	< 0.10	0.13	< 0.10	< 0.10	0.13	< 0.10	-	< 0.10
Chromium	160	ug/g		8.9	7.1	6.9	15	11	5.2	11	7.6	-	7.0
Cobalt	80	ug/g		3.5	1.9	1.9	4.4	2.9	1.6	3.3	2.8	-	2.2
Copper	**230**	ug/g		9.2	3.9	2.9	9.2	7.6	10	4.1	7.4	-	3.4
Lead	120	ug/g		4.8	2.0	2.6	5.3	2.7	1.5	5.6	4.5	-	2.4
Molybdenum	40	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	-	< 0.50
Nickel	270	ug/g		8.1	3.7	4.0	9.2	5.5	2.6	6.4	6.6	-	4.2
Silver	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20
Thallium	3.3	ug/g		0.053	< 0.050	< 0.050	0.093	< 0.050	< 0.050	< 0.050	0.056	-	< 0.050
Uranium	33	ug/g		0.50	0.50	0.50	0.52	0.50	0.39	0.35	0.43	-	0.41
Vanadium	86	ug/g		18	15	14	26	19	12	20	16	-	15
Zinc	**340**	ug/g		49	13	17	44	24	8.7	23	44	-	24
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.28	-	< 0.20
Selenium	5.5	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	-	< 0.50
Arsenic	**18**	ug/g		1.3	< 1.0	1.6	1.8	1.2	< 1.0	< 1.0	1.3	-	< 1.0
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		0.21	0.076	0.065	0.096	0.097	< 0.050	0.21	0.12	-	< 0.050
Hexavalent Chromium	8	ug/g		< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	-	< 0.18
Cyanide (WAD)	0.051	ug/g		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	-	< 0.01
Conductivity	1.4	ms/cm		0.26	0.11	0.11	0.15	0.12	0.089	0.10	0.53	-	0.14
Mercury	3.9	ug/g		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	-	< 0.050
Sodium Adsorption Ratio	12	-		6.7	0.34	0.33	0.24	0.32	0.36	0.31	6.3	-	0.35
pH	5-9(11)	pH units		8.08	8.15	8.20	7.43	7.98	7.97	6.83	8.04	-	7.99

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-17 (3M)	BH21-17 (3M)	BH21-17 (3m)	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3M)	BH21-18 (3M)	BH21-18 (3m)
			Sample Name	Dup 27	Dup 29	Dup 31	BH21-18-1	BH21-18-2	BH21-18-4	BH21-18-5	Dup 22	Dup21	Dup24
			Sample Date	2021-05-07	2021-05-07	2021-05-07	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06
			Sample Depth	0-0.61 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m	2.43-3.05 m	0.6-1.22 m	0-0.61 m	1.82-2.44 m
Metals													
Barium	670	ug/g		-	-	-	-	-	-	-	-	-	-
Beryllium	8	ug/g		-	-	-	-	-	-	-	-	-	-
Boron	120	ug/g		-	-	-	-	-	-	-	-	-	-
Cadmium	1.9	ug/g		-	-	-	-	-	-	-	-	-	-
Chromium	160	ug/g		-	-	-	-	-	-	-	-	-	-
Cobalt	80	ug/g		-	-	-	-	-	-	-	-	-	-
Copper	**230**	ug/g		-	-	-	-	-	-	-	-	-	-
Lead	120	ug/g		-	-	-	-	-	-	-	-	-	-
Molybdenum	40	ug/g		-	-	-	-	-	-	-	-	-	-
Nickel	270	ug/g		-	-	-	-	-	-	-	-	-	-
Silver	40	ug/g		-	-	-	-	-	-	-	-	-	-
Thallium	3.3	ug/g		-	-	-	-	-	-	-	-	-	-
Uranium	33	ug/g		-	-	-	-	-	-	-	-	-	-
Vanadium	86	ug/g		-	-	-	-	-	-	-	-	-	-
Zinc	**340**	ug/g		-	-	-	-	-	-	-	-	-	-
Metals, Hydride-Forming													
Antimony	40	ug/g		-	-	-	-	-	-	-	-	-	-
Selenium	5.5	ug/g		-	-	-	-	-	-	-	-	-	-
Arsenic	**18**	ug/g		-	-	-	-	-	-	-	-	-	-
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		-	-	-	-	-	-	-	-	-	-
Hexavalent Chromium	8	ug/g		-	-	-	-	-	-	-	-	-	-
Cyanide (WAD)	0.051	ug/g		-	-	-	-	-	-	-	-	-	-
Conductivity	1.4	ms/cm		-	-	-	-	-	-	-	-	-	-
Mercury	3.9	ug/g		-	-	-	-	-	-	-	-	-	-
Sodium Adsorption Ratio	12	-		-	-	-	-	-	-	-	-	-	-
pH	5-9(11)	pH units		-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected in excess of soil criteria
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-19 (3m)	BH21-19 (3m)	BH21-19 (3m)	BH21-19 (3m)	BH21-19 (3M)	BH21-19 (3M)	BH21-19 (3m)	BH21-19 (3M)	BH21-20 (3m)	BH21-20 (3m)
			Sample Name	BH21-19-1	BH21-19-2	BH21-19-4	BH21-19-5	Dup 32	Dup33	Dup35	Dup36	BH21-20-1	BH21-20-2
			Sample Date	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07
			Sample Depth	0-0.61 m	0.6-1.22 m	1.82-2.44 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m
Metals													
Barium	670	ug/g		69	-	30	-	-	-	-	-	62	46
Beryllium	8	ug/g		0.31	-	< 0.20	-	-	-	-	-	0.46	0.21
Boron	120	ug/g		6.2	-	< 5.0	-	-	-	-	-	11	5.5
Cadmium	1.9	ug/g		< 0.10	-	< 0.10	-	-	-	-	-	< 0.10	< 0.10
Chromium	160	ug/g		13	-	6.6	-	-	-	-	-	10	8.6
Cobalt	80	ug/g		4.1	-	1.9	-	-	-	-	-	3.9	2.6
Copper	**230**	ug/g		10	-	3.0	-	-	-	-	-	19	4.2
Lead	120	ug/g		5.6	-	2.2	-	-	-	-	-	16	3.4
Molybdenum	40	ug/g		< 0.50	-	< 0.50	-	-	-	-	-	1.6	< 0.50
Nickel	270	ug/g		11	-	4.0	-	-	-	-	-	20	5.4
Silver	40	ug/g		< 0.20	-	< 0.20	-	-	-	-	-	< 0.20	< 0.20
Thallium	3.3	ug/g		0.060	-	< 0.050	-	-	-	-	-	0.070	0.050
Uranium	33	ug/g		0.60	-	0.45	-	-	-	-	-	1.1	0.43
Vanadium	86	ug/g		22	-	13	-	-	-	-	-	14	14
Zinc	**340**	ug/g		28	-	23	-	-	-	-	-	25	26
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	-	< 0.20	-	-	-	-	-	< 0.20	< 0.20
Selenium	5.5	ug/g		< 0.50	-	< 0.50	-	-	-	-	-	< 0.50	< 0.50
Arsenic	**18**	ug/g		1.2	-	< 1.0	-	-	-	-	-	3.5	< 1.0
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		0.19	-	< 0.050	-	-	-	-	-	0.38	0.080
Hexavalent Chromium	8	ug/g		< 0.18	-	< 0.18	-	-	-	-	-	< 0.18	< 0.18
Cyanide (WAD)	0.051	ug/g		< 0.01	-	< 0.01	-	-	-	-	-	< 0.01	< 0.01
Conductivity	1.4	ms/cm		0.29	-	0.17	-	-	-	-	-	0.19	0.15
Mercury	3.9	ug/g		< 0.050	-	< 0.050	-	-	-	-	-	< 0.050	< 0.050
Sodium Adsorption Ratio	12	-		1.6	-	0.51	-	-	-	-	-	0.26	0.51
pH	5-9(11)	pH units		7.92	-	8.06	-	-	-	-	-	8.04	7.99

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-20 (3m)	BH21-20 (3M)	BH21-20 (3M)	BH21-21 (3m)	BH21-21 (3m)	BH21-21 (3m)	BH21-21 (3M)	BH21-22 (3m)	BH21-22 (3m)	BH21-23 (3m)
			Sample Name	BH21-20-5	Dup 37	Dup38	BH21-21-1	BH21-21-2	BH21-2-2	Dup 19	BH21-22-1	BH21-22-2	BH21-23-1
			Sample Date	2021-05-07	2021-05-07	2021-05-07	2021-04-26	2021-04-26	2021-05-05	2021-05-05	2021-04-22	2021-04-22	2021-05-03
			Sample Depth	2.43-3.05 m	0-0.61 m	0.6-1.22 m	0-0.61 m	0.6-1.22 m	0.6-1.22 m	0.6-1.22 m	0-0.61 m	0.6-1.22 m	0-0.61 m
Metals													
Barium	670	ug/g		-	-	-	30	46	39	37	32	41	120
Beryllium	8	ug/g		-	-	-	< 0.20	0.37	< 0.20	< 0.20	< 0.20	< 0.20	0.73
Boron	120	ug/g		-	-	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.6
Cadmium	1.9	ug/g		-	-	-	< 0.10	0.19	< 0.10	< 0.10	< 0.10	< 0.10	0.31
Chromium	160	ug/g		-	-	-	9.1	14	7.5	7.0	7.5	6.5	26
Cobalt	80	ug/g		-	-	-	2.6	3.8	2.3	2.0	2.3	2.0	7.8
Copper	**230**	ug/g		-	-	-	6.7	7.7	3.8	3.1	6.0	4.4	13
Lead	120	ug/g		-	-	-	3.4	7.3	2.4	2.1	2.9	2.8	12
Molybdenum	40	ug/g		-	-	-	0.67	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Nickel	270	ug/g		-	-	-	6.2	7.9	4.7	3.9	4.7	4.1	14
Silver	40	ug/g		-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	3.3	ug/g		-	-	-	0.052	0.071	< 0.050	< 0.050	< 0.050	< 0.050	0.15
Uranium	33	ug/g		-	-	-	0.57	0.61	0.53	0.53	0.47	0.47	0.77
Vanadium	86	ug/g		-	-	-	15	23	15	14	15	13	42
Zinc	**340**	ug/g		-	-	-	34	37	19	20	26	28	61
Metals, Hydride-Forming													
Antimony	40	ug/g		-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Selenium	5.5	ug/g		-	-	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.55
Arsenic	**18**	ug/g		-	-	-	1.1	1.9	< 1.0	< 1.0	< 1.0	< 1.0	2.4
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		-	-	-	0.13	0.33	< 0.050	< 0.050	0.12	0.14	0.40
Hexavalent Chromium	8	ug/g		-	-	-	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
Cyanide (WAD)	0.051	ug/g		-	-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Conductivity	1.4	ms/cm		-	-	-	0.14	0.26	0.14	0.11	0.14	0.22	0.38
Mercury	3.9	ug/g		-	-	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium Adsorption Ratio	12	-		-	-	-	0.32	1.4	0.29	0.33	0.30	0.29	1.3
pH	5-9(11)	pH units		-	-	-	7.89	7.54	7.97	8.00	7.54	7.98	7.44

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected in excess of soil criteria
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-23 (3m)	BH21-23 (3m)	BH21-24 (3m)	BH21-24 (3m)	BH21-24 (3m)	BH21-25 (3m)	BH21-25 (3m)	BH21-26 (3m)	BH21-26 (3m)	BH21-27 (3m)
			Sample Name	BH21-23-1A	BH21-23-3	BH21-24-1	BH21-24-1A	BH21-24-3	BH21-25-1	BH21-25-3	BH21-26-1	BH21-26-3	BH21-27-1
			Sample Date	2021-05-14	2021-05-03	2021-05-03	2021-05-14	2021-05-03	2021-04-27	2021-04-27	2021-04-23	2021-04-23	2021-04-27
			Sample Depth	0-0.61 m	1.21-1.83 m	0-0.61 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.21-1.83 m	0-0.61 m
Metals													
Barium	670	ug/g		89	140	81	140	170	83	160	50	64	-
Beryllium	8	ug/g		0.45	0.49	0.24	0.60	0.59	0.45	0.61	0.25	0.28	-
Boron	120	ug/g		6.2	8.2	6.0	8.3	9.0	7.7	8.5	5.0	5.8	-
Cadmium	1.9	ug/g		0.13	0.11	0.13	0.18	0.11	0.20	< 0.10	< 0.10	< 0.10	-
Chromium	160	ug/g		19	23	9.6	26	27	20	26	10	13	-
Cobalt	80	ug/g		5.5	8.4	3.8	8.1	10	5.5	8.8	3.4	4.7	-
Copper	**230**	ug/g		13	15	31	17	20	13	18	7.2	19	-
Lead	120	ug/g		7.6	5.4	9.9	7.8	5.8	9.3	5.8	3.8	6.9	-
Molybdenum	40	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.55	< 0.50	< 0.50	< 0.50	-
Nickel	270	ug/g		11	17	7.5	17	19	11	18	6.9	9.5	-
Silver	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-
Thallium	3.3	ug/g		0.11	0.14	0.057	0.14	0.19	0.11	0.18	0.056	0.060	-
Uranium	33	ug/g		0.60	0.48	0.57	0.77	0.65	0.52	0.47	0.45	0.62	-
Vanadium	86	ug/g		31	36	16	39	44	30	42	19	21	-
Zinc	**340**	ug/g		50	46	76	59	52	57	48	33	73	-
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.37	< 0.20	< 0.20	< 0.20	-
Selenium	5.5	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	-
Arsenic	**18**	ug/g		1.7	1.4	1.6	1.7	1.3	1.7	2.0	1.1	1.6	-
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		0.24	0.070	0.14	0.27	0.098	0.73	< 0.050	0.057	0.11	-
Hexavalent Chromium	8	ug/g		< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	-
Cyanide (WAD)	0.051	ug/g		0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	-
Conductivity	1.4	ms/cm		0.23	0.18	0.20	0.35	0.24	0.27	0.23	0.13	0.26	-
Mercury	3.9	ug/g		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	-
Sodium Adsorption Ratio	12	-		1.6	1.5	2.3	2.8	2.4	0.20	0.61	0.28	0.87	-
pH	5-9(11)	pH units		7.47	7.71	7.78	7.58	7.71	7.43	7.62	7.70	7.90	8.11

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-27 (3m)	BH21-27 (3m)	BH21-28 (3m)	BH21-28 (3m)	BH21-29 (3m)	BH21-29 (3m)	BH21-29 (3M)	BH21-3 (3m)	BH21-3 (3M)	BH21-30 (6m)
			Sample Name	BH21-27-1A	BH21-27-4	BH21-28-1	BH21-28-3	BH21-29-1	BH21-29-4	Dup 6	BH21-3-1	Dup 13	BH21-30-1
			Sample Date	2021-05-14	2021-04-27	2021-04-27	2021-04-27	2021-04-27	2021-04-27	2021-04-27	2021-05-04	2021-05-04	2021-04-23
			Sample Depth	0-0.61 m	1.82-2.44 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.82-2.44 m	1.82-2.44 m	0-0.61 m	0-0.6 m	0-0.61 m
Metals													
Barium	670	ug/g		31	33	84	16	90	110	97	-	-	14
Beryllium	8	ug/g		< 0.20	0.21	0.54	< 0.20	0.54	0.47	0.40	-	-	< 0.20
Boron	120	ug/g		< 5.0	< 5.0	6.3	< 5.0	14	9.4	7.5	-	-	< 5.0
Cadmium	1.9	ug/g		< 0.10	< 0.10	0.23	< 0.10	< 0.10	< 0.10	0.15	-	-	< 0.10
Chromium	160	ug/g		8.6	8.7	21	5.7	12	20	17	-	-	6.2
Cobalt	80	ug/g		2.9	2.9	6.4	1.7	4.6	6.7	6.3	-	-	1.8
Copper	**230**	ug/g		7.4	4.9	11	2.9	25	12	11	-	-	10
Lead	120	ug/g		4.2	2.6	11	1.6	16	5.5	4.6	-	-	5.6
Molybdenum	40	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	1.3	< 0.50	< 0.50	-	-	< 0.50
Nickel	270	ug/g		5.3	5.1	12	2.9	24	13	12	-	-	3.9
Silver	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-	-	< 0.20
Thallium	3.3	ug/g		< 0.050	< 0.050	0.14	< 0.050	< 0.050	0.14	0.12	-	-	< 0.050
Uranium	33	ug/g		0.46	0.41	0.51	0.44	1.4	0.47	0.44	-	-	0.43
Vanadium	86	ug/g		21	19	36	15	13	29	27	-	-	11
Zinc	**340**	ug/g		58	22	50	11	45	41	40	-	-	130
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-	-	< 0.20
Selenium	5.5	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	-	-	< 0.50
Arsenic	**18**	ug/g		1.1	< 1.0	2.6	< 1.0	2.8	1.8	1.5	-	-	< 1.0
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		0.19	0.068	0.51	< 0.050	0.51	0.080	0.082	-	-	0.065
Hexavalent Chromium	8	ug/g		< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	-	-	< 0.18
Cyanide (WAD)	0.051	ug/g		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	-	-	< 0.01
Conductivity	1.4	ms/cm		0.18	0.16	0.19	0.082	0.18	0.17	0.16	-	-	0.090
Mercury	3.9	ug/g		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	-	-	< 0.050
Sodium Adsorption Ratio	12	-		0.25	0.68	0.23	0.38	0.28	0.69	0.50	-	-	0.32
pH	5-9(11)	pH units		7.71	7.76	7.50	7.89	8.00	7.76	7.66	-	-	7.78

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-30 (6m)	BH21-30 (6m)	BH21-30 (6m)	BH21-30 (6m)	BH21-31 (3m)	BH21-31 (3m)	BH21-31 (3m)	BH21-32 (3m)	BH21-32 (3m)	BH21-32 (3m)
			Sample Name	BH21-30-10	BH21-30-4	BH21-30-6	BH21-30-7	BH21-31-1	BH21-31-2	BH21-31-5	BH21-32-1A	BH21-32-2	BH21-32-4
			Sample Date	2021-04-23	2021-04-23	2021-04-23	2021-04-23	2021-05-03	2021-05-03	2021-05-03	2021-05-14	2021-04-30	2021-04-30
			Sample Depth	5.48-6.1 m	1.82-2.44 m	3.04-3.66 m	3.65-4.27 m	0-0.61 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m
Metals													
Barium	670	ug/g		11	67	53	28	45	170	33	32	28	26
Beryllium	8	ug/g		< 0.20	0.21	0.30	< 0.20	0.31	0.67	< 0.20	0.30	< 0.20	< 0.20
Boron	120	ug/g		< 5.0	5.2	< 5.0	< 5.0	< 5.0	9.9	< 5.0	< 5.0	< 5.0	< 5.0
Cadmium	1.9	ug/g		< 0.10	< 0.10	0.11	< 0.10	< 0.10	0.10	< 0.10	0.14	< 0.10	< 0.10
Chromium	160	ug/g		6.4	9.2	13	6.7	13	29	6.7	11	8.0	6.8
Cobalt	80	ug/g		1.2	2.6	4.1	2.2	4.3	9.2	2.3	4.0	2.2	2.3
Copper	**230**	ug/g		1.9	4.8	6.3	5.0	8.4	16	3.7	6.6	4.2	3.1
Lead	120	ug/g		1.3	2.7	4.2	2.0	4.3	6.5	2.2	5.2	2.5	1.9
Molybdenum	40	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	0.58	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Nickel	270	ug/g		2.1	6.0	7.3	4.3	8.2	19	4.0	6.9	4.8	3.8
Silver	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	3.3	ug/g		< 0.050	0.058	0.068	< 0.050	0.10	0.20	< 0.050	0.085	< 0.050	< 0.050
Uranium	33	ug/g		0.31	0.48	0.47	0.39	0.48	0.50	0.43	0.43	0.42	0.46
Vanadium	86	ug/g		10	15	27	16	24	44	14	26	17	16
Zinc	**340**	ug/g		9.4	25	37	16	37	49	19	36	19	14
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Selenium	5.5	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	**18**	ug/g		< 1.0	< 1.0	1.2	< 1.0	1.4	1.8	< 1.0	1.4	< 1.0	< 1.0
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		0.065	0.12	0.12	< 0.050	0.094	0.058	< 0.050	< 0.050	< 0.050	< 0.050
Hexavalent Chromium	8	ug/g		< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
Cyanide (WAD)	0.051	ug/g		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Conductivity	1.4	ms/cm		0.11	0.62	0.29	0.10	0.16	0.17	0.12	0.11	0.10	0.081
Mercury	3.9	ug/g		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium Adsorption Ratio	12	-		0.35	0.49	0.61	0.34	0.26	0.38	0.30	0.31	0.33	0.38
pH	5-9(11)	pH units		7.62	11.7	9.92	8.00	7.62	7.66	7.82	7.45	7.76	7.91

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-33 (3m)	BH21-33 (3m)	BH21-33 (3m)	BH21-34 (3m)	BH21-34 (3m)	BH21-35 (3m)	BH21-35 (3m)	BH21-37 (3m)	BH21-37 (3m)	BH21-37 (3m)
			Sample Name	BH21-33-1	BH21-33-2	BH21-33-4	BH21-34-1	BH21-34-4	BH21-35-3A	BH21-35-4	BH21-37-1	BH21-37-15	BH21-37-3
			Sample Date	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-22	2021-04-22	2021-04-22
			Sample Depth	0-0.61 m	0.6-1.22 m	1.82-2.44 m	0-0.61 m	1.82-2.44 m	0.91-1.52 m	1.82-2.44 m	0-0.61 m	8.53-9.14 m	1.21-1.83 m
Metals													
Barium	670	ug/g		73	86	41	46	24	61	29	29	36	27
Beryllium	8	ug/g		0.48	0.49	0.27	0.23	< 0.20	0.38	< 0.20	0.32	0.20	0.21
Boron	120	ug/g		< 5.0	< 5.0	5.2	< 5.0	< 5.0	< 5.0	< 5.0	5.5	< 5.0	< 5.0
Cadmium	1.9	ug/g		0.14	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.11	< 0.10	< 0.10
Chromium	160	ug/g		18	18	11	9.2	7.3	16	7.6	8.3	8.0	7.3
Cobalt	80	ug/g		6.2	5.7	3.6	3.9	2.4	4.7	2.5	4.7	2.4	2.3
Copper	**230**	ug/g		12	10	7.0	8.6	4.0	8.8	4.5	6.7	4.5	4.5
Lead	120	ug/g		6.4	5.2	2.9	4.8	2.1	4.0	2.6	10	2.4	2.2
Molybdenum	40	ug/g		< 0.50	< 0.50	< 0.50	0.52	< 0.50	< 0.50	< 0.50	0.64	< 0.50	< 0.50
Nickel	270	ug/g		10	11	6.5	13	4.0	9.4	4.8	7.3	5.0	4.2
Silver	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	3.3	ug/g		0.12	0.10	0.071	0.069	< 0.050	0.092	< 0.050	0.076	< 0.050	< 0.050
Uranium	33	ug/g		0.46	0.47	0.45	0.51	0.38	0.69	0.80	0.59	5.3	0.42
Vanadium	86	ug/g		36	32	20	17	16	30	16	23	15	16
Zinc	**340**	ug/g		47	36	21	49	20	33	29	44	16	17
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	< 0.20	< 0.20	0.21	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Selenium	5.5	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	**18**	ug/g		1.4	1.4	1.1	8.9	< 1.0	1.1	< 1.0	1.4	< 1.0	< 1.0
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		0.067	< 0.050	< 0.050	0.078	< 0.050	0.058	< 0.050	0.12	< 0.050	< 0.050
Hexavalent Chromium	8	ug/g		< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
Cyanide (WAD)	0.051	ug/g		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Conductivity	1.4	ms/cm		0.16	0.18	0.10	0.12	0.092	0.14	0.096	0.14	0.17	0.12
Mercury	3.9	ug/g		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium Adsorption Ratio	12	-		0.24	0.23	0.33	0.29	0.33	0.27	0.33	0.30	0.26	0.55
pH	5-9(11)	pH units		7.51	7.57	7.84	7.82	7.92	7.66	7.92	7.88	8.01	7.96

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-37 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-4 (3m)	BH21-4 (3M)	BH21-42 (10m)	BH21-42 (10m)	BH21-43 (6m)
			Sample Name	BH21-37-8	BH21-38-1	BH21-38-11	BH21-38-4	BH21-38-7	BH21-4-1	Dup 15	BH21-42-2	BH21-42-8	BH21-43-2
			Sample Date	2021-04-22	2021-04-21	2021-04-21	2021-04-21	2021-04-21	2021-05-04	2021-05-04	2021-05-05	2021-05-05	2021-05-06
			Sample Depth	4.26-4.88 m	0-0.61 m	6.09-6.71 m	1.82-2.44 m	3.65-4.27 m	0-0.61 m	0-0.61 m	0.6-1.22 m	4.26-4.88 m	0.6-1.22 m
Metals													
Barium	670	ug/g		35	28	38	29	34	-	-	-	-	-
Beryllium	8	ug/g		< 0.20	0.31	< 0.20	< 0.20	0.20	-	-	-	-	-
Boron	120	ug/g		< 5.0	8.8	< 5.0	< 5.0	5.3	-	-	-	-	-
Cadmium	1.9	ug/g		< 0.10	< 0.10	< 0.10	< 0.10	0.14	-	-	-	-	-
Chromium	160	ug/g		7.4	12	6.8	8.3	8.5	-	-	-	-	-
Cobalt	80	ug/g		2.3	3.7	1.9	2.4	2.5	-	-	-	-	-
Copper	**230**	ug/g		4.1	6.9	3.5	4.0	4.3	-	-	-	-	-
Lead	120	ug/g		2.1	7.3	1.8	2.4	2.5	-	-	-	-	-
Molybdenum	40	ug/g		< 0.50	0.60	< 0.50	< 0.50	< 0.50	-	-	-	-	-
Nickel	270	ug/g		4.7	9.7	3.9	4.3	5.2	-	-	-	-	-
Silver	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-	-	-	-	-
Thallium	3.3	ug/g		< 0.050	0.072	< 0.050	< 0.050	0.052	-	-	-	-	-
Uranium	33	ug/g		0.40	0.52	0.48	0.50	0.44	-	-	-	-	-
Vanadium	86	ug/g		15	13	14	16	14	-	-	-	-	-
Zinc	**340**	ug/g		20	39	15	22	27	-	-	-	-	-
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	0.23	< 0.20	< 0.20	< 0.20	-	-	-	-	-
Selenium	5.5	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	-	-	-	-	-
Arsenic	**18**	ug/g		< 1.0	1.5	< 1.0	< 1.0	< 1.0	-	-	-	-	-
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		0.052	0.18	< 0.050	0.056	0.065	-	-	-	-	-
Hexavalent Chromium	8	ug/g		< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	-	-	-	-	-
Cyanide (WAD)	0.051	ug/g		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	-	-	-	-	-
Conductivity	1.4	ms/cm		0.14	0.15	0.20	0.15	0.16	-	-	-	-	-
Mercury	3.9	ug/g		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	-	-	-	-	-
Sodium Adsorption Ratio	12	-		0.31	0.30	0.25	1.5	0.72	-	-	-	-	-
pH	5-9(11)	pH units		7.83	7.83	7.93	7.94	8.07	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected in excess of soil criteria
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-43 (6m)	BH21-43 (6M)	BH21-44 (6m)	BH21-44 (6m)	BH21-44 (6m)	BH21-45 (3m)	BH21-45 (3m)	BH21-46 (3m)	BH21-46 (3m)	BH21-47 (6m)
			Sample Name	BH21-43-8	Dup 20	BH21-44-1	BH21-44-5	BH21-44-9	BH21-45-1	BH21-45-4	BH21-46-1	BH21-46-5B	BH21-47-1
			Sample Date	2021-05-06	2021-05-06	2021-05-10	2021-05-10	2021-05-10	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-05-12
			Sample Depth	4.26-4.88 m	0.6-1.22 m	0-0.61 m	2.43-3.05 m	4.87-5.49 m	0-0.61 m	1.82-2.44 m	0-0.61 m	2.81-3.05 m	0-0.61 m
Metals													
Barium	670	ug/g		-	-	29	43	38	95	31	130	92	34
Beryllium	8	ug/g		-	-	< 0.20	0.20	< 0.20	0.35	0.22	0.54	0.35	< 0.20
Boron	120	ug/g		-	-	< 5.0	< 5.0	< 5.0	6.7	< 5.0	9.6	7.3	< 5.0
Cadmium	1.9	ug/g		-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chromium	160	ug/g		-	-	6.6	7.1	7.4	16	9.3	23	16	8.4
Cobalt	80	ug/g		-	-	2.0	2.1	1.9	5.2	2.5	7.5	5.0	2.5
Copper	**230**	ug/g		-	-	3.5	3.6	3.3	9.6	5.8	16	9.7	4.4
Lead	120	ug/g		-	-	2.2	2.7	2.1	4.6	3.3	6.4	4.2	2.6
Molybdenum	40	ug/g		-	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Nickel	270	ug/g		-	-	3.8	4.3	3.6	11	5.3	17	11	5.1
Silver	40	ug/g		-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	3.3	ug/g		-	-	< 0.050	< 0.050	< 0.050	0.11	< 0.050	0.16	0.11	< 0.050
Uranium	33	ug/g		-	-	0.45	0.43	0.51	0.51	0.47	0.70	0.44	0.45
Vanadium	86	ug/g		-	-	14	14	13	25	15	33	25	17
Zinc	**340**	ug/g		-	-	17	24	17	33	22	46	36	20
Metals, Hydride-Forming													
Antimony	40	ug/g		-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Selenium	5.5	ug/g		-	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	**18**	ug/g		-	-	< 1.0	< 1.0	< 1.0	1.3	1.3	1.5	1.1	< 1.0
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		-	-	0.063	< 0.050	0.079	0.083	0.12	0.11	< 0.050	0.072
Hexavalent Chromium	8	ug/g		-	-	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
Cyanide (WAD)	0.051	ug/g		-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Conductivity	1.4	ms/cm		-	-	0.23	0.12	0.13	0.18	0.17	0.48	0.18	0.12
Mercury	3.9	ug/g		-	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium Adsorption Ratio	12	-		-	-	1.1	0.32	0.32	0.25	0.27	1.1	0.48	0.30
pH	5-9(11)	pH units		-	-	8.09	8.02	8.22	7.91	7.99	7.71	7.77	7.84

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-47 (6m)	BH21-47 (6m)	BH21-47 (6m)	BH21-47 (6M)	BH21-48 (3m)	BH21-48 (3m)	BH21-48 (3m)	BH21-49 (3m)	BH21-49 (3m)	BH21-49 (3m)
			Sample Name	BH21-47-3	BH21-47-6	BH21-47-9	Dup 49	BH21-48-1	BH21-48-2	BH21-48-5	BH21-49-1	BH21-49-3	BH21-49-4
			Sample Date	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-04-29	2021-04-29	2021-04-29	2021-04-28	2021-04-28	2021-04-28
			Sample Depth	1.21-1.83 m	3.04-3.66 m	4.87-5.49 m	1.21-1.83 m	0-0.61 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	1.21-1.83 m	1.82-2.44 m
Metals													
Barium	670	ug/g		82	27	73	130	35	10	6.7	47	35	26
Beryllium	8	ug/g		0.42	0.44	0.31	0.57	0.39	< 0.20	< 0.20	0.21	0.24	< 0.20
Boron	120	ug/g		7.6	10	6.8	9.1	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Cadmium	1.9	ug/g		0.18	< 0.10	< 0.10	0.16	0.14	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chromium	160	ug/g		16	13	14	23	12	5.3	3.8	9.6	9.1	8.2
Cobalt	80	ug/g		5.0	5.4	4.1	7.5	3.5	1.4	1.1	4.5	3.0	2.4
Copper	**230**	ug/g		10	11	7.4	13	2.9	1.6	1.8	25	4.5	4.6
Lead	120	ug/g		9.8	11	3.8	8.2	4.3	1.4	1.1	7.4	2.7	2.2
Molybdenum	40	ug/g		0.55	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Nickel	270	ug/g		11	11	8.8	15	6.1	2.6	1.7	6.1	5.4	4.3
Silver	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	3.3	ug/g		0.10	0.094	0.073	0.14	0.052	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Uranium	33	ug/g		0.54	0.49	0.45	0.58	0.43	0.39	0.33	0.53	0.43	0.46
Vanadium	86	ug/g		26	12	22	36	22	13	9.3	17	19	16
Zinc	**340**	ug/g		50	23	30	55	26	6.9	5.6	85	19	20
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Selenium	5.5	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	**18**	ug/g		2.2	3.0	1.2	3.0	1.3	< 1.0	< 1.0	1.8	< 1.0	< 1.0
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		0.66	0.45	0.059	0.38	0.15	0.054	< 0.050	0.076	< 0.050	0.051
Hexavalent Chromium	8	ug/g		< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
Cyanide (WAD)	0.051	ug/g		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Conductivity	1.4	ms/cm		0.29	0.29	0.18	0.34	0.12	0.083	0.063	0.14	0.15	0.11
Mercury	3.9	ug/g		< 0.050	< 0.050	< 0.050	< 0.050	0.054	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium Adsorption Ratio	12	-		0.33	1.4	1.3	0.69	0.28	0.32	0.41	0.28	0.27	0.33
pH	5-9(11)	pH units		7.36	7.88	8.00	7.27	7.47	7.89	8.09	7.78	7.77	7.84

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-49 (3M)	BH21-5 (3m)	BH21-50 (3m)	BH21-50 (3m)	BH21-50 (3m)	BH21-51 (3m)	BH21-51 (3m)	BH21-52	BH21-52	BH21-53
			Sample Name	Dup 8	BH21-5-2	BH12-50-1	BH12-50-3	BH21-50-5	BH21-51-1	BH21-51-4	BH21-52-1	BH21-52-5	BH21-53-1
			Sample Date	2021-04-28	2021-05-04	2021-04-29	2021-04-29	2021-04-29	2021-04-21	2021-04-21	2021-05-14	2021-05-14	2021-05-14
			Sample Depth	1.21-1.83 m	0.6-1.22 m	0-0.61 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	1.82-2.44 m	0-0.61 m	9.39-10 m	0-0.61 m
Metals													
Barium	670	ug/g		69	-	52	47	39	21	31	150	44	44
Beryllium	8	ug/g		0.39	-	0.20	0.21	< 0.20	0.39	< 0.20	0.80	0.24	0.38
Boron	120	ug/g		5.3	-	< 5.0	5.2	< 5.0	8.9	< 5.0	6.3	< 5.0	< 5.0
Cadmium	1.9	ug/g		< 0.10	-	0.15	< 0.10	< 0.10	< 0.10	< 0.10	0.13	< 0.10	0.20
Chromium	160	ug/g		15	-	9.4	8.7	6.8	13	8.2	30	10	13
Cobalt	80	ug/g		4.9	-	3.3	2.5	1.9	4.2	2.2	8.2	3.2	3.7
Copper	**230**	ug/g		8.7	-	10	4.6	4.8	5.3	3.9	15	7.1	5.4
Lead	120	ug/g		3.9	-	3.8	2.7	3.1	7.4	2.3	6.8	3.1	4.7
Molybdenum	40	ug/g		< 0.50	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Nickel	270	ug/g		9.4	-	6.6	4.9	4.1	8.4	4.5	20	6.4	8.2
Silver	40	ug/g		< 0.20	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	3.3	ug/g		0.096	-	0.068	< 0.050	< 0.050	0.081	< 0.050	0.17	0.059	0.065
Uranium	33	ug/g		0.49	-	0.55	0.65	0.56	0.44	0.46	0.61	0.43	0.52
Vanadium	86	ug/g		27	-	19	16	14	14	14	44	18	24
Zinc	**340**	ug/g		26	-	30	18	17	22	22	48	23	32
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Selenium	5.5	ug/g		< 0.50	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	**18**	ug/g		1.3	-	1.2	< 1.0	< 1.0	1.8	< 1.0	1.9	1.0	1.7
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		0.054	-	0.11	0.16	0.15	0.15	0.19	0.13	< 0.050	0.15
Hexavalent Chromium	8	ug/g		< 0.18	-	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
Cyanide (WAD)	0.051	ug/g		< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Conductivity	1.4	ms/cm		0.23	-	0.15	0.31	0.33	0.15	0.15	0.15	0.10	0.13
Mercury	3.9	ug/g		< 0.050	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.067	< 0.050	< 0.050
Sodium Adsorption Ratio	12	-		0.22	-	0.28	0.19	0.26	0.28	0.42	0.25	0.33	0.27
pH	5-9(11)	pH units		7.59	-	7.94	7.92	7.80	7.83	7.76	7.26	8.00	7.26

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-53	BH21-54	BH21-54	BH21-55	BH21-55	BH21-56	BH21-56	BH21-6 (3m)	BH21-6 (3m)	BH21-6 (3m)
			Sample Name	BH21-53-4	BH21-54-1	BH21-54-5	BH21-55-2	BH21-55-5	BH21-56-1	BH21-56-5	BH21-6-1	BH21-6-1A	BH21-6-5
			Sample Date	2021-05-14	2021-05-13	2021-05-13	2021-05-13	2021-05-13	2021-05-14	2021-05-14	2021-05-03	2021-05-14	2021-05-03
			Sample Depth	1.82-2.44 m	0-0.61 m	2.43-3.05 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	2.43-3.05 m	0-0.61 m	0-0.61 m	2.43-3.05 m
Metals													
Barium	670	ug/g		11	140	22	27	23	110	150	26	40	37
Beryllium	8	ug/g		< 0.20	0.74	< 0.20	< 0.20	< 0.20	0.68	0.54	0.21	0.23	< 0.20
Boron	120	ug/g		< 5.0	6.2	< 5.0	< 5.0	< 5.0	5.5	9.5	< 5.0	< 5.0	< 5.0
Cadmium	1.9	ug/g		< 0.10	0.14	< 0.10	< 0.10	< 0.10	0.27	< 0.10	< 0.10	0.12	< 0.10
Chromium	160	ug/g		6.0	29	8.6	7.6	7.7	25	24	8.9	15	8.4
Cobalt	80	ug/g		1.4	8.2	2.3	2.4	1.9	6.9	8.5	2.9	3.3	2.7
Copper	**230**	ug/g		2.9	15	3.3	4.3	3.3	16	16	5.9	13	4.4
Lead	120	ug/g		1.7	8.1	1.9	2.6	1.9	10	5.7	3.5	7.2	2.7
Molybdenum	40	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.4	< 0.50
Nickel	270	ug/g		3.3	17	4.1	4.4	3.6	13	18	6.3	21	4.9
Silver	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	3.3	ug/g		< 0.050	0.17	< 0.050	< 0.050	< 0.050	0.12	0.17	0.060	0.073	< 0.050
Uranium	33	ug/g		0.38	0.63	0.45	0.41	0.40	1.1	0.52	0.56	0.44	0.40
Vanadium	86	ug/g		13	45	15	16	14	39	36	20	18	16
Zinc	**340**	ug/g		12	59	15	22	15	61	47	24	45	25
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Selenium	5.5	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.56	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	**18**	ug/g		< 1.0	1.8	< 1.0	< 1.0	< 1.0	2.1	1.5	1.4	1.4	1.1
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		< 0.050	0.19	0.055	< 0.050	0.050	0.70	< 0.050	0.096	0.24	< 0.050
Hexavalent Chromium	8	ug/g		< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
Cyanide (WAD)	0.051	ug/g		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Conductivity	1.4	ms/cm		0.073	0.25	0.11	0.11	0.11	0.28	0.18	0.11	0.28	0.13
Mercury	3.9	ug/g		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium Adsorption Ratio	12	-		0.40	0.20	0.35	0.33	0.33	0.19	0.26	0.30	1.2	0.30
pH	5-9(11)	pH units		8.02	7.33	8.14	7.90	8.08	7.07	7.76	7.83	7.86	7.83

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-6 (3M)	BH21-7 (3m)	BH21-7 (3M)	BH21-8 (10m)	BH21-8 (10m)	BH21-8 (10M)	BH21-8 (10M)	BH21-9 (3m)	BH21-9 (3M)	GS21-1
			Sample Name	Dup 11	BH21-7-1	Dup47	BH21-8-1	BH21-8-5	Dup45	Dup46	BH21-9-1	Dup42	GS21-01
			Sample Date	2021-05-03	2021-05-12	2021-05-12	2021-05-11	2021-05-11	2021-05-11	2021-05-11	2021-05-07	2021-05-07	2021-04-16
			Sample Depth	2.39-3 m	0-0.61 m	0-0.61 m	0-0.61 m	2.43-3.05 m	0-0.61 m	2.43-3.05 m	0-0.61 m	0-0.61 m	0-0.18 m
Metals													
Barium	670	ug/g		41	-	-	-	-	-	-	-	-	36
Beryllium	8	ug/g		0.22	-	-	-	-	-	-	-	-	0.21
Boron	120	ug/g		< 5.0	-	-	-	-	-	-	-	-	5.1
Cadmium	1.9	ug/g		< 0.10	-	-	-	-	-	-	-	-	< 0.10
Chromium	160	ug/g		9.3	-	-	-	-	-	-	-	-	8.3
Cobalt	80	ug/g		3.1	-	-	-	-	-	-	-	-	2.5
Copper	**230**	ug/g		4.8	-	-	-	-	-	-	-	-	5.4
Lead	120	ug/g		2.9	-	-	-	-	-	-	-	-	3.5
Molybdenum	40	ug/g		< 0.50	-	-	-	-	-	-	-	-	< 0.50
Nickel	270	ug/g		5.5	-	-	-	-	-	-	-	-	5.1
Silver	40	ug/g		< 0.20	-	-	-	-	-	-	-	-	< 0.20
Thallium	3.3	ug/g		< 0.050	-	-	-	-	-	-	-	-	< 0.050
Uranium	33	ug/g		0.43	-	-	-	-	-	-	-	-	0.42
Vanadium	86	ug/g		17	-	-	-	-	-	-	-	-	16
Zinc	**340**	ug/g		27	-	-	-	-	-	-	-	-	27
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	-	-	-	-	-	-	-	-	< 0.20
Selenium	5.5	ug/g		< 0.50	-	-	-	-	-	-	-	-	< 0.50
Arsenic	**18**	ug/g		< 1.0	-	-	-	-	-	-	-	-	< 1.0
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		< 0.050	-	-	-	-	-	-	-	-	0.17
Hexavalent Chromium	8	ug/g		< 0.18	-	-	-	-	-	-	-	-	< 0.18
Cyanide (WAD)	0.051	ug/g		< 0.01	-	-	-	-	-	-	-	-	< 0.01
Conductivity	1.4	ms/cm		0.15	-	-	-	-	-	-	-	-	0.15
Mercury	3.9	ug/g		< 0.050	-	-	-	-	-	-	-	-	< 0.050
Sodium Adsorption Ratio	12	-		0.28	-	-	-	-	-	-	-	-	0.26
pH	5-9(11)	pH units		7.83	-	-	-	-	-	-	-	-	7.50

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-10	GS21-11	GS21-12	GS21-13	GS21-14	GS21-15	GS21-16	GS21-16	GS21-17	GS21-18
			Sample Name	GS21-10	GS21-11	GS21-12	GS21-13	GS21-14	GS21-15	DUP 4	GS21-16	GS21-17	GS21-18
			Sample Date	2021-04-16	2021-04-16	2021-04-16	2021-04-16	2021-04-16	2021-04-20	2021-04-20	2021-04-20	2021-04-20	2021-04-20
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Metals													
Barium	670	ug/g		32	27	44	-	-	35	36	34	25	67
Beryllium	8	ug/g		< 0.20	< 0.20	0.21	-	-	< 0.20	0.24	0.22	< 0.20	0.41
Boron	120	ug/g		< 5.0	< 5.0	6.6	-	-	< 5.0	6.1	5.6	< 5.0	5.2
Cadmium	1.9	ug/g		< 0.10	0.14	0.19	-	-	< 0.10	0.14	0.12	< 0.10	0.14
Chromium	160	ug/g		7.8	8.5	11	-	-	8.4	8.8	7.7	6.6	15
Cobalt	80	ug/g		3.0	2.8	4.2	-	-	3.1	2.8	2.5	2.2	4.9
Copper	**230**	ug/g		5.4	9.2	27	-	-	8.3	7.2	6.1	3.9	9.6
Lead	120	ug/g		4.2	4.8	13	-	-	3.9	4.3	3.5	2.1	11
Molybdenum	40	ug/g		0.68	< 0.50	1.2	-	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Nickel	270	ug/g		6.4	5.4	9.4	-	-	6.4	5.5	5.3	4.3	10
Silver	40	ug/g		< 0.20	< 0.20	< 0.20	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	3.3	ug/g		0.077	0.071	0.095	-	-	0.054	0.059	0.054	< 0.050	0.096
Uranium	33	ug/g		0.75	0.43	0.55	-	-	0.44	0.40	0.40	0.47	0.41
Vanadium	86	ug/g		16	19	15	-	-	16	17	15	15	26
Zinc	**340**	ug/g		32	35	120	-	-	28	35	29	21	37
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	< 0.20	0.31	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Selenium	5.5	ug/g		< 0.50	< 0.50	< 0.50	-	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	**18**	ug/g		1.2	1.2	2.3	-	-	< 1.0	1.0	1.0	< 1.0	2.6
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		0.076	0.13	0.22	-	-	0.18	0.69	0.68	0.28	0.30
Hexavalent Chromium	8	ug/g		< 0.18	< 0.18	< 0.18	-	-	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
Cyanide (WAD)	0.051	ug/g		< 0.01	< 0.01	0.01	-	-	< 0.01	0.04	0.03	0.01	0.02
Conductivity	1.4	ms/cm		0.11	0.12	0.18	-	-	0.15	0.25	0.22	0.15	0.18
Mercury	3.9	ug/g		< 0.050	< 0.050	< 0.050	-	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium Adsorption Ratio	12	-		0.32	0.29	0.24	-	-	0.28	0.21	0.21	0.27	0.21
pH	5-9(11)	pH units		7.74	7.68	7.52	-	-	7.52	7.17	7.24	7.50	7.18

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-19	GS21-2	GS21-20	GS21-20	GS21-21	GS21-22	GS21-23	GS21-24	GS21-25	GS21-26
			Sample Name	GS21-19	GS21-02	DUP 1	GS21-20	GS21-21	GS21-22	GS21-23	GS21-24	GS21-25	GS21-26
			Sample Date	2021-04-20	2021-04-16	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Metals													
Barium	670	ug/g		35	32	-	-	-	-	-	-	-	-
Beryllium	8	ug/g		0.26	< 0.20	-	-	-	-	-	-	-	-
Boron	120	ug/g		< 5.0	< 5.0	-	-	-	-	-	-	-	-
Cadmium	1.9	ug/g		0.13	< 0.10	-	-	-	-	-	-	-	-
Chromium	160	ug/g		8.7	7.4	-	-	-	-	-	-	-	-
Cobalt	80	ug/g		2.8	2.3	-	-	-	-	-	-	-	-
Copper	**230**	ug/g		4.2	4.5	-	-	-	-	-	-	-	-
Lead	120	ug/g		7.1	3.1	-	-	-	-	-	-	-	-
Molybdenum	40	ug/g		< 0.50	< 0.50	-	-	-	-	-	-	-	-
Nickel	270	ug/g		5.0	4.4	-	-	-	-	-	-	-	-
Silver	40	ug/g		< 0.20	< 0.20	-	-	-	-	-	-	-	-
Thallium	3.3	ug/g		0.053	< 0.050	-	-	-	-	-	-	-	-
Uranium	33	ug/g		0.32	0.50	-	-	-	-	-	-	-	-
Vanadium	86	ug/g		17	15	-	-	-	-	-	-	-	-
Zinc	**340**	ug/g		31	25	-	-	-	-	-	-	-	-
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	< 0.20	-	-	-	-	-	-	-	-
Selenium	5.5	ug/g		< 0.50	< 0.50	-	-	-	-	-	-	-	-
Arsenic	**18**	ug/g		1.3	< 1.0	-	-	-	-	-	-	-	-
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		0.47	0.11	-	-	-	-	-	-	-	-
Hexavalent Chromium	8	ug/g		< 0.18	< 0.18	-	-	-	-	-	-	-	-
Cyanide (WAD)	0.051	ug/g		0.03	0.01	-	-	-	-	-	-	-	-
Conductivity	1.4	ms/cm		0.16	0.14	-	-	-	-	-	-	-	-
Mercury	3.9	ug/g		< 0.050	< 0.050	-	-	-	-	-	-	-	-
Sodium Adsorption Ratio	12	-		0.24	0.26	-	-	-	-	-	-	-	-
pH	5-9(11)	pH units		7.10	7.56	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition
< Indicates parameter was below laboratory equipment detection limit.
> Indicates parameter detected in excess of soil criteria
- Chemical not analyzed or criteria not defined.
Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-27	GS21-28	GS21-29	GS21-3	GS21-30	GS21-31	GS21-32	GS21-33	GS21-34	GS21-35
			Sample Name	GS21-27	GS21-28	GS21-29	GS21-03	GS21-30	GS21-31	GS21-32	GS21-33	GS21-34	GS21-35
			Sample Date	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Metals													
Barium	670	ug/g		33	27	30	23	37	32	37	31	32	40
Beryllium	8	ug/g		< 0.20	< 0.20	0.25	< 0.20	< 0.20	< 0.20	< 0.20	0.20	< 0.20	0.22
Boron	120	ug/g		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.0
Cadmium	1.9	ug/g		< 0.10	< 0.10	< 0.10	< 0.10	0.11	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chromium	160	ug/g		8.0	7.4	10	11	9.9	14	8.0	8.6	6.3	10
Cobalt	80	ug/g		3.2	2.8	3.4	2.7	3.0	3.5	3.0	3.2	1.9	3.6
Copper	**230**	ug/g		9.1	10	6.8	7.8	14	13	8.4	8.1	4.1	11
Lead	120	ug/g		7.8	4.7	5.4	4.0	8.0	3.3	3.2	3.5	2.3	5.0
Molybdenum	40	ug/g		< 0.50	< 0.50	< 0.50	0.84	< 0.50	0.59	< 0.50	< 0.50	< 0.50	< 0.50
Nickel	270	ug/g		5.8	4.7	5.9	12	7.6	13	7.0	6.0	4.0	7.3
Silver	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	3.3	ug/g		0.099	0.059	0.073	0.060	0.066	0.10	0.11	0.097	< 0.050	0.085
Uranium	33	ug/g		0.43	1.2	0.43	0.53	0.46	0.42	1.1	0.48	0.45	0.72
Vanadium	86	ug/g		20	17	26	21	18	19	19	20	14	18
Zinc	**340**	ug/g		47	52	44	30	68	44	32	40	19	63
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.23	< 0.20	< 0.20	< 0.20	< 0.20
Selenium	5.5	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	**18**	ug/g		1.0	1.3	1.4	1.2	< 1.0	1.5	1.2	1.4	< 1.0	1.2
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		0.10	0.21	0.070	0.098	0.12	0.079	0.12	0.11	0.083	0.083
Hexavalent Chromium	8	ug/g		< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
Cyanide (WAD)	0.051	ug/g		0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Conductivity	1.4	ms/cm		0.13	0.15	0.12	0.17	0.15	0.11	0.12	0.12	0.12	0.11
Mercury	3.9	ug/g		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium Adsorption Ratio	12	-		0.26	0.26	0.29	2.4	0.26	0.30	0.29	0.27	0.34	0.31
pH	5-9(11)	pH units		7.60	7.43	7.38	7.70	7.32	7.63	7.56	7.64	7.75	7.80

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-36	GS21-37	GS21-38	GS21-39	GS21-4	GS21-40	GS21-41	GS21-42	GS21-42	GS21-43
			Sample Name	GS21-36	GS21-37	GS21-38	GS21-39	GS21-04	GS21-40	GS21-41	DUP 5	GS21-42	DUP 3
			Sample Date	2021-04-16	2021-04-20	2021-04-20	2021-04-20	2021-04-16	2021-04-19	2021-04-20	2021-04-20	2021-04-20	2021-04-19
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Metals													
Barium	670	ug/g		37	33	19	45	28	24	30	45	40	-
Beryllium	8	ug/g		< 0.20	< 0.20	< 0.20	0.24	< 0.20	< 0.20	< 0.20	0.29	0.25	-
Boron	120	ug/g		< 5.0	< 5.0	< 5.0	6.8	< 5.0	< 5.0	< 5.0	6.7	6.5	-
Cadmium	1.9	ug/g		< 0.10	< 0.10	< 0.10	0.32	0.12	0.13	0.13	0.23	0.18	-
Chromium	160	ug/g		7.4	7.2	6.0	18	10	10	10	12	9.9	-
Cobalt	80	ug/g		2.5	2.7	1.8	28	3.2	2.9	5.8	3.7	3.3	-
Copper	**230**	ug/g		5.1	7.9	3.2	**370**	16	21	48	8.9	10	-
Lead	120	ug/g		2.5	3.7	2.7	77	8.4	8.3	14	11	9.0	-
Molybdenum	40	ug/g		< 0.50	< 0.50	< 0.50	0.99	1.1	< 0.50	0.51	< 0.50	< 0.50	-
Nickel	270	ug/g		5.1	5.6	3.2	10	5.6	9.1	9.1	8.8	7.8	-
Silver	40	ug/g		< 0.20	< 0.20	< 0.20	0.26	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-
Thallium	3.3	ug/g		< 0.050	0.050	< 0.050	0.067	0.068	0.053	0.070	0.088	0.074	-
Uranium	33	ug/g		0.43	0.49	0.36	0.51	0.44	0.43	0.49	0.49	0.45	-
Vanadium	86	ug/g		14	15	14	17	19	16	17	22	19	-
Zinc	**340**	ug/g		17	26	18	**1200**	92	96	190	99	83	-
Metals, Hydride-Forming													
Antimony	40	ug/g		< 0.20	< 0.20	< 0.20	2.0	< 0.20	< 0.20	0.34	< 0.20	< 0.20	-
Selenium	5.5	ug/g		< 0.50	< 0.50	< 0.50	1.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	-
Arsenic	**18**	ug/g		< 1.0	1.1	< 1.0	**20**	1.8	1.3	3.2	1.7	1.3	-
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		0.15	0.14	0.30	0.28	0.15	0.11	0.11	0.87	0.85	-
Hexavalent Chromium	8	ug/g		< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	-
Cyanide (WAD)	0.051	ug/g		< 0.01	< 0.01	0.01	< 0.01	0.01	< 0.01	< 0.01	0.03	0.03	-
Conductivity	1.4	ms/cm		0.18	0.32	0.15	0.20	0.13	0.10	0.13	0.23	0.22	-
Mercury	3.9	ug/g		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	-
Sodium Adsorption Ratio	12	-		0.27	0.40	0.26	0.22	0.29	0.30	0.27	0.21	0.22	-
pH	5-9(11)	pH units		7.67	7.90	7.24	7.40	7.73	7.62	7.72	7.20	7.30	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-43	GS21-44	GS21-45	GS21-46	GS21-47	GS21-47	GS21-48	GS21-49	GS21-5	GS21-50
			Sample Name	GS21-43	GS21-44	GS21-45	GS21-46	DUP 2	GS21-47	GS21-48	GS21-49	GS21-05	GS21-50
			Sample Date	2021-04-19	2021-04-16	2021-04-16	2021-04-16	2021-04-15	2021-04-15	2021-04-16	2021-04-16	2021-04-19	2021-04-16
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Metals													
Barium	670	ug/g		-	-	-	-	-	-	-	-	40	-
Beryllium	8	ug/g		-	-	-	-	-	-	-	-	0.27	-
Boron	120	ug/g		-	-	-	-	-	-	-	-	8.5	-
Cadmium	1.9	ug/g		-	-	-	-	-	-	-	-	0.33	-
Chromium	160	ug/g		-	-	-	-	-	-	-	-	18	-
Cobalt	80	ug/g		-	-	-	-	-	-	-	-	3.6	-
Copper	**230**	ug/g		-	-	-	-	-	-	-	-	20	-
Lead	120	ug/g		-	-	-	-	-	-	-	-	28	-
Molybdenum	40	ug/g		-	-	-	-	-	-	-	-	1.6	-
Nickel	270	ug/g		-	-	-	-	-	-	-	-	13	-
Silver	40	ug/g		-	-	-	-	-	-	-	-	< 0.20	-
Thallium	3.3	ug/g		-	-	-	-	-	-	-	-	0.083	-
Uranium	33	ug/g		-	-	-	-	-	-	-	-	0.59	-
Vanadium	86	ug/g		-	-	-	-	-	-	-	-	13	-
Zinc	**340**	ug/g		-	-	-	-	-	-	-	-	100	-
Metals, Hydride-Forming													
Antimony	40	ug/g		-	-	-	-	-	-	-	-	0.58	-
Selenium	5.5	ug/g		-	-	-	-	-	-	-	-	< 0.50	-
Arsenic	**18**	ug/g		-	-	-	-	-	-	-	-	2.2	-
Other Regulated Parameters													
Boron, Hot Water Soluble	2	ug/g		-	-	-	-	-	-	-	-	0.21	-
Hexavalent Chromium	8	ug/g		-	-	-	-	-	-	-	-	< 0.18	-
Cyanide (WAD)	0.051	ug/g		-	-	-	-	-	-	-	-	< 0.01	-
Conductivity	1.4	ms/cm		-	-	-	-	-	-	-	-	0.41	-
Mercury	3.9	ug/g		-	-	-	-	-	-	-	-	< 0.050	-
Sodium Adsorption Ratio	12	-		-	-	-	-	-	-	-	-	4.7	-
pH	5-9(11)	pH units		-	-	-	-	-	-	-	-	7.33	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-51	GS21-52	GS21-53	GS21-6	GS21-7	GS21-8	GS21-9	BH21-36 (3M)	BH21-36 (3M)	BH21-39 (6M)	BH21-39 (6M)
			Sample Name	GS21-51	GS21-52	GS21-53	GS21-06	GS21-07	GS21-08	GS21-09	BH21-36-2	BH21-36-4	BH21-39-1	BH21-39-5
			Sample Date	2021-04-16	2021-04-19	2021-04-16	2021-04-19	2021-04-16	2021-04-19	2021-04-16	2021-04-08	2021-04-08	2021-02-09	2021-02-09
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0.6-1.2 m	1.8-2.4 m	0-0.6 m	2.4-3 m
Metals														
Barium	670	ug/g		-	-	-	74	28	26	26	42	40	120	59
Beryllium	8	ug/g		-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	0.22	0.22	0.40	0.22
Boron	120	ug/g		-	-	-	6.7	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.4	< 5.0
Cadmium	1.9	ug/g		-	-	-	0.30	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chromium	160	ug/g		-	-	-	8.7	8.5	15	12	10	11	19	13
Cobalt	80	ug/g		-	-	-	2.6	2.8	2.9	3.0	3.4	3.2	6.0	3.6
Copper	**230**	ug/g		-	-	-	13	5.8	8.3	6.4	5.8	7.5	12	6.6
Lead	120	ug/g		-	-	-	8.7	3.2	13	2.9	2.9	3.3	4.2	3.6
Molybdenum	40	ug/g		-	-	-	< 0.50	< 0.50	1.6	1.3	< 0.50	1.0	< 0.50	< 0.50
Nickel	270	ug/g		-	-	-	10	4.8	19	16	6.4	6.9	13	7.1
Silver	40	ug/g		-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	3.3	ug/g		-	-	-	0.063	0.082	0.061	0.056	0.055	0.052	0.12	0.064
Uranium	33	ug/g		-	-	-	0.66	0.42	0.51	0.45	0.42	0.45	0.45	0.45
Vanadium	86	ug/g		-	-	-	12	18	21	20	18	16	29	18
Zinc	**340**	ug/g		-	-	-	60	23	32	24	21	25	35	26
Metals, Hydride-Forming														
Antimony	40	ug/g		-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Selenium	5.5	ug/g		-	-	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	**18**	ug/g		-	-	-	1.3	1.3	1.3	1.2	< 1.0	< 1.0	1.2	< 1.0
Other Regulated Parameters														
Boron, Hot Water Soluble	2	ug/g		-	-	-	0.16	< 0.050	0.076	0.076	< 0.050	0.072	0.059	0.081
Hexavalent Chromium	8	ug/g		-	-	-	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
Cyanide (WAD)	0.051	ug/g		-	-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Conductivity	1.4	ms/cm		-	-	-	0.18	0.088	0.10	0.099	0.15	0.21	0.20	0.18
Mercury	3.9	ug/g		-	-	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium Adsorption Ratio	12	-		-	-	-	0.35	0.33	0.32	0.30	0.28	0.35	0.21	0.25
pH	5-9(11)	pH units		-	-	-	7.89	8.08	7.93	7.87	7.90	7.88	7.69	7.97

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 4 - Summary of Soil Analytical Data - Metals, Hydride Metals and Other Regulated Parameters
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-40 (3M)	BH21-40 (3M)	BH21-41 (10M)	BH21-41 (10M)	BH21-41 (10M)	BH21-41 (10M)
			Sample Name	BH21-40-2	BH21-40-3	BH21-41-1	BH21-41-3	BH21-41-4	BH21-41-6
			Sample Date	2021-04-08	2021-04-08	2021-04-09	2021-04-09	2021-04-09	2021-04-09
			Sample Depth	0.6-1.2 m	1.2-1.8 m	0-0.6 m	1.2-1.8 m	1.8-2.4 m	3-3.7 m
Metals									
Barium	670	ug/g		52	27	49	33	40	34
Beryllium	8	ug/g		0.50	0.20	0.30	< 0.20	0.23	< 0.20
Boron	120	ug/g		< 5.0	< 5.0	6.2	< 5.0	< 5.0	< 5.0
Cadmium	1.9	ug/g		0.25	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chromium	160	ug/g		14	8.4	12	7.5	9.5	7.8
Cobalt	80	ug/g		3.8	2.4	4.0	2.5	3.3	2.8
Copper	**230**	ug/g		5.1	4.5	11	4.1	5.9	4.1
Lead	120	ug/g		4.8	2.3	6.5	2.3	3.1	2.5
Molybdenum	40	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Nickel	270	ug/g		7.2	5.0	9.6	5.0	7.0	4.8
Silver	40	ug/g		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	3.3	ug/g		0.084	< 0.050	0.072	< 0.050	< 0.050	< 0.050
Uranium	33	ug/g		0.58	0.45	0.53	0.43	0.45	0.46
Vanadium	86	ug/g		26	16	19	16	17	15
Zinc	**340**	ug/g		32	16	35	23	26	19
Metals, Hydride-Forming									
Antimony	40	ug/g		< 0.20	< 0.20	0.59	< 0.20	< 0.20	< 0.20
Selenium	5.5	ug/g		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	**18**	ug/g		1.6	< 1.0	1.3	< 1.0	< 1.0	1.1
Other Regulated Parameters									
Boron, Hot Water Soluble	2	ug/g		0.21	< 0.050	0.089	< 0.050	0.078	0.066
Hexavalent Chromium	8	ug/g		< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
Cyanide (WAD)	0.051	ug/g		0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Conductivity	1.4	ms/cm		0.47	0.22	0.16	0.14	0.17	0.19
Mercury	3.9	ug/g		0.063	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium Adsorption Ratio	12	-		0.36	1.2	0.42	0.99	0.27	0.25
pH	5-9(11)	pH units		7.14	7.84	7.92	7.96	7.93	7.98

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-1 (3m)	BH21-10 (10m)	BH21-10 (10m)	BH21-11 (3m)	BH21-11 (3m)	BH21-12 (3m)	BH21-12 (3m)	BH21-13 (10m)	BH21-13 (10m)	BH21-13 (10m)
			Sample Name	BH21-1-2	BH21-10-1	BH21-10-3	BH21-11-1	BH21-11-2	BH21-12-3	BH21-12-5	BH21-13-1	BH21-13-14	BH21-13-4
			Sample Date	2021-05-04	2021-05-10	2021-05-10	2021-04-26	2021-04-26	2021-04-26	2021-04-26	2021-04-28	2021-04-28	2021-04-28
			Sample Depth	0.6-1.22 m	0-0.61 m	1.21-1.83 m	0-0.61 m	0.6-1.22 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	7.92-8.53 m	1.82-2.44 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
Chlordane	0.05	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
DDD, Total	4.6	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
DDE, Total	0.52	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
DDT, Total	1.4	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
Dieldrin	0.088	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
Endosulfan	0.3	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
Endrin	0.04	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
Heptachlor	0.19	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		-	< 0.0020	< 0.0020	-	-	-	-	-	-	-
Methoxychlor	1.6	ug/g		-	< 0.0050	< 0.0050	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-14 (10m)	BH21-14 (10m)	BH21-14 (10m)	BH21-15 (3m)	BH21-15 (3m)	BH21-16 (3m)	BH21-16 (3m)	BH21-17 (3m)	BH21-17 (3m)	BH21-17 (3m)
			Sample Name	BH21-14-1	BH21-14-12	BH21-14-6	BH21-15-1	BH21-15-4	BH12-16-4	BH21-16-1	BH21-17-1	BH21-17-3	BH21-17-5
			Sample Date	2021-05-10	2021-05-11	2021-05-11	2021-04-29	2021-04-29	2021-04-29	2021-04-29	2021-05-07	2021-05-07	2021-05-07
			Sample Depth	0-0.61 m	6.7-7.32 m	3.04-3.66 m	0-0.61 m	1.82-2.44 m	1.82-2.44 m	0-0.61 m	0-0.61 m	1.21-1.83 m	2.43-3.05 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Chlordane	0.05	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
DDD, Total	4.6	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
DDE, Total	0.52	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
DDT, Total	1.4	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Dieldrin	0.088	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Endosulfan	0.3	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Endrin	0.04	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Heptachlor	0.19	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-17 (3M)	BH21-17 (3M)	BH21-17 (3m)	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3M)	BH21-18 (3M)	BH21-18 (3m)
			Sample Name	Dup 27	Dup 29	Dup 31	BH21-18-1	BH21-18-2	BH21-18-4	BH21-18-5	Dup 22	Dup21	Dup24
			Sample Date	2021-05-07	2021-05-07	2021-05-07	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06
			Sample Depth	0-0.61 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m	2.43-3.05 m	0.6-1.22 m	0-0.61 m	1.82-2.44 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
DDD, Total	4.6	ug/g		-	-	-	-	-	-	-	-	-	-
DDE, Total	0.52	ug/g		-	-	-	-	-	-	-	-	-	-
DDT, Total	1.4	ug/g		-	-	-	-	-	-	-	-	-	-
Dieldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Endosulfan	0.3	ug/g		-	-	-	-	-	-	-	-	-	-
Endrin	0.04	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor	0.19	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	-	-	-	-	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-19 (3m)	BH21-19 (3m)	BH21-19 (3m)	BH21-19 (3m)	BH21-19 (3M)	BH21-19 (3M)	BH21-19 (3m)	BH21-19 (3M)	BH21-20 (3m)	BH21-20 (3m)
			Sample Name	BH21-19-1	BH21-19-2	BH21-19-4	BH21-19-5	Dup 32	Dup33	Dup35	Dup36	BH21-20-1	BH21-20-2
			Sample Date	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07
			Sample Depth	0-0.61 m	0.6-1.22 m	1.82-2.44 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
DDD, Total	4.6	ug/g		-	-	-	-	-	-	-	-	-	-
DDE, Total	0.52	ug/g		-	-	-	-	-	-	-	-	-	-
DDT, Total	1.4	ug/g		-	-	-	-	-	-	-	-	-	-
Dieldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Endosulfan	0.3	ug/g		-	-	-	-	-	-	-	-	-	-
Endrin	0.04	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor	0.19	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	-	-	-	-	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-20 (3m)	BH21-20 (3M)	BH21-20 (3M)	BH21-21 (3m)	BH21-21 (3m)	BH21-21 (3m)	BH21-21 (3M)	BH21-22 (3m)	BH21-22 (3m)	BH21-23 (3m)
			Sample Name	BH21-20-5	Dup 37	Dup38	BH21-21-1	BH21-21-2	BH21-2-2	Dup 19	BH21-22-1	BH21-22-2	BH21-23-1
			Sample Date	2021-05-07	2021-05-07	2021-05-07	2021-04-26	2021-04-26	2021-05-05	2021-05-05	2021-04-22	2021-04-22	2021-05-03
			Sample Depth	2.43-3.05 m	0-0.61 m	0.6-1.22 m	0-0.61 m	0.6-1.22 m	0.6-1.22 m	0.6-1.22 m	0-0.61 m	0.6-1.22 m	0-0.61 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
DDD, Total	4.6	ug/g		-	-	-	-	-	-	-	-	-	-
DDE, Total	0.52	ug/g		-	-	-	-	-	-	-	-	-	-
DDT, Total	1.4	ug/g		-	-	-	-	-	-	-	-	-	-
Dieldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Endosulfan	0.3	ug/g		-	-	-	-	-	-	-	-	-	-
Endrin	0.04	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor	0.19	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	-	-	-	-	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-23 (3m)	BH21-23 (3m)	BH21-24 (3m)	BH21-24 (3m)	BH21-24 (3m)	BH21-25 (3m)	BH21-25 (3m)	BH21-26 (3m)	BH21-26 (3m)	BH21-27 (3m)
			Sample Name	BH21-23-1A	BH21-23-3	BH21-24-1	BH21-24-1A	BH21-24-3	BH21-25-1	BH21-25-3	BH21-26-1	BH21-26-3	BH21-27-1
			Sample Date	2021-05-14	2021-05-03	2021-05-03	2021-05-14	2021-05-03	2021-04-27	2021-04-27	2021-04-23	2021-04-23	2021-04-27
			Sample Depth	0-0.61 m	1.21-1.83 m	0-0.61 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.21-1.83 m	0-0.61 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
DDD, Total	4.6	ug/g		-	-	-	-	-	-	-	-	-	-
DDE, Total	0.52	ug/g		-	-	-	-	-	-	-	-	-	-
DDT, Total	1.4	ug/g		-	-	-	-	-	-	-	-	-	-
Dieldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Endosulfan	0.3	ug/g		-	-	-	-	-	-	-	-	-	-
Endrin	0.04	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor	0.19	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	-	-	-	-	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-27 (3m)	BH21-27 (3m)	BH21-28 (3m)	BH21-28 (3m)	BH21-29 (3m)	BH21-29 (3m)	BH21-29 (3M)	BH21-3 (3m)	BH21-3 (3M)	BH21-30 (6m)
			Sample Name	BH21-27-1A	BH21-27-4	BH21-28-1	BH21-28-3	BH21-29-1	BH21-29-4	Dup 6	BH21-3-1	Dup 13	BH21-30-1
			Sample Date	2021-05-14	2021-04-27	2021-04-27	2021-04-27	2021-04-27	2021-04-27	2021-04-27	2021-05-04	2021-05-04	2021-04-23
			Sample Depth	0-0.61 m	1.82-2.44 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.82-2.44 m	1.82-2.44 m	0-0.61 m	0-0.6 m	0-0.61 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
DDD, Total	4.6	ug/g		-	-	-	-	-	-	-	-	-	-
DDE, Total	0.52	ug/g		-	-	-	-	-	-	-	-	-	-
DDT, Total	1.4	ug/g		-	-	-	-	-	-	-	-	-	-
Dieldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Endosulfan	0.3	ug/g		-	-	-	-	-	-	-	-	-	-
Endrin	0.04	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor	0.19	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	-	-	-	-	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-30 (6m)	BH21-30 (6m)	BH21-30 (6m)	BH21-30 (6m)	BH21-31 (3m)	BH21-31 (3m)	BH21-31 (3m)	BH21-32 (3m)	BH21-32 (3m)	BH21-32 (3m)
			Sample Name	BH21-30-10	BH21-30-4	BH21-30-6	BH21-30-7	BH21-31-1	BH21-31-2	BH21-31-5	BH21-32-1A	BH21-32-2	BH21-32-4
			Sample Date	2021-04-23	2021-04-23	2021-04-23	2021-04-23	2021-05-03	2021-05-03	2021-05-03	2021-05-14	2021-04-30	2021-04-30
			Sample Depth	5.48-6.1 m	1.82-2.44 m	3.04-3.66 m	3.65-4.27 m	0-0.61 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
DDD, Total	4.6	ug/g		-	-	-	-	-	-	-	-	-	-
DDE, Total	0.52	ug/g		-	-	-	-	-	-	-	-	-	-
DDT, Total	1.4	ug/g		-	-	-	-	-	-	-	-	-	-
Dieldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Endosulfan	0.3	ug/g		-	-	-	-	-	-	-	-	-	-
Endrin	0.04	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor	0.19	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	-	-	-	-	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-33 (3m)	BH21-33 (3m)	BH21-33 (3m)	BH21-34 (3m)	BH21-34 (3m)	BH21-35 (3m)	BH21-35 (3m)	BH21-37 (3m)	BH21-37 (3m)	BH21-37 (3m)
			Sample Name	BH21-33-1	BH21-33-2	BH21-33-4	BH21-34-1	BH21-34-4	BH21-35-3A	BH21-35-4	BH21-37-1	BH21-37-15	BH21-37-3
			Sample Date	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-22	2021-04-22	2021-04-22
			Sample Depth	0-0.61 m	0.6-1.22 m	1.82-2.44 m	0-0.61 m	1.82-2.44 m	0.91-1.52 m	1.82-2.44 m	0-0.61 m	8.53-9.14 m	1.21-1.83 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
DDD, Total	4.6	ug/g		-	-	-	-	-	-	-	-	-	-
DDE, Total	0.52	ug/g		-	-	-	-	-	-	-	-	-	-
DDT, Total	1.4	ug/g		-	-	-	-	-	-	-	-	-	-
Dieldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Endosulfan	0.3	ug/g		-	-	-	-	-	-	-	-	-	-
Endrin	0.04	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor	0.19	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	-	-	-	-	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-37 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-4 (3m)	BH21-4 (3M)	BH21-42 (10m)	BH21-42 (10m)	BH21-43 (6m)
			Sample Name	BH21-37-8	BH21-38-1	BH21-38-11	BH21-38-4	BH21-38-7	BH21-4-1	Dup 15	BH21-42-2	BH21-42-8	BH21-43-2
			Sample Date	2021-04-22	2021-04-21	2021-04-21	2021-04-21	2021-04-21	2021-05-04	2021-05-04	2021-05-05	2021-05-05	2021-05-06
			Sample Depth	4.26-4.88 m	0-0.61 m	6.09-6.71 m	1.82-2.44 m	3.65-4.27 m	0-0.61 m	0-0.61 m	0.6-1.22 m	4.26-4.88 m	0.6-1.22 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
DDD, Total	4.6	ug/g		-	-	-	-	-	-	-	-	-	-
DDE, Total	0.52	ug/g		-	-	-	-	-	-	-	-	-	-
DDT, Total	1.4	ug/g		-	-	-	-	-	-	-	-	-	-
Dieldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Endosulfan	0.3	ug/g		-	-	-	-	-	-	-	-	-	-
Endrin	0.04	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor	0.19	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	-	-	-	-	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-43 (6m)	BH21-43 (6M)	BH21-44 (6m)	BH21-44 (6m)	BH21-44 (6m)	BH21-45 (3m)	BH21-45 (3m)	BH21-46 (3m)	BH21-46 (3m)	BH21-47 (6m)
			Sample Name	BH21-43-8	Dup 20	BH21-44-1	BH21-44-5	BH21-44-9	BH21-45-1	BH21-45-4	BH21-46-1	BH21-46-5B	BH21-47-1
			Sample Date	2021-05-06	2021-05-06	2021-05-10	2021-05-10	2021-05-10	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-05-12
			Sample Depth	4.26-4.88 m	0.6-1.22 m	0-0.61 m	2.43-3.05 m	4.87-5.49 m	0-0.61 m	1.82-2.44 m	0-0.61 m	2.81-3.05 m	0-0.61 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
DDD, Total	4.6	ug/g		-	-	-	-	-	-	-	-	-	-
DDE, Total	0.52	ug/g		-	-	-	-	-	-	-	-	-	-
DDT, Total	1.4	ug/g		-	-	-	-	-	-	-	-	-	-
Dieldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Endosulfan	0.3	ug/g		-	-	-	-	-	-	-	-	-	-
Endrin	0.04	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor	0.19	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	-	-	-	-	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-47 (6m)	BH21-47 (6m)	BH21-47 (6m)	BH21-47 (6M)	BH21-48 (3m)	BH21-48 (3m)	BH21-48 (3m)	BH21-49 (3m)	BH21-49 (3m)	BH21-49 (3m)
			Sample Name	BH21-47-3	BH21-47-6	BH21-47-9	Dup 49	BH21-48-1	BH21-48-2	BH21-48-5	BH21-49-1	BH21-49-3	BH21-49-4
			Sample Date	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-04-29	2021-04-29	2021-04-29	2021-04-28	2021-04-28	2021-04-28
			Sample Depth	1.21-1.83 m	3.04-3.66 m	4.87-5.49 m	1.21-1.83 m	0-0.61 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	1.21-1.83 m	1.82-2.44 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
Chlordane	0.05	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
DDD, Total	4.6	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
DDE, Total	0.52	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
DDT, Total	1.4	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
Dieldrin	0.088	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
Endosulfan	0.3	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
Endrin	0.04	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
Heptachlor	0.19	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-49 (3M)	BH21-5 (3m)	BH21-50 (3m)	BH21-50 (3m)	BH21-50 (3m)	BH21-51 (3m)	BH21-51 (3m)	BH21-52	BH21-52	BH21-53
			Sample Name	Dup 8	BH21-5-2	BH12-50-1	BH12-50-3	BH21-50-5	BH21-51-1	BH21-51-4	BH21-52-1	BH21-52-5	BH21-53-1
			Sample Date	2021-04-28	2021-05-04	2021-04-29	2021-04-29	2021-04-29	2021-04-21	2021-04-21	2021-05-14	2021-05-14	2021-05-14
			Sample Depth	1.21-1.83 m	0.6-1.22 m	0-0.61 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	1.82-2.44 m	0-0.61 m	9.39-10 m	0-0.61 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
alpha-Chlordane	NV	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
Chlordane, technical mixture	0.05	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
Chlordane	0.05	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
DDD, Total	4.6	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
DDE, Total	0.52	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
DDT, Total	1.4	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
Dieldrin	0.088	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
alpha-Endosulfan	NV	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
beta-Endosulfan	NV	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
Endosulfan	0.3	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
Endrin	0.04	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
Heptachlor	0.19	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
Heptachlor Epoxide	0.05	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
Hexachlorobenzene	0.66	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
Hexachlorobutadiene	0.031	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
Hexachloroethane	0.21	ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	-	-	< 0.0020	< 0.0020	< 0.0020
Methoxychlor	1.6	ug/g		-	-	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050	< 0.0050

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-53	BH21-54	BH21-54	BH21-55	BH21-55	BH21-56	BH21-56	BH21-6 (3m)	BH21-6 (3m)	BH21-6 (3m)
			Sample Name	BH21-53-4	BH21-54-1	BH21-54-5	BH21-55-2	BH21-55-5	BH21-56-1	BH21-56-5	BH21-6-1	BH21-6-1A	BH21-6-5
			Sample Date	2021-05-14	2021-05-13	2021-05-13	2021-05-13	2021-05-13	2021-05-14	2021-05-14	2021-05-03	2021-05-14	2021-05-03
			Sample Depth	1.82-2.44 m	0-0.61 m	2.43-3.05 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	2.43-3.05 m	0-0.61 m	0-0.61 m	2.43-3.05 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
alpha-Chlordane	NV	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Chlordane, technical mixture	0.05	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Chlordane	0.05	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
DDD, Total	4.6	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
DDE, Total	0.52	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
DDT, Total	1.4	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Dieldrin	0.088	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
alpha-Endosulfan	NV	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
beta-Endosulfan	NV	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Endosulfan	0.3	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Endrin	0.04	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Heptachlor	0.19	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Heptachlor Epoxide	0.05	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Hexachlorobenzene	0.66	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Hexachlorobutadiene	0.031	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Hexachloroethane	0.21	ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
Methoxychlor	1.6	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-6 (3M)	BH21-7 (3m)	BH21-7 (3M)	BH21-8 (10m)	BH21-8 (10m)	BH21-8 (10M)	BH21-8 (10M)	BH21-9 (3m)	BH21-9 (3M)	GS21-1
			Sample Name	Dup 11	BH21-7-1	Dup47	BH21-8-1	BH21-8-5	Dup45	Dup46	BH21-9-1	Dup42	GS21-01
			Sample Date	2021-05-03	2021-05-12	2021-05-12	2021-05-11	2021-05-11	2021-05-11	2021-05-11	2021-05-07	2021-05-07	2021-04-16
			Sample Depth	2.39-3 m	0-0.61 m	0-0.61 m	0-0.61 m	2.43-3.05 m	0-0.61 m	2.43-3.05 m	0-0.61 m	0-0.61 m	0-0.18 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
alpha-Chlordane	NV	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
Chlordane	0.05	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
DDD, Total	4.6	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
DDE, Total	0.52	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
DDT, Total	1.4	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
Dieldrin	0.088	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
beta-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
Endosulfan	0.3	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
Endrin	0.04	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
Heptachlor	0.19	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
Hexachloroethane	0.21	ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-
Methoxychlor	1.6	ug/g		-	-	-	-	-	-	-	< 0.0050	< 0.0050	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-10	GS21-11	GS21-12	GS21-13	GS21-14	GS21-15	GS21-16	GS21-16	GS21-17	GS21-18
			Sample Name	GS21-10	GS21-11	GS21-12	GS21-13	GS21-14	GS21-15	DUP 4	GS21-16	GS21-17	GS21-18
			Sample Date	2021-04-16	2021-04-16	2021-04-16	2021-04-16	2021-04-16	2021-04-20	2021-04-20	2021-04-20	2021-04-20	2021-04-20
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
alpha-Chlordane	NV	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Chlordane	0.05	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
DDD, Total	4.6	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
DDE, Total	0.52	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
DDT, Total	1.4	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Dieldrin	0.088	ug/g		-	-	-	-	-	< 0.010	< 0.0020	< 0.0020	< 0.0020	< 0.0020
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
beta-Endosulfan	NV	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Endosulfan	0.3	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Endrin	0.04	ug/g		-	-	-	-	-	< 0.010	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Heptachlor	0.19	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Hexachloroethane	0.21	ug/g		-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Methoxychlor	1.6	ug/g		-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-19	GS21-2	GS21-20	GS21-20	GS21-21	GS21-22	GS21-23	GS21-24	GS21-25	GS21-26
			Sample Name	GS21-19	GS21-02	DUP 1	GS21-20	GS21-21	GS21-22	GS21-23	GS21-24	GS21-25	GS21-26
			Sample Date	2021-04-20	2021-04-16	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
Chlordane	0.05	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
DDD, Total	4.6	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
DDE, Total	0.52	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
DDT, Total	1.4	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
Dieldrin	0.088	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
Endosulfan	0.3	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
Endrin	0.04	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
Heptachlor	0.19	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		< 0.0020	-	-	-	-	-	-	-	-	-
Methoxychlor	1.6	ug/g		< 0.0050	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-27	GS21-28	GS21-29	GS21-3	GS21-30	GS21-31	GS21-32	GS21-33	GS21-34	GS21-35
			Sample Name	GS21-27	GS21-28	GS21-29	GS21-03	GS21-30	GS21-31	GS21-32	GS21-33	GS21-34	GS21-35
			Sample Date	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
DDD, Total	4.6	ug/g		-	-	-	-	-	-	-	-	-	-
DDE, Total	0.52	ug/g		-	-	-	-	-	-	-	-	-	-
DDT, Total	1.4	ug/g		-	-	-	-	-	-	-	-	-	-
Dieldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Endosulfan	0.3	ug/g		-	-	-	-	-	-	-	-	-	-
Endrin	0.04	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor	0.19	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	-	-	-	-	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-36	GS21-37	GS21-38	GS21-39	GS21-4	GS21-40	GS21-41	GS21-42	GS21-42	GS21-43
			Sample Name	GS21-36	GS21-37	GS21-38	GS21-39	GS21-04	GS21-40	GS21-41	DUP 5	GS21-42	DUP 3
			Sample Date	2021-04-16	2021-04-20	2021-04-20	2021-04-20	2021-04-16	2021-04-19	2021-04-20	2021-04-20	2021-04-20	2021-04-19
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
DDD, Total	4.6	ug/g		-	-	-	-	-	-	-	-	-	-
DDE, Total	0.52	ug/g		-	-	-	-	-	-	-	-	-	-
DDT, Total	1.4	ug/g		-	-	-	-	-	-	-	-	-	-
Dieldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Endosulfan	0.3	ug/g		-	-	-	-	-	-	-	-	-	-
Endrin	0.04	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor	0.19	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	-	-	-	-	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-43	GS21-44	GS21-45	GS21-46	GS21-47	GS21-47	GS21-48	GS21-49	GS21-5	GS21-50
			Sample Name	GS21-43	GS21-44	GS21-45	GS21-46	DUP 2	GS21-47	GS21-48	GS21-49	GS21-05	GS21-50
			Sample Date	2021-04-19	2021-04-16	2021-04-16	2021-04-16	2021-04-15	2021-04-15	2021-04-16	2021-04-16	2021-04-19	2021-04-16
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Organochlorine Pesticides													
Aldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Chlordane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
DDD, Total	4.6	ug/g		-	-	-	-	-	-	-	-	-	-
DDE, Total	0.52	ug/g		-	-	-	-	-	-	-	-	-	-
DDT, Total	1.4	ug/g		-	-	-	-	-	-	-	-	-	-
Dieldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-
Endosulfan	0.3	ug/g		-	-	-	-	-	-	-	-	-	-
Endrin	0.04	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor	0.19	ug/g		-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	-	-	-	-	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-51	GS21-52	GS21-53	GS21-6	GS21-7	GS21-8	GS21-9	BH21-36 (3M)	BH21-36 (3M)	BH21-39 (6M)	BH21-39 (6M)
			Sample Name	GS21-51	GS21-52	GS21-53	GS21-06	GS21-07	GS21-08	GS21-09	BH21-36-2	BH21-36-4	BH21-39-1	BH21-39-5
			Sample Date	2021-04-16	2021-04-19	2021-04-16	2021-04-19	2021-04-16	2021-04-19	2021-04-16	2021-04-08	2021-04-08	2021-02-09	2021-02-09
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0.6-1.2 m	1.8-2.4 m	0-0.6 m	2.4-3 m
Organochlorine Pesticides														
Aldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	-	-	-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-
Chlordane	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-
DDD, Total	4.6	ug/g		-	-	-	-	-	-	-	-	-	-	-
DDE, Total	0.52	ug/g		-	-	-	-	-	-	-	-	-	-	-
DDT, Total	1.4	ug/g		-	-	-	-	-	-	-	-	-	-	-
Dieldrin	0.088	ug/g		-	-	-	-	-	-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	-	-	-	-	-	-	-	-
Endosulfan	0.3	ug/g		-	-	-	-	-	-	-	-	-	-	-
Endrin	0.04	ug/g		-	-	-	-	-	-	-	-	-	-	-
Heptachlor	0.19	ug/g		-	-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	-	-	-	-	-	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 5 - Summary of Soil Analytical Data - Organochlorine Pesticides
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-40 (3M)	BH21-40 (3M)	BH21-41 (10M)	BH21-41 (10M)	BH21-41 (10M)	BH21-41 (10M)
			Sample Name	BH21-40-2	BH21-40-3	BH21-41-1	BH21-41-3	BH21-41-4	BH21-41-6
			Sample Date	2021-04-08	2021-04-08	2021-04-09	2021-04-09	2021-04-09	2021-04-09
			Sample Depth	0.6-1.2 m	1.2-1.8 m	0-0.6 m	1.2-1.8 m	1.8-2.4 m	3-3.7 m
Organochlorine Pesticides									
Aldrin	0.088	ug/g		-	-	-	-	-	-
alpha-Chlordane	NV	ug/g		-	-	-	-	-	-
Chlordane, technical mixture	0.05	ug/g		-	-	-	-	-	-
Chlordane	0.05	ug/g		-	-	-	-	-	-
DDD, Total	4.6	ug/g		-	-	-	-	-	-
DDE, Total	0.52	ug/g		-	-	-	-	-	-
DDT, Total	1.4	ug/g		-	-	-	-	-	-
Dieldrin	0.088	ug/g		-	-	-	-	-	-
alpha-Endosulfan	NV	ug/g		-	-	-	-	-	-
beta-Endosulfan	NV	ug/g		-	-	-	-	-	-
Endosulfan	0.3	ug/g		-	-	-	-	-	-
Endrin	0.04	ug/g		-	-	-	-	-	-
Heptachlor	0.19	ug/g		-	-	-	-	-	-
Heptachlor Epoxide	0.05	ug/g		-	-	-	-	-	-
Hexachlorobenzene	0.66	ug/g		-	-	-	-	-	-
Hexachlorobutadiene	0.031	ug/g		-	-	-	-	-	-
gamma-hexachlorocyclohexane	0.056	ug/g		-	-	-	-	-	-
Hexachloroethane	0.21	ug/g		-	-	-	-	-	-
Methoxychlor	1.6	ug/g		-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

		Sample Location	**BH21-1 (3m)**	**BH21-10 (10m)**	**BH21-10 (10m)**	**BH21-11 (3m)**	**BH21-11 (3m)**	**BH21-12 (3m)**	**BH21-12 (3m)**	**BH21-13 (10m)**	**BH21-13 (10m)**	**BH21-13 (10m)**
		Sample Name	**BH21-1-2**	**BH21-10-1**	**BH21-10-3**	**BH21-11-1**	**BH21-11-2**	**BH21-12-3**	**BH21-12-5**	**BH21-13-1**	**BH21-13-14**	**BH21-13-4**
		Sample Date	**2021-05-04**	**2021-05-10**	**2021-05-10**	**2021-04-26**	**2021-04-26**	**2021-04-26**	**2021-04-26**	**2021-04-28**	**2021-04-28**	**2021-04-28**
		Sample Depth	**0.6-1.22 m**	**0-0.61 m**	**1.21-1.83 m**	**0-0.61 m**	**0.6-1.22 m**	**1.21-1.83 m**	**2.43-3.05 m**	**0-0.61 m**	**7.92-8.53 m**	**1.82-2.44 m**
Parameter	**REG153 (11) T3-I/C/C SOIL COARSE**	**Unit**										
Polychlorinated Biphenyls												
Polychlorinated Biphenyls	1.1	ug/g	-	< 0.015	< 0.015	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

		Sample Location	BH21-14 (10m)	BH21-14 (10m)	BH21-14 (10m)	BH21-15 (3m)	BH21-15 (3m)	BH21-16 (3m)	BH21-16 (3m)	BH21-17 (3m)	BH21-17 (3m)	BH21-17 (3m)
		Sample Name	BH21-14-1	BH21-14-12	BH21-14-6	BH21-15-1	BH21-15-4	BH12-16-4	BH21-16-1	BH21-17-1	BH21-17-3	BH21-17-5
		Sample Date	2021-05-10	2021-05-11	2021-05-11	2021-04-29	2021-04-29	2021-04-29	2021-04-29	2021-05-07	2021-05-07	2021-05-07
		Sample Depth	0-0.61 m	6.7-7.32 m	3.04-3.66 m	0-0.61 m	1.82-2.44 m	1.82-2.44 m	0-0.61 m	0-0.61 m	1.21-1.83 m	2.43-3.05 m
Parameter	**REG153 (11) T3-I/C/C SOIL COARSE**	**Unit**										
Polychlorinated Biphenyls												
Polychlorinated Biphenyls	1.1	ug/g	-	-	-	< 0.015	< 0.015	< 0.015	< 0.015	< 0.010	-	< 0.010

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

		Sample Location	BH21-17 (3M)	BH21-17 (3M)	BH21-17 (3m)	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3M)	BH21-18 (3M)	BH21-18 (3m)
		Sample Name	Dup 27	Dup 29	Dup 31	BH21-18-1	BH21-18-2	BH21-18-4	BH21-18-5	Dup 22	Dup21	Dup24
		Sample Date	2021-05-07	2021-05-07	2021-05-07	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06
		Sample Depth	0-0.61 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m	2.43-3.05 m	0.6-1.22 m	0-0.61 m	1.82-2.44 m
Parameter	**REG153 (11) T3-I/C/C SOIL COARSE**	**Unit**										
Polychlorinated Biphenyls												
Polychlorinated Biphenyls	1.1	ug/g	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

		Sample Location	**BH21-19 (3m)**	**BH21-19 (3m)**	**BH21-19 (3m)**	**BH21-19 (3m)**	**BH21-19 (3M)**	**BH21-19 (3M)**	**BH21-19 (3m)**	**BH21-19 (3M)**	**BH21-20 (3m)**	**BH21-20 (3m)**
		Sample Name	**BH21-19-1**	**BH21-19-2**	**BH21-19-4**	**BH21-19-5**	**Dup 32**	**Dup33**	**Dup35**	**Dup36**	**BH21-20-1**	**BH21-20-2**
		Sample Date	**2021-05-07**	**2021-05-07**	**2021-05-07**	**2021-05-07**	**2021-05-07**	**2021-05-07**	**2021-05-07**	**2021-05-07**	**2021-05-07**	**2021-05-07**
		Sample Depth	**0-0.61 m**	**0.6-1.22 m**	**1.82-2.44 m**	**2.43-3.05 m**	**0-0.61 m**	**0.6-1.22 m**	**1.82-2.44 m**	**2.43-3.05 m**	**0-0.61 m**	**0.6-1.22 m**
Parameter	**REG153 (11) T3-I/C/C SOIL COARSE**	**Unit**										
Polychlorinated Biphenyls												
Polychlorinated Biphenyls	1.1	ug/g	< 0.010	-	< 0.010	-	-	-	-	-	< 0.010	< 0.010

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

		Sample Location	**BH21-20 (3m)**	**BH21-20 (3M)**	**BH21-20 (3M)**	**BH21-21 (3m)**	**BH21-21 (3m)**	**BH21-21 (3m)**	**BH21-21 (3M)**	**BH21-22 (3m)**	**BH21-22 (3m)**	**BH21-23 (3m)**
		Sample Name	**BH21-20-5**	**Dup 37**	**Dup38**	**BH21-21-1**	**BH21-21-2**	**BH21-2-2**	**Dup 19**	**BH21-22-1**	**BH21-22-2**	**BH21-23-1**
		Sample Date	**2021-05-07**	**2021-05-07**	**2021-05-07**	**2021-04-26**	**2021-04-26**	**2021-05-05**	**2021-05-05**	**2021-04-22**	**2021-04-22**	**2021-05-03**
		Sample Depth	**2.43-3.05 m**	**0-0.61 m**	**0.6-1.22 m**	**0-0.61 m**	**0.6-1.22 m**	**0.6-1.22 m**	**0.6-1.22 m**	**0-0.61 m**	**0.6-1.22 m**	**0-0.61 m**
Parameter	**REG153 (11) T3-I/C/C SOIL COARSE**	**Unit**										
Polychlorinated Biphenyls												
Polychlorinated Biphenyls	1.1	ug/g	-	-	-	< 0.010	< 0.010	-	-	< 0.010	< 0.010	< 0.010

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-23 (3m)	BH21-23 (3m)	BH21-24 (3m)	BH21-24 (3m)	BH21-24 (3m)	BH21-25 (3m)	BH21-25 (3m)	BH21-26 (3m)	BH21-26 (3m)	BH21-27 (3m)
			Sample Name	BH21-23-1A	BH21-23-3	BH21-24-1	BH21-24-1A	BH21-24-3	BH21-25-1	BH21-25-3	BH21-26-1	BH21-26-3	BH21-27-1
			Sample Date	2021-05-14	2021-05-03	2021-05-03	2021-05-14	2021-05-03	2021-04-27	2021-04-27	2021-04-23	2021-04-23	2021-04-27
			Sample Depth	0-0.61 m	1.21-1.83 m	0-0.61 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.21-1.83 m	0-0.61 m
Polychlorinated Biphenyls													
Polychlorinated Biphenyls	1.1	ug/g		-	< 0.010	< 0.010	-	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

		Sample Location	BH21-27 (3m)	BH21-27 (3m)	BH21-28 (3m)	BH21-28 (3m)	BH21-29 (3m)	BH21-29 (3m)	BH21-29 (3M)	BH21-3 (3m)	BH21-3 (3M)	BH21-30 (6m)
		Sample Name	BH21-27-1A	BH21-27-4	BH21-28-1	BH21-28-3	BH21-29-1	BH21-29-4	Dup 6	BH21-3-1	Dup 13	BH21-30-1
		Sample Date	2021-05-14	2021-04-27	2021-04-27	2021-04-27	2021-04-27	2021-04-27	2021-04-27	2021-05-04	2021-05-04	2021-04-23
		Sample Depth	0-0.61 m	1.82-2.44 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.82-2.44 m	1.82-2.44 m	0-0.61 m	0-0.6 m	0-0.61 m
Parameter	**REG153 (11) T3-I/C/C SOIL COARSE**	**Unit**										
Polychlorinated Biphenyls												
Polychlorinated Biphenyls	1.1	ug/g	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

		Sample Location	BH21-30 (6m)	BH21-30 (6m)	BH21-30 (6m)	BH21-30 (6m)	BH21-31 (3m)	BH21-31 (3m)	BH21-31 (3m)	BH21-32 (3m)	BH21-32 (3m)	BH21-32 (3m)
		Sample Name	BH21-30-10	BH21-30-4	BH21-30-6	BH21-30-7	BH21-31-1	BH21-31-2	BH21-31-5	BH21-32-1A	BH21-32-2	BH21-32-4
		Sample Date	2021-04-23	2021-04-23	2021-04-23	2021-04-23	2021-05-03	2021-05-03	2021-05-03	2021-05-14	2021-04-30	2021-04-30
		Sample Depth	5.48-6.1 m	1.82-2.44 m	3.04-3.66 m	3.65-4.27 m	0-0.61 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m
Parameter	**REG153 (11) T3-I/C/C SOIL COARSE**	**Unit**										
Polychlorinated Biphenyls												
Polychlorinated Biphenyls	1.1	ug/g	< 0.010	< 0.010	< 0.010	< 0.010	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

		Sample Location	BH21-33 (3m)	BH21-33 (3m)	BH21-33 (3m)	BH21-34 (3m)	BH21-34 (3m)	BH21-35 (3m)	BH21-35 (3m)	BH21-37 (3m)	BH21-37 (3m)	BH21-37 (3m)
		Sample Name	BH21-33-1	BH21-33-2	BH21-33-4	BH21-34-1	BH21-34-4	BH21-35-3A	BH21-35-4	BH21-37-1	BH21-37-15	BH21-37-3
		Sample Date	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-22	2021-04-22	2021-04-22
		Sample Depth	0-0.61 m	0.6-1.22 m	1.82-2.44 m	0-0.61 m	1.82-2.44 m	0.91-1.52 m	1.82-2.44 m	0-0.61 m	8.53-9.14 m	1.21-1.83 m
Parameter	**REG153 (11) T3-I/C/C SOIL COARSE**	**Unit**										
Polychlorinated Biphenyls												
Polychlorinated Biphenyls	1.1	ug/g	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

		Sample Location	BH21-37 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-4 (3m)	BH21-4 (3M)	BH21-42 (10m)	BH21-42 (10m)	BH21-43 (6m)
		Sample Name	BH21-37-8	BH21-38-1	BH21-38-11	BH21-38-4	BH21-38-7	BH21-4-1	Dup 15	BH21-42-2	BH21-42-8	BH21-43-2
		Sample Date	2021-04-22	2021-04-21	2021-04-21	2021-04-21	2021-04-21	2021-05-04	2021-05-04	2021-05-05	2021-05-05	2021-05-06
		Sample Depth	4.26-4.88 m	0-0.61 m	6.09-6.71 m	1.82-2.44 m	3.65-4.27 m	0-0.61 m	0-0.61 m	0.6-1.22 m	4.26-4.88 m	0.6-1.22 m
Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit										
Polychlorinated Biphenyls												
Polychlorinated Biphenyls	1.1	ug/g	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

		Sample Location	BH21-43 (6m)	BH21-43 (6M)	BH21-44 (6m)	BH21-44 (6m)	BH21-44 (6m)	BH21-45 (3m)	BH21-45 (3m)	BH21-46 (3m)	BH21-46 (3m)	BH21-47 (6m)
		Sample Name	BH21-43-8	Dup 20	BH21-44-1	BH21-44-5	BH21-44-9	BH21-45-1	BH21-45-4	BH21-46-1	BH21-46-5B	BH21-47-1
		Sample Date	2021-05-06	2021-05-06	2021-05-10	2021-05-10	2021-05-10	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-05-12
		Sample Depth	4.26-4.88 m	0.6-1.22 m	0-0.61 m	2.43-3.05 m	4.87-5.49 m	0-0.61 m	1.82-2.44 m	0-0.61 m	2.81-3.05 m	0-0.61 m
Parameter	**REG153 (11) T3-I/C/C SOIL COARSE**	**Unit**										
Polychlorinated Biphenyls												
Polychlorinated Biphenyls	1.1	ug/g	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

		Sample Location	BH21-47 (6m)	BH21-47 (6m)	BH21-47 (6m)	BH21-47 (6M)	BH21-48 (3m)	BH21-48 (3m)	BH21-48 (3m)	BH21-49 (3m)	BH21-49 (3m)	BH21-49 (3m)
		Sample Name	BH21-47-3	BH21-47-6	BH21-47-9	Dup 49	BH21-48-1	BH21-48-2	BH21-48-5	BH21-49-1	BH21-49-3	BH21-49-4
		Sample Date	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-04-29	2021-04-29	2021-04-29	2021-04-28	2021-04-28	2021-04-28
		Sample Depth	1.21-1.83 m	3.04-3.66 m	4.87-5.49 m	1.21-1.83 m	0-0.61 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	1.21-1.83 m	1.82-2.44 m
Parameter	**REG153 (11) T3-I/C/C SOIL COARSE**	**Unit**										
Polychlorinated Biphenyls												
Polychlorinated Biphenyls	1.1	ug/g	-	-	-	-	< 0.015	< 0.015	< 0.015	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-49 (3M)	BH21-5 (3m)	BH21-50 (3m)	BH21-50 (3m)	BH21-50 (3m)	BH21-51 (3m)	BH21-51 (3m)	BH21-52	BH21-52	BH21-53
			Sample Name	Dup 8	BH21-5-2	BH12-50-1	BH12-50-3	BH21-50-5	BH21-51-1	BH21-51-4	BH21-52-1	BH21-52-5	BH21-53-1
			Sample Date	2021-04-28	2021-05-04	2021-04-29	2021-04-29	2021-04-29	2021-04-21	2021-04-21	2021-05-14	2021-05-14	2021-05-14
			Sample Depth	1.21-1.83 m	0.6-1.22 m	0-0.61 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	1.82-2.44 m	0-0.61 m	9.39-10 m	0-0.61 m
Polychlorinated Biphenyls													
Polychlorinated Biphenyls	1.1	ug/g		-	< 0.020	< 0.015	< 0.015	< 0.015	< 0.010	< 0.010	< 0.015	< 0.015	< 0.015

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

		Sample Location	BH21-53	BH21-54	BH21-54	BH21-55	BH21-55	BH21-56	BH21-56	BH21-6 (3m)	BH21-6 (3m)	BH21-6 (3m)
		Sample Name	BH21-53-4	BH21-54-1	BH21-54-5	BH21-55-2	BH21-55-5	BH21-56-1	BH21-56-5	BH21-6-1	BH21-6-1A	BH21-6-5
		Sample Date	2021-05-14	2021-05-13	2021-05-13	2021-05-13	2021-05-13	2021-05-14	2021-05-14	2021-05-03	2021-05-14	2021-05-03
		Sample Depth	1.82-2.44 m	0-0.61 m	2.43-3.05 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	2.43-3.05 m	0-0.61 m	0-0.61 m	2.43-3.05 m
Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit										
Polychlorinated Biphenyls												
Polychlorinated Biphenyls	1.1	ug/g	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.010	-	< 0.010

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-6 (3M)	BH21-7 (3m)	BH21-7 (3M)	BH21-8 (10m)	BH21-8 (10m)	BH21-8 (10M)	BH21-8 (10M)	BH21-9 (3m)	BH21-9 (3M)	GS21-1
			Sample Name	Dup 11	BH21-7-1	Dup47	BH21-8-1	BH21-8-5	Dup45	Dup46	BH21-9-1	Dup42	GS21-01
			Sample Date	2021-05-03	2021-05-12	2021-05-12	2021-05-11	2021-05-11	2021-05-11	2021-05-11	2021-05-07	2021-05-07	2021-04-16
			Sample Depth	2.39-3 m	0-0.61 m	0-0.61 m	0-0.61 m	2.43-3.05 m	0-0.61 m	2.43-3.05 m	0-0.61 m	0-0.61 m	0-0.18 m
Polychlorinated Biphenyls													
Polychlorinated Biphenyls	1.1	ug/g		< 0.010	-	-	-	-	-	-	< 0.015	< 0.015	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-10	GS21-11	GS21-12	GS21-13	GS21-14	GS21-15	GS21-16	GS21-16	GS21-17	GS21-18
			Sample Name	GS21-10	GS21-11	GS21-12	GS21-13	GS21-14	GS21-15	DUP 4	GS21-16	GS21-17	GS21-18
			Sample Date	2021-04-16	2021-04-16	2021-04-16	2021-04-16	2021-04-16	2021-04-20	2021-04-20	2021-04-20	2021-04-20	2021-04-20
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Polychlorinated Biphenyls													
Polychlorinated Biphenyls	1.1	ug/g		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.040	< 0.020	< 0.015	< 0.015	< 0.020

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

		Sample Location	GS21-19	GS21-2	GS21-20	GS21-20	GS21-21	GS21-22	GS21-23	GS21-24	GS21-25	GS21-26
		Sample Name	GS21-19	GS21-02	DUP 1	GS21-20	GS21-21	GS21-22	GS21-23	GS21-24	GS21-25	GS21-26
		Sample Date	2021-04-20	2021-04-16	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-15
		Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Parameter	**REG153 (11) T3-I/C/C SOIL COARSE**	**Unit**										
Polychlorinated Biphenyls												
Polychlorinated Biphenyls	1.1	ug/g	< 0.015	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

		Sample Location	GS21-27	GS21-28	GS21-29	GS21-3	GS21-30	GS21-31	GS21-32	GS21-33	GS21-34	GS21-35
		Sample Name	GS21-27	GS21-28	GS21-29	GS21-03	GS21-30	GS21-31	GS21-32	GS21-33	GS21-34	GS21-35
		Sample Date	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19
		Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Parameter	**REG153 (11) T3-I/C/C SOIL COARSE**	**Unit**										
Polychlorinated Biphenyls												
Polychlorinated Biphenyls	1.1	ug/g	-	-	-	< 0.010	-	< 0.010	< 0.010	< 0.010	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

		Sample Location	GS21-36	GS21-37	GS21-38	GS21-39	GS21-4	GS21-40	GS21-41	GS21-42	GS21-42	GS21-43
		Sample Name	GS21-36	GS21-37	GS21-38	GS21-39	GS21-04	GS21-40	GS21-41	DUP 5	GS21-42	DUP 3
		Sample Date	2021-04-16	2021-04-20	2021-04-20	2021-04-20	2021-04-16	2021-04-19	2021-04-20	2021-04-20	2021-04-20	2021-04-19
		Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Parameter	**REG153 (11) T3-I/C/C SOIL COARSE**	**Unit**										
Polychlorinated Biphenyls												
Polychlorinated Biphenyls	1.1	ug/g	-	-	-	-	< 0.010	-	-	-	-	< 0.020

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-43	GS21-44	GS21-45	GS21-46	GS21-47	GS21-47	GS21-48	GS21-49	GS21-5	GS21-50
			Sample Name	GS21-43	GS21-44	GS21-45	GS21-46	DUP 2	GS21-47	GS21-48	GS21-49	GS21-05	GS21-50
			Sample Date	2021-04-19	2021-04-16	2021-04-16	2021-04-16	2021-04-15	2021-04-15	2021-04-16	2021-04-16	2021-04-19	2021-04-16
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Polychlorinated Biphenyls													
Polychlorinated Biphenyls	1.1	ug/g		< 0.010	-	-	< 0.010	-	-	-	< 0.010	< 0.010	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-51	GS21-52	GS21-53	GS21-6	GS21-7	GS21-8	GS21-9	BH21-36 (3M)	BH21-36 (3M)	BH21-39 (6M)	BH21-39 (6M)
			Sample Name	GS21-51	GS21-52	GS21-53	GS21-06	GS21-07	GS21-08	GS21-09	BH21-36-2	BH21-36-4	BH21-39-1	BH21-39-5
			Sample Date	2021-04-16	2021-04-19	2021-04-16	2021-04-19	2021-04-16	2021-04-19	2021-04-16	2021-04-08	2021-04-08	2021-02-09	2021-02-09
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0.6-1.2 m	1.8-2.4 m	0-0.6 m	2.4-3 m
Polychlorinated Biphenyls														
Polychlorinated Biphenyls	1.1	ug/g		-	< 0.010	-	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 6 - Summary of Soil Analytical Data - Polychlorinated Biphenyls
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	Sample Name	Sample Date	Sample Depth										
			BH21-40 (3M)	BH21-40-2	2021-04-08	0.6-1.2 m	BH21-40 (3M)	BH21-40-3	2021-04-08	1.2-1.8 m	BH21-41 (10M)	BH21-41-1	2021-04-09	0-0.6 m	BH21-41 (10M)	BH21-41-3	2021-04-09	1.2-1.8 m	BH21-41 (10M)	BH21-41-4	2021-04-09	1.8-2.4 m	BH21-41 (10M)	BH21-41-6	2021-04-09	3-3.7 m
Polychlorinated Biphenyls																										
Polychlorinated Biphenyls	1.1	ug/g	< 0.010				< 0.010				< 0.010				< 0.010				< 0.010				< 0.010			

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	Sample Name	Sample Date	Sample Depth
			BH21-1 (3m)	BH21-1-2	2021-05-04	0.6-1.22 m
			BH21-10 (10m)	BH21-10-1	2021-05-10	0-0.61 m
			BH21-10 (10m)	BH21-10-3	2021-05-10	1.21-1.83 m
			BH21-11 (3m)	BH21-11-1	2021-04-26	0-0.61 m
			BH21-11 (3m)	BH21-11-2	2021-04-26	0.6-1.22 m
			BH21-12 (3m)	BH21-12-3	2021-04-26	1.21-1.83 m
			BH21-12 (3m)	BH21-12-5	2021-04-26	2.43-3.05 m
			BH21-13 (10m)	BH21-13-1	2021-04-28	0-0.61 m
			BH21-13 (10m)	BH21-13-14	2021-04-28	7.92-8.53 m
			BH21-13 (10m)	BH21-13-4	2021-04-28	1.82-2.44 m
Acid/Base/Neutral Compounds						
Biphenyl	52	ug/g	-	< 0.05	< 0.05	< 0.1
Bis(2-chloroethyl) Ether	0.5	ug/g	-	< 0.2	< 0.2	< 0.4
Bis(2-chloroisopropyl)ether	11	ug/g	-	< 0.1	< 0.1	< 0.2
Bis(2-ethylhexyl) Phthalate	28	ug/g	-	< 1	< 1	< 2
4-Chloroaniline	0.5	ug/g	-	< 0.2	< 0.2	< 0.4
3,3'-Dichlorobenzidine	1	ug/g	-	< 0.5	< 0.5	< 1
Diethyl Phthalate	0.5	ug/g	-	< 0.2	< 0.2	< 0.4
2,4-Dimethylphenol	390	ug/g	-	< 0.2	< 0.2	< 0.4
2,4-Dinitrophenol	59	ug/g	-	< 0.5	< 0.5	< 1
2,4 + 2,6 dinitrotoluene	1.2	ug/g	-	< 0.14	< 0.14	< 0.28
Phenol	9.4	ug/g	-	< 0.09	< 0.09	< 0.2
1,2,4-Trichlorobenzene	3.2	ug/g	-	< 0.05	< 0.05	< 0.1
Ungrouped Analytes						
1,2-Dichloroethane-d4		%	-	-	-	-
1,4-Difluorobenzene		%	-	-	-	-
1-Methylnaphthalene	76	ug/g	-	< 0.03	< 0.03	0.13
2,4,6-Tribromophenol		%	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g	-	< 0.1	< 0.1	< 0.2
2,6-Dinitrotoluene	1.2	ug/g	-	< 0.1	< 0.1	< 0.2
2-Fluorobiphenyl		%	-	-	-	-
2-Methylnaphthalene	76	ug/g	-	< 0.03	< 0.03	0.17
4,4-DDD		ug/g	-	< 0.0020	< 0.0020	-
4,4-DDE		ug/g	-	< 0.0020	< 0.0020	-
4,4-DDT		ug/g	-	< 0.0020	< 0.0020	-
4-Bromofluorobenzene		%	-	-	-	-
Acenaphthylene-D8		%	-	-	-	-
Anthracene-D10		%	-	-	-	-
Aroclor 1242		ug/g	-	< 0.015	< 0.015	< 0.010
Aroclor 1248		ug/g	-	< 0.015	< 0.015	< 0.010
Aroclor 1254		ug/g	-	< 0.015	< 0.015	< 0.010
Aroclor 1260		ug/g	-	< 0.015	< 0.015	< 0.010
Benzo [b,j] fluoranthene		ug/g	-	< 0.1	< 0.1	< 0.2
Decachlorobiphenyl (PCB 209)		%	-	-	-	-
Dimethyl Phthalate	0.5	ug/g	-	< 0.2	< 0.2	< 0.4
m,p-Xylenes		ug/g	< 0.040	< 0.040	< 0.040	0.056
Moisture, Percent		%	6.1	9.9	15	11
Nitrobenzene-d5		%	-	-	-	-
o,p'-DDD		ug/g	-	< 0.0020	< 0.0020	-
o,p'-DDE		ug/g	-	< 0.0020	< 0.0020	-
o,p'-DDT		ug/g	-	< 0.0020	< 0.0020	-
o-Terphenyl		%	-	-	-	-
o-Xylene		ug/g	< 0.020	< 0.020	< 0.020	< 0.020
o-Xylene-d10		%	-	-	-	-
Terphenyl-d14		%	-	-	-	-
Tetrachloro-m-xylene		%	-	-	-	-

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	Sample Name	Sample Date	Sample Depth
			BH21-11 (3m)	BH21-11-1	2021-04-26	0-0.61 m
			BH21-11 (3m)	BH21-11-2	2021-04-26	0.6-1.22 m
			BH21-12 (3m)	BH21-12-3	2021-04-26	1.21-1.83 m
			BH21-12 (3m)	BH21-12-5	2021-04-26	2.43-3.05 m
			BH21-13 (10m)	BH21-13-1	2021-04-28	0-0.61 m
			BH21-13 (10m)	BH21-13-14	2021-04-28	7.92-8.53 m
			BH21-13 (10m)	BH21-13-4	2021-04-28	1.82-2.44 m
Acid/Base/Neutral Compounds						
Biphenyl	52	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl) Ether	0.5	ug/g	< 0.2	< 0.2	< 0.2	< 0.2
Bis(2-chloroisopropyl)ether	11	ug/g	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl) Phthalate	28	ug/g	< 1	< 1	< 1	< 1
4-Chloroaniline	0.5	ug/g	< 0.2	< 0.2	< 0.2	< 0.2
3,3'-Dichlorobenzidine	1	ug/g	< 0.5	< 0.5	< 0.5	< 0.5
Diethyl Phthalate	0.5	ug/g	< 0.2	< 0.2	< 0.2	< 0.2
2,4-Dimethylphenol	390	ug/g	< 0.2	< 0.2	< 0.2	< 0.2
2,4-Dinitrophenol	59	ug/g	< 0.5	< 0.5	< 0.5	< 0.5
2,4 + 2,6 dinitrotoluene	1.2	ug/g	< 0.14	< 0.14	< 0.14	< 0.14
Phenol	9.4	ug/g	< 0.09	< 0.09	< 0.09	< 0.09
1,2,4-Trichlorobenzene	3.2	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Ungrouped Analytes						
1,2-Dichloroethane-d4		%	-	-	-	-
1,4-Difluorobenzene		%	-	-	-	-
1-Methylnaphthalene	76	ug/g	< 0.03	< 0.03	< 0.03	0.04
2,4,6-Tribromophenol		%	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	1.2	ug/g	< 0.1	< 0.1	< 0.1	< 0.1
2-Fluorobiphenyl		%	-	-	-	-
2-Methylnaphthalene	76	ug/g	< 0.03	< 0.03	< 0.03	0.04
4,4-DDD		ug/g	-	-	-	-
4,4-DDE		ug/g	-	-	-	-
4,4-DDT		ug/g	-	-	-	-
4-Bromofluorobenzene		%	-	-	-	-
Acenaphthylene-D8		%	-	-	-	-
Anthracene-D10		%	-	-	-	-
Aroclor 1242		ug/g	< 0.010	< 0.010	< 0.010	< 0.010
Aroclor 1248		ug/g	< 0.010	< 0.010	< 0.010	< 0.010
Aroclor 1254		ug/g	< 0.010	< 0.010	< 0.010	< 0.010
Aroclor 1260		ug/g	< 0.010	< 0.010	< 0.010	< 0.010
Benzo [b,j] fluoranthene		ug/g	< 0.1	< 0.1	< 0.1	< 0.1
Decachlorobiphenyl (PCB 209)		%	-	-	-	-
Dimethyl Phthalate	0.5	ug/g	< 0.2	< 0.2	< 0.2	< 0.2
m,p-Xylenes		ug/g	< 0.040	< 0.040	< 0.040	< 0.040
Moisture, Percent		%	8.8	18	6.6	4.6
Nitrobenzene-d5		%	-	-	-	-
o,p'-DDD		ug/g	-	-	-	-
o,p'-DDE		ug/g	-	-	-	-
o,p'-DDT		ug/g	-	-	-	-
o-Terphenyl		%	-	-	-	-
o-Xylene		ug/g	< 0.020	< 0.020	< 0.020	< 0.020
o-Xylene-d10		%	-	-	-	-
Terphenyl-d14		%	-	-	-	-
Tetrachloro-m-xylene		%	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-14 (10m)	BH21-14 (10m)	BH21-14 (10m)	BH21-15 (3m)	BH21-15 (3m)	BH21-16 (3m)	BH21-16 (3m)	BH21-17 (3m)	BH21-17 (3m)	BH21-17 (3m)	BH21-17 (3M)	BH21-17 (3M)	BH21-17 (3m)
			Sample Name	BH21-14-1	BH21-14-12	BH21-14-6	BH21-15-1	BH21-15-4	BH12-16-4	BH21-16-1	BH21-17-1	BH21-17-3	BH21-17-5	Dup 27	Dup 29	Dup 31
			Sample Date	2021-05-10	2021-05-11	2021-05-11	2021-04-29	2021-04-29	2021-04-29	2021-04-29	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07
			Sample Depth	0-0.61 m	6.7-7.32 m	3.04-3.66 m	0-0.61 m	1.82-2.44 m	1.82-2.44 m	0-0.61 m	0-0.61 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	1.21-1.83 m	2.43-3.05 m
Acid/Base/Neutral Compounds																
Biphenyl	52	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		-	-	-	-	-	-	-	0.010	-	< 0.0050	-	-	-
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		-	-	-	-	-	-	-	0.012	-	< 0.0050	-	-	-
4,4-DDD		ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-	-
4,4-DDE		ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-	-
4,4-DDT		ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		-	-	-	< 0.015	< 0.015	< 0.015	< 0.015	< 0.010	-	< 0.010	-	-	-
Aroclor 1248		ug/g		-	-	-	< 0.015	< 0.015	< 0.015	< 0.015	< 0.010	-	< 0.010	-	-	-
Aroclor 1254		ug/g		-	-	-	< 0.015	< 0.015	< 0.015	< 0.015	< 0.010	-	< 0.010	-	-	-
Aroclor 1260		ug/g		-	-	-	< 0.015	< 0.015	< 0.015	< 0.015	< 0.010	-	< 0.010	-	-	-
Benzo [b,j] fluoranthene		ug/g		-	-	-	-	-	-	-	< 0.0050	-	< 0.0050	-	-	-
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes		ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.11	< 0.040	< 0.040	1.1	< 0.040	< 0.040
Moisture, Percent		%		4.2	10	5.9	17	6.2	6.6	15	6.3	9.1	8.0	20	8.7	8.0
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-	-
o,p'-DDE		ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-	-
o,p'-DDT		ug/g		-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.027	< 0.020	< 0.020	0.25	< 0.020	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3m)	BH21-18 (3M)	BH21-18 (3M)	BH21-18 (3m)	BH21-19 (3m)	BH21-19 (3m)	BH21-19 (3m)	BH21-19 (3m)	BH21-19 (3M)	BH21-19 (3M)
			Sample Name	BH21-18-1	BH21-18-2	BH21-18-4	BH21-18-5	Dup 22	Dup21	Dup24	BH21-19-1	BH21-19-2	BH21-19-4	BH21-19-5	Dup 32	Dup33
			Sample Date	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-06	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07
			Sample Depth	0-0.61 m	0.6-1.22 m	1.82-2.44 m	2.43-3.05 m	0.6-1.22 m	0-0.61 m	1.82-2.44 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m
Acid/Base/Neutral Compounds																
Biphenyl	52	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		0.034	0.0094	< 0.0050	< 0.0050	< 0.0050	0.34	< 0.0050	0.22	< 0.0050	< 0.0050	< 0.0050	0.30	< 0.0050
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		0.030	0.0084	< 0.0050	< 0.0050	< 0.0050	0.34	< 0.0050	0.22	< 0.0050	< 0.0050	< 0.0050	0.33	< 0.0050
4,4-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		-	-	-	-	-	-	-	< 0.010	-	< 0.010	-	-	-
Aroclor 1248		ug/g		-	-	-	-	-	-	-	< 0.010	-	< 0.010	-	-	-
Aroclor 1254		ug/g		-	-	-	-	-	-	-	< 0.010	-	< 0.010	-	-	-
Aroclor 1260		ug/g		-	-	-	-	-	-	-	< 0.010	-	< 0.010	-	-	-
Benzo [b,j] fluoranthene		ug/g		0.0070	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.014	< 0.0050	0.0066	< 0.0050	< 0.0050	< 0.0050	0.0078	< 0.0050
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes		ug/g		0.36	< 0.040	< 0.040	< 0.040	< 0.040	0.46	< 0.040	0.41	< 0.040	< 0.050	< 0.040	0.52	< 0.040
Moisture, Percent		%		3.9	12	7.6	7.1	12	4.4	8.4	9.0	16	5.1	4.5	4.4	12
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		0.059	< 0.020	< 0.020	< 0.020	< 0.020	0.053	< 0.020	0.025	< 0.020	< 0.020	< 0.020	0.029	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-19 (3m)	BH21-19 (3M)	BH21-20 (3m)	BH21-20 (3m)	BH21-20 (3m)	BH21-20 (3M)	BH21-20 (3M)	BH21-21 (3m)	BH21-21 (3m)	BH21-21 (3m)	BH21-21 (3M)	BH21-22 (3m)	BH21-22 (3m)
			Sample Name	Dup35	Dup36	BH21-20-1	BH21-20-2	BH21-20-5	Dup 37	Dup38	BH21-21-1	BH21-21-2	BH21-2-2	Dup 19	BH21-22-1	BH21-22-2
			Sample Date	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-05-07	2021-04-26	2021-04-26	2021-05-05	2021-05-05	2021-04-22	2021-04-22
			Sample Depth	1.82-2.44 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	0-0.61 m	0.6-1.22 m	0.6-1.22 m	0.6-1.22 m	0-0.61 m	0.6-1.22 m
Acid/Base/Neutral Compounds																
Biphenyl	52	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		< 0.0050	< 0.0050	0.52	< 0.0050	< 0.0050	0.056	0.014	0.012	0.014	-	-	< 0.0050	< 0.0050
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		0.0050	< 0.0050	0.62	< 0.0050	< 0.0050	0.058	0.017	0.019	0.020	-	-	< 0.0050	< 0.0050
4,4-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		-	-	< 0.010	< 0.010	-	-	-	< 0.010	< 0.010	-	-	< 0.010	< 0.010
Aroclor 1248		ug/g		-	-	< 0.010	< 0.010	-	-	-	< 0.010	< 0.010	-	-	< 0.010	< 0.010
Aroclor 1254		ug/g		-	-	< 0.010	< 0.010	-	-	-	< 0.010	< 0.010	-	-	< 0.010	< 0.010
Aroclor 1260		ug/g		-	-	< 0.010	< 0.010	-	-	-	< 0.010	< 0.010	-	-	< 0.010	< 0.010
Benzo [b,j] fluoranthene		ug/g		< 0.0050	< 0.0050	0.011	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	< 0.0050	< 0.0050
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes		ug/g		< 0.040	< 0.040	0.87	< 0.040	< 0.040	4.1	< 0.040	0.87	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Moisture, Percent		%		4.6	4.6	2.3	8.5	11	5.1	8.5	2.9	27	5.4	6.6	6.9	4.1
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		< 0.020	< 0.020	0.068	< 0.020	< 0.020	1.1	< 0.020	0.10	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-23 (3m)	BH21-23 (3m)	BH21-23 (3m)	BH21-24 (3m)	BH21-24 (3m)	BH21-24 (3m)	BH21-25 (3m)	BH21-25 (3m)	BH21-26 (3m)	BH21-26 (3m)	BH21-27 (3m)	BH21-27 (3m)	BH21-27 (3m)
			Sample Name	BH21-23-1	BH21-23-1A	BH21-23-3	BH21-24-1	BH21-24-1A	BH21-24-3	BH21-25-1	BH21-25-3	BH21-26-1	BH21-26-3	BH21-27-1	BH21-27-1A	BH21-27-4
			Sample Date	2021-05-03	2021-05-14	2021-05-03	2021-05-03	2021-05-14	2021-05-03	2021-04-27	2021-04-27	2021-04-23	2021-04-23	2021-04-27	2021-05-14	2021-04-27
			Sample Depth	0-0.61 m	0-0.61 m	1.21-1.83 m	0-0.61 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.21-1.83 m	0-0.61 m	1.21-1.83 m	0-0.61 m	0-0.61 m	1.82-2.44 m
Acid/Base/Neutral Compounds																
Biphenyl	52	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		< 0.0050	-	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.015	-	< 0.0050	< 0.0050
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		< 0.0050	-	< 0.0050	< 0.0050	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.015	-	< 0.0050	< 0.0050
4,4-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		< 0.010	-	< 0.010	< 0.010	-	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	< 0.010	< 0.010
Aroclor 1248		ug/g		< 0.010	-	< 0.010	< 0.010	-	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	< 0.010	< 0.010
Aroclor 1254		ug/g		< 0.010	-	< 0.010	< 0.010	-	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	< 0.010	< 0.010
Aroclor 1260		ug/g		< 0.010	-	< 0.010	< 0.010	-	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	< 0.010	< 0.010
Benzo [b,j] fluoranthene		ug/g		< 0.0050	-	< 0.0050	< 0.0050	-	< 0.0050	0.015	< 0.0050	< 0.0050	< 0.0050	-	0.0067	< 0.0050
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes		ug/g		< 0.040	-	< 0.040	< 0.040	-	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	-	-	< 0.040
Moisture, Percent		%		21	19	15	7.3	17	17	21	18	9.5	6.1	-	6.9	12
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		< 0.020	-	< 0.020	< 0.020	-	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	-	-	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-28 (3m)	BH21-28 (3m)	BH21-29 (3m)	BH21-29 (3m)	BH21-29 (3M)	BH21-3 (3m)	BH21-3 (3M)	BH21-30 (6m)	BH21-30 (6m)	BH21-30 (6m)	BH21-30 (6m)	BH21-30 (6m)	BH21-31 (3m)
			Sample Name	BH21-28-1	BH21-28-3	BH21-29-1	BH21-29-4	Dup 6	BH21-3-1	Dup 13	BH21-30-1	BH21-30-10	BH21-30-4	BH21-30-6	BH21-30-7	BH21-31-1
			Sample Date	2021-04-27	2021-04-27	2021-04-27	2021-04-27	2021-04-27	2021-05-04	2021-05-04	2021-04-23	2021-04-23	2021-04-23	2021-04-23	2021-04-23	2021-05-03
			Sample Depth	0-0.61 m	1.21-1.83 m	0-0.61 m	1.82-2.44 m	1.82-2.44 m	0-0.61 m	0-0.6 m	0-0.61 m	5.48-6.1 m	1.82-2.44 m	3.04-3.66 m	3.65-4.27 m	0-0.61 m
Acid/Base/Neutral Compounds																
Biphenyl	52	ug/g		-	-	-	-	-	< 0.05	< 0.05	-	-	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	< 0.2	< 0.2	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	< 0.1	< 0.1	-	-	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	< 1	< 1	-	-	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	< 0.2	< 0.2	-	-	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	< 0.5	< 0.5	-	-	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	< 0.2	< 0.2	-	-	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	< 0.2	< 0.2	-	-	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	< 0.5	< 0.5	-	-	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	< 0.14	< 0.14	-	-	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	< 0.09	< 0.09	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	< 0.05	< 0.05	-	-	-	-	-	-
Ungrouped Analytes																
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		0.011	< 0.0050	0.036	< 0.0050	< 0.0050	< 0.03	< 0.03	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	< 0.1	< 0.1	-	-	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	< 0.1	< 0.1	-	-	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		0.013	< 0.0050	0.034	< 0.0050	< 0.0050	< 0.03	< 0.03	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
4,4-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-
Aroclor 1248		ug/g		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-
Aroclor 1254		ug/g		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-
Aroclor 1260		ug/g		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-
Benzo [b,j] fluoranthene		ug/g		< 0.0050	< 0.0050	0.0084	< 0.0050	< 0.0050	< 0.1	< 0.1	0.0095	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	< 0.2	< 0.2	-	-	-	-	-	-
m,p-Xylenes		ug/g		< 0.040	< 0.040	0.046	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Moisture, Percent		%		13	9.4	3.5	13	13	6.6	6.3	10	15	8.4	18	6.3	11
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-31 (3m)	BH21-31 (3m)	BH21-32 (3m)	BH21-32 (3m)	BH21-32 (3m)	BH21-33 (3m)	BH21-33 (3m)	BH21-33 (3m)	BH21-34 (3m)	BH21-34 (3m)	BH21-35 (3m)	BH21-35 (3m)	BH21-37 (3m)
			Sample Name	BH21-31-2	BH21-31-5	BH21-32-1A	BH21-32-2	BH21-32-4	BH21-33-1	BH21-33-2	BH21-33-4	BH21-34-1	BH21-34-4	BH21-35-3A	BH21-35-4	BH21-37-1
			Sample Date	2021-05-03	2021-05-03	2021-05-14	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-30	2021-04-22
			Sample Depth	0.6-1.22 m	2.43-3.05 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m	0-0.61 m	0.6-1.22 m	1.82-2.44 m	0-0.61 m	1.82-2.44 m	0.91-1.52 m	1.82-2.44 m	0-0.61 m
Acid/Base/Neutral Compounds																
Biphenyl	52	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.021	< 0.0050	< 0.0050	< 0.0050	< 0.0050
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.025	< 0.0050	< 0.0050	< 0.0050	< 0.0050
4,4-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		-	-	-	-	-	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aroclor 1248		ug/g		-	-	-	-	-	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aroclor 1254		ug/g		-	-	-	-	-	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aroclor 1260		ug/g		-	-	-	-	-	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo [b,j] fluoranthene		ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0054
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes		ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Moisture, Percent		%		20	9.9	14	7.5	6.8	15	20	6.9	5.0	7.0	18	9.0	7.9
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-37 (3m)	BH21-37 (3m)	BH21-37 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-38 (3m)	BH21-4 (3m)	BH21-4 (3M)	BH21-42 (10m)	BH21-42 (10m)	BH21-43 (6m)	BH21-43 (6m)
			Sample Name	BH21-37-15	BH21-37-3	BH21-37-8	BH21-38-1	BH21-38-11	BH21-38-4	BH21-38-7	BH21-4-1	Dup 15	BH21-42-2	BH21-42-8	BH21-43-2	BH21-43-8
			Sample Date	2021-04-22	2021-04-22	2021-04-22	2021-04-21	2021-04-21	2021-04-21	2021-04-21	2021-05-04	2021-05-04	2021-05-05	2021-05-05	2021-05-06	2021-05-06
			Sample Depth	8.53-9.14 m	1.21-1.83 m	4.26-4.88 m	0-0.61 m	6.09-6.71 m	1.82-2.44 m	3.65-4.27 m	0-0.61 m	0-0.61 m	0.6-1.22 m	4.26-4.88 m	0.6-1.22 m	4.26-4.88 m
Acid/Base/Neutral Compounds																
Biphenyl	52	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-	-
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-	-
4,4-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	-	-	-
Aroclor 1248		ug/g		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	-	-	-
Aroclor 1254		ug/g		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	-	-	-
Aroclor 1260		ug/g		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	-	-	-
Benzo [b,j] fluoranthene		ug/g		< 0.0050	< 0.0050	< 0.0050	0.011	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-	-	-	-
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes		ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Moisture, Percent		%		7.2	6.5	7.9	10	5.5	7.6	8.7	12	14	9.5	11	9.6	7.5
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-43 (6M)	BH21-44 (6m)	BH21-44 (6m)	BH21-44 (6m)	BH21-45 (3m)	BH21-45 (3m)	BH21-46 (3m)	BH21-46 (3m)	BH21-47 (6m)	BH21-47 (6m)	BH21-47 (6m)	BH21-47 (6m)	BH21-47 (6M)
			Sample Name	Dup 20	BH21-44-1	BH21-44-5	BH21-44-9	BH21-45-1	BH21-45-4	BH21-46-1	BH21-46-5B	BH21-47-1	BH21-47-3	BH21-47-6	BH21-47-9	Dup 49
			Sample Date	2021-05-06	2021-05-10	2021-05-10	2021-05-10	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-05-12	2021-05-12
			Sample Depth	0.6-1.22 m	0-0.61 m	2.43-3.05 m	4.87-5.49 m	0-0.61 m	1.82-2.44 m	0-0.61 m	2.81-3.05 m	0-0.61 m	1.21-1.83 m	3.04-3.66 m	4.87-5.49 m	1.21-1.83 m
Acid/Base/Neutral Compounds																
Biphenyl	52	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1248		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1254		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1260		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo [b,j] fluoranthene		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes		ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Moisture, Percent		%		9.0	6.4	8.2	5.8	6.5	4.7	13	12	4.4	13	6.9	19	13
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-48 (3m)	BH21-48 (3m)	BH21-48 (3m)	BH21-49 (3m)	BH21-49 (3m)	BH21-49 (3m)	BH21-49 (3M)	BH21-5 (3m)	BH21-50 (3m)	BH21-50 (3m)	BH21-50 (3m)	BH21-51 (3m)	BH21-51 (3m)
			Sample Name	BH21-48-1	BH21-48-2	BH21-48-5	BH21-49-1	BH21-49-3	BH21-49-4	Dup 8	BH21-5-2	BH12-50-1	BH12-50-3	BH21-50-5	BH21-51-1	BH21-51-4
			Sample Date	2021-04-29	2021-04-29	2021-04-29	2021-04-28	2021-04-28	2021-04-28	2021-04-28	2021-05-04	2021-04-29	2021-04-29	2021-04-29	2021-04-21	2021-04-21
			Sample Depth	0-0.61 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	1.21-1.83 m	1.82-2.44 m	1.21-1.83 m	0.6-1.22 m	0-0.61 m	1.21-1.83 m	2.43-3.05 m	0-0.61 m	1.82-2.44 m
Acid/Base/Neutral Compounds																
Biphenyl	52	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		-	-	-	-	-	-	-	< 0.010	-	-	-	< 0.0050	< 0.0050
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		-	-	-	-	-	-	-	< 0.010	-	-	-	< 0.0050	< 0.0050
4,4-DDD		ug/g		< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-
4,4-DDE		ug/g		< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-
4,4-DDT		ug/g		< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		< 0.015	< 0.015	< 0.015	-	-	-	-	< 0.020	< 0.015	< 0.015	< 0.015	< 0.010	< 0.010
Aroclor 1248		ug/g		< 0.015	< 0.015	< 0.015	-	-	-	-	< 0.020	< 0.015	< 0.015	< 0.015	< 0.010	< 0.010
Aroclor 1254		ug/g		< 0.015	< 0.015	< 0.015	-	-	-	-	< 0.020	< 0.015	< 0.015	< 0.015	< 0.010	< 0.010
Aroclor 1260		ug/g		< 0.015	< 0.015	< 0.015	-	-	-	-	< 0.020	< 0.015	< 0.015	< 0.015	< 0.010	< 0.010
Benzo [b,j] fluoranthene		ug/g		-	-	-	-	-	-	-	< 0.010	-	-	-	< 0.0050	< 0.0050
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes		ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.080	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Moisture, Percent		%		12	8.9	5.6	4.3	8.6	6.5	7.4	49	8.1	5.9	6.6	7.2	4.0
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-
o,p'-DDE		ug/g		< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-
o,p'-DDT		ug/g		< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-	< 0.0020	< 0.0020	< 0.0020	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.040	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

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Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-52	BH21-52	BH21-53	BH21-53	BH21-54	BH21-54	BH21-55	BH21-55	BH21-56	BH21-56	BH21-6 (3m)	BH21-6 (3m)	BH21-6 (3m)
			Sample Name	BH21-52-1	BH21-52-5	BH21-53-1	BH21-53-4	BH21-54-1	BH21-54-5	BH21-55-2	BH21-55-5	BH21-56-1	BH21-56-5	BH21-6-1	BH21-6-1A	BH21-6-5
			Sample Date	2021-05-14	2021-05-14	2021-05-14	2021-05-14	2021-05-13	2021-05-13	2021-05-13	2021-05-13	2021-05-14	2021-05-14	2021-05-03	2021-05-14	2021-05-03
			Sample Depth	0-0.61 m	9.39-10 m	0-0.61 m	1.82-2.44 m	0-0.61 m	2.43-3.05 m	0.6-1.22 m	2.43-3.05 m	0-0.61 m	2.43-3.05 m	0-0.61 m	0-0.61 m	2.43-3.05 m
Acid/Base/Neutral Compounds																
Biphenyl	52	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		-	-	-	-	-	-	-	-	-	-	0.022	-	< 0.0050
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		-	-	-	-	-	-	-	-	-	-	0.025	-	< 0.0050
4,4-DDD		ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
4,4-DDE		ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
4,4-DDT		ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.010	-	< 0.010
Aroclor 1248		ug/g		< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.010	-	< 0.010
Aroclor 1254		ug/g		< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.010	-	< 0.010
Aroclor 1260		ug/g		< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.010	-	< 0.010
Benzo [b,j] fluoranthene		ug/g		-	-	-	-	-	-	-	-	-	-	< 0.0050	-	< 0.0050
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes		ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.31	-	< 0.040
Moisture, Percent		%		15	8.3	13	11	19	6.1	8.8	5.7	23	15	6.0	10	8.5
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
o,p'-DDE		ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
o,p'-DDT		ug/g		< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.13	-	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	BH21-6 (3M)	BH21-7 (3m)	BH21-7 (3M)	BH21-8 (10m)	BH21-8 (10m)	BH21-8 (10M)	BH21-8 (10M)	BH21-9 (3m)	BH21-9 (3M)	GS21-1	GS21-10	GS21-11	GS21-12
			Sample Name	Dup 11	BH21-7-1	Dup47	BH21-8-1	BH21-8-5	Dup45	Dup46	BH21-9-1	Dup42	GS21-01	GS21-10	GS21-11	GS21-12
			Sample Date	2021-05-03	2021-05-12	2021-05-12	2021-05-11	2021-05-11	2021-05-11	2021-05-11	2021-05-07	2021-05-07	2021-04-16	2021-04-16	2021-04-16	2021-04-16
			Sample Depth	2.39-3 m	0-0.61 m	0-0.61 m	0-0.61 m	2.43-3.05 m	0-0.61 m	2.43-3.05 m	0-0.61 m	0-0.61 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Acid/Base/Neutral Compounds																
Biphenyl	52	ug/g		-	-	-	-	-	-	-	< 0.05	< 0.05	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	-	-	< 0.2	< 0.2	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	-	-	< 0.1	< 0.1	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	-	-	< 1	< 1	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	-	-	< 0.2	< 0.2	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	-	-	< 0.5	< 0.5	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	< 0.2	< 0.2	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	-	-	< 0.2	< 0.2	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	-	-	< 0.5	< 0.5	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	< 0.14	< 0.14	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	-	-	< 0.09	< 0.09	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	-	-	< 0.05	< 0.05	-	-	-	-
Ungrouped Analytes																
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		< 0.0050	-	-	-	-	-	-	< 0.03	< 0.03	-	< 0.0050	< 0.0050	0.0065
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	< 0.1	< 0.1	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	< 0.1	< 0.1	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		< 0.0050	-	-	-	-	-	-	< 0.03	< 0.03	-	< 0.0050	< 0.0050	0.0072
4,4-DDD		ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-	-	-	-
4,4-DDE		ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-	-	-	-
4,4-DDT		ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-	-	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		< 0.010	-	-	-	-	-	-	< 0.015	< 0.015	-	< 0.010	< 0.010	< 0.010
Aroclor 1248		ug/g		< 0.010	-	-	-	-	-	-	< 0.015	< 0.015	-	< 0.010	< 0.010	< 0.010
Aroclor 1254		ug/g		< 0.010	-	-	-	-	-	-	< 0.015	< 0.015	-	< 0.010	< 0.010	< 0.010
Aroclor 1260		ug/g		< 0.010	-	-	-	-	-	-	< 0.015	< 0.015	-	< 0.010	< 0.010	< 0.010
Benzo [b,j] fluoranthene		ug/g		< 0.0050	-	-	-	-	-	-	< 0.1	< 0.1	-	0.0074	0.0053	0.047
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	< 0.2	< 0.2	-	-	-	-
m,p-Xylenes		ug/g		< 0.040	4.0	2.5	3.9	< 0.040	0.71	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Moisture, Percent		%		8.3	9.8	5.8	4.2	21	5.0	21	8.9	6.1	15	5.9	7.7	10
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-	-	-	-
o,p'-DDE		ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-	-	-	-
o,p'-DDT		ug/g		-	-	-	-	-	-	-	< 0.0020	< 0.0020	-	-	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		< 0.020	0.94	0.64	0.061	< 0.020	0.022	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-13	GS21-14	GS21-15	GS21-16	GS21-16	GS21-17	GS21-18	GS21-19	GS21-2	GS21-20	GS21-20	GS21-21	GS21-22
			Sample Name	GS21-13	GS21-14	GS21-15	DUP 4	GS21-16	GS21-17	GS21-18	GS21-19	GS21-02	DUP 1	GS21-20	GS21-21	GS21-22
			Sample Date	2021-04-16	2021-04-16	2021-04-20	2021-04-20	2021-04-20	2021-04-20	2021-04-20	2021-04-20	2021-04-16	2021-04-15	2021-04-15	2021-04-15	2021-04-15
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Acid/Base/Neutral Compounds																
Biphenyl	52	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		< 0.0050	< 0.0050	-	-	-	-	-	-	-	0.0051	0.010	< 0.0050	< 0.0050
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		< 0.0050	< 0.0050	-	-	-	-	-	-	-	< 0.0050	0.0090	< 0.0050	< 0.0050
4,4-DDD		ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-
4,4-DDE		ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-
4,4-DDT		ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		< 0.010	< 0.010	< 0.040	< 0.020	< 0.015	< 0.015	< 0.020	< 0.015	-	-	-	-	-
Aroclor 1248		ug/g		< 0.010	< 0.010	< 0.040	< 0.020	< 0.015	< 0.015	< 0.020	< 0.015	-	-	-	-	-
Aroclor 1254		ug/g		< 0.010	< 0.010	< 0.040	< 0.020	< 0.015	< 0.015	< 0.020	< 0.015	-	-	-	-	-
Aroclor 1260		ug/g		< 0.010	< 0.010	< 0.040	< 0.020	< 0.015	< 0.015	< 0.020	< 0.015	-	-	-	-	-
Benzo [b,j] fluoranthene		ug/g		< 0.0050	< 0.0050	-	-	-	-	-	-	-	0.016	0.012	< 0.0050	0.012
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes		ug/g		-	-	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Moisture, Percent		%		8.3	15	11	20	16	13	22	26	14	9.9	10	6.2	17
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-
o,p'-DDE		ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-
o,p'-DDT		ug/g		-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	-	-	-	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		-	-	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

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Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-23	GS21-24	GS21-25	GS21-26	GS21-27	GS21-28	GS21-29	GS21-3	GS21-30	GS21-31	GS21-32	GS21-33	GS21-34
			Sample Name	GS21-23	GS21-24	GS21-25	GS21-26	GS21-27	GS21-28	GS21-29	GS21-03	GS21-30	GS21-31	GS21-32	GS21-33	GS21-34
			Sample Date	2021-04-15	2021-04-15	2021-04-15	2021-04-15	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19	2021-04-19
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Acid/Base/Neutral Compounds																
Biphenyl	52	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		< 0.0050	< 0.070	< 0.0050	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		< 0.0050	< 0.030	< 0.0050	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-
4,4-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		-	-	-	-	-	-	-	< 0.010	-	< 0.010	< 0.010	< 0.010	-
Aroclor 1248		ug/g		-	-	-	-	-	-	-	< 0.010	-	< 0.010	< 0.010	< 0.010	-
Aroclor 1254		ug/g		-	-	-	-	-	-	-	< 0.010	-	< 0.010	< 0.010	< 0.010	-
Aroclor 1260		ug/g		-	-	-	-	-	-	-	< 0.010	-	< 0.010	< 0.010	< 0.010	-
Benzo [b,j] fluoranthene		ug/g		< 0.0050	0.020	0.078	-	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0054	< 0.0050	< 0.0050	0.0054	-
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes		ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Moisture, Percent		%		5.5	17	13	10	14	9.8	9.1	9.0	20	11	14	13	8.9
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-35	GS21-36	GS21-37	GS21-38	GS21-39	GS21-4	GS21-40	GS21-41	GS21-42	GS21-42	GS21-43	GS21-43	GS21-44
			Sample Name	GS21-35	GS21-36	GS21-37	GS21-38	GS21-39	GS21-04	GS21-40	GS21-41	DUP 5	GS21-42	DUP 3	GS21-43	GS21-44
			Sample Date	2021-04-19	2021-04-16	2021-04-20	2021-04-20	2021-04-20	2021-04-16	2021-04-19	2021-04-20	2021-04-20	2021-04-20	2021-04-19	2021-04-19	2021-04-16
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Acid/Base/Neutral Compounds																
Biphenyl	52	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		-	-	-	-	-	< 0.0050	-	-	-	-	-	-	-
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		-	-	-	-	-	< 0.0050	-	-	-	-	-	-	-
4,4-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		-	-	-	-	-	< 0.010	-	-	-	-	< 0.020	< 0.010	-
Aroclor 1248		ug/g		-	-	-	-	-	< 0.010	-	-	-	-	< 0.020	< 0.010	-
Aroclor 1254		ug/g		-	-	-	-	-	< 0.010	-	-	-	-	< 0.020	< 0.010	-
Aroclor 1260		ug/g		-	-	-	-	-	< 0.010	-	-	-	-	< 0.020	< 0.010	-
Benzo [b,j] fluoranthene		ug/g		-	-	-	-	-	0.0061	-	-	-	-	-	-	-
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes		ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Moisture, Percent		%		11	14	8.0	16	2.3	< 1.0	8.0	8.2	19	21	33	27	12
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-45	GS21-46	GS21-47	GS21-47	GS21-48	GS21-49	GS21-5	GS21-50	GS21-51	GS21-52	GS21-53	GS21-6	GS21-7
			Sample Name	GS21-45	GS21-46	DUP 2	GS21-47	GS21-48	GS21-49	GS21-05	GS21-50	GS21-51	GS21-52	GS21-53	GS21-06	GS21-07
			Sample Date	2021-04-16	2021-04-16	2021-04-15	2021-04-15	2021-04-16	2021-04-16	2021-04-19	2021-04-16	2021-04-16	2021-04-19	2021-04-16	2021-04-19	2021-04-16
			Sample Depth	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m	0-0.18 m
Acid/Base/Neutral Compounds																
Biphenyl	52	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes																
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		-	-	-	-	-	-	0.0094	-	-	-	-	0.0053	< 0.0050
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		-	-	-	-	-	-	0.012	-	-	-	-	0.0057	< 0.0050
4,4-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		-	< 0.010	-	-	-	< 0.010	< 0.010	-	-	< 0.010	-	< 0.010	< 0.010
Aroclor 1248		ug/g		-	< 0.010	-	-	-	< 0.010	< 0.010	-	-	< 0.010	-	< 0.010	< 0.010
Aroclor 1254		ug/g		-	< 0.010	-	-	-	< 0.010	< 0.010	-	-	< 0.010	-	< 0.010	< 0.010
Aroclor 1260		ug/g		-	< 0.010	-	-	-	< 0.010	< 0.010	-	-	< 0.010	-	< 0.010	< 0.010
Benzo [b,j] fluoranthene		ug/g		-	-	-	-	-	-	0.022	-	-	-	-	0.057	< 0.0050
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes		ug/g		0.17	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Moisture, Percent		%		21	12	12	13	19	13	17	8.4	7.9	22	25	8.2	7.1
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		0.16	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.023	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-	-

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< Indicates parameter was below laboratory equipment detection limit.

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Table 7 - Summary of Soil Analytical Data - Acid/Base/Neutral Compounds, Ungrouped Analytes
Darlington New Nuclear Project

Parameter	REG153 (11) T3-I/C/C SOIL COARSE	Unit	Sample Location	GS21-8	GS21-9	BH21-36 (3M)	BH21-36 (3M)	BH21-39 (6M)	BH21-39 (6M)	BH21-40 (3M)	BH21-40 (3M)	BH21-41 (10M)	BH21-41 (10M)	BH21-41 (10M)	BH21-41 (10M)
			Sample Name	GS21-08	GS21-09	BH21-36-2	BH21-36-4	BH21-39-1	BH21-39-5	BH21-40-2	BH21-40-3	BH21-41-1	BH21-41-3	BH21-41-4	BH21-41-6
			Sample Date	2021-04-19	2021-04-16	2021-04-08	2021-04-08	2021-02-09	2021-02-09	2021-04-08	2021-04-08	2021-04-09	2021-04-09	2021-04-09	2021-04-09
			Sample Depth	0-0.18 m	0-0.18 m	0.6-1.2 m	1.8-2.4 m	0-0.6 m	2.4-3 m	0.6-1.2 m	1.2-1.8 m	0-0.6 m	1.2-1.8 m	1.8-2.4 m	3-3.7 m
Acid/Base/Neutral Compounds						-	-	-	-	-	-	-	-	-	-
Biphenyl	52	ug/g		-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl) Ether	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroisopropyl)ether	11	ug/g		-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl) Phthalate	28	ug/g		-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	1	ug/g		-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	390	ug/g		-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	59	ug/g		-	-	-	-	-	-	-	-	-	-	-	-
2,4 + 2,6 dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-
Phenol	9.4	ug/g		-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-
Ungrouped Analytes															
1,2-Dichloroethane-d4		%		-	-	-	-	-	-	-	-	-	-	-	-
1,4-Difluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	76	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
2,4,6-Tribromophenol		%		-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	1.2	ug/g		-	-	-	-	-	-	-	-	-	-	-	-
2-Fluorobiphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	76	ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
4,4-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-
4-Bromofluorobenzene		%		-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene-D8		%		-	-	-	-	-	-	-	-	-	-	-	-
Anthracene-D10		%		-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242		ug/g		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aroclor 1248		ug/g		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aroclor 1254		ug/g		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Aroclor 1260		ug/g		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo [b,j] fluoranthene		ug/g		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Decachlorobiphenyl (PCB 209)		%		-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate	0.5	ug/g		-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes		ug/g		< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Moisture, Percent		%		8.0	7.7	7.9	8.9	12	20	17	6.1	8.9	7.1	5.7	6.9
Nitrobenzene-d5		%		-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD		ug/g		-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDE		ug/g		-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDT		ug/g		-	-	-	-	-	-	-	-	-	-	-	-
o-Terphenyl		%		-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ug/g		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
o-Xylene-d10		%		-	-	-	-	-	-	-	-	-	-	-	-
Terphenyl-d14		%		-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloro-m-xylene		%		-	-	-	-	-	-	-	-	-	-	-	-

O.Reg 153 (2011) Table 3 Standards for industrial/commerical/community property use for coarse textured soil in full depth generic site condition in a non-potable groundwater condition

< Indicates parameter was below laboratory equipment detection limit.

> Indicates parameter detected in excess of soil criteria

- Chemical not analyzed or criteria not defined.

Output generated by GalReport.

TABLE 8 - CONTAMINANTS OF CONCERN IN SOIL
DARLINGTON NEW NUCLEAR PROJECT

APEC	Original Contaminants of Concern	Location ID	Investigation Depth (mbgs)	Number of Samples to be Collected	Contaminants of Concern Requiring Further Investigation
APEC 1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-1	3	1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-2	3	1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-1	0-0.15	1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-2	0-0.15	1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 2, 3, 4	PHCs, BTEX, VOCs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-3	2	1	BTEX, PCBs, PAHs, VOCs
APEC 2, 3, 4	PHCs, BTEX, VOCs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-4	2	1	BTEX, PCBs, PAHs
APEC 2, 3, 4	PHCs, BTEX, VOCs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-5	2	1	BTEX, PCBs, PAHs
APEC 5	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	n/a	n/a	n/a	n/a
APEC 6	PCBs, PAHs, PHCs	BH21-6	3	2	PCBs, PAHs, PHCs
APEC 6	PCBs, PAHs, PHCs	GS21-3	0-0.15	1	PCBs, PAHs, PHCs
APEC 7	PHCs, PAHs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-6	3	2	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 7	PHCs, PAHs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-3	0-0.15	1	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 7	PHCs, PAHs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-4	0-0.15	1	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 7	PHCs, PAHs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-5	0-0.15	1	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 7	PHCs, PAHs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-6	0-0.15	1	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 7	PHCs, PAHs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-7	0-0.15	1	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 7	PHCs, PAHs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-8	0-0.15	1	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 7	PHCs, PAHs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-9	0-0.15	1	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 7	PHCs, PAHs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-10	0-0.15	1	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 7	PHCs, PAHs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-11	0-0.15	1	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 7	PHCs, PAHs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-12	0-0.15	1	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 8	PHCs, BTEX	BH21-7	3	1	PHC, BTEX
APEC 8	PHCs, BTEX	BH21-8	10	2	PHC, BTEX
APEC 9	PHCs, VOCs, BTEX, PAHs, ABN	BH21-9	3	1	PHCs, VOCs, BTEX, PAHs, ABN, OCP
APEC 9	PHCs, VOCs, BTEX, PAHs, ABN	BH21-10	10	2	PHCs, VOCs, BTEX, PAHs, ABN, OCP
APEC 10	PHCs, VOCs, BTEX, PAHs, ABN	BH21-11	3	2	PHCs, VOCs, BTEX, PAHs, ABN
APEC 10	PHCs, VOCs, BTEX, PAHs, ABN	BH21-12	3	2	PHCs, VOCs, BTEX, PAHs, ABN
APEC 10	PHCs, VOCs, BTEX, PAHs, ABN	BH21-13	10	3	PHCs, VOCs, BTEX, PAHs, ABN
APEC 11	PAHs, PCBs, PHCs	BH21-3	3	1	PCBs, PAHs
APEC 11	PAHs, PCBs, PHCs	GS21-13	0-0.15	1	PCBs, PAHs
APEC 11	PAHs, PCBs, PHCs	GS21-14	0-0.15	1	PCBs, PAHs
APEC 12, 14	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-14	10	3	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, EC, SAR
APEC 13	OCs, CN-, Metals, As, Se and Sb	BH21-15	3	2	OCPs (Coordinated with APEC 19b: PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR)
APEC 13	OCs, CN-, Metals, As, Se and Sb	BH21-16	3	2	OCPs (Coordinated with APEC 19b: PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR)
APEC 13	OCs, CN-, Metals, As, Se and Sb	BH21-48	3	2	OCPs (Coordinated with APEC 19b: PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR)
APEC 13	OCs, CN-, Metals, As, Se and Sb	BH21-50	3	2	OCPs (Coordinated with APEC 19b: PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR)
APEC 13	OCs, CN-, Metals, As, Se and Sb	GS21-15	0-0.15	1	OCPs (Coordinated with APEC 19b: PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR)
APEC 13	OCs, CN-, Metals, As, Se and Sb	GS21-16	0-0.15	1	OCPs (Coordinated with APEC 19b: PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR)
APEC 13	OCs, CN-, Metals, As, Se and Sb	GS21-17	0-0.15	1	OCPs (Coordinated with APEC 19b: PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR)
APEC 13	OCs, CN-, Metals, As, Se and Sb	GS21-18	0-0.15	1	OCPs (Coordinated with APEC 19b: PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR)
APEC 13	OCs, CN-, Metals, As, Se and Sb	GS21-19	0-0.15	1	OCPs (Coordinated with APEC 19b: PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR)
APEC 14	EC, SAR	N/A	N/A	N/A	N/A
APEC 15a	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-17	3	2	PAH, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15a	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-17	3	3	BTEX
APEC 15a	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-18	3	4	BTEX, PAH
APEC 15a	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-19	3	2	PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15a	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-19	3	4	BTEX, PAH
APEC 15a	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-20	3	2	BTEX, PAH, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15a	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-20	3	3	BTEX, PAH

TABLE 8 - CONTAMINANTS OF CONCERN IN SOIL
DARLINGTON NEW NUCLEAR PROJECT

APEC	Original Contaminants of Concern	Location ID	Investigation Depth (mbgs)	Number of Samples to be Collected	Contaminants of Concern Requiring Further Investigation
APEC 15a	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-20	0-0.15	1	BTEX, PAH
APEC 15a	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-21	0-0.15	1	BTEX, PAH
APEC 15a	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-22	0-0.15	1	BTEX, PAH
APEC 15a	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-23	0-0.15	1	BTEX, PAH
APEC 15a	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-24	0-0.15	1	BTEX, PAH
APEC 15a	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-25	0-0.15	1	BTEX, PAH
APEC 15a	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-26	0-0.15	1	BTEX
APEC 15b	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-21	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15b	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-22	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15b	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-23	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15b	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-24	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15b	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-25	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15b	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-26	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15b	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-27	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15b	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-28	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15b	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-29	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15b	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-30	6	5	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15b	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-11	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15b	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-12	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15b	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-13	10	3	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15c	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-31	3	3	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15c	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-32	3	3	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15c	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-33	3	3	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15c	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-27	0-0.15	1	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15c	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-28	0-0.15	1	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15c	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-29	0-0.15	1	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15c	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-30	0-0.15	1	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15d	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-34	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15d	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-35	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15d	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-31	0-0.15	1	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15d	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-32	0-0.15	1	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15d	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-33	0-0.15	1	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15e	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-36	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15e	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-37	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15e	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-38	6	4	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15e	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-39	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15e	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-51	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15e	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-40	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 15e	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-41	10	6	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 16	PHCs, BTEX	BH21-42	10	2	PHCs, BTEX
APEC 16	PHCs, BTEX	BH21-43	6	2	PHCs, BTEX
APEC17a	Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR, PHCs	BH21-17	3	3	Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 17b	Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR, PHCs	BH21-41	10	6	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 17c, 19c	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-11	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 17c, 19c	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-13	10	3	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 17c, 19c	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-27	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 17c, 19c	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-28	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR

TABLE 8 - CONTAMINANTS OF CONCERN IN SOIL
DARLINGTON NEW NUCLEAR PROJECT

APEC	Original Contaminants of Concern	Location ID	Investigation Depth (mbgs)	Number of Samples to be Collected	Contaminants of Concern Requiring Further Investigation
APEC 17c, 19c	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-29	3	1	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 17d	Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR, PHCs	BH21-44	6	3	PHCs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 18	H3	n/a	n/a	n/a	n/a
APEC 19a	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-45	3	2	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19a	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-46	3	2	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19a	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-47	6	4	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19a	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-26	3	2	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
APEC 19a	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-34	0-0.15	1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19a	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-35	0-0.15	1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19a	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-36	0-0.15	1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19b	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-48	3	3	OCP, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19b	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-49	3	3	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19b	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-50	3	3	OCP, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19b	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-15	0-0.15	1	OCPs, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19b	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-16	0-0.15	1	OCPs, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19b	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-17	0-0.15	1	OCPs, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19b	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-18	0-0.15	1	OCPs, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19b	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-19	0-0.15	1	OCPs, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19b	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-37	0-0.15	1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19b	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-38	0-0.15	1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19b	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-39	0-0.15	1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19c	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	N/A	N/A	N/A	N/A
APEC 19d	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	BH21-49	3	2	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19d	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-39	0-0.15	1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19d	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-40	0-0.15	1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19d	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-41	0-0.15	1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 19d	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR	GS21-42	0-0.15	1	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
APEC 20	PHCs, PAHs, PCBs	GS21-43	0-0.15	1	PHCs, PCBs
APEC 20	PHCs, PAHs, PCBs	GS21-44	0-0.15	1	PHCs
APEC 20	PHCs, PAHs, PCBs	GS21-45	0-0.15	1	PHCs
APEC 20	PHCs, PAHs, PCBs	GS21-46	0-0.15	1	PHCs, PCBs
APEC 20	PHCs, PAHs, PCBs	GS21-47	0-0.15	1	PHCs
APEC 20	PHCs, PAHs, PCBs	GS21-48	0-0.15	1	PHCs
APEC 20	PHCs, PAHs, PCBs	GS21-49	0-0.15	1	PHCs, PCBs
APEC 20	PHCs, PAHs, PCBs	GS21-50	0-0.15	1	PHCs
APEC 20	PHCs, PAHs, PCBs	GS21-51	0-0.15	1	PHCs
APEC 20	PHCs, PAHs, PCBs	GS21-52	0-0.15	1	PHCs, PCBs
APEC 20	PHCs, PAHs, PCBs	GS21-53	0-0.15	1	PHCs
DNNP NE Landfill Area	N/A	BH21-52	3	2	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
DNNP NE Landfill Area	N/A	BH21-53	3	2	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
DNNP NE Landfill Area	N/A	BH21-54	3	2	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
DNNP NE Landfill Area	N/A	BH21-55	3	2	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
DNNP NE Landfill Area	N/A	BH21-56	3	2	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-

Notes:
1. Samling location identified on Figures 2 and 3 of the workplan
2. "Number of Samples" column does not include duplicate samples (required one duplicate sample for each set of 10 samples collected as part of the field work program).
3. Soil Gap Analysis: "Soil Characterization Gap Analysis – Darlington New Nuclear Project" prepared by Golder for OPG and dated August 13, 2020 (Golder File No. 2013728
4. "Original Contaminants of Concern" ("COC") refers to the COCs associated with each APEC. "Contaminants of Concern Requiring Further Investigation" is specific to this cu
5. Note that specific depths or depth ranges have been evaluated and included on a case-by-case basis throughout this plan, based on PCA/APEC, BH depth and required nur observations during drilling. As such, specific sampling target depths have not been standardized herein.

Figures



LEGEND

- RAILWAY
- WATERCOURSE
- DNNP LANDS NE LANDFILL AREA
- DNNP LANDS SOUTH
- AREA OF POTENTIAL ENVIRONMENTAL CONCERN (APEC)

0 200 400

1:7,500 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2019
PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
BASE IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
SITE AREA AND AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

25mm

0

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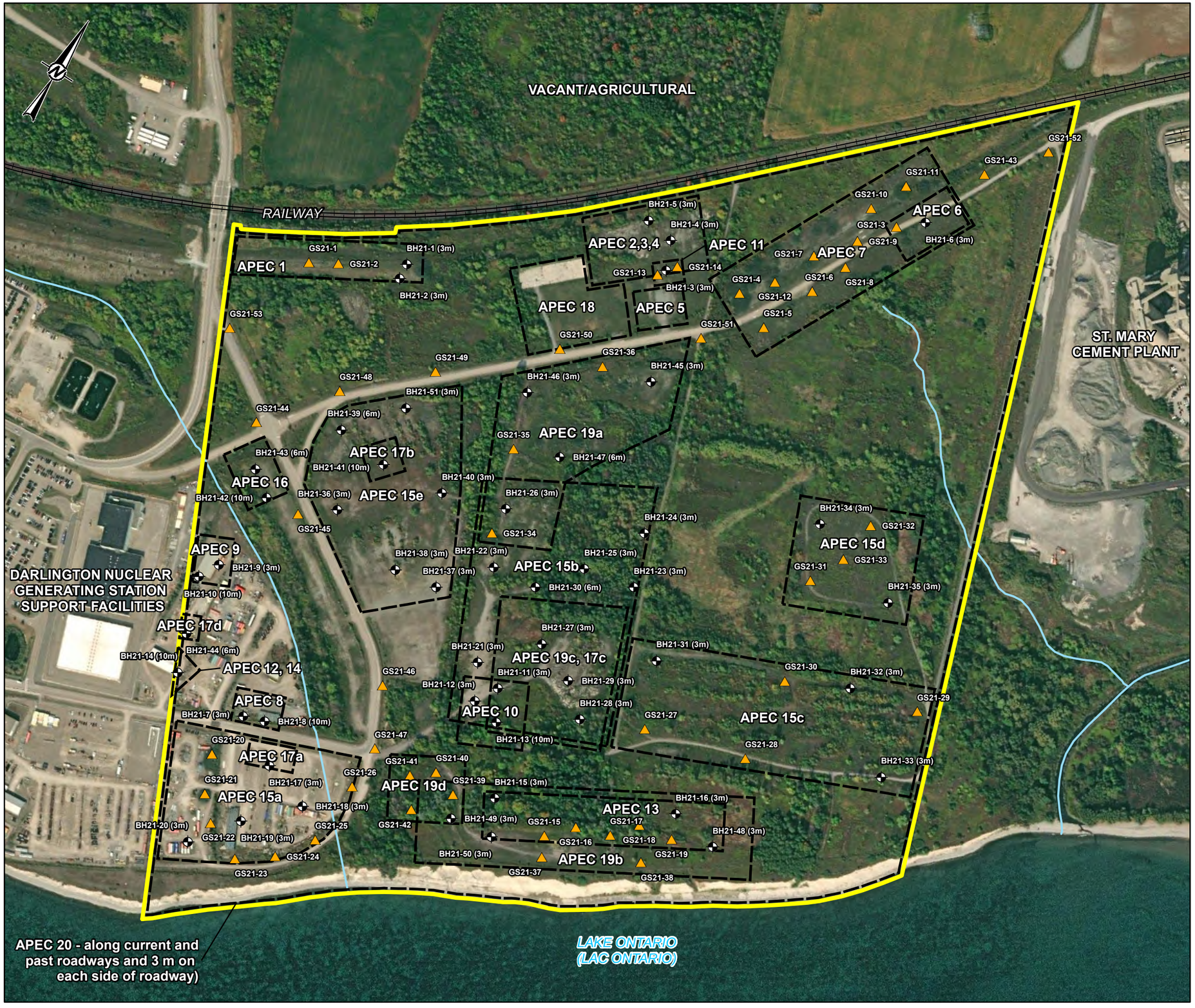

LEGEND

- BOREHOLE LOCATION
- GRAB SAMPLE LOCATION
- RAILWAY
- WATERCOURSE
- DNNP LANDS NE LANDFILL AREA
- AREA OF POTENTIAL ENVIRONMENTAL CONCERN (APEC)

0 200 400

1:5,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2019
PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
BASE IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
SAMPLE LOCATION PLAN – DNNP LANDS SOUTH

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	2

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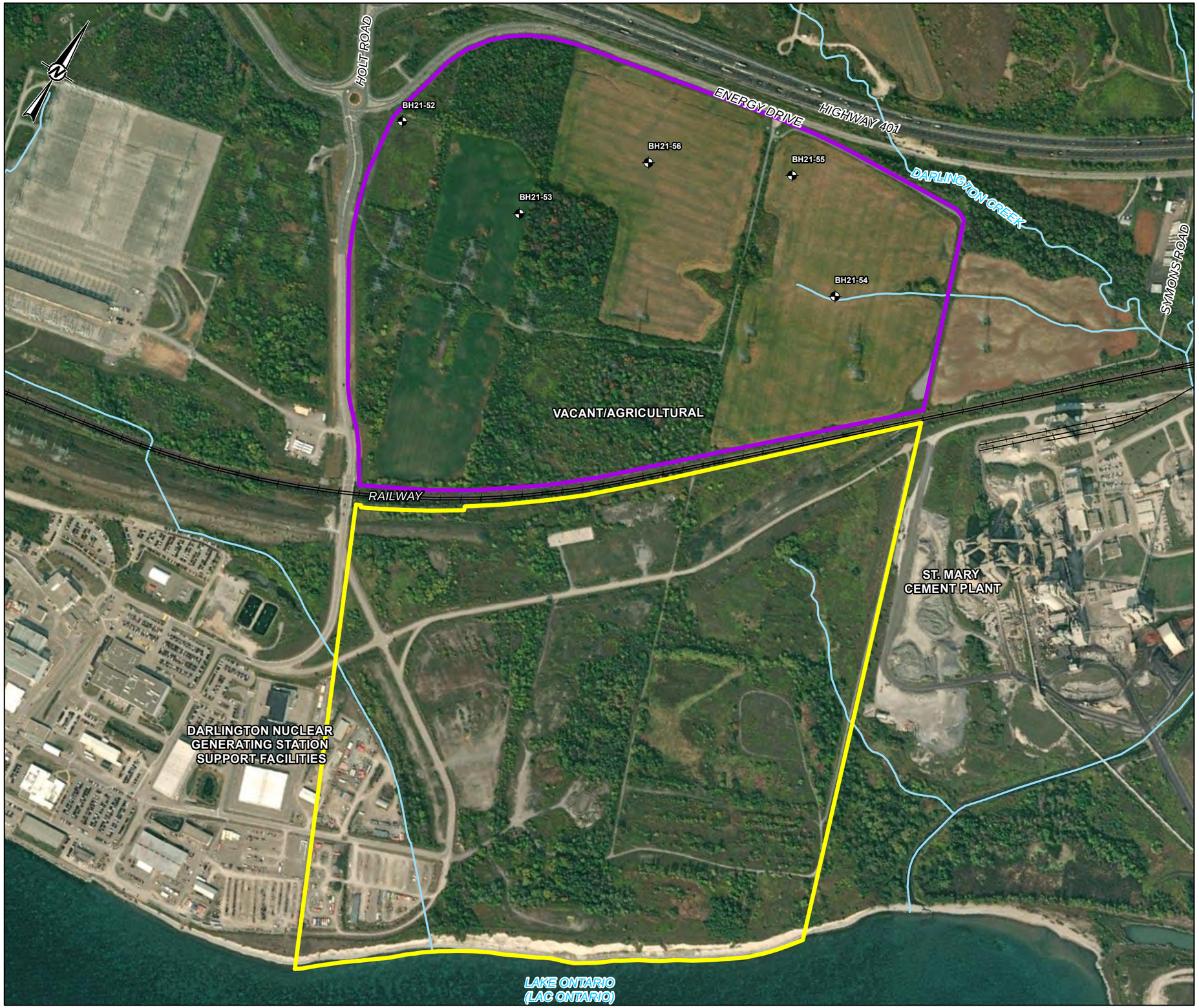

LEGEND

- BOREHOLE LOCATION
- RAILWAY
- WATERCOURSE
- DNNP LANDS NE LANDFILL AREA
- DNNP LANDS SOUTH

0 200 400

1:7,500 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2019
PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
BASE IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
SAMPLE LOCATION PLAN – DNNP LANDS NE LANDFILL AREA

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-02-24
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

25mm

0

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LEGEND

- BOREHOLE LOCATION
- GRAB SAMPLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- SAMPLE WAS NOT TESTED
- RAILWAY
- WATERCOURSE
- DNNP LANDS SOUTH

0 200 400

1:5,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2019
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BASE IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
SOIL EXCEEDANCES - ACID/BASE/NEUTRAL COMPOUNDS – DNNP LANDS SOUTH

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	4.1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

0 25mm

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LEGEND

- BOREHOLE LOCATION
- GRAB SAMPLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- SAMPLE WAS NOT TESTED
- RAILWAY
- WATERCOURSE
- DNNP LANDS SOUTH

0 200 400

1:5,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2019
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BASE IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
SOIL EXCEEDANCES - CHLOROPHENOLS – DNNP LANDS SOUTH

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	4.2

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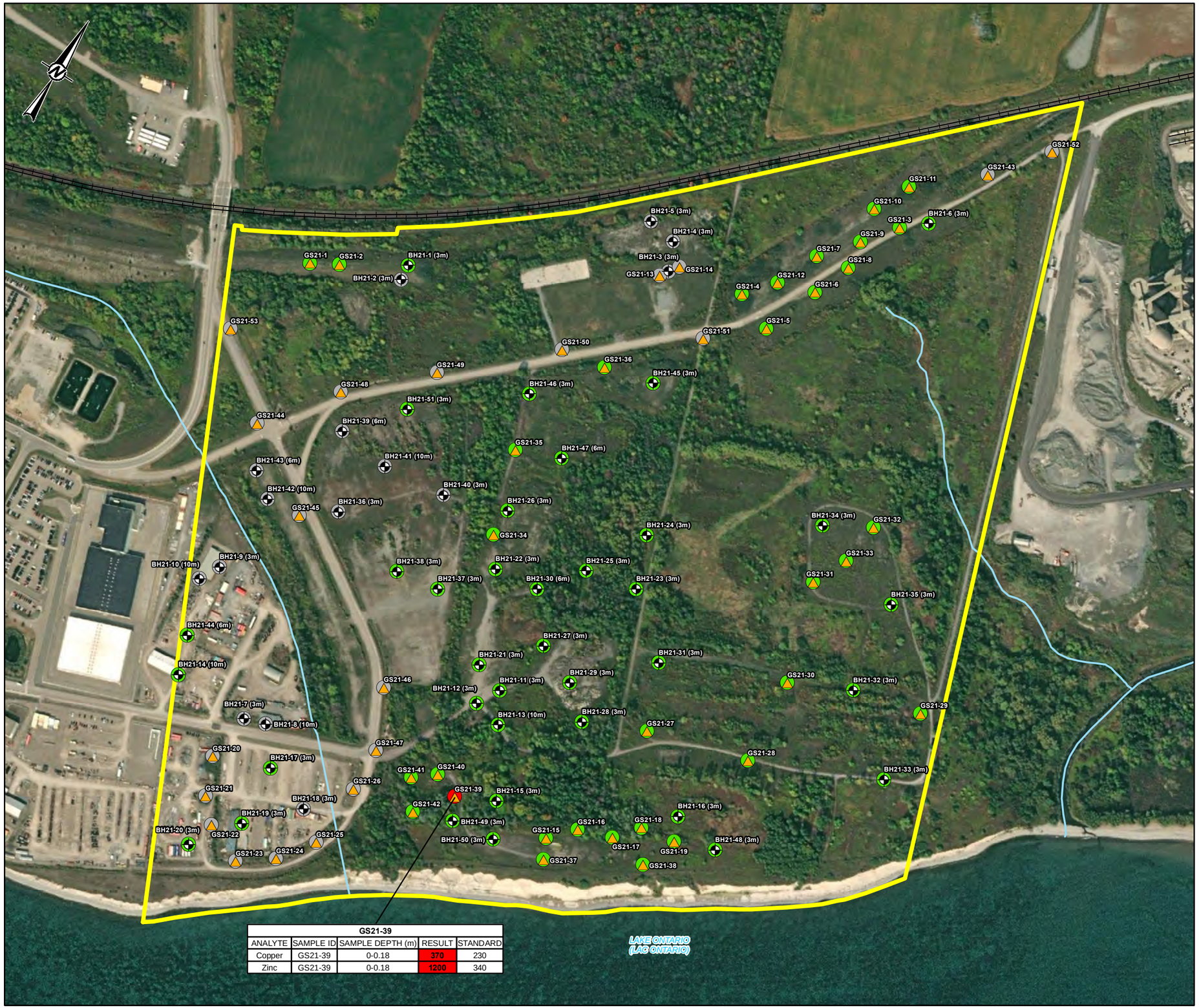

GS21-39				
ANALYTE	SAMPLE ID	SAMPLE DEPTH (m)	RESULT	STANDARD
Copper	GS21-39	0-0.18	370	230
Zinc	GS21-39	0-0.18	1200	340

LEGEND

- BOREHOLE LOCATION
- GRAB SAMPLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- SAMPLE TESTED AND EXCEEDS STANDARDS
- SAMPLE WAS NOT TESTED
- RAILWAY
- WATERCOURSE
- DNNP LANDS SOUTH

0 200 400

1:5,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2019
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BASE IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
SOIL EXCEEDANCES – METALS – DNNP LANDS SOUTH

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	4.3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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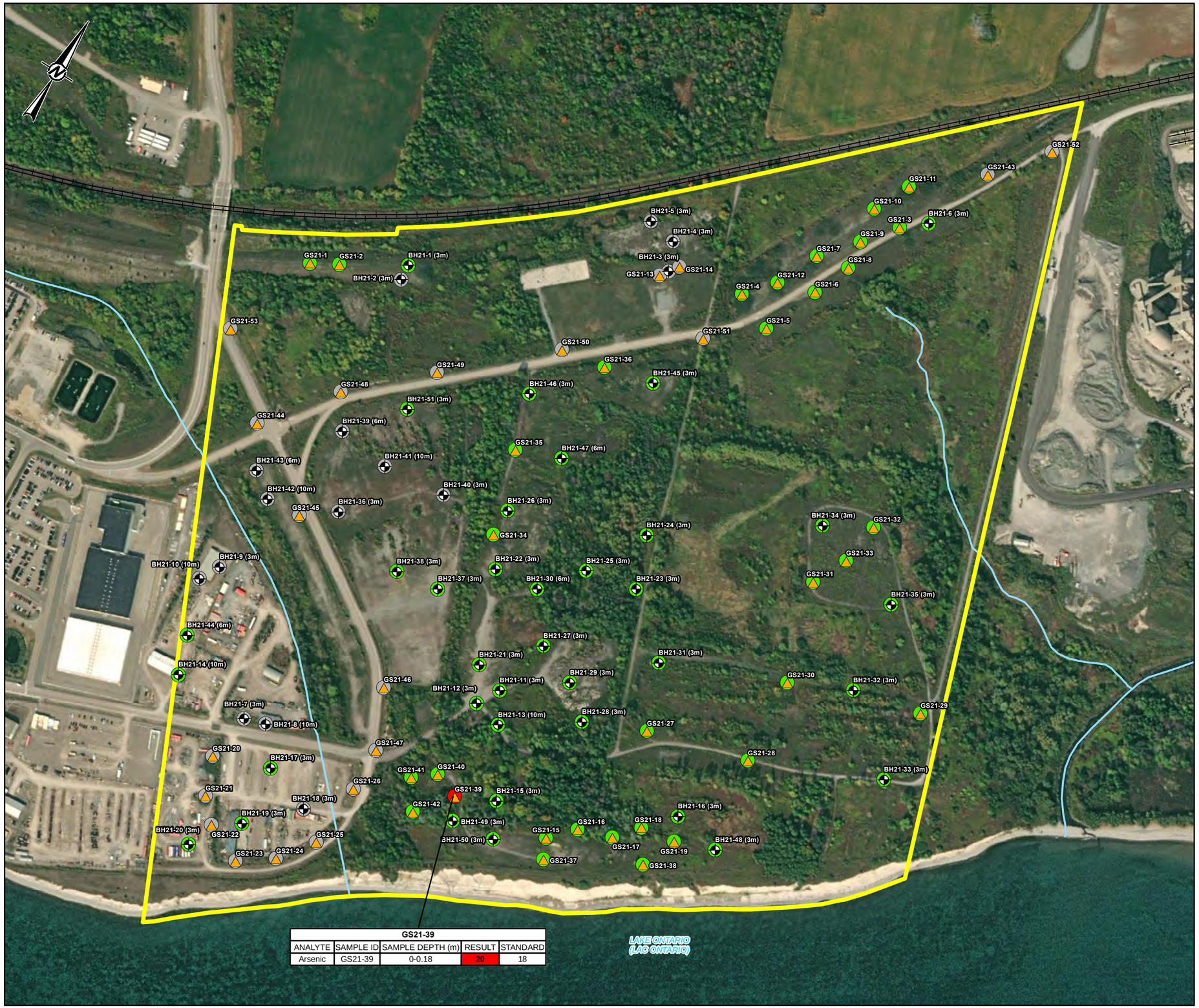

GS21-39				
ANALYTE	SAMPLE ID	SAMPLE DEPTH (m)	RESULT	STANDARD
Arsenic	GS21-39	0-0.18	20	18

LEGEND

- BOREHOLE LOCATION
- GRAB SAMPLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- SAMPLE TESTED AND EXCEEDS STANDARDS
- SAMPLE NOT TESTED
- RAILWAY
- WATERCOURSE
- DNNP LANDS SOUTH

0 200 400

1:5,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2019
PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
BASE IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
SOIL EXCEEDANCES – HYDRIDE FORMING METALS – DNNP LANDS SOUTH

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	4.4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm 0

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LEGEND

- BOREHOLE LOCATION
- GRAB SAMPLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- SAMPLE WAS NOT TETED
- RAILWAY
- WATERCOURSE
- DNNP LANDS SOUTH

0 200 400

1:5,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2019
PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
BASE IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
SOIL EXCEEDANCES – ORGANOCHLORINE PESTICIDES – DNNP LANDS SOUTH

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	4.5

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

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BH21-30 (6m)				
ANALYTE	SAMPLE ID	SAMPLE DEPTH (m)	RESULT	STANDARD
pH	BH21-30-4	1.82-2.44	11.7	5-9(11)

LEGEND

- BOREHOLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- SAMPLE TESTED AND EXCEEDED STANDARDS
- SAMPLE WAS NOT TESTED
- RAILWAY
- WATERCOURSE
- DNNP LANDS SOUTH

0 200 400

1:5,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2019
PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
BASE IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
SOIL EXCEEDANCES – OTHER REGULATED PARAMETERS – DNNP LANDS SOUTH

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	4.6

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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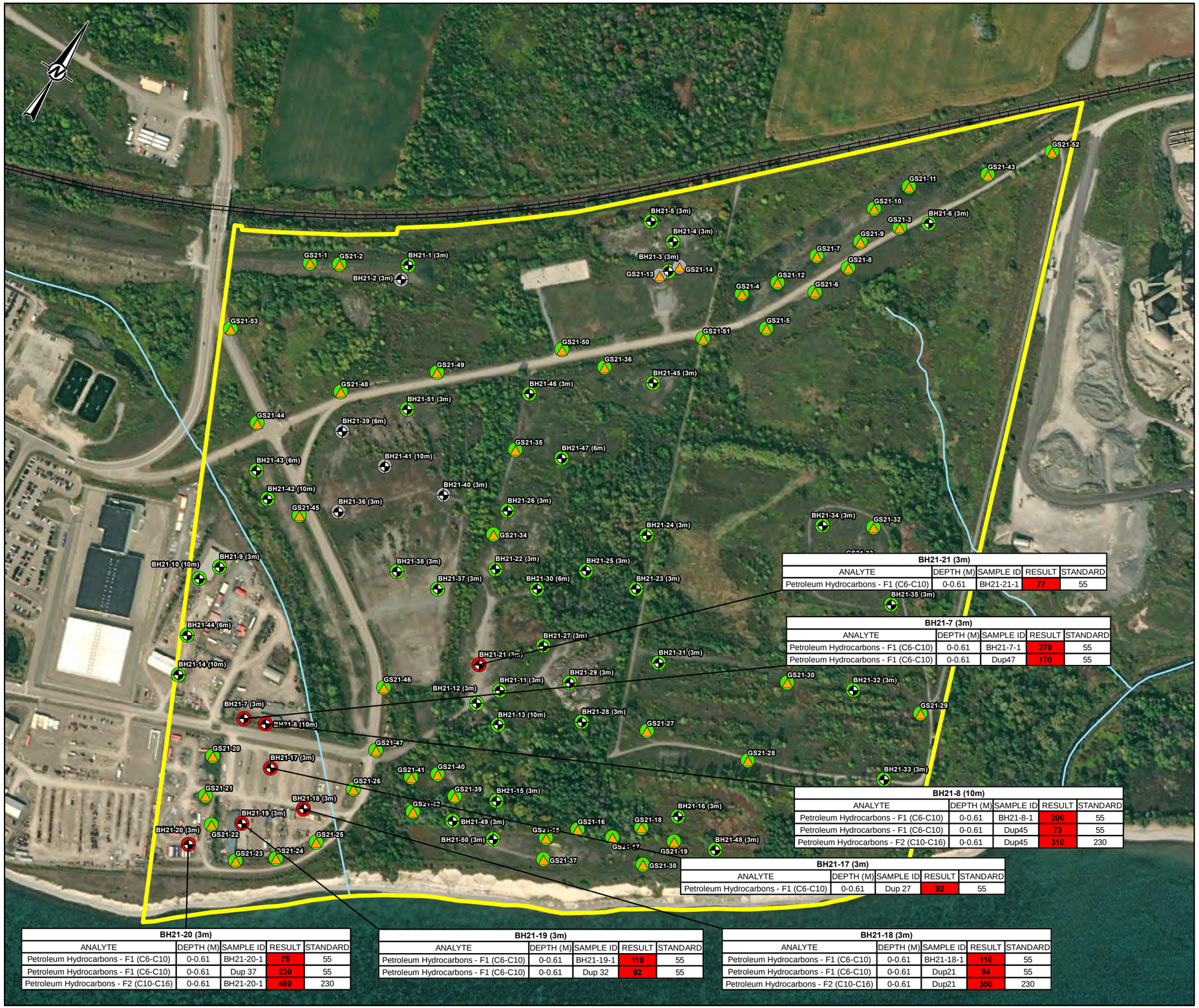

BH21-21 (3m)

ANALYTE	DEPTH (M)	SAMPLE ID	RESULT	STANDARD
Petroleum Hydrocarbons - F1 (C6-C10)	0-0.61	BH21-21-1	77	55

BH21-7 (3m)

ANALYTE	DEPTH (M)	SAMPLE ID	RESULT	STANDARD
Petroleum Hydrocarbons - F1 (C6-C10)	0-0.61	BH21-7-1	270	55
Petroleum Hydrocarbons - F1 (C6-C10)	0-0.61	Dup47	170	55

BH21-8 (10m)

ANALYTE	DEPTH (M)	SAMPLE ID	RESULT	STANDARD
Petroleum Hydrocarbons - F1 (C6-C10)	0-0.61	BH21-8-1	200	55
Petroleum Hydrocarbons - F1 (C6-C10)	0-0.61	Dup45	73	55
Petroleum Hydrocarbons - F2 (C10-C16)	0-0.61	Dup45	310	230

BH21-17 (3m)

ANALYTE	DEPTH (M)	SAMPLE ID	RESULT	STANDARD
Petroleum Hydrocarbons - F1 (C6-C10)	0-0.61	Dup 27	92	55

BH21-20 (3m)

ANALYTE	DEPTH (M)	SAMPLE ID	RESULT	STANDARD
Petroleum Hydrocarbons - F1 (C6-C10)	0-0.61	BH21-20-1	75	55
Petroleum Hydrocarbons - F1 (C6-C10)	0-0.61	Dup 37	230	55
Petroleum Hydrocarbons - F2 (C10-C16)	0-0.61	BH21-20-1	460	230

BH21-19 (3m)

ANALYTE	DEPTH (M)	SAMPLE ID	RESULT	STANDARD
Petroleum Hydrocarbons - F1 (C6-C10)	0-0.61	BH21-19-1	110	55
Petroleum Hydrocarbons - F1 (C6-C10)	0-0.61	Dup 32	92	55

BH21-18 (3m)

ANALYTE	DEPTH (M)	SAMPLE ID	RESULT	STANDARD
Petroleum Hydrocarbons - F1 (C6-C10)	0-0.61	BH21-18-1	110	55
Petroleum Hydrocarbons - F1 (C6-C10)	0-0.61	Dup21	94	55
Petroleum Hydrocarbons - F2 (C10-C16)	0-0.61	Dup21	350	230

LEGEND

- BOREHOLE LOCATION
- GRAB SAMPLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- SAMPLE TESTED AND EXCEEDS STANDARDS
- SAMPLE WAS NOT TESTED
- RAILWAY
- WATERCOURSE
- DNNP LANDS SOUTH

0 200 400

1:5,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2019
PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
BASE IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
SOIL EXCEEDANCES – PETROLEUM HYDROCARBONS – DNNP LANDS SOUTH

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	4.7

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

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LEGEND

- BOREHOLE LOCATION
- GRAB SAMPLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- SAMPLE WAS NOT TESTED
- RAILWAY
- WATERCOURSE
- DNNP LANDS SOUTH

0 200 400

1:5,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

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PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
SOIL EXCEEDANCES – POLYCHLORINATED BIPHENYLS – DNNP LANDS SOUTH

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	4.8

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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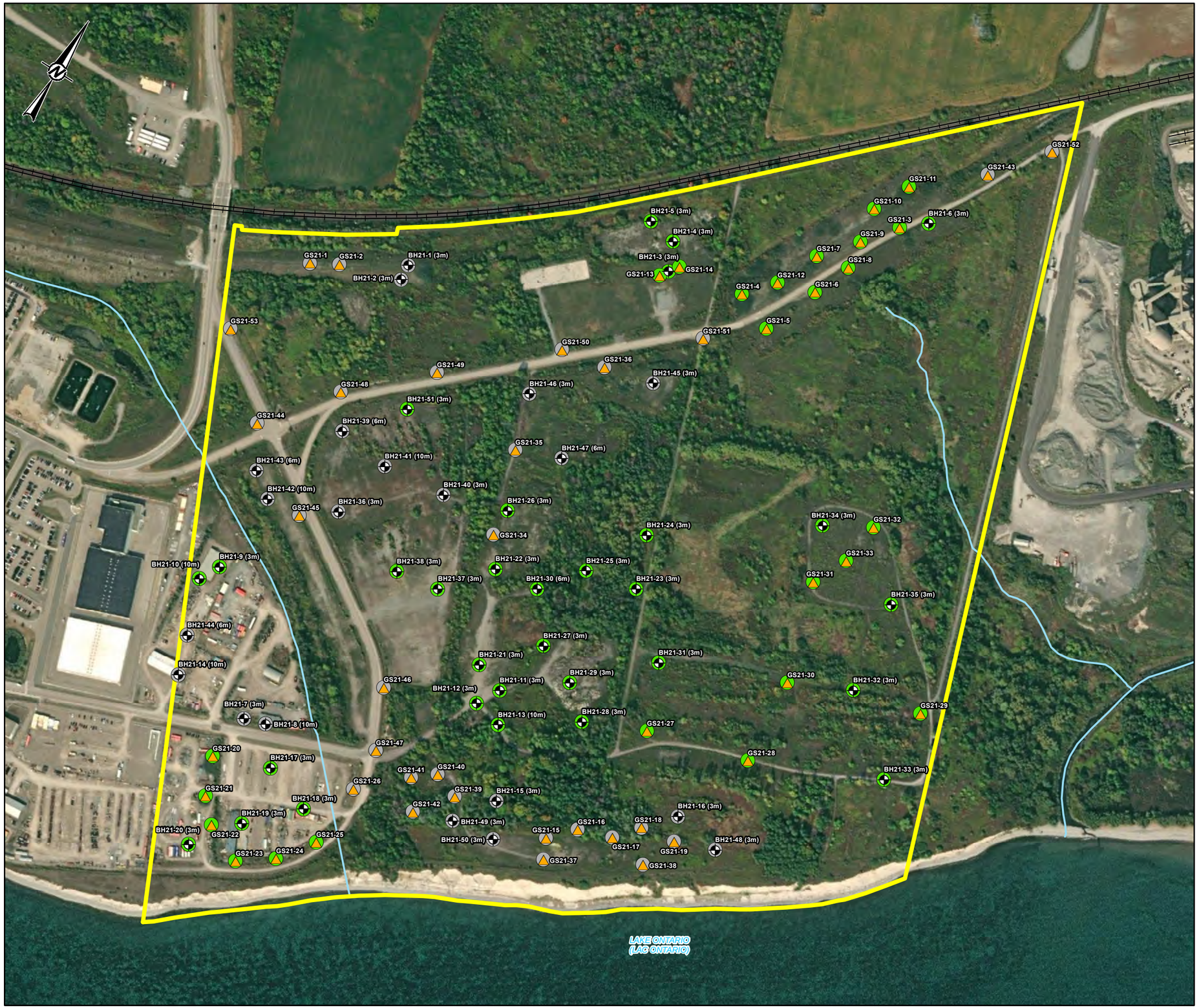

LEGEND

- BOREHOLE LOCATION
- GRAB SAMPLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- SAMPLE WAS NOT TESTED
- RAILWAY
- WATERCOURSE
- DNNP LANDS SOUTH

0 200 400

1:5,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

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PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
SOIL EXCEEDANCES – POLYCYCLIC AROMATIC HYDROCARBONS – DNNP LANDS SOUTH

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	4.9

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

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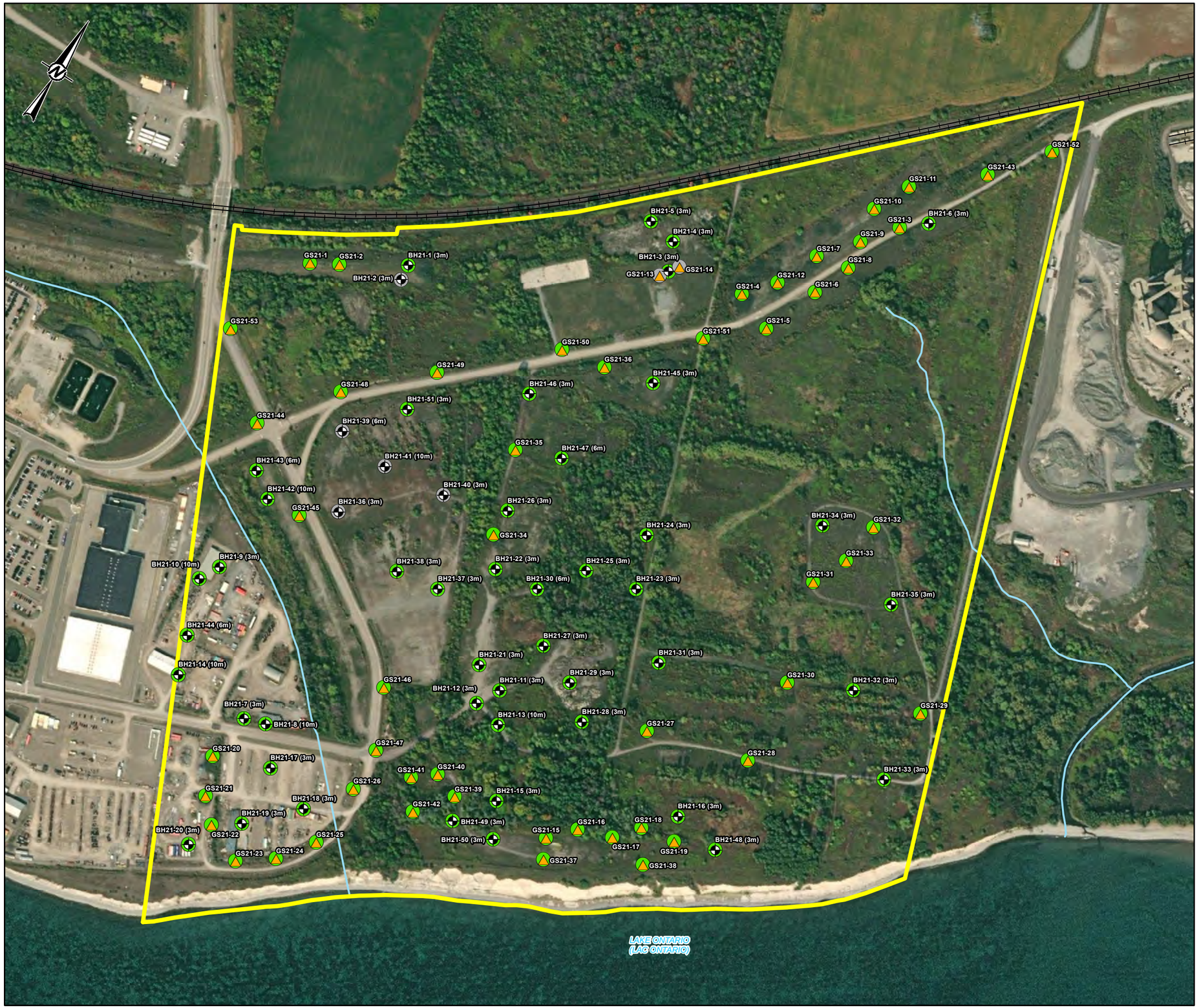

LEGEND

- BOREHOLE LOCATION
- GRAB SAMPLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- SAMPLE WS NOT TESTED
- RAILWAY
- WATERCOURSE
- DNNP LANDS SOUTH

0 200 400

1:5,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

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PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
SOIL EXCEEDANCES – VOLATILE ORGANIC COMPOUNDS, BTEX – DNNP LANDS SOUTH

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	4.10

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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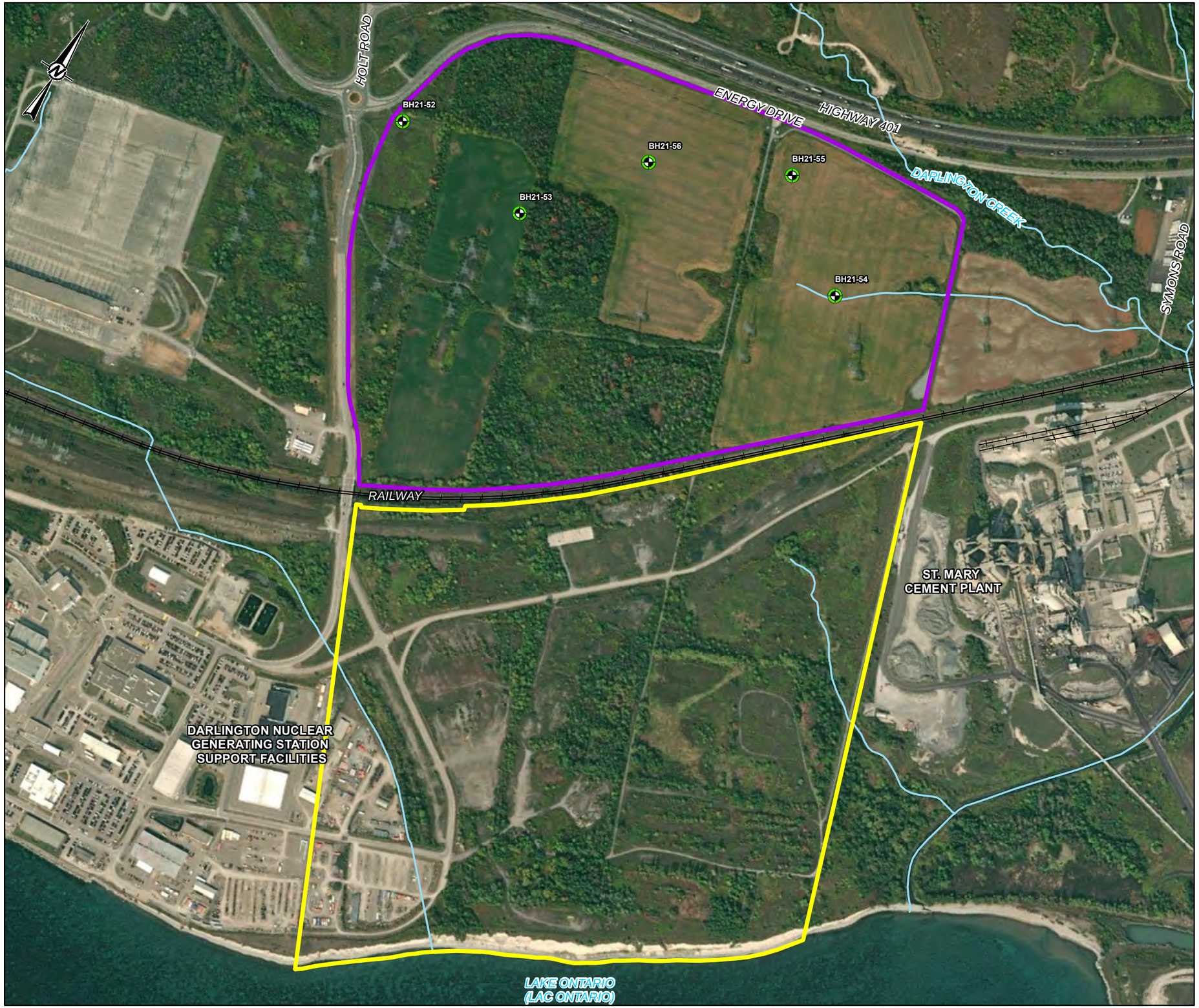

LEGEND

- BOREHOLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- RAILWAY
- WATERCOURSE
- DNNP LANDS NE LANDFILL AREA
- DNNP LANDS SOUTH

0 200 400

1:7,500 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2019
PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
BASE IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
BOREHOLE EXCEEDANCES – METALS – DNNP LANDS NE LANDFILL AREA

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	5.1

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25mm
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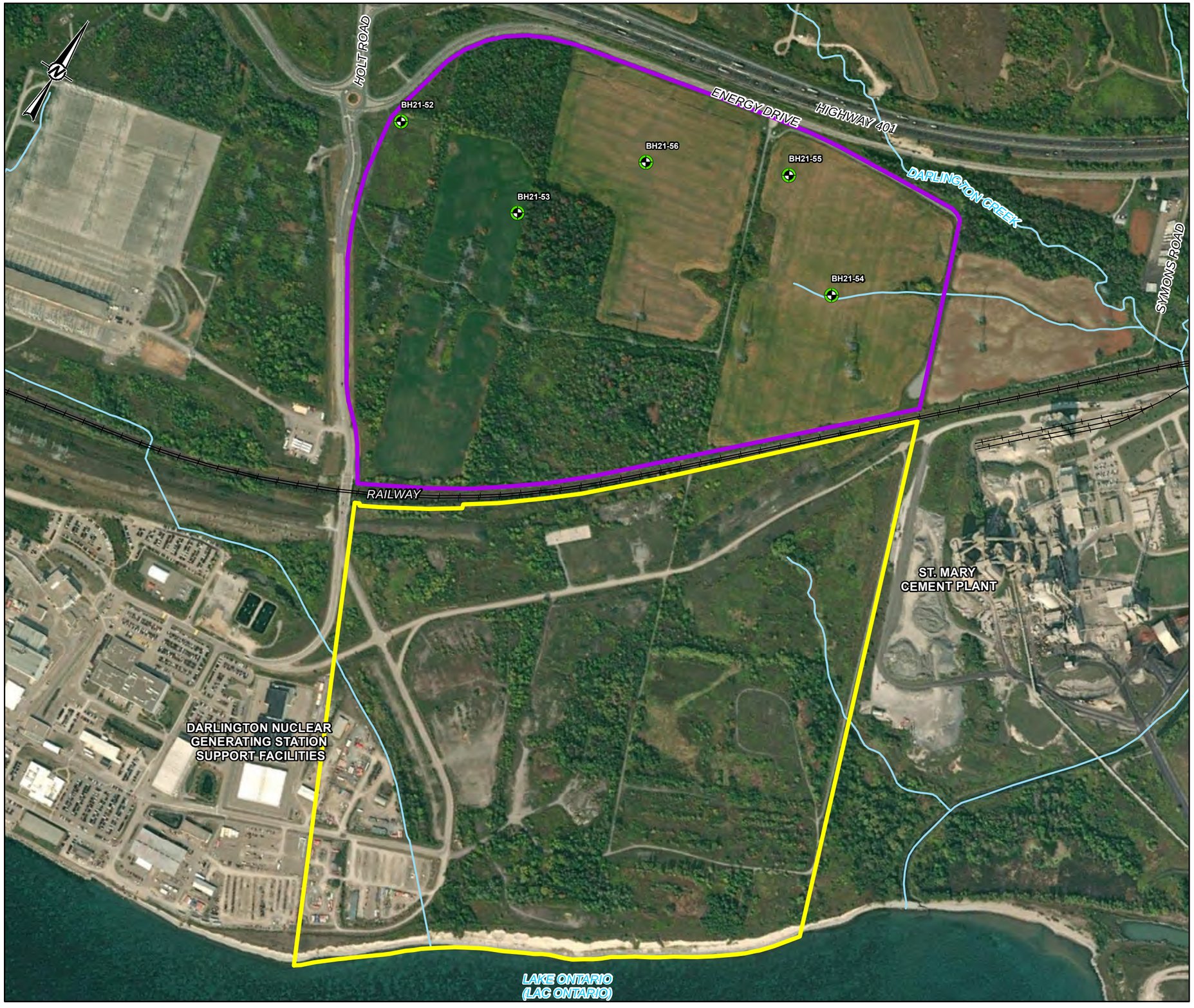

LEGEND

- BOREHOLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- RAILWAY
- WATERCOURSE
- DNNP LANDS NE LANDFILL AREA
- DNNP LANDS SOUTH

0 200 400

1:7,500 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2019
PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
BASE IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
BOREHOLE EXCEEDANCES – HYDRIDE-FORMING METALS – DNNP LANDS NE LANDFILL AREA

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	5.2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

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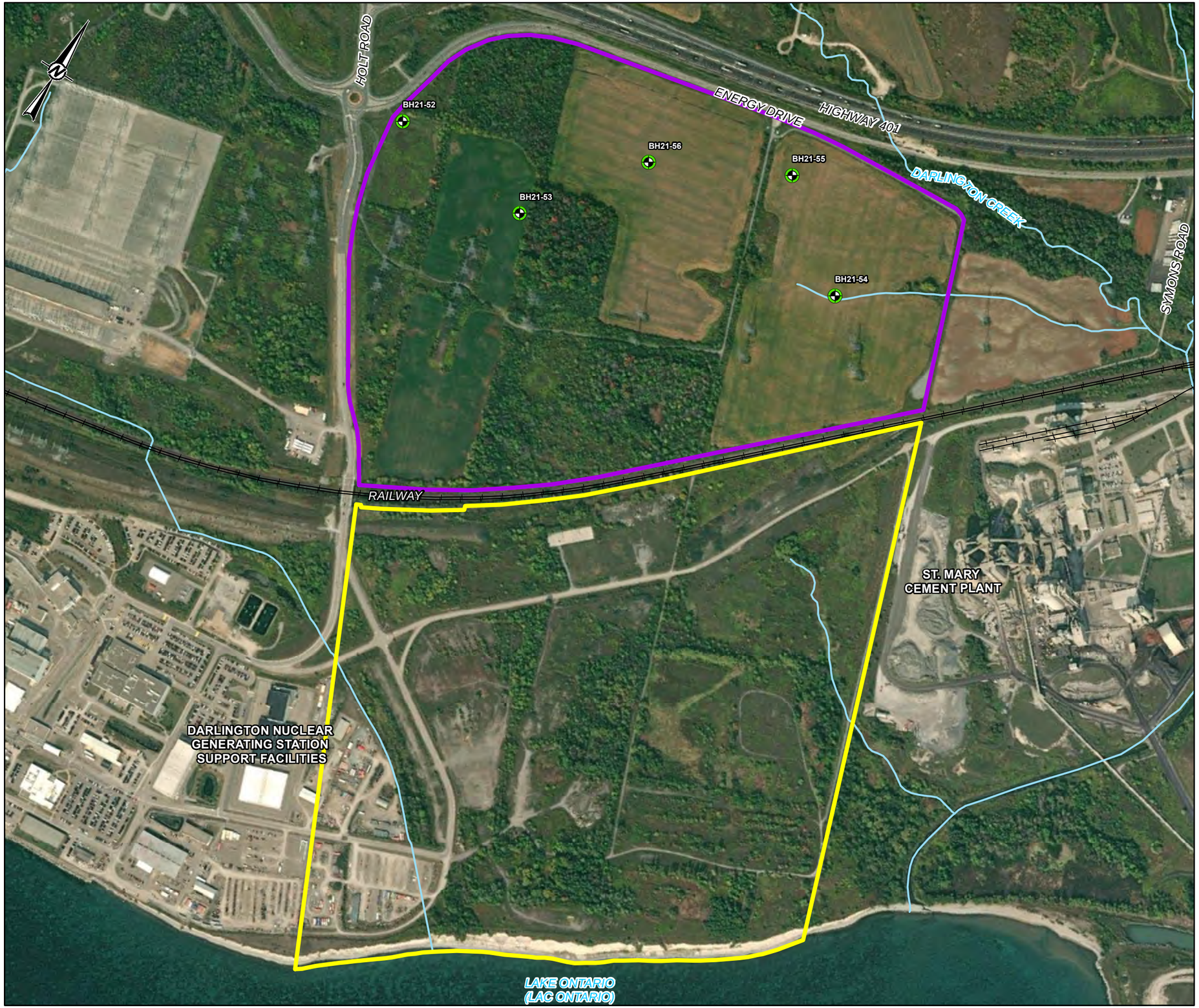

LEGEND

- BOREHOLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- RAILWAY
- WATERCOURSE
- DNNP LANDS NE LANDFILL AREA
- DNNP LANDS SOUTH

0 200 400

1:7,500 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2019
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PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
BOREHOLE EXCEEDANCES – ORGANOCHLORINE PESTICIDES – DNNP LANDS NE LANDFILL AREA

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	5.3

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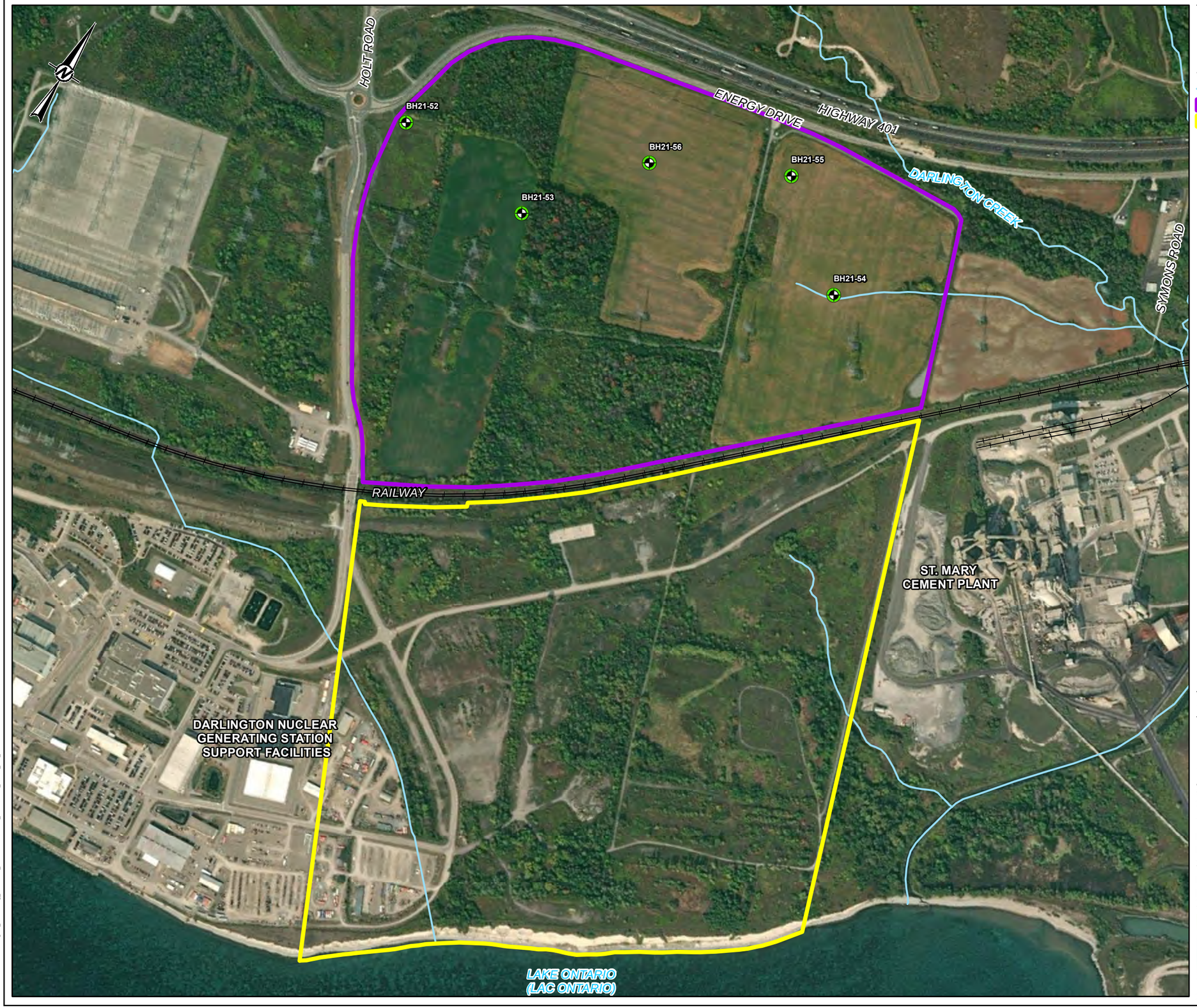

LEGEND

- BOREHOLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- RAILWAY
- WATERCOURSE
- DNNP LANDS NE LANDFILL AREA
- DNNP LANDS SOUTH

0 200 400

1:7,500 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

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PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
BOREHOLE EXCEEDANCES – OTHER REGULATED PARAMETERS – DNNP LANDS NE LANDFILL AREA

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	5.4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25mm
0

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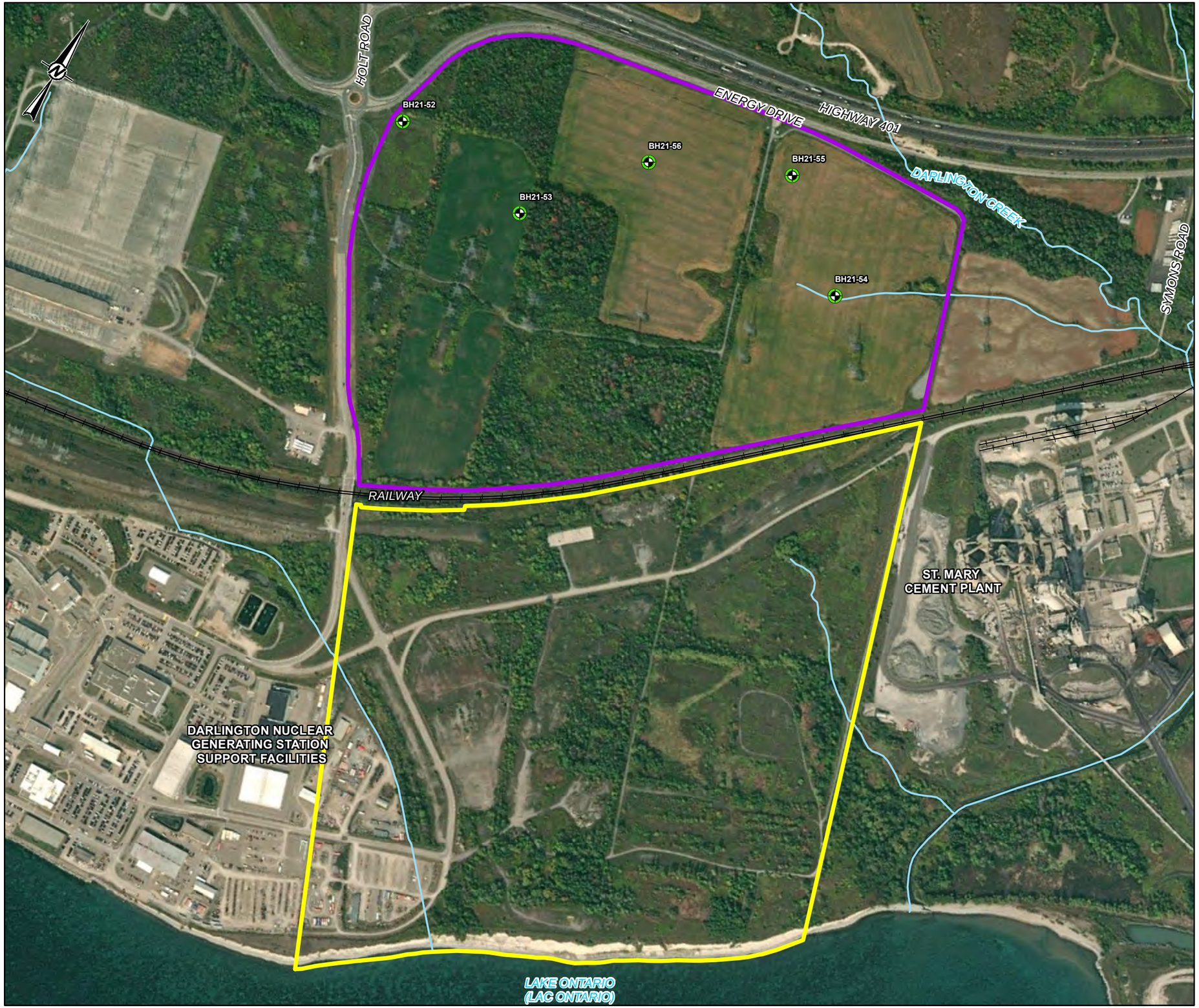

LEGEND

- BOREHOLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- RAILWAY
- WATERCOURSE
- DNNP LANDS NE LANDFILL AREA
- DNNP LANDS SOUTH

0 200 400

1:7,500 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

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PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
BOREHOLE EXCEEDANCES – PETROLEUM HYDROCARBONS – DNNP LANDS NE LANDFILL AREA

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	5.5

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

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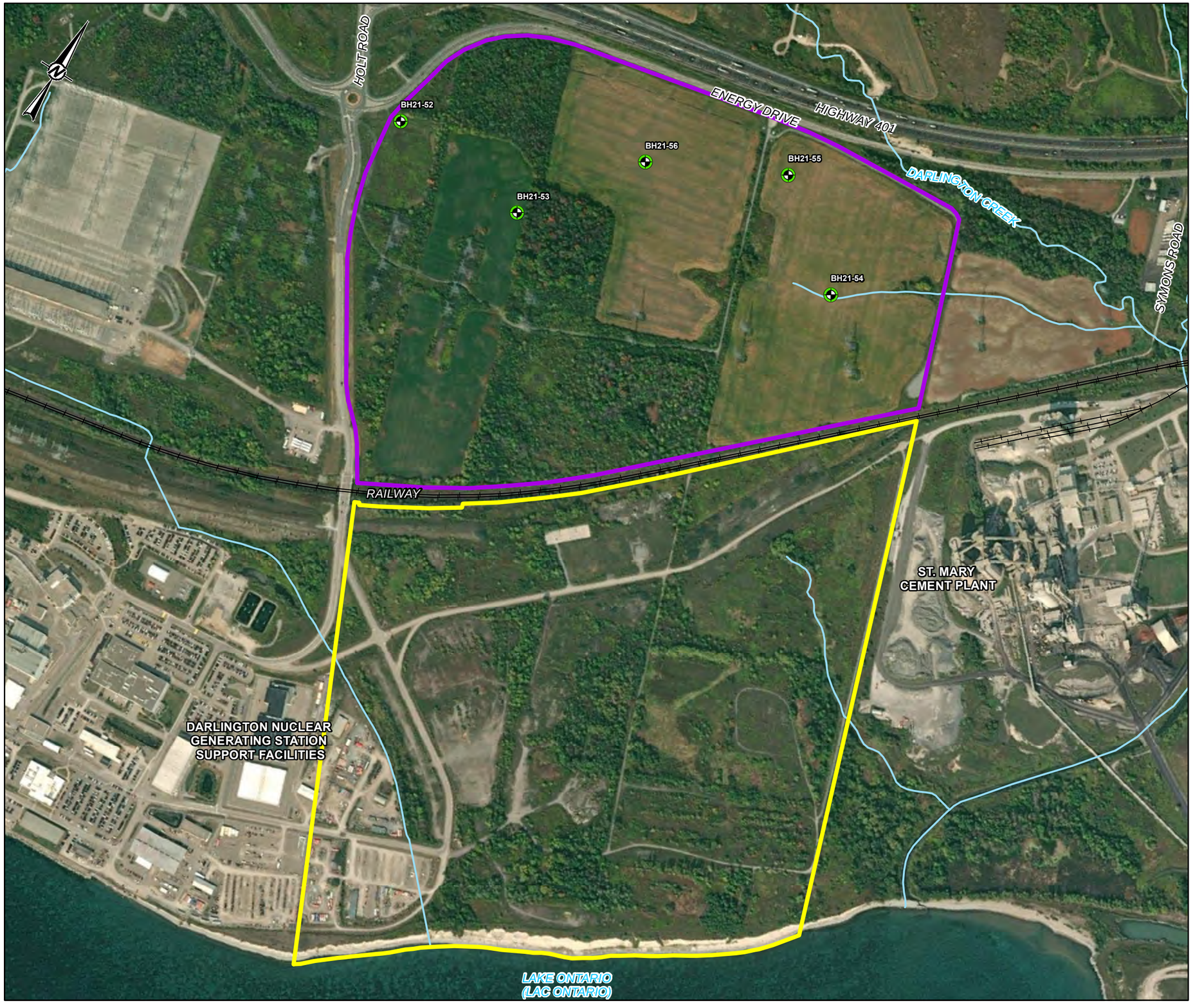

LEGEND

- BOREHOLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- RAILWAY
- WATERCOURSE
- DNNP LANDS NE LANDFILL AREA
- DNNP LANDS SOUTH

0 200 400

1:7,500 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

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PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
BOREHOLE EXCEEDANCES – POLYCHLORINATED BIPHENYLS – DNNP LANDS NE LANDFILL AREA

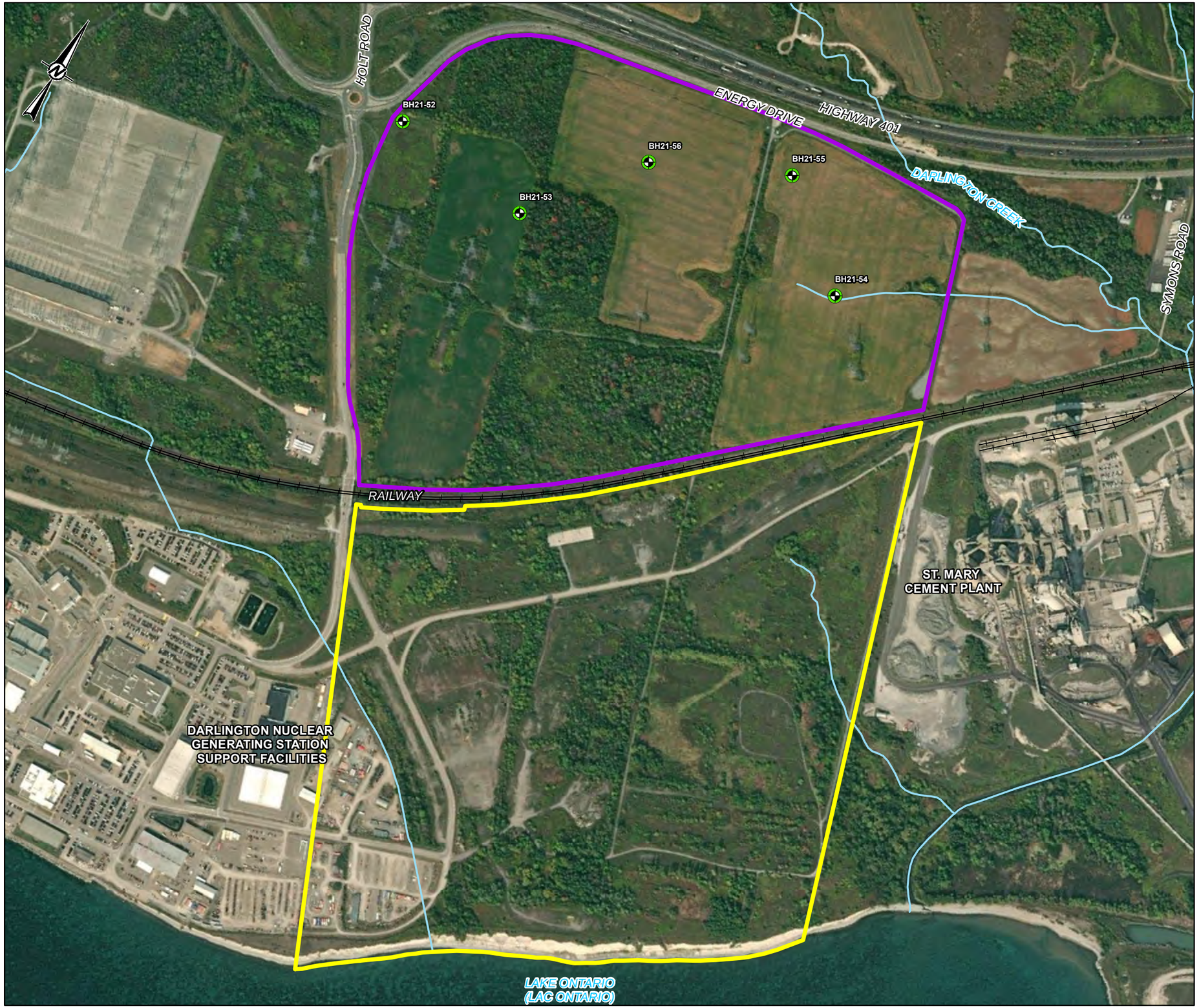
CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	5.6

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
0 25mm

PATH: S:\Clients\OPG\Darlington\n_Generating_Station\99_PRO\20368429\40_PROD\0002_DNNP_Soil_Characterization\20368429-0002-HS-0005.6.mxd PRINTED ON: 2021-07-20 AT: 10:37:31 AM



LEGEND

- BOREHOLE LOCATION
- SAMPLE TESTED AND DID NOT EXCEED STANDARDS
- RAILWAY
- WATERCOURSE
- DNNP LANDS NE LANDFILL AREA
- DNNP LANDS SOUTH

0 200 400

1:7,500 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2019
PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
BASE IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
ONTARIO POWER GENERATION

PROJECT
DNNP SOIL CHARACTERIZATION
DARLINGTON NEW NUCLEAR PROJECT, CLARINGTON, ONTARIO

TITLE
BOREHOLE EXCEEDANCES – VOLATILE ORGANIC COMPOUNDS, BTEX – DNNP LANDS NE LANDFILL AREA

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-06-02
DESIGNED	JT
PREPARED	JT
REVIEWED	KB
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
20368429	0002	A	5.7

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

0 25mm

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APPENDIX A

Record of Boreholes and Test Pits

PROJECT: 20368429

RECORD OF BOREHOLE: BH21-01

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: May 4, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(SM) SAND, trace organics; brown; non-cohesive, moist, very loose		0.00	1	SS	3	ND			
1		(ML) sandy SILT, trace gravel; light brown; non-cohesive, moist, compact to very dense		0.61	2	SS	22	ND			
		(ML) SILT, trace sand; light brown; non-cohesive, dry to moist, very dense		1.22	3	SS	50	ND			
2					4	SS	50	ND			
3					5	SS	50	ND			
		END OF BOREHOLE		3.05							
4		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED: TO

PROJECT: 20368429

RECORD OF BOREHOLE: BH21-02

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: May 5, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(ML) sandy SILT, trace gravel; greyish brown; non-cohesive, moist, loose to very loose		0.00	1	SS	5	ND			
1					2	SS	59	ND			
2					3	SS	63	ND			
3					4	SS	15	ND			
					5	SS	30	ND			
		END OF BOREHOLE		3.05							
4		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
		2. Water level encountered during drilling at a depth of 1.85 m below ground surface.									
5											
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED: ED

PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-03

SHEET 1 OF 1

BORING DATE: May 4, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	FILL - (SW) SAND, trace gravel; grey; non-cohesive, moist, compact		0.00	1	SS	17	ND			
1					2	SS	26	ND			
		(CL) SILTY CLAY; light brown; slight cohesive, moist, w<PL, stiff		1.22	3	SS	12	ND			
2		- Sand lens at a depth of 1.8 m		1.83							
		(ML) sandy SILT; light brown; slight cohesive, wet, w~PL, hard		2.06	4	SS	59	ND			
		(ML) SILT, trace gravel; light brown; non-cohesive, dry to moist, very dense			5	SS	90	ND			
3		END OF BOREHOLE		2.90							
4		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes. 2. Water level encountered during drilling at a depth of 1.83 m below ground surface.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED: TD

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PROJECT: 20368429

RECORD OF BOREHOLE: BH21-04

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: May 4, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(GW) sandy GRAVEL; grey; non-cohesive, moist, very dense		0.00	1	SS	78	ND			
1		(CL) SILTY CLAY; dark rbown to light brown; cohesive, moist, w<PL, very stiff		0.61	2	SS	24	ND			
					3	SS	17	ND			
2		(ML) sandy SILT, trace gravel; light brown; non-cohesive, moist, very dense		1.83	4	SS	61	ND			
					5	SS	76	ND			
3		END OF BOREHOLE		3.05							
4		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes. 2. Water level encountered druing driliing at a depth of 1.37 m below ground surface.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-05

SHEET 1 OF 1

BORING DATE: May 4, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger, 50 mm Solid Stem Auger	(SW) gravelly SAND; light brown; non-cohesive, moist, loose		0.00							
		(CH) gravelly CLAY; grey; cohesive, dry to moist, w<PL, stiff		0.10	1	SS	9				
1					2	SS	12				
		(CH) CLAY, trace organics; dark brown; cohesive, moist, w~PL, firm		1.22	3	SS	8				
2		END OF BOREHOLE		1.83							
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Notes:

1. Record of Borehole not prepared for geotechnical engineering purposes.

DEPTH SCALE

1 : 50

GOLDER MEMBER OF WSP

LOGGED: DC

CHECKED: 174

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PROJECT: 20368429

RECORD OF BOREHOLE: BH21-06

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: May 3, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	FILL - (GW) sandy GRAVEL; brown to black; non-cohesive, dry to moist, dense		0.00	1	SS	31				
1		(CH) CLAY, trace sand; brownish; grey; cohesive, moist, w~PL, very stiff		0.61	2	SS	19				
2		(ML) CLAYEY SILT, trace sand; greyish brown; slight cohesive, moist, w<PL, very stiff		1.22	3	SS	25	ND			
					4	SS	33	ND			
3		(ML) SILT, trace sand, clay; grey; slight cohesive, moist, w<PL, firm		2.44	5	SS	17	ND			
		END OF BOREHOLE		3.05							
4		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED: ED

PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-07

SHEET 1 OF 1

BORING DATE: May 12, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(GW) sandy GRAVEL; blackish brown; non-cohesive, dry, compact		0.00	1	SS	26	⊕			
1		(ML) sandy SILT; brown to grey; non-cohesive, dry to moist, very dense to dense		0.61	2	SS	78	⊕ ND			
					3	SS	37	□ ND			
2		(CL) SILTY CLAY, trace sand; greyish brown; cohesive, moist, w<PL, stiff		1.83	4	SS	9	⊕ ND			
					5	SS	14	⊕ ND			
3		END OF BOREHOLE		3.05							
		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED: [illegible]

PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-08

SHEET 1 OF 2

BORING DATE: May 11, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(GW) sandy GRAVEL; blackish brown; non-cohesive, dry, dense		0.00	1	SS	47				
1		(SW) SILTY SAND, trace gravel; light brown to brown; non-cohesive, dry to moist, very dense to compact		0.61	2	SS	50				
					3	SS	19	ND			
2		(CL) SILTY CLAY; greyish brown; cohesive, moist, w<PL, very stiff		1.83	4	SS	5	ND			
					5	SS	13	ND			
3					6	SS	24				
4					7	SS	21	ND			
		(ML) sandy SILT; grey; slight cohesive, wet to moist, w~PL, very stiff		4.27	8	SS	6	ND			
5					9	SS	4	ND			
					10	SS	10	ND			
6					11	SS	8	ND			
7					12	SS	8	ND			
					13	SS	21	ND			
8					14	SS	34	ND			
					15	SS	42	ND			
9		END OF BOREHOLE		9.14							
		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
10		*CONTINUED NEXT PAGE*									

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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED: DT

PROJECT: 20368429

RECORD OF BOREHOLE: BH21-08

SHEET 2 OF 2

LOCATION: N ; E

BORING DATE: May 11, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
10		*--- CONTINUED FROM PREVIOUS PAGE ---*									
		2. Water level encountered during drilling at a depth of 2.44 m below ground surface.									
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19											
20											

DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-09

SHEET 1 OF 1

BORING DATE: May 7, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(SW) SAND, trace gravel; light brown; non-cohesive, moist, compact		0.00	1	SS	18				
1		(ML) CLAYEY SILT, trace sand, trace gravel; greyish brown; w<PL to w~PL, stiff		0.61	2	SS	18				
2					3	SS	21	ND			
					4	SS	11				
3					5	SS	10	ND			
		END OF BOREHOLE		3.05							
4		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
5											
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-10

SHEET 1 OF 2

BORING DATE: May 10, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger / 100 mm Hollow Stem Auger	(SW) SAND, trace silt; brown; non-cohesve, moist, loose		0.00	1	SS	8	ND			
1		(ML) sandy SILT; brownish grey; cohesive, moist, w~PL		0.61	2	SS	51				
		- Clay lens at a depth of 1.37 m			3	SS	15				
2		(CL) SILTY CLAY; light brown to grey; cohesive, moist, w<PL		1.83	4	SS	8				
					5	SS	11				
3					6	SS	18	ND			
4					7	SS	7	ND			
					8	SS	3				
5		(ML) sandy SILT, trace gravel; grey; non-cohesive, loose to very dense		4.88	9	SS	7				
					10	SS	3				
6					11	SS	15	ND			
7					12	SS	10	ND			
					13	SS	52	ND			
8					14	SS	72				
					15	SS	75	ND			
9		END OF BOREHOLE		9.14							
		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
10		*CONTINUED NEXT PAGE*									

DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-10

BORING DATE: May 10, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		--- CONTINUED FROM PREVIOUS PAGE ---									
10		2. Water level encountered during drilling at a depth of 4.27 m below ground surface.									
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DEPTH SCALE

1 : 50

GOLDER MEMBER OF WSP

LOGGED: DC

CHECKED: LBI

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-11

SHEET 1 OF 1

BORING DATE: April 26, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	TOPSOIL		0.00							
		FILL - (SW) gravelly SAND; grey to brown; non-cohesive, dry, compact to dense			1	SS	30				
		(ML) sandy SILT, trace gravel; light brown; non-cohesive, moist to wet, dense to very dense		0.61	2	SS	33				
1					3	SS	56	ND			
2					4	SS	77	ND			
					5	SS	50	ND			
		END OF BOREHOLE		2.74							
3		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-12

SHEET 1 OF 1

BORING DATE: April 26, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger / 50 mm Solid Stem Auger	TOPSOIL		0.00	1	SS	50	ND			
		FILL - (GP) GRAVEL; grey; non-cohesive, dry, very dense			2	SS	50	ND			
1		(MH) CLAYEY SILT; dark brown; slightly cohesive, w<PL, moist, loose to compact		1.22	3	SS	5	ND			
2					4	SS	14	ND			
		(ML) SILT, trace gravel; light brown; non-cohesive, moist, very dense		2.44	5	SS	64	ND			
3		END OF BOREHOLE		3.05							
		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-13

SHEET 1 OF 2

BORING DATE: April 28, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0		GROUND SURFACE									
		TOPSOIL		0.00							
	Rotary Power Auger 100 mm Hollow Stem Auger	(SW) gravelly SAND; brown; non-cohesive, moist, compact			1	SS	25	ND			
		(ML) sandy SILT, trace gravel; light brown; non-cohesive, dry to moist, loose to very dense		0.61	2	SS	15	ND			
1					3	SS	9	ND			
					4	SS	87	ND			
2					5	SS	50	ND			
					6	SS	50	ND			
3					7	SS	50	ND			
					8	SS	50	ND			
4					9	SS	50				
					10	SS	50	ND			
5					11	SS	50	ND			
					12	SS	50	ND			
6					13	SS	87	ND			
		(SP) fine SAND, trace silt; light brown to grey; non-cohesive, moist to wet, very dense		7.92	14	SS	85	ND			
7					15	SS	86	ND			
		END OF BOREHOLE		9.14							
8		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.									
9											
10		*CONTINUED NEXT PAGE*									

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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

PROJECT: 20368429

RECORD OF BOREHOLE: BH21-13

SHEET 2 OF 2

LOCATION: N ; E

BORING DATE: April 28, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA PLOT	SOIL PROFILE: ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected 100 200 300 400 / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected 100 200 300 400	HYDRAULIC CONDUCTIVITY, k, cm/s 10^{-6} 10^{-5} 10^{-4} 10^{-3} / WATER CONTENT PERCENT Wp W Wl 10 20 30 40	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		--- CONTINUED FROM PREVIOUS PAGE ---									
10		2. Water level encountered at a depth of 8.53 m below ground surface.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-14

SHEET 1 OF 2

BORING DATE: May 10, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 100 mm Hollow Stem Auger	(SP) gravelly SAND; dark to light brown; non-cohesive, moist to dry, dense		0.00	1	SS	42	⊕			
		(ML) sandy SILT, trace gravel; greyish brown; non-cohesive, moist, dense		0.61	2	SS	39	⊕			
1		(ML) CLAYEY SILT; light brown to grey; cohesive, moist, w<PL, stiff		1.22	3	SS	14	⊕ ND			
		(ML) sandy SILT; grey; cohesive, moist to wet, w<PL, hard		1.83	4	SS	4	⊕ ND			
2					5	SS	17	⊕ ND			
3					6	SS	70	⊕ ND			
					7	SS	50	⊕ ND			
4					8	SS	50	⊕ ND			
5					9	SS	34	⊕ ND			
					10	SS	37	⊕ ND			
6					11	SS	152	⊕ ND			
7					12	SS	91	⊕ ND			
					13	SS	83	⊕ ND			
8					14	SS	74	⊕ ND			
					15	SS	73	⊕ ND			
9		END OF BOREHOLE		9.14							
		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.									
10		*CONTINUED NEXT PAGE*									

DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-14

SHEET 2 OF 2

BORING DATE: May 10, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
10		*--- CONTINUED FROM PREVIOUS PAGE ---*									
		2. Water level encountered at a depth of 2.44 m below ground surface.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-15

SHEET 1 OF 1

BORING DATE: April 29, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	TOPSOIL		0.00							
		(MH) CLAYEY SILT; dark brown; slight cohesive, w<PL, moist, loose			1	SS	6	ND			
		(ML) sandy SILT; light brown; non-cohesive, moist to dry, dense to very dense		0.61	2	SS	3	ND			
1					3	SS	90	ND			
2					4	SS	50	ND			
					5	SS	50	ND			
		END OF BOREHOLE		2.59							
3		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-16

SHEET 1 OF 1

BORING DATE: April 29, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	TOPSOIL		0.00							
		FILL - (SP) SAND, trace organics, trace silt; light brown; non-cohesive, moist, very loose to loose			1	SS	1	ND			
1					2	SS	5	ND			
		(SM) SILTY SAND; light brown; non-cohesive, moist, compact		1.22	3	SS	11	ND			
2		(ML) sandy SILT, trace gravel; greyish brown; non-cohesive, moist, very dense		1.83	4	SS	85	ND			
					5	SS	94	ND			
3		END OF BOREHOLE		2.90							
		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

PROJECT: 20368429

RECORD OF BOREHOLE: BH21-17

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: May 7, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(GW) sandy GRAVEL; black to brown; non-cohesive, dry, compact		0.00	1	SS	18	⊕			
1		(CH) CLAY, trace gravel; black to brown; moist, w~PL, firm		0.61	2	SS	12	⊕ ND			
		(ML) CLAYEY SILT, trace sandl light brown to grey; moist, w~PL, firm		1.22	3	SS	14	⊕ ND			
2		(ML) sandy SILT; greyish brown; moist, w<PL, very stiff		1.83	4	SS	21	⊕ ND			
					5	SS	15	⊕ ND			
3		END OF BOREHOLE Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.		3.05							
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

RECORD OF BOREHOLE: BH21-18

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: May 6, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger; 50 mm Solid Stem Auger	FILL - (GW) sandy GRAVEL; black; non-cohesive, dry, compact		0.00	1	SS	29	ND			
1		(ML) sandy SILT; brown; non-cohesive, moist, compact		0.61	2	SS	21	ND			
		(ML) CLAYEY SILT; greyish brown; moist, w<PL, firm		1.22	3	SS	12	ND			
2		(ML) sandy SILT; greyish brown; moist, w<PL, firm to stiff		1.83	4	SS	20	ND			
					5	SS	13	ND			
3		END OF BOREHOLE Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.		3.05							
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10											

DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED: 191

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-19

SHEET 1 OF 1

BORING DATE: May 7, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger / 50 mm Solid Stem Auger	(GW) sandy GRAVEL; brown to black; non-cohesive, dry, compact		0.00	1	SS	18	⊕ ND, □			
1		(ML) CLAYEY SILT, trace sand; dark brown; moist, w<PL, very stiff		0.61	2	SS	19	⊕ ND, □			
2		(ML) sandy SILT, trace gravel; grey; non-cohesive, moist to dry, very dense		1.22	3	SS	50	⊕ ND, □			
					4	SS	50	⊕ ND, □			
					5	SS	50	⊕ ND, □			
3		END OF BOREHOLE		2.74							
		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

RECORD OF BOREHOLE: BH21-20

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: May 7, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(GW) sandy GRAVEL; blackish brown; non-cohesive, dry, compact		0.00	1	SS	26	⊕			
1		(ML) sandy SILT; dark brown to grey; non-cohesive, moist to wet, compact to very desne		0.61	2	SS	10	□ ⊕			
2					3	SS	45	⊕			
					4	SS	91	⊕ *ND*			
					5	SS	97	⊕			
3		END OF BOREHOLE		2.90							
4		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.									
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9											
10											

DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-21

SHEET 1 OF 1

BORING DATE: April 26, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger / 50 mm Solid Stem Auger	FILL - (SW) gravelly SAND, trace silt; grey; non-cohesive, dry, dense		0.00	1	SS	48				
1		(ML) sandy SILT, trace gravel; light brown; non-cohesive, dry to moist, compact to very dense		0.61	2	SS	15	⊕			
		- Sand lens at a depth of 1.32 m			3	SS	95	⊕ ND			
2					4	SS	50	⊕ ND			
					5	SS	97	⊕			
3		END OF BOREHOLE		2.77							
		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

RECORD OF BOREHOLE: BH21-22

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: April 22, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	GRAVEL		0.00							
		(SM) SILTY SAND, trace gravel; brown to grey; cohesive, moist, loose to very dense			1	SS	22	ND			
1					2	SS	86	ND			
					3	SS	50	ND			
2					4	SS	7	ND			
					5	SS	4	ND			
3		END OF BOREHOLE		3.05							
		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-23

SHEET 1 OF 1

BORING DATE: May 3, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(ML) CLAYEY SILT, trace sand; dark brown; slight cohesive, moist, w<PL, firm		0.00	1	SS	6	ND			
1		(CL) SILTY CLAY; brownish black to greyish brown; slightly cohesive, w<PL, very stiff		0.61	2	SS	12	ND			
					3	SS	18	ND			
2		(ML) CLAYEY SILT; greyish brown; slight cohesive, moist, w<PL, very stiff		1.83	4	SS	22	ND			
3		(CH) CLAY; grey; cohesive, moist, w~PL, stiff		2.44	5	SS	8	ND			
		END OF BOREHOLE		3.05							
4		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-24

SHEET 1 OF 1

BORING DATE: May 3, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(GW) sandy GRAVEL, trace organics; grey; non-coehsive, moist, loose		0.00	1	SS	8	⊕			
1		(ML) CLAYEY SILT, trace sand, trace organics; dark brown to greyish brown; slight cohesive, moist, w<PL, stiff		0.61	2	SS	7	⊕ ND			
					3	SS	17	⊕ ND			
2		(CL) SILTY CLAY; brown to grey; cohesive, moist, w<PL to w~PL, very stiff		1.83	4	SS	26	⊕ ND			
					5	SS	25	⊕ ND			
3		END OF BOREHOLE Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.		3.05							
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-25

SHEET 1 OF 1

BORING DATE: April 27, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(SC) CLAYEY SAND; dark brown; slight cohesive, w<PL, moist, loose		0.00	1	SS	5	ND			
1		(SW) gravelly SAND; dark brown; non-cohesive, moist, loose		0.61	2	SS	8	ND			
2		(MH) CLAYEY SILT; greyish brown; slight cohesive, w<PL, moist, very loose to compact		1.22	3	SS	2	ND			
					4	SS	18	ND			
3		(ML) SILT, trace sand; light brown; non-cohesive, moist, compact		2.44	5	SS	26	ND			
		END OF BOREHOLE		3.05							
4		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-26

SHEET 1 OF 1

BORING DATE: April 23, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(SP) SILTY SAND; trace gravel, trace organics; brown; non-cohesive, moist, very loose to loose		0.00	1	SS	4	⊕ ND			
1					2	SS	12	⊕			
2		(ML) SILT; trace sand, trace gravel; grey; moist to wet, very loose to medium dense		1.22	3	SS	18	□ ⊕			
					4	SS	2	⊕ ND			
3					5	SS	0	⊕			
		END OF BOREHOLE		3.05							
4		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-27

SHEET 1 OF 1

BORING DATE: April 27, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	TOPSOIL		0.00							
		FILL - (GW) sandy GRAVEL; grey; non-cohesive, dry, dense			1	SS	43	ND			
1		(MH) CLAYEY SILT, trace gravel; grey to black; slight cohesive, w<PL, moist, compact		0.61	2	SS	21				
		(SC) CLAYEY SAND; light brown; slight cohesive, w<PL, moist, very loose		1.22	3	SS	3	ND			
2		(SP) SILTY SAND; light brown; non-cohesive, moist to wet, dense to very dense		1.83	4	SS	49	ND			
					5	SS	50	ND			
		END OF BOREHOLE		2.74							
3		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
		2. Water level encountered during drilling at a depth of 2.44 m below ground surface.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED: 200

PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-28

SHEET 1 OF 1

BORING DATE: April 27, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	TOPSOIL		0.00							
		FILL - (SP) SILTY SAND, trace gravel; brown; non-cohesive, moist, compact			1	SS	23	□⊕			
1		(MH) CLAYEY SILT, trace sand; brown; slght cohesive, w<PL, moist, compact		0.61	2	SS	11	⊕			
		(ML) SILT, trace gravel; light brown; non-cohesive, moist to dry, very dense		1.22	3	SS	72	⊕			
2					4	SS	77	⊕			
					5	SS	88	⊕			
3		END OF BOREHOLE		2.90							
		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-29

SHEET 1 OF 1

BORING DATE: April 27, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	FILL - (SW) gravelly SAND; dark brown; non-cohesive, dry, dense		0.00	1	SS	41				
1		FILL - (GC) CLAYEY GRAVEL; black; cohesive, w=PL, moist, loose		0.61	2	SS	5	ND			
2		(ML) SILT, trace gravel; light brown; non-cohesive, moist to dry, compact to dense		1.22	3	SS	10	ND			
					4	SS	19	ND			
3					5	SS	90	ND			
		END OF BOREHOLE		3.05							
4		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED: 202

PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-30

SHEET 1 OF 1

BORING DATE: April 23, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(SP) SAND, trace organics, trace gravel; dark brown; moist, medium dense		0.00	1	SS	11	ND			
					2	SS	22	ND			
1		(ML) sandy SILT, trace organics, trace gravel; grey; non-cohesive, moist, loose to dense		1.22	3	SS	9	ND			
					4	SS	38	ND			
2		(OL) sandy SILT, trace gravel; blackish grey; low cohesive, moist, loose to very dense		2.44	5	SS	5				
					6	SS	83	ND			
3		(ML) sandy SILT, trace gravel; light brown to grey; non-cohesive, moist, very dense to loose		3.66	7	SS	83				
					8	SS	78	ND			
4					9	SS	65	ND			
					10	SS	7	ND			
5		END OF BOREHOLE BACK FILLED WITH TAILINGS		5.79							
6		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes. 2. Borehole caved to a depth of 3.96 m upon completion of drilling.									
7											
8											
9											
10											

DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

RECORD OF BOREHOLE: BH21-31

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: May 3, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(SW) SAND, trace gravel; grey; non-cohesive, moist to wet, loose		0.00	1	SS	6	ND			
1		(CL) SILTY CLAY, trace sand; light brown to grey; moist to wet, w~PL, firm		0.61	2	SS	6				
2					3	SS	21	ND			
					4	SS	16	ND			
3		(ML) sandy SILT; grey; moist, w>PL, soft		2.44	5	SS	6	ND			
		END OF BOREHOLE		3.05							
4		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes. 2. Water level encountered during drilling at a depth of 3.05 m below ground surface.									
5											
6											
7											
8											
9											
10											

DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED: 204

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PROJECT: 20368429

RECORD OF BOREHOLE: BH21-32

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: April 30, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger / 50 mm Solid Stem Auger	TOPSOIL		0.00							
		NO SAMPLE			1	SS	8				
1		(ML) sandy SILT, trace gravel; light brown to grey; non-cohesive, moist to dry, compact to very dense		0.61	2	SS	20	ND			
					3	SS	74	ND			
2					4	SS	84	ND			
					5	SS	68	ND			
3		END OF BOREHOLE		2.74							
		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
4											
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED: 205

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-33

SHEET 1 OF 1

BORING DATE: April 30, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(SP) SAND, some topsoil; dark brown; slight cohesive, w<PL, moist, loose		0.00	1	SS	6	ND			
1		(CL) SILTY CLAY; dark brown; cohesive, w~PL, moist, loose		0.61	2	SS	8	ND			
		(ML) sandy SILT, trace gravel		1.22	3	SS	65	ND			
2					4	SS	71				
					5	SS	99	ND			
3		END OF BOREHOLE		2.82							
		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-34

SHEET 1 OF 1

BORING DATE: April 30, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger / 50 mm Solid Stem Auger	FILL - (SW) gravelly SAND; brown; non-cohesive, moist, compact		0.00	1	SS	16	ND			
1		(CL) SILTY CLAY; brown; cohesive, w~PL, moist, loose		0.61	2	SS	8				
		(ML) sandy SILT, trace gravel; light brown; non-cohesive, moist, compact to very dense		1.22	3	SS	30	ND			
2					4	SS	85	ND			
					5	SS	63	ND			
3		END OF BOREHOLE		2.74							
		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

RECORD OF BOREHOLE: BH21-35

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: April 30, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger / 50 mm Solid Stem Auger	TOPSOIL		0.00							
		NO SAMPLE			1	SS	7	ND			
1		(CL) SILTY CLAY, trace gravel; dark brown; cohesive, w~PL, moist to wet, very loose to compact		0.61	2	SS	3	ND			
		(ML) sandy SILT, trace gravel; light brown to grey; non-cohesive, moist, compact to very dense		1.37	3	SS	27	ND			
2					4	SS	85	ND			
					5	SS	50	ND			
		END OF BOREHOLE		2.59							
3		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes. 2. Water level encountered during drilling at a depth of about 2.44 m below ground surface.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-36

SHEET 1 OF 1

BORING DATE: April 8, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 110 mm Hollow Stem Auger	FILL - (SM) SILTY SAND, trace gravel; light brown; non-cohesive, dry, compact to dense		0.00	1	SS	30	ND			
1		(SM) SILTY SAND, trace clay; light brown; non-cohesive, moist, compact		0.61	2	SS	26	ND			
2		(SM) SILTY SAND, trace cobble; light brown with grey streaks; non-cohesive, moist to wet, dense to very dense		1.22	3	SS	45	ND			
					4	SS	76	ND			
		(SM) SILTY SAND, trace cobble; greyish brown; non-cohesive, moist to dry, very dense		2.44	5	SS	97	ND			
3		END OF BOREHOLE		2.84							
4		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes. 2. Water level encountered during drilling at a depth of about 2.74 m below ground surface.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-37

SHEET 1 OF 1

BORING DATE: April 22, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger; 100 mm Hollow Stem Auger	(SP) SILTY SAND, trace gravel; greyish brown; moist, medium dense to very dense		0.00	1	SS	19	ND			
					2	SS	73	ND			
1		(ML) SILT, trace sand, trace gravel; greyish brown; non-cohesive, moist, very dense		1.22	3	SS	71	ND			
					4	SS	77	ND			
2					5	SS	95	ND			
					6	SS	52	ND			
3					7	SS	65	ND			
					8	SS	75	ND			
4					9	SS	69	ND			
					10	SS	92	ND			
5					11	SS	82				
					12	SS	95	ND			
6					13	SS	86	ND			
		(GM) SILTY GRAVEL; greyish brown to brown; non-cohesive, wet, very dense		7.92	14	SS	50	ND			
7					15	SS	70	ND			
		END OF BOREHOLE BACKFILLED WITH CUTTINGS		8.84							
8		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.									
9											
10											

DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-38

SHEET 1 OF 1

BORING DATE: April 21, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	50 mm Solid Stem Auger	(SP) SAND, trace gravel; greyish brown; non-cohesive, moist, medium dense		0.00	1	SS	22	ND			
1	50 mm Solid Stem Auger	(ML) sandy SILT, trace gravel; light brown; non-cohesive, moist to wet, dense to very dense		0.61	2	SS	37	ND			
					3	SS	65	ND			
2					4	SS	80	ND			
		(SP) coarse SAND; dark brown; non-cohesive, moist, very dense		2.44	5	SS	50				
3	Rotary Power Auger / 110 mm Hollow Stem Auger	(ML) SILT, trace sand, trace gravel; light brown to grey; non-cohesive, moist to wet, very dense		3.05	6	SS	50	ND			
4					7	SS	94	ND			
					8	SS	83	ND			
5					9	SS	83	ND			
					10	SS	77	ND			
6					11	SS	82	ND			
		END OF BOREHOLE BACKFILLED WITH TAILINGS		6.71							
7		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

RECORD OF BOREHOLE: BH21-39

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: April 9, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0		GROUND SURFACE									
0	Rotary Power Auger 110 mm Hollow Stem Auger	(CL) SILTY CLAY; greyish brown; cohesive, w<PL, moist to dry, very stiff		0.00	1	SS	21	ND			
1		(SM) sandy SILT, trace clay, trace cobble, trace gravel; greyish brown, orange staining at 2.44 m depth; dry to moist, very dense		0.61	2	SS	56	ND			
					3	SS	55	ND			
2					4	SS	96	ND			
					5	SS	70				
		END OF BOREHOLE		2.55							
3		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-40

SHEET 1 OF 1

BORING DATE: April 8, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 110 mm Hollow Stem Auger	FILL - (SM) SILTY SAND, trace organics, dark brownish black; non-cohesive, dry to moist, compact		0.00	1	SS	17	⊕ ND			
1					2	SS	14	□ ⊕			
2		(SM) SILTY SAND, trace cobble; grey; non-cohesive, moist, very dense		1.22	3	SS	70	⊕			
					4	SS	92	⊕ ND			
		(SM) SILTY SAND, trace cobble; brownish grey; non-cohesive, dry, very dense		2.44	5	SS	80	⊕ ND			
3		END OF BOREHOLE		2.67							
4		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes. 2. Water level encountered during drilling at a depth of 1.52 m below ground surface.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

RECORD OF BOREHOLE: BH21-41

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: April 9, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 110 mm Hollow Stem Auger	FILL - (SM) SILTY SAND, trace cobble, trace gravel; light brown; non-cohesive, dry, dense		0.00	1	SS	35	ND			
1					2	SS	49	ND			
		(SM) SILTY SAND, trace gravel, trace cobble; grey; non-cohesive, dry to moist, very dense		1.22	3	SS	76	ND			
2					4	SS	94	ND			
					5	SS	84	ND			
3					6	SS	75	ND			
					7	SS	90	ND			
4		END OF BOREHOLE Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.		3.84							
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-42

SHEET 1 OF 2

BORING DATE: May 5-6, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger / 100 mm Hollow Stem Auger	(GW) GRAVEL, trace organics; brown; non-cohesive, moist, compact		0.00	1	SS	16	ND			
1		(ML) CLAYEY SILT, trace gravel, trace organics; light brown; slight cohesive, moist, w<PL, stiff		0.61	2	SS	20	ND			
2		(ML) sandy SILT, trace gravel; light brown to grey; non-cohesive, moist to wet, dense to very dense		1.22	3	SS	39	ND			
					4	SS	90	ND			
					5	SS	90	ND			
3					6	SS	80	ND			
					7	SS	80	ND			
4					8	SS	50	ND			
					9	SS	50	ND			
5					10	SS	50				
					11	SS	50	ND			
6					12	SS	94	ND			
					13	SS	88	ND			
7					14	SS	90	ND			
8		(ML) SILT, trace sand; grey; slight cohesive, moist, w<PL, hard		7.92	15	SS	96	ND			
9		END OF BOREHOLE Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.		9.14							
10		*CONTINUED NEXT PAGE*									

DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

RECORD OF BOREHOLE: BH21-42

SHEET 2 OF 2

LOCATION: N ; E

BORING DATE: May 5-6, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
10		*--- CONTINUED FROM PREVIOUS PAGE ---*									
		2. Water level encountered during drilling at a depth of about 4.88 m below ground surface.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-43

SHEET 1 OF 1

BORING DATE: May 6, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger / 100 mm Hollow Stem Auger	(SW) SAND, trace gravel; grey to brown; non-cohesive, moist, loose		0.00	1	SS	6	⊕ ND			
1		(CL) SILTY CLAY, trace sand; light brown; moist, w<PL, firm		0.61	2	SS	13	⊕ ND			
2		(ML) sandy SILT; light brown to grey; non-cohesive, moist, compact to very dense		1.22	3	SS	16	⊕ ND			
					4	SS	33	⊕			
3					5	SS	53	⊕			
					6	SS	80	⊕			
4					7	SS	77	⊕			
					8	SS	59	⊕			
5					9	SS	72	□⊕			
					10	SS	50	⊕			
6		END OF BOREHOLE		5.64							
		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
		2. Water level encountered during drilling at a depth 5.49 m below ground surface.									
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8											
9											
10											

DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-44

SHEET 1 OF 1

BORING DATE: May 10, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger / 50 mm Solid Stem Auger	(SP) SAND, trace gravel; brown; non-cohesive, moist, compact		0.00	1	SS	17	ND			
1		(SM) SILTY SAND, trace gravel; brown; non-cohesive, moist, compact		0.61	2	SS	27	ND			
		(CL) SILTY CLAY, trace sand, trace gravel; greyish brown; slight cohesive, moist, compact		1.22	3	SS	21	ND			
2		(ML) sandy SILT, trace clay; grey; slightly cohesive, moist to wet, w<PL		1.83	4	SS	7	ND			
					5	SS	8	ND			
3					6	SS	8	ND			
4					7	SS	25	ND			
					8	SS	91	ND			
5					9	SS	68	ND			
					10	SS	88	ND			
6		END OF BOREHOLE		6.10							
7		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes. 2. Water level encountered during drilling at a depth of about 3.05 m below ground surface.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

RECORD OF BOREHOLE: BH21-45

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: May 12, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	(ML) sandy SILT, trace gravel; light brown; cohesive, moist, w<PL, very stiff		0.00	1	SS	15	ND			
1					2	SS	29	ND			
		(SW) SAND, trace gravel; brown; non-cohesive, moist, compact		1.22	3	SS	12	ND			
2		(ML) sandy SILT, trace gravel; brown to grey; non-cohesive, moist, loose to dense		1.83	4	SS	21	ND			
					5	SS	7	ND			
3		END OF BOREHOLE		3.05							
4		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

RECORD OF BOREHOLE: BH21-46

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: May 12, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger / 50 mm Solid Stem Auger	(CH) CLAY, trace sand, trace gravel, trace organics; brown to greyish brown; cohesive, moist to wet, w<PL to w~PL, stiff		0.00	1	SS	4	ND			
1					2	SS	10	ND			
					3	SS	15	ND			
2		(SP) fine SAND; brown; non-cohesive, wet, compact		1.83	4	SS	13	ND			
					5A	SS	31				
3		(ML) sandy SILT; greyish brown; cohesive, w<PL, moist, hard		2.69	5B						
		END OF BOREHOLE		3.05							
4		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-47

SHEET 1 OF 1

BORING DATE: May 12, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger; 50 mm Solid Stem Auger	(SW) SILTY SAND, trace organics; greyish brown; non-cohesive, dry to moist, very loose		0.00	1	SS	4	ND			
1					2	SS	3	ND			
		(CL) SILTY CLAY, trace sand; brown to grey; moist to wet, w<PL to w~PL, stiff		1.22	3	SS	14	ND			
2					4	SS	9	ND			
					5	SS	9	ND			
3		(GW) sandy GRAVEL; light brown; non-cohesive, moist, dense		3.05	6	SS	39	ND			
		(CL) SILTY CLAY; brown to greyish brown; cohesive, moist, w<PL, stiff		3.66	7	SS	6	ND			
4					8	SS	19	ND			
5		(ML) sandy SILT, trace gravel; brown to grey; cohesive, w<PL, hard		4.88	9	SS	52	ND			
					10	SS	91	ND			
6		END OF BOREHOLE Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes. 2. Water level encountered during drilling at a depth 2.74 m below ground surface.		5.79							
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-48

SHEET 1 OF 1

BORING DATE: April 29, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	TOPSOIL		0.00							
		FILL - (SW) SAND; light brown; non-cohesive, moist, loose			1	SS	2	ND			
1		(SP) fine SAND; light brown to grey; non-cohesive, moist, compact		0.61	2	SS	13	ND			
		- Coarse sand lens at a depth of 0.91 m									
2		(SM) SILTY SAND; ight brown; non-cohesive, moist, very dense		1.22	3	SS	65	ND			
					4	SS	90	ND			
		(ML) sandy SILT; light brown to grey; non-cohesive, moist, very dense		2.44	5	SS	87	ND			
3		END OF BOREHOLE		2.90							
		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-49

SHEET 1 OF 1

BORING DATE: April 28, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	FILL - (SP) SILTY SAND, trace gravel; light brown; non-cohesive, moist, dense		0.00	1	SS	42	ND			
1		(MH) CLAYEY SILT, trace sand; dark brown; slight cohesive, w<PL, moist, compact		0.61	2	SS	14	ND			
2		(ML) sandy SILT, trace gravel; light brown; non-cohesive, moist to dry, compact to very dense		1.22	3	SS	23	ND			
					4	SS	94	ND			
					5	SS	50	ND			
		END OF BOREHOLE		2.59							
3		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
		2. Water level encountered during drilling at a depth 2.13 m below ground surface.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-50

SHEET 1 OF 1

BORING DATE: April 29, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger / 50 mm Solid Stem Auger	(SP/SC) SAND, some clay; greyish brown; slight cohesive, w<PL, moist, loose		0.00	1	SS	8	ND			
1		(ML) sandy SILT, trace gravel; grey; non-cohsive, moist to wet, loose to very dense		0.61	2	SS	86	ND			
					3	SS	40	ND			
2					4	SS	7	ND			
					5	SS	15	ND			
3		END OF BOREHOLE		3.05							
4		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes. 2. Water level encountered during drilling at a depth 1.83 m below ground surface.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

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PROJECT: 20368429

RECORD OF BOREHOLE: BH21-51

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: April 21, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		0.00							
0	Rotary Power Auger 50 mm Solid Stem Auger	TOPSOIL (0.09)		0.09							
		(GW) sandy GRAVEL; greyish brown; non-cohesive, dry to moist, medium dense			1	SS	17	ND			
		(ML) sandy SILT; brown; non-cohesive, dry to moist, very dense		0.61	2	SS	78	ND			
1					3	SS	50				
2					4	SS	57	ND			
					5	SS	72				
		END OF BOREHOLE BACKFILLED WITH TAILINGS		2.79							
3		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-52

SHEET 1 OF 1

BORING DATE: May 14, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	TOPSOIL - (SW) SAND, some organics; dark brown; cohesive, moist, w~PL		0.00	1	SS	5	ND			
1		(ML) sandy SILT; brown; slight cohesive, moist, w<PL		0.61	2	SS	16	ND			
		(SP) fine SAND; brown; non-cohesive, wet, compact to dense - Sand lens at a depth of 1.22 m		1.22	3	SS	17	ND			
2					4	SS	45	ND			
		(ML) sandy SILT, trace gravel; brown; slight cohesive, moist, w<PL		2.44	5	SS	82	ND			
3		END OF BOREHOLE		2.90							
4		Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes. 2. Water level encountered during drilling at a depth 1.83 m below ground surface.									
5											
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-53

SHEET 1 OF 1

BORING DATE: May 14, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger / 50 mm Solid Stem Auger	TOPSOIL - (SW) SAND, trace organics, trace silt; dark brown; non-cohesive, moist, very loose		0.00	1	SS	4	⊕ ND			
1		(SP) fine SAND, trace organics; light brown; non-cohesive, moist, compact		0.61	2	SS	20	⊕ ND			
2		(ML) sandy SILT; light brown to grey; slight cohesive, moist, w<PL		1.22	3	SS	61	⊕ ND			
					4	SS	95	⊕ ND			
					5	SS	91	⊕ ND			
3		END OF BOREHOLE		2.74							
4		Notes:									
5		1. Record of Borehole not prepared for geotechnical engineering purposes.									
6		2. Water level encountered during drilling at a depth 3.05 m below ground surface.									
7											
8											
9											
10											

DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-54

SHEET 1 OF 1

BORING DATE: May 13, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger / 50 mm Solid Stem Auger	TOPSOIL - (CL) CLAY, some organics; blackish brown; cohesive, moist, w~PL		0.00	1	SS	3	ND			
1		(CL) SILTY CLAY; light brown; cohesive, moist, w<PL		0.61	2	SS	26	ND			
2		(ML) sandy SILT, trace gravel; greyish light brown; slight cohesive, moist to dry, w~PL to w<PL		1.22	3	SS	27				
					4	SS	95	ND			
					5	SS	90	ND			
3		END OF BOREHOLE Notes: 1. Record of Borehole not prepared for geotechnical engineering purposes.		2.74							
4											
5											
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10											

DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECK

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PROJECT: 20368429

RECORD OF BOREHOLE: BH21-55

SHEET 1 OF 1

LOCATION: N ; E

BORING DATE: May 13, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	TOPSOIL - (CL) CLAY, some organics, trace sand; dark brown; cohesive, moist, w~PL		0.00	1	SS	7	ND			
1		(ML) sandy SILT, trace gravel; light brown to grey; slight cohesive, moist to dry, w<PL		0.61	2	SS	16	ND			
					3	SS	44	ND			
2					4	SS	64	ND			
					5	SS	61	ND			
3		END OF BOREHOLE		2.74							
4		Notes:									
5		1. Record of Borehole not prepared for geotechnical engineering purposes.									
6		2. Water level encountered during drilling at a depth 1.83 m below ground surface.									
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DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

PROJECT: 20368429

LOCATION: N ; E

RECORD OF BOREHOLE: BH21-56

SHEET 1 OF 1

BORING DATE: May 14, 2021

DATUM: -

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (10 20 30 40)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE									
0	Rotary Power Auger 50 mm Solid Stem Auger	TOPSOIL - (CL) SILTY CLAY; black; non-cohesive, moist, loose		0.00	1	SS	4	⊕ ND			
1		(CL) SILTY CLAY; brown; cohesive, moist, w<PL		0.61	2	SS	10	⊕ ND			
2					3	SS	23	⊕ ND			
					4	SS	24				
3					5	SS	22				
		END OF BOREHOLE		3.05							
4		Notes:									
		1. Record of Borehole not prepared for geotechnical engineering purposes.									
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10											

DEPTH SCALE

1 : 50

GOLDER
MEMBER OF WSP

LOGGED: DC

CHECKED:

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Record of Test Pits
Darlington New Nuclear Project

Location ID	Area of Potential Environmental Concern	Easting	Northing	Sample ID	Sample Date	Sample Depth		Headspace		Soil Type / Observations	Analysis
						Start (mbgs)	End (mbgs)	Hexane (ppm)	Isobutylene (ppm)		
GS21-1	APEC 1	683605.15	4860560.60	GS21-01	2021-04-16	0	0.15	0	0	Brown silty sand with trace gravel - No Odours or Staining	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-2	APEC 1	683638.43	4860579.60	GS21-02	2021-04-16	0	0.15	0	0	Brown silty sand with trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-3	APEC 6, 7	684229.08	4861004.87	GS21-03	2021-04-19	0	0.15	0	1	Light brown sand	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-4	APEC 7	684101.51	4860823.26	GS21-04	2021-04-16	0	0.15	0	1	brown sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-5	APEC 7	684152.00	4860802.19	GS21-05	2021-04-19	0	0.15	0	0	Brown topsoil, tracel gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-6	APEC 7	684180.43	4860875.57	GS21-06	2021-04-19	0	0.15	0	0	Grey sand with gravel, trace clay	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-7	APEC 7	684157.79	4860916.23	GS21-07	2021-04-16	0	0.15	0	0	Brown sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-8	APEC 7	684200.45	4860925.29	GS21-08	2021-04-19	0	0.15	0	0	Light brown sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-9	APEC 7	684195.72	4860962.35	GS21-09	2021-04-16	0	0.15	0	0	Brown sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-10	APEC 7	684188.33	4861007.89	GS21-10	2021-04-16	0	0.15	0	1	Grey sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-11	APEC 7	684211.63	4861056.36	GS21-11	2021-04-16	0	0.15	0	0	Brown sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-12	APEC 7	684132.67	4860860.23	GS21-12	2021-04-16	0	0.15	0	1	Brown sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-13	APEC 11	683998.18	4860787.36	GS21-13	2021-04-16	0	0.15	0	0	Grey silty sand with trace gravel	PCBs, PAHs
GS21-14	APEC 11	684014.35	4860810.27	GS21-14	2021-04-16	0	0.15	0	1	Greyish brown sand with gravel	PCBs, PAHs
GS21-15	APEC 13, 19b	684260.06	4860090.33	GS21-15	2021-04-20	0	0.15	0	1	Brown topsoil	OCPs , PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-16	APEC 13, 19b	684288.95	4860121.32	GS21-16	2021-04-20	0	0.15	0	0	Brown to grey topsoil with trace clay	OCPs , PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-17	APEC 13, 19b	684332.42	4860136.47	GS21-17	2021-04-20	0	0.15	0	1	Greyish brown silty topsoil	OCPs , PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-18	APEC 13, 19b	684357.70	4860167.36	GS21-18	2021-04-20	0	0.15	5	0	Brown sandy topsoil	OCPs , PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-19	APEC 13, 19b	684403.24	4860174.09	GS21-19	2021-04-20	0	0.15	0	1	Brown topsoil	OCPs , PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-20	APEC 15a	683837.11	4859951.11	GS21-20	2021-04-15	0	0.15	0	0	Dark Brown Silty Sand, Some Gravel	BTEX, PAH
GS21-21	APEC 15a	683856.68	4859902.56	GS21-21	2021-04-15	0	0.15	5	0	Light Brown Sand, some gravel	BTEX, PAH
GS21-22	APEC 15a	683883.00	4859874.47	GS21-22	2021-04-15	0	0.15	0	0	Dark brown to black sandy topsoil	BTEX, PAH
GS21-23	APEC 15a	683934.38	4859851.68	GS21-23	2021-04-15	0	0.15	5	0	Light brown sand, trace gravel	BTEX, PAH
GS21-24	APEC 15a	683977.23	4859882.17	GS21-24	2021-04-15	0	0.15	5	0	Dark brown sand, some organics	BTEX, PAH
GS21-25	APEC 15a	684010.21	4859927.73	GS21-25	2021-04-15	0	0.15	0	0	Dark brown sand with trace gravel, organics	BTEX, PAH
GS21-26	APEC 15a	684014.52	4860011.92	GS21-26	2021-04-15	0	0.15	5	0	Brown sand with some gravel, trace organics	BTEX
GS21-27	APEC 15c	684297.58	4860277.32	GS21-27	2021-04-19	0	0.15	0	0	Grey sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-28	APEC 15c	684428.53	4860314.25	GS21-28	2021-04-19	0	0.15	0	0	Brown sandy topsoil	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-29	APEC 15c	684586.21	4860484.44	GS21-29	2021-04-19	0	0.15	0	0	Dark brown sand with trace organics	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-30	APEC 15c	684418.73	4860426.86	GS21-30	2021-04-19	0	0.15	0	0	Grey sand with gravel	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-31	APEC 15d	684377.81	4860555.42	GS21-31	2021-04-19	0	0.15	0	1	Grey sand with gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-32	APEC 15d	684406.56	4860657.29	GS21-32	2021-04-19	0	0.15	0	0	Greyish brown sand with gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-33	APEC 15d	684399.60	4860601.15	GS21-33	2021-04-19	0	0.15	0	1	Grey sand with gravel	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-34	APEC 15d	683993.72	4860388.18	GS21-34	2021-04-19	0	0.15	0	0	Grey silty sand with trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-35	APEC 19a	683959.52	4860495.98	GS21-35	2021-04-19	0	0.15	0	0	Light brown sand with gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-36	APEC 19a	684000.92	4860648.34	GS21-36	2021-04-16	0	0.15	0	1	Light brown silt	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-37	APEC 19b	684272.02	4860064.94	GS21-37	2021-04-20	0	0.15	0	1	Grey gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-38	APEC 19b	684385.27	4860127.37	GS21-38	2021-04-20	0	0.15	0	1	Brown sandy topsoil	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-39	APEC 19b, 19d	684130.94	4860072.88	GS21-39	2021-04-20	0	0.15	0	0	Greyish brown topsoil with trace clay	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-40	APEC 19d	684097.07	4860085.59	GS21-40	2021-04-19	0	0.15	0	0	Light brown sand with trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-41	APEC 19d	684070.19	4860064.43	GS21-41	2021-04-20	0	0.15	0	0	Greyish brown sand with trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-42	APEC 19d	684095.50	4860027.52	GS21-42	2021-04-20	0	0.15	0	0	Brown topsoil with trace gravel	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,

Record of Test Pits
Darlington New Nuclear Project

Location ID	Area of Potential Environmental Concern	Easting	Northing	Sample ID	Sample Date	Sample Depth		Headspace		Soil Type / Observations	Analysis
						Start (mbgs)	End (mbgs)	Hexane (ppm)	Isobutylene (ppm)		
GS21-43	APEC 20	684289.88	4861123.46	GS21-43	2021-04-19	0	0.15	0	1	Brownish black topsoil	PHCs, PCBs
GS21-44	APEC 20	683657.31	4860348.06	GS21-44	2021-04-16	0	0.15	0	0	Dark brown gravel with some sand	PHCs
GS21-45	APEC 20	683766.68	4860275.50	GS21-45	2021-04-16	0	0.15	0	0	Dark brown clayey sand, some organics	PHCs
GS21-46	APEC 20	683978.19	4860144.49	GS21-46	2021-04-16	0	0.15	0	0	Light brown clayey sand	PHCs, PCBs
GS21-47	APEC 20	684013.07	4860069.64	GS21-47	2021-04-15	0	0.15	0	0	Light brown sand with trace gravel	PHCs
GS21-48	APEC 20	683727.80	4860439.95	GS21-48	2021-04-16	0	0.15	0	0	Light brown sandy silt with trace gravel	PHCs
GS21-49	APEC 20	683820.20	4860527.41	GS21-49	2021-04-16	0	0.15	5	0	Light brown sandy silt with trace gravel	PHCs, PCBs
GS21-50	APEC 20	683941.91	4860638.19	GS21-50	2021-04-16	0	0.15	0	0	Greyish brown sand with gravel	PHCs
GS21-51	APEC 20	684089.71	4860747.45	GS21-51	2021-04-16	0	0.15	0	1	Greyish brown sand with gravel,	PHCs
GS21-52	APEC 20	684345.03	4861192.54	GS21-52	2021-04-19	0	0.15	0	1	Brown topsoil	PHCs, PCBs
GS21-53	APEC 20	683563.14	4860433.78	GS21-53	2021-04-16	0	0.15	0	0	Dark brown silty sand, trace organics	PHCs

Notes
1 Easting/northing presented NAD83, Zone 17
2 mbgs metres below ground surface
3 ppm parts per million

APPENDIX B

Certificates of Analysis and Data Quality Review

TECHNICAL MEMORANDUM

DATE June 28, 2021 **Project No.** 20368429

TO Eric Hood, Ph.D., P.Eng.,QPESA

FROM Kevan Browne **EMAIL kbrowne@golder.com**

DATA QUALITY REVIEW – SOIL SAMPLES COLLECTED BETWEEN APRIL 8 AND MAY 14, 2021 FROM DARLINGTON NEW NUCLEAR PROJECT LANDS AT 1 HOLT ROAD SOUTH, BOWMANVILLE, ONTARIO

Data quality review was completed for samples collected between April 8 and May 14, 2021 from the Darlington New Nuclear Project Lands located at 1 Holt Road South in Bowmanville, Ontario. The samples were submitted to Bureau Veritas Laboratories for analysis and were reported by the laboratory as sample delivery groups (SDG) C1A5742, C1B0746, C1C0381, C1C4985, C1D2548 and C1D3619. A sample key for all samples submitted for analysis is provided in Table 1. The quality assurance criteria used to assess the data were established based on the methods of analysis.

The reported sample analytical results and the supporting quality assurance/quality control (QA/QC) data were reviewed. Evaluation of the analytical results was based on the chain of custody forms, laboratory certificates of analysis, and the electronic data deliverable submitted by the analytical laboratory. The QA/QC criteria by which the data have been assessed are outlined in the respective analytical methods and the following documents:

- "*National Functional Guidelines for Organic Data Review*", January 2017, United States Environmental Protection Agency, 540-R-2017-002.
- "*National Functional Guidelines for Inorganic Data Review*", January 2017, United States Environmental Protection Agency, 540-R-2017-001.

Field Data

Field forms documenting the sampling event were reviewed for completeness and to evaluate compliance with standard operating procedures. The findings of the review are documented in the field notes. No significant deviations from the standard operating procedures were identified that are likely to impact the validity of the analytical data.

Laboratory Quality Assurance

Electronic Data Deliverables

The reported analytical results in the EDDs were compared to those results presented in the certificate of analysis to confirm that the laboratory consistently reported the results. The reported analyte concentrations in the EDD were spot-checked and found to be identical to those results on the certificate of analysis. No revision of the EDDs was required.

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Holding Time

Sample holding times are determined by the sample collection date provided on the chain of custody document and sample analysis date provided by the laboratory. Holding time criteria for each analytical method are provided in the MECP *Analytical Protocol*.

The analytical laboratory did not identify any analyses that were completed outside the recommending holding time criteria.

Laboratory Quality Assurance

The analytical laboratory did not identify any concerns with the analytical data based on the laboratory's internal quality assurance program with the following exceptions:

- C1B0746 (GS21-11 Lab-Dup) - RPD for uranium is outside control limits. The overall quality control for this analysis meets acceptability criteria.
- C1B0746 (GS21-24) - Detection limits for 1-methylnaphthalene and 2-methylnaphthalene were raised due to matrix interferences. The RDL is below the applicable Table 3 site condition standard.
- C1B0746 (Dup 3) - Surrogate recovery for decachlorobiphenyl was above the upper control limit. This may represent a high bias in the results. The reported sample concentrations are all below the reportable detection limits.
- C1C0381 (BH21-11-2) - Surrogate recovery for D5-nitrobenzene was below the lower control limit due to matrix interference. This may represent a low bias in some semi-volatile results. The reported concentrations of all semi-volatile parameters were below the reportable detection limits.
- C1C0381 (Matrix Spike) - The recovery for chromium VI was below the lower control limit. This may be due in part to the reducing environment of the sample. Chromium VI was not detected in any sample.
- C1C4985 (Dup 15, BH21-5-2) - Surrogate recovery decachlorobiphenyl was above the upper control limit. This may represent a high bias in some PCB results. The reported sample concentrations are all below the reportable detection limit.
- C1C4985 (Matrix Spike) - The recovery for chromium VI was below the lower control limit. This may be due in part to the reducing environment of the sample. Chromium VI was not detected in any sample.
- C1C4985 (RPD, lab duplicate) – RPD for fluoranthene, phenanthrene, and pyrene were outside control limits. These parameters were not detected in any samples. No further qualification of the results is required.

Field Duplicate Samples

Field duplicate samples are used as an indication of field and analytical reproducibility. Duplicate samples were collected at 29 locations and submitted for laboratory analysis. The field duplicate sample sets submitted for analysis were:

- Dup 1 and GS21-20;
- Dup 2 and GS21-47;
- Dup 3 and GS21-43;

- Dup 4 and GS21-16;
- Dup 5 and GS21-42;
- Dup 6 and BH21-29-4;
- Dup 8 and BH21-49-3;
- Dup 11 and BH21-6-5;
- Dup 13 and BH21-3-1;
- Dup 15 and BH21-4-1;
- Dup 19 and BH21-2-2;
- Dup 21 and BH21-18-1;
- Dup 22 and BH21-18-2;
- Dup 24 and BH21-18-4;
- Dup 20 and BH21-43-2;
- Dup 27 and BH21-17-1;
- Dup 29 and BH21-17-3;
- Dup 31 and BH21-17-5;
- Dup 32 and BH21-19-1;
- Dup 33 an dBH21-19-2;
- Dup 35 and BH21-19-4;
- Dup 36 and BH21-19-5;
- Dup 37 and BH21-20-1;
- Dup 38 and BH21-20-2;
- Dup 42 and BH21-9-1;
- Dup 45 and BH21-8-1;
- Dup 46 and BH21-8-5;
- Dup 47 and BH21-7-1; and
- Dup 49 and BH21-47-3.

The relative percent difference was calculated for duplicate sets where the reported concentration of detected compounds was greater than five times the reporting detection limit (>5X RDL) in both samples (Table 2). For all duplicate sets, the RPD for each analyte was less than the specified control limits, with the following exceptions:

- Samples GS21-16 and Dup 4 for conductivity;
- Samples BH21-49-3 and Dup 8 for various metals and conductivity;
- Samples BH21-6-5 and Dup 11 for conductivity;
- Samples BH21-4-1 and Dup 15 for PHC F3 and phenanthrene;
- Samples BH21-2-2 and Dup 19 for conductivity;
- Samples BH21-18-1 and Dup 21 for PHC F2 and F3 and PAHs;
- Samples BH21-17-1 and Dup 27 for PHC F1, ethylbenzene and xylenes;
- Samples BH21-19-1 and Dup 32 for naphthalene and ethylbenzene;
- Samples BH21-20-1 and Dup 37 for PHCs F1-F4, PAHs and BTEX;
- BH21-8-1 and Dup 45 for PHC F1, F2, F3, benzene, ethylbenzene and xylenes; and
- Samples BH21-47-3 and Dup 49 for metals, hot-water-soluble boron and conductivity.

It is noted that the reported concentrations of all samples (parent and duplicate) were below the corresponding Table 3 site condition standards, except where the parent sample was found to exceed the Table 3 site condition standard, in which case the duplicate also exceeded the standard. No qualification of the results is required.

Rinsate Blanks

Rinsate blanks consist of organic-free water samples prepared by the analytical laboratory and poured over the non-dedicated sampling equipment into laboratory supplied sampling containers for analysis. These analyses are used to test for possible cross-contamination of samples collected using non-dedicated sampling equipment, to evaluate the effectiveness of the cleaning procedure. The reported concentrations of all analytes were less than the reporting detection limit and no qualification of the sample results is required.

Conclusion

The accuracy and precision of the reported analyte concentrations are acceptable and no qualification of the data was required.

Attachments: Table 1 – Data Quality Review Sample Key
Table 2 – Relative Percent Difference Calculations

TABLE 1 - SAMPLE KEY
Darlington New Nuclear Project

Sample Location	Sample ID	Sample Date	Sample Start Depth (mbgs)	Sample End Depth (mbgs)	Samples Submitted for Analysis
BH21-1	BH21-1-1	2021-05-04	0.00	0.61	NA
BH21-1	BH21-1-2	2021-05-04	0.61	1.22	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-1	BH21-1-3	2021-05-04	1.22	1.52	NA
BH21-1	BH21-1-4	2021-05-04	1.83	2.13	NA
BH21-1	BH21-1-5	2021-05-04	2.44	3.05	NA
BH21-10	BH21-10-1	2021-05-10	0.00	0.61	PHCs, VOCs, BTEX, PAHs, ABN, OCP
BH21-10	BH21-10-3	2021-05-10	1.22	1.83	PHCs, VOCs, BTEX, PAHs, ABN, OCP
BH21-11	BH21-11-1	2021-04-26	0.00	0.61	PHCs, VOCs, BTEX, PAHs, ABN
BH21-11	BH21-11-2	2021-04-26	0.61	1.22	PHCs, VOCs, BTEX, PAHs, ABN
BH21-12	BH21-12-3	2021-04-26	1.22	1.83	PHCs, VOCs, BTEX, PAHs, ABN
BH21-12	BH21-12-5	2021-04-26	2.44	3.05	PHCs, VOCs, BTEX, PAHs, ABN
BH21-13	BH21-13-1	2021-04-28	0.00	0.61	PHCs, VOCs, BTEX, PAHs, ABN
BH21-13	BH21-13-14	2021-04-28	7.92	8.53	PHCs, VOCs, BTEX, PAHs, ABN
BH21-13	BH21-13-4	2021-04-28	1.83	2.44	PHCs, VOCs, BTEX, PAHs, ABN
BH21-14	BH21-14-1	2021-05-10	0.00	0.61	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, EC, SAR
BH21-14	BH21-14-12	2021-05-11	6.71	7.32	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, EC, SAR
BH21-14	BH21-14-6	2021-05-11	3.05	3.66	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, EC, SAR
BH21-15	BH21-15-1	2021-04-29	0.00	0.61	OCPs, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-15	BH21-15-4	2021-04-29	1.83	2.44	OCPs, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-16	BH21-16-1	2021-04-29	0.00	0.61	OCPs, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-16	BH21-16-4	2021-04-29	1.83	2.44	OCPs, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-17	BH21-17-1	2021-05-07	0.00	0.61	BTEX, PAH, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-17	BH21-17-3	2021-05-07	1.22	1.83	BTEX, PHCs
BH21-17	BH21-17-5	2021-05-07	2.44	3.05	BTEX, PAH, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-17	Dup 27	2021-05-07	0.00	0.61	NA
BH21-17	Dup 29	2021-05-07	1.22	1.83	NA
BH21-17	Dup 31	2021-05-07	2.44	3.05	NA
BH21-18	BH21-18-1	2021-05-06	0.00	0.61	BTEX, PAH
BH21-18	BH21-18-2	2021-05-06	0.61	1.22	BTEX, PAH
BH21-18	BH21-18-4	2021-05-06	1.83	2.44	BTEX, PAH
BH21-18	BH21-18-5	2021-05-06	2.44	3.05	BTEX, PAH
BH21-18	Dup 22	2021-05-06	0.61	1.22	NA
BH21-18	Dup21	2021-05-06	0.00	0.61	NA
BH21-18	Dup24	2021-05-06	1.83	2.44	NA
BH21-19	BH21-19-1	2021-05-07	0.00	0.61	PHCs, BTEX, PAH, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-19	BH21-19-2	2021-05-07	0.61	1.22	PHCs, BTEX, PAH
BH21-19	BH21-19-4	2021-05-07	1.83	2.44	PHCs, BTEX, PAH, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-19	BH21-19-5	2021-05-07	2.44	3.05	PHCs, BTEX, PAH
BH21-19	Dup 32	2021-05-07	0.00	0.61	NA
BH21-19	Dup33	2021-05-07	0.61	1.22	NA
BH21-19	Dup35	2021-05-07	1.83	2.44	NA
BH21-19	Dup36	2021-05-07	2.44	3.05	NA
BH21-2	BH21-2-2	2021-05-05	0.61	1.22	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-2	Dup 19	2021-05-05	0.61	1.22	NA
BH21-20	BH21-20-1	2021-05-07	0.00	0.61	PHCs, BTEX, PAH, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-20	BH21-20-2	2021-05-07	0.61	1.22	PHCs, BTEX, PAH, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-20	BH21-20-5	2021-05-07	2.44	3.05	PHCs, BTEX, PAH
BH21-20	Dup 37	2021-05-07	0.00	0.61	NA
BH21-20	Dup38	2021-05-07	0.61	1.22	NA
BH21-21	BH21-21-1	2021-04-26	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-21	BH21-21-2	2021-04-26	0.61	1.22	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-22	BH21-22-1	2021-04-22	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-22	BH21-22-2	2021-04-22	0.61	1.22	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-23	BH21-23-1	2021-05-03	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-23	BH21-23-1A	2021-05-14	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-23	BH21-23-3	2021-05-03	1.22	1.83	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-24	BH21-24-1	2021-05-03	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-24	BH21-24-1A	2021-05-14	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-24	BH21-24-3	2021-05-03	1.22	1.83	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-25	BH21-25-1	2021-04-27	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-25	BH21-25-3	2021-04-27	1.22	1.83	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-26	BH21-26-1	2021-04-23	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-26	BH21-26-3	2021-04-23	1.22	1.83	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-27	BH21-27-1	2021-04-27	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-27	BH21-27-1A	2021-05-14	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-27	BH21-27-4	2021-04-27	1.83	2.44	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-28	BH21-28-1	2021-04-27	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-28	BH21-28-3	2021-04-27	1.22	1.83	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-29	BH21-29-1	2021-04-27	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR

TABLE 1 - SAMPLE KEY
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Sample Location	Sample ID	Sample Date	Sample Start Depth (mbgs)	Sample End Depth (mbgs)	Samples Submitted for Analysis
BH21-29	BH21-29-4	2021-04-27	1.83	2.44	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-29	Dup 6	2021-04-27	1.83	2.44	NA
BH21-3	BH21-3-1	2021-05-04	0.00	0.61	BTEX, PCBs, PAHs, VOCs
BH21-3	Dup 13	2021-05-04	0.00	0.60	NA
BH21-30	BH21-30-1	2021-04-23	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-30	BH21-30-10	2021-04-23	5.49	6.10	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-30	BH21-30-4	2021-04-23	1.83	2.44	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-30	BH21-30-6	2021-04-23	3.05	3.66	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-30	BH21-30-7	2021-04-23	3.66	4.27	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-31	BH21-31-1	2021-05-03	0.00	0.61	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-31	BH21-31-2	2021-05-03	0.61	1.22	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-31	BH21-31-5	2021-05-03	2.44	3.05	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-32	BH21-32-1A	2021-05-14	0.00	0.61	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-32	BH21-32-2	2021-04-30	0.61	1.22	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-32	BH21-32-4	2021-04-30	1.83	2.44	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-33	BH21-33-1	2021-04-30	0.00	0.61	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-33	BH21-33-2	2021-04-30	0.61	1.22	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-33	BH21-33-4	2021-04-30	1.83	2.44	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-34	BH21-34-1	2021-04-30	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-34	BH21-34-4	2021-04-30	1.83	2.44	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-35	BH21-35-3A	2021-04-30	0.91	1.52	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-35	BH21-35-4	2021-04-30	1.83	2.44	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-36	BH21-36-2	2021-04-08	0.60	1.20	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-36	BH21-36-4	2021-04-08	1.80	2.40	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-37	BH21-37-1	2021-04-22	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-37	BH21-37-15	2021-04-22	8.53	9.14	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-37	BH21-37-3	2021-04-22	1.22	1.83	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-37	BH21-37-8	2021-04-22	4.27	4.88	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-38	BH21-38-1	2021-04-21	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-38	BH21-38-11	2021-04-21	6.10	6.71	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-38	BH21-38-4	2021-04-21	1.83	2.44	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-38	BH21-38-7	2021-04-21	3.66	4.27	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-39	BH21-39-1	2021-04-09	0	0.6	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-39	BH21-39-5	2021-04-09	2.40	3.00	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-4	BH21-4-1	2021-05-04	0.00	0.61	BTEX, PCBs, PAHs
BH21-4	Dup 15	2021-05-04	0.00	0.61	NA
BH21-40	BH21-40-2	2021-04-08	0.60	1.20	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-40	BH21-40-3	2021-04-08	1.20	1.80	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-41	BH21-41-1	2021-04-09	0.00	0.60	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-41	BH21-41-3	2021-04-09	1.20	1.80	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-41	BH21-41-4	2021-04-09	1.80	2.40	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-41	BH21-41-6	2021-04-09	3.00	3.70	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-42	BH21-42-2	2021-05-05	0.61	1.22	PHCs, BTEX
BH21-42	BH21-42-8	2021-05-05	4.27	4.88	PHCs, BTEX
BH21-43	BH21-43-2	2021-05-06	0.61	1.22	PHCs, BTEX
BH21-43	BH21-43-8	2021-05-06	4.27	4.88	PHCs, BTEX
BH21-43	Dup 20	2021-05-06	0.61	1.22	NA
BH21-44	BH21-44-1	2021-05-10	0.00	0.61	PHCs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-44	BH21-44-5	2021-05-10	2.44	3.05	PHCs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-44	BH21-44-9	2021-05-10	4.88	5.49	PHCs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-45	BH21-45-1	2021-05-12	0.00	0.61	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-45	BH21-45-4	2021-05-12	1.83	2.44	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-46	BH21-46-1	2021-05-12	0.00	0.61	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-46	BH21-46-5B	2021-05-12	2.82	3.05	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-47	BH21-47-1	2021-05-12	0.00	0.61	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-47	BH21-47-3	2021-05-12	1.22	1.83	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-47	BH21-47-6	2021-05-12	3.05	3.66	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-47	BH21-47-9	2021-05-12	4.88	5.49	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-47	Dup 49	2021-05-12	1.22	1.83	NA
BH21-48	BH21-48-1	2021-04-29	0.00	0.61	OCP, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-48	BH21-48-2	2021-04-29	0.61	1.22	OCP, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-48	BH21-48-5	2021-04-29	2.44	3.05	OCP, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-49	BH21-49-1	2021-04-28	0.00	0.61	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-49	BH21-49-3	2021-04-28	1.22	1.83	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-49	BH21-49-4	2021-04-28	1.83	2.44	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-49	Dup 8	2021-04-28	1.22	1.83	PHCs, BTEX
BH21-5	BH21-5-2	2021-05-04	0.61	1.22	BTEX, PCBs, PAHs
BH21-50	BH21-50-1	2021-04-29	0.00	0.61	OCP, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-50	BH21-50-3	2021-04-29	1.22	1.83	OCP, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-50	BH21-50-5	2021-04-29	2.44	3.05	OCP, PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
BH21-51	BH21-51-1	2021-04-21	0.00	0.61	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR

TABLE 1 - SAMPLE KEY
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Sample Location	Sample ID	Sample Date	Sample Start Depth (mbgs)	Sample End Depth (mbgs)	Samples Submitted for Analysis
BH21-51	BH21-51-4	2021-04-21	1.83	2.44	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-52	BH21-52-1	2021-05-14	0.00	0.61	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
BH21-52	BH21-52-5	2021-05-14	9.39	10.00	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
BH21-53	BH21-53-1	2021-05-14	0.00	0.61	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
BH21-53	BH21-53-4	2021-05-14	1.83	2.44	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
BH21-54	BH21-54-1	2021-05-13	0.00	0.61	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
BH21-54	BH21-54-5	2021-05-13	2.44	3.05	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
BH21-55	BH21-55-2	2021-05-13	0.61	1.22	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
BH21-55	BH21-55-5	2021-05-13	2.44	3.05	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
BH21-56	BH21-56-1	2021-05-14	0.00	0.61	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
BH21-56	BH21-56-5	2021-05-14	2.44	3.05	Metals, Hydride Metals, BTEX, PHC, EC, SAR, OCP, Hg, CN-
BH21-6	BH21-6-1	2021-05-03	0.00	0.61	PCBs, PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-6	BH21-6-1A	2021-05-14	0.00	0.61	Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-6	BH21-6-5	2021-05-03	2.44	3.05	PCBs, PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
BH21-6	Dup 11	2021-05-03	2.39	3.00	NA
BH21-7	BH21-7-1	2021-05-12	0.00	0.61	PHC, BTEX
BH21-7	Dup47	2021-05-12	0.00	0.61	NA
BH21-8	BH21-8-1	2021-05-11	0.00	0.61	PHC, BTEX
BH21-8	BH21-8-5	2021-05-11	2.44	3.05	PHC, BTEX
BH21-8	Dup45	2021-05-11	0.00	0.61	NA
BH21-8	Dup46	2021-05-11	2.44	3.05	NA
BH21-9	BH21-9-1	2021-05-07	0.00	0.61	PHCs, VOCs, BTEX, PAHs, ABN, OCP
BH21-9	Dup42	2021-05-07	0.00	0.61	NA
GS21-01	GS21-01	2021-04-16	0.00	0.18	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-02	GS21-02	2021-04-16	0.00	0.18	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-03	GS21-03	2021-04-19	0.00	0.18	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-04	GS21-04	2021-04-16	0.00	0.18	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-05	GS21-05	2021-04-19	0.00	0.18	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-06	GS21-06	2021-04-19	0.00	0.18	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-07	GS21-07	2021-04-16	0.00	0.18	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-08	GS21-08	2021-04-19	0.00	0.18	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-09	GS21-09	2021-04-16	0.00	0.18	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-10	GS21-10	2021-04-16	0.00	0.18	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-11	GS21-11	2021-04-16	0.00	0.18	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-12	GS21-12	2021-04-16	0.00	0.18	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-13	GS21-13	2021-04-16	0.00	0.18	PCBs, PAHs
GS21-14	GS21-14	2021-04-16	0.00	0.18	PCBs, PAHs
GS21-15	GS21-15	2021-04-20	0.00	0.18	OCPs , PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-16	DUP 4	2021-04-20	0.00	0.18	NA
GS21-16	GS21-16	2021-04-20	0.00	0.18	OCPs , PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-17	GS21-17	2021-04-20	0.00	0.18	OCPs , PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-18	GS21-18	2021-04-20	0.00	0.18	OCPs , PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-19	GS21-19	2021-04-20	0.00	0.18	OCPs , PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-20	DUP 1	2021-04-15	0.00	0.18	NA
GS21-20	GS21-20	2021-04-15	0.00	0.18	BTEX, PAH
GS21-21	GS21-21	2021-04-15	0.00	0.18	BTEX, PAH
GS21-22	GS21-22	2021-04-15	0.00	0.18	BTEX, PAH
GS21-23	GS21-23	2021-04-15	0.00	0.18	BTEX, PAH
GS21-24	GS21-24	2021-04-15	0.00	0.18	BTEX, PAH
GS21-25	GS21-25	2021-04-15	0.00	0.18	BTEX, PAH
GS21-26	GS21-26	2021-04-15	0.00	0.18	BTEX
GS21-27	GS21-27	2021-04-19	0.00	0.18	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-28	GS21-28	2021-04-19	0.00	0.18	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-29	GS21-29	2021-04-19	0.00	0.18	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-30	GS21-30	2021-04-19	0.00	0.18	PHCs, BTEX, PAHs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-31	GS21-31	2021-04-19	0.00	0.18	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-32	GS21-32	2021-04-19	0.00	0.18	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-33	GS21-33	2021-04-19	0.00	0.18	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-34	GS21-34	2021-04-19	0.00	0.18	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-35	GS21-35	2021-04-19	0.00	0.18	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-36	GS21-36	2021-04-16	0.00	0.18	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-37	GS21-37	2021-04-20	0.00	0.18	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-38	GS21-38	2021-04-20	0.00	0.18	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-39	GS21-39	2021-04-20	0.00	0.18	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-40	GS21-40	2021-04-19	0.00	0.18	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-41	GS21-41	2021-04-20	0.00	0.18	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-42	DUP 5	2021-04-20	0.00	0.18	PHCs, BTEX, PAHs, PCBs, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR
GS21-42	GS21-42	2021-04-20	0.00	0.18	PHCs, BTEX, Metals, As, Se and Sb, HWSB, CrVI, CN-, EC, Hg, SAR,
GS21-43	DUP 3	2021-04-19	0.00	0.18	PHCs, PCBs
GS21-43	GS21-43	2021-04-19	0.00	0.18	PHCs, PCBs
GS21-44	GS21-44	2021-04-16	0.00	0.18	PHCs
GS21-45	GS21-45	2021-04-16	0.00	0.18	PHCs
GS21-46	GS21-46	2021-04-16	0.00	0.18	PHCs, PCBs
GS21-47	DUP 2	2021-04-15	0.00	0.18	NA
GS21-47	GS21-47	2021-04-15	0.00	0.18	PHCs
GS21-48	GS21-48	2021-04-16	0.00	0.18	PHCs
GS21-49	GS21-49	2021-04-16	0.00	0.18	PHCs, PCBs
GS21-50	GS21-50	2021-04-16	0.00	0.18	PHCs
GS21-51	GS21-51	2021-04-16	0.00	0.18	PHCs
GS21-52	GS21-52	2021-04-19	0.00	0.18	PHCs, PCBs
GS21-53	GS21-53	2021-04-16	0.00	0.18	PHCs

Notes

mbgs	metres below ground surface
PHC	petroleum hydrocarbon
PCB	polychlorinated biphenyl
OCP	organochlorine pesticides
PAH	polycyclic aromatic hydrocarbons
BTEX	benzene, toluene, ethylbenzene and xylenes
HWSB	hot water soluble boron
CrVI	hexavalent chromium
CN	cyanide
EC	electrical conductivity
SAR	sodium adsorption ratio

TABLE 2 - Relative Percent Difference Calculations
Darlington New Nuclear Project

Relative Percent Difference Calculations

Sample Location						GS21-20	GS21-20	
Sample Name		RPD			Is either	DUP 1	GS21-20	
Sample Collection Date	Units	Alert	RDL	5X RDL	result	15/2021 12:30:00 P	15/2021 12:30:00 P	RPD (%)
Sample Matrix		Limit			>5X RDL	SO	SO	
Sample Depth						0 - 0.18 m	0 - 0.18 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	15	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	90	150	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	67	n/c
RSC-Polycyclic Aromatic Hydrocarbons								
1- & 2-Methylnaphthalene	ug/g	≤40%	0.0071	0.0355	no	< 0.0071	0.019	n/c
Acenaphthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Acenaphthylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]pyrene	ug/g	≤40%	0.0050	0.025	no	0.0059	< 0.0050	n/c
Benzo[g,h,i]perylene	ug/g	≤40%	0.0050	0.025	no	0.012	0.0071	n/c
Benzo[k]fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Chrysene	ug/g	≤40%	0.0050	0.025	no	0.0080	0.013	n/c
Dibenzo[a,h]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluoranthene	ug/g	≤40%	0.0050	0.025	no	0.0071	0.0079	n/c
Fluorene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Indeno[1,2,3-cd]pyrene	ug/g	≤40%	0.0050	0.025	no	0.0097	< 0.0050	n/c
Naphthalene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Phenanthrene	ug/g	≤40%	0.0050	0.025	no	0.0063	0.016	n/c
Pyrene	ug/g	≤40%	0.0050	0.025	no	0.0064	0.0058	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

Sample Location						GS21-47	GS21-47	
Sample Name		RPD			Is either	DUP 2	GS21-47	
Sample Collection Date	Units	Alert	RDL	5X RDL	result	/15/2021 2:30:00 P	/15/2021 2:30:00 P	RPD (%)
Sample Matrix		Limit			>5X RDL	SO	SO	
Sample Depth						0 - 0.18 m	0 - 0.18 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	66	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	51	< 50	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

Sample Location						GS21-43	GS21-43	
Sample Name		RPD			Is either	DUP 3	GS21-43	
Sample Collection Date	Units	Alert	RDL	5X RDL	result	/19/2021 8:00:00 A	/19/2021 8:00:00 A	RPD (%)
Sample Matrix		Limit			>5X RDL	SO	SO	
Sample Depth						0 - 0.18 m	0 - 0.18 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	82	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Polychlorinated Biphenyls								
Polychlorinated Biphenyls	ug/g	≤40%	0.020	0.1	no	< 0.020	< 0.010	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

TABLE 2 - Relative Percent Difference Calculations
Darlington New Nuclear Project

Sample Location						GS21-16	GS21-16	
Sample Name						DUP 4	GS21-16	
Sample Collection Date	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	20/2021 10:10:00 A	20/2021 10:10:00 A	RPD (%)
Sample Matrix						SO	SO	
Sample Depth						0 - 0.18 m	0 - 0.18 m	
RSC-Metals								
Barium	ug/g	≤30%	0.50	2.5	yes	36	34	6
Beryllium	ug/g	≤30%	0.20	1	no	0.24	0.22	n/c
Boron	ug/g	≤30%	5.0	25	no	6.1	5.6	n/c
Cadmium	ug/g	≤30%	0.10	0.5	no	0.14	0.12	n/c
Chromium	ug/g	≤30%	1.0	5	yes	8.8	7.7	13
Cobalt	ug/g	≤30%	0.10	0.5	yes	2.8	2.5	11
Copper	ug/g	≤30%	0.50	2.5	yes	7.2	6.1	17
Lead	ug/g	≤30%	1.0	5	no	4.3	3.5	n/c
Molybdenum	ug/g	≤30%	0.50	2.5	no	< 0.50	< 0.50	n/c
Nickel	ug/g	≤30%	0.50	2.5	yes	5.5	5.3	4
Silver	ug/g	≤30%	0.20	1	no	< 0.20	< 0.20	n/c
Thallium	ug/g	≤30%	0.050	0.25	no	0.059	0.054	n/c
Uranium	ug/g	≤30%	0.050	0.25	yes	0.40	0.40	0
Vanadium	ug/g	≤30%	5.0	25	no	17	15	n/c
Zinc	ug/g	≤30%	5.0	25	yes	35	29	19
RSC-Metals, Hydride-Forming								
Antimony	ug/g	≤30%	0.20	1	no	< 0.20	< 0.20	n/c
Arsenic	ug/g	≤30%	1.0	5	no	1.0	1.0	n/c
Selenium	ug/g	≤30%	0.50	2.5	no	< 0.50	< 0.50	n/c
RSC-Organochlorine Pesticides								
Aldrin	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
alpha-Chlordane	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
alpha-Endosulfan	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
beta-Endosulfan	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Chlordane	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Chlordane, technical mixture	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
DDD, Total	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
DDE, Total	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
DDT, Total	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Dieldrin	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Endosulfan	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Endrin	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
gamma-hexachlorocyclohexane	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Heptachlor	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Heptachlor Epoxide	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Hexachlorobenzene	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Hexachlorobutadiene	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Hexachloroethane	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Methoxychlor	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
RSC-Other Regulated Parameters								
Boron, Hot Water Soluble	ug/g	≤40%	0.050	0.25	yes	0.69	0.68	1
Conductivity	ms/cm	≤10%	0.002	0.01	yes	0.25	0.22	13
Cyanide (WAD)	ug/g	≤35%	0.01	0.05	no	0.04	0.03	n/c
Hexavalent Chromium	ug/g	≤35%	0.18	0.9	no	< 0.18	< 0.18	n/c
Mercury	ug/g	≤30%	0.050	0.25	no	< 0.050	< 0.050	n/c
pH	pH units	0.3	-	-	-	7.17	7.24	n/c
Sodium Adsorption Ratio	-	-	-	-	-	0.21	0.21	n/c
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Polychlorinated Biphenyls								
Polychlorinated Biphenyls	ug/g	≤40%	0.020	0.1	no	< 0.020	< 0.015	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

TABLE 2 - Relative Percent Difference Calculations
Darlington New Nuclear Project

Sample Location						GS21-42	GS21-42	
Sample Name		RPD			Is either	DUP 5	GS21-42	
Sample Collection Date	Units	Alert	RDL	5X RDL	result	20/2021 11:00:00 A	20/2021 11:00:00 A	RPD (%)
Sample Matrix		Limit			>5X RDL	SO	SO	
Sample Depth						0 - 0.18 m	0 - 0.18 m	
RSC-Metals								
Barium	ug/g	≤30%	0.50	2.5	yes	45	40	12
Beryllium	ug/g	≤30%	0.20	1	no	0.29	0.25	n/c
Boron	ug/g	≤30%	5.0	25	no	6.7	6.5	n/c
Cadmium	ug/g	≤30%	0.10	0.5	no	0.23	0.18	n/c
Chromium	ug/g	≤30%	1.0	5	yes	12	9.9	19
Cobalt	ug/g	≤30%	0.10	0.5	yes	3.7	3.3	11
Copper	ug/g	≤30%	0.50	2.5	yes	8.9	10	12
Lead	ug/g	≤30%	1.0	5	yes	11	9.0	20
Molybdenum	ug/g	≤30%	0.50	2.5	no	< 0.50	< 0.50	n/c
Nickel	ug/g	≤30%	0.50	2.5	yes	8.8	7.8	12
Silver	ug/g	≤30%	0.20	1	no	< 0.20	< 0.20	n/c
Thallium	ug/g	≤30%	0.050	0.25	no	0.088	0.074	n/c
Uranium	ug/g	≤30%	0.050	0.25	yes	0.49	0.45	9
Vanadium	ug/g	≤30%	5.0	25	no	22	19	n/c
Zinc	ug/g	≤30%	5.0	25	yes	99	83	18
RSC-Metals, Hydride-Forming								
Antimony	ug/g	≤30%	0.20	1	no	< 0.20	< 0.20	n/c
Arsenic	ug/g	≤30%	1.0	5	no	1.7	1.3	n/c
Selenium	ug/g	≤30%	0.50	2.5	no	< 0.50	< 0.50	n/c
RSC-Other Regulated Parameters								
Boron, Hot Water Soluble	ug/g	≤40%	0.050	0.25	yes	0.87	0.85	2
Conductivity	ms/cm	≤10%	0.002	0.01	yes	0.23	0.22	4
Cyanide (WAD)	ug/g	≤35%	0.01	0.05	no	0.03	0.03	n/c
Hexavalent Chromium	ug/g	≤35%	0.18	0.9	no	< 0.18	< 0.18	n/c
Mercury	ug/g	≤30%	0.050	0.25	no	< 0.050	< 0.050	n/c
pH	pH units	0.3	-	-	-	7.20	7.30	n/c
Sodium Adsorption Ratio	-	-	-	-	-	0.21	0.22	n/c
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	52	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

TABLE 2 - Relative Percent Difference Calculations
Darlington New Nuclear Project

Sample Location Sample Name Sample Collection Date Sample Matrix Sample Depth	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	BH21-29 (3m) BH21-29-4 /27/2021 2:30:00 P SO 1.82 - 2.44 m	BH21-29 (3M) Dup 6 /27/2021 2:30:00 P SO 1.82 - 2.44 m	RPD (%)
RSC-Metals								
Barium	ug/g	≤30%	0.50	2.5	yes	110	97	13
Beryllium	ug/g	≤30%	0.20	1	no	0.47	0.40	n/c
Boron	ug/g	≤30%	5.0	25	no	9.4	7.5	n/c
Cadmium	ug/g	≤30%	0.10	0.5	no	< 0.10	0.15	n/c
Chromium	ug/g	≤30%	1.0	5	yes	20	17	16
Cobalt	ug/g	≤30%	0.10	0.5	yes	6.7	6.3	6
Copper	ug/g	≤30%	0.50	2.5	yes	12	11	9
Lead	ug/g	≤30%	1.0	5	yes	5.5	4.6	18
Molybdenum	ug/g	≤30%	0.50	2.5	no	< 0.50	< 0.50	n/c
Nickel	ug/g	≤30%	0.50	2.5	yes	13	12	8
Silver	ug/g	≤30%	0.20	1	no	< 0.20	< 0.20	n/c
Thallium	ug/g	≤30%	0.050	0.25	no	0.14	0.12	n/c
Uranium	ug/g	≤30%	0.050	0.25	yes	0.47	0.44	7
Vanadium	ug/g	≤30%	5.0	25	yes	29	27	7
Zinc	ug/g	≤30%	5.0	25	yes	41	40	2
RSC-Metals, Hydride-Forming								
Antimony	ug/g	≤30%	0.20	1	no	< 0.20	< 0.20	n/c
Arsenic	ug/g	≤30%	1.0	5	no	1.8	1.5	n/c
Selenium	ug/g	≤30%	0.50	2.5	no	< 0.50	< 0.50	n/c
RSC-Other Regulated Parameters								
Boron, Hot Water Soluble	ug/g	≤40%	0.050	0.25	no	0.080	0.082	n/c
Conductivity	ms/cm	≤10%	0.002	0.01	yes	0.17	0.16	6
Cyanide (WAD)	ug/g	≤35%	0.01	0.05	no	< 0.01	< 0.01	n/c
Hexavalent Chromium	ug/g	≤35%	0.18	0.9	no	< 0.18	< 0.18	n/c
Mercury	ug/g	≤30%	0.050	0.25	no	< 0.050	< 0.050	n/c
pH	pH units	0.3	-	-	-	7.76	7.66	n/c
Sodium Adsorption Ratio	-	-	-	-	-	0.69	0.50	n/c
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Polychlorinated Biphenyls								
Polychlorinated Biphenyls	ug/g	≤40%	0.010	0.05	no	< 0.010	< 0.010	n/c
RSC-Polycyclic Aromatic Hydrocarbons								
1- & 2-Methylnaphthalene	ug/g	≤40%	0.0071	0.0355	no	< 0.0071	< 0.0071	n/c
Acenaphthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Acenaphthylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[g,h,i]perylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[k]fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Chrysene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Dibenzo[a,h]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluorene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Indeno[1,2,3-cd]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Naphthalene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Phenanthrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

TABLE 2 - Relative Percent Difference Calculations
Darlington New Nuclear Project

Sample Location						BH21-49 (3m)	BH21-49 (3M)	
Sample Name	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	BH21-49-3	Dup 8	RPD (%)
Sample Collection Date						/28/2021 3:55:00 P	/28/2021 3:55:00 P	
Sample Matrix						SO	SO	
Sample Depth						1.21 - 1.83 m	1.21 - 1.83 m	
RSC-Metals								
Barium	ug/g	≤30%	0.50	2.5	yes	35	69	65
Beryllium	ug/g	≤30%	0.20	1	no	0.24	0.39	n/c
Boron	ug/g	≤30%	5.0	25	no	< 5.0	5.3	n/c
Cadmium	ug/g	≤30%	0.10	0.5	no	< 0.10	< 0.10	n/c
Chromium	ug/g	≤30%	1.0	5	yes	9.1	15	49
Cobalt	ug/g	≤30%	0.10	0.5	yes	3.0	4.9	48
Copper	ug/g	≤30%	0.50	2.5	yes	4.5	8.7	64
Lead	ug/g	≤30%	1.0	5	no	2.7	3.9	n/c
Molybdenum	ug/g	≤30%	0.50	2.5	no	< 0.50	< 0.50	n/c
Nickel	ug/g	≤30%	0.50	2.5	yes	5.4	9.4	54
Silver	ug/g	≤30%	0.20	1	no	< 0.20	< 0.20	n/c
Thallium	ug/g	≤30%	0.050	0.25	no	< 0.050	0.096	n/c
Uranium	ug/g	≤30%	0.050	0.25	yes	0.43	0.49	13
Vanadium	ug/g	≤30%	5.0	25	yes	19	27	35
Zinc	ug/g	≤30%	5.0	25	yes	19	26	31
RSC-Metals, Hydride-Forming								
Antimony	ug/g	≤30%	0.20	1	no	< 0.20	< 0.20	n/c
Arsenic	ug/g	≤30%	1.0	5	no	< 1.0	1.3	n/c
Selenium	ug/g	≤30%	0.50	2.5	no	< 0.50	< 0.50	n/c
RSC-Other Regulated Parameters								
Boron, Hot Water Soluble	ug/g	≤40%	0.050	0.25	no	< 0.050	0.054	n/c
Conductivity	ms/cm	≤10%	0.002	0.01	yes	0.15	0.23	42
Cyanide (WAD)	ug/g	≤35%	0.01	0.05	no	< 0.01	< 0.01	n/c
Hexavalent Chromium	ug/g	≤35%	0.18	0.9	no	< 0.18	< 0.18	n/c
Mercury	ug/g	≤30%	0.050	0.25	no	< 0.050	< 0.050	n/c
pH	pH units	0.3	-	-	-	7.77	7.59	n/c
Sodium Adsorption Ratio	-	-	-	-	-	0.27	0.22	n/c
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

TABLE 2 - Relative Percent Difference Calculations
Darlington New Nuclear Project

Sample Location						BH21-6 (3m)	BH21-6 (3M)	
Sample Name		RPD			Is either	BH21-6-5	Dup 11	
Sample Collection Date	Units	Alert	RDL	5X RDL	result	6/3/2021 2:45:00 PM	6/3/2021 2:45:00 PM	RPD (%)
Sample Matrix		Limit			>5X RDL	SO	SO	
Sample Depth						2.43 - 3.05 m	2.39 - 3 m	
RSC-Metals								
Barium	ug/g	≤30%	0.50	2.5	yes	37	41	10
Beryllium	ug/g	≤30%	0.20	1	no	< 0.20	0.22	n/c
Boron	ug/g	≤30%	5.0	25	no	< 5.0	< 5.0	n/c
Cadmium	ug/g	≤30%	0.10	0.5	no	< 0.10	< 0.10	n/c
Chromium	ug/g	≤30%	1.0	5	yes	8.4	9.3	10
Cobalt	ug/g	≤30%	0.10	0.5	yes	2.7	3.1	14
Copper	ug/g	≤30%	0.50	2.5	yes	4.4	4.8	9
Lead	ug/g	≤30%	1.0	5	no	2.7	2.9	n/c
Molybdenum	ug/g	≤30%	0.50	2.5	no	< 0.50	< 0.50	n/c
Nickel	ug/g	≤30%	0.50	2.5	yes	4.9	5.5	12
Silver	ug/g	≤30%	0.20	1	no	< 0.20	< 0.20	n/c
Thallium	ug/g	≤30%	0.050	0.25	no	< 0.050	< 0.050	n/c
Uranium	ug/g	≤30%	0.050	0.25	yes	0.40	0.43	7
Vanadium	ug/g	≤30%	5.0	25	no	16	17	n/c
Zinc	ug/g	≤30%	5.0	25	yes	25	27	8
RSC-Metals, Hydride-Forming								
Antimony	ug/g	≤30%	0.20	1	no	< 0.20	< 0.20	n/c
Arsenic	ug/g	≤30%	1.0	5	no	1.1	< 1.0	n/c
Selenium	ug/g	≤30%	0.50	2.5	no	< 0.50	< 0.50	n/c
RSC-Other Regulated Parameters								
Boron, Hot Water Soluble	ug/g	≤40%	0.050	0.25	no	< 0.050	< 0.050	n/c
Conductivity	ms/cm	≤10%	0.002	0.01	yes	0.13	0.15	14
Cyanide (WAD)	ug/g	≤35%	0.01	0.05	no	< 0.01	< 0.01	n/c
Hexavalent Chromium	ug/g	≤35%	0.18	0.9	no	< 0.18	< 0.18	n/c
Mercury	ug/g	≤30%	0.050	0.25	no	< 0.050	< 0.050	n/c
pH	pH units	0.3	-	-	-	7.83	7.83	n/c
Sodium Adsorption Ratio	-	-	-	-	-	0.30	0.28	n/c
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Polychlorinated Biphenyls								
Polychlorinated Biphenyls	ug/g	≤40%	0.010	0.05	no	< 0.010	< 0.010	n/c
RSC-Polycyclic Aromatic Hydrocarbons								
1- & 2-Methylnaphthalene	ug/g	≤40%	0.0071	0.0355	no	< 0.0071	< 0.0071	n/c
Acenaphthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Acenaphthylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[g,h,i]perylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[k]fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Chrysene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Dibenzo[a,h]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluorene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Indeno[1,2,3-cd]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Naphthalene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Phenanthrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

TABLE 2 - Relative Percent Difference Calculations
Darlington New Nuclear Project

Sample Location						BH21-3 (3m)	BH21-3 (3M)	
Sample Name		RPD			Is either	BH21-3-1	Dup 13	
Sample Collection Date	Units	Alert Limit	RDL	5X RDL	result >5X RDL	6/4/2021 8:45:00 AM	6/4/2021 8:45:00 AM	RPD (%)
Sample Matrix						SO	SO	
Sample Depth						0 - 0.61 m	0 - 0.6 m	
RSC-Acid/Base/Neutral Compounds								
1,2,4-Trichlorobenzene	ug/g	≤50%	0.05	0.25	no	< 0.05	< 0.05	n/c
2,4 + 2,6 dinitrotoluene	ug/g	≤50%	0.14	0.7	no	< 0.14	< 0.14	n/c
2,4-Dimethylphenol	ug/g	≤50%	0.2	1	no	< 0.2	< 0.2	n/c
2,4-Dinitrophenol	ug/g	≤50%	0.5	2.5	no	< 0.5	< 0.5	n/c
3,3'-Dichlorobenzidine	ug/g	≤50%	0.5	2.5	no	< 0.5	< 0.5	n/c
4-Chloroaniline	ug/g	≤50%	0.2	1	no	< 0.2	< 0.2	n/c
Biphenyl	ug/g	≤50%	0.05	0.25	no	< 0.05	< 0.05	n/c
Bis(2-chloroethyl) Ether	ug/g	≤50%	0.2	1	no	< 0.2	< 0.2	n/c
Bis(2-chloroisopropyl)ether	ug/g	≤50%	0.1	0.5	no	< 0.1	< 0.1	n/c
Bis(2-ethylhexyl) Phthalate	ug/g	≤50%	1	5	no	< 1	< 1	n/c
Diethyl Phthalate	ug/g	≤50%	0.2	1	no	< 0.2	< 0.2	n/c
Phenol	ug/g	≤50%	0.09	0.45	no	< 0.09	< 0.09	n/c
RSC-Chlorophenols								
2,4,5-Trichlorophenol	ug/g	≤50%	0.08	0.4	no	< 0.08	< 0.08	n/c
2,4,6-Trichlorophenol	ug/g	≤50%	0.1	0.5	no	< 0.1	< 0.1	n/c
2,4-Dichlorophenol	ug/g	≤50%	0.1	0.5	no	< 0.1	< 0.1	n/c
2-Chlorophenol	ug/g	≤50%	0.08	0.4	no	< 0.08	< 0.08	n/c
Pentachlorophenol	ug/g	≤50%	0.1	0.5	no	< 0.1	< 0.1	n/c
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Polychlorinated Biphenyls								
Polychlorinated Biphenyls	ug/g	≤40%	0.010	0.05	no	< 0.010	< 0.010	n/c
RSC-Polycyclic Aromatic Hydrocarbons								
1- & 2-Methylnaphthalene	ug/g	≤40%	0.042	0.21	no	< 0.042	< 0.042	n/c
Acenaphthene	ug/g	≤40%	0.03	0.15	no	< 0.03	< 0.03	n/c
Acenaphthylene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
Anthracene	ug/g	≤40%	0.03	0.15	no	< 0.03	< 0.03	n/c
Benzo[a]anthracene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
Benzo[a]pyrene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
Benzo[g,h,i]perylene	ug/g	≤40%	0.1	0.5	no	< 0.1	< 0.1	n/c
Benzo[k]fluoranthene	ug/g	≤40%	0.03	0.15	no	< 0.03	< 0.03	n/c
Chrysene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
Dibenzo[a,h]anthracene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
Fluoranthene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
Fluorene	ug/g	≤40%	0.03	0.15	no	< 0.03	< 0.03	n/c
Indeno[1,2,3-cd]pyrene	ug/g	≤40%	0.08	0.4	no	< 0.08	< 0.08	n/c
Naphthalene	ug/g	≤40%	0.03	0.15	no	< 0.03	< 0.03	n/c
Phenanthrene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
Pyrene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

TABLE 2 - Relative Percent Difference Calculations
Darlington New Nuclear Project

Sample Location	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	BH21-4 (3m)	BH21-4 (3M)	RPD (%)
Sample Name						BH21-4-1	Dup 15	
Sample Collection Date						/4/2021 10:00:00 A	/4/2021 10:00:00 A	
Sample Matrix						SO	SO	
Sample Depth						0 - 0.61 m	0 - 0.61 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	yes	300	< 50	143
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Polychlorinated Biphenyls								
Polychlorinated Biphenyls	ug/g	≤40%	0.010	0.05	no	< 0.010	< 0.010	n/c
RSC-Polycyclic Aromatic Hydrocarbons								
1- & 2-Methylnaphthalene	ug/g	≤40%	0.0071	0.0355	no	< 0.0071	< 0.0071	n/c
Acenaphthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Acenaphthylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[g,h,i]perylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[k]fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Chrysene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Dibenzo[a,h]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluorene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Indeno[1,2,3-cd]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Naphthalene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Phenanthrene	ug/g	≤40%	0.0050	0.025	yes	0.035	< 0.0050	150
Pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

Sample Location	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	BH21-21 (3m)	BH21-21 (3M)	RPD (%)
Sample Name						BH21-2-2	Dup 19	
Sample Collection Date						/5/2021 7:55:00 AM	/5/2021 7:55:00 AM	
Sample Matrix						SO	SO	
Sample Depth						0.6 - 1.22 m	0.6 - 1.22 m	
RSC-Metals								
Barium	ug/g	≤30%	0.50	2.5	yes	39	37	5
Beryllium	ug/g	≤30%	0.20	1	no	< 0.20	< 0.20	n/c
Boron	ug/g	≤30%	5.0	25	no	< 5.0	< 5.0	n/c
Cadmium	ug/g	≤30%	0.10	0.5	no	< 0.10	< 0.10	n/c
Chromium	ug/g	≤30%	1.0	5	yes	7.5	7.0	7
Cobalt	ug/g	≤30%	0.10	0.5	yes	2.3	2.0	14
Copper	ug/g	≤30%	0.50	2.5	yes	3.8	3.1	20
Lead	ug/g	≤30%	1.0	5	no	2.4	2.1	n/c
Molybdenum	ug/g	≤30%	0.50	2.5	no	< 0.50	< 0.50	n/c
Nickel	ug/g	≤30%	0.50	2.5	yes	4.7	3.9	19
Silver	ug/g	≤30%	0.20	1	no	< 0.20	< 0.20	n/c
Thallium	ug/g	≤30%	0.050	0.25	no	< 0.050	< 0.050	n/c
Uranium	ug/g	≤30%	0.050	0.25	yes	0.53	0.53	0
Vanadium	ug/g	≤30%	5.0	25	no	15	14	n/c
Zinc	ug/g	≤30%	5.0	25	no	19	20	n/c
RSC-Metals, Hydride-Forming								
Antimony	ug/g	≤30%	0.20	1	no	< 0.20	< 0.20	n/c
Arsenic	ug/g	≤30%	1.0	5	no	< 1.0	< 1.0	n/c
Selenium	ug/g	≤30%	0.50	2.5	no	< 0.50	< 0.50	n/c
RSC-Other Regulated Parameters								
Boron, Hot Water Soluble	ug/g	≤40%	0.050	0.25	no	< 0.050	< 0.050	n/c
Conductivity	ms/cm	≤10%	0.002	0.01	yes	0.14	0.11	24
Cyanide (WAD)	ug/g	≤35%	0.01	0.05	no	< 0.01	< 0.01	n/c
Hexavalent Chromium	ug/g	≤35%	0.18	0.9	no	< 0.18	< 0.18	n/c
Mercury	ug/g	≤30%	0.050	0.25	no	< 0.050	< 0.050	n/c
pH	pH units	0.3	-	-	-	7.97	8.00	n/c
Sodium Adsorption Ratio	-	-	-	-	-	0.29	0.33	n/c
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

TABLE 2 - Relative Percent Difference Calculations
Darlington New Nuclear Project

Sample Location						BH21-18 (3m)	BH21-18 (3M)	
Sample Name	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	BH21-18-1	Dup21	RPD (%)
Sample Collection Date						5/6/2021 3:05:00 PM	5/6/2021 3:05:00 PM	
Sample Matrix						SO	SO	
Sample Depth						0 - 0.61 m	0 - 0.61 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	yes	110	94	16
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	yes	22	350	176
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	yes	76	780	164
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	230	n/c
RSC-Polycyclic Aromatic Hydrocarbons								
1- & 2-Methylnaphthalene	ug/g	≤40%	0.0071	0.0355	yes	0.064	0.69	166
Acenaphthene	ug/g	≤40%	0.0050	0.025	yes	< 0.0050	< 0.30	193
Acenaphthylene	ug/g	≤40%	0.020	0.1	no	< 0.020	< 0.030	n/c
Anthracene	ug/g	≤40%	0.0050	0.025	yes	< 0.0050	0.077	176
Benzo[a]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[g,h,i]perylene	ug/g	≤40%	0.0050	0.025	no	0.0064	0.0055	n/c
Benzo[k]fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Chrysene	ug/g	≤40%	0.0050	0.025	yes	0.017	0.031	58
Dibenzo[a,h]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluoranthene	ug/g	≤40%	0.0050	0.025	yes	< 0.0050	< 0.040	156
Fluorene	ug/g	≤40%	0.0050	0.025	yes	< 0.0050	< 0.070	173
Indeno[1,2,3-cd]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Naphthalene	ug/g	≤40%	0.0090	0.045	yes	< 0.0090	0.055	144
Phenanthrene	ug/g	≤40%	0.0050	0.025	yes	0.051	0.27	136
Pyrene	ug/g	≤40%	0.0050	0.025	yes	0.0059	< 0.030	134
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	yes	0.12	0.090	29
Toluene	ug/g	≤50%	0.020	0.1	no	0.028	0.024	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	yes	0.42	0.51	19

Sample Location						BH21-18 (3m)	BH21-18 (3M)	
Sample Name	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	BH21-18-2	Dup 22	RPD (%)
Sample Collection Date						5/6/2021 3:10:00 PM	5/6/2021 3:10:00 PM	
Sample Matrix						SO	SO	
Sample Depth						0.6 - 1.22 m	0.6 - 1.22 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	15	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	54	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Polycyclic Aromatic Hydrocarbons								
1- & 2-Methylnaphthalene	ug/g	≤40%	0.0071	0.0355	no	0.018	< 0.0071	n/c
Acenaphthene	ug/g	≤40%	0.0050	0.025	no	< 0.0070	< 0.0050	n/c
Acenaphthylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[g,h,i]perylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[k]fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Chrysene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Dibenzo[a,h]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluorene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Indeno[1,2,3-cd]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Naphthalene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Phenanthrene	ug/g	≤40%	0.0050	0.025	no	0.012	< 0.0050	n/c
Pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

TABLE 2 - Relative Percent Difference Calculations
Darlington New Nuclear Project

Sample Location						BH21-18 (3m)	BH21-18 (3m)	
Sample Name		RPD			Is either	BH21-18-4	Dup24	
Sample Collection Date	Units	Alert	RDL	5X RDL	result	5/6/2021 3:30:00 PM	5/6/2021 3:30:00 PM	RPD (%)
Sample Matrix		Limit			>5X RDL	SO	SO	
Sample Depth						1.82 - 2.44 m	1.82 - 2.44 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Polycyclic Aromatic Hydrocarbons								
1- & 2-Methylnaphthalene	ug/g	≤40%	0.0071	0.0355	no	< 0.0071	< 0.0071	n/c
Acenaphthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Acenaphthylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[g,h,i]perylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[k]fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Chrysene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Dibenzo[a,h]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluorene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Indeno[1,2,3-cd]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Naphthalene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Phenanthrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

Sample Location						BH21-43 (6m)	BH21-43 (6M)	
Sample Name		RPD			Is either	BH21-43-2	Dup 20	
Sample Collection Date	Units	Alert	RDL	5X RDL	result	5/6/2021 10:25:00 AM	5/6/2021 10:25:00 AM	RPD (%)
Sample Matrix		Limit			>5X RDL	SO	SO	
Sample Depth						0.6 - 1.22 m	0.6 - 1.22 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

Sample Location						BH21-17 (3m)	BH21-17 (3M)	
Sample Name		RPD			Is either	BH21-17-1	Dup 27	
Sample Collection Date	Units	Alert	RDL	5X RDL	result	5/7/2021 8:45:00 AM	5/7/2021 8:45:00 AM	RPD (%)
Sample Matrix		Limit			>5X RDL	SO	SO	
Sample Depth						0 - 0.61 m	0 - 0.61 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	yes	< 10	92	161
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	12	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	59	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	0.053	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	yes	< 0.020	0.17	158
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	0.065	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	yes	0.14	1.3	161

Sample Location						BH21-17 (3m)	BH21-17 (3M)	
Sample Name		RPD			Is either	BH21-17-3	Dup 29	
Sample Collection Date	Units	Alert	RDL	5X RDL	result	5/7/2021 9:00:00 AM	5/7/2021 9:00:00 AM	RPD (%)
Sample Matrix		Limit			>5X RDL	SO	SO	
Sample Depth						1.21 - 1.83 m	1.21 - 1.83 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

Sample Location						BH21-17 (3m)	BH21-17 (3m)	
Sample Name		RPD			Is either	BH21-17-5	Dup 31	
Sample Collection Date	Units	Alert	RDL	5X RDL	result	5/7/2021 9:15:00 AM	5/7/2021 9:15:00 AM	RPD (%)
Sample Matrix		Limit			>5X RDL	SO	SO	
Sample Depth						2.43 - 3.05 m	2.43 - 3.05 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

TABLE 2 - Relative Percent Difference Calculations
Darlington New Nuclear Project

Sample Location						BH21-19 (3m)	BH21-19 (3M)	
Sample Name						BH21-19-1	Dup 32	
Sample Collection Date	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	7/2021 10:00:00 A	7/2021 10:00:00 A	RPD (%)
Sample Matrix						SO	SO	
Sample Depth						0 - 0.61 m	0 - 0.61 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	yes	110	92	18
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	yes	200	220	10
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	yes	450	480	6
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	150	150	n/c
RSC-Polycyclic Aromatic Hydrocarbons								
1- & 2-Methylnaphthalene	ug/g	≤40%	0.0071	0.0355	yes	0.45	0.64	35
Acenaphthene	ug/g	≤40%	0.30	1.5	no	< 0.30	< 0.30	n/c
Acenaphthylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Anthracene	ug/g	≤40%	0.0050	0.025	yes	0.040	0.049	20
Benzo[a]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[g,h,i]perylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[k]fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Chrysene	ug/g	≤40%	0.0050	0.025	no	0.024	0.025	n/c
Dibenzo[a,h]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluoranthene	ug/g	≤40%	0.020	0.1	no	< 0.020	< 0.030	n/c
Fluorene	ug/g	≤40%	0.040	0.2	no	< 0.040	< 0.050	n/c
Indeno[1,2,3-cd]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Naphthalene	ug/g	≤40%	0.0050	0.025	yes	0.039	0.062	46
Phenanthrene	ug/g	≤40%	0.0050	0.025	yes	0.14	0.17	19
Pyrene	ug/g	≤40%	0.020	0.1	no	< 0.020	< 0.020	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	0.062	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	yes	0.19	0.091	70
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	yes	0.43	0.55	24

Sample Location						BH21-19 (3m)	BH21-19 (3M)	
Sample Name						BH21-19-2	Dup33	
Sample Collection Date	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	7/2021 10:10:00 A	7/2021 10:10:00 A	RPD (%)
Sample Matrix						SO	SO	
Sample Depth						0.6 - 1.22 m	0.6 - 1.22 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Polycyclic Aromatic Hydrocarbons								
1- & 2-Methylnaphthalene	ug/g	≤40%	0.0071	0.0355	no	< 0.0071	< 0.0071	n/c
Acenaphthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Acenaphthylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[g,h,i]perylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[k]fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Chrysene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Dibenzo[a,h]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluorene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Indeno[1,2,3-cd]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Naphthalene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Phenanthrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

Sample Location						BH21-19 (3m)	BH21-19 (3m)	
Sample Name						BH21-19-4	Dup35	
Sample Collection Date	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	7/2021 10:30:00 A	7/2021 10:30:00 A	RPD (%)
Sample Matrix						SO	SO	
Sample Depth						1.82 - 2.44 m	1.82 - 2.44 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Polycyclic Aromatic Hydrocarbons								
1- & 2-Methylnaphthalene	ug/g	≤40%	0.0071	0.0355	no	< 0.0071	< 0.0071	n/c
Acenaphthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Acenaphthylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[g,h,i]perylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[k]fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Chrysene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Dibenzo[a,h]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluorene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Indeno[1,2,3-cd]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Naphthalene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Phenanthrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	0.031	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.050	< 0.040	n/c

TABLE 2 - Relative Percent Difference Calculations
Darlington New Nuclear Project

Sample Location						BH21-19 (3m)	BH21-19 (3M)	
Sample Name	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	BH21-19-5	Dup36	RPD (%)
Sample Collection Date						/7/2021 10:40:00 A	/7/2021 10:40:00 A	
Sample Matrix						SO	SO	
Sample Depth						2.43 - 3.05 m	2.43 - 3.05 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Polycyclic Aromatic Hydrocarbons								
1- & 2-Methylnaphthalene	ug/g	≤40%	0.0071	0.0355	no	< 0.0071	< 0.0071	n/c
Acenaphthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Acenaphthylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[g,h,i]perylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[k]fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Chrysene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Dibenzo[a,h]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluorene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Indeno[1,2,3-cd]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Naphthalene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Phenanthrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

Sample Location						BH21-20 (3m)	BH21-20 (3M)	
Sample Name	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	BH21-20-1	Dup 37	RPD (%)
Sample Collection Date						5/7/2021 1:05:00 PM	5/7/2021 1:05:00 PM	
Sample Matrix						SO	SO	
Sample Depth						0 - 0.61 m	0 - 0.61 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	yes	75	230	102
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	yes	460	70	147
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	yes	1000	200	133
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	yes	350	75	129
RSC-Polycyclic Aromatic Hydrocarbons								
1- & 2-Methylnaphthalene	ug/g	≤40%	0.0071	0.0355	yes	1.1	0.11	164
Acenaphthene	ug/g	≤40%	0.40	2	no	< 0.40	< 0.050	n/c
Acenaphthylene	ug/g	≤40%	0.030	0.15	no	< 0.030	< 0.0050	n/c
Anthracene	ug/g	≤40%	0.0050	0.025	yes	0.075	0.0095	155
Benzo[a]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[g,h,i]perylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[k]fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Chrysene	ug/g	≤40%	0.0050	0.025	yes	0.030	0.0072	123
Dibenzo[a,h]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluoranthene	ug/g	≤40%	0.030	0.15	no	< 0.030	< 0.0050	n/c
Fluorene	ug/g	≤40%	0.060	0.3	no	< 0.060	< 0.0080	n/c
Indeno[1,2,3-cd]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Naphthalene	ug/g	≤40%	0.0050	0.025	yes	0.12	0.010	169
Phenanthrene	ug/g	≤40%	0.0050	0.025	yes	0.22	0.031	151
Pyrene	ug/g	≤40%	0.030	0.15	no	< 0.030	< 0.0050	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	yes	0.025	0.13	135
Ethylbenzene	ug/g	≤50%	0.020	0.1	yes	0.10	0.48	131
Toluene	ug/g	≤50%	0.020	0.1	yes	0.026	0.45	178
Xylenes, Total	ug/g	≤50%	0.040	0.2	yes	0.93	5.2	139

TABLE 2 - Relative Percent Difference Calculations
Darlington New Nuclear Project

Sample Location						BH21-20 (3m)	BH21-20 (3M)	
Sample Name	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	BH21-20-2	Dup38	RPD (%)
Sample Collection Date						6/7/2021 1:10:00 PM	6/7/2021 1:10:00 PM	
Sample Matrix						SO	SO	
Sample Depth						0.6 - 1.22 m	0.6 - 1.22 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Polycyclic Aromatic Hydrocarbons								
1- & 2-Methylnaphthalene	ug/g	≤40%	0.0071	0.0355	no	< 0.0071	0.032	n/c
Acenaphthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Acenaphthylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[a]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[g,h,i]perylene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Benzo[k]fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Chrysene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Dibenzo[a,h]anthracene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluoranthene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Fluorene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Indeno[1,2,3-cd]pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Naphthalene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
Phenanthrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	0.0094	n/c
Pyrene	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

Sample Location						BH21-9 (3m)	BH21-9 (3M)	
Sample Name	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	BH21-9-1	Dup42	RPD (%)
Sample Collection Date						6/7/2021 2:45:00 PM	6/7/2021 2:45:00 PM	
Sample Matrix						SO	SO	
Sample Depth						0 - 0.61 m	0 - 0.61 m	
RSC-Acid/Base/Neutral Compounds								
1,2,4-Trichlorobenzene	ug/g	≤50%	0.05	0.25	no	< 0.05	< 0.05	n/c
2,4 + 2,6 dinitrotoluene	ug/g	≤50%	0.14	0.7	no	< 0.14	< 0.14	n/c
2,4-Dimethylphenol	ug/g	≤50%	0.2	1	no	< 0.2	< 0.2	n/c
2,4-Dinitrophenol	ug/g	≤50%	0.5	2.5	no	< 0.5	< 0.5	n/c
3,3'-Dichlorobenzidine	ug/g	≤50%	0.5	2.5	no	< 0.5	< 0.5	n/c
4-Chloroaniline	ug/g	≤50%	0.2	1	no	< 0.2	< 0.2	n/c
Biphenyl	ug/g	≤50%	0.05	0.25	no	< 0.05	< 0.05	n/c
Bis(2-chloroethyl) Ether	ug/g	≤50%	0.2	1	no	< 0.2	< 0.2	n/c
Bis(2-chloroisopropyl)ether	ug/g	≤50%	0.1	0.5	no	< 0.1	< 0.1	n/c
Bis(2-ethylhexyl) Phthalate	ug/g	≤50%	1	5	no	< 1	< 1	n/c
Diethyl Phthalate	ug/g	≤50%	0.2	1	no	< 0.2	< 0.2	n/c
Phenol	ug/g	≤50%	0.09	0.45	no	< 0.09	< 0.09	n/c
RSC-Chlorophenols								
2,4,5-Trichlorophenol	ug/g	≤50%	0.08	0.4	no	< 0.08	< 0.08	n/c
2,4,6-Trichlorophenol	ug/g	≤50%	0.1	0.5	no	< 0.1	< 0.1	n/c
2,4-Dichlorophenol	ug/g	≤50%	0.1	0.5	no	< 0.1	< 0.1	n/c
2-Chlorophenol	ug/g	≤50%	0.08	0.4	no	< 0.08	< 0.08	n/c
Pentachlorophenol	ug/g	≤50%	0.1	0.5	no	< 0.1	< 0.1	n/c
RSC-Organochlorine Pesticides								
Aldrin	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
alpha-Chlordane	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
alpha-Endosulfan	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
beta-Endosulfan	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Chlordane	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Chlordane, technical mixture	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
DDD, Total	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
DDE, Total	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
DDT, Total	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Dieldrin	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Endosulfan	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Endrin	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
gamma-hexachlorocyclohexane	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Heptachlor	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Heptachlor Epoxide	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Hexachlorobenzene	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Hexachlorobutadiene	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Hexachloroethane	ug/g	≤40%	0.0020	0.01	no	< 0.0020	< 0.0020	n/c
Methoxychlor	ug/g	≤40%	0.0050	0.025	no	< 0.0050	< 0.0050	n/c

TABLE 2 - Relative Percent Difference Calculations
Darlington New Nuclear Project

RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Polychlorinated Biphenyls								
Polychlorinated Biphenyls	ug/g	≤40%	0.015	0.075	no	< 0.015	< 0.015	n/c
RSC-Polycyclic Aromatic Hydrocarbons								
1- & 2-Methylnaphthalene	ug/g	≤40%	0.042	0.21	no	< 0.042	< 0.042	n/c
Acenaphthene	ug/g	≤40%	0.03	0.15	no	< 0.03	< 0.03	n/c
Acenaphthylene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
Anthracene	ug/g	≤40%	0.03	0.15	no	< 0.03	< 0.03	n/c
Benzo[a]anthracene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
Benzo[a]pyrene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
Benzo[g,h,i]perylene	ug/g	≤40%	0.1	0.5	no	< 0.1	< 0.1	n/c
Benzo[k]fluoranthene	ug/g	≤40%	0.03	0.15	no	< 0.03	< 0.03	n/c
Chrysene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
Dibenzo[a,h]anthracene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
Fluoranthene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
Fluorene	ug/g	≤40%	0.03	0.15	no	< 0.03	< 0.03	n/c
Indeno[1,2,3-cd]pyrene	ug/g	≤40%	0.08	0.4	no	< 0.08	< 0.08	n/c
Naphthalene	ug/g	≤40%	0.03	0.15	no	< 0.03	< 0.03	n/c
Phenanthrene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
Pyrene	ug/g	≤40%	0.05	0.25	no	< 0.05	< 0.05	n/c
RSC-Trihalomethanes								
Bromodichloromethane	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
Bromoform	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
Dibromochloromethane	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
RSC-Volatile Organic Compounds I								
1,1,1,2-Tetrachloroethane	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
1,1,1-Trichloroethane	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
1,1,2,2-Tetrachloroethane	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
1,1,2-Trichloroethane	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
1,1-Dichloroethane	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
1,1-Dichloroethene	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
1,2-Dibromoethane	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
1,2-Dichlorobenzene	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
1,2-Dichloroethane	ug/g	≤50%	0.049	0.245	no	< 0.049	< 0.049	n/c
1,2-Dichloropropane	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
1,3-Dichlorobenzene	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
1,4-Dichlorobenzene	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
2-Butanone	ug/g	≤50%	0.40	2	no	< 0.40	< 0.40	n/c
4-Methyl-2-pentanone	ug/g	≤50%	0.40	2	no	< 0.40	< 0.40	n/c
Acetone	ug/g	≤50%	0.49	2.45	no	< 0.49	< 0.49	n/c
Bromomethane	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
Carbon Tetrachloride	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
Chlorobenzene	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
Chloroform	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
cis-1,2-Dichloroethene	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
cis-1,3-Dichloropropene	ug/g	≤50%	0.030	0.15	no	< 0.030	< 0.030	n/c
Dichlorodifluoromethane	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
Methyl tert-Butyl Ether	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
Methylene Chloride	ug/g	≤50%	0.049	0.245	no	< 0.049	< 0.049	n/c
n-Hexane	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
Styrene	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
Tetrachloroethene	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
trans-1,2-Dichloroethene	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
trans-1,3-Dichloropropene	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
Trichloroethene	ug/g	≤50%	0.010	0.05	no	< 0.010	< 0.010	n/c
Trichlorofluoromethane	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c
Vinyl Chloride	ug/g	≤50%	0.019	0.095	no	< 0.019	< 0.019	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

TABLE 2 - Relative Percent Difference Calculations
Darlington New Nuclear Project

Sample Location						BH21-8 (10m)	BH21-8 (10M)	
Sample Name						BH21-8-1	Dup45	
Sample Collection Date	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	/11/2021 2:00:00 P	/11/2021 2:00:00 P	RPD (%)
Sample Matrix						SO	SO	
Sample Depth						0 - 0.61 m	0 - 0.61 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	yes	200	73	93
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	yes	150	310	70
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	yes	350	520	39
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	110	150	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	yes	0.19	0.028	149
Ethylbenzene	ug/g	≤50%	0.020	0.1	yes	0.56	0.11	134
Toluene	ug/g	≤50%	0.020	0.1	no	0.021	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	yes	4.0	0.73	138

Sample Location						BH21-8 (10m)	BH21-8 (10M)	
Sample Name						BH21-8-5	Dup46	
Sample Collection Date	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	/11/2021 2:50:00 P	/11/2021 2:50:00 P	RPD (%)
Sample Matrix						SO	SO	
Sample Depth						2.43 - 3.05 m	2.43 - 3.05 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

Sample Location						BH21-7 (3m)	BH21-7 (3M)	
Sample Name						BH21-7-1	Dup47	
Sample Collection Date	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	/12/2021 8:40:00 A	/12/2021 8:40:00 A	RPD (%)
Sample Matrix						SO	SO	
Sample Depth						0 - 0.61 m	0 - 0.61 m	
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	yes	270	170	45
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	yes	< 10	170	178
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	yes	< 50	370	152
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	120	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	yes	0.21	0.13	47
Ethylbenzene	ug/g	≤50%	0.020	0.1	yes	0.55	0.33	50
Toluene	ug/g	≤50%	0.020	0.1	yes	0.41	0.39	5
Xylenes, Total	ug/g	≤50%	0.040	0.2	yes	5.0	3.2	44

Sample Location						BH21-47 (6m)	BH21-47 (6M)	
Sample Name						BH21-47-3	Dup 49	
Sample Collection Date	Units	RPD Alert Limit	RDL	5X RDL	Is either result >5X RDL	12/2021 11:15:00 A	12/2021 11:15:00 A	RPD (%)
Sample Matrix						SO	SO	
Sample Depth						1.21 - 1.83 m	1.21 - 1.83 m	
RSC-Metals								
Barium	ug/g	≤30%	0.50	2.5	yes	82	130	45
Beryllium	ug/g	≤30%	0.20	1	no	0.42	0.57	n/c
Boron	ug/g	≤30%	5.0	25	no	7.6	9.1	n/c
Cadmium	ug/g	≤30%	0.10	0.5	no	0.18	0.16	n/c
Chromium	ug/g	≤30%	1.0	5	yes	16	23	36
Cobalt	ug/g	≤30%	0.10	0.5	yes	5.0	7.5	40
Copper	ug/g	≤30%	0.50	2.5	yes	10	13	26
Lead	ug/g	≤30%	1.0	5	yes	9.8	8.2	18
Molybdenum	ug/g	≤30%	0.50	2.5	no	0.55	< 0.50	n/c
Nickel	ug/g	≤30%	0.50	2.5	yes	11	15	31
Silver	ug/g	≤30%	0.20	1	no	< 0.20	< 0.20	n/c
Thallium	ug/g	≤30%	0.050	0.25	no	0.10	0.14	n/c
Uranium	ug/g	≤30%	0.050	0.25	yes	0.54	0.58	7
Vanadium	ug/g	≤30%	5.0	25	yes	26	36	32
Zinc	ug/g	≤30%	5.0	25	yes	50	55	10
RSC-Metals, Hydride-Forming								
Antimony	ug/g	≤30%	0.20	1	no	< 0.20	< 0.20	n/c
Arsenic	ug/g	≤30%	1.0	5	no	2.2	3.0	n/c
Selenium	ug/g	≤30%	0.50	2.5	no	< 0.50	< 0.50	n/c
RSC-Other Regulated Parameters								
Boron, Hot Water Soluble	ug/g	≤40%	0.050	0.25	yes	0.66	0.38	54
Conductivity	ms/cm	≤10%	0.002	0.01	yes	0.29	0.34	16
Cyanide (WAD)	ug/g	≤35%	0.01	0.05	no	< 0.01	< 0.01	n/c
Hexavalent Chromium	ug/g	≤35%	0.18	0.9	no	< 0.18	< 0.18	n/c
Mercury	ug/g	≤30%	0.050	0.25	no	< 0.050	< 0.050	n/c
pH	pH units	0.3	-	-	-	7.36	7.27	n/c
Sodium Adsorption Ratio	-	-	-	-	-	0.33	0.69	n/c
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	≤30%	10	50	no	< 10	< 10	n/c
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	≤30%	50	250	no	< 50	< 50	n/c
RSC-Volatile Organic Compounds II: BTEX								
Benzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Ethylbenzene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Toluene	ug/g	≤50%	0.020	0.1	no	< 0.020	< 0.020	n/c
Xylenes, Total	ug/g	≤50%	0.040	0.2	no	< 0.040	< 0.040	n/c

Notes:
Items high-lighted in red are outside of the alert limit. The MECP does not publish an alert limit for sodium adsorption ratio
n/c - RPD was not calculated since both of the reported concentrations were <5X RDL.

Your Project #: 20368429
Site Location: OPG Darlington
Your C.O.C. #: 332791

Attention: Kevan Browne (20368429)

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/06/24
Report #: R6690773
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C1A5742
Received: 2021/04/21, 14:50

Sample Matrix: Soil
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	10	N/A	2021/04/27	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	9	2021/04/23	2021/04/26	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron	1	2021/04/26	2021/04/26	CAM SOP-00408	R153 Ana. Prot. 2011
Free (WAD) Cyanide	10	2021/04/26	2021/04/27	CAM SOP-00457	OMOE E3015 m
Conductivity	10	2021/04/27	2021/04/27	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	10	2021/04/26	2021/04/27	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	2	N/A	2021/04/22	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	8	N/A	2021/04/23	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	4	2021/04/22	2021/04/23	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	6	2021/04/26	2021/04/26	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	9	2021/04/23	2021/04/25	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS	1	2021/04/26	2021/04/26	CAM SOP-00447	EPA 6020B m
Moisture	10	N/A	2021/04/22	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	10	2021/04/26	2021/04/27	CAM SOP-00318	EPA 8270D m
Polychlorinated Biphenyl in Soil	10	2021/04/26	2021/04/26	CAM SOP-00309	EPA 8082A m
pH CaCl2 EXTRACT	10	2021/04/27	2021/04/27	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	10	N/A	2021/04/27	CAM SOP-00102	EPA 6010C

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the

Your Project #: 20368429
Site Location: OPG Darlington
Your C.O.C. #: 332791

Attention: Kevan Browne (20368429)

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/06/24
Report #: R6690773
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C1A5742
Received: 2021/04/21, 14:50
customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.
(2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key



Ronklin Gracian
Project Manager
24 Jun 2021 14:41:09

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: emese.gitej@bureauveritas.com
Phone# (905)817-5829
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O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PJJ967	PJJ968	PJJ969	PJJ970	PJJ971		
Sampling Date		2021/04/08 14:10	2021/04/08 14:20	2021/04/08 15:00	2021/04/08 15:20	2021/04/09 08:30		
COC Number		332791	332791	332791	332791	332791		
	UNITS	BH21-40-2	BH21-40-3	BH21-36-2	BH21-36-4	BH21-41-1	RDL	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A	0.36	1.2	0.28 (1)	0.35	0.42		7312392
Inorganics								
Conductivity	mS/cm	0.47	0.22	0.15	0.21	0.16	0.002	7320015
Available (CaCl2) pH	pH	7.14	7.84	7.90	7.88	7.92		7320219
WAD Cyanide (Free)	ug/g	0.02	<0.01	<0.01	<0.01	<0.01	0.01	7318565
Chromium (VI)	ug/g	<0.18	<0.18	<0.18	<0.18	<0.18	0.18	7318882
Metals								
Hot Water Ext. Boron (B)	ug/g	0.21	<0.050	<0.050	0.072	0.089	0.050	7315941
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	<0.20	<0.20	0.59	0.20	7315829
Acid Extractable Arsenic (As)	ug/g	1.6	<1.0	<1.0	<1.0	1.3	1.0	7315829
Acid Extractable Barium (Ba)	ug/g	52	27	42	40	49	0.50	7315829
Acid Extractable Beryllium (Be)	ug/g	0.50	0.20	0.22	0.22	0.30	0.20	7315829
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	<5.0	<5.0	6.2	5.0	7315829
Acid Extractable Cadmium (Cd)	ug/g	0.25	<0.10	<0.10	<0.10	<0.10	0.10	7315829
Acid Extractable Chromium (Cr)	ug/g	14	8.4	10	11	12	1.0	7315829
Acid Extractable Cobalt (Co)	ug/g	3.8	2.4	3.4	3.2	4.0	0.10	7315829
Acid Extractable Copper (Cu)	ug/g	5.1	4.5	5.8	7.5	11	0.50	7315829
Acid Extractable Lead (Pb)	ug/g	4.8	2.3	2.9	3.3	6.5	1.0	7315829
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	<0.50	1.0	<0.50	0.50	7315829
Acid Extractable Nickel (Ni)	ug/g	7.2	5.0	6.4	6.9	9.6	0.50	7315829
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7315829
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	7315829
Acid Extractable Thallium (Tl)	ug/g	0.084	<0.050	0.055	0.052	0.072	0.050	7315829
Acid Extractable Uranium (U)	ug/g	0.58	0.45	0.42	0.45	0.53	0.050	7315829
Acid Extractable Vanadium (V)	ug/g	26	16	18	16	19	5.0	7315829
Acid Extractable Zinc (Zn)	ug/g	32	16	21	25	35	5.0	7315829
Acid Extractable Mercury (Hg)	ug/g	0.063	<0.050	<0.050	<0.050	<0.050	0.050	7315829

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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BV Labs Job #: C1A5742
Report Date: 2021/06/24

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PJJ971			PJJ972	PJJ973			PJJ973		
Sampling Date		2021/04/09 08:30			2021/04/09 09:00	2021/04/09 09:15			2021/04/09 09:15		
COC Number		332791			332791	332791			332791		
	UNITS	BH21-41-1 Lab-Dup	RDL	QC Batch	BH21-41-3	BH21-41-4	RDL	QC Batch	BH21-41-4 Lab-Dup	RDL	QC Batch
Calculated Parameters											
Sodium Adsorption Ratio	N/A				0.99	0.27 (1)		7312392			
Inorganics											
Conductivity	mS/cm				0.14	0.17	0.002	7320015			
Available (CaCl2) pH	pH				7.96	7.93		7320219			
WAD Cyanide (Free)	ug/g	<0.01	0.01	7318565	<0.01	<0.01	0.01	7318565			
Chromium (VI)	ug/g	<0.18	0.18	7318882	<0.18	<0.18	0.18	7318882			
Metals											
Hot Water Ext. Boron (B)	ug/g				<0.050	0.078	0.050	7315941	0.066	0.050	7315941
Acid Extractable Antimony (Sb)	ug/g				<0.20	<0.20	0.20	7315829			
Acid Extractable Arsenic (As)	ug/g				<1.0	<1.0	1.0	7315829			
Acid Extractable Barium (Ba)	ug/g				33	40	0.50	7315829			
Acid Extractable Beryllium (Be)	ug/g				<0.20	0.23	0.20	7315829			
Acid Extractable Boron (B)	ug/g				<5.0	<5.0	5.0	7315829			
Acid Extractable Cadmium (Cd)	ug/g				<0.10	<0.10	0.10	7315829			
Acid Extractable Chromium (Cr)	ug/g				7.5	9.5	1.0	7315829			
Acid Extractable Cobalt (Co)	ug/g				2.5	3.3	0.10	7315829			
Acid Extractable Copper (Cu)	ug/g				4.1	5.9	0.50	7315829			
Acid Extractable Lead (Pb)	ug/g				2.3	3.1	1.0	7315829			
Acid Extractable Molybdenum (Mo)	ug/g				<0.50	<0.50	0.50	7315829			
Acid Extractable Nickel (Ni)	ug/g				5.0	7.0	0.50	7315829			
Acid Extractable Selenium (Se)	ug/g				<0.50	<0.50	0.50	7315829			
Acid Extractable Silver (Ag)	ug/g				<0.20	<0.20	0.20	7315829			
Acid Extractable Thallium (Tl)	ug/g				<0.050	<0.050	0.050	7315829			
Acid Extractable Uranium (U)	ug/g				0.43	0.45	0.050	7315829			
Acid Extractable Vanadium (V)	ug/g				16	17	5.0	7315829			
Acid Extractable Zinc (Zn)	ug/g				23	26	5.0	7315829			
Acid Extractable Mercury (Hg)	ug/g				<0.050	<0.050	0.050	7315829			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PJJ974			PJJ974		PJJ975		
Sampling Date		2021/04/09 09:45			2021/04/09 09:45		2021/04/09 11:45		
COC Number		332791			332791		332791		
	UNITS	BH21-41-6	RDL	QC Batch	BH21-41-6 Lab-Dup	QC Batch	BH21-39-1	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	0.25 (1)		7312392			0.21 (1)		7312392
Inorganics									
Conductivity	mS/cm	0.19	0.002	7320025			0.20	0.002	7320015
Available (CaCl2) pH	pH	7.98		7320219	8.00	7320219	7.69		7320219
WAD Cyanide (Free)	ug/g	<0.01	0.01	7318565			<0.01	0.01	7318565
Chromium (VI)	ug/g	<0.18	0.18	7318882			<0.18	0.18	7318882
Metals									
Hot Water Ext. Boron (B)	ug/g	0.066	0.050	7318204			0.059	0.050	7315941
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7318235			<0.20	0.20	7315829
Acid Extractable Arsenic (As)	ug/g	1.1	1.0	7318235			1.2	1.0	7315829
Acid Extractable Barium (Ba)	ug/g	34	0.50	7318235			120	0.50	7315829
Acid Extractable Beryllium (Be)	ug/g	<0.20	0.20	7318235			0.40	0.20	7315829
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7318235			6.4	5.0	7315829
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7318235			<0.10	0.10	7315829
Acid Extractable Chromium (Cr)	ug/g	7.8	1.0	7318235			19	1.0	7315829
Acid Extractable Cobalt (Co)	ug/g	2.8	0.10	7318235			6.0	0.10	7315829
Acid Extractable Copper (Cu)	ug/g	4.1	0.50	7318235			12	0.50	7315829
Acid Extractable Lead (Pb)	ug/g	2.5	1.0	7318235			4.2	1.0	7315829
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7318235			<0.50	0.50	7315829
Acid Extractable Nickel (Ni)	ug/g	4.8	0.50	7318235			13	0.50	7315829
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7318235			<0.50	0.50	7315829
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7318235			<0.20	0.20	7315829
Acid Extractable Thallium (Tl)	ug/g	<0.050	0.050	7318235			0.12	0.050	7315829
Acid Extractable Uranium (U)	ug/g	0.46	0.050	7318235			0.45	0.050	7315829
Acid Extractable Vanadium (V)	ug/g	15	5.0	7318235			29	5.0	7315829
Acid Extractable Zinc (Zn)	ug/g	19	5.0	7318235			35	5.0	7315829
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7318235			<0.050	0.050	7315829

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PJJ975			PJJ976		
Sampling Date		2021/04/09 11:45			2021/04/09 12:45		
COC Number		332791			332791		
	UNITS	BH21-39-1 Lab-Dup	RDL	QC Batch	BH21-39-5	RDL	QC Batch
Calculated Parameters							
Sodium Adsorption Ratio	N/A				0.25 (1)		7312392
Inorganics							
Conductivity	mS/cm	0.20	0.002	7320015	0.18	0.002	7320015
Available (CaCl2) pH	pH				7.97		7320219
WAD Cyanide (Free)	ug/g				<0.01	0.01	7318565
Chromium (VI)	ug/g				<0.18	0.18	7318882
Metals							
Hot Water Ext. Boron (B)	ug/g				0.081	0.050	7315941
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7315829	<0.20	0.20	7315829
Acid Extractable Arsenic (As)	ug/g	1.5	1.0	7315829	<1.0	1.0	7315829
Acid Extractable Barium (Ba)	ug/g	120	0.50	7315829	59	0.50	7315829
Acid Extractable Beryllium (Be)	ug/g	0.44	0.20	7315829	0.22	0.20	7315829
Acid Extractable Boron (B)	ug/g	6.2	5.0	7315829	<5.0	5.0	7315829
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7315829	<0.10	0.10	7315829
Acid Extractable Chromium (Cr)	ug/g	18	1.0	7315829	13	1.0	7315829
Acid Extractable Cobalt (Co)	ug/g	5.9	0.10	7315829	3.6	0.10	7315829
Acid Extractable Copper (Cu)	ug/g	12	0.50	7315829	6.6	0.50	7315829
Acid Extractable Lead (Pb)	ug/g	4.2	1.0	7315829	3.6	1.0	7315829
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7315829	<0.50	0.50	7315829
Acid Extractable Nickel (Ni)	ug/g	12	0.50	7315829	7.1	0.50	7315829
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7315829	<0.50	0.50	7315829
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7315829	<0.20	0.20	7315829
Acid Extractable Thallium (Tl)	ug/g	0.11	0.050	7315829	0.064	0.050	7315829
Acid Extractable Uranium (U)	ug/g	0.45	0.050	7315829	0.45	0.050	7315829
Acid Extractable Vanadium (V)	ug/g	29	5.0	7315829	18	5.0	7315829
Acid Extractable Zinc (Zn)	ug/g	35	5.0	7315829	26	5.0	7315829
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7315829	<0.050	0.050	7315829

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1A5742
Report Date: 2021/06/24

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PAHS (SOIL)

BV Labs ID		PJJ967	PJJ968	PJJ969	PJJ970		PJJ971	PJJ972		
Sampling Date		2021/04/08 14:10	2021/04/08 14:20	2021/04/08 15:00	2021/04/08 15:20		2021/04/09 08:30	2021/04/09 09:00		
COC Number		332791	332791	332791	332791		332791	332791		
	UNITS	BH21-40-2	BH21-40-3	BH21-36-2	BH21-36-4	QC Batch	BH21-41-1	BH21-41-3	RDL	QC Batch
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	<0.0071	<0.0071	7312421	<0.0071	<0.0071	0.0071	7312421
Polyaromatic Hydrocarbons										
Acenaphthene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Acenaphthylene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Anthracene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Benzo(a)anthracene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Benzo(a)pyrene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Benzo(b/j)fluoranthene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Benzo(g,h,i)perylene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Benzo(k)fluoranthene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Chrysene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Dibenzo(a,h)anthracene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Fluoranthene	ug/g	0.0058	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Fluorene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
2-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Naphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Phenanthrene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Pyrene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7319006	<0.0050	<0.0050	0.0050	7319229
Surrogate Recovery (%)										
D10-Anthracene	%	85	101	95	100	7319006	103	107		7319229
D14-Terphenyl (FS)	%	82	88	84	93	7319006	100	104		7319229
D8-Acenaphthylene	%	74	73	75	79	7319006	95	98		7319229

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PAHS (SOIL)

BV Labs ID		PJJ973			PJJ974			PJJ975	PJJ976		
Sampling Date		2021/04/09 09:15			2021/04/09 09:45			2021/04/09 11:45	2021/04/09 12:45		
COC Number		332791			332791			332791	332791		
	UNITS	BH21-41-4	RDL	QC Batch	BH21-41-6	RDL	QC Batch	BH21-39-1	BH21-39-5	RDL	QC Batch
Inorganics											
Moisture	%				6.9	1.0	7313745				
Calculated Parameters											
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	0.0071	7312421	<0.0071	0.0071	7312421	<0.0071	<0.0071	0.0071	7312421
Polyaromatic Hydrocarbons											
Acenaphthene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Acenaphthylene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Anthracene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Benzo(a)anthracene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Benzo(a)pyrene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Benzo(b/j)fluoranthene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Chrysene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Fluoranthene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Fluorene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
1-Methylnaphthalene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
2-Methylnaphthalene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Naphthalene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Phenanthrene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Pyrene	ug/g	<0.0050	0.0050	7319229	<0.0050	0.0050	7319229	<0.0050	<0.0050	0.0050	7319229
Surrogate Recovery (%)											
D10-Anthracene	%	105		7319229	103		7319229	100	99		7319229
D14-Terphenyl (FS)	%	101		7319229	100		7319229	97	99		7319229
D8-Acenaphthylene	%	103		7319229	97		7319229	100	87		7319229

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 PCBS (SOIL)

BV Labs ID		PJJ967	PJJ968	PJJ969	PJJ970	PJJ970	PJJ971	PJJ972		
Sampling Date		2021/04/08 14:10	2021/04/08 14:20	2021/04/08 15:00	2021/04/08 15:20	2021/04/08 15:20	2021/04/09 08:30	2021/04/09 09:00		
COC Number		332791	332791	332791	332791	332791	332791	332791		
	UNITS	BH21-40-2	BH21-40-3	BH21-36-2	BH21-36-4	BH21-36-4 Lab-Dup	BH21-41-1	BH21-41-3	RDL	QC Batch
PCBs										
Aroclor 1242	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7318183
Aroclor 1248	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7318183
Aroclor 1254	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7318183
Aroclor 1260	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7318183
Total PCB	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7318183
Surrogate Recovery (%)										
Decachlorobiphenyl	%	81	79	85	83	84	80	80		7318183

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

BV Labs ID		PJJ973	PJJ974	PJJ975	PJJ976		
Sampling Date		2021/04/09 09:15	2021/04/09 09:45	2021/04/09 11:45	2021/04/09 12:45		
COC Number		332791	332791	332791	332791		
	UNITS	BH21-41-4	BH21-41-6	BH21-39-1	BH21-39-5	RDL	QC Batch
PCBs							
Aroclor 1242	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	7318183
Aroclor 1248	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	7318183
Aroclor 1254	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	7318183
Aroclor 1260	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	7318183
Total PCB	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	7318183
Surrogate Recovery (%)							
Decachlorobiphenyl	%	77	82	77	82		7318183

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs Job #: C1A5742
Report Date: 2021/06/24

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PJJ967			PJJ967			PJJ968	PJJ969		
Sampling Date		2021/04/08 14:10			2021/04/08 14:10			2021/04/08 14:20	2021/04/08 15:00		
COC Number		332791			332791			332791	332791		
	UNITS	BH21-40-2	RDL	QC Batch	BH21-40-2 Lab-Dup	RDL	QC Batch	BH21-40-3	BH21-36-2	RDL	QC Batch
Inorganics											
Moisture	%	17	1.0	7313861				6.1	7.9	1.0	7313745
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	0.020	7313850	<0.020	0.020	7313850	<0.020	<0.020	0.020	7313850
Toluene	ug/g	<0.020	0.020	7313850	<0.020	0.020	7313850	<0.020	<0.020	0.020	7313850
Ethylbenzene	ug/g	<0.020	0.020	7313850	<0.020	0.020	7313850	<0.020	<0.020	0.020	7313850
o-Xylene	ug/g	<0.020	0.020	7313850	<0.020	0.020	7313850	<0.020	<0.020	0.020	7313850
p+m-Xylene	ug/g	<0.040	0.040	7313850	<0.040	0.040	7313850	<0.040	<0.040	0.040	7313850
Total Xylenes	ug/g	<0.040	0.040	7313850	<0.040	0.040	7313850	<0.040	<0.040	0.040	7313850
F1 (C6-C10)	ug/g	<10	10	7313850	<10	10	7313850	<10	<10	10	7313850
F1 (C6-C10) - BTEX	ug/g	<10	10	7313850	<10	10	7313850	<10	<10	10	7313850
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7313227				<10	<10	10	7313227
F3 (C16-C34 Hydrocarbons)	ug/g	70	50	7313227				<50	<50	50	7313227
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7313227				<50	<50	50	7313227
Reached Baseline at C50	ug/g	Yes		7313227				Yes	Yes		7313227
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	100		7313850	98		7313850	98	99		7313850
4-Bromofluorobenzene	%	98		7313850	92		7313850	96	97		7313850
D10-o-Xylene	%	90		7313850	90		7313850	76	86		7313850
D4-1,2-Dichloroethane	%	98		7313850	100		7313850	99	98		7313850
o-Terphenyl	%	101		7313227				98	96		7313227

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1A5742
Report Date: 2021/06/24

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PJJ970		PJJ971			PJJ971		
Sampling Date		2021/04/08 15:20		2021/04/09 08:30			2021/04/09 08:30		
COC Number		332791		332791			332791		
	UNITS	BH21-36-4	QC Batch	BH21-41-1	RDL	QC Batch	BH21-41-1 Lab-Dup	RDL	QC Batch
Inorganics									
Moisture	%	8.9	7313745	8.9	1.0	7313745			
BTEX & F1 Hydrocarbons									
Benzene	ug/g	<0.020	7313850	<0.020	0.020	7315862	<0.020	0.020	7315862
Toluene	ug/g	<0.020	7313850	<0.020	0.020	7315862	<0.020	0.020	7315862
Ethylbenzene	ug/g	<0.020	7313850	<0.020	0.020	7315862	<0.020	0.020	7315862
o-Xylene	ug/g	<0.020	7313850	<0.020	0.020	7315862	<0.020	0.020	7315862
p+m-Xylene	ug/g	<0.040	7313850	<0.040	0.040	7315862	<0.040	0.040	7315862
Total Xylenes	ug/g	<0.040	7313850	<0.040	0.040	7315862	<0.040	0.040	7315862
F1 (C6-C10)	ug/g	<10	7313850	<10	10	7315862	<10	10	7315862
F1 (C6-C10) - BTEX	ug/g	<10	7313850	<10	10	7315862	<10	10	7315862
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7313227	<10	10	7318031			
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7313227	<50	50	7318031			
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7313227	<50	50	7318031			
Reached Baseline at C50	ug/g	Yes	7313227	Yes		7318031			
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	99	7313850	99		7315862	98		7315862
4-Bromofluorobenzene	%	95	7313850	96		7315862	95		7315862
D10-o-Xylene	%	93	7313850	88		7315862	84		7315862
D4-1,2-Dichloroethane	%	96	7313850	98		7315862	97		7315862
o-Terphenyl	%	95	7313227	100		7318031			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PJJ972	PJJ973			PJJ974			PJJ975		
Sampling Date		2021/04/09 09:00	2021/04/09 09:15			2021/04/09 09:45			2021/04/09 11:45		
COC Number		332791	332791			332791			332791		
	UNITS	BH21-41-3	BH21-41-4	RDL	QC Batch	BH21-41-6	RDL	QC Batch	BH21-39-1	RDL	QC Batch
Inorganics											
Moisture	%	7.1	5.7	1.0	7313745				12	1.0	7313745
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	<0.020	0.020	7315862	<0.020	0.020	7315862	<0.020	0.020	7315862
Toluene	ug/g	<0.020	<0.020	0.020	7315862	<0.020	0.020	7315862	<0.020	0.020	7315862
Ethylbenzene	ug/g	<0.020	<0.020	0.020	7315862	<0.020	0.020	7315862	<0.020	0.020	7315862
o-Xylene	ug/g	<0.020	<0.020	0.020	7315862	<0.020	0.020	7315862	<0.020	0.020	7315862
p+m-Xylene	ug/g	<0.040	<0.040	0.040	7315862	<0.040	0.040	7315862	<0.040	0.040	7315862
Total Xylenes	ug/g	<0.040	<0.040	0.040	7315862	<0.040	0.040	7315862	<0.040	0.040	7315862
F1 (C6-C10)	ug/g	<10	<10	10	7315862	<10	10	7315862	<10	10	7315862
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	7315862	<10	10	7315862	<10	10	7315862
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	7318031	<10	10	7318031	<10	10	7318031
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	7318031	<50	50	7318031	<50	50	7318031
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	7318031	<50	50	7318031	<50	50	7318031
Reached Baseline at C50	ug/g	Yes	Yes		7318031	Yes		7318031	Yes		7318031
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	100	100		7315862	99		7315862	98		7315862
4-Bromofluorobenzene	%	94	95		7315862	95		7315862	96		7315862
D10-o-Xylene	%	87	91		7315862	85		7315862	80		7315862
D4-1,2-Dichloroethane	%	96	96		7315862	97		7315862	97		7315862
o-Terphenyl	%	101	103		7318031	100		7318031	103		7318031

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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BV Labs Job #: C1A5742
Report Date: 2021/06/24

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PJJ976		
Sampling Date		2021/04/09 12:45		
COC Number		332791		
	UNITS	BH21-39-5	RDL	QC Batch
Inorganics				
Moisture	%	20	1.0	7313745
BTEX & F1 Hydrocarbons				
Benzene	ug/g	<0.020	0.020	7315862
Toluene	ug/g	<0.020	0.020	7315862
Ethylbenzene	ug/g	<0.020	0.020	7315862
o-Xylene	ug/g	<0.020	0.020	7315862
p+m-Xylene	ug/g	<0.040	0.040	7315862
Total Xylenes	ug/g	<0.040	0.040	7315862
F1 (C6-C10)	ug/g	<10	10	7315862
F1 (C6-C10) - BTEX	ug/g	<10	10	7315862
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7318031
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7318031
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7318031
Reached Baseline at C50	ug/g	Yes		7318031
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	98		7315862
4-Bromofluorobenzene	%	95		7315862
D10-o-Xylene	%	97		7315862
D4-1,2-Dichloroethane	%	97		7315862
o-Terphenyl	%	101		7318031

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1A5742
Report Date: 2021/06/24

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

TEST SUMMARY

BV Labs ID: PJJ967
Sample ID: BH21-40-2
Matrix: Soil

Collected: 2021/04/08
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7312421	N/A	2021/04/27	Automated Statchk
Hot Water Extractable Boron	ICP	7315941	2021/04/23	2021/04/26	Jolly John
Free (WAD) Cyanide	TECH	7318565	2021/04/26	2021/04/27	Aditiben Patel
Conductivity	AT	7320015	2021/04/27	2021/04/27	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7318882	2021/04/26	2021/04/27	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7313850	N/A	2021/04/22	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7313227	2021/04/22	2021/04/23	Margaret Kulczyk-Stanko
Acid Extractable Metals by ICPMS	ICP/MS	7315829	2021/04/23	2021/04/25	Azita Fazaeli
Moisture	BAL	7313861	N/A	2021/04/22	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7319006	2021/04/26	2021/04/27	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7318183	2021/04/26	2021/04/26	Mahmudul Khan
pH CaCl2 EXTRACT	AT	7320219	2021/04/27	2021/04/27	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7312392	N/A	2021/04/27	Automated Statchk

BV Labs ID: PJJ967 Dup
Sample ID: BH21-40-2
Matrix: Soil

Collected: 2021/04/08
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7313850	N/A	2021/04/22	Ravinder Gaidhu

BV Labs ID: PJJ968
Sample ID: BH21-40-3
Matrix: Soil

Collected: 2021/04/08
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7312421	N/A	2021/04/27	Automated Statchk
Hot Water Extractable Boron	ICP	7315941	2021/04/23	2021/04/26	Jolly John
Free (WAD) Cyanide	TECH	7318565	2021/04/26	2021/04/27	Aditiben Patel
Conductivity	AT	7320015	2021/04/27	2021/04/27	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7318882	2021/04/26	2021/04/27	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7313850	N/A	2021/04/22	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7313227	2021/04/22	2021/04/23	Margaret Kulczyk-Stanko
Acid Extractable Metals by ICPMS	ICP/MS	7315829	2021/04/23	2021/04/25	Azita Fazaeli
Moisture	BAL	7313745	N/A	2021/04/22	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7319006	2021/04/26	2021/04/27	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7318183	2021/04/26	2021/04/26	Mahmudul Khan
pH CaCl2 EXTRACT	AT	7320219	2021/04/27	2021/04/27	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7312392	N/A	2021/04/27	Automated Statchk

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BV Labs Job #: C1A5742
Report Date: 2021/06/24

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

TEST SUMMARY

BV Labs ID: PJJ969
Sample ID: BH21-36-2
Matrix: Soil

Collected: 2021/04/08
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7312421	N/A	2021/04/27	Automated Statchk
Hot Water Extractable Boron	ICP	7315941	2021/04/23	2021/04/26	Jolly John
Free (WAD) Cyanide	TECH	7318565	2021/04/26	2021/04/27	Aditiben Patel
Conductivity	AT	7320015	2021/04/27	2021/04/27	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7318882	2021/04/26	2021/04/27	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7313850	N/A	2021/04/23	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7313227	2021/04/22	2021/04/23	Margaret Kulczyk-Stanko
Acid Extractable Metals by ICPMS	ICP/MS	7315829	2021/04/23	2021/04/25	Azita Fazaeli
Moisture	BAL	7313745	N/A	2021/04/22	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7319006	2021/04/26	2021/04/27	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7318183	2021/04/26	2021/04/26	Mahmudul Khan
pH CaCl2 EXTRACT	AT	7320219	2021/04/27	2021/04/27	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7312392	N/A	2021/04/27	Automated Statchk

BV Labs ID: PJJ970
Sample ID: BH21-36-4
Matrix: Soil

Collected: 2021/04/08
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7312421	N/A	2021/04/27	Automated Statchk
Hot Water Extractable Boron	ICP	7315941	2021/04/23	2021/04/26	Jolly John
Free (WAD) Cyanide	TECH	7318565	2021/04/26	2021/04/27	Aditiben Patel
Conductivity	AT	7320015	2021/04/27	2021/04/27	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7318882	2021/04/26	2021/04/27	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7313850	N/A	2021/04/23	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7313227	2021/04/22	2021/04/23	Margaret Kulczyk-Stanko
Acid Extractable Metals by ICPMS	ICP/MS	7315829	2021/04/23	2021/04/25	Azita Fazaeli
Moisture	BAL	7313745	N/A	2021/04/22	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7319006	2021/04/26	2021/04/27	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7318183	2021/04/26	2021/04/26	Mahmudul Khan
pH CaCl2 EXTRACT	AT	7320219	2021/04/27	2021/04/27	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7312392	N/A	2021/04/27	Automated Statchk

BV Labs ID: PJJ970 Dup
Sample ID: BH21-36-4
Matrix: Soil

Collected: 2021/04/08
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Polychlorinated Biphenyl in Soil	GC/ECD	7318183	2021/04/26	2021/04/26	Mahmudul Khan

TEST SUMMARY

BV Labs ID: PJJ971
Sample ID: BH21-41-1
Matrix: Soil

Collected: 2021/04/09
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7312421	N/A	2021/04/27	Automated Statchk
Hot Water Extractable Boron	ICP	7315941	2021/04/23	2021/04/26	Jolly John
Free (WAD) Cyanide	TECH	7318565	2021/04/26	2021/04/27	Aditiben Patel
Conductivity	AT	7320015	2021/04/27	2021/04/27	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7318882	2021/04/26	2021/04/27	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7315862	N/A	2021/04/23	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7318031	2021/04/26	2021/04/26	Margaret Kulczyk-Stanko
Acid Extractable Metals by ICPMS	ICP/MS	7315829	2021/04/23	2021/04/25	Azita Fazaeli
Moisture	BAL	7313745	N/A	2021/04/22	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7319229	2021/04/26	2021/04/27	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7318183	2021/04/26	2021/04/26	Mahmudul Khan
pH CaCl2 EXTRACT	AT	7320219	2021/04/27	2021/04/27	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7312392	N/A	2021/04/27	Automated Statchk

BV Labs ID: PJJ971 Dup
Sample ID: BH21-41-1
Matrix: Soil

Collected: 2021/04/09
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7318565	2021/04/26	2021/04/27	Aditiben Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7318882	2021/04/26	2021/04/27	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7315862	N/A	2021/04/23	Ravinder Gaidhu

BV Labs ID: PJJ972
Sample ID: BH21-41-3
Matrix: Soil

Collected: 2021/04/09
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7312421	N/A	2021/04/27	Automated Statchk
Hot Water Extractable Boron	ICP	7315941	2021/04/23	2021/04/26	Jolly John
Free (WAD) Cyanide	TECH	7318565	2021/04/26	2021/04/27	Aditiben Patel
Conductivity	AT	7320015	2021/04/27	2021/04/27	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7318882	2021/04/26	2021/04/27	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7315862	N/A	2021/04/23	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7318031	2021/04/26	2021/04/26	Margaret Kulczyk-Stanko
Acid Extractable Metals by ICPMS	ICP/MS	7315829	2021/04/23	2021/04/25	Azita Fazaeli
Moisture	BAL	7313745	N/A	2021/04/22	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7319229	2021/04/26	2021/04/27	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7318183	2021/04/26	2021/04/26	Mahmudul Khan
pH CaCl2 EXTRACT	AT	7320219	2021/04/27	2021/04/27	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7312392	N/A	2021/04/27	Automated Statchk

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TEST SUMMARY

BV Labs ID: PJJ973
Sample ID: BH21-41-4
Matrix: Soil

Collected: 2021/04/09
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7312421	N/A	2021/04/27	Automated Statchk
Hot Water Extractable Boron	ICP	7315941	2021/04/23	2021/04/26	Jolly John
Free (WAD) Cyanide	TECH	7318565	2021/04/26	2021/04/27	Aditiben Patel
Conductivity	AT	7320015	2021/04/27	2021/04/27	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7318882	2021/04/26	2021/04/27	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7315862	N/A	2021/04/23	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7318031	2021/04/26	2021/04/26	Margaret Kulczyk-Stanko
Acid Extractable Metals by ICPMS	ICP/MS	7315829	2021/04/23	2021/04/25	Azita Fazaeli
Moisture	BAL	7313745	N/A	2021/04/22	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7319229	2021/04/26	2021/04/27	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7318183	2021/04/26	2021/04/26	Mahmudul Khan
pH CaCl2 EXTRACT	AT	7320219	2021/04/27	2021/04/27	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7312392	N/A	2021/04/27	Automated Statchk

BV Labs ID: PJJ973 Dup
Sample ID: BH21-41-4
Matrix: Soil

Collected: 2021/04/09
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7315941	2021/04/23	2021/04/26	Jolly John

BV Labs ID: PJJ974
Sample ID: BH21-41-6
Matrix: Soil

Collected: 2021/04/09
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7312421	N/A	2021/04/27	Automated Statchk
Hot Water Extractable Boron	ICP	7318204	2021/04/26	2021/04/26	Medhat Nasr
Free (WAD) Cyanide	TECH	7318565	2021/04/26	2021/04/27	Aditiben Patel
Conductivity	AT	7320025	2021/04/27	2021/04/27	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7318882	2021/04/26	2021/04/27	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7315862	N/A	2021/04/23	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7318031	2021/04/26	2021/04/26	Margaret Kulczyk-Stanko
Acid Extractable Metals by ICPMS	ICP/MS	7318235	2021/04/26	2021/04/26	Azita Fazaeli
Moisture	BAL	7313745	N/A	2021/04/22	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7319229	2021/04/26	2021/04/27	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7318183	2021/04/26	2021/04/26	Mahmudul Khan
pH CaCl2 EXTRACT	AT	7320219	2021/04/27	2021/04/27	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7312392	N/A	2021/04/27	Automated Statchk

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TEST SUMMARY

BV Labs ID: PJJ974 Dup
Sample ID: BH21-41-6
Matrix: Soil

Collected: 2021/04/09
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	7320219	2021/04/27	2021/04/27	Neil Dassanayake

BV Labs ID: PJJ975
Sample ID: BH21-39-1
Matrix: Soil

Collected: 2021/04/09
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7312421	N/A	2021/04/27	Automated Statchk
Hot Water Extractable Boron	ICP	7315941	2021/04/23	2021/04/26	Jolly John
Free (WAD) Cyanide	TECH	7318565	2021/04/26	2021/04/27	Aditiben Patel
Conductivity	AT	7320015	2021/04/27	2021/04/27	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7318882	2021/04/26	2021/04/27	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7315862	N/A	2021/04/23	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7318031	2021/04/26	2021/04/26	Margaret Kulczyk-Stanko
Acid Extractable Metals by ICPMS	ICP/MS	7315829	2021/04/23	2021/04/25	Azita Fazaeli
Moisture	BAL	7313745	N/A	2021/04/22	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7319229	2021/04/26	2021/04/27	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7318183	2021/04/26	2021/04/26	Mahmudul Khan
pH CaCl2 EXTRACT	AT	7320219	2021/04/27	2021/04/27	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7312392	N/A	2021/04/27	Automated Statchk

BV Labs ID: PJJ975 Dup
Sample ID: BH21-39-1
Matrix: Soil

Collected: 2021/04/09
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	7320015	2021/04/27	2021/04/27	Tarunpreet Kaur
Acid Extractable Metals by ICPMS	ICP/MS	7315829	2021/04/23	2021/04/25	Azita Fazaeli

BV Labs ID: PJJ976
Sample ID: BH21-39-5
Matrix: Soil

Collected: 2021/04/09
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7312421	N/A	2021/04/27	Automated Statchk
Hot Water Extractable Boron	ICP	7315941	2021/04/23	2021/04/26	Jolly John
Free (WAD) Cyanide	TECH	7318565	2021/04/26	2021/04/27	Aditiben Patel
Conductivity	AT	7320015	2021/04/27	2021/04/27	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7318882	2021/04/26	2021/04/27	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7315862	N/A	2021/04/23	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7318031	2021/04/26	2021/04/26	Margaret Kulczyk-Stanko
Acid Extractable Metals by ICPMS	ICP/MS	7315829	2021/04/23	2021/04/25	Azita Fazaeli
Moisture	BAL	7313745	N/A	2021/04/22	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7319229	2021/04/26	2021/04/27	Mitesh Raj

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BV Labs Job #: C1A5742
Report Date: 2021/06/24

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

TEST SUMMARY

BV Labs ID: PJJ976
Sample ID: BH21-39-5
Matrix: Soil

Collected: 2021/04/09
Shipped:
Received: 2021/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Polychlorinated Biphenyl in Soil	GC/ECD	7318183	2021/04/26	2021/04/26	Mahmudul Khan
pH CaCl2 EXTRACT	AT	7320219	2021/04/27	2021/04/27	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7312392	N/A	2021/04/27	Automated Statchk

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BV Labs Job #: C1A5742
Report Date: 2021/06/24

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.0°C

Revised Report [2021/06/24]: Sampling date updated as per client request.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7313227	MKS	Matrix Spike	o-Terphenyl	2021/04/22		95	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/04/22		100	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/04/22		104	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/04/22		110	%	50 - 130
7313227	MKS	Spiked Blank	o-Terphenyl	2021/04/22		94	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/04/22		95	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/04/22		100	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/04/22		105	%	80 - 120
7313227	MKS	Method Blank	o-Terphenyl	2021/04/22		99	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/04/22	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/04/22	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/04/22	<50		ug/g	
7313227	MKS	RPD	F2 (C10-C16 Hydrocarbons)	2021/04/23	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/04/23	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/04/23	NC		%	30
7313745	KJP	RPD	Moisture	2021/04/22	4.3		%	20
7313850	RGA	Matrix Spike [PJJ967-04]	1,4-Difluorobenzene	2021/04/22		95	%	60 - 140
			4-Bromofluorobenzene	2021/04/22		99	%	60 - 140
			D10-o-Xylene	2021/04/22		93	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/22		96	%	60 - 140
			Benzene	2021/04/22		105	%	50 - 140
			Toluene	2021/04/22		104	%	50 - 140
			Ethylbenzene	2021/04/22		117	%	50 - 140
			o-Xylene	2021/04/22		115	%	50 - 140
			p+m-Xylene	2021/04/22		111	%	50 - 140
			F1 (C6-C10)	2021/04/22		98	%	60 - 140
7313850	RGA	Spiked Blank	1,4-Difluorobenzene	2021/04/22		96	%	60 - 140
			4-Bromofluorobenzene	2021/04/22		101	%	60 - 140
			D10-o-Xylene	2021/04/22		96	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/22		91	%	60 - 140
			Benzene	2021/04/22		95	%	50 - 140
			Toluene	2021/04/22		93	%	50 - 140
			Ethylbenzene	2021/04/22		104	%	50 - 140
			o-Xylene	2021/04/22		101	%	50 - 140
			p+m-Xylene	2021/04/22		98	%	50 - 140
			F1 (C6-C10)	2021/04/22		89	%	80 - 120
7313850	RGA	Method Blank	1,4-Difluorobenzene	2021/04/22		98	%	60 - 140
			4-Bromofluorobenzene	2021/04/22		96	%	60 - 140
			D10-o-Xylene	2021/04/22		82	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/22		102	%	60 - 140
			Benzene	2021/04/22	<0.020		ug/g	
			Toluene	2021/04/22	<0.020		ug/g	
			Ethylbenzene	2021/04/22	<0.020		ug/g	
			o-Xylene	2021/04/22	<0.020		ug/g	
			p+m-Xylene	2021/04/22	<0.040		ug/g	
			Total Xylenes	2021/04/22	<0.040		ug/g	
			F1 (C6-C10)	2021/04/22	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/04/22	<10		ug/g	
7313850	RGA	RPD [PJJ967-04]	Benzene	2021/04/22	NC		%	50
			Toluene	2021/04/22	NC		%	50
			Ethylbenzene	2021/04/22	NC		%	50

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			o-Xylene	2021/04/22	NC		%	50
			p+m-Xylene	2021/04/22	NC		%	50
			Total Xylenes	2021/04/22	NC		%	50
			F1 (C6-C10)	2021/04/22	NC		%	30
			F1 (C6-C10) - BTEX	2021/04/22	NC		%	30
7313861	KJP	RPD	Moisture	2021/04/22	4.4		%	20
7315829	AFZ	Matrix Spike [PJJ975-01]	Acid Extractable Antimony (Sb)	2021/04/25		98	%	75 - 125
			Acid Extractable Arsenic (As)	2021/04/25		105	%	75 - 125
			Acid Extractable Barium (Ba)	2021/04/25		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/04/25		108	%	75 - 125
			Acid Extractable Boron (B)	2021/04/25		104	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/04/25		102	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/04/25		101	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/04/25		102	%	75 - 125
			Acid Extractable Copper (Cu)	2021/04/25		98	%	75 - 125
			Acid Extractable Lead (Pb)	2021/04/25		97	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/04/25		104	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/04/25		102	%	75 - 125
			Acid Extractable Selenium (Se)	2021/04/25		104	%	75 - 125
			Acid Extractable Silver (Ag)	2021/04/25		102	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/04/25		99	%	75 - 125
			Acid Extractable Uranium (U)	2021/04/25		102	%	75 - 125
			Acid Extractable Vanadium (V)	2021/04/25		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/04/25		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/04/25		86	%	75 - 125
7315829	AFZ	Spiked Blank	Acid Extractable Antimony (Sb)	2021/04/25		103	%	80 - 120
			Acid Extractable Arsenic (As)	2021/04/25		101	%	80 - 120
			Acid Extractable Barium (Ba)	2021/04/25		104	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/04/25		102	%	80 - 120
			Acid Extractable Boron (B)	2021/04/25		98	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/04/25		98	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/04/25		99	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/04/25		99	%	80 - 120
			Acid Extractable Copper (Cu)	2021/04/25		98	%	80 - 120
			Acid Extractable Lead (Pb)	2021/04/25		100	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/04/25		101	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/04/25		100	%	80 - 120
			Acid Extractable Selenium (Se)	2021/04/25		102	%	80 - 120
			Acid Extractable Silver (Ag)	2021/04/25		102	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/04/25		99	%	80 - 120
			Acid Extractable Uranium (U)	2021/04/25		102	%	80 - 120
			Acid Extractable Vanadium (V)	2021/04/25		100	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/04/25		100	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/04/25		88	%	80 - 120
7315829	AFZ	Method Blank	Acid Extractable Antimony (Sb)	2021/04/25	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/04/25	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/04/25	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/04/25	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/04/25	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/04/25	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/04/25	<1.0		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Cobalt (Co)	2021/04/25	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/04/25	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/04/25	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/04/25	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/04/25	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/04/25	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/04/25	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/04/25	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/04/25	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/04/25	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/04/25	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/04/25	<0.050		ug/g	
7315829	AFZ	RPD [PJJ975-01]	Acid Extractable Antimony (Sb)	2021/04/25	NC		%	30
			Acid Extractable Arsenic (As)	2021/04/25	21		%	30
			Acid Extractable Barium (Ba)	2021/04/25	0.89		%	30
			Acid Extractable Beryllium (Be)	2021/04/25	9.4		%	30
			Acid Extractable Boron (B)	2021/04/25	3.5		%	30
			Acid Extractable Cadmium (Cd)	2021/04/25	NC		%	30
			Acid Extractable Chromium (Cr)	2021/04/25	3.7		%	30
			Acid Extractable Cobalt (Co)	2021/04/25	0.97		%	30
			Acid Extractable Copper (Cu)	2021/04/25	3.8		%	30
			Acid Extractable Lead (Pb)	2021/04/25	0.32		%	30
			Acid Extractable Molybdenum (Mo)	2021/04/25	NC		%	30
			Acid Extractable Nickel (Ni)	2021/04/25	3.6		%	30
			Acid Extractable Selenium (Se)	2021/04/25	NC		%	30
			Acid Extractable Silver (Ag)	2021/04/25	NC		%	30
			Acid Extractable Thallium (Tl)	2021/04/25	6.7		%	30
			Acid Extractable Uranium (U)	2021/04/25	0.0071		%	30
			Acid Extractable Vanadium (V)	2021/04/25	1.7		%	30
			Acid Extractable Zinc (Zn)	2021/04/25	1.4		%	30
			Acid Extractable Mercury (Hg)	2021/04/25	NC		%	30
7315862	RGA	Matrix Spike [PJJ971-04]	1,4-Difluorobenzene	2021/04/23		95	%	60 - 140
			4-Bromofluorobenzene	2021/04/23		100	%	60 - 140
			D10-o-Xylene	2021/04/23		88	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/23		95	%	60 - 140
			Benzene	2021/04/23		97	%	50 - 140
			Toluene	2021/04/23		98	%	50 - 140
			Ethylbenzene	2021/04/23		108	%	50 - 140
			o-Xylene	2021/04/23		108	%	50 - 140
			p+m-Xylene	2021/04/23		104	%	50 - 140
			F1 (C6-C10)	2021/04/23		93	%	60 - 140
7315862	RGA	Spiked Blank	1,4-Difluorobenzene	2021/04/23		98	%	60 - 140
			4-Bromofluorobenzene	2021/04/23		100	%	60 - 140
			D10-o-Xylene	2021/04/23		94	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/23		91	%	60 - 140
			Benzene	2021/04/23		95	%	50 - 140
			Toluene	2021/04/23		94	%	50 - 140
			Ethylbenzene	2021/04/23		105	%	50 - 140
			o-Xylene	2021/04/23		103	%	50 - 140
			p+m-Xylene	2021/04/23		100	%	50 - 140
			F1 (C6-C10)	2021/04/23		90	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7315862	RGA	Method Blank	1,4-Difluorobenzene	2021/04/23		98	%	60 - 140
			4-Bromofluorobenzene	2021/04/23		96	%	60 - 140
			D10-o-Xylene	2021/04/23		73	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/23		100	%	60 - 140
			Benzene	2021/04/23	<0.020		ug/g	
			Toluene	2021/04/23	<0.020		ug/g	
			Ethylbenzene	2021/04/23	<0.020		ug/g	
			o-Xylene	2021/04/23	<0.020		ug/g	
			p+m-Xylene	2021/04/23	<0.040		ug/g	
			Total Xylenes	2021/04/23	<0.040		ug/g	
			F1 (C6-C10)	2021/04/23	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/04/23	<10		ug/g	
7315862	RGA	RPD [PJJ971-04]	Benzene	2021/04/23	NC		%	50
			Toluene	2021/04/23	NC		%	50
			Ethylbenzene	2021/04/23	NC		%	50
			o-Xylene	2021/04/23	NC		%	50
			p+m-Xylene	2021/04/23	NC		%	50
			Total Xylenes	2021/04/23	NC		%	50
			F1 (C6-C10)	2021/04/23	NC		%	30
			F1 (C6-C10) - BTEX	2021/04/23	NC		%	30
7315941	JOH	Matrix Spike [PJJ973-01]	Hot Water Ext. Boron (B)	2021/04/26		97	%	75 - 125
7315941	JOH	Spiked Blank	Hot Water Ext. Boron (B)	2021/04/26		94	%	75 - 125
7315941	JOH	Method Blank	Hot Water Ext. Boron (B)	2021/04/26	<0.050		ug/g	
7315941	JOH	RPD [PJJ973-01]	Hot Water Ext. Boron (B)	2021/04/26	16		%	40
7318031	MKS	Matrix Spike	o-Terphenyl	2021/04/26		99	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/04/26		103	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/04/26		103	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/04/26		105	%	50 - 130
7318031	MKS	Spiked Blank	o-Terphenyl	2021/04/26		99	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/04/26		103	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/04/26		101	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/04/26		103	%	80 - 120
7318031	MKS	Method Blank	o-Terphenyl	2021/04/26		108	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/04/26	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/04/26	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/04/26	<50		ug/g	
7318031	MKS	RPD	F2 (C10-C16 Hydrocarbons)	2021/04/26	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/04/26	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/04/26	NC		%	30
7318183	MAK	Matrix Spike [PJJ970-02]	Decachlorobiphenyl	2021/04/26		81	%	60 - 130
			Aroclor 1260	2021/04/26		103	%	30 - 130
			Total PCB	2021/04/26		103	%	30 - 130
7318183	MAK	Spiked Blank	Decachlorobiphenyl	2021/04/26		83	%	60 - 130
			Aroclor 1260	2021/04/26		102	%	30 - 130
			Total PCB	2021/04/26		102	%	30 - 130
7318183	MAK	Method Blank	Decachlorobiphenyl	2021/04/26		80	%	60 - 130
			Aroclor 1242	2021/04/26	<0.010		ug/g	
			Aroclor 1248	2021/04/26	<0.010		ug/g	
			Aroclor 1254	2021/04/26	<0.010		ug/g	
			Aroclor 1260	2021/04/26	<0.010		ug/g	
			Total PCB	2021/04/26	<0.010		ug/g	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7318183	MAK	RPD [PJJ970-02]	Aroclor 1242	2021/04/26	NC		%	50
			Aroclor 1248	2021/04/26	NC		%	50
			Aroclor 1254	2021/04/26	NC		%	50
			Aroclor 1260	2021/04/26	NC		%	50
			Total PCB	2021/04/26	NC		%	50
7318204	MEN	Matrix Spike	Hot Water Ext. Boron (B)	2021/04/26		90	%	75 - 125
7318204	MEN	Spiked Blank	Hot Water Ext. Boron (B)	2021/04/26		100	%	75 - 125
7318204	MEN	Method Blank	Hot Water Ext. Boron (B)	2021/04/26	<0.050		ug/g	
7318204	MEN	RPD	Hot Water Ext. Boron (B)	2021/04/26	7.7		%	40
7318235	AFZ	Matrix Spike	Acid Extractable Antimony (Sb)	2021/04/26		92	%	75 - 125
			Acid Extractable Arsenic (As)	2021/04/26		105	%	75 - 125
			Acid Extractable Barium (Ba)	2021/04/26		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/04/26		103	%	75 - 125
			Acid Extractable Boron (B)	2021/04/26		103	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/04/26		98	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/04/26		NC	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/04/26		97	%	75 - 125
			Acid Extractable Copper (Cu)	2021/04/26		95	%	75 - 125
			Acid Extractable Lead (Pb)	2021/04/26		94	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/04/26		100	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/04/26		97	%	75 - 125
			Acid Extractable Selenium (Se)	2021/04/26		102	%	75 - 125
			Acid Extractable Silver (Ag)	2021/04/26		99	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/04/26		96	%	75 - 125
			Acid Extractable Uranium (U)	2021/04/26		101	%	75 - 125
			Acid Extractable Vanadium (V)	2021/04/26		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/04/26		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/04/26		90	%	75 - 125
7318235	AFZ	Spiked Blank	Acid Extractable Antimony (Sb)	2021/04/26		96	%	80 - 120
			Acid Extractable Arsenic (As)	2021/04/26		101	%	80 - 120
			Acid Extractable Barium (Ba)	2021/04/26		98	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/04/26		100	%	80 - 120
			Acid Extractable Boron (B)	2021/04/26		100	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/04/26		95	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/04/26		98	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/04/26		95	%	80 - 120
			Acid Extractable Copper (Cu)	2021/04/26		95	%	80 - 120
			Acid Extractable Lead (Pb)	2021/04/26		95	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/04/26		96	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/04/26		96	%	80 - 120
			Acid Extractable Selenium (Se)	2021/04/26		101	%	80 - 120
			Acid Extractable Silver (Ag)	2021/04/26		98	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/04/26		95	%	80 - 120
			Acid Extractable Uranium (U)	2021/04/26		100	%	80 - 120
			Acid Extractable Vanadium (V)	2021/04/26		98	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/04/26		94	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/04/26		87	%	80 - 120
7318235	AFZ	Method Blank	Acid Extractable Antimony (Sb)	2021/04/26	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/04/26	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/04/26	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/04/26	<0.20		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Boron (B)	2021/04/26	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/04/26	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/04/26	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/04/26	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/04/26	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/04/26	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/04/26	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/04/26	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/04/26	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/04/26	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/04/26	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/04/26	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/04/26	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/04/26	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/04/26	<0.050		ug/g	
7318235	AFZ	RPD	Acid Extractable Antimony (Sb)	2021/04/26	NC		%	30
			Acid Extractable Arsenic (As)	2021/04/26	21		%	30
			Acid Extractable Barium (Ba)	2021/04/26	12		%	30
			Acid Extractable Beryllium (Be)	2021/04/26	4.7		%	30
			Acid Extractable Boron (B)	2021/04/26	NC		%	30
			Acid Extractable Cadmium (Cd)	2021/04/26	NC		%	30
			Acid Extractable Chromium (Cr)	2021/04/26	2.7		%	30
			Acid Extractable Cobalt (Co)	2021/04/26	1.2		%	30
			Acid Extractable Copper (Cu)	2021/04/26	1.6		%	30
			Acid Extractable Lead (Pb)	2021/04/26	0.20		%	30
			Acid Extractable Molybdenum (Mo)	2021/04/26	9.9		%	30
			Acid Extractable Nickel (Ni)	2021/04/26	0.96		%	30
			Acid Extractable Selenium (Se)	2021/04/26	NC		%	30
			Acid Extractable Silver (Ag)	2021/04/26	NC		%	30
			Acid Extractable Thallium (Tl)	2021/04/26	4.5		%	30
			Acid Extractable Uranium (U)	2021/04/26	3.2		%	30
			Acid Extractable Vanadium (V)	2021/04/26	1.5		%	30
			Acid Extractable Zinc (Zn)	2021/04/26	3.7		%	30
			Acid Extractable Mercury (Hg)	2021/04/26	NC		%	30
7318565	ABP	Matrix Spike [PJJ971-02]	WAD Cyanide (Free)	2021/04/27		85	%	75 - 125
7318565	ABP	Spiked Blank	WAD Cyanide (Free)	2021/04/27		93	%	80 - 120
7318565	ABP	Method Blank	WAD Cyanide (Free)	2021/04/27	<0.01		ug/g	
7318565	ABP	RPD [PJJ971-02]	WAD Cyanide (Free)	2021/04/27	NC		%	35
7318882	VP2	Matrix Spike [PJJ971-02]	Chromium (VI)	2021/04/27		93	%	70 - 130
7318882	VP2	Spiked Blank	Chromium (VI)	2021/04/27		93	%	80 - 120
7318882	VP2	Method Blank	Chromium (VI)	2021/04/27	<0.18		ug/g	
7318882	VP2	RPD [PJJ971-02]	Chromium (VI)	2021/04/27	NC		%	35
7319006	RAJ	Matrix Spike	D10-Anthracene	2021/04/27		85	%	50 - 130
			D14-Terphenyl (FS)	2021/04/27		83	%	50 - 130
			D8-Acenaphthylene	2021/04/27		76	%	50 - 130
			Acenaphthene	2021/04/27		79	%	50 - 130
			Acenaphthylene	2021/04/27		74	%	50 - 130
			Anthracene	2021/04/27		83	%	50 - 130
			Benzo(a)anthracene	2021/04/27		82	%	50 - 130
			Benzo(a)pyrene	2021/04/27		65	%	50 - 130
			Benzo(b/j)fluoranthene	2021/04/27		70	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzo(g,h,i)perylene	2021/04/27		67	%	50 - 130
			Benzo(k)fluoranthene	2021/04/27		67	%	50 - 130
			Chrysene	2021/04/27		81	%	50 - 130
			Dibenzo(a,h)anthracene	2021/04/27		68	%	50 - 130
			Fluoranthene	2021/04/27		85	%	50 - 130
			Fluorene	2021/04/27		79	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/04/27		74	%	50 - 130
			1-Methylnaphthalene	2021/04/27		68	%	50 - 130
			2-Methylnaphthalene	2021/04/27		65	%	50 - 130
			Naphthalene	2021/04/27		65	%	50 - 130
			Phenanthrene	2021/04/27		80	%	50 - 130
			Pyrene	2021/04/27		85	%	50 - 130
7319006	RAJ	Spiked Blank	D10-Anthracene	2021/04/27		99	%	50 - 130
			D14-Terphenyl (FS)	2021/04/27		92	%	50 - 130
			D8-Acenaphthylene	2021/04/27		87	%	50 - 130
			Acenaphthene	2021/04/27		87	%	50 - 130
			Acenaphthylene	2021/04/27		82	%	50 - 130
			Anthracene	2021/04/27		92	%	50 - 130
			Benzo(a)anthracene	2021/04/27		89	%	50 - 130
			Benzo(a)pyrene	2021/04/27		76	%	50 - 130
			Benzo(b/j)fluoranthene	2021/04/27		80	%	50 - 130
			Benzo(g,h,i)perylene	2021/04/27		82	%	50 - 130
			Benzo(k)fluoranthene	2021/04/27		76	%	50 - 130
			Chrysene	2021/04/27		91	%	50 - 130
			Dibenzo(a,h)anthracene	2021/04/27		78	%	50 - 130
			Fluoranthene	2021/04/27		94	%	50 - 130
			Fluorene	2021/04/27		87	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/04/27		94	%	50 - 130
			1-Methylnaphthalene	2021/04/27		77	%	50 - 130
			2-Methylnaphthalene	2021/04/27		75	%	50 - 130
			Naphthalene	2021/04/27		79	%	50 - 130
			Phenanthrene	2021/04/27		88	%	50 - 130
			Pyrene	2021/04/27		94	%	50 - 130
7319006	RAJ	Method Blank	D10-Anthracene	2021/04/27		102	%	50 - 130
			D14-Terphenyl (FS)	2021/04/27		94	%	50 - 130
			D8-Acenaphthylene	2021/04/27		83	%	50 - 130
			Acenaphthene	2021/04/27	<0.0050		ug/g	
			Acenaphthylene	2021/04/27	<0.0050		ug/g	
			Anthracene	2021/04/27	<0.0050		ug/g	
			Benzo(a)anthracene	2021/04/27	<0.0050		ug/g	
			Benzo(a)pyrene	2021/04/27	<0.0050		ug/g	
			Benzo(b/j)fluoranthene	2021/04/27	<0.0050		ug/g	
			Benzo(g,h,i)perylene	2021/04/27	<0.0050		ug/g	
			Benzo(k)fluoranthene	2021/04/27	<0.0050		ug/g	
			Chrysene	2021/04/27	<0.0050		ug/g	
			Dibenzo(a,h)anthracene	2021/04/27	<0.0050		ug/g	
			Fluoranthene	2021/04/27	<0.0050		ug/g	
			Fluorene	2021/04/27	<0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/04/27	<0.0050		ug/g	
			1-Methylnaphthalene	2021/04/27	<0.0050		ug/g	
			2-Methylnaphthalene	2021/04/27	<0.0050		ug/g	

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Naphthalene	2021/04/27	<0.0050		ug/g	
			Phenanthrene	2021/04/27	<0.0050		ug/g	
			Pyrene	2021/04/27	<0.0050		ug/g	
7319006	RAJ	RPD	Acenaphthene	2021/04/27	NC		%	40
			Acenaphthylene	2021/04/27	NC		%	40
			Anthracene	2021/04/27	NC		%	40
			Benzo(a)anthracene	2021/04/27	NC		%	40
			Benzo(a)pyrene	2021/04/27	NC		%	40
			Benzo(b/j)fluoranthene	2021/04/27	NC		%	40
			Benzo(g,h,i)perylene	2021/04/27	NC		%	40
			Benzo(k)fluoranthene	2021/04/27	NC		%	40
			Chrysene	2021/04/27	NC		%	40
			Dibenzo(a,h)anthracene	2021/04/27	NC		%	40
			Fluoranthene	2021/04/27	NC		%	40
			Fluorene	2021/04/27	NC		%	40
			Indeno(1,2,3-cd)pyrene	2021/04/27	NC		%	40
			1-Methylnaphthalene	2021/04/27	NC		%	40
			2-Methylnaphthalene	2021/04/27	NC		%	40
			Naphthalene	2021/04/27	NC		%	40
			Phenanthrene	2021/04/27	NC		%	40
			Pyrene	2021/04/27	NC		%	40
7319229	RAJ	Matrix Spike	D10-Anthracene	2021/04/27		103	%	50 - 130
			D14-Terphenyl (FS)	2021/04/27		102	%	50 - 130
			D8-Acenaphthylene	2021/04/27		97	%	50 - 130
			Acenaphthene	2021/04/27		91	%	50 - 130
			Acenaphthylene	2021/04/27		94	%	50 - 130
			Anthracene	2021/04/27		94	%	50 - 130
			Benzo(a)anthracene	2021/04/27		98	%	50 - 130
			Benzo(a)pyrene	2021/04/27		81	%	50 - 130
			Benzo(b/j)fluoranthene	2021/04/27		89	%	50 - 130
			Benzo(g,h,i)perylene	2021/04/27		93	%	50 - 130
			Benzo(k)fluoranthene	2021/04/27		81	%	50 - 130
			Chrysene	2021/04/27		100	%	50 - 130
			Dibenzo(a,h)anthracene	2021/04/27		91	%	50 - 130
			Fluoranthene	2021/04/27		101	%	50 - 130
			Fluorene	2021/04/27		91	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/04/27		99	%	50 - 130
			1-Methylnaphthalene	2021/04/27		94	%	50 - 130
			2-Methylnaphthalene	2021/04/27		89	%	50 - 130
			Naphthalene	2021/04/27		80	%	50 - 130
			Phenanthrene	2021/04/27		97	%	50 - 130
			Pyrene	2021/04/27		101	%	50 - 130
7319229	RAJ	Spiked Blank	D10-Anthracene	2021/04/27		103	%	50 - 130
			D14-Terphenyl (FS)	2021/04/27		100	%	50 - 130
			D8-Acenaphthylene	2021/04/27		103	%	50 - 130
			Acenaphthene	2021/04/27		93	%	50 - 130
			Acenaphthylene	2021/04/27		97	%	50 - 130
			Anthracene	2021/04/27		91	%	50 - 130
			Benzo(a)anthracene	2021/04/27		98	%	50 - 130
			Benzo(a)pyrene	2021/04/27		83	%	50 - 130
			Benzo(b/j)fluoranthene	2021/04/27		89	%	50 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzo(g,h,i)perylene	2021/04/27		94	%	50 - 130
			Benzo(k)fluoranthene	2021/04/27		83	%	50 - 130
			Chrysene	2021/04/27		101	%	50 - 130
			Dibenzo(a,h)anthracene	2021/04/27		89	%	50 - 130
			Fluoranthene	2021/04/27		100	%	50 - 130
			Fluorene	2021/04/27		93	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/04/27		100	%	50 - 130
			1-Methylnaphthalene	2021/04/27		96	%	50 - 130
			2-Methylnaphthalene	2021/04/27		93	%	50 - 130
			Naphthalene	2021/04/27		85	%	50 - 130
			Phenanthrene	2021/04/27		98	%	50 - 130
			Pyrene	2021/04/27		101	%	50 - 130
7319229	RAJ	Method Blank	D10-Anthracene	2021/04/27		102	%	50 - 130
			D14-Terphenyl (FS)	2021/04/27		98	%	50 - 130
			D8-Acenaphthylene	2021/04/27		99	%	50 - 130
			Acenaphthene	2021/04/27	<0.0050		ug/g	
			Acenaphthylene	2021/04/27	<0.0050		ug/g	
			Anthracene	2021/04/27	<0.0050		ug/g	
			Benzo(a)anthracene	2021/04/27	<0.0050		ug/g	
			Benzo(a)pyrene	2021/04/27	<0.0050		ug/g	
			Benzo(b/j)fluoranthene	2021/04/27	<0.0050		ug/g	
			Benzo(g,h,i)perylene	2021/04/27	<0.0050		ug/g	
			Benzo(k)fluoranthene	2021/04/27	<0.0050		ug/g	
			Chrysene	2021/04/27	<0.0050		ug/g	
			Dibenzo(a,h)anthracene	2021/04/27	<0.0050		ug/g	
			Fluoranthene	2021/04/27	<0.0050		ug/g	
			Fluorene	2021/04/27	<0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/04/27	<0.0050		ug/g	
			1-Methylnaphthalene	2021/04/27	<0.0050		ug/g	
			2-Methylnaphthalene	2021/04/27	<0.0050		ug/g	
			Naphthalene	2021/04/27	<0.0050		ug/g	
			Phenanthrene	2021/04/27	<0.0050		ug/g	
			Pyrene	2021/04/27	<0.0050		ug/g	
7319229	RAJ	RPD	Acenaphthene	2021/04/27	NC		%	40
			Acenaphthylene	2021/04/27	NC		%	40
			Anthracene	2021/04/27	NC		%	40
			Benzo(a)anthracene	2021/04/27	NC		%	40
			Benzo(a)pyrene	2021/04/27	NC		%	40
			Benzo(b/j)fluoranthene	2021/04/27	NC		%	40
			Benzo(g,h,i)perylene	2021/04/27	NC		%	40
			Benzo(k)fluoranthene	2021/04/27	NC		%	40
			Chrysene	2021/04/27	NC		%	40
			Dibenzo(a,h)anthracene	2021/04/27	NC		%	40
			Fluoranthene	2021/04/27	NC		%	40
			Fluorene	2021/04/27	NC		%	40
			Indeno(1,2,3-cd)pyrene	2021/04/27	NC		%	40
			1-Methylnaphthalene	2021/04/27	NC		%	40
			2-Methylnaphthalene	2021/04/27	NC		%	40
			Naphthalene	2021/04/27	NC		%	40
			Phenanthrene	2021/04/27	NC		%	40
			Pyrene	2021/04/27	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7320015	TKA	Spiked Blank	Conductivity	2021/04/27		103	%	90 - 110
7320015	TKA	Method Blank	Conductivity	2021/04/27	<0.002		mS/cm	
7320015	TKA	RPD [PJJ975-01]	Conductivity	2021/04/27	1.2		%	10
7320025	TKA	Spiked Blank	Conductivity	2021/04/27		103	%	90 - 110
7320025	TKA	Method Blank	Conductivity	2021/04/27	<0.002		mS/cm	
7320025	TKA	RPD	Conductivity	2021/04/27	0.81		%	10
7320219	NYS	Spiked Blank	Available (CaCl2) pH	2021/04/27		100	%	97 - 103
7320219	NYS	RPD [PJJ974-01]	Available (CaCl2) pH	2021/04/27	0.31		%	N/A

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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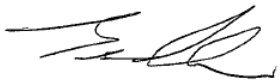
BV Labs Job #: C1A5742
Report Date: 2021/06/24

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Brad Newman, B.Sc., C.Chem., Scientific Service Specialist

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Your Project #: 20368429
Site Location: OPG Darlington
Your C.O.C. #: 335072

Attention: Kevan Browne (20368429)

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/05/03
Report #: R6619002
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1B0746
Received: 2021/04/26, 15:30

Sample Matrix: Soil
Samples Received: 59

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	17	N/A	2021/04/30	CAM SOP-00301	EPA 8270D m
Methylnaphthalene Sum	9	N/A	2021/05/01	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	35	2021/04/29	2021/04/30	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	1	N/A	2021/04/30		EPA 8260C m
Free (WAD) Cyanide	35	2021/04/29	2021/05/01	CAM SOP-00457	OMOE E3015 m
Conductivity	35	2021/04/30	2021/04/30	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	35	2021/04/29	2021/04/30	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	56	N/A	2021/04/29	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	36	2021/04/29	2021/04/29	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	20	2021/04/29	2021/04/30	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	20	2021/04/29	2021/04/29	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS	15	2021/04/30	2021/04/30	CAM SOP-00447	EPA 6020B m
Moisture	58	N/A	2021/04/28	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (4)	6	2021/04/29	2021/04/30	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	6	N/A	2021/04/29	CAM SOP-00307	EPA 8081/8082 m
PAH Compounds in Soil by GC/MS (SIM)	5	2021/04/29	2021/04/29	CAM SOP-00318	EPA 8270D m
PAH Compounds in Soil by GC/MS (SIM)	21	2021/04/29	2021/04/30	CAM SOP-00318	EPA 8270D m
Polychlorinated Biphenyl in Soil	7	2021/04/29	2021/04/29	CAM SOP-00309	EPA 8082A m
Polychlorinated Biphenyl in Soil	13	2021/04/29	2021/04/30	CAM SOP-00309	EPA 8082A m
pH CaCl2 EXTRACT	35	2021/04/30	2021/04/30	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	35	N/A	2021/04/30	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds in Soil	1	N/A	2021/04/30	CAM SOP-00228	EPA 8260C m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Your Project #: 20368429
Site Location: OPG Darlington
Your C.O.C. #: 335072

Attention: Kevan Browne (20368429)

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/05/03
Report #: R6619002
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1B0746
Received: 2021/04/26, 15:30

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
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Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.
(2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following “Alberta Environment’s Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003”. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(4) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key



Bureau Veritas
03 May 2021 13:11:19

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: emese.gitej@bureauveritas.com
Phone# (905)817-5829
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BV Labs Job #: C1B0746
Report Date: 2021/05/03

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PKK704		PKK705			PKK705		
Sampling Date		2021/04/16 10:00		2021/04/16 10:10			2021/04/16 10:10		
COC Number		335072		335072			335072		
	UNITS	GS21-01	QC Batch	GS21-02	RDL	QC Batch	GS21-02 Lab-Dup	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	0.26 (1)	7323294	0.26 (1)		7323294			
Inorganics									
Conductivity	mS/cm	0.15	7327310	0.14	0.002	7327310			
Available (CaCl2) pH	pH	7.50	7327355	7.56		7327339	7.56		7327339
WAD Cyanide (Free)	ug/g	<0.01	7325697	0.01	0.01	7325840	<0.01	0.01	7325840
Chromium (VI)	ug/g	<0.18	7325628	<0.18	0.18	7326052	<0.18	0.18	7326052
Metals									
Hot Water Ext. Boron (B)	ug/g	0.17	7326790	0.11	0.050	7326790			
Acid Extractable Antimony (Sb)	ug/g	<0.20	7327262	<0.20	0.20	7327262			
Acid Extractable Arsenic (As)	ug/g	<1.0	7327262	<1.0	1.0	7327262			
Acid Extractable Barium (Ba)	ug/g	36	7327262	32	0.50	7327262			
Acid Extractable Beryllium (Be)	ug/g	0.21	7327262	<0.20	0.20	7327262			
Acid Extractable Boron (B)	ug/g	5.1	7327262	<5.0	5.0	7327262			
Acid Extractable Cadmium (Cd)	ug/g	<0.10	7327262	<0.10	0.10	7327262			
Acid Extractable Chromium (Cr)	ug/g	8.3	7327262	7.4	1.0	7327262			
Acid Extractable Cobalt (Co)	ug/g	2.5	7327262	2.3	0.10	7327262			
Acid Extractable Copper (Cu)	ug/g	5.4	7327262	4.5	0.50	7327262			
Acid Extractable Lead (Pb)	ug/g	3.5	7327262	3.1	1.0	7327262			
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	7327262	<0.50	0.50	7327262			
Acid Extractable Nickel (Ni)	ug/g	5.1	7327262	4.4	0.50	7327262			
Acid Extractable Selenium (Se)	ug/g	<0.50	7327262	<0.50	0.50	7327262			
Acid Extractable Silver (Ag)	ug/g	<0.20	7327262	<0.20	0.20	7327262			
Acid Extractable Thallium (Tl)	ug/g	<0.050	7327262	<0.050	0.050	7327262			
Acid Extractable Uranium (U)	ug/g	0.42	7327262	0.50	0.050	7327262			
Acid Extractable Vanadium (V)	ug/g	16	7327262	15	5.0	7327262			
Acid Extractable Zinc (Zn)	ug/g	27	7327262	25	5.0	7327262			
Acid Extractable Mercury (Hg)	ug/g	<0.050	7327262	<0.050	0.050	7327262			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PKK706		PKK707	PKK708	PKK709	PKK710		
Sampling Date		2021/04/19 08:45		2021/04/16 13:10	2021/04/19 09:40	2021/04/19 09:20	2021/04/16 13:30		
COC Number		335072		335072	335072	335072	335072		
	UNITS	GS21-03	QC Batch	GS21-04	GS21-05	GS21-06	GS21-07	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	2.4	7322772	0.29 (1)	4.7	0.35	0.33 (1)		7322772
Inorganics									
Conductivity	mS/cm	0.17	7327180	0.13	0.41	0.18	0.088	0.002	7327180
Available (CaCl2) pH	pH	7.70	7327355	7.73	7.33	7.89	8.08		7327339
WAD Cyanide (Free)	ug/g	<0.01	7325697	0.01	<0.01	<0.01	<0.01	0.01	7325840
Chromium (VI)	ug/g	<0.18	7325628	<0.18	<0.18	<0.18	<0.18	0.18	7326052
Metals									
Hot Water Ext. Boron (B)	ug/g	0.098	7326807	0.15	0.21	0.16	<0.050	0.050	7326807
Acid Extractable Antimony (Sb)	ug/g	<0.20	7326440	<0.20	0.58	<0.20	<0.20	0.20	7326440
Acid Extractable Arsenic (As)	ug/g	1.2	7326440	1.8	2.2	1.3	1.3	1.0	7326440
Acid Extractable Barium (Ba)	ug/g	23	7326440	28	40	74	28	0.50	7326440
Acid Extractable Beryllium (Be)	ug/g	<0.20	7326440	<0.20	0.27	<0.20	<0.20	0.20	7326440
Acid Extractable Boron (B)	ug/g	<5.0	7326440	<5.0	8.5	6.7	<5.0	5.0	7326440
Acid Extractable Cadmium (Cd)	ug/g	<0.10	7326440	0.12	0.33	0.30	<0.10	0.10	7326440
Acid Extractable Chromium (Cr)	ug/g	11	7326440	10	18	8.7	8.5	1.0	7326440
Acid Extractable Cobalt (Co)	ug/g	2.7	7326440	3.2	3.6	2.6	2.8	0.10	7326440
Acid Extractable Copper (Cu)	ug/g	7.8	7326440	16	20	13	5.8	0.50	7326440
Acid Extractable Lead (Pb)	ug/g	4.0	7326440	8.4	28	8.7	3.2	1.0	7326440
Acid Extractable Molybdenum (Mo)	ug/g	0.84	7326440	1.1	1.6	<0.50	<0.50	0.50	7326440
Acid Extractable Nickel (Ni)	ug/g	12	7326440	5.6	13	10	4.8	0.50	7326440
Acid Extractable Selenium (Se)	ug/g	<0.50	7326440	<0.50	<0.50	<0.50	<0.50	0.50	7326440
Acid Extractable Silver (Ag)	ug/g	<0.20	7326440	<0.20	<0.20	<0.20	<0.20	0.20	7326440
Acid Extractable Thallium (Tl)	ug/g	0.060	7326440	0.068	0.083	0.063	0.082	0.050	7326440
Acid Extractable Uranium (U)	ug/g	0.53	7326440	0.44	0.59	0.66	0.42	0.050	7326440
Acid Extractable Vanadium (V)	ug/g	21	7326440	19	13	12	18	5.0	7326440
Acid Extractable Zinc (Zn)	ug/g	30	7326440	92	100	60	23	5.0	7326440
Acid Extractable Mercury (Hg)	ug/g	<0.050	7326440	<0.050	<0.050	<0.050	<0.050	0.050	7326440

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PKK711			PKK711			PKK712	PKK713		
Sampling Date		2021/04/19 09:10			2021/04/19 09:10			2021/04/16 13:50	2021/04/16 14:05		
COC Number		335072			335072			335072	335072		
	UNITS	GS21-08	RDL	QC Batch	GS21-08 Lab-Dup	RDL	QC Batch	GS21-09	GS21-10	RDL	QC Batch
Calculated Parameters											
Sodium Adsorption Ratio	N/A	0.32 (1)		7322772				0.30 (1)	0.32 (1)		7322772
Inorganics											
Conductivity	mS/cm	0.10	0.002	7327180	0.10	0.002	7327180	0.099	0.11	0.002	7327180
Available (CaCl2) pH	pH	7.93		7327339				7.87	7.74		7327355
WAD Cyanide (Free)	ug/g	<0.01	0.01	7325840				<0.01	<0.01	0.01	7325697
Chromium (VI)	ug/g	<0.18	0.18	7326052				<0.18	<0.18	0.18	7325628
Metals											
Hot Water Ext. Boron (B)	ug/g	0.076	0.050	7326807				0.076	0.076	0.050	7326807
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7326440				<0.20	<0.20	0.20	7326440
Acid Extractable Arsenic (As)	ug/g	1.3	1.0	7326440				1.2	1.2	1.0	7326440
Acid Extractable Barium (Ba)	ug/g	26	0.50	7326440				26	32	0.50	7326440
Acid Extractable Beryllium (Be)	ug/g	<0.20	0.20	7326440				<0.20	<0.20	0.20	7326440
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7326440				<5.0	<5.0	5.0	7326440
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7326440				<0.10	<0.10	0.10	7326440
Acid Extractable Chromium (Cr)	ug/g	15	1.0	7326440				12	7.8	1.0	7326440
Acid Extractable Cobalt (Co)	ug/g	2.9	0.10	7326440				3.0	3.0	0.10	7326440
Acid Extractable Copper (Cu)	ug/g	8.3	0.50	7326440				6.4	5.4	0.50	7326440
Acid Extractable Lead (Pb)	ug/g	13	1.0	7326440				2.9	4.2	1.0	7326440
Acid Extractable Molybdenum (Mo)	ug/g	1.6	0.50	7326440				1.3	0.68	0.50	7326440
Acid Extractable Nickel (Ni)	ug/g	19	0.50	7326440				16	6.4	0.50	7326440
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7326440				<0.50	<0.50	0.50	7326440
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7326440				<0.20	<0.20	0.20	7326440
Acid Extractable Thallium (Tl)	ug/g	0.061	0.050	7326440				0.056	0.077	0.050	7326440
Acid Extractable Uranium (U)	ug/g	0.51	0.050	7326440				0.45	0.75	0.050	7326440
Acid Extractable Vanadium (V)	ug/g	21	5.0	7326440				20	16	5.0	7326440
Acid Extractable Zinc (Zn)	ug/g	32	5.0	7326440				24	32	5.0	7326440
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7326440				<0.050	<0.050	0.050	7326440

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PKK714			PKK714			PKK715		
Sampling Date		2021/04/16 14:30			2021/04/16 14:30			2021/04/16 13:20		
COC Number		335072			335072			335072		
	UNITS	GS21-11	RDL	QC Batch	GS21-11 Lab-Dup	RDL	QC Batch	GS21-12	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.29 (1)		7322772				0.24 (1)		7322772
Inorganics										
Conductivity	mS/cm	0.12	0.002	7327180				0.18	0.002	7327180
Available (CaCl2) pH	pH	7.68		7327355				7.52		7327339
WAD Cyanide (Free)	ug/g	<0.01	0.01	7325697				0.01	0.01	7325840
Chromium (VI)	ug/g	<0.18	0.18	7325628				<0.18	0.18	7326052
Metals										
Hot Water Ext. Boron (B)	ug/g	0.13	0.050	7326807				0.22	0.050	7326807
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7326440	0.27	0.20	7326440	0.31	0.20	7326440
Acid Extractable Arsenic (As)	ug/g	1.2	1.0	7326440	1.2	1.0	7326440	2.3	1.0	7326440
Acid Extractable Barium (Ba)	ug/g	27	0.50	7326440	26	0.50	7326440	44	0.50	7326440
Acid Extractable Beryllium (Be)	ug/g	<0.20	0.20	7326440	<0.20	0.20	7326440	0.21	0.20	7326440
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7326440	<5.0	5.0	7326440	6.6	5.0	7326440
Acid Extractable Cadmium (Cd)	ug/g	0.14	0.10	7326440	0.14	0.10	7326440	0.19	0.10	7326440
Acid Extractable Chromium (Cr)	ug/g	8.5	1.0	7326440	7.9	1.0	7326440	11	1.0	7326440
Acid Extractable Cobalt (Co)	ug/g	2.8	0.10	7326440	2.6	0.10	7326440	4.2	0.10	7326440
Acid Extractable Copper (Cu)	ug/g	9.2	0.50	7326440	8.2	0.50	7326440	27	0.50	7326440
Acid Extractable Lead (Pb)	ug/g	4.8	1.0	7326440	4.0	1.0	7326440	13	1.0	7326440
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7326440	<0.50	0.50	7326440	1.2	0.50	7326440
Acid Extractable Nickel (Ni)	ug/g	5.4	0.50	7326440	6.1	0.50	7326440	9.4	0.50	7326440
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7326440	<0.50	0.50	7326440	<0.50	0.50	7326440
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7326440	<0.20	0.20	7326440	<0.20	0.20	7326440
Acid Extractable Thallium (Tl)	ug/g	0.071	0.050	7326440	0.061	0.050	7326440	0.095	0.050	7326440
Acid Extractable Uranium (U)	ug/g	0.43	0.050	7326440	0.70 (2)	0.050	7326440	0.55	0.050	7326440
Acid Extractable Vanadium (V)	ug/g	19	5.0	7326440	19	5.0	7326440	15	5.0	7326440
Acid Extractable Zinc (Zn)	ug/g	35	5.0	7326440	37	5.0	7326440	120	5.0	7326440
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7326440	<0.050	0.050	7326440	<0.050	0.050	7326440

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PKK718		PKK719		PKK720		PKK721		
Sampling Date		2021/04/20 10:30		2021/04/20 10:10		2021/04/20 00:00		2021/04/20 09:15		
COC Number		335072		335072		335072		335072		
	UNITS	GS21-15	QC Batch	GS21-16	QC Batch	GS21-17	QC Batch	GS21-18	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.28 (1)	7322772	0.21 (1)	7322772	0.27 (1)	7322772	0.21 (1)		7322772
Inorganics										
Conductivity	mS/cm	0.15	7327310	0.22	7327180	0.15	7327310	0.18	0.002	7327180
Available (CaCl2) pH	pH	7.52	7327339	7.24	7327339	7.50	7327339	7.18		7327355
WAD Cyanide (Free)	ug/g	<0.01	7325840	0.03	7325840	0.01	7325840	0.02	0.01	7325697
Chromium (VI)	ug/g	<0.18	7326052	<0.18	7326052	<0.18	7326052	<0.18	0.18	7325628
Metals										
Hot Water Ext. Boron (B)	ug/g	0.18	7326790	0.68	7326807	0.28	7326790	0.30	0.050	7326807
Acid Extractable Antimony (Sb)	ug/g	<0.20	7327262	<0.20	7326440	<0.20	7326440	<0.20	0.20	7327262
Acid Extractable Arsenic (As)	ug/g	<1.0	7327262	1.0	7326440	<1.0	7326440	2.6	1.0	7327262
Acid Extractable Barium (Ba)	ug/g	35	7327262	34	7326440	25	7326440	67	0.50	7327262
Acid Extractable Beryllium (Be)	ug/g	<0.20	7327262	0.22	7326440	<0.20	7326440	0.41	0.20	7327262
Acid Extractable Boron (B)	ug/g	<5.0	7327262	5.6	7326440	<5.0	7326440	5.2	5.0	7327262
Acid Extractable Cadmium (Cd)	ug/g	<0.10	7327262	0.12	7326440	<0.10	7326440	0.14	0.10	7327262
Acid Extractable Chromium (Cr)	ug/g	8.4	7327262	7.7	7326440	6.6	7326440	15	1.0	7327262
Acid Extractable Cobalt (Co)	ug/g	3.1	7327262	2.5	7326440	2.2	7326440	4.9	0.10	7327262
Acid Extractable Copper (Cu)	ug/g	8.3	7327262	6.1	7326440	3.9	7326440	9.6	0.50	7327262
Acid Extractable Lead (Pb)	ug/g	3.9	7327262	3.5	7326440	2.1	7326440	11	1.0	7327262
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	7327262	<0.50	7326440	<0.50	7326440	<0.50	0.50	7327262
Acid Extractable Nickel (Ni)	ug/g	6.4	7327262	5.3	7326440	4.3	7326440	10	0.50	7327262
Acid Extractable Selenium (Se)	ug/g	<0.50	7327262	<0.50	7326440	<0.50	7326440	<0.50	0.50	7327262
Acid Extractable Silver (Ag)	ug/g	<0.20	7327262	<0.20	7326440	<0.20	7326440	<0.20	0.20	7327262
Acid Extractable Thallium (Tl)	ug/g	0.054	7327262	0.054	7326440	<0.050	7326440	0.096	0.050	7327262
Acid Extractable Uranium (U)	ug/g	0.44	7327262	0.40	7326440	0.47	7326440	0.41	0.050	7327262
Acid Extractable Vanadium (V)	ug/g	16	7327262	15	7326440	15	7326440	26	5.0	7327262
Acid Extractable Zinc (Zn)	ug/g	28	7327262	29	7326440	21	7326440	37	5.0	7327262
Acid Extractable Mercury (Hg)	ug/g	<0.050	7327262	<0.050	7326440	<0.050	7326440	<0.050	0.050	7327262

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1B0746
Report Date: 2021/05/03

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PKK721			PKK722		PKK730		
Sampling Date		2021/04/20 09:15			2021/04/20 09:45		2021/04/19 10:30		
COC Number		335072			335072		335072		
	UNITS	GS21-18 Lab-Dup	RDL	QC Batch	GS21-19	QC Batch	GS21-27	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A				0.24 (1)	7322772	0.26 (1)		7322772
Inorganics									
Conductivity	mS/cm				0.16	7327180	0.13	0.002	7327180
Available (CaCl2) pH	pH				7.10	7327355	7.60		7327339
WAD Cyanide (Free)	ug/g	0.02	0.01	7325697	0.03	7325697	0.01	0.01	7325840
Chromium (VI)	ug/g	<0.18	0.18	7325628	<0.18	7325628	<0.18	0.18	7326052
Metals									
Hot Water Ext. Boron (B)	ug/g	0.31	0.050	7326807	0.47	7326807	0.10	0.050	7326807
Acid Extractable Antimony (Sb)	ug/g				<0.20	7326440	<0.20	0.20	7326440
Acid Extractable Arsenic (As)	ug/g				1.3	7326440	1.0	1.0	7326440
Acid Extractable Barium (Ba)	ug/g				35	7326440	33	0.50	7326440
Acid Extractable Beryllium (Be)	ug/g				0.26	7326440	<0.20	0.20	7326440
Acid Extractable Boron (B)	ug/g				<5.0	7326440	<5.0	5.0	7326440
Acid Extractable Cadmium (Cd)	ug/g				0.13	7326440	<0.10	0.10	7326440
Acid Extractable Chromium (Cr)	ug/g				8.7	7326440	8.0	1.0	7326440
Acid Extractable Cobalt (Co)	ug/g				2.8	7326440	3.2	0.10	7326440
Acid Extractable Copper (Cu)	ug/g				4.2	7326440	9.1	0.50	7326440
Acid Extractable Lead (Pb)	ug/g				7.1	7326440	7.8	1.0	7326440
Acid Extractable Molybdenum (Mo)	ug/g				<0.50	7326440	<0.50	0.50	7326440
Acid Extractable Nickel (Ni)	ug/g				5.0	7326440	5.8	0.50	7326440
Acid Extractable Selenium (Se)	ug/g				<0.50	7326440	<0.50	0.50	7326440
Acid Extractable Silver (Ag)	ug/g				<0.20	7326440	<0.20	0.20	7326440
Acid Extractable Thallium (Tl)	ug/g				0.053	7326440	0.099	0.050	7326440
Acid Extractable Uranium (U)	ug/g				0.32	7326440	0.43	0.050	7326440
Acid Extractable Vanadium (V)	ug/g				17	7326440	20	5.0	7326440
Acid Extractable Zinc (Zn)	ug/g				31	7326440	47	5.0	7326440
Acid Extractable Mercury (Hg)	ug/g				<0.050	7326440	<0.050	0.050	7326440

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PKK731	PKK732	PKK733		PKK734		PKK735		
Sampling Date		2021/04/19 10:45	2021/04/19 12:35	2021/04/19 10:15		2021/04/19 13:45		2021/04/19 13:00		
COC Number		335072	335072	335072		335072		335072		
	UNITS	GS21-28	GS21-29	GS21-30	QC Batch	GS21-31	QC Batch	GS21-32	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.26 (1)	0.29 (1)	0.26 (1)	7322772	0.30 (1)	7322772	0.29 (1)		7323294
Inorganics										
Conductivity	mS/cm	0.15	0.12	0.15	7327180	0.11	7327180	0.12	0.002	7327310
Available (CaCl2) pH	pH	7.43	7.38	7.32	7327355	7.63	7327339	7.56		7327355
WAD Cyanide (Free)	ug/g	0.01	<0.01	<0.01	7325697	<0.01	7325840	<0.01	0.01	7325697
Chromium (VI)	ug/g	<0.18	<0.18	<0.18	7325628	<0.18	7326052	<0.18	0.18	7325628
Metals										
Hot Water Ext. Boron (B)	ug/g	0.21	0.070	0.12	7326807	0.079	7326807	0.12	0.050	7326790
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	<0.20	7326440	0.23	7326440	<0.20	0.20	7326440
Acid Extractable Arsenic (As)	ug/g	1.3	1.4	<1.0	7326440	1.5	7326440	1.2	1.0	7326440
Acid Extractable Barium (Ba)	ug/g	27	30	37	7326440	32	7326440	37	0.50	7326440
Acid Extractable Beryllium (Be)	ug/g	<0.20	0.25	<0.20	7326440	<0.20	7326440	<0.20	0.20	7326440
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	<5.0	7326440	<5.0	7326440	<5.0	5.0	7326440
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	0.11	7326440	<0.10	7326440	<0.10	0.10	7326440
Acid Extractable Chromium (Cr)	ug/g	7.4	10	9.9	7326440	14	7326440	8.0	1.0	7326440
Acid Extractable Cobalt (Co)	ug/g	2.8	3.4	3.0	7326440	3.5	7326440	3.0	0.10	7326440
Acid Extractable Copper (Cu)	ug/g	10	6.8	14	7326440	13	7326440	8.4	0.50	7326440
Acid Extractable Lead (Pb)	ug/g	4.7	5.4	8.0	7326440	3.3	7326440	3.2	1.0	7326440
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	<0.50	7326440	0.59	7326440	<0.50	0.50	7326440
Acid Extractable Nickel (Ni)	ug/g	4.7	5.9	7.6	7326440	13	7326440	7.0	0.50	7326440
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	7326440	<0.50	7326440	<0.50	0.50	7326440
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	7326440	<0.20	7326440	<0.20	0.20	7326440
Acid Extractable Thallium (Tl)	ug/g	0.059	0.073	0.066	7326440	0.10	7326440	0.11	0.050	7326440
Acid Extractable Uranium (U)	ug/g	1.2	0.43	0.46	7326440	0.42	7326440	1.1	0.050	7326440
Acid Extractable Vanadium (V)	ug/g	17	26	18	7326440	19	7326440	19	5.0	7326440
Acid Extractable Zinc (Zn)	ug/g	52	44	68	7326440	44	7326440	32	5.0	7326440
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	<0.050	7326440	<0.050	7326440	<0.050	0.050	7326440

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PKK735			PKK736		PKK737		
Sampling Date		2021/04/19 13:00			2021/04/19 13:15		2021/04/19 14:15		
COC Number		335072			335072		335072		
	UNITS	GS21-32 Lab-Dup	RDL	QC Batch	GS21-33	QC Batch	GS21-34	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A				0.27 (1)	7323294	0.34 (1)		7323294
Inorganics									
Conductivity	mS/cm				0.12	7327180	0.12	0.002	7327310
Available (CaCl2) pH	pH				7.64	7327339	7.75		7327339
WAD Cyanide (Free)	ug/g				<0.01	7325840	<0.01	0.01	7325840
Chromium (VI)	ug/g				<0.18	7326052	<0.18	0.18	7326052
Metals									
Hot Water Ext. Boron (B)	ug/g	0.10	0.050	7326790	0.11	7326807	0.083	0.050	7326790
Acid Extractable Antimony (Sb)	ug/g				<0.20	7326440	<0.20	0.20	7327262
Acid Extractable Arsenic (As)	ug/g				1.4	7326440	<1.0	1.0	7327262
Acid Extractable Barium (Ba)	ug/g				31	7326440	32	0.50	7327262
Acid Extractable Beryllium (Be)	ug/g				0.20	7326440	<0.20	0.20	7327262
Acid Extractable Boron (B)	ug/g				<5.0	7326440	<5.0	5.0	7327262
Acid Extractable Cadmium (Cd)	ug/g				<0.10	7326440	<0.10	0.10	7327262
Acid Extractable Chromium (Cr)	ug/g				8.6	7326440	6.3	1.0	7327262
Acid Extractable Cobalt (Co)	ug/g				3.2	7326440	1.9	0.10	7327262
Acid Extractable Copper (Cu)	ug/g				8.1	7326440	4.1	0.50	7327262
Acid Extractable Lead (Pb)	ug/g				3.5	7326440	2.3	1.0	7327262
Acid Extractable Molybdenum (Mo)	ug/g				<0.50	7326440	<0.50	0.50	7327262
Acid Extractable Nickel (Ni)	ug/g				6.0	7326440	4.0	0.50	7327262
Acid Extractable Selenium (Se)	ug/g				<0.50	7326440	<0.50	0.50	7327262
Acid Extractable Silver (Ag)	ug/g				<0.20	7326440	<0.20	0.20	7327262
Acid Extractable Thallium (Tl)	ug/g				0.097	7326440	<0.050	0.050	7327262
Acid Extractable Uranium (U)	ug/g				0.48	7326440	0.45	0.050	7327262
Acid Extractable Vanadium (V)	ug/g				20	7326440	14	5.0	7327262
Acid Extractable Zinc (Zn)	ug/g				40	7326440	19	5.0	7327262
Acid Extractable Mercury (Hg)	ug/g				<0.050	7326440	<0.050	0.050	7327262

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PKK737			PKK738		PKK739	PKK740		
Sampling Date		2021/04/19 14:15			2021/04/19 14:30		2021/04/16 10:50	2021/04/20 10:20		
COC Number		335072			335072		335072	335072		
	UNITS	GS21-34 Lab-Dup	RDL	QC Batch	GS21-35	QC Batch	GS21-36	GS21-37	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A				0.31 (1)	7323294	0.27 (1)	0.40		7322772
Inorganics										
Conductivity	mS/cm	0.11	0.002	7327310	0.11	7327180	0.18	0.32	0.002	7327310
Available (CaCl2) pH	pH				7.80	7327355	7.67	7.90		7327355
WAD Cyanide (Free)	ug/g				<0.01	7325840	<0.01	<0.01	0.01	7325697
Chromium (VI)	ug/g				<0.18	7325628	<0.18	<0.18	0.18	7325628
Metals										
Hot Water Ext. Boron (B)	ug/g				0.083	7326790	0.15	0.14	0.050	7326790
Acid Extractable Antimony (Sb)	ug/g				<0.20	7327262	<0.20	<0.20	0.20	7327262
Acid Extractable Arsenic (As)	ug/g				1.2	7327262	<1.0	1.1	1.0	7327262
Acid Extractable Barium (Ba)	ug/g				40	7327262	37	33	0.50	7327262
Acid Extractable Beryllium (Be)	ug/g				0.22	7327262	<0.20	<0.20	0.20	7327262
Acid Extractable Boron (B)	ug/g				5.0	7327262	<5.0	<5.0	5.0	7327262
Acid Extractable Cadmium (Cd)	ug/g				<0.10	7327262	<0.10	<0.10	0.10	7327262
Acid Extractable Chromium (Cr)	ug/g				10	7327262	7.4	7.2	1.0	7327262
Acid Extractable Cobalt (Co)	ug/g				3.6	7327262	2.5	2.7	0.10	7327262
Acid Extractable Copper (Cu)	ug/g				11	7327262	5.1	7.9	0.50	7327262
Acid Extractable Lead (Pb)	ug/g				5.0	7327262	2.5	3.7	1.0	7327262
Acid Extractable Molybdenum (Mo)	ug/g				<0.50	7327262	<0.50	<0.50	0.50	7327262
Acid Extractable Nickel (Ni)	ug/g				7.3	7327262	5.1	5.6	0.50	7327262
Acid Extractable Selenium (Se)	ug/g				<0.50	7327262	<0.50	<0.50	0.50	7327262
Acid Extractable Silver (Ag)	ug/g				<0.20	7327262	<0.20	<0.20	0.20	7327262
Acid Extractable Thallium (Tl)	ug/g				0.085	7327262	<0.050	0.050	0.050	7327262
Acid Extractable Uranium (U)	ug/g				0.72	7327262	0.43	0.49	0.050	7327262
Acid Extractable Vanadium (V)	ug/g				18	7327262	14	15	5.0	7327262
Acid Extractable Zinc (Zn)	ug/g				63	7327262	17	26	5.0	7327262
Acid Extractable Mercury (Hg)	ug/g				<0.050	7327262	<0.050	<0.050	0.050	7327262

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PKK741	PKK742		PKK743		PKK744		
Sampling Date		2021/04/20 09:00	2021/04/20 10:45		2021/04/19 14:40		2021/04/20 11:15		
COC Number		335072	335072		335072		335072		
	UNITS	GS21-38	GS21-39	QC Batch	GS21-40	QC Batch	GS21-41	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	0.26 (1)	0.22 (1)	7322772	0.30 (1)	7322772	0.27 (1)		7322772
Inorganics									
Conductivity	mS/cm	0.15	0.20	7327310	0.10	7327310	0.13	0.002	7327310
Available (CaCl2) pH	pH	7.24	7.40	7327355	7.62	7327355	7.72		7327355
WAD Cyanide (Free)	ug/g	0.01	<0.01	7325697	<0.01	7325697	<0.01	0.01	7325697
Chromium (VI)	ug/g	<0.18	<0.18	7325628	<0.18	7325628	<0.18	0.18	7325628
Metals									
Hot Water Ext. Boron (B)	ug/g	0.30	0.28	7326790	0.11	7326807	0.11	0.050	7326790
Acid Extractable Antimony (Sb)	ug/g	<0.20	2.0	7327262	<0.20	7327262	0.34	0.20	7327262
Acid Extractable Arsenic (As)	ug/g	<1.0	20	7327262	1.3	7327262	3.2	1.0	7327262
Acid Extractable Barium (Ba)	ug/g	19	45	7327262	24	7327262	30	0.50	7327262
Acid Extractable Beryllium (Be)	ug/g	<0.20	0.24	7327262	<0.20	7327262	<0.20	0.20	7327262
Acid Extractable Boron (B)	ug/g	<5.0	6.8	7327262	<5.0	7327262	<5.0	5.0	7327262
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.32	7327262	0.13	7327262	0.13	0.10	7327262
Acid Extractable Chromium (Cr)	ug/g	6.0	18	7327262	10	7327262	10	1.0	7327262
Acid Extractable Cobalt (Co)	ug/g	1.8	28	7327262	2.9	7327262	5.8	0.10	7327262
Acid Extractable Copper (Cu)	ug/g	3.2	370	7327262	21	7327262	48	0.50	7327262
Acid Extractable Lead (Pb)	ug/g	2.7	77	7327262	8.3	7327262	14	1.0	7327262
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.99	7327262	<0.50	7327262	0.51	0.50	7327262
Acid Extractable Nickel (Ni)	ug/g	3.2	10	7327262	9.1	7327262	9.1	0.50	7327262
Acid Extractable Selenium (Se)	ug/g	<0.50	1.4	7327262	<0.50	7327262	<0.50	0.50	7327262
Acid Extractable Silver (Ag)	ug/g	<0.20	0.26	7327262	<0.20	7327262	<0.20	0.20	7327262
Acid Extractable Thallium (Tl)	ug/g	<0.050	0.067	7327262	0.053	7327262	0.070	0.050	7327262
Acid Extractable Uranium (U)	ug/g	0.36	0.51	7327262	0.43	7327262	0.49	0.050	7327262
Acid Extractable Vanadium (V)	ug/g	14	17	7327262	16	7327262	17	5.0	7327262
Acid Extractable Zinc (Zn)	ug/g	18	1200	7327262	96	7327262	190	5.0	7327262
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	7327262	<0.050	7327262	<0.050	0.050	7327262

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PKK744			PKK745	PKK760			PKK760	
Sampling Date		2021/04/20 11:15			2021/04/20 11:00	2021/04/20 10:10			2021/04/20 10:10	
COC Number		335072			335072	335072			335072	
	UNITS	GS21-41 Lab-Dup	RDL	QC Batch	GS21-42	DUP 4	RDL	QC Batch	DUP 4 Lab-Dup	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A				0.22 (1)	0.21 (1)		7322772		
Inorganics										
Conductivity	mS/cm				0.22	0.25	0.002	7327310		
Available (CaCl2) pH	pH				7.30	7.17		7327355	7.17	7327355
WAD Cyanide (Free)	ug/g				0.03	0.04	0.01	7325697		
Chromium (VI)	ug/g				<0.18	<0.18	0.18	7325628		
Metals										
Hot Water Ext. Boron (B)	ug/g				0.85	0.69	0.050	7326790		
Acid Extractable Antimony (Sb)	ug/g	0.35	0.20	7327262	<0.20	<0.20	0.20	7327262		
Acid Extractable Arsenic (As)	ug/g	3.3	1.0	7327262	1.3	1.0	1.0	7327262		
Acid Extractable Barium (Ba)	ug/g	29	0.50	7327262	40	36	0.50	7327262		
Acid Extractable Beryllium (Be)	ug/g	<0.20	0.20	7327262	0.25	0.24	0.20	7327262		
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7327262	6.5	6.1	5.0	7327262		
Acid Extractable Cadmium (Cd)	ug/g	0.13	0.10	7327262	0.18	0.14	0.10	7327262		
Acid Extractable Chromium (Cr)	ug/g	10	1.0	7327262	9.9	8.8	1.0	7327262		
Acid Extractable Cobalt (Co)	ug/g	6.0	0.10	7327262	3.3	2.8	0.10	7327262		
Acid Extractable Copper (Cu)	ug/g	57	0.50	7327262	10	7.2	0.50	7327262		
Acid Extractable Lead (Pb)	ug/g	13	1.0	7327262	9.0	4.3	1.0	7327262		
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7327262	<0.50	<0.50	0.50	7327262		
Acid Extractable Nickel (Ni)	ug/g	8.7	0.50	7327262	7.8	5.5	0.50	7327262		
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7327262	<0.50	<0.50	0.50	7327262		
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7327262	<0.20	<0.20	0.20	7327262		
Acid Extractable Thallium (Tl)	ug/g	0.065	0.050	7327262	0.074	0.059	0.050	7327262		
Acid Extractable Uranium (U)	ug/g	0.61	0.050	7327262	0.45	0.40	0.050	7327262		
Acid Extractable Vanadium (V)	ug/g	20	5.0	7327262	19	17	5.0	7327262		
Acid Extractable Zinc (Zn)	ug/g	190	5.0	7327262	83	35	5.0	7327262		
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7327262	<0.050	<0.050	0.050	7327262		

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PKK761		
Sampling Date		2021/04/20 11:00		
COC Number		335072		
	UNITS	DUP 5	RDL	QC Batch
Calculated Parameters				
Sodium Adsorption Ratio	N/A	0.21 (1)		7322772
Inorganics				
Conductivity	mS/cm	0.23	0.002	7327310
Available (CaCl2) pH	pH	7.20		7327339
WAD Cyanide (Free)	ug/g	0.03	0.01	7325697
Chromium (VI)	ug/g	<0.18	0.18	7326052
Metals				
Hot Water Ext. Boron (B)	ug/g	0.87	0.050	7326790
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7327262
Acid Extractable Arsenic (As)	ug/g	1.7	1.0	7327262
Acid Extractable Barium (Ba)	ug/g	45	0.50	7327262
Acid Extractable Beryllium (Be)	ug/g	0.29	0.20	7327262
Acid Extractable Boron (B)	ug/g	6.7	5.0	7327262
Acid Extractable Cadmium (Cd)	ug/g	0.23	0.10	7327262
Acid Extractable Chromium (Cr)	ug/g	12	1.0	7327262
Acid Extractable Cobalt (Co)	ug/g	3.7	0.10	7327262
Acid Extractable Copper (Cu)	ug/g	8.9	0.50	7327262
Acid Extractable Lead (Pb)	ug/g	11	1.0	7327262
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7327262
Acid Extractable Nickel (Ni)	ug/g	8.8	0.50	7327262
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7327262
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7327262
Acid Extractable Thallium (Tl)	ug/g	0.088	0.050	7327262
Acid Extractable Uranium (U)	ug/g	0.49	0.050	7327262
Acid Extractable Vanadium (V)	ug/g	22	5.0	7327262
Acid Extractable Zinc (Zn)	ug/g	99	5.0	7327262
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7327262

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PKK718		PKK719	PKK720		PKK721		
Sampling Date		2021/04/20 10:30		2021/04/20 10:10	2021/04/20 00:00		2021/04/20 09:15		
COC Number		335072		335072	335072		335072		
	UNITS	GS21-15	RDL	GS21-16	GS21-17	RDL	GS21-18	RDL	QC Batch
Calculated Parameters									
Chlordane (Total)	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7323290
o,p-DDD + p,p-DDD	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7323290
o,p-DDE + p,p-DDE	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7323290
o,p-DDT + p,p-DDT	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7323290
Total Endosulfan	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7323290
Total PCB	ug/g	<0.040	0.040	<0.015	<0.015	0.015	<0.020	0.020	7323290
Pesticides & Herbicides									
Aldrin	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
a-Chlordane	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
g-Chlordane	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
o,p-DDD	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
p,p-DDD	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
o,p-DDE	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
p,p-DDE	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
o,p-DDT	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
p,p-DDT	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
Dieldrin	ug/g	<0.010	0.010	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
Lindane	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
Endosulfan II (beta)	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
Endrin	ug/g	<0.010	0.010	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
Heptachlor	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
Heptachlor epoxide	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
Hexachlorobenzene	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
Hexachlorobutadiene	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
Hexachloroethane	ug/g	<0.0020	0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7326258
Methoxychlor	ug/g	<0.0050	0.0050	<0.0050	<0.0050	0.0050	<0.0050	0.0050	7326258
Aroclor 1242	ug/g	<0.040	0.040	<0.015	<0.015	0.015	<0.020	0.020	7326258
Aroclor 1248	ug/g	<0.040	0.040	<0.015	<0.015	0.015	<0.020	0.020	7326258
Aroclor 1254	ug/g	<0.040	0.040	<0.015	<0.015	0.015	<0.020	0.020	7326258
Aroclor 1260	ug/g	<0.040	0.040	<0.015	<0.015	0.015	<0.020	0.020	7326258
Surrogate Recovery (%)									
2,4,5,6-Tetrachloro-m-xylene	%	78		77	74		81		7326258

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PKK718		PKK719	PKK720		PKK721		
Sampling Date		2021/04/20 10:30		2021/04/20 10:10	2021/04/20 00:00		2021/04/20 09:15		
COC Number		335072		335072	335072		335072		
	UNITS	GS21-15	RDL	GS21-16	GS21-17	RDL	GS21-18	RDL	QC Batch
Decachlorobiphenyl	%	76		75	79		82		7326258

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PKK722		PKK760		
Sampling Date		2021/04/20 09:45		2021/04/20 10:10		
COC Number		335072		335072		
	UNITS	GS21-19	RDL	DUP 4	RDL	QC Batch
Calculated Parameters						
Chlordane (Total)	ug/g	<0.0020	0.0020	<0.0020	0.0020	7323290
o,p-DDD + p,p-DDD	ug/g	<0.0020	0.0020	<0.0020	0.0020	7323290
o,p-DDE + p,p-DDE	ug/g	<0.0020	0.0020	<0.0020	0.0020	7323290
o,p-DDT + p,p-DDT	ug/g	<0.0020	0.0020	<0.0020	0.0020	7323290
Total Endosulfan	ug/g	<0.0020	0.0020	<0.0020	0.0020	7323290
Total PCB	ug/g	<0.015	0.015	<0.020	0.020	7323290
Pesticides & Herbicides						
Aldrin	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
a-Chlordane	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
g-Chlordane	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
o,p-DDD	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
p,p-DDD	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
o,p-DDE	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
p,p-DDE	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
o,p-DDT	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
p,p-DDT	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
Dieldrin	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
Lindane	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
Endosulfan II (beta)	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
Endrin	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
Heptachlor	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
Heptachlor epoxide	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
Hexachlorobenzene	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
Hexachlorobutadiene	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
Hexachloroethane	ug/g	<0.0020	0.0020	<0.0020	0.0020	7326258
Methoxychlor	ug/g	<0.0050	0.0050	<0.0050	0.0050	7326258
Aroclor 1242	ug/g	<0.015	0.015	<0.020	0.020	7326258
Aroclor 1248	ug/g	<0.015	0.015	<0.020	0.020	7326258
Aroclor 1254	ug/g	<0.015	0.015	<0.020	0.020	7326258
Aroclor 1260	ug/g	<0.015	0.015	<0.020	0.020	7326258
Surrogate Recovery (%)						
2,4,5,6-Tetrachloro-m-xylene	%	78		78		7326258

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PKK722		PKK760		
Sampling Date		2021/04/20 09:45		2021/04/20 10:10		
COC Number		335072		335072		
	UNITS	GS21-19	RDL	DUP 4	RDL	QC Batch
Decachlorobiphenyl	%	84		77		7326258

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 PAHS (SOIL)

BV Labs ID		PKK706		PKK707		PKK708		PKK709		
Sampling Date		2021/04/19 08:45		2021/04/16 13:10		2021/04/19 09:40		2021/04/19 09:20		
COC Number		335072		335072		335072		335072		
	UNITS	GS21-03	QC Batch	GS21-04	QC Batch	GS21-05	QC Batch	GS21-06	RDL	QC Batch
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	7319911	<0.0071	7319911	0.021	7319911	0.011	0.0071	7319911
Polyaromatic Hydrocarbons										
Acenaphthene	ug/g	<0.0050	7325571	<0.0050	7326292	<0.0050	7325571	0.023	0.0050	7324982
Acenaphthylene	ug/g	<0.0050	7325571	<0.0050	7326292	<0.0050	7325571	<0.0050	0.0050	7324982
Anthracene	ug/g	<0.0050	7325571	<0.0050	7326292	<0.0050	7325571	0.032	0.0050	7324982
Benzo(a)anthracene	ug/g	<0.0050	7325571	<0.0050	7326292	0.0084	7325571	0.045	0.0050	7324982
Benzo(a)pyrene	ug/g	<0.0050	7325571	<0.0050	7326292	0.015	7325571	0.039	0.0050	7324982
Benzo(b/j)fluoranthene	ug/g	<0.0050	7325571	0.0061	7326292	0.022	7325571	0.057	0.0050	7324982
Benzo(g,h,i)perylene	ug/g	0.0051	7325571	<0.0050	7326292	0.019	7325571	0.025	0.0050	7324982
Benzo(k)fluoranthene	ug/g	<0.0050	7325571	<0.0050	7326292	<0.0050	7325571	0.016	0.0050	7324982
Chrysene	ug/g	<0.0050	7325571	<0.0050	7326292	0.012	7325571	0.051	0.0050	7324982
Dibenzo(a,h)anthracene	ug/g	<0.0050	7325571	<0.0050	7326292	<0.0050	7325571	<0.0050	0.0050	7324982
Fluoranthene	ug/g	<0.0050	7325571	<0.0050	7326292	0.021	7325571	0.13	0.0050	7324982
Fluorene	ug/g	<0.0050	7325571	<0.0050	7326292	<0.0050	7325571	0.023	0.0050	7324982
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	7325571	<0.0050	7326292	0.0099	7325571	0.022	0.0050	7324982
1-Methylnaphthalene	ug/g	<0.0050	7325571	<0.0050	7326292	0.0094	7325571	0.0053	0.0050	7324982
2-Methylnaphthalene	ug/g	<0.0050	7325571	<0.0050	7326292	0.012	7325571	0.0057	0.0050	7324982
Naphthalene	ug/g	<0.0050	7325571	<0.0050	7326292	0.0067	7325571	<0.0050	0.0050	7324982
Phenanthrene	ug/g	<0.0050	7325571	<0.0050	7326292	0.017	7325571	0.14	0.0050	7324982
Pyrene	ug/g	<0.0050	7325571	0.0054	7326292	0.019	7325571	0.092	0.0050	7324982
Surrogate Recovery (%)										
D10-Anthracene	%	94	7325571	96	7326292	92	7325571	100		7324982
D14-Terphenyl (FS)	%	97	7325571	116	7326292	95	7325571	102		7324982
D8-Acenaphthylene	%	93	7325571	87	7326292	90	7325571	97		7324982

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 PAHS (SOIL)

BV Labs ID		PKK710	PKK711	PKK712	PKK713		PKK714	PKK715		
Sampling Date		2021/04/16 13:30	2021/04/19 09:10	2021/04/16 13:50	2021/04/16 14:05		2021/04/16 14:30	2021/04/16 13:20		
COC Number		335072	335072	335072	335072		335072	335072		
	UNITS	GS21-07	GS21-08	GS21-09	GS21-10	QC Batch	GS21-11	GS21-12	RDL	QC Batch
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	<0.0071	<0.0071	7319911	<0.0071	0.014	0.0071	7319911
Polyaromatic Hydrocarbons										
Acenaphthene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7324982	<0.0050	<0.0050	0.0050	7326292
Acenaphthylene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7324982	<0.0050	0.0051	0.0050	7326292
Anthracene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7324982	<0.0050	0.012	0.0050	7326292
Benzo(a)anthracene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7324982	<0.0050	0.013	0.0050	7326292
Benzo(a)pyrene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7324982	<0.0050	0.019	0.0050	7326292
Benzo(b/j)fluoranthene	ug/g	<0.0050	<0.0050	<0.0050	0.0074	7324982	0.0053	0.047	0.0050	7326292
Benzo(g,h,i)perylene	ug/g	<0.0050	<0.0050	<0.0050	0.0052	7324982	<0.0050	0.061	0.0050	7326292
Benzo(k)fluoranthene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7324982	<0.0050	0.014	0.0050	7326292
Chrysene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7324982	<0.0050	0.019	0.0050	7326292
Dibenzo(a,h)anthracene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7324982	<0.0050	0.0059	0.0050	7326292
Fluoranthene	ug/g	<0.0050	<0.0050	<0.0050	0.0063	7324982	<0.0050	0.015	0.0050	7326292
Fluorene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7324982	<0.0050	<0.0050	0.0050	7326292
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7324982	<0.0050	0.046	0.0050	7326292
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7324982	<0.0050	0.0065	0.0050	7326292
2-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7324982	<0.0050	0.0072	0.0050	7326292
Naphthalene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7324982	<0.0050	<0.0050	0.0050	7326292
Phenanthrene	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	7324982	<0.0050	0.014	0.0050	7326292
Pyrene	ug/g	<0.0050	<0.0050	<0.0050	0.0058	7324982	<0.0050	0.040	0.0050	7326292
Surrogate Recovery (%)										
D10-Anthracene	%	96	90	102	96	7324982	92	93		7326292
D14-Terphenyl (FS)	%	97	91	102	97	7324982	103	97		7326292
D8-Acenaphthylene	%	97	89	97	95	7324982	84	87		7326292

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 PAHS (SOIL)

BV Labs ID		PKK716		PKK717			PKK723	PKK724		
Sampling Date		2021/04/16 12:30		2021/04/16 12:30			2021/04/15 12:30	2021/04/15 12:40		
COC Number		335072		335072			335072	335072		
	UNITS	GS21-13	QC Batch	GS21-14	RDL	QC Batch	GS21-20	GS21-21	RDL	QC Batch
Inorganics										
Moisture	%	8.3	7323419	15	1.0	7323419				
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	7319911	<0.0071	0.0071	7319911	0.019	<0.0071	0.0071	7319911
Polyaromatic Hydrocarbons										
Acenaphthene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	<0.0050	<0.0050	0.0050	7326292
Acenaphthylene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	<0.0050	<0.0050	0.0050	7326292
Anthracene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	<0.0050	<0.0050	0.0050	7326292
Benzo(a)anthracene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	<0.0050	<0.0050	0.0050	7326292
Benzo(a)pyrene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	<0.0050	<0.0050	0.0050	7326292
Benzo(b/j)fluoranthene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	0.012	<0.0050	0.0050	7326292
Benzo(g,h,i)perylene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	0.0071	<0.0050	0.0050	7326292
Benzo(k)fluoranthene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	<0.0050	<0.0050	0.0050	7326292
Chrysene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	0.013	<0.0050	0.0050	7326292
Dibenzo(a,h)anthracene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	<0.0050	<0.0050	0.0050	7326292
Fluoranthene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	0.0079	<0.0050	0.0050	7326292
Fluorene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	<0.0050	<0.0050	0.0050	7326292
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	<0.0050	<0.0050	0.0050	7326292
1-Methylnaphthalene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	0.010	<0.0050	0.0050	7326292
2-Methylnaphthalene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	0.0090	<0.0050	0.0050	7326292
Naphthalene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	<0.0050	<0.0050	0.0050	7326292
Phenanthrene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	0.016	<0.0050	0.0050	7326292
Pyrene	ug/g	<0.0050	7326292	<0.0050	0.0050	7324982	0.0058	<0.0050	0.0050	7326292
Surrogate Recovery (%)										
D10-Anthracene	%	94	7326292	98		7324982	95	97		7326292
D14-Terphenyl (FS)	%	98	7326292	101		7324982	109	91		7326292
D8-Acenaphthylene	%	84	7326292	97		7324982	87	87		7326292

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PAHS (SOIL)

BV Labs ID		PKK725		PKK726		PKK727			PKK728		
Sampling Date		2021/04/15 12:50		2021/04/15 13:00		2021/04/15 13:10			2021/04/15 13:20		
COC Number		335072		335072		335072			335072		
	UNITS	GS21-22	QC Batch	GS21-23	RDL	GS21-24	RDL	QC Batch	GS21-25	RDL	QC Batch
Calculated Parameters											
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	7319911	<0.0071	0.0071	<0.076	0.076	7319911	<0.0071	0.0071	7319911
Polyaromatic Hydrocarbons											
Acenaphthene	ug/g	<0.0050	7325693	<0.0050	0.0050	<0.0050	0.0050	7325571	<0.0050	0.0050	7325693
Acenaphthylene	ug/g	<0.0050	7325693	<0.0050	0.0050	<0.0050	0.0050	7325571	0.016	0.0050	7325693
Anthracene	ug/g	<0.0050	7325693	<0.0050	0.0050	<0.0050	0.0050	7325571	0.015	0.0050	7325693
Benzo(a)anthracene	ug/g	<0.0050	7325693	<0.0050	0.0050	0.0085	0.0050	7325571	0.027	0.0050	7325693
Benzo(a)pyrene	ug/g	0.0072	7325693	<0.0050	0.0050	0.013	0.0050	7325571	0.037	0.0050	7325693
Benzo(b/j)fluoranthene	ug/g	0.012	7325693	<0.0050	0.0050	0.020	0.0050	7325571	0.078	0.0050	7325693
Benzo(g,h,i)perylene	ug/g	0.014	7325693	<0.0050	0.0050	0.012	0.0050	7325571	0.053	0.0050	7325693
Benzo(k)fluoranthene	ug/g	<0.0050	7325693	<0.0050	0.0050	<0.0050	0.0050	7325571	0.023	0.0050	7325693
Chrysene	ug/g	0.0075	7325693	<0.0050	0.0050	0.011	0.0050	7325571	0.034	0.0050	7325693
Dibenzo(a,h)anthracene	ug/g	<0.0050	7325693	<0.0050	0.0050	<0.0050	0.0050	7325571	0.0078	0.0050	7325693
Fluoranthene	ug/g	0.0095	7325693	<0.0050	0.0050	0.023	0.0050	7325571	0.067	0.0050	7325693
Fluorene	ug/g	<0.0050	7325693	<0.0050	0.0050	<0.0050	0.0050	7325571	<0.0050	0.0050	7325693
Indeno(1,2,3-cd)pyrene	ug/g	0.012	7325693	<0.0050	0.0050	0.0093	0.0050	7325571	0.048	0.0050	7325693
1-Methylnaphthalene	ug/g	<0.0050	7325693	<0.0050	0.0050	<0.070 (1)	0.070	7325571	<0.0050	0.0050	7325693
2-Methylnaphthalene	ug/g	<0.0050	7325693	<0.0050	0.0050	<0.030 (1)	0.030	7325571	<0.0050	0.0050	7325693
Naphthalene	ug/g	<0.0050	7325693	<0.0050	0.0050	<0.0050	0.0050	7325571	<0.0050	0.0050	7325693
Phenanthrene	ug/g	0.0061	7325693	<0.0050	0.0050	0.018	0.0050	7325571	0.013	0.0050	7325693
Pyrene	ug/g	0.0094	7325693	<0.0050	0.0050	0.021	0.0050	7325571	0.072	0.0050	7325693
Surrogate Recovery (%)											
D10-Anthracene	%	101	7325693	103		96		7325571	97		7325693
D14-Terphenyl (FS)	%	96	7325693	100		97		7325571	92		7325693
D8-Acenaphthylene	%	91	7325693	98		94		7325571	86		7325693

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Detection Limit was raised due to matrix interferences.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PAHS (SOIL)

BV Labs ID		PKK730		PKK731	PKK732	PKK733		PKK734		
Sampling Date		2021/04/19 10:30		2021/04/19 10:45	2021/04/19 12:35	2021/04/19 10:15		2021/04/19 13:45		
COC Number		335072		335072	335072	335072		335072		
	UNITS	GS21-27	QC Batch	GS21-28	GS21-29	GS21-30	QC Batch	GS21-31	RDL	QC Batch
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	7319911	<0.0071	<0.0071	<0.0071	7319911	<0.0071	0.0071	7319911
Polyaromatic Hydrocarbons										
Acenaphthene	ug/g	<0.0050	7325693	<0.0050	<0.0050	<0.0050	7325571	<0.0050	0.0050	7326292
Acenaphthylene	ug/g	<0.0050	7325693	<0.0050	<0.0050	<0.0050	7325571	<0.0050	0.0050	7326292
Anthracene	ug/g	<0.0050	7325693	<0.0050	<0.0050	<0.0050	7325571	<0.0050	0.0050	7326292
Benzo(a)anthracene	ug/g	<0.0050	7325693	<0.0050	<0.0050	<0.0050	7325571	<0.0050	0.0050	7326292
Benzo(a)pyrene	ug/g	<0.0050	7325693	<0.0050	<0.0050	0.0065	7325571	<0.0050	0.0050	7326292
Benzo(b/j)fluoranthene	ug/g	<0.0050	7325693	<0.0050	<0.0050	0.0054	7325571	<0.0050	0.0050	7326292
Benzo(g,h,i)perylene	ug/g	0.0077	7325693	<0.0050	<0.0050	0.0084	7325571	<0.0050	0.0050	7326292
Benzo(k)fluoranthene	ug/g	<0.0050	7325693	<0.0050	<0.0050	<0.0050	7325571	<0.0050	0.0050	7326292
Chrysene	ug/g	<0.0050	7325693	<0.0050	<0.0050	<0.0050	7325571	<0.0050	0.0050	7326292
Dibenzo(a,h)anthracene	ug/g	<0.0050	7325693	<0.0050	<0.0050	<0.0050	7325571	<0.0050	0.0050	7326292
Fluoranthene	ug/g	<0.0050	7325693	<0.0050	<0.0050	<0.0050	7325571	<0.0050	0.0050	7326292
Fluorene	ug/g	<0.0050	7325693	<0.0050	<0.0050	<0.0050	7325571	<0.0050	0.0050	7326292
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	7325693	<0.0050	<0.0050	<0.0050	7325571	<0.0050	0.0050	7326292
1-Methylnaphthalene	ug/g	<0.0050	7325693	<0.0050	<0.0050	<0.0050	7325571	<0.0050	0.0050	7326292
2-Methylnaphthalene	ug/g	<0.0050	7325693	<0.0050	<0.0050	<0.0050	7325571	<0.0050	0.0050	7326292
Naphthalene	ug/g	<0.0050	7325693	<0.0050	<0.0050	<0.0050	7325571	<0.0050	0.0050	7326292
Phenanthrene	ug/g	<0.0050	7325693	<0.0050	<0.0050	<0.0050	7325571	<0.0050	0.0050	7326292
Pyrene	ug/g	<0.0050	7325693	<0.0050	<0.0050	0.0051	7325571	<0.0050	0.0050	7326292
Surrogate Recovery (%)										
D10-Anthracene	%	96	7325693	97	100	94	7325571	92		7326292
D14-Terphenyl (FS)	%	94	7325693	96	103	95	7325571	106		7326292
D8-Acenaphthylene	%	81	7325693	97	100	94	7325571	85		7326292

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PAHS (SOIL)

BV Labs ID		PKK735		PKK736			PKK757		
Sampling Date		2021/04/19 13:00		2021/04/19 13:15			2021/04/15 12:30		
COC Number		335072		335072			335072		
	UNITS	GS21-32	QC Batch	GS21-33	RDL	QC Batch	DUP 1	RDL	QC Batch
Inorganics									
Moisture	%						9.9	1.0	7323523
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	7319911	<0.0071	0.0071	7319911	<0.0071	0.0071	7319911
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	<0.0050	0.0050	7326292
Acenaphthylene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	<0.0050	0.0050	7326292
Anthracene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	<0.0050	0.0050	7326292
Benzo(a)anthracene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	<0.0050	0.0050	7326292
Benzo(a)pyrene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	0.0059	0.0050	7326292
Benzo(b/j)fluoranthene	ug/g	<0.0050	7326292	0.0054	0.0050	7325571	0.016	0.0050	7326292
Benzo(g,h,i)perylene	ug/g	<0.0050	7326292	0.0063	0.0050	7325571	0.012	0.0050	7326292
Benzo(k)fluoranthene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	<0.0050	0.0050	7326292
Chrysene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	0.0080	0.0050	7326292
Dibenzo(a,h)anthracene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	<0.0050	0.0050	7326292
Fluoranthene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	0.0071	0.0050	7326292
Fluorene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	<0.0050	0.0050	7326292
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	0.0097	0.0050	7326292
1-Methylnaphthalene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	0.0051	0.0050	7326292
2-Methylnaphthalene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	<0.0050	0.0050	7326292
Naphthalene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	<0.0050	0.0050	7326292
Phenanthrene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	0.0063	0.0050	7326292
Pyrene	ug/g	<0.0050	7326292	<0.0050	0.0050	7325571	0.0064	0.0050	7326292
Surrogate Recovery (%)									
D10-Anthracene	%	92	7326292	96		7325571	95		7326292
D14-Terphenyl (FS)	%	99	7326292	99		7325571	94		7326292
D8-Acenaphthylene	%	84	7326292	95		7325571	86		7326292

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 PCBS (SOIL)

BV Labs ID		PKK706	PKK707	PKK708	PKK709	PKK710	PKK711	PKK712		
Sampling Date		2021/04/19 08:45	2021/04/16 13:10	2021/04/19 09:40	2021/04/19 09:20	2021/04/16 13:30	2021/04/19 09:10	2021/04/16 13:50		
COC Number		335072	335072	335072	335072	335072	335072	335072		
	UNITS	GS21-03	GS21-04	GS21-05	GS21-06	GS21-07	GS21-08	GS21-09	RDL	QC Batch
PCBs										
Aroclor 1242	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7326018
Aroclor 1248	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7326018
Aroclor 1254	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7326018
Aroclor 1260	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7326018
Total PCB	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7326018
Surrogate Recovery (%)										
Decachlorobiphenyl	%	117	118	121	110	114	109	118		7326018

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs ID		PKK713	PKK714	PKK715	PKK716	PKK717	PKK734	PKK735		
Sampling Date		2021/04/16 14:05	2021/04/16 14:30	2021/04/16 13:20	2021/04/16 12:30	2021/04/16 12:30	2021/04/19 13:45	2021/04/19 13:00		
COC Number		335072	335072	335072	335072	335072	335072	335072		
	UNITS	GS21-10	GS21-11	GS21-12	GS21-13	GS21-14	GS21-31	GS21-32	RDL	QC Batch
PCBs										
Aroclor 1242	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7326018
Aroclor 1248	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7326018
Aroclor 1254	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7326018
Aroclor 1260	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7326018
Total PCB	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7326018
Surrogate Recovery (%)										
Decachlorobiphenyl	%	110	117	109	117	123	126	111		7326018

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 PCBS (SOIL)

BV Labs ID		PKK735	PKK736			PKK746		PKK749	PKK752		
Sampling Date		2021/04/19 13:00	2021/04/19 13:15			2021/04/19 08:00		2021/04/16 08:15	2021/04/16 10:20		
COC Number		335072	335072			335072		335072	335072		
	UNITS	GS21-32 Lab-Dup	GS21-33	RDL	QC Batch	GS21-43	QC Batch	GS21-46	GS21-49	RDL	QC Batch
Inorganics											
Moisture	%					27	7323523	12	13	1.0	7323625
PCBs											
Aroclor 1242	ug/g	<0.010	<0.010	0.010	7326018	<0.010	7326018	<0.010	<0.010	0.010	7326018
Aroclor 1248	ug/g	<0.010	<0.010	0.010	7326018	<0.010	7326018	<0.010	<0.010	0.010	7326018
Aroclor 1254	ug/g	<0.010	<0.010	0.010	7326018	<0.010	7326018	<0.010	<0.010	0.010	7326018
Aroclor 1260	ug/g	<0.010	<0.010	0.010	7326018	<0.010	7326018	<0.010	<0.010	0.010	7326018
Total PCB	ug/g	<0.010	<0.010	0.010	7326018	<0.010	7326018	<0.010	<0.010	0.010	7326018
Surrogate Recovery (%)											
Decachlorobiphenyl	%	117	123		7326018	126	7326018	117	122		7326018

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

BV Labs ID		PKK755		PKK759		
Sampling Date		2021/04/19 08:30		2021/04/19 08:00		
COC Number		335072		335072		
	UNITS	GS21-52	RDL	DUP 3	RDL	QC Batch
Inorganics						
Moisture	%	22	1.0	33	1.0	7323625
PCBs						
Aroclor 1242	ug/g	<0.010	0.010	<0.020	0.020	7326018
Aroclor 1248	ug/g	<0.010	0.010	<0.020	0.020	7326018
Aroclor 1254	ug/g	<0.010	0.010	<0.020	0.020	7326018
Aroclor 1260	ug/g	<0.010	0.010	<0.020	0.020	7326018
Total PCB	ug/g	<0.010	0.010	<0.020	0.020	7326018
Surrogate Recovery (%)						
Decachlorobiphenyl	%	126		141 (1)		7326018

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Surrogate recovery was above the upper control limit. This may represent a high bias in the results. For results that were not detected (ND), this potential bias has no impact.

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BV Labs Job #: C1B0746
Report Date: 2021/05/03

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK704		PKK705			PKK705			PKK706		
Sampling Date		2021/04/16 10:00		2021/04/16 10:10			2021/04/16 10:10			2021/04/19 08:45		
COC Number		335072		335072			335072			335072		
	UNITS	GS21-01	QC Batch	GS21-02	RDL	QC Batch	GS21-02 Lab-Dup	RDL	QC Batch	GS21-03	RDL	QC Batch
Inorganics												
Moisture	%	15	7323419	14	1.0	7323419	14	1.0	7323419	9.0	1.0	7323523
BTEX & F1 Hydrocarbons												
Benzene	ug/g	<0.020	7324919	<0.020	0.020	7324919				<0.020	0.020	7324919
Toluene	ug/g	<0.020	7324919	<0.020	0.020	7324919				<0.020	0.020	7324919
Ethylbenzene	ug/g	<0.020	7324919	<0.020	0.020	7324919				<0.020	0.020	7324919
o-Xylene	ug/g	<0.020	7324919	<0.020	0.020	7324919				<0.020	0.020	7324919
p+m-Xylene	ug/g	<0.040	7324919	<0.040	0.040	7324919				<0.040	0.040	7324919
Total Xylenes	ug/g	<0.040	7324919	<0.040	0.040	7324919				<0.040	0.040	7324919
F1 (C6-C10)	ug/g	<10	7324919	<10	10	7324919				<10	10	7324919
F1 (C6-C10) - BTEX	ug/g	<10	7324919	<10	10	7324919				<10	10	7324919
F2-F4 Hydrocarbons												
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7324794	<10	10	7326398				<10	10	7325215
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7324794	<50	50	7326398				<50	50	7325215
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7324794	<50	50	7326398				<50	50	7325215
Reached Baseline at C50	ug/g	Yes	7324794	Yes		7326398				Yes		7325215
Surrogate Recovery (%)												
1,4-Difluorobenzene	%	97	7324919	99		7324919				98		7324919
4-Bromofluorobenzene	%	97	7324919	98		7324919				96		7324919
D10-o-Xylene	%	86	7324919	91		7324919				91		7324919
D4-1,2-Dichloroethane	%	99	7324919	99		7324919				98		7324919
o-Terphenyl	%	96	7324794	102		7326398				99		7325215

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK707		PKK708		PKK709	PKK710	PKK711		
Sampling Date		2021/04/16 13:10		2021/04/19 09:40		2021/04/19 09:20	2021/04/16 13:30	2021/04/19 09:10		
COC Number		335072		335072		335072	335072	335072		
	UNITS	GS21-04	QC Batch	GS21-05	QC Batch	GS21-06	GS21-07	GS21-08	RDL	QC Batch
Inorganics										
Moisture	%	<1.0	7323419	17	7323523	8.2	7.1	8.0	1.0	7323419
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	7324919	<0.020	7324919	<0.020	<0.020	<0.020	0.020	7324919
Toluene	ug/g	<0.020	7324919	<0.020	7324919	<0.020	<0.020	<0.020	0.020	7324919
Ethylbenzene	ug/g	<0.020	7324919	<0.020	7324919	<0.020	<0.020	<0.020	0.020	7324919
o-Xylene	ug/g	<0.020	7324919	0.023	7324919	<0.020	<0.020	<0.020	0.020	7324919
p+m-Xylene	ug/g	<0.040	7324919	<0.040	7324919	<0.040	<0.040	<0.040	0.040	7324919
Total Xylenes	ug/g	<0.040	7324919	<0.040	7324919	<0.040	<0.040	<0.040	0.040	7324919
F1 (C6-C10)	ug/g	<10	7324919	<10	7324919	<10	<10	<10	10	7324919
F1 (C6-C10) - BTEX	ug/g	<10	7324919	<10	7324919	<10	<10	<10	10	7324919
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7326398	<10	7325215	13	<10	<10	10	7324794
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7326398	150	7325215	89	<50	<50	50	7324794
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7326398	99	7325215	<50	<50	<50	50	7324794
Reached Baseline at C50	ug/g	Yes	7326398	Yes	7325215	Yes	Yes	Yes		7324794
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	97	7324919	93	7324919	96	98	97		7324919
4-Bromofluorobenzene	%	102	7324919	107	7324919	103	102	102		7324919
D10-o-Xylene	%	90	7324919	81	7324919	87	91	88		7324919
D4-1,2-Dichloroethane	%	101	7324919	95	7324919	97	100	97		7324919
o-Terphenyl	%	102	7326398	87	7325215	95	94	94		7324794

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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BV Labs Job #: C1B0746
Report Date: 2021/05/03

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK712	PKK713		PKK714		PKK715		PKK718		
Sampling Date		2021/04/16 13:50	2021/04/16 14:05		2021/04/16 14:30		2021/04/16 13:20		2021/04/20 10:30		
COC Number		335072	335072		335072		335072		335072		
	UNITS	GS21-09	GS21-10	QC Batch	GS21-11	QC Batch	GS21-12	QC Batch	GS21-15	RDL	QC Batch
Inorganics											
Moisture	%	7.7	5.9	7323419	7.7	7323419	10	7323419	11	1.0	7323419
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	<0.020	7324919	<0.020	7324919	<0.020	7325182	<0.020	0.020	7324931
Toluene	ug/g	<0.020	<0.020	7324919	<0.020	7324919	<0.020	7325182	<0.020	0.020	7324931
Ethylbenzene	ug/g	<0.020	<0.020	7324919	<0.020	7324919	<0.020	7325182	<0.020	0.020	7324931
o-Xylene	ug/g	<0.020	<0.020	7324919	<0.020	7324919	<0.020	7325182	<0.020	0.020	7324931
p+m-Xylene	ug/g	<0.040	<0.040	7324919	<0.040	7324919	<0.040	7325182	<0.040	0.040	7324931
Total Xylenes	ug/g	<0.040	<0.040	7324919	<0.040	7324919	<0.040	7325182	<0.040	0.040	7324931
F1 (C6-C10)	ug/g	<10	<10	7324919	<10	7324919	<10	7325182	<10	10	7324931
F1 (C6-C10) - BTEX	ug/g	<10	<10	7324919	<10	7324919	<10	7325182	<10	10	7324931
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	7324794	<10	7326398	<10	7326398	<10	10	7324794
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	7324794	<50	7326398	97	7326398	<50	50	7324794
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	7324794	<50	7326398	<50	7326398	<50	50	7324794
Reached Baseline at C50	ug/g	Yes	Yes	7324794	Yes	7326398	Yes	7326398	Yes		7324794
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	99	97	7324919	98	7324919	99	7325182	98		7324931
4-Bromofluorobenzene	%	94	101	7324919	97	7324919	107	7325182	97		7324931
D10-o-Xylene	%	92	91	7324919	90	7324919	88	7325182	83		7324931
D4-1,2-Dichloroethane	%	100	99	7324919	102	7324919	108	7325182	94		7324931
o-Terphenyl	%	97	95	7324794	97	7326398	105	7326398	96		7324794

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK719	PKK720			PKK720			PKK721		
Sampling Date		2021/04/20 10:10	2021/04/20 00:00			2021/04/20 00:00			2021/04/20 09:15		
COC Number		335072	335072			335072			335072		
	UNITS	GS21-16	GS21-17	RDL	QC Batch	GS21-17 Lab-Dup	RDL	QC Batch	GS21-18	RDL	QC Batch
Inorganics											
Moisture	%	16	13	1.0	7323419				22	1.0	7323419
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	<0.020	0.020	7324931	<0.020	0.020	7324931	<0.020	0.020	7324931
Toluene	ug/g	<0.020	<0.020	0.020	7324931	<0.020	0.020	7324931	<0.020	0.020	7324931
Ethylbenzene	ug/g	<0.020	<0.020	0.020	7324931	<0.020	0.020	7324931	<0.020	0.020	7324931
o-Xylene	ug/g	<0.020	<0.020	0.020	7324931	<0.020	0.020	7324931	<0.020	0.020	7324931
p+m-Xylene	ug/g	<0.040	<0.040	0.040	7324931	<0.040	0.040	7324931	<0.040	0.040	7324931
Total Xylenes	ug/g	<0.040	<0.040	0.040	7324931	<0.040	0.040	7324931	<0.040	0.040	7324931
F1 (C6-C10)	ug/g	<10	<10	10	7324931	<10	10	7324931	<10	10	7324931
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	7324931	<10	10	7324931	<10	10	7324931
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	7324794				<10	10	7324794
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	7324794				<50	50	7324794
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	7324794				<50	50	7324794
Reached Baseline at C50	ug/g	Yes	Yes		7324794				Yes		7324794
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	97	97		7324931	96		7324931	97		7324931
4-Bromofluorobenzene	%	98	99		7324931	97		7324931	94		7324931
D10-o-Xylene	%	87	86		7324931	83		7324931	90		7324931
D4-1,2-Dichloroethane	%	95	94		7324931	94		7324931	95		7324931
o-Terphenyl	%	96	96		7324794				96		7324794

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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BV Labs Job #: C1B0746
Report Date: 2021/05/03

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK722		PKK723	PKK724		PKK725		PKK726		
Sampling Date		2021/04/20 09:45		2021/04/15 12:30	2021/04/15 12:40		2021/04/15 12:50		2021/04/15 13:00		
COC Number		335072		335072	335072		335072		335072		
	UNITS	GS21-19	QC Batch	GS21-20	GS21-21	QC Batch	GS21-22	QC Batch	GS21-23	RDL	QC Batch
Inorganics											
Moisture	%	26	7323419	10	6.2	7323523	17	7323419	5.5	1.0	7323523
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	7324931	<0.020	<0.020	7324931	<0.020	7324931	<0.020	0.020	7324931
Toluene	ug/g	<0.020	7324931	<0.020	<0.020	7324931	<0.020	7324931	<0.020	0.020	7324931
Ethylbenzene	ug/g	<0.020	7324931	<0.020	<0.020	7324931	<0.020	7324931	<0.020	0.020	7324931
o-Xylene	ug/g	<0.020	7324931	<0.020	<0.020	7324931	<0.020	7324931	<0.020	0.020	7324931
p+m-Xylene	ug/g	<0.040	7324931	<0.040	<0.040	7324931	<0.040	7324931	<0.040	0.040	7324931
Total Xylenes	ug/g	<0.040	7324931	<0.040	<0.040	7324931	<0.040	7324931	<0.040	0.040	7324931
F1 (C6-C10)	ug/g	<10	7324931	<10	<10	7324931	<10	7324931	<10	10	7324931
F1 (C6-C10) - BTEX	ug/g	<10	7324931	<10	<10	7324931	<10	7324931	<10	10	7324931
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7325215	15	<10	7326398	<10	7325215	<10	10	7325215
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7325215	150	<50	7326398	66	7325215	<50	50	7325215
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7325215	67	<50	7326398	<50	7325215	<50	50	7325215
Reached Baseline at C50	ug/g	Yes	7325215	Yes	Yes	7326398	Yes	7325215	Yes		7325215
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	97	7324931	97	98	7324931	97	7324931	98		7324931
4-Bromofluorobenzene	%	99	7324931	97	97	7324931	97	7324931	96		7324931
D10-o-Xylene	%	91	7324931	93	90	7324931	84	7324931	88		7324931
D4-1,2-Dichloroethane	%	96	7324931	96	94	7324931	94	7324931	94		7324931
o-Terphenyl	%	87	7325215	103	104	7326398	89	7325215	87		7325215

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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BV Labs Job #: C1B0746
Report Date: 2021/05/03

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK727		PKK728		PKK729		PKK730		
Sampling Date		2021/04/15 13:10		2021/04/15 13:20		2021/04/15 12:30		2021/04/19 10:30		
COC Number		335072		335072		335072		335072		
	UNITS	GS21-24	QC Batch	GS21-25	QC Batch	GS21-26	QC Batch	GS21-27	RDL	QC Batch
Inorganics										
Moisture	%	17	7323523	13	7323419	10	7323523	14	1.0	7323419
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	7324931	<0.020	7324931	<0.020	7324931	<0.020	0.020	7324931
Toluene	ug/g	<0.020	7324931	<0.020	7324931	<0.020	7324931	<0.020	0.020	7324931
Ethylbenzene	ug/g	<0.020	7324931	<0.020	7324931	<0.020	7324931	<0.020	0.020	7324931
o-Xylene	ug/g	<0.020	7324931	<0.020	7324931	<0.020	7324931	<0.020	0.020	7324931
p+m-Xylene	ug/g	<0.040	7324931	<0.040	7324931	<0.040	7324931	<0.040	0.040	7324931
Total Xylenes	ug/g	<0.040	7324931	<0.040	7324931	<0.040	7324931	<0.040	0.040	7324931
F1 (C6-C10)	ug/g	<10	7324931	<10	7324931	<10	7324931	<10	10	7324931
F1 (C6-C10) - BTEX	ug/g	<10	7324931	<10	7324931	<10	7324931	<10	10	7324931
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	24	7325215	<10	7325215	<10	7325215	<10	10	7325215
F3 (C16-C34 Hydrocarbons)	ug/g	88	7325215	70	7325215	<50	7325215	150	50	7325215
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7325215	<50	7325215	<50	7325215	65	50	7325215
Reached Baseline at C50	ug/g	Yes	7325215	Yes	7325215	Yes	7325215	Yes		7325215
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	97	7324931	98	7324931	99	7324931	98		7324931
4-Bromofluorobenzene	%	97	7324931	96	7324931	97	7324931	98		7324931
D10-o-Xylene	%	107	7324931	87	7324931	87	7324931	87		7324931
D4-1,2-Dichloroethane	%	95	7324931	93	7324931	93	7324931	94		7324931
o-Terphenyl	%	96	7325215	89	7325215	88	7325215	91		7325215

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK731	PKK732	PKK733		PKK734	PKK735		
Sampling Date		2021/04/19 10:45	2021/04/19 12:35	2021/04/19 10:15		2021/04/19 13:45	2021/04/19 13:00		
COC Number		335072	335072	335072		335072	335072		
	UNITS	GS21-28	GS21-29	GS21-30	QC Batch	GS21-31	GS21-32	RDL	QC Batch
Inorganics									
Moisture	%	9.8	9.1	20	7323523	11	14	1.0	7323523
BTEX & F1 Hydrocarbons									
Benzene	ug/g	<0.020	<0.020	<0.020	7324931	<0.020	<0.020	0.020	7324931
Toluene	ug/g	<0.020	<0.020	<0.020	7324931	<0.020	<0.020	0.020	7324931
Ethylbenzene	ug/g	<0.020	<0.020	<0.020	7324931	<0.020	<0.020	0.020	7324931
o-Xylene	ug/g	<0.020	<0.020	<0.020	7324931	<0.020	<0.020	0.020	7324931
p+m-Xylene	ug/g	<0.040	<0.040	<0.040	7324931	<0.040	<0.040	0.040	7324931
Total Xylenes	ug/g	<0.040	<0.040	<0.040	7324931	<0.040	<0.040	0.040	7324931
F1 (C6-C10)	ug/g	<10	<10	<10	7324931	<10	<10	10	7324931
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	7324931	<10	<10	10	7324931
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	7325215	<10	<10	10	7326398
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	<50	7325215	<50	<50	50	7326398
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	<50	7325215	<50	<50	50	7326398
Reached Baseline at C50	ug/g	Yes	Yes	Yes	7325215	Yes	Yes		7326398
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	98	99	98	7324931	98	99		7324931
4-Bromofluorobenzene	%	95	96	96	7324931	94	95		7324931
D10-o-Xylene	%	88	84	90	7324931	86	87		7324931
D4-1,2-Dichloroethane	%	94	94	94	7324931	93	96		7324931
o-Terphenyl	%	87	89	92	7325215	102	103		7326398

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK736	PKK737		PKK738		PKK739		
Sampling Date		2021/04/19 13:15	2021/04/19 14:15		2021/04/19 14:30		2021/04/16 10:50		
COC Number		335072	335072		335072		335072		
	UNITS	GS21-33	GS21-34	QC Batch	GS21-35	QC Batch	GS21-36	RDL	QC Batch
Inorganics									
Moisture	%	13	8.9	7323523	11	7323523	14	1.0	7323625
BTEX & F1 Hydrocarbons									
Benzene	ug/g	<0.020	<0.020	7324931	<0.020	7325182	<0.020	0.020	7325182
Toluene	ug/g	<0.020	<0.020	7324931	<0.020	7325182	<0.020	0.020	7325182
Ethylbenzene	ug/g	<0.020	<0.020	7324931	<0.020	7325182	<0.020	0.020	7325182
o-Xylene	ug/g	<0.020	<0.020	7324931	<0.020	7325182	<0.020	0.020	7325182
p+m-Xylene	ug/g	<0.040	<0.040	7324931	<0.040	7325182	<0.040	0.040	7325182
Total Xylenes	ug/g	<0.040	<0.040	7324931	<0.040	7325182	<0.040	0.040	7325182
F1 (C6-C10)	ug/g	<10	<10	7324931	<10	7325182	<10	10	7325182
F1 (C6-C10) - BTEX	ug/g	<10	<10	7324931	<10	7325182	<10	10	7325182
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	7325215	<10	7325215	<10	10	7324794
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	7325215	<50	7325215	<50	50	7324794
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	7325215	<50	7325215	<50	50	7324794
Reached Baseline at C50	ug/g	Yes	Yes	7325215	Yes	7325215	Yes		7324794
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	98	97	7324931	100	7325182	100		7325182
4-Bromofluorobenzene	%	96	97	7324931	95	7325182	104		7325182
D10-o-Xylene	%	88	93	7324931	81	7325182	82		7325182
D4-1,2-Dichloroethane	%	95	96	7324931	111	7325182	109		7325182
o-Terphenyl	%	86	86	7325215	95	7325215	94		7324794

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK739			PKK740		PKK741			PKK741		
Sampling Date		2021/04/16 10:50			2021/04/20 10:20		2021/04/20 09:00			2021/04/20 09:00		
COC Number		335072			335072		335072			335072		
	UNITS	GS21-36 Lab-Dup	RDL	QC Batch	GS21-37	QC Batch	GS21-38	RDL	QC Batch	GS21-38 Lab-Dup	RDL	QC Batch
Inorganics												
Moisture	%	13	1.0	7323625	8.0	7323625	16	1.0	7323523			
BTEX & F1 Hydrocarbons												
Benzene	ug/g				<0.020	7325182	<0.020	0.020	7325182	<0.020	0.020	7325182
Toluene	ug/g				<0.020	7325182	<0.020	0.020	7325182	<0.020	0.020	7325182
Ethylbenzene	ug/g				<0.020	7325182	<0.020	0.020	7325182	<0.020	0.020	7325182
o-Xylene	ug/g				<0.020	7325182	<0.020	0.020	7325182	<0.020	0.020	7325182
p+m-Xylene	ug/g				<0.040	7325182	<0.040	0.040	7325182	<0.040	0.040	7325182
Total Xylenes	ug/g				<0.040	7325182	<0.040	0.040	7325182	<0.040	0.040	7325182
F1 (C6-C10)	ug/g				<10	7325182	<10	10	7325182	<10	10	7325182
F1 (C6-C10) - BTEX	ug/g				<10	7325182	<10	10	7325182	<10	10	7325182
F2-F4 Hydrocarbons												
F2 (C10-C16 Hydrocarbons)	ug/g				<10	7324794	<10	10	7325215			
F3 (C16-C34 Hydrocarbons)	ug/g				<50	7324794	<50	50	7325215			
F4 (C34-C50 Hydrocarbons)	ug/g				<50	7324794	<50	50	7325215			
Reached Baseline at C50	ug/g				Yes	7324794	Yes		7325215			
Surrogate Recovery (%)												
1,4-Difluorobenzene	%				100	7325182	98		7325182	100		7325182
4-Bromofluorobenzene	%				105	7325182	102		7325182	104		7325182
D10-o-Xylene	%				90	7325182	86		7325182	79		7325182
D4-1,2-Dichloroethane	%				108	7325182	107		7325182	108		7325182
o-Terphenyl	%				96	7324794	93		7325215			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK742		PKK743	PKK744		PKK745		
Sampling Date		2021/04/20 10:45		2021/04/19 14:40	2021/04/20 11:15		2021/04/20 11:00		
COC Number		335072		335072	335072		335072		
	UNITS	GS21-39	QC Batch	GS21-40	GS21-41	QC Batch	GS21-42	RDL	QC Batch
Inorganics									
Moisture	%	2.3	7323523	8.0	8.2	7323625	21	1.0	7323625
BTEX & F1 Hydrocarbons									
Benzene	ug/g	<0.020	7325182	<0.020	<0.020	7325182	<0.020	0.020	7325182
Toluene	ug/g	<0.020	7325182	<0.020	<0.020	7325182	<0.020	0.020	7325182
Ethylbenzene	ug/g	<0.020	7325182	<0.020	<0.020	7325182	<0.020	0.020	7325182
o-Xylene	ug/g	<0.020	7325182	<0.020	<0.020	7325182	<0.020	0.020	7325182
p+m-Xylene	ug/g	<0.040	7325182	<0.040	<0.040	7325182	<0.040	0.040	7325182
Total Xylenes	ug/g	<0.040	7325182	<0.040	<0.040	7325182	<0.040	0.040	7325182
F1 (C6-C10)	ug/g	<10	7325182	<10	<10	7325182	<10	10	7325182
F1 (C6-C10) - BTEX	ug/g	<10	7325182	<10	<10	7325182	<10	10	7325182
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7325215	<10	<10	7324794	<10	10	7326398
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7325215	<50	<50	7324794	52	50	7326398
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7325215	<50	<50	7324794	<50	50	7326398
Reached Baseline at C50	ug/g	Yes	7325215	Yes	Yes	7324794	Yes		7326398
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	100	7325182	100	99	7325182	102		7325182
4-Bromofluorobenzene	%	98	7325182	94	99	7325182	93		7325182
D10-o-Xylene	%	82	7325182	82	83	7325182	83		7325182
D4-1,2-Dichloroethane	%	107	7325182	107	108	7325182	107		7325182
o-Terphenyl	%	91	7325215	95	97	7324794	103		7326398

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1B0746
Report Date: 2021/05/03

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK746			PKK746			PKK747	PKK748		
Sampling Date		2021/04/19 08:00			2021/04/19 08:00			2021/04/16 08:45	2021/04/16 08:30		
COC Number		335072			335072			335072	335072		
	UNITS	GS21-43	RDL	QC Batch	GS21-43 Lab-Dup	RDL	QC Batch	GS21-44	GS21-45	RDL	QC Batch
Inorganics											
Moisture	%							12	21	1.0	7323625
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	0.020	7325182				<0.020	<0.020	0.020	7325182
Toluene	ug/g	<0.020	0.020	7325182				<0.020	<0.020	0.020	7325182
Ethylbenzene	ug/g	<0.020	0.020	7325182				<0.020	<0.020	0.020	7325182
o-Xylene	ug/g	<0.020	0.020	7325182				<0.020	0.16	0.020	7325182
p+m-Xylene	ug/g	<0.040	0.040	7325182				<0.040	0.17	0.040	7325182
Total Xylenes	ug/g	<0.040	0.040	7325182				<0.040	0.33	0.040	7325182
F1 (C6-C10)	ug/g	<10	10	7325182				<10	<10	10	7325182
F1 (C6-C10) - BTEX	ug/g	<10	10	7325182				<10	<10	10	7325182
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7325215	<10	10	7325215	14	<10	10	7326398
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7325215	<50	50	7325215	130	<50	50	7326398
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7325215	<50	50	7325215	55	<50	50	7326398
Reached Baseline at C50	ug/g	Yes		7325215	Yes		7325215	Yes	Yes		7326398
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	100		7325182				98	99		7325182
4-Bromofluorobenzene	%	104		7325182				107	106		7325182
D10-o-Xylene	%	90		7325182				85	84		7325182
D4-1,2-Dichloroethane	%	107		7325182				104	108		7325182
o-Terphenyl	%	88		7325215	91		7325215	100	101		7326398

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1B0746
Report Date: 2021/05/03

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK749			PKK749			PKK750	PKK751		
Sampling Date		2021/04/16 08:15			2021/04/16 08:15			2021/04/15 14:30	2021/04/16 09:15		
COC Number		335072			335072			335072	335072		
	UNITS	GS21-46	RDL	QC Batch	GS21-46 Lab-Dup	RDL	QC Batch	GS21-47	GS21-48	RDL	QC Batch
Inorganics											
Moisture	%							13	19	1.0	7323625
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	0.020	7325182				<0.020	<0.020	0.020	7325182
Toluene	ug/g	<0.020	0.020	7325182				<0.020	<0.020	0.020	7325182
Ethylbenzene	ug/g	<0.020	0.020	7325182				<0.020	<0.020	0.020	7325182
o-Xylene	ug/g	<0.020	0.020	7325182				<0.020	<0.020	0.020	7325182
p+m-Xylene	ug/g	<0.040	0.040	7325182				<0.040	<0.040	0.040	7325182
Total Xylenes	ug/g	<0.040	0.040	7325182				<0.040	<0.040	0.040	7325182
F1 (C6-C10)	ug/g	<10	10	7325182				<10	<10	10	7325182
F1 (C6-C10) - BTEX	ug/g	<10	10	7325182				<10	<10	10	7325182
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7326398	<10	10	7326398	<10	<10	10	7324794
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7326398	<50	50	7326398	<50	<50	50	7324794
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7326398	<50	50	7326398	<50	<50	50	7324794
Reached Baseline at C50	ug/g	Yes		7326398	Yes		7326398	Yes	Yes		7324794
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	98		7325182				98	100		7325182
4-Bromofluorobenzene	%	102		7325182				101	90		7325182
D10-o-Xylene	%	80		7325182				78	80		7325182
D4-1,2-Dichloroethane	%	106		7325182				108	111		7325182
o-Terphenyl	%	104		7326398	101		7326398	97	96		7324794

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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BV Labs Job #: C1B0746
Report Date: 2021/05/03

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK752			PKK752			PKK753		PKK754		
Sampling Date		2021/04/16 10:20			2021/04/16 10:20			2021/04/16 10:30		2021/04/16 12:45		
COC Number		335072			335072			335072		335072		
	UNITS	GS21-49	RDL	QC Batch	GS21-49 Lab-Dup	RDL	QC Batch	GS21-50	QC Batch	GS21-51	RDL	QC Batch
Inorganics												
Moisture	%							8.4	7323625	7.9	1.0	7323625
BTEX & F1 Hydrocarbons												
Benzene	ug/g	<0.020	0.020	7325182				<0.020	7325182	<0.020	0.020	7325182
Toluene	ug/g	<0.020	0.020	7325182				<0.020	7325182	<0.020	0.020	7325182
Ethylbenzene	ug/g	<0.020	0.020	7325182				<0.020	7325182	<0.020	0.020	7325182
o-Xylene	ug/g	<0.020	0.020	7325182				<0.020	7325182	<0.020	0.020	7325182
p+m-Xylene	ug/g	<0.040	0.040	7325182				<0.040	7325182	<0.040	0.040	7325182
Total Xylenes	ug/g	<0.040	0.040	7325182				<0.040	7325182	<0.040	0.040	7325182
F1 (C6-C10)	ug/g	<10	10	7325182				<10	7325182	<10	10	7325182
F1 (C6-C10) - BTEX	ug/g	<10	10	7325182				<10	7325182	<10	10	7325182
F2-F4 Hydrocarbons												
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7324794	<10	10	7324794	<10	7324794	<10	10	7325215
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7324794	<50	50	7324794	<50	7324794	93	50	7325215
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7324794	<50	50	7324794	<50	7324794	63	50	7325215
Reached Baseline at C50	ug/g	Yes		7324794	Yes		7324794	Yes	7324794	Yes		7325215
Surrogate Recovery (%)												
1,4-Difluorobenzene	%	100		7325182				100	7325182	99		7325182
4-Bromofluorobenzene	%	82		7325182				97	7325182	103		7325182
D10-o-Xylene	%	79		7325182				80	7325182	91		7325182
D4-1,2-Dichloroethane	%	108		7325182				106	7325182	109		7325182
o-Terphenyl	%	97		7324794	95		7324794	96	7324794	87		7325215

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK755			PKK756			PKK757		
Sampling Date		2021/04/19 08:30			2021/04/16 09:00			2021/04/15 12:30		
COC Number		335072			335072			335072		
	UNITS	GS21-52	RDL	QC Batch	GS21-53	RDL	QC Batch	DUP 1	RDL	QC Batch
Inorganics										
Moisture	%				25	1.0	7323625			
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	0.020	7325182	<0.020	0.020	7325182	<0.020	0.020	7326487
Toluene	ug/g	<0.020	0.020	7325182	<0.020	0.020	7325182	<0.020	0.020	7326487
Ethylbenzene	ug/g	<0.020	0.020	7325182	<0.020	0.020	7325182	<0.020	0.020	7326487
o-Xylene	ug/g	<0.020	0.020	7325182	<0.020	0.020	7325182	<0.020	0.020	7326487
p+m-Xylene	ug/g	<0.040	0.040	7325182	<0.040	0.040	7325182	<0.040	0.040	7326487
Total Xylenes	ug/g	<0.040	0.040	7325182	<0.040	0.040	7325182	<0.040	0.040	7326487
F1 (C6-C10)	ug/g	<10	10	7325182	<10	10	7325182	<10	10	7326487
F1 (C6-C10) - BTEX	ug/g	<10	10	7325182	<10	10	7325182	<10	10	7326487
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7325215	<10	10	7326398	<10	10	7326398
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7325215	<50	50	7326398	90	50	7326398
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7325215	<50	50	7326398	<50	50	7326398
Reached Baseline at C50	ug/g	Yes		7325215	Yes		7326398	Yes		7326398
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	102		7325182	99		7325182	99		7326487
4-Bromofluorobenzene	%	105		7325182	92		7325182	99		7326487
D10-o-Xylene	%	82		7325182	84		7325182	87		7326487
D4-1,2-Dichloroethane	%	111		7325182	107		7325182	97		7326487
o-Terphenyl	%	91		7325215	100		7326398	100		7326398

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK757			PKK758			PKK758		
Sampling Date		2021/04/15 12:30			2021/04/15 14:30			2021/04/15 14:30		
COC Number		335072			335072			335072		
	UNITS	DUP 1 Lab-Dup	RDL	QC Batch	DUP 2	RDL	QC Batch	DUP 2 Lab-Dup	RDL	QC Batch
Inorganics										
Moisture	%				12	1.0	7323523	12	1.0	7323523
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	0.020	7326487	<0.020	0.020	7326487			
Toluene	ug/g	<0.020	0.020	7326487	<0.020	0.020	7326487			
Ethylbenzene	ug/g	<0.020	0.020	7326487	<0.020	0.020	7326487			
o-Xylene	ug/g	<0.020	0.020	7326487	<0.020	0.020	7326487			
p+m-Xylene	ug/g	<0.040	0.040	7326487	<0.040	0.040	7326487			
Total Xylenes	ug/g	<0.040	0.040	7326487	<0.040	0.040	7326487			
F1 (C6-C10)	ug/g	<10	10	7326487	<10	10	7326487			
F1 (C6-C10) - BTEX	ug/g	<10	10	7326487	<10	10	7326487			
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g				<10	10	7326398			
F3 (C16-C34 Hydrocarbons)	ug/g				66	50	7326398			
F4 (C34-C50 Hydrocarbons)	ug/g				51	50	7326398			
Reached Baseline at C50	ug/g				Yes		7326398			
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	96		7326487	96		7326487			
4-Bromofluorobenzene	%	101		7326487	107		7326487			
D10-o-Xylene	%	84		7326487	83		7326487			
D4-1,2-Dichloroethane	%	97		7326487	93		7326487			
o-Terphenyl	%				101		7326398			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PKK759			PKK760	PKK761		
Sampling Date		2021/04/19 08:00			2021/04/20 10:10	2021/04/20 11:00		
COC Number		335072			335072	335072		
	UNITS	DUP 3	RDL	QC Batch	DUP 4	DUP 5	RDL	QC Batch
Inorganics								
Moisture	%				20	19	1.0	7323625
BTEX & F1 Hydrocarbons								
Benzene	ug/g	<0.020	0.020	7326487	<0.020	<0.020	0.020	7326487
Toluene	ug/g	<0.020	0.020	7326487	<0.020	<0.020	0.020	7326487
Ethylbenzene	ug/g	<0.020	0.020	7326487	<0.020	<0.020	0.020	7326487
o-Xylene	ug/g	<0.020	0.020	7326487	<0.020	<0.020	0.020	7326487
p+m-Xylene	ug/g	<0.040	0.040	7326487	<0.040	<0.040	0.040	7326487
Total Xylenes	ug/g	<0.040	0.040	7326487	<0.040	<0.040	0.040	7326487
F1 (C6-C10)	ug/g	<10	10	7326487	<10	<10	10	7326487
F1 (C6-C10) - BTEX	ug/g	<10	10	7326487	<10	<10	10	7326487
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7326398	<10	<10	10	7324794
F3 (C16-C34 Hydrocarbons)	ug/g	82	50	7326398	<50	<50	50	7324794
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7326398	<50	<50	50	7324794
Reached Baseline at C50	ug/g	Yes		7326398	Yes	Yes		7324794
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	99		7326487	99	99		7326487
4-Bromofluorobenzene	%	98		7326487	102	102		7326487
D10-o-Xylene	%	93		7326487	86	84		7326487
D4-1,2-Dichloroethane	%	97		7326487	97	97		7326487
o-Terphenyl	%	105		7326398	95	96		7324794

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 VOCS BY HS (SOIL)

BV Labs ID		PKK762		
Sampling Date		2021/04/20 11:00		
COC Number		335072		
	UNITS	Trip Blank	RDL	QC Batch
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	7322771
Volatile Organics				
Acetone (2-Propanone)	ug/g	<0.49	0.49	7325873
Benzene	ug/g	<0.0060	0.0060	7325873
Bromodichloromethane	ug/g	<0.040	0.040	7325873
Bromoform	ug/g	<0.040	0.040	7325873
Bromomethane	ug/g	<0.040	0.040	7325873
Carbon Tetrachloride	ug/g	<0.040	0.040	7325873
Chlorobenzene	ug/g	<0.040	0.040	7325873
Chloroform	ug/g	<0.040	0.040	7325873
Dibromochloromethane	ug/g	<0.040	0.040	7325873
1,2-Dichlorobenzene	ug/g	<0.040	0.040	7325873
1,3-Dichlorobenzene	ug/g	<0.040	0.040	7325873
1,4-Dichlorobenzene	ug/g	<0.040	0.040	7325873
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	7325873
1,1-Dichloroethane	ug/g	<0.040	0.040	7325873
1,2-Dichloroethane	ug/g	<0.049	0.049	7325873
1,1-Dichloroethylene	ug/g	<0.040	0.040	7325873
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	7325873
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	7325873
1,2-Dichloropropane	ug/g	<0.040	0.040	7325873
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	7325873
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	7325873
Ethylbenzene	ug/g	<0.010	0.010	7325873
Ethylene Dibromide	ug/g	<0.040	0.040	7325873
Hexane	ug/g	<0.040	0.040	7325873
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	7325873
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	7325873
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	7325873
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	7325873
Styrene	ug/g	<0.040	0.040	7325873
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	7325873
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	7325873

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 VOCS BY HS (SOIL)

BV Labs ID		PKK762		
Sampling Date		2021/04/20 11:00		
COC Number		335072		
	UNITS	Trip Blank	RDL	QC Batch
Tetrachloroethylene	ug/g	<0.040	0.040	7325873
Toluene	ug/g	<0.020	0.020	7325873
1,1,1-Trichloroethane	ug/g	<0.040	0.040	7325873
1,1,2-Trichloroethane	ug/g	<0.040	0.040	7325873
Trichloroethylene	ug/g	<0.010	0.010	7325873
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	7325873
Vinyl Chloride	ug/g	<0.019	0.019	7325873
p+m-Xylene	ug/g	<0.020	0.020	7325873
o-Xylene	ug/g	<0.020	0.020	7325873
Total Xylenes	ug/g	<0.020	0.020	7325873
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	97		7325873
D10-o-Xylene	%	90		7325873
D4-1,2-Dichloroethane	%	98		7325873
D8-Toluene	%	98		7325873

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

TEST SUMMARY

BV Labs ID: PKK704
Sample ID: GS21-01
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324919	N/A	2021/04/29	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7323294	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK705
Sample ID: GS21-02
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324919	N/A	2021/04/29	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/29	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7323294	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK705 Dup
Sample ID: GS21-02
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai

BV Labs ID: PKK706
Sample ID: GS21-03
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John

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TEST SUMMARY

BV Labs ID: PKK706
Sample ID: GS21-03
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324919	N/A	2021/04/29	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7325571	2021/04/29	2021/04/29	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/29	Sarah Huang
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK707
Sample ID: GS21-04
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324919	N/A	2021/04/29	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/29	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7326292	2021/04/29	2021/04/30	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/29	Sarah Huang
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK708
Sample ID: GS21-05
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324919	N/A	2021/04/29	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu

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TEST SUMMARY

BV Labs ID: PKK708
Sample ID: GS21-05
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7325571	2021/04/29	2021/04/29	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/29	Sarah Huang
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK709
Sample ID: GS21-06
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/05/01	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324919	N/A	2021/04/29	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7324982	2021/04/29	2021/04/30	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/29	Sarah Huang
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK710
Sample ID: GS21-07
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/05/01	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324919	N/A	2021/04/29	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7324982	2021/04/29	2021/04/30	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/29	Sarah Huang
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

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TEST SUMMARY

BV Labs ID: PKK711
Sample ID: GS21-08
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/05/01	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324919	N/A	2021/04/29	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7324982	2021/04/29	2021/04/30	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/29	Sarah Huang
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK711 Dup
Sample ID: GS21-08
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur

BV Labs ID: PKK712
Sample ID: GS21-09
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/05/01	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324919	N/A	2021/04/29	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7324982	2021/04/29	2021/04/30	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/30	Sarah Huang
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

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TEST SUMMARY

BV Labs ID: PKK713
Sample ID: GS21-10
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/05/01	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324919	N/A	2021/04/29	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7324982	2021/04/29	2021/04/30	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/30	Sarah Huang
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK714
Sample ID: GS21-11
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324919	N/A	2021/04/29	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/29	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7326292	2021/04/29	2021/04/30	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/30	Sarah Huang
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK714 Dup
Sample ID: GS21-11
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu

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TEST SUMMARY

BV Labs ID: PKK715
Sample ID: GS21-12
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/29	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7326292	2021/04/29	2021/04/30	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/30	Sarah Huang
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK716
Sample ID: GS21-13
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7326292	2021/04/29	2021/04/30	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/30	Sarah Huang

BV Labs ID: PKK717
Sample ID: GS21-14
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/05/01	Automated Statchk
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7324982	2021/04/29	2021/04/30	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/30	Sarah Huang

BV Labs ID: PKK718
Sample ID: GS21-15
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin

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TEST SUMMARY

BV Labs ID: PKK718
Sample ID: GS21-15
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
OC Pesticides (Selected) & PCB	GC/ECD	7326258	2021/04/29	2021/04/30	Li Peng
OC Pesticides Summed Parameters	CALC	7323290	N/A	2021/04/29	Automated Statchk
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK719
Sample ID: GS21-16
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
OC Pesticides (Selected) & PCB	GC/ECD	7326258	2021/04/29	2021/04/30	Li Peng
OC Pesticides Summed Parameters	CALC	7323290	N/A	2021/04/29	Automated Statchk
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK720
Sample ID: GS21-17
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
OC Pesticides (Selected) & PCB	GC/ECD	7326258	2021/04/29	2021/04/30	Li Peng
OC Pesticides Summed Parameters	CALC	7323290	N/A	2021/04/29	Automated Statchk
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

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TEST SUMMARY

BV Labs ID: PKK720 Dup
Sample ID: GS21-17
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin

BV Labs ID: PKK721
Sample ID: GS21-18
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
OC Pesticides (Selected) & PCB	GC/ECD	7326258	2021/04/29	2021/04/30	Li Peng
OC Pesticides Summed Parameters	CALC	7323290	N/A	2021/04/29	Automated Statchk
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK721 Dup
Sample ID: GS21-18
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila

BV Labs ID: PKK722
Sample ID: GS21-19
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
OC Pesticides (Selected) & PCB	GC/ECD	7326258	2021/04/29	2021/04/30	Li Peng
OC Pesticides Summed Parameters	CALC	7323290	N/A	2021/04/29	Automated Statchk

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TEST SUMMARY

BV Labs ID: PKK722
Sample ID: GS21-19
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK723
Sample ID: GS21-20
Matrix: Soil

Collected: 2021/04/15
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/29	Dennis Ngondu
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7326292	2021/04/29	2021/04/30	Mitesh Raj

BV Labs ID: PKK724
Sample ID: GS21-21
Matrix: Soil

Collected: 2021/04/15
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/29	Dennis Ngondu
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7326292	2021/04/29	2021/04/30	Mitesh Raj

BV Labs ID: PKK725
Sample ID: GS21-22
Matrix: Soil

Collected: 2021/04/15
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/05/01	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/29	(Kent) Maolin Li
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7325693	2021/04/29	2021/04/29	Mitesh Raj

BV Labs ID: PKK726
Sample ID: GS21-23
Matrix: Soil

Collected: 2021/04/15
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/29	(Kent) Maolin Li
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

TEST SUMMARY

BV Labs ID: PKK726 **Collected:** 2021/04/15
Sample ID: GS21-23 **Shipped:**
Matrix: Soil **Received:** 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7325571	2021/04/29	2021/04/30	Mitesh Raj

BV Labs ID: PKK727 **Collected:** 2021/04/15
Sample ID: GS21-24 **Shipped:**
Matrix: Soil **Received:** 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/29	(Kent) Maolin Li
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7325571	2021/04/29	2021/04/30	Mitesh Raj

BV Labs ID: PKK728 **Collected:** 2021/04/15
Sample ID: GS21-25 **Shipped:**
Matrix: Soil **Received:** 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/05/01	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/29	(Kent) Maolin Li
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7325693	2021/04/29	2021/04/29	Mitesh Raj

BV Labs ID: PKK729 **Collected:** 2021/04/15
Sample ID: GS21-26 **Shipped:**
Matrix: Soil **Received:** 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/29	(Kent) Maolin Li
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur

BV Labs ID: PKK730 **Collected:** 2021/04/19
Sample ID: GS21-27 **Shipped:**
Matrix: Soil **Received:** 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/05/01	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/29	(Kent) Maolin Li

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TEST SUMMARY

BV Labs ID: PKK730
Sample ID: GS21-27
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323419	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7325693	2021/04/29	2021/04/29	Mitesh Raj
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK731
Sample ID: GS21-28
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7325571	2021/04/29	2021/04/30	Mitesh Raj
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK732
Sample ID: GS21-29
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7325571	2021/04/29	2021/04/30	Mitesh Raj
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

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TEST SUMMARY

BV Labs ID: PKK733
Sample ID: GS21-30
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7325571	2021/04/29	2021/04/30	Mitesh Raj
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK734
Sample ID: GS21-31
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/29	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7326292	2021/04/29	2021/04/30	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/30	Sarah Huang
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK735
Sample ID: GS21-32
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/30	Dennis Ngondu

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TEST SUMMARY

BV Labs ID: PKK735
Sample ID: GS21-32
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7326292	2021/04/29	2021/04/30	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/29	Sarah Huang
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7323294	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK735 Dup
Sample ID: GS21-32
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/29	Sarah Huang

BV Labs ID: PKK736
Sample ID: GS21-33
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7326440	2021/04/29	2021/04/29	Daniel Teclu
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7325571	2021/04/29	2021/04/30	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/30	Sarah Huang
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7323294	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK737
Sample ID: GS21-34
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7324931	N/A	2021/04/29	Lincoln Ramdahin

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TEST SUMMARY

BV Labs ID: PKK737
Sample ID: GS21-34
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7323294	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK737 Dup
Sample ID: GS21-34
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur

BV Labs ID: PKK738
Sample ID: GS21-35
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325840	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327180	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/30	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7323294	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK739
Sample ID: GS21-36
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

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TEST SUMMARY

BV Labs ID: PKK739 Dup
Sample ID: GS21-36
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur

BV Labs ID: PKK740
Sample ID: GS21-37
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK741
Sample ID: GS21-38
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/30	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK741 Dup
Sample ID: GS21-38
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali

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TEST SUMMARY

BV Labs ID: PKK742
Sample ID: GS21-39
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/30	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK743
Sample ID: GS21-40
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326807	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK744
Sample ID: GS21-41
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/29	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

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TEST SUMMARY

BV Labs ID: PKK744 Dup
Sample ID: GS21-41
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu

BV Labs ID: PKK745
Sample ID: GS21-42
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/30	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK746
Sample ID: GS21-43
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/30	(Kent) Maolin Li
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/30	Sarah Huang

BV Labs ID: PKK746 Dup
Sample ID: GS21-43
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/30	(Kent) Maolin Li

BV Labs ID: PKK747
Sample ID: GS21-44
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/30	Dennis Ngondu
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

TEST SUMMARY

BV Labs ID: PKK748
Sample ID: GS21-45
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/30	Dennis Ngondu
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur

BV Labs ID: PKK749
Sample ID: GS21-46
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/30	Dennis Ngondu
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/30	Sarah Huang

BV Labs ID: PKK749 Dup
Sample ID: GS21-46
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/30	Dennis Ngondu

BV Labs ID: PKK750
Sample ID: GS21-47
Matrix: Soil

Collected: 2021/04/15
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/29	(Kent) Maolin Li
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur

BV Labs ID: PKK751
Sample ID: GS21-48
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/30	(Kent) Maolin Li
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur

BV Labs ID: PKK752
Sample ID: GS21-49
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali

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TEST SUMMARY

BV Labs ID: PKK752
Sample ID: GS21-49
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/30	(Kent) Maolin Li
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/30	Sarah Huang

BV Labs ID: PKK752 Dup
Sample ID: GS21-49
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/30	(Kent) Maolin Li

BV Labs ID: PKK753
Sample ID: GS21-50
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/30	(Kent) Maolin Li
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur

BV Labs ID: PKK754
Sample ID: GS21-51
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/30	(Kent) Maolin Li
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur

BV Labs ID: PKK755
Sample ID: GS21-52
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7325215	2021/04/29	2021/04/30	(Kent) Maolin Li
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/30	Sarah Huang

BV Labs ID: PKK756
Sample ID: GS21-53
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7325182	N/A	2021/04/29	Abdikarim Ali

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

TEST SUMMARY

BV Labs ID: PKK756
Sample ID: GS21-53
Matrix: Soil

Collected: 2021/04/16
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/30	Dennis Ngondu
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur

BV Labs ID: PKK757
Sample ID: DUP 1
Matrix: Soil

Collected: 2021/04/15
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7319911	N/A	2021/04/30	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7326487	N/A	2021/04/29	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/30	Dennis Ngondu
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7326292	2021/04/29	2021/04/30	Mitesh Raj

BV Labs ID: PKK757 Dup
Sample ID: DUP 1
Matrix: Soil

Collected: 2021/04/15
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7326487	N/A	2021/04/29	Domnica Andronescu

BV Labs ID: PKK758
Sample ID: DUP 2
Matrix: Soil

Collected: 2021/04/15
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7326487	N/A	2021/04/29	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/30	Dennis Ngondu
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur

BV Labs ID: PKK758 Dup
Sample ID: DUP 2
Matrix: Soil

Collected: 2021/04/15
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7323523	N/A	2021/04/28	Manpreet Kaur

BV Labs ID: PKK759
Sample ID: DUP 3
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7326487	N/A	2021/04/29	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7326398	2021/04/29	2021/04/30	Dennis Ngondu
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur

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BV Labs Job #: C1B0746
Report Date: 2021/05/03

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

TEST SUMMARY

BV Labs ID: PKK759
Sample ID: DUP 3
Matrix: Soil

Collected: 2021/04/19
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Polychlorinated Biphenyl in Soil	GC/ECD	7326018	2021/04/29	2021/04/30	Sarah Huang

BV Labs ID: PKK760
Sample ID: DUP 4
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7325628	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7326487	N/A	2021/04/29	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/30	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur
OC Pesticides (Selected) & PCB	GC/ECD	7326258	2021/04/29	2021/04/30	Li Peng
OC Pesticides Summed Parameters	CALC	7323290	N/A	2021/04/29	Automated Statchk
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

BV Labs ID: PKK760 Dup
Sample ID: DUP 4
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	7327355	2021/04/30	2021/04/30	Neil Dassanayake

BV Labs ID: PKK761
Sample ID: DUP 5
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7326790	2021/04/29	2021/04/30	Jolly John
Free (WAD) Cyanide	TECH	7325697	2021/04/29	2021/05/01	Aditiben Patel
Conductivity	AT	7327310	2021/04/30	2021/04/30	Tarunpreet Kaur
Hexavalent Chromium in Soil by IC	IC/SPEC	7326052	2021/04/29	2021/04/30	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7326487	N/A	2021/04/29	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7324794	2021/04/29	2021/04/30	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7327262	2021/04/30	2021/04/30	Daniel Teclu
Moisture	BAL	7323625	N/A	2021/04/28	Manpreet Kaur
pH CaCl2 EXTRACT	AT	7327339	2021/04/30	2021/04/30	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7322772	N/A	2021/04/30	Automated Statchk

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BV Labs Job #: C1B0746
Report Date: 2021/05/03

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

TEST SUMMARY

BV Labs ID: PKK762
Sample ID: Trip Blank
Matrix: Soil

Collected: 2021/04/20
Shipped:
Received: 2021/04/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7322771	N/A	2021/04/30	Automated Statchk
Volatile Organic Compounds in Soil	GC/MS	7325873	N/A	2021/04/30	Ancheol Jeong

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.3°C
Package 2	0.0°C
Package 3	1.3°C
Package 4	-0.7°C
Package 5	0.7°C

F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PKK715 [GS21-12] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PKK718 [GS21-15] : OC Pesticide Analysis: Detection limits were raised due to matrix interferences.

Sample PKK721 [GS21-18] : OC Pesticide Analysis: Detection limits were raised due to matrix interferences.

Sample PKK738 [GS21-35] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PKK739 [GS21-36] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PKK740 [GS21-37] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PKK741 [GS21-38] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PKK742 [GS21-39] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PKK743 [GS21-40] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PKK745 [GS21-42] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PKK751 [GS21-48] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PKK752 [GS21-49] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PKK753 [GS21-50] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PKK755 [GS21-52] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PKK759 [DUP 3] : PCB Analysis: Detection limits were adjusted for high moisture content.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Sample PKK760 [DUP 4] : OC Pesticide Analysis: Detection limits were raised due to matrix interferences.

Sample PKK761 [DUP 5] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Results relate only to the items tested.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7323419	KJP	RPD [PKK705-02]	Moisture	2021/04/28	2.9		%	20
7323523	KJP	RPD [PKK758-01]	Moisture	2021/04/28	3.4		%	20
7323625	KJP	RPD [PKK739-02]	Moisture	2021/04/28	6.5		%	20
7324794	KLI	Matrix Spike [PKK752-01]	o-Terphenyl	2021/04/29		91	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/04/29		95	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/04/29		99	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/04/29		104	%	50 - 130
7324794	KLI	Spiked Blank	o-Terphenyl	2021/04/29		92	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/04/29		96	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/04/29		97	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/04/29		102	%	80 - 120
7324794	KLI	Method Blank	o-Terphenyl	2021/04/29		97	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/04/29	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/04/29	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/04/29	<50		ug/g	
7324794	KLI	RPD [PKK752-01]	F2 (C10-C16 Hydrocarbons)	2021/04/30	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/04/30	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/04/30	NC		%	30
7324919	H_W	Matrix Spike	1,4-Difluorobenzene	2021/04/29		94	%	60 - 140
			4-Bromofluorobenzene	2021/04/29		106	%	60 - 140
			D10-o-Xylene	2021/04/29		92	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/29		93	%	60 - 140
			Benzene	2021/04/29		83	%	50 - 140
			Toluene	2021/04/29		85	%	50 - 140
			Ethylbenzene	2021/04/29		97	%	50 - 140
			o-Xylene	2021/04/29		97	%	50 - 140
			p+m-Xylene	2021/04/29		97	%	50 - 140
			F1 (C6-C10)	2021/04/29		NC	%	60 - 140
7324919	H_W	Spiked Blank	1,4-Difluorobenzene	2021/04/29		96	%	60 - 140
			4-Bromofluorobenzene	2021/04/29		106	%	60 - 140
			D10-o-Xylene	2021/04/29		88	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/29		94	%	60 - 140
			Benzene	2021/04/29		78	%	50 - 140
			Toluene	2021/04/29		82	%	50 - 140
			Ethylbenzene	2021/04/29		93	%	50 - 140
			o-Xylene	2021/04/29		93	%	50 - 140
			p+m-Xylene	2021/04/29		92	%	50 - 140
			F1 (C6-C10)	2021/04/29		84	%	80 - 120
7324919	H_W	Method Blank	1,4-Difluorobenzene	2021/04/29		99	%	60 - 140
			4-Bromofluorobenzene	2021/04/29		87	%	60 - 140
			D10-o-Xylene	2021/04/29		88	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/29		98	%	60 - 140
			Benzene	2021/04/29	<0.020		ug/g	
			Toluene	2021/04/29	<0.020		ug/g	
			Ethylbenzene	2021/04/29	<0.020		ug/g	
			o-Xylene	2021/04/29	<0.020		ug/g	
			p+m-Xylene	2021/04/29	<0.040		ug/g	
			Total Xylenes	2021/04/29	<0.040		ug/g	
			F1 (C6-C10)	2021/04/29	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/04/29	<10		ug/g	
7324919	H_W	RPD	Benzene	2021/04/29	NC		%	50

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Toluene	2021/04/29	NC		%	50
			Ethylbenzene	2021/04/29	2.6		%	50
			o-Xylene	2021/04/29	4.3		%	50
			p+m-Xylene	2021/04/29	1.3		%	50
			Total Xylenes	2021/04/29	2.5		%	50
			F1 (C6-C10)	2021/04/29	7.2		%	30
			F1 (C6-C10) - BTEX	2021/04/29	7.2		%	30
7324931	LRA	Matrix Spike [PKK720-03]	1,4-Difluorobenzene	2021/04/29		94	%	60 - 140
			4-Bromofluorobenzene	2021/04/29		98	%	60 - 140
			D10-o-Xylene	2021/04/29		102	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/29		90	%	60 - 140
			Benzene	2021/04/29		112	%	50 - 140
			Toluene	2021/04/29		113	%	50 - 140
			Ethylbenzene	2021/04/29		126	%	50 - 140
			o-Xylene	2021/04/29		124	%	50 - 140
			p+m-Xylene	2021/04/29		120	%	50 - 140
			F1 (C6-C10)	2021/04/29		100	%	60 - 140
7324931	LRA	Spiked Blank	1,4-Difluorobenzene	2021/04/29		99	%	60 - 140
			4-Bromofluorobenzene	2021/04/29		99	%	60 - 140
			D10-o-Xylene	2021/04/29		96	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/29		90	%	60 - 140
			Benzene	2021/04/29		93	%	50 - 140
			Toluene	2021/04/29		92	%	50 - 140
			Ethylbenzene	2021/04/29		102	%	50 - 140
			o-Xylene	2021/04/29		100	%	50 - 140
			p+m-Xylene	2021/04/29		97	%	50 - 140
			F1 (C6-C10)	2021/04/29		88	%	80 - 120
7324931	LRA	Method Blank	1,4-Difluorobenzene	2021/04/29		98	%	60 - 140
			4-Bromofluorobenzene	2021/04/29		96	%	60 - 140
			D10-o-Xylene	2021/04/29		80	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/29		97	%	60 - 140
			Benzene	2021/04/29	<0.020		ug/g	
			Toluene	2021/04/29	<0.020		ug/g	
			Ethylbenzene	2021/04/29	<0.020		ug/g	
			o-Xylene	2021/04/29	<0.020		ug/g	
			p+m-Xylene	2021/04/29	<0.040		ug/g	
			Total Xylenes	2021/04/29	<0.040		ug/g	
			F1 (C6-C10)	2021/04/29	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/04/29	<10		ug/g	
7324931	LRA	RPD [PKK720-03]	Benzene	2021/04/29	NC		%	50
			Toluene	2021/04/29	NC		%	50
			Ethylbenzene	2021/04/29	NC		%	50
			o-Xylene	2021/04/29	NC		%	50
			p+m-Xylene	2021/04/29	NC		%	50
			Total Xylenes	2021/04/29	NC		%	50
			F1 (C6-C10)	2021/04/29	NC		%	30
			F1 (C6-C10) - BTEX	2021/04/29	NC		%	30
7324982	RAJ	Matrix Spike	D10-Anthracene	2021/04/30		92	%	50 - 130
			D14-Terphenyl (FS)	2021/04/30		96	%	50 - 130
			D8-Acenaphthylene	2021/04/30		88	%	50 - 130
			Acenaphthene	2021/04/30		90	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acenaphthylene	2021/04/30		88	%	50 - 130
			Anthracene	2021/04/30		95	%	50 - 130
			Benzo(a)anthracene	2021/04/30		102	%	50 - 130
			Benzo(a)pyrene	2021/04/30		93	%	50 - 130
			Benzo(b/j)fluoranthene	2021/04/30		106	%	50 - 130
			Benzo(g,h,i)perylene	2021/04/30		102	%	50 - 130
			Benzo(k)fluoranthene	2021/04/30		97	%	50 - 130
			Chrysene	2021/04/30		106	%	50 - 130
			Dibenzo(a,h)anthracene	2021/04/30		101	%	50 - 130
			Fluoranthene	2021/04/30		104	%	50 - 130
			Fluorene	2021/04/30		97	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/04/30		104	%	50 - 130
			1-Methylnaphthalene	2021/04/30		86	%	50 - 130
			2-Methylnaphthalene	2021/04/30		82	%	50 - 130
			Naphthalene	2021/04/30		72	%	50 - 130
			Phenanthrene	2021/04/30		97	%	50 - 130
			Pyrene	2021/04/30		103	%	50 - 130
7324982	RAJ	Spiked Blank	D10-Anthracene	2021/04/30		98	%	50 - 130
			D14-Terphenyl (FS)	2021/04/30		100	%	50 - 130
			D8-Acenaphthylene	2021/04/30		100	%	50 - 130
			Acenaphthene	2021/04/30		96	%	50 - 130
			Acenaphthylene	2021/04/30		96	%	50 - 130
			Anthracene	2021/04/30		97	%	50 - 130
			Benzo(a)anthracene	2021/04/30		103	%	50 - 130
			Benzo(a)pyrene	2021/04/30		94	%	50 - 130
			Benzo(b/j)fluoranthene	2021/04/30		109	%	50 - 130
			Benzo(g,h,i)perylene	2021/04/30		105	%	50 - 130
			Benzo(k)fluoranthene	2021/04/30		100	%	50 - 130
			Chrysene	2021/04/30		110	%	50 - 130
			Dibenzo(a,h)anthracene	2021/04/30		106	%	50 - 130
			Fluoranthene	2021/04/30		108	%	50 - 130
			Fluorene	2021/04/30		104	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/04/30		106	%	50 - 130
			1-Methylnaphthalene	2021/04/30		101	%	50 - 130
			2-Methylnaphthalene	2021/04/30		98	%	50 - 130
			Naphthalene	2021/04/30		90	%	50 - 130
			Phenanthrene	2021/04/30		101	%	50 - 130
			Pyrene	2021/04/30		108	%	50 - 130
7324982	RAJ	Method Blank	D10-Anthracene	2021/04/30		95	%	50 - 130
			D14-Terphenyl (FS)	2021/04/30		95	%	50 - 130
			D8-Acenaphthylene	2021/04/30		90	%	50 - 130
			Acenaphthene	2021/04/30	<0.0050		ug/g	
			Acenaphthylene	2021/04/30	<0.0050		ug/g	
			Anthracene	2021/04/30	<0.0050		ug/g	
			Benzo(a)anthracene	2021/04/30	<0.0050		ug/g	
			Benzo(a)pyrene	2021/04/30	<0.0050		ug/g	
			Benzo(b/j)fluoranthene	2021/04/30	<0.0050		ug/g	
			Benzo(g,h,i)perylene	2021/04/30	<0.0050		ug/g	
			Benzo(k)fluoranthene	2021/04/30	<0.0050		ug/g	
			Chrysene	2021/04/30	<0.0050		ug/g	
			Dibenzo(a,h)anthracene	2021/04/30	<0.0050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Fluoranthene	2021/04/30	<0.0050		ug/g	
			Fluorene	2021/04/30	<0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/04/30	<0.0050		ug/g	
			1-Methylnaphthalene	2021/04/30	<0.0050		ug/g	
			2-Methylnaphthalene	2021/04/30	<0.0050		ug/g	
			Naphthalene	2021/04/30	<0.0050		ug/g	
			Phenanthrene	2021/04/30	<0.0050		ug/g	
			Pyrene	2021/04/30	<0.0050		ug/g	
7324982	RAJ	RPD	Acenaphthene	2021/04/30	NC		%	40
			Acenaphthylene	2021/04/30	NC		%	40
			Anthracene	2021/04/30	NC		%	40
			Benzo(a)anthracene	2021/04/30	NC		%	40
			Benzo(a)pyrene	2021/04/30	NC		%	40
			Benzo(b/j)fluoranthene	2021/04/30	NC		%	40
			Benzo(g,h,i)perylene	2021/04/30	NC		%	40
			Benzo(k)fluoranthene	2021/04/30	NC		%	40
			Chrysene	2021/04/30	NC		%	40
			Dibenzo(a,h)anthracene	2021/04/30	NC		%	40
			Fluoranthene	2021/04/30	NC		%	40
			Fluorene	2021/04/30	NC		%	40
			Indeno(1,2,3-cd)pyrene	2021/04/30	NC		%	40
			1-Methylnaphthalene	2021/04/30	NC		%	40
			2-Methylnaphthalene	2021/04/30	NC		%	40
			Naphthalene	2021/04/30	NC		%	40
			Phenanthrene	2021/04/30	NC		%	40
			Pyrene	2021/04/30	NC		%	40
7325182	AAI	Matrix Spike [PKK741-03]	1,4-Difluorobenzene	2021/04/29		93	%	60 - 140
			4-Bromofluorobenzene	2021/04/29		113	%	60 - 140
			D10-o-Xylene	2021/04/29		86	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/29		100	%	60 - 140
			Benzene	2021/04/29		102	%	50 - 140
			Toluene	2021/04/29		100	%	50 - 140
			Ethylbenzene	2021/04/29		114	%	50 - 140
			o-Xylene	2021/04/29		110	%	50 - 140
			p+m-Xylene	2021/04/29		110	%	50 - 140
			F1 (C6-C10)	2021/04/29		84	%	60 - 140
7325182	AAI	Spiked Blank	1,4-Difluorobenzene	2021/04/29		94	%	60 - 140
			4-Bromofluorobenzene	2021/04/29		110	%	60 - 140
			D10-o-Xylene	2021/04/29		85	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/29		104	%	60 - 140
			Benzene	2021/04/29		98	%	50 - 140
			Toluene	2021/04/29		96	%	50 - 140
			Ethylbenzene	2021/04/29		108	%	50 - 140
			o-Xylene	2021/04/29		105	%	50 - 140
			p+m-Xylene	2021/04/29		104	%	50 - 140
			F1 (C6-C10)	2021/04/29		85	%	80 - 120
7325182	AAI	Method Blank	1,4-Difluorobenzene	2021/04/29		97	%	60 - 140
			4-Bromofluorobenzene	2021/04/29		102	%	60 - 140
			D10-o-Xylene	2021/04/29		83	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/29		108	%	60 - 140
			Benzene	2021/04/29	<0.020		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Toluene	2021/04/29	<0.020		ug/g	
			Ethylbenzene	2021/04/29	<0.020		ug/g	
			o-Xylene	2021/04/29	<0.020		ug/g	
			p+m-Xylene	2021/04/29	<0.040		ug/g	
			Total Xylenes	2021/04/29	<0.040		ug/g	
			F1 (C6-C10)	2021/04/29	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/04/29	<10		ug/g	
7325182	AAI	RPD [PKK741-03]	Benzene	2021/04/29	NC		%	50
			Toluene	2021/04/29	NC		%	50
			Ethylbenzene	2021/04/29	NC		%	50
			o-Xylene	2021/04/29	NC		%	50
			p+m-Xylene	2021/04/29	NC		%	50
			Total Xylenes	2021/04/29	NC		%	50
			F1 (C6-C10)	2021/04/29	NC		%	30
			F1 (C6-C10) - BTEX	2021/04/29	NC		%	30
7325215	KLI	Matrix Spike [PKK746-01]	o-Terphenyl	2021/04/29		86	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/04/29		94	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/04/29		94	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/04/29		95	%	50 - 130
7325215	KLI	Spiked Blank	o-Terphenyl	2021/04/29		84	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/04/29		93	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/04/29		93	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/04/29		94	%	80 - 120
7325215	KLI	Method Blank	o-Terphenyl	2021/04/29		88	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/04/29	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/04/29	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/04/29	<50		ug/g	
7325215	KLI	RPD [PKK746-01]	F2 (C10-C16 Hydrocarbons)	2021/04/30	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/04/30	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/04/30	NC		%	30
7325571	RAJ	Matrix Spike	D10-Anthracene	2021/04/29		98	%	50 - 130
			D14-Terphenyl (FS)	2021/04/29		99	%	50 - 130
			D8-Acenaphthylene	2021/04/29		94	%	50 - 130
			Acenaphthene	2021/04/29		93	%	50 - 130
			Acenaphthylene	2021/04/29		92	%	50 - 130
			Anthracene	2021/04/29		90	%	50 - 130
			Benzo(a)anthracene	2021/04/29		92	%	50 - 130
			Benzo(a)pyrene	2021/04/29		87	%	50 - 130
			Benzo(b/j)fluoranthene	2021/04/29		100	%	50 - 130
			Benzo(g,h,i)perylene	2021/04/29		105	%	50 - 130
			Benzo(k)fluoranthene	2021/04/29		108	%	50 - 130
			Chrysene	2021/04/29		100	%	50 - 130
			Dibenzo(a,h)anthracene	2021/04/29		105	%	50 - 130
			Fluoranthene	2021/04/29		72	%	50 - 130
			Fluorene	2021/04/29		98	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/04/29		106	%	50 - 130
			1-Methylnaphthalene	2021/04/29		97	%	50 - 130
			2-Methylnaphthalene	2021/04/29		92	%	50 - 130
			Naphthalene	2021/04/29		82	%	50 - 130
			Phenanthrene	2021/04/29		70	%	50 - 130
			Pyrene	2021/04/29		81	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7325571	RAJ	Spiked Blank	D10-Anthracene	2021/04/29		96	%	50 - 130
			D14-Terphenyl (FS)	2021/04/29		99	%	50 - 130
			D8-Acenaphthylene	2021/04/29		96	%	50 - 130
			Acenaphthene	2021/04/29		97	%	50 - 130
			Acenaphthylene	2021/04/29		94	%	50 - 130
			Anthracene	2021/04/29		95	%	50 - 130
			Benzo(a)anthracene	2021/04/29		104	%	50 - 130
			Benzo(a)pyrene	2021/04/29		91	%	50 - 130
			Benzo(b/j)fluoranthene	2021/04/29		109	%	50 - 130
			Benzo(g,h,i)perylene	2021/04/29		109	%	50 - 130
			Benzo(k)fluoranthene	2021/04/29		107	%	50 - 130
			Chrysene	2021/04/29		113	%	50 - 130
			Dibenzo(a,h)anthracene	2021/04/29		105	%	50 - 130
			Fluoranthene	2021/04/29		108	%	50 - 130
			Fluorene	2021/04/29		102	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/04/29		110	%	50 - 130
			1-Methylnaphthalene	2021/04/29		101	%	50 - 130
			2-Methylnaphthalene	2021/04/29		98	%	50 - 130
			Naphthalene	2021/04/29		92	%	50 - 130
			Phenanthrene	2021/04/29		104	%	50 - 130
			Pyrene	2021/04/29		105	%	50 - 130
7325571	RAJ	Method Blank	D10-Anthracene	2021/04/29		96	%	50 - 130
			D14-Terphenyl (FS)	2021/04/29		93	%	50 - 130
			D8-Acenaphthylene	2021/04/29		93	%	50 - 130
			Acenaphthene	2021/04/29	<0.0050		ug/g	
			Acenaphthylene	2021/04/29	<0.0050		ug/g	
			Anthracene	2021/04/29	<0.0050		ug/g	
			Benzo(a)anthracene	2021/04/29	<0.0050		ug/g	
			Benzo(a)pyrene	2021/04/29	<0.0050		ug/g	
			Benzo(b/j)fluoranthene	2021/04/29	<0.0050		ug/g	
			Benzo(g,h,i)perylene	2021/04/29	<0.0050		ug/g	
			Benzo(k)fluoranthene	2021/04/29	<0.0050		ug/g	
			Chrysene	2021/04/29	<0.0050		ug/g	
			Dibenzo(a,h)anthracene	2021/04/29	<0.0050		ug/g	
			Fluoranthene	2021/04/29	<0.0050		ug/g	
			Fluorene	2021/04/29	<0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/04/29	<0.0050		ug/g	
			1-Methylnaphthalene	2021/04/29	<0.0050		ug/g	
			2-Methylnaphthalene	2021/04/29	<0.0050		ug/g	
			Naphthalene	2021/04/29	<0.0050		ug/g	
			Phenanthrene	2021/04/29	<0.0050		ug/g	
			Pyrene	2021/04/29	<0.0050		ug/g	
7325571	RAJ	RPD	Acenaphthene	2021/04/29	11		%	40
			Acenaphthylene	2021/04/29	NC		%	40
			Anthracene	2021/04/29	111 (1)		%	40
			Benzo(a)anthracene	2021/04/29	145 (1)		%	40
			Benzo(a)pyrene	2021/04/29	128 (1)		%	40
			Benzo(b/j)fluoranthene	2021/04/29	150 (1)		%	40
			Benzo(g,h,i)perylene	2021/04/29	NC		%	40
			Benzo(k)fluoranthene	2021/04/29	NC		%	40
			Chrysene	2021/04/29	140 (1)		%	40

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dibenzo(a,h)anthracene	2021/04/29	NC		%	40
			Fluoranthene	2021/04/29	178 (1)		%	40
			Fluorene	2021/04/29	NC		%	40
			Indeno(1,2,3-cd)pyrene	2021/04/29	NC		%	40
			1-Methylnaphthalene	2021/04/29	NC		%	40
			2-Methylnaphthalene	2021/04/29	NC		%	40
			Naphthalene	2021/04/29	NC		%	40
			Phenanthrene	2021/04/29	176 (1)		%	40
			Pyrene	2021/04/29	172 (1)		%	40
7325628	VP2	Matrix Spike [PKK721-04]	Chromium (VI)	2021/04/30		0 (2)	%	70 - 130
7325628	VP2	Spiked Blank	Chromium (VI)	2021/04/30		94	%	80 - 120
7325628	VP2	Method Blank	Chromium (VI)	2021/04/30	<0.18		ug/g	
7325628	VP2	RPD [PKK721-04]	Chromium (VI)	2021/04/30	NC		%	35
7325693	RAJ	Matrix Spike	D10-Anthracene	2021/04/29		106	%	50 - 130
			D14-Terphenyl (FS)	2021/04/29		100	%	50 - 130
			D8-Acenaphthylene	2021/04/29		97	%	50 - 130
			Acenaphthene	2021/04/29		99	%	50 - 130
			Acenaphthylene	2021/04/29		94	%	50 - 130
			Anthracene	2021/04/29		100	%	50 - 130
			Benzo(a)anthracene	2021/04/29		106	%	50 - 130
			Benzo(a)pyrene	2021/04/29		86	%	50 - 130
			Benzo(b/j)fluoranthene	2021/04/29		91	%	50 - 130
			Benzo(g,h,i)perylene	2021/04/29		100	%	50 - 130
			Benzo(k)fluoranthene	2021/04/29		88	%	50 - 130
			Chrysene	2021/04/29		105	%	50 - 130
			Dibenzo(a,h)anthracene	2021/04/29		101	%	50 - 130
			Fluoranthene	2021/04/29		108	%	50 - 130
			Fluorene	2021/04/29		100	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/04/29		107	%	50 - 130
			1-Methylnaphthalene	2021/04/29		86	%	50 - 130
			2-Methylnaphthalene	2021/04/29		84	%	50 - 130
			Naphthalene	2021/04/29		89	%	50 - 130
			Phenanthrene	2021/04/29		102	%	50 - 130
			Pyrene	2021/04/29		107	%	50 - 130
7325693	RAJ	Spiked Blank	D10-Anthracene	2021/04/29		109	%	50 - 130
			D14-Terphenyl (FS)	2021/04/29		104	%	50 - 130
			D8-Acenaphthylene	2021/04/29		96	%	50 - 130
			Acenaphthene	2021/04/29		98	%	50 - 130
			Acenaphthylene	2021/04/29		92	%	50 - 130
			Anthracene	2021/04/29		101	%	50 - 130
			Benzo(a)anthracene	2021/04/29		104	%	50 - 130
			Benzo(a)pyrene	2021/04/29		88	%	50 - 130
			Benzo(b/j)fluoranthene	2021/04/29		98	%	50 - 130
			Benzo(g,h,i)perylene	2021/04/29		104	%	50 - 130
			Benzo(k)fluoranthene	2021/04/29		89	%	50 - 130
			Chrysene	2021/04/29		107	%	50 - 130
			Dibenzo(a,h)anthracene	2021/04/29		95	%	50 - 130
			Fluoranthene	2021/04/29		113	%	50 - 130
			Fluorene	2021/04/29		99	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/04/29		118	%	50 - 130
			1-Methylnaphthalene	2021/04/29		86	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			2-Methylnaphthalene	2021/04/29		83	%	50 - 130
			Naphthalene	2021/04/29		87	%	50 - 130
			Phenanthrene	2021/04/29		104	%	50 - 130
			Pyrene	2021/04/29		113	%	50 - 130
7325693	RAJ	Method Blank	D10-Anthracene	2021/04/29		108	%	50 - 130
			D14-Terphenyl (FS)	2021/04/29		107	%	50 - 130
			D8-Acenaphthylene	2021/04/29		92	%	50 - 130
			Acenaphthene	2021/04/29	<0.0050		ug/g	
			Acenaphthylene	2021/04/29	<0.0050		ug/g	
			Anthracene	2021/04/29	<0.0050		ug/g	
			Benzo(a)anthracene	2021/04/29	<0.0050		ug/g	
			Benzo(a)pyrene	2021/04/29	<0.0050		ug/g	
			Benzo(b/j)fluoranthene	2021/04/29	<0.0050		ug/g	
			Benzo(g,h,i)perylene	2021/04/29	<0.0050		ug/g	
			Benzo(k)fluoranthene	2021/04/29	<0.0050		ug/g	
			Chrysene	2021/04/29	<0.0050		ug/g	
			Dibenzo(a,h)anthracene	2021/04/29	<0.0050		ug/g	
			Fluoranthene	2021/04/29	<0.0050		ug/g	
			Fluorene	2021/04/29	<0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/04/29	<0.0050		ug/g	
			1-Methylnaphthalene	2021/04/29	<0.0050		ug/g	
			2-Methylnaphthalene	2021/04/29	<0.0050		ug/g	
			Naphthalene	2021/04/29	<0.0050		ug/g	
			Phenanthrene	2021/04/29	<0.0050		ug/g	
			Pyrene	2021/04/29	<0.0050		ug/g	
7325693	RAJ	RPD	Acenaphthene	2021/04/29	NC		%	40
			Acenaphthylene	2021/04/29	NC		%	40
			Anthracene	2021/04/29	NC		%	40
			Benzo(a)anthracene	2021/04/29	NC		%	40
			Benzo(a)pyrene	2021/04/29	NC		%	40
			Benzo(b/j)fluoranthene	2021/04/29	1.7		%	40
			Benzo(g,h,i)perylene	2021/04/29	NC		%	40
			Benzo(k)fluoranthene	2021/04/29	NC		%	40
			Chrysene	2021/04/29	NC		%	40
			Dibenzo(a,h)anthracene	2021/04/29	NC		%	40
			Fluoranthene	2021/04/29	0.067		%	40
			Fluorene	2021/04/29	NC		%	40
			Indeno(1,2,3-cd)pyrene	2021/04/29	NC		%	40
			1-Methylnaphthalene	2021/04/29	NC		%	40
			2-Methylnaphthalene	2021/04/29	NC		%	40
			Naphthalene	2021/04/29	NC		%	40
			Phenanthrene	2021/04/29	NC		%	40
			Pyrene	2021/04/29	3.0		%	40
7325697	ABP	Matrix Spike [PKK721-04]	WAD Cyanide (Free)	2021/05/01		65 (1)	%	75 - 125
7325697	ABP	Spiked Blank	WAD Cyanide (Free)	2021/05/01		95	%	80 - 120
7325697	ABP	Method Blank	WAD Cyanide (Free)	2021/05/01	<0.01		ug/g	
7325697	ABP	RPD [PKK721-04]	WAD Cyanide (Free)	2021/05/01	14		%	35
7325840	ABP	Matrix Spike [PKK705-01]	WAD Cyanide (Free)	2021/05/01		74 (1)	%	75 - 125
7325840	ABP	Spiked Blank	WAD Cyanide (Free)	2021/05/01		97	%	80 - 120
7325840	ABP	Method Blank	WAD Cyanide (Free)	2021/05/01	<0.01		ug/g	
7325840	ABP	RPD [PKK705-01]	WAD Cyanide (Free)	2021/05/01	11		%	35

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7325873	AJG	Matrix Spike	4-Bromofluorobenzene	2021/04/30		100	%	60 - 140
			D10-o-Xylene	2021/04/30		93	%	60 - 130
			D4-1,2-Dichloroethane	2021/04/30		96	%	60 - 140
			D8-Toluene	2021/04/30		103	%	60 - 140
			Acetone (2-Propanone)	2021/04/30		87	%	60 - 140
			Benzene	2021/04/30		87	%	60 - 140
			Bromodichloromethane	2021/04/30		89	%	60 - 140
			Bromoform	2021/04/30		86	%	60 - 140
			Bromomethane	2021/04/30		92	%	60 - 140
			Carbon Tetrachloride	2021/04/30		97	%	60 - 140
			Chlorobenzene	2021/04/30		93	%	60 - 140
			Chloroform	2021/04/30		91	%	60 - 140
			Dibromochloromethane	2021/04/30		86	%	60 - 140
			1,2-Dichlorobenzene	2021/04/30		91	%	60 - 140
			1,3-Dichlorobenzene	2021/04/30		92	%	60 - 140
			1,4-Dichlorobenzene	2021/04/30		106	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2021/04/30		87	%	60 - 140
			1,1-Dichloroethane	2021/04/30		89	%	60 - 140
			1,2-Dichloroethane	2021/04/30		85	%	60 - 140
			1,1-Dichloroethylene	2021/04/30		97	%	60 - 140
			cis-1,2-Dichloroethylene	2021/04/30		91	%	60 - 140
			trans-1,2-Dichloroethylene	2021/04/30		95	%	60 - 140
			1,2-Dichloropropane	2021/04/30		86	%	60 - 140
			cis-1,3-Dichloropropene	2021/04/30		90	%	60 - 140
			trans-1,3-Dichloropropene	2021/04/30		98	%	60 - 140
			Ethylbenzene	2021/04/30		88	%	60 - 140
			Ethylene Dibromide	2021/04/30		82	%	60 - 140
			Hexane	2021/04/30		99	%	60 - 140
			Methylene Chloride(Dichloromethane)	2021/04/30		93	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2021/04/30		85	%	60 - 140
			Methyl Isobutyl Ketone	2021/04/30		83	%	60 - 140
			Methyl t-butyl ether (MTBE)	2021/04/30		87	%	60 - 140
			Styrene	2021/04/30		98	%	60 - 140
			1,1,1,2-Tetrachloroethane	2021/04/30		92	%	60 - 140
			1,1,2,2-Tetrachloroethane	2021/04/30		80	%	60 - 140
			Tetrachloroethylene	2021/04/30		91	%	60 - 140
			Toluene	2021/04/30		90	%	60 - 140
			1,1,1-Trichloroethane	2021/04/30		98	%	60 - 140
			1,1,2-Trichloroethane	2021/04/30		90	%	60 - 140
			Trichloroethylene	2021/04/30		98	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2021/04/30		98	%	60 - 140
			Vinyl Chloride	2021/04/30		94	%	60 - 140
			p+m-Xylene	2021/04/30		89	%	60 - 140
			o-Xylene	2021/04/30		86	%	60 - 140
7325873	AJG	Spiked Blank	4-Bromofluorobenzene	2021/04/30		102	%	60 - 140
			D10-o-Xylene	2021/04/30		105	%	60 - 130
			D4-1,2-Dichloroethane	2021/04/30		100	%	60 - 140
			D8-Toluene	2021/04/30		100	%	60 - 140
			Acetone (2-Propanone)	2021/04/30		94	%	60 - 140
			Benzene	2021/04/30		90	%	60 - 130
			Bromodichloromethane	2021/04/30		94	%	60 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Bromoform	2021/04/30		91	%	60 - 130
			Bromomethane	2021/04/30		95	%	60 - 140
			Carbon Tetrachloride	2021/04/30		99	%	60 - 130
			Chlorobenzene	2021/04/30		94	%	60 - 130
			Chloroform	2021/04/30		94	%	60 - 130
			Dibromochloromethane	2021/04/30		90	%	60 - 130
			1,2-Dichlorobenzene	2021/04/30		91	%	60 - 130
			1,3-Dichlorobenzene	2021/04/30		89	%	60 - 130
			1,4-Dichlorobenzene	2021/04/30		104	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2021/04/30		89	%	60 - 140
			1,1-Dichloroethane	2021/04/30		91	%	60 - 130
			1,2-Dichloroethane	2021/04/30		91	%	60 - 130
			1,1-Dichloroethylene	2021/04/30		97	%	60 - 130
			cis-1,2-Dichloroethylene	2021/04/30		94	%	60 - 130
			trans-1,2-Dichloroethylene	2021/04/30		95	%	60 - 130
			1,2-Dichloropropane	2021/04/30		90	%	60 - 130
			cis-1,3-Dichloropropene	2021/04/30		94	%	60 - 130
			trans-1,3-Dichloropropene	2021/04/30		99	%	60 - 130
			Ethylbenzene	2021/04/30		86	%	60 - 130
			Ethylene Dibromide	2021/04/30		86	%	60 - 130
			Hexane	2021/04/30		98	%	60 - 130
			Methylene Chloride(Dichloromethane)	2021/04/30		97	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/04/30		94	%	60 - 140
			Methyl Isobutyl Ketone	2021/04/30		93	%	60 - 130
			Methyl t-butyl ether (MTBE)	2021/04/30		90	%	60 - 130
			Styrene	2021/04/30		100	%	60 - 130
			1,1,1,2-Tetrachloroethane	2021/04/30		93	%	60 - 130
			1,1,2,2-Tetrachloroethane	2021/04/30		86	%	60 - 130
			Tetrachloroethylene	2021/04/30		89	%	60 - 130
			Toluene	2021/04/30		89	%	60 - 130
			1,1,1-Trichloroethane	2021/04/30		99	%	60 - 130
			1,1,2-Trichloroethane	2021/04/30		93	%	60 - 130
			Trichloroethylene	2021/04/30		100	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2021/04/30		98	%	60 - 130
			Vinyl Chloride	2021/04/30		96	%	60 - 130
			p+m-Xylene	2021/04/30		88	%	60 - 130
			o-Xylene	2021/04/30		86	%	60 - 130
7325873	AJG	Method Blank	4-Bromofluorobenzene	2021/04/30		98	%	60 - 140
			D10-o-Xylene	2021/04/30		101	%	60 - 130
			D4-1,2-Dichloroethane	2021/04/30		102	%	60 - 140
			D8-Toluene	2021/04/30		97	%	60 - 140
			Acetone (2-Propanone)	2021/04/30	<0.49		ug/g	
			Benzene	2021/04/30	<0.0060		ug/g	
			Bromodichloromethane	2021/04/30	<0.040		ug/g	
			Bromoform	2021/04/30	<0.040		ug/g	
			Bromomethane	2021/04/30	<0.040		ug/g	
			Carbon Tetrachloride	2021/04/30	<0.040		ug/g	
			Chlorobenzene	2021/04/30	<0.040		ug/g	
			Chloroform	2021/04/30	<0.040		ug/g	
			Dibromochloromethane	2021/04/30	<0.040		ug/g	
			1,2-Dichlorobenzene	2021/04/30	<0.040		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,3-Dichlorobenzene	2021/04/30	<0.040		ug/g	
			1,4-Dichlorobenzene	2021/04/30	<0.040		ug/g	
			Dichlorodifluoromethane (FREON 12)	2021/04/30	<0.040		ug/g	
			1,1-Dichloroethane	2021/04/30	<0.040		ug/g	
			1,2-Dichloroethane	2021/04/30	<0.049		ug/g	
			1,1-Dichloroethylene	2021/04/30	<0.040		ug/g	
			cis-1,2-Dichloroethylene	2021/04/30	<0.040		ug/g	
			trans-1,2-Dichloroethylene	2021/04/30	<0.040		ug/g	
			1,2-Dichloropropane	2021/04/30	<0.040		ug/g	
			cis-1,3-Dichloropropene	2021/04/30	<0.030		ug/g	
			trans-1,3-Dichloropropene	2021/04/30	<0.040		ug/g	
			Ethylbenzene	2021/04/30	<0.010		ug/g	
			Ethylene Dibromide	2021/04/30	<0.040		ug/g	
			Hexane	2021/04/30	<0.040		ug/g	
			Methylene Chloride(Dichloromethane)	2021/04/30	<0.049		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2021/04/30	<0.40		ug/g	
			Methyl Isobutyl Ketone	2021/04/30	<0.40		ug/g	
			Methyl t-butyl ether (MTBE)	2021/04/30	<0.040		ug/g	
			Styrene	2021/04/30	<0.040		ug/g	
			1,1,1,2-Tetrachloroethane	2021/04/30	<0.040		ug/g	
			1,1,2,2-Tetrachloroethane	2021/04/30	<0.040		ug/g	
			Tetrachloroethylene	2021/04/30	<0.040		ug/g	
			Toluene	2021/04/30	<0.020		ug/g	
			1,1,1-Trichloroethane	2021/04/30	<0.040		ug/g	
			1,1,2-Trichloroethane	2021/04/30	<0.040		ug/g	
			Trichloroethylene	2021/04/30	<0.010		ug/g	
			Trichlorofluoromethane (FREON 11)	2021/04/30	<0.040		ug/g	
			Vinyl Chloride	2021/04/30	<0.019		ug/g	
			p+m-Xylene	2021/04/30	<0.020		ug/g	
			o-Xylene	2021/04/30	<0.020		ug/g	
			Total Xylenes	2021/04/30	<0.020		ug/g	
7325873	AJG	RPD	Acetone (2-Propanone)	2021/04/30	NC		%	50
			Benzene	2021/04/30	NC		%	50
			Bromodichloromethane	2021/04/30	NC		%	50
			Bromoform	2021/04/30	NC		%	50
			Bromomethane	2021/04/30	NC		%	50
			Carbon Tetrachloride	2021/04/30	NC		%	50
			Chlorobenzene	2021/04/30	NC		%	50
			Chloroform	2021/04/30	NC		%	50
			Dibromochloromethane	2021/04/30	NC		%	50
			1,2-Dichlorobenzene	2021/04/30	NC		%	50
			1,3-Dichlorobenzene	2021/04/30	NC		%	50
			1,4-Dichlorobenzene	2021/04/30	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2021/04/30	NC		%	50
			1,1-Dichloroethane	2021/04/30	NC		%	50
			1,2-Dichloroethane	2021/04/30	NC		%	50
			1,1-Dichloroethylene	2021/04/30	NC		%	50
			cis-1,2-Dichloroethylene	2021/04/30	NC		%	50
			trans-1,2-Dichloroethylene	2021/04/30	NC		%	50
			1,2-Dichloropropane	2021/04/30	NC		%	50
			cis-1,3-Dichloropropene	2021/04/30	NC		%	50

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			trans-1,3-Dichloropropene	2021/04/30	NC		%	50
			Ethylbenzene	2021/04/30	NC		%	50
			Ethylene Dibromide	2021/04/30	NC		%	50
			Hexane	2021/04/30	NC		%	50
			Methylene Chloride(Dichloromethane)	2021/04/30	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2021/04/30	NC		%	50
			Methyl Isobutyl Ketone	2021/04/30	NC		%	50
			Methyl t-butyl ether (MTBE)	2021/04/30	NC		%	50
			Styrene	2021/04/30	NC		%	50
			1,1,1,2-Tetrachloroethane	2021/04/30	NC		%	50
			1,1,2,2-Tetrachloroethane	2021/04/30	NC		%	50
			Tetrachloroethylene	2021/04/30	NC		%	50
			Toluene	2021/04/30	NC		%	50
			1,1,1-Trichloroethane	2021/04/30	NC		%	50
			1,1,2-Trichloroethane	2021/04/30	NC		%	50
			Trichloroethylene	2021/04/30	NC		%	50
			Trichlorofluoromethane (FREON 11)	2021/04/30	NC		%	50
			Vinyl Chloride	2021/04/30	NC		%	50
			p+m-Xylene	2021/04/30	NC		%	50
			o-Xylene	2021/04/30	NC		%	50
			Total Xylenes	2021/04/30	NC		%	50
7326018	SHG	Matrix Spike [PKK735-04]	Decachlorobiphenyl	2021/04/29		106	%	60 - 130
			Aroclor 1260	2021/04/29		110	%	30 - 130
			Total PCB	2021/04/29		110	%	30 - 130
7326018	SHG	Spiked Blank	Decachlorobiphenyl	2021/04/29		108	%	60 - 130
			Aroclor 1260	2021/04/29		109	%	30 - 130
			Total PCB	2021/04/29		109	%	30 - 130
7326018	SHG	Method Blank	Decachlorobiphenyl	2021/04/29		112	%	60 - 130
			Aroclor 1242	2021/04/29	<0.010		ug/g	
			Aroclor 1248	2021/04/29	<0.010		ug/g	
			Aroclor 1254	2021/04/29	<0.010		ug/g	
			Aroclor 1260	2021/04/29	<0.010		ug/g	
			Total PCB	2021/04/29	<0.010		ug/g	
7326018	SHG	RPD [PKK735-04]	Aroclor 1242	2021/04/29	NC		%	50
			Aroclor 1248	2021/04/29	NC		%	50
			Aroclor 1254	2021/04/29	NC		%	50
			Aroclor 1260	2021/04/29	NC		%	50
			Total PCB	2021/04/29	NC		%	50
7326052	VP2	Matrix Spike [PKK705-01]	Chromium (VI)	2021/04/30		12 (2)	%	70 - 130
7326052	VP2	Spiked Blank	Chromium (VI)	2021/04/30		93	%	80 - 120
7326052	VP2	Method Blank	Chromium (VI)	2021/04/30	<0.18		ug/g	
7326052	VP2	RPD [PKK705-01]	Chromium (VI)	2021/04/30	NC		%	35
7326258	LPG	Matrix Spike	2,4,5,6-Tetrachloro-m-xylene	2021/04/30		93	%	50 - 130
			Decachlorobiphenyl	2021/04/30		91	%	50 - 130
			Aldrin	2021/04/30		90	%	50 - 130
			a-Chlordane	2021/04/30		94	%	50 - 130
			g-Chlordane	2021/04/30		96	%	50 - 130
			o,p-DDD	2021/04/30		106	%	50 - 130
			p,p-DDD	2021/04/30		102	%	50 - 130
			o,p-DDE	2021/04/30		93	%	50 - 130
			p,p-DDE	2021/04/30		94	%	50 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			o,p-DDT	2021/04/30		99	%	50 - 130
			p,p-DDT	2021/04/30		98	%	50 - 130
			Dieldrin	2021/04/30		103	%	50 - 130
			Lindane	2021/04/30		95	%	50 - 130
			Endosulfan I (alpha)	2021/04/30		84	%	50 - 130
			Endosulfan II (beta)	2021/04/30		82	%	50 - 130
			Endrin	2021/04/30		92	%	50 - 130
			Heptachlor	2021/04/30		98	%	50 - 130
			Heptachlor epoxide	2021/04/30		93	%	50 - 130
			Hexachlorobenzene	2021/04/30		89	%	50 - 130
			Hexachlorobutadiene	2021/04/30		88	%	50 - 130
			Hexachloroethane	2021/04/30		68	%	50 - 130
			Methoxychlor	2021/04/30		105	%	50 - 130
7326258	LPG	Spiked Blank	2,4,5,6-Tetrachloro-m-xylene	2021/04/30		100	%	50 - 130
			Decachlorobiphenyl	2021/04/30		120	%	50 - 130
			Aldrin	2021/04/30		96	%	50 - 130
			a-Chlordane	2021/04/30		99	%	50 - 130
			g-Chlordane	2021/04/30		96	%	50 - 130
			o,p-DDD	2021/04/30		115	%	50 - 130
			p,p-DDD	2021/04/30		113	%	50 - 130
			o,p-DDE	2021/04/30		99	%	50 - 130
			p,p-DDE	2021/04/30		88	%	50 - 130
			o,p-DDT	2021/04/30		109	%	50 - 130
			p,p-DDT	2021/04/30		103	%	50 - 130
			Dieldrin	2021/04/30		114	%	50 - 130
			Lindane	2021/04/30		98	%	50 - 130
			Endosulfan I (alpha)	2021/04/30		77	%	50 - 130
			Endosulfan II (beta)	2021/04/30		88	%	50 - 130
			Endrin	2021/04/30		99	%	50 - 130
			Heptachlor	2021/04/30		100	%	50 - 130
			Heptachlor epoxide	2021/04/30		98	%	50 - 130
			Hexachlorobenzene	2021/04/30		90	%	50 - 130
			Hexachlorobutadiene	2021/04/30		108	%	50 - 130
			Hexachloroethane	2021/04/30		88	%	50 - 130
			Methoxychlor	2021/04/30		109	%	50 - 130
7326258	LPG	RPD	Aldrin	2021/04/30	22		%	40
			a-Chlordane	2021/04/30	20		%	40
			g-Chlordane	2021/04/30	16		%	40
			o,p-DDD	2021/04/30	21		%	40
			p,p-DDD	2021/04/30	20		%	40
			o,p-DDE	2021/04/30	19		%	40
			p,p-DDE	2021/04/30	11		%	40
			o,p-DDT	2021/04/30	19		%	40
			p,p-DDT	2021/04/30	19		%	40
			Dieldrin	2021/04/30	21		%	40
			Lindane	2021/04/30	20		%	40
			Endosulfan I (alpha)	2021/04/30	10		%	40
			Endosulfan II (beta)	2021/04/30	18		%	40
			Endrin	2021/04/30	22		%	40
			Heptachlor	2021/04/30	20		%	40
			Heptachlor epoxide	2021/04/30	22		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Hexachlorobenzene	2021/04/30	24		%	40
			Hexachlorobutadiene	2021/04/30	16		%	40
			Hexachloroethane	2021/04/30	14		%	40
			Methoxychlor	2021/04/30	23		%	40
			Aldrin	2021/04/30	NC		%	40
			a-Chlordane	2021/04/30	NC		%	40
			g-Chlordane	2021/04/30	NC		%	40
			o,p-DDD	2021/04/30	NC		%	40
			p,p-DDD	2021/04/30	NC		%	40
			o,p-DDE	2021/04/30	NC		%	40
			p,p-DDE	2021/04/30	NC		%	40
			o,p-DDT	2021/04/30	NC		%	40
			p,p-DDT	2021/04/30	NC		%	40
			Dieldrin	2021/04/30	NC		%	40
			Lindane	2021/04/30	NC		%	40
			Endosulfan I (alpha)	2021/04/30	NC		%	40
			Endosulfan II (beta)	2021/04/30	NC		%	40
			Endrin	2021/04/30	NC		%	40
			Heptachlor	2021/04/30	NC		%	40
			Heptachlor epoxide	2021/04/30	NC		%	40
			Hexachlorobenzene	2021/04/30	NC		%	40
			Hexachlorobutadiene	2021/04/30	NC		%	40
			Hexachloroethane	2021/04/30	NC		%	40
			Methoxychlor	2021/04/30	NC		%	40
			Aroclor 1242	2021/04/30	NC		%	40
			Aroclor 1248	2021/04/30	NC		%	40
			Aroclor 1254	2021/04/30	NC		%	40
			Aroclor 1260	2021/04/30	NC		%	40
7326258	LPG	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2021/04/30		82	%	50 - 130
			Decachlorobiphenyl	2021/04/30		93	%	50 - 130
			Aldrin	2021/04/30	<0.0020		ug/g	
			a-Chlordane	2021/04/30	<0.0020		ug/g	
			g-Chlordane	2021/04/30	<0.0020		ug/g	
			o,p-DDD	2021/04/30	<0.0020		ug/g	
			p,p-DDD	2021/04/30	<0.0020		ug/g	
			o,p-DDE	2021/04/30	<0.0020		ug/g	
			p,p-DDE	2021/04/30	<0.0020		ug/g	
			o,p-DDT	2021/04/30	<0.0020		ug/g	
			p,p-DDT	2021/04/30	<0.0020		ug/g	
			Dieldrin	2021/04/30	<0.0020		ug/g	
			Lindane	2021/04/30	<0.0020		ug/g	
			Endosulfan I (alpha)	2021/04/30	<0.0020		ug/g	
			Endosulfan II (beta)	2021/04/30	<0.0020		ug/g	
			Endrin	2021/04/30	<0.0020		ug/g	
			Heptachlor	2021/04/30	<0.0020		ug/g	
			Heptachlor epoxide	2021/04/30	<0.0020		ug/g	
			Hexachlorobenzene	2021/04/30	<0.0020		ug/g	
			Hexachlorobutadiene	2021/04/30	<0.0020		ug/g	
			Hexachloroethane	2021/04/30	<0.0020		ug/g	
			Methoxychlor	2021/04/30	<0.0050		ug/g	
			Aroclor 1242	2021/04/30	<0.015		ug/g	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Aroclor 1248	2021/04/30	<0.015		ug/g	
			Aroclor 1254	2021/04/30	<0.015		ug/g	
			Aroclor 1260	2021/04/30	<0.015		ug/g	
7326292	RAJ	Matrix Spike	D10-Anthracene	2021/04/30		92	%	50 - 130
			D14-Terphenyl (FS)	2021/04/30		91	%	50 - 130
			D8-Acenaphthylene	2021/04/30		85	%	50 - 130
			Acenaphthene	2021/04/30		98	%	50 - 130
			Acenaphthylene	2021/04/30		89	%	50 - 130
			Anthracene	2021/04/30		95	%	50 - 130
			Benzo(a)anthracene	2021/04/30		106	%	50 - 130
			Benzo(a)pyrene	2021/04/30		93	%	50 - 130
			Benzo(b/j)fluoranthene	2021/04/30		106	%	50 - 130
			Benzo(g,h,i)perylene	2021/04/30		105	%	50 - 130
			Benzo(k)fluoranthene	2021/04/30		111	%	50 - 130
			Chrysene	2021/04/30		106	%	50 - 130
			Dibenzo(a,h)anthracene	2021/04/30		105	%	50 - 130
			Fluoranthene	2021/04/30		101	%	50 - 130
			Fluorene	2021/04/30		100	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/04/30		105	%	50 - 130
			1-Methylnaphthalene	2021/04/30		112	%	50 - 130
			2-Methylnaphthalene	2021/04/30		110	%	50 - 130
			Naphthalene	2021/04/30		94	%	50 - 130
			Phenanthrene	2021/04/30		102	%	50 - 130
			Pyrene	2021/04/30		101	%	50 - 130
7326292	RAJ	Spiked Blank	D10-Anthracene	2021/04/30		96	%	50 - 130
			D14-Terphenyl (FS)	2021/04/30		104	%	50 - 130
			D8-Acenaphthylene	2021/04/30		88	%	50 - 130
			Acenaphthene	2021/04/30		97	%	50 - 130
			Acenaphthylene	2021/04/30		88	%	50 - 130
			Anthracene	2021/04/30		96	%	50 - 130
			Benzo(a)anthracene	2021/04/30		103	%	50 - 130
			Benzo(a)pyrene	2021/04/30		93	%	50 - 130
			Benzo(b/j)fluoranthene	2021/04/30		107	%	50 - 130
			Benzo(g,h,i)perylene	2021/04/30		105	%	50 - 130
			Benzo(k)fluoranthene	2021/04/30		109	%	50 - 130
			Chrysene	2021/04/30		107	%	50 - 130
			Dibenzo(a,h)anthracene	2021/04/30		102	%	50 - 130
			Fluoranthene	2021/04/30		113	%	50 - 130
			Fluorene	2021/04/30		99	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/04/30		106	%	50 - 130
			1-Methylnaphthalene	2021/04/30		113	%	50 - 130
			2-Methylnaphthalene	2021/04/30		110	%	50 - 130
			Naphthalene	2021/04/30		95	%	50 - 130
			Phenanthrene	2021/04/30		102	%	50 - 130
			Pyrene	2021/04/30		113	%	50 - 130
7326292	RAJ	Method Blank	D10-Anthracene	2021/04/30		93	%	50 - 130
			D14-Terphenyl (FS)	2021/04/30		104	%	50 - 130
			D8-Acenaphthylene	2021/04/30		86	%	50 - 130
			Acenaphthene	2021/04/30	<0.0050		ug/g	
			Acenaphthylene	2021/04/30	<0.0050		ug/g	
			Anthracene	2021/04/30	<0.0050		ug/g	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzo(a)anthracene	2021/04/30	<0.0050		ug/g	
			Benzo(a)pyrene	2021/04/30	<0.0050		ug/g	
			Benzo(b/j)fluoranthene	2021/04/30	<0.0050		ug/g	
			Benzo(g,h,i)perylene	2021/04/30	<0.0050		ug/g	
			Benzo(k)fluoranthene	2021/04/30	<0.0050		ug/g	
			Chrysene	2021/04/30	<0.0050		ug/g	
			Dibenzo(a,h)anthracene	2021/04/30	<0.0050		ug/g	
			Fluoranthene	2021/04/30	<0.0050		ug/g	
			Fluorene	2021/04/30	<0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/04/30	<0.0050		ug/g	
			1-Methylnaphthalene	2021/04/30	<0.0050		ug/g	
			2-Methylnaphthalene	2021/04/30	<0.0050		ug/g	
			Naphthalene	2021/04/30	<0.0050		ug/g	
			Phenanthrene	2021/04/30	<0.0050		ug/g	
			Pyrene	2021/04/30	<0.0050		ug/g	
7326292	RAJ	RPD	Acenaphthene	2021/04/30	NC		%	40
			Acenaphthylene	2021/04/30	NC		%	40
			Anthracene	2021/04/30	NC		%	40
			Benzo(a)anthracene	2021/04/30	NC		%	40
			Benzo(a)pyrene	2021/04/30	NC		%	40
			Benzo(b/j)fluoranthene	2021/04/30	4.8		%	40
			Benzo(g,h,i)perylene	2021/04/30	NC		%	40
			Benzo(k)fluoranthene	2021/04/30	NC		%	40
			Chrysene	2021/04/30	NC		%	40
			Dibenzo(a,h)anthracene	2021/04/30	NC		%	40
			Fluoranthene	2021/04/30	2.3		%	40
			Fluorene	2021/04/30	NC		%	40
			Indeno(1,2,3-cd)pyrene	2021/04/30	NC		%	40
			1-Methylnaphthalene	2021/04/30	NC		%	40
			2-Methylnaphthalene	2021/04/30	NC		%	40
			Naphthalene	2021/04/30	NC		%	40
			Phenanthrene	2021/04/30	7.5		%	40
			Pyrene	2021/04/30	2.5		%	40
7326398	DN0	Matrix Spike [PKK749-01]	o-Terphenyl	2021/04/29		99	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/04/29		106	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/04/29		109	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/04/29		116	%	50 - 130
7326398	DN0	Spiked Blank	o-Terphenyl	2021/04/29		104	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/04/29		109	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/04/29		111	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/04/29		117	%	80 - 120
7326398	DN0	Method Blank	o-Terphenyl	2021/04/29		104	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/04/29	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/04/29	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/04/29	<50		ug/g	
7326398	DN0	RPD [PKK749-01]	F2 (C10-C16 Hydrocarbons)	2021/04/30	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/04/30	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/04/30	NC		%	30
7326440	DT1	Matrix Spike [PKK714-01]	Acid Extractable Antimony (Sb)	2021/04/29		110	%	75 - 125
			Acid Extractable Arsenic (As)	2021/04/29		109	%	75 - 125
			Acid Extractable Barium (Ba)	2021/04/29		NC	%	75 - 125

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Beryllium (Be)	2021/04/29		109	%	75 - 125
			Acid Extractable Boron (B)	2021/04/29		101	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/04/29		107	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/04/29		102	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/04/29		102	%	75 - 125
			Acid Extractable Copper (Cu)	2021/04/29		98	%	75 - 125
			Acid Extractable Lead (Pb)	2021/04/29		99	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/04/29		104	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/04/29		106	%	75 - 125
			Acid Extractable Selenium (Se)	2021/04/29		108	%	75 - 125
			Acid Extractable Silver (Ag)	2021/04/29		107	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/04/29		101	%	75 - 125
			Acid Extractable Uranium (U)	2021/04/29		101	%	75 - 125
			Acid Extractable Vanadium (V)	2021/04/29		105	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/04/29		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/04/29		93	%	75 - 125
7326440	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2021/04/29		102	%	80 - 120
			Acid Extractable Arsenic (As)	2021/04/29		103	%	80 - 120
			Acid Extractable Barium (Ba)	2021/04/29		103	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/04/29		99	%	80 - 120
			Acid Extractable Boron (B)	2021/04/29		96	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/04/29		97	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/04/29		96	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/04/29		95	%	80 - 120
			Acid Extractable Copper (Cu)	2021/04/29		95	%	80 - 120
			Acid Extractable Lead (Pb)	2021/04/29		96	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/04/29		92	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/04/29		100	%	80 - 120
			Acid Extractable Selenium (Se)	2021/04/29		101	%	80 - 120
			Acid Extractable Silver (Ag)	2021/04/29		99	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/04/29		97	%	80 - 120
			Acid Extractable Uranium (U)	2021/04/29		95	%	80 - 120
			Acid Extractable Vanadium (V)	2021/04/29		98	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/04/29		97	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/04/29		89	%	80 - 120
7326440	DT1	Method Blank	Acid Extractable Antimony (Sb)	2021/04/29	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/04/29	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/04/29	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/04/29	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/04/29	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/04/29	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/04/29	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/04/29	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/04/29	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/04/29	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/04/29	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/04/29	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/04/29	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/04/29	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/04/29	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/04/29	<0.050		ug/g	

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Vanadium (V)	2021/04/29	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/04/29	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/04/29	<0.050		ug/g	
7326440	DT1	RPD [PKK714-01]	Acid Extractable Antimony (Sb)	2021/04/29	NC		%	30
			Acid Extractable Arsenic (As)	2021/04/29	5.8		%	30
			Acid Extractable Barium (Ba)	2021/04/29	6.1		%	30
			Acid Extractable Beryllium (Be)	2021/04/29	NC		%	30
			Acid Extractable Boron (B)	2021/04/29	NC		%	30
			Acid Extractable Cadmium (Cd)	2021/04/29	3.5		%	30
			Acid Extractable Chromium (Cr)	2021/04/29	6.9		%	30
			Acid Extractable Cobalt (Co)	2021/04/29	5.8		%	30
			Acid Extractable Copper (Cu)	2021/04/29	12		%	30
			Acid Extractable Lead (Pb)	2021/04/29	18		%	30
			Acid Extractable Molybdenum (Mo)	2021/04/29	NC		%	30
			Acid Extractable Nickel (Ni)	2021/04/29	12		%	30
			Acid Extractable Selenium (Se)	2021/04/29	NC		%	30
			Acid Extractable Silver (Ag)	2021/04/29	NC		%	30
			Acid Extractable Thallium (Tl)	2021/04/29	16		%	30
			Acid Extractable Uranium (U)	2021/04/29	48 (1)		%	30
			Acid Extractable Vanadium (V)	2021/04/29	0.99		%	30
			Acid Extractable Zinc (Zn)	2021/04/29	4.3		%	30
			Acid Extractable Mercury (Hg)	2021/04/29	NC		%	30
7326487	DAN	Matrix Spike [PKK757-02]	1,4-Difluorobenzene	2021/04/29		97	%	60 - 140
			4-Bromofluorobenzene	2021/04/29		104	%	60 - 140
			D10-o-Xylene	2021/04/29		86	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/29		95	%	60 - 140
			Benzene	2021/04/29		79	%	50 - 140
			Toluene	2021/04/29		81	%	50 - 140
			Ethylbenzene	2021/04/29		92	%	50 - 140
			o-Xylene	2021/04/29		93	%	50 - 140
			p+m-Xylene	2021/04/29		93	%	50 - 140
			F1 (C6-C10)	2021/04/29		89	%	60 - 140
7326487	DAN	Spiked Blank	1,4-Difluorobenzene	2021/04/29		91	%	60 - 140
			4-Bromofluorobenzene	2021/04/29		107	%	60 - 140
			D10-o-Xylene	2021/04/29		119	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/29		99	%	60 - 140
			Benzene	2021/04/29		103	%	50 - 140
			Toluene	2021/04/29		109	%	50 - 140
			Ethylbenzene	2021/04/29		125	%	50 - 140
			o-Xylene	2021/04/29		124	%	50 - 140
			p+m-Xylene	2021/04/29		124	%	50 - 140
			F1 (C6-C10)	2021/04/29		113	%	80 - 120
7326487	DAN	Method Blank	1,4-Difluorobenzene	2021/04/29		100	%	60 - 140
			4-Bromofluorobenzene	2021/04/29		99	%	60 - 140
			D10-o-Xylene	2021/04/29		82	%	60 - 140
			D4-1,2-Dichloroethane	2021/04/29		97	%	60 - 140
			Benzene	2021/04/29	<0.020		ug/g	
			Toluene	2021/04/29	<0.020		ug/g	
			Ethylbenzene	2021/04/29	<0.020		ug/g	
			o-Xylene	2021/04/29	<0.020		ug/g	
			p+m-Xylene	2021/04/29	<0.040		ug/g	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Xylenes	2021/04/29	<0.040		ug/g	
			F1 (C6-C10)	2021/04/29	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/04/29	<10		ug/g	
7326487	DAN	RPD [PKK757-02]	Benzene	2021/04/29	NC		%	50
			Toluene	2021/04/29	NC		%	50
			Ethylbenzene	2021/04/29	NC		%	50
			o-Xylene	2021/04/29	NC		%	50
			p+m-Xylene	2021/04/29	NC		%	50
			Total Xylenes	2021/04/29	NC		%	50
			F1 (C6-C10)	2021/04/29	NC		%	30
			F1 (C6-C10) - BTEX	2021/04/29	NC		%	30
7326790	JOH	Matrix Spike [PKK735-01]	Hot Water Ext. Boron (B)	2021/04/30		103	%	75 - 125
7326790	JOH	Spiked Blank	Hot Water Ext. Boron (B)	2021/04/30		96	%	75 - 125
7326790	JOH	Method Blank	Hot Water Ext. Boron (B)	2021/04/30	<0.050		ug/g	
7326790	JOH	RPD [PKK735-01]	Hot Water Ext. Boron (B)	2021/04/30	15		%	40
7326807	JOH	Matrix Spike [PKK721-01]	Hot Water Ext. Boron (B)	2021/04/30		102	%	75 - 125
7326807	JOH	Spiked Blank	Hot Water Ext. Boron (B)	2021/04/30		97	%	75 - 125
7326807	JOH	Method Blank	Hot Water Ext. Boron (B)	2021/04/30	<0.050		ug/g	
7326807	JOH	RPD [PKK721-01]	Hot Water Ext. Boron (B)	2021/04/30	4.9		%	40
7327180	TKA	Spiked Blank	Conductivity	2021/04/30		102	%	90 - 110
7327180	TKA	Method Blank	Conductivity	2021/04/30	<0.002		mS/cm	
7327180	TKA	RPD [PKK711-01]	Conductivity	2021/04/30	1.5		%	10
7327262	DT1	Matrix Spike [PKK744-01]	Acid Extractable Antimony (Sb)	2021/04/30		105	%	75 - 125
			Acid Extractable Arsenic (As)	2021/04/30		105	%	75 - 125
			Acid Extractable Barium (Ba)	2021/04/30		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/04/30		106	%	75 - 125
			Acid Extractable Boron (B)	2021/04/30		104	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/04/30		103	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/04/30		96	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/04/30		101	%	75 - 125
			Acid Extractable Copper (Cu)	2021/04/30		NC	%	75 - 125
			Acid Extractable Lead (Pb)	2021/04/30		97	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/04/30		106	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/04/30		95	%	75 - 125
			Acid Extractable Selenium (Se)	2021/04/30		106	%	75 - 125
			Acid Extractable Silver (Ag)	2021/04/30		105	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/04/30		103	%	75 - 125
			Acid Extractable Uranium (U)	2021/04/30		101	%	75 - 125
			Acid Extractable Vanadium (V)	2021/04/30		106	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/04/30		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/04/30		89	%	75 - 125
7327262	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2021/04/30		104	%	80 - 120
			Acid Extractable Arsenic (As)	2021/04/30		105	%	80 - 120
			Acid Extractable Barium (Ba)	2021/04/30		108	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/04/30		102	%	80 - 120
			Acid Extractable Boron (B)	2021/04/30		102	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/04/30		102	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/04/30		101	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/04/30		101	%	80 - 120
			Acid Extractable Copper (Cu)	2021/04/30		103	%	80 - 120
			Acid Extractable Lead (Pb)	2021/04/30		102	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Molybdenum (Mo)	2021/04/30		102	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/04/30		105	%	80 - 120
			Acid Extractable Selenium (Se)	2021/04/30		105	%	80 - 120
			Acid Extractable Silver (Ag)	2021/04/30		103	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/04/30		105	%	80 - 120
			Acid Extractable Uranium (U)	2021/04/30		102	%	80 - 120
			Acid Extractable Vanadium (V)	2021/04/30		104	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/04/30		101	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/04/30		92	%	80 - 120
7327262	DT1	Method Blank	Acid Extractable Antimony (Sb)	2021/04/30	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/04/30	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/04/30	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/04/30	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/04/30	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/04/30	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/04/30	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/04/30	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/04/30	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/04/30	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/04/30	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/04/30	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/04/30	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/04/30	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/04/30	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/04/30	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/04/30	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/04/30	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/04/30	<0.050		ug/g	
7327262	DT1	RPD [PKK744-01]	Acid Extractable Antimony (Sb)	2021/04/30	4.0		%	30
			Acid Extractable Arsenic (As)	2021/04/30	4.8		%	30
			Acid Extractable Barium (Ba)	2021/04/30	3.1		%	30
			Acid Extractable Beryllium (Be)	2021/04/30	NC		%	30
			Acid Extractable Boron (B)	2021/04/30	NC		%	30
			Acid Extractable Cadmium (Cd)	2021/04/30	0.30		%	30
			Acid Extractable Chromium (Cr)	2021/04/30	2.3		%	30
			Acid Extractable Cobalt (Co)	2021/04/30	3.1		%	30
			Acid Extractable Copper (Cu)	2021/04/30	18		%	30
			Acid Extractable Lead (Pb)	2021/04/30	9.8		%	30
			Acid Extractable Molybdenum (Mo)	2021/04/30	2.0		%	30
			Acid Extractable Nickel (Ni)	2021/04/30	4.0		%	30
			Acid Extractable Selenium (Se)	2021/04/30	NC		%	30
			Acid Extractable Silver (Ag)	2021/04/30	NC		%	30
			Acid Extractable Thallium (Tl)	2021/04/30	7.3		%	30
			Acid Extractable Uranium (U)	2021/04/30	21		%	30
			Acid Extractable Vanadium (V)	2021/04/30	15		%	30
			Acid Extractable Zinc (Zn)	2021/04/30	1.6		%	30
			Acid Extractable Mercury (Hg)	2021/04/30	NC		%	30
7327310	TKA	Spiked Blank	Conductivity	2021/04/30		102	%	90 - 110
7327310	TKA	Method Blank	Conductivity	2021/04/30	<0.002		mS/cm	
7327310	TKA	RPD [PKK737-01]	Conductivity	2021/04/30	4.2		%	10
7327339	SAU	Spiked Blank	Available (CaCl2) pH	2021/04/30		100	%	97 - 103

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7327339	SAU	RPD [PKK705-01]	Available (CaCl2) pH	2021/04/30	0.083		%	N/A
7327355	NYS	Spiked Blank	Available (CaCl2) pH	2021/04/30		100	%	97 - 103
7327355	NYS	RPD [PKK760-04]	Available (CaCl2) pH	2021/04/30	0.028		%	N/A

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The matrix spike was reanalyzed to confirm result.

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BV Labs Job #: C1B0746
Report Date: 2021/05/03

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Brad Newman, B.Sc., C.Chem., Scientific Service Specialist

Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

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Your Project #: 20368429
Site Location: OPG Darlington
Your C.O.C. #: 339628

Attention: Kevan Browne (20368429)

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/05/12
Report #: R6630907
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1C0381
Received: 2021/05/05, 14:15

Sample Matrix: Soil
Samples Received: 26

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	2	N/A	2021/05/11	CAM SOP-00301	EPA 8270D m
Methylnaphthalene Sum	4	N/A	2021/05/12	CAM SOP-00301	EPA 8270D m
Methylnaphthalene Sum	19	N/A	2021/05/07	CAM SOP-00301	EPA 8270D m
ABN Compounds in soil by GC/MS	4	2021/05/08	2021/05/10	CAM SOP-00301	EPA 8270 m
Hot Water Extractable Boron	13	2021/05/10	2021/05/10	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron	12	2021/05/08	2021/05/10	CAM SOP-00408	R153 Ana. Prot. 2011
Free (WAD) Cyanide	23	2021/05/10	2021/05/11	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide	2	2021/05/07	2021/05/10	CAM SOP-00457	OMOE E3015 m
Conductivity	20	2021/05/10	2021/05/10	CAM SOP-00414	OMOE E3530 v1 m
Conductivity	5	2021/05/10	2021/05/11	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	23	2021/05/10	2021/05/10	CAM SOP-00436	EPA 3060/7199 m
Hexavalent Chromium in Soil by IC (1)	2	2021/05/10	2021/05/11	CAM SOP-00436	EPA 3060/7199 m
Dinitrotoluene Sum	4	2021/05/05	2021/05/12	CAM SOP - 00301	EPA 8270
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	1	N/A	2021/05/10	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	20	N/A	2021/05/06	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	5	N/A	2021/05/07	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	11	2021/05/06	2021/05/06	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	14	2021/05/06	2021/05/07	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	11	2021/05/10	2021/05/10	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS	14	2021/05/08	2021/05/10	CAM SOP-00447	EPA 6020B m
Moisture	11	N/A	2021/05/05	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	14	N/A	2021/05/06	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	2	2021/05/10	2021/05/11	CAM SOP-00318	EPA 8270D m
PAH Compounds in Soil by GC/MS (SIM)	1	2021/05/06	2021/05/06	CAM SOP-00318	EPA 8270D m
PAH Compounds in Soil by GC/MS (SIM)	18	2021/05/06	2021/05/07	CAM SOP-00318	EPA 8270D m
Polychlorinated Biphenyl in Soil	25	2021/05/08	2021/05/08	CAM SOP-00309	EPA 8082A m
pH CaCl2 EXTRACT	25	2021/05/10	2021/05/10	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	25	N/A	2021/05/11	CAM SOP-00102	EPA 6010C

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau

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Your Project #: 20368429
Site Location: OPG Darlington
Your C.O.C. #: 339628

Attention: Kevan Browne (20368429)

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/05/12
Report #: R6630907
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1C0381
Received: 2021/05/05, 14:15

Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
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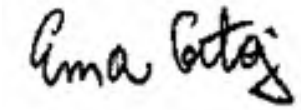
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.
(2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following “Alberta Environment’s Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003”. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key



Ema Gitej
Senior Project Manager
12 May 2021 18:45:45

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: emese.gitej@bureauveritas.com
Phone# (905)817-5829

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BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PMK442		PMK443		PMK444		PMK445		
Sampling Date		2021/04/21 10:20		2021/04/21 11:00		2021/04/21 12:45		2021/04/21 14:00		
COC Number		339628		339628		339628		339628		
	UNITS	BH21-51-1	QC Batch	BH21-51-4	QC Batch	BH21-38-1	QC Batch	BH21-38-4	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.28 (1)	7336687	0.42	7336687	0.30 (1)	7336687	1.5		7336687
Inorganics										
Conductivity	mS/cm	0.15	7343386	0.15	7343806	0.15	7343386	0.15	0.002	7343806
Available (CaCl2) pH	pH	7.83	7342578	7.76	7342578	7.83	7342578	7.94		7342578
WAD Cyanide (Free)	ug/g	<0.01	7342612	<0.01	7342612	<0.01	7342612	<0.01	0.01	7342612
Chromium (VI)	ug/g	<0.18	7342619	<0.18	7342619	<0.18	7342619	<0.18	0.18	7342619
Metals										
Hot Water Ext. Boron (B)	ug/g	0.15	7341945	0.19	7341960	0.18	7342580	0.056	0.050	7341960
Acid Extractable Antimony (Sb)	ug/g	<0.20	7341716	<0.20	7341716	0.23	7342630	<0.20	0.20	7341716
Acid Extractable Arsenic (As)	ug/g	1.8	7341716	<1.0	7341716	1.5	7342630	<1.0	1.0	7341716
Acid Extractable Barium (Ba)	ug/g	21	7341716	31	7341716	28	7342630	29	0.50	7341716
Acid Extractable Beryllium (Be)	ug/g	0.39	7341716	<0.20	7341716	0.31	7342630	<0.20	0.20	7341716
Acid Extractable Boron (B)	ug/g	8.9	7341716	<5.0	7341716	8.8	7342630	<5.0	5.0	7341716
Acid Extractable Cadmium (Cd)	ug/g	<0.10	7341716	<0.10	7341716	<0.10	7342630	<0.10	0.10	7341716
Acid Extractable Chromium (Cr)	ug/g	13	7341716	8.2	7341716	12	7342630	8.3	1.0	7341716
Acid Extractable Cobalt (Co)	ug/g	4.2	7341716	2.2	7341716	3.7	7342630	2.4	0.10	7341716
Acid Extractable Copper (Cu)	ug/g	5.3	7341716	3.9	7341716	6.9	7342630	4.0	0.50	7341716
Acid Extractable Lead (Pb)	ug/g	7.4	7341716	2.3	7341716	7.3	7342630	2.4	1.0	7341716
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	7341716	<0.50	7341716	0.60	7342630	<0.50	0.50	7341716
Acid Extractable Nickel (Ni)	ug/g	8.4	7341716	4.5	7341716	9.7	7342630	4.3	0.50	7341716
Acid Extractable Selenium (Se)	ug/g	<0.50	7341716	<0.50	7341716	<0.50	7342630	<0.50	0.50	7341716
Acid Extractable Silver (Ag)	ug/g	<0.20	7341716	<0.20	7341716	<0.20	7342630	<0.20	0.20	7341716
Acid Extractable Thallium (Tl)	ug/g	0.081	7341716	<0.050	7341716	0.072	7342630	<0.050	0.050	7341716
Acid Extractable Uranium (U)	ug/g	0.44	7341716	0.46	7341716	0.52	7342630	0.50	0.050	7341716
Acid Extractable Vanadium (V)	ug/g	14	7341716	14	7341716	13	7342630	16	5.0	7341716
Acid Extractable Zinc (Zn)	ug/g	22	7341716	22	7341716	39	7342630	22	5.0	7341716
Acid Extractable Mercury (Hg)	ug/g	<0.050	7341716	<0.050	7341716	<0.050	7342630	<0.050	0.050	7341716

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C0381
Report Date: 2021/05/12

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PMK445			PMK446			PMK446		
Sampling Date		2021/04/21 14:00			2021/04/21 15:00			2021/04/21 15:00		
COC Number		339628			339628			339628		
	UNITS	BH21-38-4 Lab-Dup	RDL	QC Batch	BH21-38-7	RDL	QC Batch	BH21-38-7 Lab-Dup	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A				0.72		7336687			
Inorganics										
Conductivity	mS/cm				0.16	0.002	7343386			
Available (CaCl2) pH	pH				8.07		7342578			
WAD Cyanide (Free)	ug/g				<0.01	0.01	7342612			
Chromium (VI)	ug/g				<0.18	0.18	7342619			
Metals										
Hot Water Ext. Boron (B)	ug/g				0.065	0.050	7341960	0.065	0.050	7341960
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7341716	<0.20	0.20	7341898			
Acid Extractable Arsenic (As)	ug/g	<1.0	1.0	7341716	<1.0	1.0	7341898			
Acid Extractable Barium (Ba)	ug/g	30	0.50	7341716	34	0.50	7341898			
Acid Extractable Beryllium (Be)	ug/g	<0.20	0.20	7341716	0.20	0.20	7341898			
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7341716	5.3	5.0	7341898			
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7341716	0.14	0.10	7341898			
Acid Extractable Chromium (Cr)	ug/g	7.5	1.0	7341716	8.5	1.0	7341898			
Acid Extractable Cobalt (Co)	ug/g	2.2	0.10	7341716	2.5	0.10	7341898			
Acid Extractable Copper (Cu)	ug/g	4.4	0.50	7341716	4.3	0.50	7341898			
Acid Extractable Lead (Pb)	ug/g	2.3	1.0	7341716	2.5	1.0	7341898			
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7341716	<0.50	0.50	7341898			
Acid Extractable Nickel (Ni)	ug/g	4.3	0.50	7341716	5.2	0.50	7341898			
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7341716	<0.50	0.50	7341898			
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7341716	<0.20	0.20	7341898			
Acid Extractable Thallium (Tl)	ug/g	0.051	0.050	7341716	0.052	0.050	7341898			
Acid Extractable Uranium (U)	ug/g	0.45	0.050	7341716	0.44	0.050	7341898			
Acid Extractable Vanadium (V)	ug/g	15	5.0	7341716	14	5.0	7341898			
Acid Extractable Zinc (Zn)	ug/g	22	5.0	7341716	27	5.0	7341898			
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7341716	<0.050	0.050	7341898			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PMK447			PMK448			PMK449		
Sampling Date		2021/04/21 16:00			2021/04/22 15:00			2021/04/22 15:10		
COC Number		339628			339628			339628		
	UNITS	BH21-38-11	RDL	QC Batch	BH21-22-1	RDL	QC Batch	BH21-22-2	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.25 (1)		7336687	0.30 (1)		7336687	0.29		7336687
Inorganics										
Conductivity	mS/cm	0.20	0.002	7343386	0.14	0.002	7343806	0.22	0.002	7343386
Moisture	%				6.9	1.0	7336751			
Available (CaCl2) pH	pH	7.93		7342578	7.54		7343523	7.98		7342578
WAD Cyanide (Free)	ug/g	<0.01	0.01	7342606	<0.01	0.01	7339520	<0.01	0.01	7342606
Chromium (VI)	ug/g	<0.18	0.18	7342619	<0.18	0.18	7342772	<0.18	0.18	7342634
Metals										
Hot Water Ext. Boron (B)	ug/g	<0.050	0.050	7342580	0.12	0.050	7342580	0.14	0.050	7342580
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7342630	<0.20	0.20	7341716	<0.20	0.20	7342630
Acid Extractable Arsenic (As)	ug/g	<1.0	1.0	7342630	<1.0	1.0	7341716	<1.0	1.0	7342630
Acid Extractable Barium (Ba)	ug/g	38	0.50	7342630	32	0.50	7341716	41	0.50	7342630
Acid Extractable Beryllium (Be)	ug/g	<0.20	0.20	7342630	<0.20	0.20	7341716	<0.20	0.20	7342630
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7342630	<5.0	5.0	7341716	<5.0	5.0	7342630
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7342630	<0.10	0.10	7341716	<0.10	0.10	7342630
Acid Extractable Chromium (Cr)	ug/g	6.8	1.0	7342630	7.5	1.0	7341716	6.5	1.0	7342630
Acid Extractable Cobalt (Co)	ug/g	1.9	0.10	7342630	2.3	0.10	7341716	2.0	0.10	7342630
Acid Extractable Copper (Cu)	ug/g	3.5	0.50	7342630	6.0	0.50	7341716	4.4	0.50	7342630
Acid Extractable Lead (Pb)	ug/g	1.8	1.0	7342630	2.9	1.0	7341716	2.8	1.0	7342630
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7342630	<0.50	0.50	7341716	<0.50	0.50	7342630
Acid Extractable Nickel (Ni)	ug/g	3.9	0.50	7342630	4.7	0.50	7341716	4.1	0.50	7342630
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7342630	<0.50	0.50	7341716	<0.50	0.50	7342630
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7342630	<0.20	0.20	7341716	<0.20	0.20	7342630
Acid Extractable Thallium (Tl)	ug/g	<0.050	0.050	7342630	<0.050	0.050	7341716	<0.050	0.050	7342630
Acid Extractable Uranium (U)	ug/g	0.48	0.050	7342630	0.47	0.050	7341716	0.47	0.050	7342630
Acid Extractable Vanadium (V)	ug/g	14	5.0	7342630	15	5.0	7341716	13	5.0	7342630
Acid Extractable Zinc (Zn)	ug/g	15	5.0	7342630	26	5.0	7341716	28	5.0	7342630
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7342630	<0.050	0.050	7341716	<0.050	0.050	7342630

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PMK450			PMK451		PMK452		
Sampling Date		2021/04/22 09:00			2021/04/22 09:30		2021/04/22 12:00		
COC Number		339628			339628		339628		
	UNITS	BH21-37-1	RDL	QC Batch	BH21-37-3	QC Batch	BH21-37-8	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	0.30 (1)		7336687	0.55	7336687	0.31 (1)		7336687
Inorganics									
Conductivity	mS/cm	0.14	0.002	7343806	0.12	7343386	0.14	0.002	7343386
Moisture	%	7.9	1.0	7336751					
Available (CaCl2) pH	pH	7.88		7343523	7.96	7342578	7.83		7343722
WAD Cyanide (Free)	ug/g	<0.01	0.01	7339520	<0.01	7342612	<0.01	0.01	7342606
Chromium (VI)	ug/g	<0.18	0.18	7342772	<0.18	7342619	<0.18	0.18	7342634
Metals									
Hot Water Ext. Boron (B)	ug/g	0.12	0.050	7342580	<0.050	7341960	0.052	0.050	7342580
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7341716	<0.20	7341716	<0.20	0.20	7342630
Acid Extractable Arsenic (As)	ug/g	1.4	1.0	7341716	<1.0	7341716	<1.0	1.0	7342630
Acid Extractable Barium (Ba)	ug/g	29	0.50	7341716	27	7341716	35	0.50	7342630
Acid Extractable Beryllium (Be)	ug/g	0.32	0.20	7341716	0.21	7341716	<0.20	0.20	7342630
Acid Extractable Boron (B)	ug/g	5.5	5.0	7341716	<5.0	7341716	<5.0	5.0	7342630
Acid Extractable Cadmium (Cd)	ug/g	0.11	0.10	7341716	<0.10	7341716	<0.10	0.10	7342630
Acid Extractable Chromium (Cr)	ug/g	8.3	1.0	7341716	7.3	7341716	7.4	1.0	7342630
Acid Extractable Cobalt (Co)	ug/g	4.7	0.10	7341716	2.3	7341716	2.3	0.10	7342630
Acid Extractable Copper (Cu)	ug/g	6.7	0.50	7341716	4.5	7341716	4.1	0.50	7342630
Acid Extractable Lead (Pb)	ug/g	10	1.0	7341716	2.2	7341716	2.1	1.0	7342630
Acid Extractable Molybdenum (Mo)	ug/g	0.64	0.50	7341716	<0.50	7341716	<0.50	0.50	7342630
Acid Extractable Nickel (Ni)	ug/g	7.3	0.50	7341716	4.2	7341716	4.7	0.50	7342630
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7341716	<0.50	7341716	<0.50	0.50	7342630
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7341716	<0.20	7341716	<0.20	0.20	7342630
Acid Extractable Thallium (Tl)	ug/g	0.076	0.050	7341716	<0.050	7341716	<0.050	0.050	7342630
Acid Extractable Uranium (U)	ug/g	0.59	0.050	7341716	0.42	7341716	0.40	0.050	7342630
Acid Extractable Vanadium (V)	ug/g	23	5.0	7341716	16	7341716	15	5.0	7342630
Acid Extractable Zinc (Zn)	ug/g	44	5.0	7341716	17	7341716	20	5.0	7342630
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7341716	<0.050	7341716	<0.050	0.050	7342630

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C0381
Report Date: 2021/05/12

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PMK453	PMK454		PMK455		PMK456		
Sampling Date		2021/04/23 11:15	2021/04/23 11:30		2021/04/23 08:30		2021/04/23 09:00		
COC Number		339628	339628		339628		339628		
	UNITS	BH21-26-1	BH21-26-3	QC Batch	BH21-30-1	QC Batch	BH21-30-4	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	0.28 (1)	0.87	7336687	0.32 (1)	7336687	0.49		7336687
Inorganics									
Conductivity	mS/cm	0.13	0.26	7343386	0.090	7343386	0.62	0.002	7343386
Available (CaCl2) pH	pH	7.70	7.90	7342578	7.78	7342578	11.7		7343722
WAD Cyanide (Free)	ug/g	<0.01	<0.01	7342612	<0.01	7342612	<0.01	0.01	7342612
Chromium (VI)	ug/g	<0.18	<0.18	7342619	<0.18	7342619	<0.18	0.18	7342634
Metals									
Hot Water Ext. Boron (B)	ug/g	0.057	0.11	7341960	0.065	7342580	0.12	0.050	7342580
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	7341716	<0.20	7342630	<0.20	0.20	7342630
Acid Extractable Arsenic (As)	ug/g	1.1	1.6	7341716	<1.0	7342630	<1.0	1.0	7342630
Acid Extractable Barium (Ba)	ug/g	50	64	7341716	14	7342630	67	0.50	7342630
Acid Extractable Beryllium (Be)	ug/g	0.25	0.28	7341716	<0.20	7342630	0.21	0.20	7342630
Acid Extractable Boron (B)	ug/g	5.0	5.8	7341716	<5.0	7342630	5.2	5.0	7342630
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	7341716	<0.10	7342630	<0.10	0.10	7342630
Acid Extractable Chromium (Cr)	ug/g	10	13	7341716	6.2	7342630	9.2	1.0	7342630
Acid Extractable Cobalt (Co)	ug/g	3.4	4.7	7341716	1.8	7342630	2.6	0.10	7342630
Acid Extractable Copper (Cu)	ug/g	7.2	19	7341716	10	7342630	4.8	0.50	7342630
Acid Extractable Lead (Pb)	ug/g	3.8	6.9	7341716	5.6	7342630	2.7	1.0	7342630
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	7341716	<0.50	7342630	<0.50	0.50	7342630
Acid Extractable Nickel (Ni)	ug/g	6.9	9.5	7341716	3.9	7342630	6.0	0.50	7342630
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	7341716	<0.50	7342630	<0.50	0.50	7342630
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	7341716	<0.20	7342630	<0.20	0.20	7342630
Acid Extractable Thallium (Tl)	ug/g	0.056	0.060	7341716	<0.050	7342630	0.058	0.050	7342630
Acid Extractable Uranium (U)	ug/g	0.45	0.62	7341716	0.43	7342630	0.48	0.050	7342630
Acid Extractable Vanadium (V)	ug/g	19	21	7341716	11	7342630	15	5.0	7342630
Acid Extractable Zinc (Zn)	ug/g	33	73	7341716	130	7342630	25	5.0	7342630
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	7341716	<0.050	7342630	<0.050	0.050	7342630

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C0381
Report Date: 2021/05/12

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PMK457		PMK458	PMK459			PMK460		
Sampling Date		2021/04/23 09:15		2021/04/23 09:30	2021/04/23 10:00			2021/04/26 14:40		
COC Number		339628		339628	339628			339628		
	UNITS	BH21-30-6	QC Batch	BH21-30-7	BH21-30-10	RDL	QC Batch	BH21-11-1	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.61	7336687	0.34 (1)	0.35 (1)		7336687	0.27 (1)		7336687
Inorganics										
Conductivity	mS/cm	0.29	7343386	0.10	0.11	0.002	7343386	0.17	0.002	7343386
Moisture	%							11	1.0	7336947
Available (CaCl2) pH	pH	9.92	7343722	8.00	7.62		7342578	7.87		7342578
WAD Cyanide (Free)	ug/g	<0.01	7342612	<0.01	<0.01	0.01	7342612	<0.01	0.01	7342612
Chromium (VI)	ug/g	<0.18	7342619	<0.18	<0.18	0.18	7342619	<0.18	0.18	7342619
Metals										
Hot Water Ext. Boron (B)	ug/g	0.12	7342580	<0.050	0.065	0.050	7341960	0.26	0.050	7342580
Acid Extractable Antimony (Sb)	ug/g	<0.20	7342630	<0.20	<0.20	0.20	7341716	<0.20	0.20	7342630
Acid Extractable Arsenic (As)	ug/g	1.2	7342630	<1.0	<1.0	1.0	7341716	1.6	1.0	7342630
Acid Extractable Barium (Ba)	ug/g	53	7342630	28	11	0.50	7341716	72	0.50	7342630
Acid Extractable Beryllium (Be)	ug/g	0.30	7342630	<0.20	<0.20	0.20	7341716	0.34	0.20	7342630
Acid Extractable Boron (B)	ug/g	<5.0	7342630	<5.0	<5.0	5.0	7341716	10	5.0	7342630
Acid Extractable Cadmium (Cd)	ug/g	0.11	7342630	<0.10	<0.10	0.10	7341716	0.21	0.10	7342630
Acid Extractable Chromium (Cr)	ug/g	13	7342630	6.7	6.4	1.0	7341716	10	1.0	7342630
Acid Extractable Cobalt (Co)	ug/g	4.1	7342630	2.2	1.2	0.10	7341716	3.8	0.10	7342630
Acid Extractable Copper (Cu)	ug/g	6.3	7342630	5.0	1.9	0.50	7341716	12	0.50	7342630
Acid Extractable Lead (Pb)	ug/g	4.2	7342630	2.0	1.3	1.0	7341716	8.9	1.0	7342630
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	7342630	<0.50	<0.50	0.50	7341716	0.56	0.50	7342630
Acid Extractable Nickel (Ni)	ug/g	7.3	7342630	4.3	2.1	0.50	7341716	20	0.50	7342630
Acid Extractable Selenium (Se)	ug/g	<0.50	7342630	<0.50	<0.50	0.50	7341716	<0.50	0.50	7342630
Acid Extractable Silver (Ag)	ug/g	<0.20	7342630	<0.20	<0.20	0.20	7341716	<0.20	0.20	7342630
Acid Extractable Thallium (Tl)	ug/g	0.068	7342630	<0.050	<0.050	0.050	7341716	0.061	0.050	7342630
Acid Extractable Uranium (U)	ug/g	0.47	7342630	0.39	0.31	0.050	7341716	0.97	0.050	7342630
Acid Extractable Vanadium (V)	ug/g	27	7342630	16	10	5.0	7341716	12	5.0	7342630
Acid Extractable Zinc (Zn)	ug/g	37	7342630	16	9.4	5.0	7341716	54	5.0	7342630
Acid Extractable Mercury (Hg)	ug/g	<0.050	7342630	<0.050	<0.050	0.050	7341716	<0.050	0.050	7342630

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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BV Labs Job #: C1C0381
Report Date: 2021/05/12

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PMK461		PMK462			PMK462		
Sampling Date		2021/04/26 14:50		2021/04/26 13:50			2021/04/26 13:50		
COC Number		339628		339628			339628		
	UNITS	BH21-11-2	QC Batch	BH21-12-3	RDL	QC Batch	BH21-12-3 Lab-Dup	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	0.28 (1)	7336687	0.73		7336687			
Inorganics									
Conductivity	mS/cm	0.15	7343386	0.31	0.002	7343386	0.31	0.002	7343386
Moisture	%	8.8	7336947	18	1.0	7336751			
Available (CaCl2) pH	pH	7.82	7342578	7.87		7342578			
WAD Cyanide (Free)	ug/g	<0.01	7342612	<0.01	0.01	7342612			
Chromium (VI)	ug/g	<0.18	7342619	<0.18	0.18	7342619			
Metals									
Hot Water Ext. Boron (B)	ug/g	0.11	7342580	0.43	0.050	7342580	0.43	0.050	7342580
Acid Extractable Antimony (Sb)	ug/g	<0.20	7342630	<0.20	0.20	7342630			
Acid Extractable Arsenic (As)	ug/g	1.1	7342630	2.4	1.0	7342630			
Acid Extractable Barium (Ba)	ug/g	34	7342630	49	0.50	7342630			
Acid Extractable Beryllium (Be)	ug/g	0.26	7342630	0.39	0.20	7342630			
Acid Extractable Boron (B)	ug/g	<5.0	7342630	<5.0	5.0	7342630			
Acid Extractable Cadmium (Cd)	ug/g	0.11	7342630	0.23	0.10	7342630			
Acid Extractable Chromium (Cr)	ug/g	8.1	7342630	12	1.0	7342630			
Acid Extractable Cobalt (Co)	ug/g	2.8	7342630	3.7	0.10	7342630			
Acid Extractable Copper (Cu)	ug/g	4.9	7342630	6.6	0.50	7342630			
Acid Extractable Lead (Pb)	ug/g	3.0	7342630	7.7	1.0	7342630			
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	7342630	<0.50	0.50	7342630			
Acid Extractable Nickel (Ni)	ug/g	6.5	7342630	8.0	0.50	7342630			
Acid Extractable Selenium (Se)	ug/g	<0.50	7342630	<0.50	0.50	7342630			
Acid Extractable Silver (Ag)	ug/g	<0.20	7342630	<0.20	0.20	7342630			
Acid Extractable Thallium (Tl)	ug/g	0.061	7342630	0.076	0.050	7342630			
Acid Extractable Uranium (U)	ug/g	0.47	7342630	0.41	0.050	7342630			
Acid Extractable Vanadium (V)	ug/g	15	7342630	23	5.0	7342630			
Acid Extractable Zinc (Zn)	ug/g	30	7342630	36	5.0	7342630			
Acid Extractable Mercury (Hg)	ug/g	<0.050	7342630	<0.050	0.050	7342630			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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BV Labs Job #: C1C0381
Report Date: 2021/05/12

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PMK463			PMK463			PMK464		
Sampling Date		2021/04/26 14:10			2021/04/26 14:10			2021/04/26 11:40		
COC Number		339628			339628			339628		
	UNITS	BH21-12-5	RDL	QC Batch	BH21-12-5 Lab-Dup	RDL	QC Batch	BH21-21-1	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.84		7336687				0.32 (1)		7336687
Inorganics										
Conductivity	mS/cm	0.16	0.002	7343386				0.14	0.002	7343806
Moisture	%	6.6	1.0	7336947						
Available (CaCl2) pH	pH	7.87		7342578	7.88		7342578	7.89		7342578
WAD Cyanide (Free)	ug/g	<0.01	0.01	7342612	<0.01	0.01	7342612	<0.01	0.01	7342612
Chromium (VI)	ug/g	<0.18	0.18	7342619	<0.18	0.18	7342619	<0.18	0.18	7342619
Metals										
Hot Water Ext. Boron (B)	ug/g	0.11	0.050	7342580				0.13	0.050	7341960
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7342630				<0.20	0.20	7341716
Acid Extractable Arsenic (As)	ug/g	<1.0	1.0	7342630				1.1	1.0	7341716
Acid Extractable Barium (Ba)	ug/g	42	0.50	7342630				30	0.50	7341716
Acid Extractable Beryllium (Be)	ug/g	0.21	0.20	7342630				<0.20	0.20	7341716
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7342630				<5.0	5.0	7341716
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7342630				<0.10	0.10	7341716
Acid Extractable Chromium (Cr)	ug/g	9.9	1.0	7342630				9.1	1.0	7341716
Acid Extractable Cobalt (Co)	ug/g	3.4	0.10	7342630				2.6	0.10	7341716
Acid Extractable Copper (Cu)	ug/g	5.2	0.50	7342630				6.7	0.50	7341716
Acid Extractable Lead (Pb)	ug/g	3.1	1.0	7342630				3.4	1.0	7341716
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7342630				0.67	0.50	7341716
Acid Extractable Nickel (Ni)	ug/g	27	0.50	7342630				6.2	0.50	7341716
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7342630				<0.50	0.50	7341716
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7342630				<0.20	0.20	7341716
Acid Extractable Thallium (Tl)	ug/g	0.063	0.050	7342630				0.052	0.050	7341716
Acid Extractable Uranium (U)	ug/g	0.40	0.050	7342630				0.57	0.050	7341716
Acid Extractable Vanadium (V)	ug/g	16	5.0	7342630				15	5.0	7341716
Acid Extractable Zinc (Zn)	ug/g	28	5.0	7342630				34	5.0	7341716
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7342630				<0.050	0.050	7341716

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PMK465	PMK467		
Sampling Date		2021/04/26 11:50	2021/04/22 12:30		
COC Number		339628	339628		
	UNITS	BH21-21-2	BH21-37-15	RDL	QC Batch
Calculated Parameters					
Sodium Adsorption Ratio	N/A	1.4	0.26 (1)		7336687
Inorganics					
Conductivity	mS/cm	0.26	0.17	0.002	7343386
Available (CaCl2) pH	pH	7.54	8.01		7342578
WAD Cyanide (Free)	ug/g	<0.01	<0.01	0.01	7342612
Chromium (VI)	ug/g	<0.18	<0.18	0.18	7342619
Metals					
Hot Water Ext. Boron (B)	ug/g	0.33	<0.050	0.050	7341960
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	0.20	7341716
Acid Extractable Arsenic (As)	ug/g	1.9	<1.0	1.0	7341716
Acid Extractable Barium (Ba)	ug/g	46	36	0.50	7341716
Acid Extractable Beryllium (Be)	ug/g	0.37	0.20	0.20	7341716
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	5.0	7341716
Acid Extractable Cadmium (Cd)	ug/g	0.19	<0.10	0.10	7341716
Acid Extractable Chromium (Cr)	ug/g	14	8.0	1.0	7341716
Acid Extractable Cobalt (Co)	ug/g	3.8	2.4	0.10	7341716
Acid Extractable Copper (Cu)	ug/g	7.7	4.5	0.50	7341716
Acid Extractable Lead (Pb)	ug/g	7.3	2.4	1.0	7341716
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	0.50	7341716
Acid Extractable Nickel (Ni)	ug/g	7.9	5.0	0.50	7341716
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	0.50	7341716
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	0.20	7341716
Acid Extractable Thallium (Tl)	ug/g	0.071	<0.050	0.050	7341716
Acid Extractable Uranium (U)	ug/g	0.61	5.3	0.050	7341716
Acid Extractable Vanadium (V)	ug/g	23	15	5.0	7341716
Acid Extractable Zinc (Zn)	ug/g	37	16	5.0	7341716
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	0.050	7341716

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

O.REG 153 PAHS (SOIL)

BV Labs ID		PMK442	PMK443			PMK444			PMK445		
Sampling Date		2021/04/21 10:20	2021/04/21 11:00			2021/04/21 12:45			2021/04/21 14:00		
COC Number		339628	339628			339628			339628		
	UNITS	BH21-51-1	BH21-51-4	RDL	QC Batch	BH21-38-1	RDL	QC Batch	BH21-38-4	RDL	QC Batch
Inorganics											
Moisture	%					10	1.0	7336947			
Calculated Parameters											
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	0.0071	7336688	<0.0071	0.0071	7336688	<0.0071	0.0071	7336688
Polyaromatic Hydrocarbons											
Acenaphthene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Acenaphthylene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Anthracene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Benzo(a)anthracene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Benzo(a)pyrene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Benzo(b/j)fluoranthene	ug/g	<0.0050	<0.0050	0.0050	7338060	0.011	0.0050	7338060	<0.0050	0.0050	7338060
Benzo(g,h,i)perylene	ug/g	<0.0050	<0.0050	0.0050	7338060	0.0076	0.0050	7338060	<0.0050	0.0050	7338060
Benzo(k)fluoranthene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Chrysene	ug/g	<0.0050	<0.0050	0.0050	7338060	0.0076	0.0050	7338060	<0.0050	0.0050	7338060
Dibenzo(a,h)anthracene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Fluoranthene	ug/g	<0.0050	<0.0050	0.0050	7338060	0.0075	0.0050	7338060	<0.0050	0.0050	7338060
Fluorene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
2-Methylnaphthalene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Naphthalene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Phenanthrene	ug/g	<0.0050	<0.0050	0.0050	7338060	0.0061	0.0050	7338060	<0.0050	0.0050	7338060
Pyrene	ug/g	<0.0050	<0.0050	0.0050	7338060	0.0080	0.0050	7338060	<0.0050	0.0050	7338060
Surrogate Recovery (%)											
D10-Anthracene	%	106	111		7338060	105		7338060	106		7338060
D14-Terphenyl (FS)	%	110	102		7338060	104		7338060	113		7338060
D8-Acenaphthylene	%	89	86		7338060	89		7338060	84		7338060

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 PAHS (SOIL)

BV Labs ID		PMK446		PMK447		PMK448		
Sampling Date		2021/04/21 15:00		2021/04/21 16:00		2021/04/22 15:00		
COC Number		339628		339628		339628		
	UNITS	BH21-38-7	QC Batch	BH21-38-11	QC Batch	BH21-22-1	RDL	QC Batch
Calculated Parameters								
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	7336688	<0.0071	7336688	<0.0071	0.0071	7336688
Polyaromatic Hydrocarbons								
Acenaphthene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Acenaphthylene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Anthracene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Benzo(a)anthracene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Benzo(a)pyrene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Benzo(b/j)fluoranthene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Benzo(g,h,i)perylene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Benzo(k)fluoranthene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Chrysene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Dibenzo(a,h)anthracene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Fluoranthene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Fluorene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
1-Methylnaphthalene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
2-Methylnaphthalene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Naphthalene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Phenanthrene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Pyrene	ug/g	<0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Surrogate Recovery (%)								
D10-Anthracene	%	113	7338060	98	7343770	105		7338060
D14-Terphenyl (FS)	%	102	7338060	112	7343770	100		7338060
D8-Acenaphthylene	%	87	7338060	90	7343770	89		7338060

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PAHS (SOIL)

BV Labs ID		PMK449			PMK450	PMK451			PMK452		
Sampling Date		2021/04/22 15:10			2021/04/22 09:00	2021/04/22 09:30			2021/04/22 12:00		
COC Number		339628			339628	339628			339628		
	UNITS	BH21-22-2	RDL	QC Batch	BH21-37-1	BH21-37-3	RDL	QC Batch	BH21-37-8	RDL	QC Batch
Inorganics											
Moisture	%	4.1	1.0	7336947					7.9	1.0	7336751
Calculated Parameters											
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	0.0071	7336688	<0.0071	<0.0071	0.0071	7336688	<0.0071	0.0071	7336688
Polyaromatic Hydrocarbons											
Acenaphthene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Acenaphthylene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Anthracene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Benzo(a)anthracene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Benzo(a)pyrene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Benzo(b/j)fluoranthene	ug/g	<0.0050	0.0050	7338060	0.0054	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Chrysene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Fluoranthene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Fluorene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
1-Methylnaphthalene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
2-Methylnaphthalene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Naphthalene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Phenanthrene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Pyrene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Surrogate Recovery (%)											
D10-Anthracene	%	112		7338060	106	112		7338060	114		7338060
D14-Terphenyl (FS)	%	115		7338060	97	115		7338060	114		7338060
D8-Acenaphthylene	%	88		7338060	85	82		7338060	77		7338060

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PAHS (SOIL)

BV Labs ID		PMK452			PMK453	PMK454			PMK455		
Sampling Date		2021/04/22 12:00			2021/04/23 11:15	2021/04/23 11:30			2021/04/23 08:30		
COC Number		339628			339628	339628			339628		
	UNITS	BH21-37-8 Lab-Dup	RDL	QC Batch	BH21-26-1	BH21-26-3	RDL	QC Batch	BH21-30-1	RDL	QC Batch
Inorganics											
Moisture	%	7.6	1.0	7336751					10	1.0	7336751
Calculated Parameters											
Methylnaphthalene, 2-(1-)	ug/g				<0.0071	0.030	0.0071	7336688	<0.0071	0.0071	7336688
Polyaromatic Hydrocarbons											
Acenaphthene	ug/g				<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Acenaphthylene	ug/g				<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Anthracene	ug/g				<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Benzo(a)anthracene	ug/g				<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Benzo(a)pyrene	ug/g				<0.0050	<0.0050	0.0050	7338060	0.0057	0.0050	7338060
Benzo(b/j)fluoranthene	ug/g				<0.0050	<0.0050	0.0050	7338060	0.0095	0.0050	7338060
Benzo(g,h,i)perylene	ug/g				<0.0050	<0.0050	0.0050	7338060	0.0099	0.0050	7338060
Benzo(k)fluoranthene	ug/g				<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Chrysene	ug/g				<0.0050	<0.0050	0.0050	7338060	0.0061	0.0050	7338060
Dibenzo(a,h)anthracene	ug/g				<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Fluoranthene	ug/g				<0.0050	<0.0050	0.0050	7338060	0.016	0.0050	7338060
Fluorene	ug/g				<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Indeno(1,2,3-cd)pyrene	ug/g				<0.0050	<0.0050	0.0050	7338060	0.0058	0.0050	7338060
1-Methylnaphthalene	ug/g				<0.0050	0.015	0.0050	7338060	<0.0050	0.0050	7338060
2-Methylnaphthalene	ug/g				<0.0050	0.015	0.0050	7338060	<0.0050	0.0050	7338060
Naphthalene	ug/g				<0.0050	<0.0050	0.0050	7338060	<0.0050	0.0050	7338060
Phenanthrene	ug/g				<0.0050	0.014	0.0050	7338060	0.012	0.0050	7338060
Pyrene	ug/g				<0.0050	<0.0050	0.0050	7338060	0.012	0.0050	7338060
Surrogate Recovery (%)											
D10-Anthracene	%				108	101		7338060	102		7338060
D14-Terphenyl (FS)	%				107	113		7338060	108		7338060
D8-Acenaphthylene	%				84	87		7338060	90		7338060

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PAHS (SOIL)

BV Labs ID		PMK456	PMK457			PMK458		PMK459		
Sampling Date		2021/04/23 09:00	2021/04/23 09:15			2021/04/23 09:30		2021/04/23 10:00		
COC Number		339628	339628			339628		339628		
	UNITS	BH21-30-4	BH21-30-6	RDL	QC Batch	BH21-30-7	QC Batch	BH21-30-10	RDL	QC Batch
Inorganics										
Moisture	%	8.4	18	1.0	7336751					
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	0.0071	7336688	<0.0071	7336688	<0.0071	0.0071	7336688
Polyaromatic Hydrocarbons										
Acenaphthene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Acenaphthylene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Anthracene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Benzo(a)anthracene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Benzo(a)pyrene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Benzo(b/j)fluoranthene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Benzo(g,h,i)perylene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Benzo(k)fluoranthene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Chrysene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Dibenzo(a,h)anthracene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Fluoranthene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Fluorene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
2-Methylnaphthalene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Naphthalene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Phenanthrene	ug/g	0.0057	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Pyrene	ug/g	<0.0050	<0.0050	0.0050	7338060	<0.0050	7343770	<0.0050	0.0050	7338060
Surrogate Recovery (%)										
D10-Anthracene	%	116	109		7338060	87	7343770	112		7338060
D14-Terphenyl (FS)	%	114	109		7338060	83	7343770	106		7338060
D8-Acenaphthylene	%	91	87		7338060	76	7343770	82		7338060

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PAHS (SOIL)

BV Labs ID		PMK459			PMK464	PMK465	PMK467		
Sampling Date		2021/04/23 10:00			2021/04/26 11:40	2021/04/26 11:50	2021/04/22 12:30		
COC Number		339628			339628	339628	339628		
	UNITS	BH21-30-10 Lab-Dup	RDL	QC Batch	BH21-21-1	BH21-21-2	BH21-37-15	RDL	QC Batch
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g				0.031	0.034	<0.0071	0.0071	7336688
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	<0.0050	0.0050	7338060
Acenaphthylene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	<0.0050	0.0050	7338060
Anthracene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	<0.0050	0.0050	7338060
Benzo(a)anthracene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	<0.0050	0.0050	7338060
Benzo(a)pyrene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	<0.0050	0.0050	7338060
Benzo(b/j)fluoranthene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	<0.0050	0.0050	7338060
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	<0.0050	0.0050	7338060
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	<0.0050	0.0050	7338060
Chrysene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	<0.0050	0.0050	7338060
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	<0.0050	0.0050	7338060
Fluoranthene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	<0.0050	0.0050	7338060
Fluorene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	<0.0050	0.0050	7338060
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	<0.0050	0.0050	7338060
1-Methylnaphthalene	ug/g	<0.0050	0.0050	7338060	0.012	0.014	<0.0050	0.0050	7338060
2-Methylnaphthalene	ug/g	<0.0050	0.0050	7338060	0.019	0.020	<0.0050	0.0050	7338060
Naphthalene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	<0.0050	0.0050	7338060
Phenanthrene	ug/g	<0.0050	0.0050	7338060	0.0099	0.0071	<0.0050	0.0050	7338060
Pyrene	ug/g	<0.0050	0.0050	7338060	<0.0050	<0.0050	<0.0050	0.0050	7338060
Surrogate Recovery (%)									
D10-Anthracene	%	112		7338060	109	97	110		7338060
D14-Terphenyl (FS)	%	108		7338060	108	105	112		7338060
D8-Acenaphthylene	%	81		7338060	93	87	87		7338060

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PCBS (SOIL)

BV Labs ID		PMK442	PMK443			PMK444			PMK445		
Sampling Date		2021/04/21 10:20	2021/04/21 11:00			2021/04/21 12:45			2021/04/21 14:00		
COC Number		339628	339628			339628			339628		
	UNITS	BH21-51-1	BH21-51-4	RDL	QC Batch	BH21-38-1	RDL	QC Batch	BH21-38-4	RDL	QC Batch
Inorganics											
Moisture	%	7.2	4.0	1.0	7336947				7.6	1.0	7336947
PCBs											
Aroclor 1242	ug/g	<0.010	<0.010	0.010	7341736	<0.010	0.010	7341736	<0.010	0.010	7341736
Aroclor 1248	ug/g	<0.010	<0.010	0.010	7341736	<0.010	0.010	7341736	<0.010	0.010	7341736
Aroclor 1254	ug/g	<0.010	<0.010	0.010	7341736	<0.010	0.010	7341736	<0.010	0.010	7341736
Aroclor 1260	ug/g	<0.010	<0.010	0.010	7341736	<0.010	0.010	7341736	<0.010	0.010	7341736
Total PCB	ug/g	<0.010	<0.010	0.010	7341736	<0.010	0.010	7341736	<0.010	0.010	7341736
Surrogate Recovery (%)											
Decachlorobiphenyl	%	103	111		7341736	107		7341736	110		7341736

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs ID		PMK446			PMK447		PMK448		PMK449		
Sampling Date		2021/04/21 15:00			2021/04/21 16:00		2021/04/22 15:00		2021/04/22 15:10		
COC Number		339628			339628		339628		339628		
	UNITS	BH21-38-7	RDL	QC Batch	BH21-38-11	QC Batch	BH21-22-1	QC Batch	BH21-22-2	RDL	QC Batch
Inorganics											
Moisture	%	8.7	1.0	7336947							
PCBs											
Aroclor 1242	ug/g	<0.010	0.010	7341736	<0.010	7341736	<0.010	7341814	<0.010	0.010	7341736
Aroclor 1248	ug/g	<0.010	0.010	7341736	<0.010	7341736	<0.010	7341814	<0.010	0.010	7341736
Aroclor 1254	ug/g	<0.010	0.010	7341736	<0.010	7341736	<0.010	7341814	<0.010	0.010	7341736
Aroclor 1260	ug/g	<0.010	0.010	7341736	<0.010	7341736	<0.010	7341814	<0.010	0.010	7341736
Total PCB	ug/g	<0.010	0.010	7341736	<0.010	7341736	<0.010	7341814	<0.010	0.010	7341736
Surrogate Recovery (%)											
Decachlorobiphenyl	%	110		7341736	108	7341736	97	7341814	104		7341736

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PCBS (SOIL)

BV Labs ID		PMK450			PMK451			PMK451		
Sampling Date		2021/04/22 09:00			2021/04/22 09:30			2021/04/22 09:30		
COC Number		339628			339628			339628		
	UNITS	BH21-37-1	RDL	QC Batch	BH21-37-3	RDL	QC Batch	BH21-37-3 Lab-Dup	RDL	QC Batch
Inorganics										
Moisture	%				6.5	1.0	7336947	6.6	1.0	7336947
PCBs										
Aroclor 1242	ug/g	<0.010	0.010	7341814	<0.010	0.010	7341736			
Aroclor 1248	ug/g	<0.010	0.010	7341814	<0.010	0.010	7341736			
Aroclor 1254	ug/g	<0.010	0.010	7341814	<0.010	0.010	7341736			
Aroclor 1260	ug/g	<0.010	0.010	7341814	<0.010	0.010	7341736			
Total PCB	ug/g	<0.010	0.010	7341814	<0.010	0.010	7341736			
Surrogate Recovery (%)										
Decachlorobiphenyl	%	101		7341814	112		7341736			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

BV Labs ID		PMK452			PMK453		PMK454		
Sampling Date		2021/04/22 12:00			2021/04/23 11:15		2021/04/23 11:30		
COC Number		339628			339628		339628		
	UNITS	BH21-37-8	RDL	QC Batch	BH21-26-1	QC Batch	BH21-26-3	RDL	QC Batch
Inorganics									
Moisture	%				9.5	7336947	6.1	1.0	7336751
PCBs									
Aroclor 1242	ug/g	<0.010	0.010	7341736	<0.010	7341736	<0.010	0.010	7341736
Aroclor 1248	ug/g	<0.010	0.010	7341736	<0.010	7341736	<0.010	0.010	7341736
Aroclor 1254	ug/g	<0.010	0.010	7341736	<0.010	7341736	<0.010	0.010	7341736
Aroclor 1260	ug/g	<0.010	0.010	7341736	<0.010	7341736	<0.010	0.010	7341736
Total PCB	ug/g	<0.010	0.010	7341736	<0.010	7341736	<0.010	0.010	7341736
Surrogate Recovery (%)									
Decachlorobiphenyl	%	107		7341736	113	7341736	97		7341736

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PCBS (SOIL)

BV Labs ID		PMK455		PMK456		PMK457			PMK458		
Sampling Date		2021/04/23 08:30		2021/04/23 09:00		2021/04/23 09:15			2021/04/23 09:30		
COC Number		339628		339628		339628			339628		
	UNITS	BH21-30-1	QC Batch	BH21-30-4	QC Batch	BH21-30-6	RDL	QC Batch	BH21-30-7	RDL	QC Batch
Inorganics											
Moisture	%								6.3	1.0	7336947
PCBs											
Aroclor 1242	ug/g	<0.010	7341814	<0.010	7341736	<0.010	0.010	7341814	<0.010	0.010	7341736
Aroclor 1248	ug/g	<0.010	7341814	<0.010	7341736	<0.010	0.010	7341814	<0.010	0.010	7341736
Aroclor 1254	ug/g	<0.010	7341814	<0.010	7341736	<0.010	0.010	7341814	<0.010	0.010	7341736
Aroclor 1260	ug/g	<0.010	7341814	<0.010	7341736	<0.010	0.010	7341814	<0.010	0.010	7341736
Total PCB	ug/g	<0.010	7341814	<0.010	7341736	<0.010	0.010	7341814	<0.010	0.010	7341736
Surrogate Recovery (%)											
Decachlorobiphenyl	%	105	7341814	108	7341736	103		7341814	112		7341736

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs ID		PMK458			PMK459			PMK460	PMK461		
Sampling Date		2021/04/23 09:30			2021/04/23 10:00			2021/04/26 14:40	2021/04/26 14:50		
COC Number		339628			339628			339628	339628		
	UNITS	BH21-30-7 Lab-Dup	RDL	QC Batch	BH21-30-10	RDL	QC Batch	BH21-11-1	BH21-11-2	RDL	QC Batch
Inorganics											
Moisture	%				15	1.0	7336751				
PCBs											
Aroclor 1242	ug/g	<0.010	0.010	7341736	<0.010	0.010	7341736	<0.010	<0.010	0.010	7341736
Aroclor 1248	ug/g	<0.010	0.010	7341736	<0.010	0.010	7341736	<0.010	<0.010	0.010	7341736
Aroclor 1254	ug/g	<0.010	0.010	7341736	<0.010	0.010	7341736	<0.010	<0.010	0.010	7341736
Aroclor 1260	ug/g	<0.010	0.010	7341736	<0.010	0.010	7341736	<0.010	<0.010	0.010	7341736
Total PCB	ug/g	<0.010	0.010	7341736	<0.010	0.010	7341736	<0.010	<0.010	0.010	7341736
Surrogate Recovery (%)											
Decachlorobiphenyl	%	109		7341736	110		7341736	95	103		7341736

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C0381
Report Date: 2021/05/12

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PCBS (SOIL)

BV Labs ID		PMK462		PMK463			PMK464		PMK465		
Sampling Date		2021/04/26 13:50		2021/04/26 14:10			2021/04/26 11:40		2021/04/26 11:50		
COC Number		339628		339628			339628		339628		
	UNITS	BH21-12-3	QC Batch	BH21-12-5	RDL	QC Batch	BH21-21-1	QC Batch	BH21-21-2	RDL	QC Batch
Inorganics											
Moisture	%						2.9	7336947	27	1.0	7336751
PCBs											
Aroclor 1242	ug/g	<0.010	7341814	<0.010	0.010	7341736	<0.010	7341736	<0.010	0.010	7341736
Aroclor 1248	ug/g	<0.010	7341814	<0.010	0.010	7341736	<0.010	7341736	<0.010	0.010	7341736
Aroclor 1254	ug/g	<0.010	7341814	<0.010	0.010	7341736	<0.010	7341736	<0.010	0.010	7341736
Aroclor 1260	ug/g	<0.010	7341814	<0.010	0.010	7341736	<0.010	7341736	<0.010	0.010	7341736
Total PCB	ug/g	<0.010	7341814	<0.010	0.010	7341736	<0.010	7341736	<0.010	0.010	7341736
Surrogate Recovery (%)											
Decachlorobiphenyl	%	112	7341814	106		7341736	105	7341736	104		7341736

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs ID		PMK467		
Sampling Date		2021/04/22 12:30		
COC Number		339628		
	UNITS	BH21-37-15	RDL	QC Batch
PCBs				
Aroclor 1242	ug/g	<0.010	0.010	7341736
Aroclor 1248	ug/g	<0.010	0.010	7341736
Aroclor 1254	ug/g	<0.010	0.010	7341736
Aroclor 1260	ug/g	<0.010	0.010	7341736
Total PCB	ug/g	<0.010	0.010	7341736
Surrogate Recovery (%)				
Decachlorobiphenyl	%	103		7341736

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C0381
Report Date: 2021/05/12

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PMK442			PMK442			PMK443	PMK444		
Sampling Date		2021/04/21 10:20			2021/04/21 10:20			2021/04/21 11:00	2021/04/21 12:45		
COC Number		339628			339628			339628	339628		
	UNITS	BH21-51-1	RDL	QC Batch	BH21-51-1 Lab-Dup	RDL	QC Batch	BH21-51-4	BH21-38-1	RDL	QC Batch
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	0.020	7337234	<0.020	0.020	7337234	<0.020	<0.020	0.020	7337234
Toluene	ug/g	<0.020	0.020	7337234	<0.020	0.020	7337234	<0.020	<0.020	0.020	7337234
Ethylbenzene	ug/g	<0.020	0.020	7337234	<0.020	0.020	7337234	<0.020	<0.020	0.020	7337234
o-Xylene	ug/g	<0.020	0.020	7337234	<0.020	0.020	7337234	<0.020	<0.020	0.020	7337234
p+m-Xylene	ug/g	<0.040	0.040	7337234	<0.040	0.040	7337234	<0.040	<0.040	0.040	7337234
Total Xylenes	ug/g	<0.040	0.040	7337234	<0.040	0.040	7337234	<0.040	<0.040	0.040	7337234
F1 (C6-C10)	ug/g	<10	10	7337234	<10	10	7337234	<10	<10	10	7337234
F1 (C6-C10) - BTEX	ug/g	<10	10	7337234	<10	10	7337234	<10	<10	10	7337234
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	15	10	7336926				<10	<10	10	7336926
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7336926				<50	55	50	7336926
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7336926				<50	<50	50	7336926
Reached Baseline at C50	ug/g	Yes		7336926				Yes	Yes		7336926
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	101		7337234	99		7337234	100	99		7337234
4-Bromofluorobenzene	%	97		7337234	100		7337234	101	104		7337234
D10-o-Xylene	%	89		7337234	80		7337234	94	91		7337234
D4-1,2-Dichloroethane	%	102		7337234	103		7337234	102	100		7337234
o-Terphenyl	%	89		7336926				95	91		7336926

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PMK445	PMK446			PMK447			PMK448		
Sampling Date		2021/04/21 14:00	2021/04/21 15:00			2021/04/21 16:00			2021/04/22 15:00		
COC Number		339628	339628			339628			339628		
	UNITS	BH21-38-4	BH21-38-7	RDL	QC Batch	BH21-38-11	RDL	QC Batch	BH21-22-1	RDL	QC Batch
Inorganics											
Moisture	%					5.5	1.0	7336947			
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	<0.020	0.020	7337234	<0.020	0.020	7337234	<0.020	0.020	7337234
Toluene	ug/g	<0.020	<0.020	0.020	7337234	<0.020	0.020	7337234	<0.020	0.020	7337234
Ethylbenzene	ug/g	<0.020	<0.020	0.020	7337234	<0.020	0.020	7337234	<0.020	0.020	7337234
o-Xylene	ug/g	<0.020	<0.020	0.020	7337234	<0.020	0.020	7337234	<0.020	0.020	7337234
p+m-Xylene	ug/g	<0.040	<0.040	0.040	7337234	<0.040	0.040	7337234	<0.040	0.040	7337234
Total Xylenes	ug/g	<0.040	<0.040	0.040	7337234	<0.040	0.040	7337234	<0.040	0.040	7337234
F1 (C6-C10)	ug/g	<10	<10	10	7337234	<10	10	7337234	<10	10	7337234
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	7337234	<10	10	7337234	<10	10	7337234
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	11	10	7336926	<10	10	7336926	10	10	7336926
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	7336926	<50	50	7336926	<50	50	7336926
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	7336926	<50	50	7336926	<50	50	7336926
Reached Baseline at C50	ug/g	Yes	Yes		7336926	Yes		7336926	Yes		7336926
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	101	102		7337234	100		7337234	101		7337234
4-Bromofluorobenzene	%	99	98		7337234	98		7337234	85		7337234
D10-o-Xylene	%	85	89		7337234	82		7337234	81		7337234
D4-1,2-Dichloroethane	%	103	104		7337234	104		7337234	103		7337234
o-Terphenyl	%	94	95		7336926	94		7336926	91		7336926

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PMK449		PMK450		PMK451	PMK452	PMK453		
Sampling Date		2021/04/22 15:10		2021/04/22 09:00		2021/04/22 09:30	2021/04/22 12:00	2021/04/23 11:15		
COC Number		339628		339628		339628	339628	339628		
	UNITS	BH21-22-2	QC Batch	BH21-37-1	QC Batch	BH21-37-3	BH21-37-8	BH21-26-1	RDL	QC Batch
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	7337234	<0.020	7337234	<0.020	<0.020	<0.020	0.020	7337234
Toluene	ug/g	<0.020	7337234	<0.020	7337234	<0.020	<0.020	<0.020	0.020	7337234
Ethylbenzene	ug/g	<0.020	7337234	<0.020	7337234	<0.020	<0.020	<0.020	0.020	7337234
o-Xylene	ug/g	<0.020	7337234	<0.020	7337234	<0.020	<0.020	<0.020	0.020	7337234
p+m-Xylene	ug/g	<0.040	7337234	<0.040	7337234	<0.040	<0.040	<0.040	0.040	7337234
Total Xylenes	ug/g	<0.040	7337234	<0.040	7337234	<0.040	<0.040	<0.040	0.040	7337234
F1 (C6-C10)	ug/g	<10	7337234	<10	7337234	<10	<10	<10	10	7337234
F1 (C6-C10) - BTEX	ug/g	<10	7337234	<10	7337234	<10	<10	<10	10	7337234
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	11	7336926	<10	7338543	<10	<10	<10	10	7336926
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7336926	<50	7338543	<50	<50	<50	50	7336926
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7336926	<50	7338543	<50	<50	<50	50	7336926
Reached Baseline at C50	ug/g	Yes	7336926	Yes	7338543	Yes	Yes	Yes		7336926
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	100	7337234	101	7337234	102	102	98		7337234
4-Bromofluorobenzene	%	101	7337234	86	7337234	99	99	94		7337234
D10-o-Xylene	%	85	7337234	86	7337234	79	82	82		7337234
D4-1,2-Dichloroethane	%	100	7337234	102	7337234	103	102	99		7337234
o-Terphenyl	%	95	7336926	89	7338543	92	95	95		7336926

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PMK453			PMK454	PMK455	PMK456	PMK457	PMK458		
Sampling Date		2021/04/23 11:15			2021/04/23 11:30	2021/04/23 08:30	2021/04/23 09:00	2021/04/23 09:15	2021/04/23 09:30		
COC Number		339628			339628	339628	339628	339628	339628		
	UNITS	BH21-26-1 Lab-Dup	RDL	QC Batch	BH21-26-3	BH21-30-1	BH21-30-4	BH21-30-6	BH21-30-7	RDL	QC Batch
BTEX & F1 Hydrocarbons											
Benzene	ug/g				<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7337234
Toluene	ug/g				<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7337234
Ethylbenzene	ug/g				<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7337234
o-Xylene	ug/g				<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7337234
p+m-Xylene	ug/g				<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7337234
Total Xylenes	ug/g				<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7337234
F1 (C6-C10)	ug/g				<10	<10	<10	<10	<10	10	7337234
F1 (C6-C10) - BTEX	ug/g				<10	<10	<10	<10	<10	10	7337234
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7336926	25	<10	<10	<10	<10	10	7336926
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7336926	88	100	<50	<50	<50	50	7336926
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7336926	<50	69	<50	<50	<50	50	7336926
Reached Baseline at C50	ug/g	Yes		7336926	Yes	Yes	Yes	Yes	Yes		7336926
Surrogate Recovery (%)											
1,4-Difluorobenzene	%				102	101	102	102	101		7337234
4-Bromofluorobenzene	%				91	101	88	93	100		7337234
D10-o-Xylene	%				90	85	89	83	87		7337234
D4-1,2-Dichloroethane	%				101	101	104	102	100		7337234
o-Terphenyl	%	92		7336926	96	94	95	95	96		7336926

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C0381
Report Date: 2021/05/12

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PMK459		PMK460	PMK461		PMK462		PMK463		
Sampling Date		2021/04/23 10:00		2021/04/26 14:40	2021/04/26 14:50		2021/04/26 13:50		2021/04/26 14:10		
COC Number		339628		339628	339628		339628		339628		
	UNITS	BH21-30-10	QC Batch	BH21-11-1	BH21-11-2	QC Batch	BH21-12-3	QC Batch	BH21-12-5	RDL	QC Batch
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	7337234	<0.020	<0.020	7337234	<0.020	7339553	<0.020	0.020	7339553
Toluene	ug/g	<0.020	7337234	<0.020	<0.020	7337234	<0.020	7339553	<0.020	0.020	7339553
Ethylbenzene	ug/g	<0.020	7337234	<0.020	<0.020	7337234	<0.020	7339553	<0.020	0.020	7339553
o-Xylene	ug/g	<0.020	7337234	<0.020	<0.020	7337234	<0.020	7339553	<0.020	0.020	7339553
p+m-Xylene	ug/g	<0.040	7337234	0.056	<0.040	7337234	<0.040	7339553	<0.040	0.040	7339553
Total Xylenes	ug/g	<0.040	7337234	0.056	<0.040	7337234	<0.040	7339553	<0.040	0.040	7339553
F1 (C6-C10)	ug/g	<10	7337234	20	<10	7337234	<10	7339553	<10	10	7339553
F1 (C6-C10) - BTEX	ug/g	<10	7337234	20	<10	7337234	<10	7339553	<10	10	7339553
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7338543	13	<10	7336926	13	7338543	<10	10	7336926
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7338543	<50	<50	7336926	<50	7338543	<50	50	7336926
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7338543	<50	<50	7336926	<50	7338543	<50	50	7336926
Reached Baseline at C50	ug/g	Yes	7338543	Yes	Yes	7336926	Yes	7338543	Yes		7336926
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	102	7337234	96	103	7337234	100	7339553	101		7339553
4-Bromofluorobenzene	%	97	7337234	101	88	7337234	90	7339553	89		7339553
D10-o-Xylene	%	82	7337234	83	87	7337234	94	7339553	84		7339553
D4-1,2-Dichloroethane	%	102	7337234	97	108	7337234	98	7339553	100		7339553
o-Terphenyl	%	94	7338543	94	95	7336926	93	7338543	97		7336926

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PMK464		PMK465			PMK467		
Sampling Date		2021/04/26 11:40		2021/04/26 11:50			2021/04/22 12:30		
COC Number		339628		339628			339628		
	UNITS	BH21-21-1	QC Batch	BH21-21-2	RDL	QC Batch	BH21-37-15	RDL	QC Batch
Inorganics									
Moisture	%						7.2	1.0	7336751
BTEX & F1 Hydrocarbons									
Benzene	ug/g	0.029	7339553	<0.020	0.020	7339553	<0.020	0.020	7339553
Toluene	ug/g	0.040	7339553	<0.020	0.020	7339553	<0.020	0.020	7339553
Ethylbenzene	ug/g	0.11	7339553	<0.020	0.020	7339553	<0.020	0.020	7339553
o-Xylene	ug/g	0.10	7339553	<0.020	0.020	7339553	<0.020	0.020	7339553
p+m-Xylene	ug/g	0.87	7339553	<0.040	0.040	7339553	<0.040	0.040	7339553
Total Xylenes	ug/g	0.97	7339553	<0.040	0.040	7339553	<0.040	0.040	7339553
F1 (C6-C10)	ug/g	77	7339553	<10	10	7339553	<10	10	7339553
F1 (C6-C10) - BTEX	ug/g	75	7339553	<10	10	7339553	<10	10	7339553
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	19	7336926	<10	10	7338543	<10	10	7338543
F3 (C16-C34 Hydrocarbons)	ug/g	63	7336926	<50	50	7338543	<50	50	7338543
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7336926	<50	50	7338543	<50	50	7338543
Reached Baseline at C50	ug/g	Yes	7336926	Yes		7338543	Yes		7338543
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	96	7339553	104		7339553	100		7339553
4-Bromofluorobenzene	%	96	7339553	97		7339553	95		7339553
D10-o-Xylene	%	95	7339553	105		7339553	86		7339553
D4-1,2-Dichloroethane	%	93	7339553	106		7339553	102		7339553
o-Terphenyl	%	91	7336926	92		7338543	94		7338543

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 SEMIVOLATILES PACKAGE (SOIL)

BV Labs ID		PMK460		PMK461	PMK462	PMK463		
Sampling Date		2021/04/26 14:40		2021/04/26 14:50	2021/04/26 13:50	2021/04/26 14:10		
COC Number		339628		339628	339628	339628		
	UNITS	BH21-11-1	RDL	BH21-11-2	BH21-12-3	BH21-12-5	RDL	QC Batch
Semivolatile Organics								
1,2,4-Trichlorobenzene	ug/g	<0.1	0.1	<0.05	<0.05	<0.05	0.05	7341628
1-Methylnaphthalene	ug/g	0.13	0.06	<0.03	<0.03	<0.03	0.03	7341628
2,4,5-Trichlorophenol	ug/g	<0.2	0.2	<0.08	<0.08	<0.08	0.08	7341628
2,4,6-Trichlorophenol	ug/g	<0.2	0.2	<0.1	<0.1	<0.1	0.1	7341628
2,4-Dichlorophenol	ug/g	<0.2	0.2	<0.1	<0.1	<0.1	0.1	7341628
2,4-Dimethylphenol	ug/g	<0.4	0.4	<0.2	<0.2	<0.2	0.2	7341628
2,4-Dinitrophenol	ug/g	<1	1	<0.5	<0.5	<0.5	0.5	7341628
2,4-Dinitrotoluene	ug/g	<0.2	0.2	<0.1	<0.1	<0.1	0.1	7341628
2,6-Dinitrotoluene	ug/g	<0.2	0.2	<0.1	<0.1	<0.1	0.1	7341628
2-Chlorophenol	ug/g	<0.2	0.2	<0.08	<0.08	<0.08	0.08	7341628
2-Methylnaphthalene	ug/g	0.17	0.06	<0.03	<0.03	<0.03	0.03	7341628
3,3'-Dichlorobenzidine	ug/g	<1	1	<0.5	<0.5	<0.5	0.5	7341628
Acenaphthene	ug/g	<0.06	0.06	<0.03	<0.03	<0.03	0.03	7341628
Acenaphthylene	ug/g	<0.1	0.1	<0.05	<0.05	<0.05	0.05	7341628
Anthracene	ug/g	<0.06	0.06	<0.03	<0.03	<0.03	0.03	7341628
Benzo(a)anthracene	ug/g	<0.1	0.1	<0.05	<0.05	<0.05	0.05	7341628
Benzo(a)pyrene	ug/g	<0.1	0.1	<0.05	<0.05	<0.05	0.05	7341628
Benzo(b/j)fluoranthene	ug/g	<0.2	0.2	<0.1	<0.1	<0.1	0.1	7341628
Benzo(g,h,i)perylene	ug/g	<0.2	0.2	<0.1	<0.1	<0.1	0.1	7341628
Benzo(k)fluoranthene	ug/g	<0.06	0.06	<0.03	<0.03	<0.03	0.03	7341628
Biphenyl	ug/g	<0.1	0.1	<0.05	<0.05	<0.05	0.05	7341628
Bis(2-chloroethyl)ether	ug/g	<0.4	0.4	<0.2	<0.2	<0.2	0.2	7341628
Bis(2-chloroisopropyl)ether	ug/g	<0.2	0.2	<0.1	<0.1	<0.1	0.1	7341628
Bis(2-ethylhexyl)phthalate	ug/g	<2	2	<1	<1	<1	1	7341628
Chrysene	ug/g	<0.1	0.1	<0.05	<0.05	<0.05	0.05	7341628
Dibenzo(a,h)anthracene	ug/g	<0.1	0.1	<0.05	<0.05	<0.05	0.05	7341628
Diethyl phthalate	ug/g	<0.4	0.4	<0.2	<0.2	<0.2	0.2	7341628
Dimethyl phthalate	ug/g	<0.4	0.4	<0.2	<0.2	<0.2	0.2	7341628
Fluoranthene	ug/g	<0.1	0.1	<0.05	<0.05	<0.05	0.05	7341628
Fluorene	ug/g	<0.06	0.06	<0.03	<0.03	<0.03	0.03	7341628
Indeno(1,2,3-cd)pyrene	ug/g	<0.2	0.2	<0.08	<0.08	<0.08	0.08	7341628
Naphthalene	ug/g	<0.06	0.06	<0.03	<0.03	<0.03	0.03	7341628
p-Chloroaniline	ug/g	<0.4	0.4	<0.2	<0.2	<0.2	0.2	7341628

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 SEMIVOLATILES PACKAGE (SOIL)

BV Labs ID		PMK460		PMK461	PMK462	PMK463		
Sampling Date		2021/04/26 14:40		2021/04/26 14:50	2021/04/26 13:50	2021/04/26 14:10		
COC Number		339628		339628	339628	339628		
	UNITS	BH21-11-1	RDL	BH21-11-2	BH21-12-3	BH21-12-5	RDL	QC Batch
Pentachlorophenol	ug/g	<0.2	0.2	<0.1	<0.1	<0.1	0.1	7341628
Phenanthrene	ug/g	<0.1	0.1	<0.05	<0.05	<0.05	0.05	7341628
Phenol	ug/g	<0.2	0.2	<0.09	<0.09	<0.09	0.09	7341628
Pyrene	ug/g	<0.1	0.1	<0.05	<0.05	<0.05	0.05	7341628
Calculated Parameters								
2,4- & 2,6-Dinitrotoluene	ug/g	<0.28	0.28	<0.14	<0.14	<0.14	0.14	7336478
Methylnaphthalene, 2-(1-)	ug/g	0.31	0.085	<0.042	<0.042	<0.042	0.042	7336474
Surrogate Recovery (%)								
2,4,6-Tribromophenol	%	55		55	55	57		7341628
2-Fluorobiphenyl	%	72		50	51	58		7341628
D14-Terphenyl (FS)	%	82		85	84	83		7341628
D5-Nitrobenzene	%	86		43 (1)	58	61		7341628

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Surrogate recovery was below the lower control limit due to matrix interference. This may represent a low bias in some results.

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PETROLEUM HYDROCARBONS (CCME)

BV Labs ID		PMK466		
Sampling Date		2021/05/04 19:00		
COC Number		339628		
	UNITS	Trip Blank	RDL	QC Batch
BTEX & F1 Hydrocarbons				
Benzene	ug/g	<0.020	0.020	7342650
Toluene	ug/g	<0.020	0.020	7342650
Ethylbenzene	ug/g	<0.020	0.020	7342650
o-Xylene	ug/g	<0.020	0.020	7342650
p+m-Xylene	ug/g	<0.040	0.040	7342650
Total Xylenes	ug/g	<0.040	0.040	7342650
F1 (C6-C10)	ug/g	<10	10	7342650
F1 (C6-C10) - BTEX	ug/g	<10	10	7342650
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	98		7342650
4-Bromofluorobenzene	%	96		7342650
D10-o-Xylene	%	83		7342650
D4-1,2-Dichloroethane	%	102		7342650

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

TEST SUMMARY

BV Labs ID: PMK442
Sample ID: BH21-51-1
Matrix: Soil

Collected: 2021/04/21
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7341945	2021/05/08	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/06	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7341716	2021/05/08	2021/05/10	Daniel Teclu
Moisture	BAL	7336947	N/A	2021/05/06	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK442 Dup
Sample ID: BH21-51-1
Matrix: Soil

Collected: 2021/04/21
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali

BV Labs ID: PMK443
Sample ID: BH21-51-4
Matrix: Soil

Collected: 2021/04/21
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7341960	2021/05/08	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343806	2021/05/10	2021/05/11	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/06	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7341716	2021/05/08	2021/05/10	Daniel Teclu
Moisture	BAL	7336947	N/A	2021/05/06	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

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TEST SUMMARY

BV Labs ID: PMK444
Sample ID: BH21-38-1
Matrix: Soil

Collected: 2021/04/21
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7342580	2021/05/10	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/06	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7342630	2021/05/10	2021/05/10	Viviana Canzonieri
Moisture	BAL	7336947	N/A	2021/05/06	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK445
Sample ID: BH21-38-4
Matrix: Soil

Collected: 2021/04/21
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7341960	2021/05/08	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343806	2021/05/10	2021/05/11	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/06	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7341716	2021/05/08	2021/05/10	Daniel Teclu
Moisture	BAL	7336947	N/A	2021/05/06	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK445 Dup
Sample ID: BH21-38-4
Matrix: Soil

Collected: 2021/04/21
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	7341716	2021/05/08	2021/05/10	Daniel Teclu

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

TEST SUMMARY

BV Labs ID: PMK446
Sample ID: BH21-38-7
Matrix: Soil

Collected: 2021/04/21
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7341960	2021/05/08	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/06	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7341898	2021/05/08	2021/05/10	Viviana Canzonieri
Moisture	BAL	7336947	N/A	2021/05/06	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK446 Dup
Sample ID: BH21-38-7
Matrix: Soil

Collected: 2021/04/21
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7341960	2021/05/08	2021/05/10	Jolly John

BV Labs ID: PMK447
Sample ID: BH21-38-11
Matrix: Soil

Collected: 2021/04/21
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/11	Automated Statchk
Hot Water Extractable Boron	ICP	7342580	2021/05/10	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342606	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/06	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7342630	2021/05/10	2021/05/10	Viviana Canzonieri
Moisture	BAL	7336947	N/A	2021/05/06	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7343770	2021/05/10	2021/05/11	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

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TEST SUMMARY

BV Labs ID: PMK448
Sample ID: BH21-22-1
Matrix: Soil

Collected: 2021/04/22
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7342580	2021/05/10	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7339520	2021/05/07	2021/05/10	Aditiben Patel
Conductivity	AT	7343806	2021/05/10	2021/05/11	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342772	2021/05/10	2021/05/11	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/06	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7341716	2021/05/08	2021/05/10	Daniel Teclu
Moisture	BAL	7336751	N/A	2021/05/05	Kruti Jitesh Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341814	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7343523	2021/05/10	2021/05/10	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK449
Sample ID: BH21-22-2
Matrix: Soil

Collected: 2021/04/22
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7342580	2021/05/10	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342606	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342634	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/06	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7342630	2021/05/10	2021/05/10	Viviana Canzonieri
Moisture	BAL	7336947	N/A	2021/05/06	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK450
Sample ID: BH21-37-1
Matrix: Soil

Collected: 2021/04/22
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7342580	2021/05/10	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7339520	2021/05/07	2021/05/10	Aditiben Patel
Conductivity	AT	7343806	2021/05/10	2021/05/11	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342772	2021/05/10	2021/05/11	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

TEST SUMMARY

BV Labs ID: PMK450
Sample ID: BH21-37-1
Matrix: Soil

Collected: 2021/04/22
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7338543	2021/05/06	2021/05/07	Ksenia Trofimova
Acid Extractable Metals by ICPMS	ICP/MS	7341716	2021/05/08	2021/05/10	Daniel Teclu
Moisture	BAL	7336751	N/A	2021/05/05	Kruti Jitesh Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341814	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7343523	2021/05/10	2021/05/10	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK451
Sample ID: BH21-37-3
Matrix: Soil

Collected: 2021/04/22
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7341960	2021/05/08	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/06	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7341716	2021/05/08	2021/05/10	Daniel Teclu
Moisture	BAL	7336947	N/A	2021/05/06	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK451 Dup
Sample ID: BH21-37-3
Matrix: Soil

Collected: 2021/04/22
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7336947	N/A	2021/05/06	Gurpreet Kaur (ONT)

BV Labs ID: PMK452
Sample ID: BH21-37-8
Matrix: Soil

Collected: 2021/04/22
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7342580	2021/05/10	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342606	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342634	2021/05/10	2021/05/10	Lusine Khachatryan

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TEST SUMMARY

BV Labs ID: PMK452
Sample ID: BH21-37-8
Matrix: Soil

Collected: 2021/04/22
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/06	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7342630	2021/05/10	2021/05/10	Viviana Canzonieri
Moisture	BAL	7336751	N/A	2021/05/05	Kruti Jitesh Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7343722	2021/05/10	2021/05/10	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK452 Dup
Sample ID: BH21-37-8
Matrix: Soil

Collected: 2021/04/22
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7336751	N/A	2021/05/05	Kruti Jitesh Patel

BV Labs ID: PMK453
Sample ID: BH21-26-1
Matrix: Soil

Collected: 2021/04/23
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7341960	2021/05/08	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/06	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7341716	2021/05/08	2021/05/10	Daniel Teclu
Moisture	BAL	7336947	N/A	2021/05/06	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK453 Dup
Sample ID: BH21-26-1
Matrix: Soil

Collected: 2021/04/23
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/06	Dennis Ngondu

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TEST SUMMARY

BV Labs ID: PMK454
Sample ID: BH21-26-3
Matrix: Soil

Collected: 2021/04/23
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7341960	2021/05/08	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/07	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7341716	2021/05/08	2021/05/10	Daniel Teclu
Moisture	BAL	7336751	N/A	2021/05/05	Kruti Jitesh Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK455
Sample ID: BH21-30-1
Matrix: Soil

Collected: 2021/04/23
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7342580	2021/05/10	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/07	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7342630	2021/05/10	2021/05/10	Viviana Canzonieri
Moisture	BAL	7336751	N/A	2021/05/05	Kruti Jitesh Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341814	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK456
Sample ID: BH21-30-4
Matrix: Soil

Collected: 2021/04/23
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7342580	2021/05/10	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342634	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

TEST SUMMARY

BV Labs ID: PMK456
Sample ID: BH21-30-4
Matrix: Soil

Collected: 2021/04/23
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/07	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7342630	2021/05/10	2021/05/10	Viviana Canzonieri
Moisture	BAL	7336751	N/A	2021/05/05	Kruti Jitesh Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7343722	2021/05/10	2021/05/10	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK457
Sample ID: BH21-30-6
Matrix: Soil

Collected: 2021/04/23
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7342580	2021/05/10	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/07	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7342630	2021/05/10	2021/05/10	Viviana Canzonieri
Moisture	BAL	7336751	N/A	2021/05/05	Kruti Jitesh Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341814	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7343722	2021/05/10	2021/05/10	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK458
Sample ID: BH21-30-7
Matrix: Soil

Collected: 2021/04/23
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/11	Automated Statchk
Hot Water Extractable Boron	ICP	7341960	2021/05/08	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/07	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7341716	2021/05/08	2021/05/10	Daniel Teclu
Moisture	BAL	7336947	N/A	2021/05/06	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7343770	2021/05/10	2021/05/11	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

TEST SUMMARY

BV Labs ID: PMK458
Sample ID: BH21-30-7
Matrix: Soil

Collected: 2021/04/23
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK458 Dup
Sample ID: BH21-30-7
Matrix: Soil

Collected: 2021/04/23
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng

BV Labs ID: PMK459
Sample ID: BH21-30-10
Matrix: Soil

Collected: 2021/04/23
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7341960	2021/05/08	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7338543	2021/05/06	2021/05/07	Ksenia Trofimova
Acid Extractable Metals by ICPMS	ICP/MS	7341716	2021/05/08	2021/05/10	Daniel Teclu
Moisture	BAL	7336751	N/A	2021/05/05	Kruti Jitesh Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/06	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK459 Dup
Sample ID: BH21-30-10
Matrix: Soil

Collected: 2021/04/23
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj

BV Labs ID: PMK460
Sample ID: BH21-11-1
Matrix: Soil

Collected: 2021/04/26
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336474	N/A	2021/05/12	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	7341628	2021/05/08	2021/05/10	Milijana Avramovic
Hot Water Extractable Boron	ICP	7342580	2021/05/10	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

TEST SUMMARY

BV Labs ID: PMK460
Sample ID: BH21-11-1
Matrix: Soil

Collected: 2021/04/26
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Dinitrotoluene Sum	CALC	7336478	2021/05/12	2021/05/12	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/07	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7342630	2021/05/10	2021/05/10	Viviana Canzonieri
Moisture	BAL	7336947	N/A	2021/05/06	Gurpreet Kaur (ONT)
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK461
Sample ID: BH21-11-2
Matrix: Soil

Collected: 2021/04/26
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336474	N/A	2021/05/12	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	7341628	2021/05/08	2021/05/10	Milijana Avramovic
Hot Water Extractable Boron	ICP	7342580	2021/05/10	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Dinitrotoluene Sum	CALC	7336478	2021/05/12	2021/05/12	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7337234	N/A	2021/05/06	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/07	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7342630	2021/05/10	2021/05/10	Viviana Canzonieri
Moisture	BAL	7336947	N/A	2021/05/06	Gurpreet Kaur (ONT)
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK462
Sample ID: BH21-12-3
Matrix: Soil

Collected: 2021/04/26
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336474	N/A	2021/05/12	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	7341628	2021/05/08	2021/05/10	Milijana Avramovic
Hot Water Extractable Boron	ICP	7342580	2021/05/10	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Dinitrotoluene Sum	CALC	7336478	2021/05/12	2021/05/12	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7339553	N/A	2021/05/07	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7338543	2021/05/06	2021/05/07	Ksenia Trofimova

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TEST SUMMARY

BV Labs ID: PMK462
Sample ID: BH21-12-3
Matrix: Soil

Collected: 2021/04/26
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	7342630	2021/05/10	2021/05/10	Viviana Canzonieri
Moisture	BAL	7336751	N/A	2021/05/05	Kruti Jitesh Patel
Polychlorinated Biphenyl in Soil	GC/ECD	7341814	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK462 Dup
Sample ID: BH21-12-3
Matrix: Soil

Collected: 2021/04/26
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7342580	2021/05/10	2021/05/10	Jolly John
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal

BV Labs ID: PMK463
Sample ID: BH21-12-5
Matrix: Soil

Collected: 2021/04/26
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336474	N/A	2021/05/12	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	7341628	2021/05/08	2021/05/10	Milijana Avramovic
Hot Water Extractable Boron	ICP	7342580	2021/05/10	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Dinitrotoluene Sum	CALC	7336478	2021/05/12	2021/05/12	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7339553	N/A	2021/05/07	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/07	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7342630	2021/05/10	2021/05/10	Viviana Canzonieri
Moisture	BAL	7336947	N/A	2021/05/06	Gurpreet Kaur (ONT)
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK463 Dup
Sample ID: BH21-12-5
Matrix: Soil

Collected: 2021/04/26
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C0381
Report Date: 2021/05/12

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

TEST SUMMARY

BV Labs ID: PMK464
Sample ID: BH21-21-1
Matrix: Soil

Collected: 2021/04/26
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7341960	2021/05/08	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343806	2021/05/10	2021/05/11	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7339553	N/A	2021/05/07	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7336926	2021/05/06	2021/05/07	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7341716	2021/05/08	2021/05/10	Daniel Teclu
Moisture	BAL	7336947	N/A	2021/05/06	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK465
Sample ID: BH21-21-2
Matrix: Soil

Collected: 2021/04/26
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7341960	2021/05/08	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7339553	N/A	2021/05/07	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7338543	2021/05/06	2021/05/07	Ksenia Trofimova
Acid Extractable Metals by ICPMS	ICP/MS	7341716	2021/05/08	2021/05/10	Daniel Teclu
Moisture	BAL	7336751	N/A	2021/05/05	Kruti Jitesh Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

BV Labs ID: PMK466
Sample ID: Trip Blank
Matrix: Soil

Collected: 2021/05/04
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7342650	N/A	2021/05/10	Domnica Andronescu

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C0381
Report Date: 2021/05/12

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

TEST SUMMARY

BV Labs ID: PMK467
Sample ID: BH21-37-15
Matrix: Soil

Collected: 2021/04/22
Shipped:
Received: 2021/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7336688	N/A	2021/05/07	Automated Statchk
Hot Water Extractable Boron	ICP	7341960	2021/05/08	2021/05/10	Jolly John
Free (WAD) Cyanide	TECH	7342612	2021/05/10	2021/05/11	Aditiben Patel
Conductivity	AT	7343386	2021/05/10	2021/05/10	Amanpreet Sappal
Hexavalent Chromium in Soil by IC	IC/SPEC	7342619	2021/05/10	2021/05/10	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7339553	N/A	2021/05/07	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7338543	2021/05/06	2021/05/07	Ksenia Trofimova
Acid Extractable Metals by ICPMS	ICP/MS	7341716	2021/05/08	2021/05/10	Daniel Teclu
Moisture	BAL	7336751	N/A	2021/05/05	Kruti Jitesh Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7338060	2021/05/06	2021/05/07	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7341736	2021/05/08	2021/05/08	Li Peng
pH CaCl2 EXTRACT	AT	7342578	2021/05/10	2021/05/10	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7336687	N/A	2021/05/11	Automated Statchk

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.3°C
Package 2	-0.7°C

Sampling dates updated as per client request.

Sample PMK442 [BH21-51-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PMK444 [BH21-38-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PMK445 [BH21-38-4] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PMK447 [BH21-38-11] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PMK448 [BH21-22-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PMK449 [BH21-22-2] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PMK450 [BH21-37-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PMK451 [BH21-37-3] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PMK452 [BH21-37-8] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PMK453 [BH21-26-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PMK454 [BH21-26-3] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PMK455 [BH21-30-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PMK458 [BH21-30-7] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PMK459 [BH21-30-10] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PMK460 [BH21-11-1] : ABN Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Sample PMK466 [Trip Blank] : Sample analyzed for F1/BTEX as per client request.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7336751	GYA	RPD [PMK452-02]	Moisture	2021/05/05	3.9		%	20
7336926	DN0	Matrix Spike [PMK453-02]	o-Terphenyl	2021/05/06		91	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/06		100	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/05/06		106	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/05/06		109	%	50 - 130
7336926	DN0	Spiked Blank	o-Terphenyl	2021/05/06		93	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/06		101	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/05/06		106	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/05/06		108	%	80 - 120
7336926	DN0	Method Blank	o-Terphenyl	2021/05/06		96	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/06	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/05/06	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/05/06	<50		ug/g	
7336926	DN0	RPD [PMK453-02]	F2 (C10-C16 Hydrocarbons)	2021/05/06	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/05/06	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/05/06	NC		%	30
7336947	GYA	RPD [PMK451-02]	Moisture	2021/05/06	1.5		%	20
7337234	AAI	Matrix Spike [PMK442-03]	1,4-Difluorobenzene	2021/05/06		94	%	60 - 140
			4-Bromofluorobenzene	2021/05/06		106	%	60 - 140
			D10-o-Xylene	2021/05/06		95	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/06		94	%	60 - 140
			Benzene	2021/05/06		106	%	50 - 140
			Toluene	2021/05/06		105	%	50 - 140
			Ethylbenzene	2021/05/06		121	%	50 - 140
			o-Xylene	2021/05/06		120	%	50 - 140
			p+m-Xylene	2021/05/06		118	%	50 - 140
			F1 (C6-C10)	2021/05/06		94	%	60 - 140
7337234	AAI	Spiked Blank	1,4-Difluorobenzene	2021/05/06		95	%	60 - 140
			4-Bromofluorobenzene	2021/05/06		106	%	60 - 140
			D10-o-Xylene	2021/05/06		85	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/06		96	%	60 - 140
			Benzene	2021/05/06		98	%	50 - 140
			Toluene	2021/05/06		97	%	50 - 140
			Ethylbenzene	2021/05/06		110	%	50 - 140
			o-Xylene	2021/05/06		108	%	50 - 140
			p+m-Xylene	2021/05/06		106	%	50 - 140
			F1 (C6-C10)	2021/05/06		91	%	80 - 120
7337234	AAI	Method Blank	1,4-Difluorobenzene	2021/05/06		100	%	60 - 140
			4-Bromofluorobenzene	2021/05/06		97	%	60 - 140
			D10-o-Xylene	2021/05/06		89	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/06		101	%	60 - 140
			Benzene	2021/05/06	<0.020		ug/g	
			Toluene	2021/05/06	<0.020		ug/g	
			Ethylbenzene	2021/05/06	<0.020		ug/g	
			o-Xylene	2021/05/06	<0.020		ug/g	
			p+m-Xylene	2021/05/06	<0.040		ug/g	
			Total Xylenes	2021/05/06	<0.040		ug/g	
			F1 (C6-C10)	2021/05/06	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/05/06	<10		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7337234	AAI	RPD [PMK442-03]	Benzene	2021/05/06	NC		%	50
			Toluene	2021/05/06	NC		%	50
			Ethylbenzene	2021/05/06	NC		%	50
			o-Xylene	2021/05/06	NC		%	50
			p+m-Xylene	2021/05/06	NC		%	50
			Total Xylenes	2021/05/06	NC		%	50
			F1 (C6-C10)	2021/05/06	NC		%	30
			F1 (C6-C10) - BTEX	2021/05/06	NC		%	30
7338060	RAJ	Matrix Spike [PMK459-02]	D10-Anthracene	2021/05/07		103	%	50 - 130
			D14-Terphenyl (FS)	2021/05/07		97	%	50 - 130
			D8-Acenaphthylene	2021/05/07		82	%	50 - 130
			Acenaphthene	2021/05/07		84	%	50 - 130
			Acenaphthylene	2021/05/07		83	%	50 - 130
			Anthracene	2021/05/07		86	%	50 - 130
			Benzo(a)anthracene	2021/05/07		90	%	50 - 130
			Benzo(a)pyrene	2021/05/07		88	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/07		88	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/07		83	%	50 - 130
			Benzo(k)fluoranthene	2021/05/07		91	%	50 - 130
			Chrysene	2021/05/07		87	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/07		89	%	50 - 130
			Fluoranthene	2021/05/07		85	%	50 - 130
			Fluorene	2021/05/07		86	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/07		87	%	50 - 130
			1-Methylnaphthalene	2021/05/07		86	%	50 - 130
			2-Methylnaphthalene	2021/05/07		83	%	50 - 130
			Naphthalene	2021/05/07		81	%	50 - 130
			Phenanthrene	2021/05/07		87	%	50 - 130
			Pyrene	2021/05/07		83	%	50 - 130
7338060	RAJ	Spiked Blank	D10-Anthracene	2021/05/06		101	%	50 - 130
			D14-Terphenyl (FS)	2021/05/06		101	%	50 - 130
			D8-Acenaphthylene	2021/05/06		88	%	50 - 130
			Acenaphthene	2021/05/06		85	%	50 - 130
			Acenaphthylene	2021/05/06		85	%	50 - 130
			Anthracene	2021/05/06		88	%	50 - 130
			Benzo(a)anthracene	2021/05/06		90	%	50 - 130
			Benzo(a)pyrene	2021/05/06		89	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/06		89	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/06		86	%	50 - 130
			Benzo(k)fluoranthene	2021/05/06		92	%	50 - 130
			Chrysene	2021/05/06		89	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/06		91	%	50 - 130
			Fluoranthene	2021/05/06		85	%	50 - 130
			Fluorene	2021/05/06		88	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/06		89	%	50 - 130
			1-Methylnaphthalene	2021/05/06		89	%	50 - 130
			2-Methylnaphthalene	2021/05/06		88	%	50 - 130
			Naphthalene	2021/05/06		87	%	50 - 130
			Phenanthrene	2021/05/06		88	%	50 - 130
			Pyrene	2021/05/06		86	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7338060	RAJ	Method Blank	D10-Anthracene	2021/05/06		114	%	50 - 130
			D14-Terphenyl (FS)	2021/05/06		108	%	50 - 130
			D8-Acenaphthylene	2021/05/06		85	%	50 - 130
			Acenaphthene	2021/05/06	<0.0050		ug/g	
			Acenaphthylene	2021/05/06	<0.0050		ug/g	
			Anthracene	2021/05/06	<0.0050		ug/g	
			Benzo(a)anthracene	2021/05/06	<0.0050		ug/g	
			Benzo(a)pyrene	2021/05/06	<0.0050		ug/g	
			Benzo(b/j)fluoranthene	2021/05/06	<0.0050		ug/g	
			Benzo(g,h,i)perylene	2021/05/06	<0.0050		ug/g	
			Benzo(k)fluoranthene	2021/05/06	<0.0050		ug/g	
			Chrysene	2021/05/06	<0.0050		ug/g	
			Dibenzo(a,h)anthracene	2021/05/06	<0.0050		ug/g	
			Fluoranthene	2021/05/06	<0.0050		ug/g	
			Fluorene	2021/05/06	<0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/05/06	<0.0050		ug/g	
			1-Methylnaphthalene	2021/05/06	<0.0050		ug/g	
			2-Methylnaphthalene	2021/05/06	<0.0050		ug/g	
			Naphthalene	2021/05/06	<0.0050		ug/g	
			Phenanthrene	2021/05/06	<0.0050		ug/g	
			Pyrene	2021/05/06	<0.0050		ug/g	
7338060	RAJ	RPD [PMK459-02]	Acenaphthene	2021/05/07	NC		%	40
			Acenaphthylene	2021/05/07	NC		%	40
			Anthracene	2021/05/07	NC		%	40
			Benzo(a)anthracene	2021/05/07	NC		%	40
			Benzo(a)pyrene	2021/05/07	NC		%	40
			Benzo(b/j)fluoranthene	2021/05/07	NC		%	40
			Benzo(g,h,i)perylene	2021/05/07	NC		%	40
			Benzo(k)fluoranthene	2021/05/07	NC		%	40
			Chrysene	2021/05/07	NC		%	40
			Dibenzo(a,h)anthracene	2021/05/07	NC		%	40
			Fluoranthene	2021/05/07	NC		%	40
			Fluorene	2021/05/07	NC		%	40
			Indeno(1,2,3-cd)pyrene	2021/05/07	NC		%	40
			1-Methylnaphthalene	2021/05/07	NC		%	40
			2-Methylnaphthalene	2021/05/07	NC		%	40
			Naphthalene	2021/05/07	NC		%	40
			Phenanthrene	2021/05/07	NC		%	40
			Pyrene	2021/05/07	NC		%	40
7338543	KTR	Matrix Spike	o-Terphenyl	2021/05/07		94	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/07		106	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/05/07		107	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/05/07		108	%	50 - 130
7338543	KTR	Spiked Blank	o-Terphenyl	2021/05/07		100	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/07		106	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/05/07		107	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/05/07		109	%	80 - 120
7338543	KTR	Method Blank	o-Terphenyl	2021/05/07		97	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/07	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/05/07	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/05/07	<50		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7338543	KTR	RPD	F2 (C10-C16 Hydrocarbons)	2021/05/07	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/05/07	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/05/07	NC		%	30
7339520	ABP	Matrix Spike	WAD Cyanide (Free)	2021/05/10		95	%	75 - 125
7339520	ABP	Spiked Blank	WAD Cyanide (Free)	2021/05/10		97	%	80 - 120
7339520	ABP	Method Blank	WAD Cyanide (Free)	2021/05/10	<0.01		ug/g	
7339520	ABP	RPD	WAD Cyanide (Free)	2021/05/10	NC		%	35
7339553	AAI	Matrix Spike	1,4-Difluorobenzene	2021/05/07		95	%	60 - 140
			4-Bromofluorobenzene	2021/05/07		104	%	60 - 140
			D10-o-Xylene	2021/05/07		88	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/07		98	%	60 - 140
			Benzene	2021/05/07		97	%	50 - 140
			Toluene	2021/05/07		95	%	50 - 140
			Ethylbenzene	2021/05/07		107	%	50 - 140
			o-Xylene	2021/05/07		107	%	50 - 140
			p+m-Xylene	2021/05/07		106	%	50 - 140
			F1 (C6-C10)	2021/05/07		89	%	60 - 140
7339553	AAI	Spiked Blank	1,4-Difluorobenzene	2021/05/07		95	%	60 - 140
			4-Bromofluorobenzene	2021/05/07		102	%	60 - 140
			D10-o-Xylene	2021/05/07		90	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/07		96	%	60 - 140
			Benzene	2021/05/07		105	%	50 - 140
			Toluene	2021/05/07		102	%	50 - 140
			Ethylbenzene	2021/05/07		114	%	50 - 140
			o-Xylene	2021/05/07		111	%	50 - 140
			p+m-Xylene	2021/05/07		109	%	50 - 140
			F1 (C6-C10)	2021/05/07		98	%	80 - 120
7339553	AAI	Method Blank	1,4-Difluorobenzene	2021/05/07		108	%	60 - 140
			4-Bromofluorobenzene	2021/05/07		78	%	60 - 140
			D10-o-Xylene	2021/05/07		91	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/07		111	%	60 - 140
			Benzene	2021/05/07	<0.020		ug/g	
			Toluene	2021/05/07	<0.020		ug/g	
			Ethylbenzene	2021/05/07	<0.020		ug/g	
			o-Xylene	2021/05/07	<0.020		ug/g	
			p+m-Xylene	2021/05/07	<0.040		ug/g	
			Total Xylenes	2021/05/07	<0.040		ug/g	
			F1 (C6-C10)	2021/05/07	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/05/07	<10		ug/g	
7339553	AAI	RPD	Benzene	2021/05/07	NC		%	50
			Toluene	2021/05/07	NC		%	50
			Ethylbenzene	2021/05/07	NC		%	50
			o-Xylene	2021/05/07	NC		%	50
			p+m-Xylene	2021/05/07	NC		%	50
			Total Xylenes	2021/05/07	NC		%	50
			F1 (C6-C10)	2021/05/07	NC		%	30
			F1 (C6-C10) - BTEX	2021/05/07	NC		%	30
7341628	MA	Matrix Spike	2,4,6-Tribromophenol	2021/05/10		67	%	50 - 130
			2-Fluorobiphenyl	2021/05/10		69	%	50 - 130
			D14-Terphenyl (FS)	2021/05/10		78	%	50 - 130
			D5-Nitrobenzene	2021/05/10		76	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,2,4-Trichlorobenzene	2021/05/10		65	%	50 - 130
			1-Methylnaphthalene	2021/05/10		74	%	50 - 130
			2,4,5-Trichlorophenol	2021/05/10		74	%	50 - 130
			2,4,6-Trichlorophenol	2021/05/10		72	%	50 - 130
			2,4-Dichlorophenol	2021/05/10		80	%	50 - 130
			2,4-Dimethylphenol	2021/05/10		71	%	30 - 130
			2,4-Dinitrophenol	2021/05/10		31	%	30 - 130
			2,4-Dinitrotoluene	2021/05/10		73	%	50 - 130
			2,6-Dinitrotoluene	2021/05/10		66	%	50 - 130
			2-Chlorophenol	2021/05/10		71	%	50 - 130
			2-Methylnaphthalene	2021/05/10		70	%	50 - 130
			3,3'-Dichlorobenzidine	2021/05/10		75	%	30 - 130
			Acenaphthene	2021/05/10		74	%	50 - 130
			Acenaphthylene	2021/05/10		74	%	50 - 130
			Anthracene	2021/05/10		79	%	50 - 130
			Benzo(a)anthracene	2021/05/10		84	%	50 - 130
			Benzo(a)pyrene	2021/05/10		69	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/10		92	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/10		66	%	50 - 130
			Benzo(k)fluoranthene	2021/05/10		94	%	50 - 130
			Biphenyl	2021/05/10		73	%	50 - 130
			Bis(2-chloroethyl)ether	2021/05/10		68	%	50 - 130
			Bis(2-chloroisopropyl)ether	2021/05/10		52	%	50 - 130
			Bis(2-ethylhexyl)phthalate	2021/05/10		74	%	50 - 130
			Chrysene	2021/05/10		84	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/10		69	%	50 - 130
			Diethyl phthalate	2021/05/10		64	%	50 - 130
			Dimethyl phthalate	2021/05/10		65	%	50 - 130
			Fluoranthene	2021/05/10		85	%	50 - 130
			Fluorene	2021/05/10		73	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/10		66	%	50 - 130
			Naphthalene	2021/05/10		73	%	50 - 130
			p-Chloroaniline	2021/05/10		77	%	30 - 130
			Pentachlorophenol	2021/05/10		66	%	50 - 130
			Phenanthrene	2021/05/10		81	%	50 - 130
			Phenol	2021/05/10		83	%	30 - 130
			Pyrene	2021/05/10		92	%	50 - 130
7341628	MA	Spiked Blank	2,4,6-Tribromophenol	2021/05/10		68	%	50 - 130
			2-Fluorobiphenyl	2021/05/10		72	%	50 - 130
			D14-Terphenyl (FS)	2021/05/10		79	%	50 - 130
			D5-Nitrobenzene	2021/05/10		77	%	50 - 130
			1,2,4-Trichlorobenzene	2021/05/10		73	%	50 - 130
			1-Methylnaphthalene	2021/05/10		76	%	50 - 130
			2,4,5-Trichlorophenol	2021/05/10		75	%	50 - 130
			2,4,6-Trichlorophenol	2021/05/10		73	%	50 - 130
			2,4-Dichlorophenol	2021/05/10		81	%	50 - 130
			2,4-Dimethylphenol	2021/05/10		74	%	30 - 130
			2,4-Dinitrophenol	2021/05/10		30	%	30 - 130
			2,4-Dinitrotoluene	2021/05/10		78	%	50 - 130
			2,6-Dinitrotoluene	2021/05/10		83	%	50 - 130
			2-Chlorophenol	2021/05/10		72	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			2-Methylnaphthalene	2021/05/10		72	%	50 - 130
			3,3'-Dichlorobenzidine	2021/05/10		51	%	30 - 130
			Acenaphthene	2021/05/10		78	%	50 - 130
			Acenaphthylene	2021/05/10		78	%	50 - 130
			Anthracene	2021/05/10		82	%	50 - 130
			Benzo(a)anthracene	2021/05/10		86	%	50 - 130
			Benzo(a)pyrene	2021/05/10		98	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/10		95	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/10		67	%	50 - 130
			Benzo(k)fluoranthene	2021/05/10		102	%	50 - 130
			Biphenyl	2021/05/10		76	%	50 - 130
			Bis(2-chloroethyl)ether	2021/05/10		65	%	50 - 130
			Bis(2-chloroisopropyl)ether	2021/05/10		51	%	50 - 130
			Bis(2-ethylhexyl)phthalate	2021/05/10		75	%	50 - 130
			Chrysene	2021/05/10		87	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/10		70	%	50 - 130
			Diethyl phthalate	2021/05/10		67	%	50 - 130
			Dimethyl phthalate	2021/05/10		68	%	50 - 130
			Fluoranthene	2021/05/10		87	%	50 - 130
			Fluorene	2021/05/10		76	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/10		67	%	50 - 130
			Naphthalene	2021/05/10		74	%	50 - 130
			p-Chloroaniline	2021/05/10		59	%	30 - 130
			Pentachlorophenol	2021/05/10		68	%	50 - 130
			Phenanthrene	2021/05/10		83	%	50 - 130
			Phenol	2021/05/10		82	%	30 - 130
			Pyrene	2021/05/10		94	%	50 - 130
7341628	MA	Method Blank	2,4,6-Tribromophenol	2021/05/10		54	%	50 - 130
			2-Fluorobiphenyl	2021/05/10		78	%	50 - 130
			D14-Terphenyl (FS)	2021/05/10		81	%	50 - 130
			D5-Nitrobenzene	2021/05/10		84	%	50 - 130
			1,2,4-Trichlorobenzene	2021/05/10	<0.05		ug/g	
			1-Methylnaphthalene	2021/05/10	<0.03		ug/g	
			2,4,5-Trichlorophenol	2021/05/10	<0.08		ug/g	
			2,4,6-Trichlorophenol	2021/05/10	<0.1		ug/g	
			2,4-Dichlorophenol	2021/05/10	<0.1		ug/g	
			2,4-Dimethylphenol	2021/05/10	<0.2		ug/g	
			2,4-Dinitrophenol	2021/05/10	<0.5		ug/g	
			2,4-Dinitrotoluene	2021/05/10	<0.1		ug/g	
			2,6-Dinitrotoluene	2021/05/10	<0.1		ug/g	
			2-Chlorophenol	2021/05/10	<0.08		ug/g	
			2-Methylnaphthalene	2021/05/10	<0.03		ug/g	
			3,3'-Dichlorobenzidine	2021/05/10	<0.5		ug/g	
			Acenaphthene	2021/05/10	<0.03		ug/g	
			Acenaphthylene	2021/05/10	<0.05		ug/g	
			Anthracene	2021/05/10	<0.03		ug/g	
			Benzo(a)anthracene	2021/05/10	<0.05		ug/g	
			Benzo(a)pyrene	2021/05/10	<0.05		ug/g	
			Benzo(b/j)fluoranthene	2021/05/10	<0.1		ug/g	
			Benzo(g,h,i)perylene	2021/05/10	<0.1		ug/g	
			Benzo(k)fluoranthene	2021/05/10	<0.03		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Biphenyl	2021/05/10	<0.05		ug/g	
			Bis(2-chloroethyl)ether	2021/05/10	<0.2		ug/g	
			Bis(2-chloroisopropyl)ether	2021/05/10	<0.1		ug/g	
			Bis(2-ethylhexyl)phthalate	2021/05/10	<1		ug/g	
			Chrysene	2021/05/10	<0.05		ug/g	
			Dibenzo(a,h)anthracene	2021/05/10	<0.05		ug/g	
			Diethyl phthalate	2021/05/10	<0.2		ug/g	
			Dimethyl phthalate	2021/05/10	<0.2		ug/g	
			Fluoranthene	2021/05/10	<0.05		ug/g	
			Fluorene	2021/05/10	<0.03		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/05/10	<0.08		ug/g	
			Naphthalene	2021/05/10	<0.03		ug/g	
			p-Chloroaniline	2021/05/10	<0.2		ug/g	
			Pentachlorophenol	2021/05/10	<0.1		ug/g	
			Phenanthrene	2021/05/10	<0.05		ug/g	
			Phenol	2021/05/10	<0.09		ug/g	
			Pyrene	2021/05/10	<0.05		ug/g	
7341628	MA	RPD	1,2,4-Trichlorobenzene	2021/05/10	NC		%	40
			1-Methylnaphthalene	2021/05/10	NC		%	40
			2,4,5-Trichlorophenol	2021/05/10	NC		%	40
			2,4,6-Trichlorophenol	2021/05/10	NC		%	40
			2,4-Dichlorophenol	2021/05/10	NC		%	40
			2,4-Dimethylphenol	2021/05/10	NC		%	40
			2,4-Dinitrophenol	2021/05/10	NC		%	40
			2,4-Dinitrotoluene	2021/05/10	NC		%	40
			2,6-Dinitrotoluene	2021/05/10	NC		%	40
			2-Chlorophenol	2021/05/10	NC		%	40
			2-Methylnaphthalene	2021/05/10	NC		%	40
			3,3'-Dichlorobenzidine	2021/05/10	NC		%	40
			Acenaphthene	2021/05/10	NC		%	40
			Acenaphthylene	2021/05/10	NC		%	40
			Anthracene	2021/05/10	NC		%	40
			Benzo(a)anthracene	2021/05/10	NC		%	40
			Benzo(a)pyrene	2021/05/10	NC		%	40
			Benzo(b/j)fluoranthene	2021/05/10	NC		%	40
			Benzo(g,h,i)perylene	2021/05/10	NC		%	40
			Benzo(k)fluoranthene	2021/05/10	NC		%	40
			Biphenyl	2021/05/10	NC		%	40
			Bis(2-chloroethyl)ether	2021/05/10	NC		%	40
			Bis(2-chloroisopropyl)ether	2021/05/10	NC		%	40
			Bis(2-ethylhexyl)phthalate	2021/05/10	NC		%	40
			Chrysene	2021/05/10	NC		%	40
			Dibenzo(a,h)anthracene	2021/05/10	NC		%	40
			Diethyl phthalate	2021/05/10	NC		%	40
			Dimethyl phthalate	2021/05/10	NC		%	40
			Fluoranthene	2021/05/10	NC		%	40
			Fluorene	2021/05/10	NC		%	40
			Indeno(1,2,3-cd)pyrene	2021/05/10	NC		%	40
			Naphthalene	2021/05/10	NC		%	40
			p-Chloroaniline	2021/05/10	NC		%	40
			Pentachlorophenol	2021/05/10	NC		%	40

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Phenanthrene	2021/05/10	NC		%	40
			Phenol	2021/05/10	NC		%	40
			Pyrene	2021/05/10	NC		%	40
7341716	DT1	Matrix Spike [PMK445-01]	Acid Extractable Antimony (Sb)	2021/05/10		109	%	75 - 125
			Acid Extractable Arsenic (As)	2021/05/10		107	%	75 - 125
			Acid Extractable Barium (Ba)	2021/05/10		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/05/10		107	%	75 - 125
			Acid Extractable Boron (B)	2021/05/10		103	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/05/10		108	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/05/10		107	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/05/10		105	%	75 - 125
			Acid Extractable Copper (Cu)	2021/05/10		103	%	75 - 125
			Acid Extractable Lead (Pb)	2021/05/10		99	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/05/10		110	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/05/10		109	%	75 - 125
			Acid Extractable Selenium (Se)	2021/05/10		107	%	75 - 125
			Acid Extractable Silver (Ag)	2021/05/10		107	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/05/10		100	%	75 - 125
			Acid Extractable Uranium (U)	2021/05/10		105	%	75 - 125
			Acid Extractable Vanadium (V)	2021/05/10		105	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/05/10		106	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/05/10		88	%	75 - 125
7341716	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2021/05/10		103	%	80 - 120
			Acid Extractable Arsenic (As)	2021/05/10		95	%	80 - 120
			Acid Extractable Barium (Ba)	2021/05/10		97	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/05/10		98	%	80 - 120
			Acid Extractable Boron (B)	2021/05/10		96	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/05/10		100	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/05/10		97	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/05/10		97	%	80 - 120
			Acid Extractable Copper (Cu)	2021/05/10		99	%	80 - 120
			Acid Extractable Lead (Pb)	2021/05/10		95	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/05/10		100	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/05/10		96	%	80 - 120
			Acid Extractable Selenium (Se)	2021/05/10		96	%	80 - 120
			Acid Extractable Silver (Ag)	2021/05/10		98	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/05/10		95	%	80 - 120
			Acid Extractable Uranium (U)	2021/05/10		98	%	80 - 120
			Acid Extractable Vanadium (V)	2021/05/10		101	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/05/10		98	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/05/10		84	%	80 - 120
7341716	DT1	Method Blank	Acid Extractable Antimony (Sb)	2021/05/10	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/05/10	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/05/10	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/05/10	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/05/10	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/05/10	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/05/10	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/05/10	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/05/10	<0.50		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Lead (Pb)	2021/05/10	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/05/10	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/05/10	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/05/10	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/05/10	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/05/10	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/05/10	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/05/10	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/05/10	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/05/10	<0.050		ug/g	
7341716	DT1	RPD [PMK445-01]	Acid Extractable Antimony (Sb)	2021/05/10	NC		%	30
			Acid Extractable Arsenic (As)	2021/05/10	NC		%	30
			Acid Extractable Barium (Ba)	2021/05/10	1.5		%	30
			Acid Extractable Beryllium (Be)	2021/05/10	NC		%	30
			Acid Extractable Boron (B)	2021/05/10	NC		%	30
			Acid Extractable Cadmium (Cd)	2021/05/10	NC		%	30
			Acid Extractable Chromium (Cr)	2021/05/10	9.6		%	30
			Acid Extractable Cobalt (Co)	2021/05/10	6.4		%	30
			Acid Extractable Copper (Cu)	2021/05/10	8.8		%	30
			Acid Extractable Lead (Pb)	2021/05/10	2.3		%	30
			Acid Extractable Molybdenum (Mo)	2021/05/10	NC		%	30
			Acid Extractable Nickel (Ni)	2021/05/10	1.5		%	30
			Acid Extractable Selenium (Se)	2021/05/10	NC		%	30
			Acid Extractable Silver (Ag)	2021/05/10	NC		%	30
			Acid Extractable Thallium (Tl)	2021/05/10	1.1		%	30
			Acid Extractable Uranium (U)	2021/05/10	9.4		%	30
			Acid Extractable Vanadium (V)	2021/05/10	3.7		%	30
			Acid Extractable Zinc (Zn)	2021/05/10	0.61		%	30
			Acid Extractable Mercury (Hg)	2021/05/10	NC		%	30
7341736	LPG	Matrix Spike [PMK458-01]	Decachlorobiphenyl	2021/05/08		107	%	60 - 130
			Aroclor 1260	2021/05/08		119	%	30 - 130
			Total PCB	2021/05/08		119	%	30 - 130
7341736	LPG	Spiked Blank	Decachlorobiphenyl	2021/05/08		108	%	60 - 130
			Aroclor 1260	2021/05/08		119	%	30 - 130
			Total PCB	2021/05/08		119	%	30 - 130
7341736	LPG	Method Blank	Decachlorobiphenyl	2021/05/08		108	%	60 - 130
			Aroclor 1242	2021/05/08	<0.010		ug/g	
			Aroclor 1248	2021/05/08	<0.010		ug/g	
			Aroclor 1254	2021/05/08	<0.010		ug/g	
			Aroclor 1260	2021/05/08	<0.010		ug/g	
			Total PCB	2021/05/08	<0.010		ug/g	
7341736	LPG	RPD [PMK458-01]	Aroclor 1242	2021/05/08	NC		%	50
			Aroclor 1248	2021/05/08	NC		%	50
			Aroclor 1254	2021/05/08	NC		%	50
			Aroclor 1260	2021/05/08	NC		%	50
			Total PCB	2021/05/08	NC		%	50
7341814	LPG	Matrix Spike	Decachlorobiphenyl	2021/05/08		112	%	60 - 130
			Aroclor 1260	2021/05/08		123	%	30 - 130
			Total PCB	2021/05/08		123	%	30 - 130
7341814	LPG	Spiked Blank	Decachlorobiphenyl	2021/05/08		99	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Aroclor 1260	2021/05/08		114	%	30 - 130
			Total PCB	2021/05/08		114	%	30 - 130
7341814	LPG	Method Blank	Decachlorobiphenyl	2021/05/08		101	%	60 - 130
			Aroclor 1242	2021/05/08	<0.010		ug/g	
			Aroclor 1248	2021/05/08	<0.010		ug/g	
			Aroclor 1254	2021/05/08	<0.010		ug/g	
			Aroclor 1260	2021/05/08	<0.010		ug/g	
			Total PCB	2021/05/08	<0.010		ug/g	
7341814	LPG	RPD	Aroclor 1242	2021/05/08	NC		%	50
			Aroclor 1248	2021/05/08	NC		%	50
			Aroclor 1254	2021/05/08	NC		%	50
			Aroclor 1260	2021/05/08	NC		%	50
			Total PCB	2021/05/08	NC		%	50
7341898	VIV	Matrix Spike	Acid Extractable Antimony (Sb)	2021/05/10		102	%	75 - 125
			Acid Extractable Arsenic (As)	2021/05/10		96	%	75 - 125
			Acid Extractable Barium (Ba)	2021/05/10		97	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/05/10		92	%	75 - 125
			Acid Extractable Boron (B)	2021/05/10		87	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/05/10		98	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/05/10		96	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/05/10		94	%	75 - 125
			Acid Extractable Copper (Cu)	2021/05/10		94	%	75 - 125
			Acid Extractable Lead (Pb)	2021/05/10		NC	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/05/10		96	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/05/10		95	%	75 - 125
			Acid Extractable Selenium (Se)	2021/05/10		95	%	75 - 125
			Acid Extractable Silver (Ag)	2021/05/10		100	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/05/10		90	%	75 - 125
			Acid Extractable Uranium (U)	2021/05/10		92	%	75 - 125
			Acid Extractable Vanadium (V)	2021/05/10		96	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/05/10		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/05/10		80	%	75 - 125
7341898	VIV	Spiked Blank	Acid Extractable Antimony (Sb)	2021/05/10		104	%	80 - 120
			Acid Extractable Arsenic (As)	2021/05/10		102	%	80 - 120
			Acid Extractable Barium (Ba)	2021/05/10		103	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/05/10		97	%	80 - 120
			Acid Extractable Boron (B)	2021/05/10		97	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/05/10		102	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/05/10		101	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/05/10		100	%	80 - 120
			Acid Extractable Copper (Cu)	2021/05/10		99	%	80 - 120
			Acid Extractable Lead (Pb)	2021/05/10		98	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/05/10		99	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/05/10		104	%	80 - 120
			Acid Extractable Selenium (Se)	2021/05/10		102	%	80 - 120
			Acid Extractable Silver (Ag)	2021/05/10		102	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/05/10		97	%	80 - 120
			Acid Extractable Uranium (U)	2021/05/10		99	%	80 - 120
			Acid Extractable Vanadium (V)	2021/05/10		99	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/05/10		102	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/05/10		90	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7341898	VIV	Method Blank	Acid Extractable Antimony (Sb)	2021/05/10	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/05/10	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/05/10	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/05/10	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/05/10	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/05/10	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/05/10	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/05/10	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/05/10	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/05/10	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/05/10	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/05/10	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/05/10	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/05/10	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/05/10	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/05/10	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/05/10	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/05/10	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/05/10	<0.050		ug/g	
7341898	VIV	RPD	Acid Extractable Antimony (Sb)	2021/05/10	NC		%	30
			Acid Extractable Arsenic (As)	2021/05/10	2.3		%	30
			Acid Extractable Barium (Ba)	2021/05/10	1.4		%	30
			Acid Extractable Beryllium (Be)	2021/05/10	NC		%	30
			Acid Extractable Boron (B)	2021/05/10	NC		%	30
			Acid Extractable Cadmium (Cd)	2021/05/10	3.4		%	30
			Acid Extractable Chromium (Cr)	2021/05/10	1.7		%	30
			Acid Extractable Cobalt (Co)	2021/05/10	1.3		%	30
			Acid Extractable Copper (Cu)	2021/05/10	0.75		%	30
			Acid Extractable Lead (Pb)	2021/05/10	1.5		%	30
			Acid Extractable Molybdenum (Mo)	2021/05/10	NC		%	30
			Acid Extractable Nickel (Ni)	2021/05/10	0.78		%	30
			Acid Extractable Selenium (Se)	2021/05/10	NC		%	30
			Acid Extractable Silver (Ag)	2021/05/10	NC		%	30
			Acid Extractable Thallium (Tl)	2021/05/10	NC		%	30
			Acid Extractable Uranium (U)	2021/05/10	5.6		%	30
			Acid Extractable Vanadium (V)	2021/05/10	1.4		%	30
			Acid Extractable Zinc (Zn)	2021/05/10	0.71		%	30
			Acid Extractable Mercury (Hg)	2021/05/10	3.1		%	30
7341945	JOH	Matrix Spike	Hot Water Ext. Boron (B)	2021/05/10		113	%	75 - 125
7341945	JOH	Spiked Blank	Hot Water Ext. Boron (B)	2021/05/10		99	%	75 - 125
7341945	JOH	Method Blank	Hot Water Ext. Boron (B)	2021/05/10	<0.050		ug/g	
7341945	JOH	RPD	Hot Water Ext. Boron (B)	2021/05/10	4.3		%	40
7341960	JOH	Matrix Spike [PMK446-01]	Hot Water Ext. Boron (B)	2021/05/10		110	%	75 - 125
7341960	JOH	Spiked Blank	Hot Water Ext. Boron (B)	2021/05/10		94	%	75 - 125
7341960	JOH	Method Blank	Hot Water Ext. Boron (B)	2021/05/10	<0.050		ug/g	
7341960	JOH	RPD [PMK446-01]	Hot Water Ext. Boron (B)	2021/05/10	0.43		%	40
7342578	SAU	Spiked Blank	Available (CaCl2) pH	2021/05/10		100	%	97 - 103
7342578	SAU	RPD [PMK463-01]	Available (CaCl2) pH	2021/05/10	0.13		%	N/A
7342580	JOH	Matrix Spike [PMK462-04]	Hot Water Ext. Boron (B)	2021/05/10		106	%	75 - 125

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7342580	JOH	Spiked Blank	Hot Water Ext. Boron (B)	2021/05/10		93	%	75 - 125
7342580	JOH	Method Blank	Hot Water Ext. Boron (B)	2021/05/10	<0.050		ug/g	
7342580	JOH	RPD [PMK462-04]	Hot Water Ext. Boron (B)	2021/05/10	0.65		%	40
7342606	ABP	Matrix Spike	WAD Cyanide (Free)	2021/05/11		100	%	75 - 125
7342606	ABP	Spiked Blank	WAD Cyanide (Free)	2021/05/11		93	%	80 - 120
7342606	ABP	Method Blank	WAD Cyanide (Free)	2021/05/11	<0.01		ug/g	
7342606	ABP	RPD	WAD Cyanide (Free)	2021/05/11	NC		%	35
7342612	ABP	Matrix Spike [PMK463-01]	WAD Cyanide (Free)	2021/05/11		96	%	75 - 125
7342612	ABP	Spiked Blank	WAD Cyanide (Free)	2021/05/11		93	%	80 - 120
7342612	ABP	Method Blank	WAD Cyanide (Free)	2021/05/11	<0.01		ug/g	
7342612	ABP	RPD [PMK463-01]	WAD Cyanide (Free)	2021/05/11	NC		%	35
7342619	LKH	Matrix Spike [PMK463-01]	Chromium (VI)	2021/05/10		84	%	70 - 130
7342619	LKH	Spiked Blank	Chromium (VI)	2021/05/10		88	%	80 - 120
7342619	LKH	Method Blank	Chromium (VI)	2021/05/10	<0.18		ug/g	
7342619	LKH	RPD [PMK463-01]	Chromium (VI)	2021/05/10	NC		%	35
7342630	VIV	Matrix Spike	Acid Extractable Antimony (Sb)	2021/05/10		90	%	75 - 125
			Acid Extractable Arsenic (As)	2021/05/10		91	%	75 - 125
			Acid Extractable Barium (Ba)	2021/05/10		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/05/10		89	%	75 - 125
			Acid Extractable Boron (B)	2021/05/10		82	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/05/10		95	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/05/10		89	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/05/10		87	%	75 - 125
			Acid Extractable Copper (Cu)	2021/05/10		NC	%	75 - 125
			Acid Extractable Lead (Pb)	2021/05/10		84	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/05/10		92	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/05/10		88	%	75 - 125
			Acid Extractable Selenium (Se)	2021/05/10		89	%	75 - 125
			Acid Extractable Silver (Ag)	2021/05/10		93	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/05/10		85	%	75 - 125
			Acid Extractable Uranium (U)	2021/05/10		88	%	75 - 125
			Acid Extractable Vanadium (V)	2021/05/10		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/05/10		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/05/10		79	%	75 - 125
7342630	VIV	Spiked Blank	Acid Extractable Antimony (Sb)	2021/05/10		107	%	80 - 120
			Acid Extractable Arsenic (As)	2021/05/10		100	%	80 - 120
			Acid Extractable Barium (Ba)	2021/05/10		106	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/05/10		95	%	80 - 120
			Acid Extractable Boron (B)	2021/05/10		93	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/05/10		102	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/05/10		97	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/05/10		96	%	80 - 120
			Acid Extractable Copper (Cu)	2021/05/10		96	%	80 - 120
			Acid Extractable Lead (Pb)	2021/05/10		95	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/05/10		98	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/05/10		100	%	80 - 120
			Acid Extractable Selenium (Se)	2021/05/10		99	%	80 - 120
			Acid Extractable Silver (Ag)	2021/05/10		101	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/05/10		94	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Uranium (U)	2021/05/10		96	%	80 - 120
			Acid Extractable Vanadium (V)	2021/05/10		95	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/05/10		97	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/05/10		87	%	80 - 120
7342630	VIV	Method Blank	Acid Extractable Antimony (Sb)	2021/05/10	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/05/10	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/05/10	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/05/10	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/05/10	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/05/10	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/05/10	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/05/10	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/05/10	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/05/10	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/05/10	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/05/10	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/05/10	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/05/10	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/05/10	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/05/10	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/05/10	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/05/10	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/05/10	<0.050		ug/g	
7342630	VIV	RPD	Acid Extractable Antimony (Sb)	2021/05/10	NC		%	30
			Acid Extractable Arsenic (As)	2021/05/10	2.9		%	30
			Acid Extractable Barium (Ba)	2021/05/10	2.7		%	30
			Acid Extractable Beryllium (Be)	2021/05/10	1.8		%	30
			Acid Extractable Boron (B)	2021/05/10	9.0		%	30
			Acid Extractable Cadmium (Cd)	2021/05/10	NC		%	30
			Acid Extractable Chromium (Cr)	2021/05/10	3.1		%	30
			Acid Extractable Cobalt (Co)	2021/05/10	4.1		%	30
			Acid Extractable Copper (Cu)	2021/05/10	2.8		%	30
			Acid Extractable Lead (Pb)	2021/05/10	4.7		%	30
			Acid Extractable Molybdenum (Mo)	2021/05/10	NC		%	30
			Acid Extractable Nickel (Ni)	2021/05/10	2.2		%	30
			Acid Extractable Selenium (Se)	2021/05/10	NC		%	30
			Acid Extractable Silver (Ag)	2021/05/10	NC		%	30
			Acid Extractable Thallium (Tl)	2021/05/10	6.4		%	30
			Acid Extractable Uranium (U)	2021/05/10	5.0		%	30
			Acid Extractable Vanadium (V)	2021/05/10	1.5		%	30
			Acid Extractable Zinc (Zn)	2021/05/10	5.3		%	30
			Acid Extractable Mercury (Hg)	2021/05/10	NC		%	30
7342634	LKH	Matrix Spike	Chromium (VI)	2021/05/10		82	%	70 - 130
7342634	LKH	Spiked Blank	Chromium (VI)	2021/05/10		89	%	80 - 120
7342634	LKH	Method Blank	Chromium (VI)	2021/05/10	<0.18		ug/g	
7342634	LKH	RPD	Chromium (VI)	2021/05/10	NC		%	35
7342650	DAN	Matrix Spike	1,4-Difluorobenzene	2021/05/10		95	%	60 - 140
			4-Bromofluorobenzene	2021/05/10		98	%	60 - 140
			D10-o-Xylene	2021/05/10		89	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/10		95	%	60 - 140
			Benzene	2021/05/10		96	%	50 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Toluene	2021/05/10		100	%	50 - 140
			Ethylbenzene	2021/05/10		107	%	50 - 140
			o-Xylene	2021/05/10		104	%	50 - 140
			p+m-Xylene	2021/05/10		115	%	50 - 140
			F1 (C6-C10)	2021/05/10		89	%	60 - 140
7342650	DAN	Spiked Blank	1,4-Difluorobenzene	2021/05/10		95	%	60 - 140
			4-Bromofluorobenzene	2021/05/10		99	%	60 - 140
			D10-o-Xylene	2021/05/10		92	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/10		96	%	60 - 140
			Benzene	2021/05/10		98	%	50 - 140
			Toluene	2021/05/10		103	%	50 - 140
			Ethylbenzene	2021/05/10		107	%	50 - 140
			o-Xylene	2021/05/10		107	%	50 - 140
			p+m-Xylene	2021/05/10		118	%	50 - 140
			F1 (C6-C10)	2021/05/10		88	%	80 - 120
7342650	DAN	Method Blank	1,4-Difluorobenzene	2021/05/10		97	%	60 - 140
			4-Bromofluorobenzene	2021/05/10		96	%	60 - 140
			D10-o-Xylene	2021/05/10		93	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/10		101	%	60 - 140
			Benzene	2021/05/10	<0.020		ug/g	
			Toluene	2021/05/10	<0.020		ug/g	
			Ethylbenzene	2021/05/10	<0.020		ug/g	
			o-Xylene	2021/05/10	<0.020		ug/g	
			p+m-Xylene	2021/05/10	<0.040		ug/g	
			Total Xylenes	2021/05/10	<0.040		ug/g	
			F1 (C6-C10)	2021/05/10	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/05/10	<10		ug/g	
7342650	DAN	RPD	Benzene	2021/05/10	NC		%	50
			Toluene	2021/05/10	NC		%	50
			Ethylbenzene	2021/05/10	NC		%	50
			o-Xylene	2021/05/10	NC		%	50
			p+m-Xylene	2021/05/10	NC		%	50
			Total Xylenes	2021/05/10	NC		%	50
			F1 (C6-C10)	2021/05/10	NC		%	30
			F1 (C6-C10) - BTEX	2021/05/10	NC		%	30
7342772	LKH	Matrix Spike	Chromium (VI)	2021/05/11		36 (1)	%	70 - 130
7342772	LKH	Spiked Blank	Chromium (VI)	2021/05/11		91	%	80 - 120
7342772	LKH	Method Blank	Chromium (VI)	2021/05/11	<0.18		ug/g	
7342772	LKH	RPD	Chromium (VI)	2021/05/11	NC		%	35
7343386	ASP	Spiked Blank	Conductivity	2021/05/10		102	%	90 - 110
7343386	ASP	Method Blank	Conductivity	2021/05/10	<0.002		mS/cm	
7343386	ASP	RPD [PMK462-04]	Conductivity	2021/05/10	0.65		%	10
7343523	NYS	Spiked Blank	Available (CaCl2) pH	2021/05/10		100	%	97 - 103
7343523	NYS	RPD	Available (CaCl2) pH	2021/05/10	0.39		%	N/A
7343722	NYS	Spiked Blank	Available (CaCl2) pH	2021/05/10		100	%	97 - 103
7343722	NYS	RPD	Available (CaCl2) pH	2021/05/10	0.21		%	N/A
7343770	RAJ	Matrix Spike	D10-Anthracene	2021/05/11		98	%	50 - 130
			D14-Terphenyl (FS)	2021/05/11		73	%	50 - 130
			D8-Acenaphthylene	2021/05/11		74	%	50 - 130
			Acenaphthene	2021/05/11		74	%	50 - 130
			Acenaphthylene	2021/05/11		66	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Anthracene	2021/05/11		75	%	50 - 130
			Benzo(a)anthracene	2021/05/11		74	%	50 - 130
			Benzo(a)pyrene	2021/05/11		60	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/11		73	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/11		65	%	50 - 130
			Benzo(k)fluoranthene	2021/05/11		71	%	50 - 130
			Chrysene	2021/05/11		70	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/11		71	%	50 - 130
			Fluoranthene	2021/05/11		62	%	50 - 130
			Fluorene	2021/05/11		74	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/11		65	%	50 - 130
			1-Methylnaphthalene	2021/05/11		83	%	50 - 130
			2-Methylnaphthalene	2021/05/11		79	%	50 - 130
			Naphthalene	2021/05/11		73	%	50 - 130
			Phenanthrene	2021/05/11		72	%	50 - 130
			Pyrene	2021/05/11		65	%	50 - 130
7343770	RAJ	Spiked Blank	D10-Anthracene	2021/05/11		95	%	50 - 130
			D14-Terphenyl (FS)	2021/05/11		103	%	50 - 130
			D8-Acenaphthylene	2021/05/11		84	%	50 - 130
			Acenaphthene	2021/05/11		87	%	50 - 130
			Acenaphthylene	2021/05/11		79	%	50 - 130
			Anthracene	2021/05/11		86	%	50 - 130
			Benzo(a)anthracene	2021/05/11		90	%	50 - 130
			Benzo(a)pyrene	2021/05/11		81	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/11		97	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/11		89	%	50 - 130
			Benzo(k)fluoranthene	2021/05/11		93	%	50 - 130
			Chrysene	2021/05/11		92	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/11		92	%	50 - 130
			Fluoranthene	2021/05/11		98	%	50 - 130
			Fluorene	2021/05/11		86	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/11		91	%	50 - 130
			1-Methylnaphthalene	2021/05/11		99	%	50 - 130
			2-Methylnaphthalene	2021/05/11		97	%	50 - 130
			Naphthalene	2021/05/11		88	%	50 - 130
			Phenanthrene	2021/05/11		89	%	50 - 130
			Pyrene	2021/05/11		99	%	50 - 130
7343770	RAJ	Method Blank	D10-Anthracene	2021/05/11		93	%	50 - 130
			D14-Terphenyl (FS)	2021/05/11		110	%	50 - 130
			D8-Acenaphthylene	2021/05/11		85	%	50 - 130
			Acenaphthene	2021/05/11	<0.0050		ug/g	
			Acenaphthylene	2021/05/11	<0.0050		ug/g	
			Anthracene	2021/05/11	<0.0050		ug/g	
			Benzo(a)anthracene	2021/05/11	<0.0050		ug/g	
			Benzo(a)pyrene	2021/05/11	<0.0050		ug/g	
			Benzo(b/j)fluoranthene	2021/05/11	<0.0050		ug/g	
			Benzo(g,h,i)perylene	2021/05/11	<0.0050		ug/g	
			Benzo(k)fluoranthene	2021/05/11	<0.0050		ug/g	
			Chrysene	2021/05/11	<0.0050		ug/g	
			Dibenzo(a,h)anthracene	2021/05/11	<0.0050		ug/g	
			Fluoranthene	2021/05/11	<0.0050		ug/g	

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Fluorene	2021/05/11	<0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/05/11	<0.0050		ug/g	
			1-Methylnaphthalene	2021/05/11	<0.0050		ug/g	
			2-Methylnaphthalene	2021/05/11	<0.0050		ug/g	
			Naphthalene	2021/05/11	<0.0050		ug/g	
			Phenanthrene	2021/05/11	<0.0050		ug/g	
			Pyrene	2021/05/11	<0.0050		ug/g	
7343770	RAJ	RPD	Acenaphthene	2021/05/11	NC		%	40
			Acenaphthylene	2021/05/11	NC		%	40
			Anthracene	2021/05/11	NC		%	40
			Benzo(a)anthracene	2021/05/11	NC		%	40
			Benzo(a)pyrene	2021/05/11	24		%	40
			Benzo(b/j)fluoranthene	2021/05/11	NC		%	40
			Benzo(g,h,i)perylene	2021/05/11	NC		%	40
			Benzo(k)fluoranthene	2021/05/11	NC		%	40
			Chrysene	2021/05/11	NC		%	40
			Dibenzo(a,h)anthracene	2021/05/11	NC		%	40
			Fluoranthene	2021/05/11	NC		%	40
			Fluorene	2021/05/11	NC		%	40
			Indeno(1,2,3-cd)pyrene	2021/05/11	39		%	40
			1-Methylnaphthalene	2021/05/11	NC		%	40
			2-Methylnaphthalene	2021/05/11	NC		%	40
			Naphthalene	2021/05/11	NC		%	40
			Phenanthrene	2021/05/11	8.5		%	40
			Pyrene	2021/05/11	NC		%	40
7343806	ASP	Spiked Blank	Conductivity	2021/05/11		101	%	90 - 110
7343806	ASP	Method Blank	Conductivity	2021/05/11	<0.002		mS/cm	
7343806	ASP	RPD	Conductivity	2021/05/11	1.5		%	10

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was reanalyzed with the same results

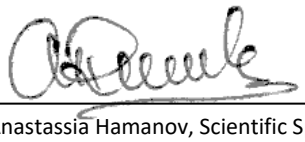
Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

BV Labs Job #: C1C0381
Report Date: 2021/05/12

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Anastassia Hamanov, Scientific Specialist



Brad Newman, B.Sc., C.Chem., Scientific Service Specialist

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

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Your Project #: 20368429
Site Location: OPG Darlington
Your C.O.C. #: 341727

Attention: Kevan Browne (20368429)

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/05/27
Report #: R6649703
Version: 1 - Partial

CERTIFICATE OF ANALYSIS – PARTIAL RESULTS

BV LABS JOB #: C1C4985
Received: 2021/05/10, 14:40

Sample Matrix: Soil
Samples Received: 51

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	14	N/A	2021/05/13	CAM SOP-00301	EPA 8270D m
Methylnaphthalene Sum	1	N/A	2021/05/14	CAM SOP-00301	EPA 8270D m
Methylnaphthalene Sum	15	N/A	2021/05/15	CAM SOP-00301	EPA 8270D m
Methylnaphthalene Sum	4	N/A	2021/05/17	CAM SOP-00301	EPA 8270D m
ABN Compounds in soil by GC/MS	1	2021/05/12	2021/05/12	CAM SOP-00301	EPA 8270 m
ABN Compounds in soil by GC/MS	4	2021/05/12	2021/05/13	CAM SOP-00301	EPA 8270 m
Hot Water Extractable Boron	20	2021/05/12	2021/05/12	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron	13	2021/05/12	2021/05/13	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron	11	2021/05/13	2021/05/13	CAM SOP-00408	R153 Ana. Prot. 2011
Free (WAD) Cyanide	1	2021/05/11	2021/05/12	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide	5	2021/05/11	2021/05/13	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide	38	2021/05/12	2021/05/13	CAM SOP-00457	OMOE E3015 m
Conductivity	30	2021/05/12	2021/05/12	CAM SOP-00414	OMOE E3530 v1 m
Conductivity	14	2021/05/13	2021/05/13	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	1	2021/05/11	2021/05/12	CAM SOP-00436	EPA 3060/7199 m
Hexavalent Chromium in Soil by IC (1)	5	2021/05/11	2021/05/13	CAM SOP-00436	EPA 3060/7199 m
Hexavalent Chromium in Soil by IC (1)	38	2021/05/12	2021/05/13	CAM SOP-00436	EPA 3060/7199 m
Dinitrotoluene Sum	1	2021/05/10	2021/05/14	CAM SOP - 00301	EPA 8270
Dinitrotoluene Sum	4	2021/05/10	2021/05/17	CAM SOP - 00301	EPA 8270
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	7	N/A	2021/05/11	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	23	N/A	2021/05/12	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	20	N/A	2021/05/13	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	7	2021/05/11	2021/05/12	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	1	2021/05/11	2021/05/13	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	41	2021/05/12	2021/05/12	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	33	2021/05/12	2021/05/12	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS	8	2021/05/13	2021/05/13	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS	3	2021/05/13	2021/05/14	CAM SOP-00447	EPA 6020B m
Moisture	41	N/A	2021/05/11	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	8	N/A	2021/05/12	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (4)	10	2021/05/14	2021/05/15	CAM SOP-00307	SW846 8081, 8082

BV Labs - Partial/Rush Results

BV Labs - Partial/Rush Results

Your Project #: 20368429
Site Location: OPG Darlington
Your C.O.C. #: 341727

Attention: Kevan Browne (20368429)

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/05/27
Report #: R6649703
Version: 1 - Partial

CERTIFICATE OF ANALYSIS – PARTIAL RESULTS

BV LABS JOB #: C1C4985
Received: 2021/05/10, 14:40

Sample Matrix: Soil
Samples Received: 51

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
OC Pesticides Summed Parameters	10	N/A	2021/05/12	CAM SOP-00307	EPA 8081/8082 m
PAH Compounds in Soil by GC/MS (SIM)	15	2021/05/12	2021/05/13	CAM SOP-00318	EPA 8270D m
PAH Compounds in Soil by GC/MS (SIM)	14	2021/05/12	2021/05/14	CAM SOP-00318	EPA 8270D m
Polychlorinated Biphenyl in Soil	1	2021/05/11	2021/05/12	CAM SOP-00309	EPA 8082A m
Polychlorinated Biphenyl in Soil	6	2021/05/12	2021/05/13	CAM SOP-00309	EPA 8082A m
Polychlorinated Biphenyl in Soil	19	2021/05/12	2021/05/16	CAM SOP-00309	EPA 8082A m
Polychlorinated Biphenyl in Soil	4	2021/05/13	2021/05/13	CAM SOP-00309	EPA 8082A m
pH CaCl2 EXTRACT	1	2021/05/11	2021/05/11	CAM SOP-00413	EPA 9045 D m
pH CaCl2 EXTRACT	5	2021/05/12	2021/05/12	CAM SOP-00413	EPA 9045 D m
pH CaCl2 EXTRACT	39	2021/05/12	2021/05/13	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	18	N/A	2021/05/13	CAM SOP-00102	EPA 6010C
Sodium Adsorption Ratio (SAR)	26	N/A	2021/05/14	CAM SOP-00102	EPA 6010C

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
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Your Project #: 20368429
Site Location: OPG Darlington
Your C.O.C. #: 341727

Attention: Kevan Browne (20368429)

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

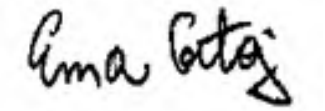
Report Date: 2021/05/27
Report #: R6649703
Version: 1 - Partial

CERTIFICATE OF ANALYSIS – PARTIAL RESULTS

BV LABS JOB #: C1C4985
Received: 2021/05/10, 14:40

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.
(2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(4) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key



Ema Gitej
Senior Project Manager
27 May 2021 07:02:52

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: emese.gitej@bureauveritas.com
Phone# (905)817-5829
==========
This report has been generated and distributed using a secure automated process.
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BV Labs - Partial/Rush Results

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BV Labs - Partial/Rush Results

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ047		PNJ048			PNJ048		
Sampling Date		2021/04/27 08:30		2021/04/27 09:00			2021/04/27 09:00		
COC Number		341727		341727			341727		
	UNITS	BH21-27-1	QC Batch	BH21-27-4	RDL	QC Batch	BH21-27-4 Lab-Dup	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A			0.68		7343922			
Inorganics									
Conductivity	mS/cm			0.16	0.002	7347902			
Moisture	%			12	1.0	7345085			
Available (CaCl2) pH	pH	8.11	7348910	7.76		7349204			
WAD Cyanide (Free)	ug/g			<0.01	0.01	7348092			
Chromium (VI)	ug/g			<0.18	0.18	7347815			
Metals									
Hot Water Ext. Boron (B)	ug/g			0.068	0.050	7347755			
Acid Extractable Antimony (Sb)	ug/g			<0.20	0.20	7347619	<0.20	0.20	7347619
Acid Extractable Arsenic (As)	ug/g			<1.0	1.0	7347619	<1.0	1.0	7347619
Acid Extractable Barium (Ba)	ug/g			33	0.50	7347619	31	0.50	7347619
Acid Extractable Beryllium (Be)	ug/g			0.21	0.20	7347619	<0.20	0.20	7347619
Acid Extractable Boron (B)	ug/g			<5.0	5.0	7347619	<5.0	5.0	7347619
Acid Extractable Cadmium (Cd)	ug/g			<0.10	0.10	7347619	<0.10	0.10	7347619
Acid Extractable Chromium (Cr)	ug/g			8.7	1.0	7347619	8.9	1.0	7347619
Acid Extractable Cobalt (Co)	ug/g			2.9	0.10	7347619	2.9	0.10	7347619
Acid Extractable Copper (Cu)	ug/g			4.9	0.50	7347619	4.9	0.50	7347619
Acid Extractable Lead (Pb)	ug/g			2.6	1.0	7347619	2.5	1.0	7347619
Acid Extractable Molybdenum (Mo)	ug/g			<0.50	0.50	7347619	<0.50	0.50	7347619
Acid Extractable Nickel (Ni)	ug/g			5.1	0.50	7347619	5.3	0.50	7347619
Acid Extractable Selenium (Se)	ug/g			<0.50	0.50	7347619	<0.50	0.50	7347619
Acid Extractable Silver (Ag)	ug/g			<0.20	0.20	7347619	<0.20	0.20	7347619
Acid Extractable Thallium (Tl)	ug/g			<0.050	0.050	7347619	<0.050	0.050	7347619
Acid Extractable Uranium (U)	ug/g			0.41	0.050	7347619	0.42	0.050	7347619
Acid Extractable Vanadium (V)	ug/g			19	5.0	7347619	19	5.0	7347619
Acid Extractable Zinc (Zn)	ug/g			22	5.0	7347619	20	5.0	7347619
Acid Extractable Mercury (Hg)	ug/g			<0.050	0.050	7347619	<0.050	0.050	7347619

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

BV Labs - Partial/Rush Results

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ049			PNJ050		PNJ051		
Sampling Date		2021/04/27 10:10			2021/04/27 10:30		2021/04/27 12:15		
COC Number		341727			341727		341727		
	UNITS	BH21-25-1	RDL	QC Batch	BH21-25-3	QC Batch	BH21-28-1	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	0.20 (1)		7344349	0.61	7343922	0.23 (1)		7344349
Inorganics									
Conductivity	mS/cm	0.27	0.002	7347902	0.23	7347952	0.19	0.002	7349998
Moisture	%				18	7344857	13	1.0	7347980
Available (CaCl2) pH	pH	7.43		7349204	7.62	7349204	7.50		7348910
WAD Cyanide (Free)	ug/g	<0.01	0.01	7348086	<0.01	7348092	<0.01	0.01	7347805
Chromium (VI)	ug/g	<0.18	0.18	7347720	<0.18	7347815	<0.18	0.18	7347720
Metals									
Hot Water Ext. Boron (B)	ug/g	0.73	0.050	7347755	<0.050	7347890	0.51	0.050	7349822
Acid Extractable Antimony (Sb)	ug/g	0.37	0.20	7347617	<0.20	7347619	<0.20	0.20	7349785
Acid Extractable Arsenic (As)	ug/g	1.7	1.0	7347617	2.0	7347619	2.6	1.0	7349785
Acid Extractable Barium (Ba)	ug/g	83	0.50	7347617	160	7347619	84	0.50	7349785
Acid Extractable Beryllium (Be)	ug/g	0.45	0.20	7347617	0.61	7347619	0.54	0.20	7349785
Acid Extractable Boron (B)	ug/g	7.7	5.0	7347617	8.5	7347619	6.3	5.0	7349785
Acid Extractable Cadmium (Cd)	ug/g	0.20	0.10	7347617	<0.10	7347619	0.23	0.10	7349785
Acid Extractable Chromium (Cr)	ug/g	20	1.0	7347617	26	7347619	21	1.0	7349785
Acid Extractable Cobalt (Co)	ug/g	5.5	0.10	7347617	8.8	7347619	6.4	0.10	7349785
Acid Extractable Copper (Cu)	ug/g	13	0.50	7347617	18	7347619	11	0.50	7349785
Acid Extractable Lead (Pb)	ug/g	9.3	1.0	7347617	5.8	7347619	11	1.0	7349785
Acid Extractable Molybdenum (Mo)	ug/g	0.55	0.50	7347617	<0.50	7347619	<0.50	0.50	7349785
Acid Extractable Nickel (Ni)	ug/g	11	0.50	7347617	18	7347619	12	0.50	7349785
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7347617	<0.50	7347619	<0.50	0.50	7349785
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7347617	<0.20	7347619	<0.20	0.20	7349785
Acid Extractable Thallium (Tl)	ug/g	0.11	0.050	7347617	0.18	7347619	0.14	0.050	7349785
Acid Extractable Uranium (U)	ug/g	0.52	0.050	7347617	0.47	7347619	0.51	0.050	7349785
Acid Extractable Vanadium (V)	ug/g	30	5.0	7347617	42	7347619	36	5.0	7349785
Acid Extractable Zinc (Zn)	ug/g	57	5.0	7347617	48	7347619	50	5.0	7349785
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7347617	<0.050	7347619	<0.050	0.050	7349785

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

BV Labs - Partial/Rush Results

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ052			PNJ053			PNJ054		
Sampling Date		2021/04/27 12:20			2021/04/27 14:15			2021/04/27 14:30		
COC Number		341727			341727			341727		
	UNITS	BH21-28-3	RDL	QC Batch	BH21-29-1	RDL	QC Batch	BH21-29-4	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.38 (1)		7343922	0.28 (1)		7344349	0.69		7343922
Inorganics										
Conductivity	mS/cm	0.082	0.002	7347902	0.18	0.002	7349998	0.17	0.002	7347902
Moisture	%	9.4	1.0	7344939				13	1.0	7344857
Available (CaCl2) pH	pH	7.89		7349204	8.00		7348910	7.76		7349204
WAD Cyanide (Free)	ug/g	<0.01	0.01	7348092	<0.01	0.01	7347805	<0.01	0.01	7348086
Chromium (VI)	ug/g	<0.18	0.18	7347815	<0.18	0.18	7347720	<0.18	0.18	7347720
Metals										
Hot Water Ext. Boron (B)	ug/g	<0.050	0.050	7347755	0.51	0.050	7349822	0.080	0.050	7347755
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7347619	<0.20	0.20	7349784	<0.20	0.20	7347619
Acid Extractable Arsenic (As)	ug/g	<1.0	1.0	7347619	2.8	1.0	7349784	1.8	1.0	7347619
Acid Extractable Barium (Ba)	ug/g	16	0.50	7347619	90	0.50	7349784	110	0.50	7347619
Acid Extractable Beryllium (Be)	ug/g	<0.20	0.20	7347619	0.54	0.20	7349784	0.47	0.20	7347619
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7347619	14	5.0	7349784	9.4	5.0	7347619
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7347619	<0.10	0.10	7349784	<0.10	0.10	7347619
Acid Extractable Chromium (Cr)	ug/g	5.7	1.0	7347619	12	1.0	7349784	20	1.0	7347619
Acid Extractable Cobalt (Co)	ug/g	1.7	0.10	7347619	4.6	0.10	7349784	6.7	0.10	7347619
Acid Extractable Copper (Cu)	ug/g	2.9	0.50	7347619	25	0.50	7349784	12	0.50	7347619
Acid Extractable Lead (Pb)	ug/g	1.6	1.0	7347619	16	1.0	7349784	5.5	1.0	7347619
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7347619	1.3	0.50	7349784	<0.50	0.50	7347619
Acid Extractable Nickel (Ni)	ug/g	2.9	0.50	7347619	24	0.50	7349784	13	0.50	7347619
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7347619	<0.50	0.50	7349784	<0.50	0.50	7347619
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7347619	<0.20	0.20	7349784	<0.20	0.20	7347619
Acid Extractable Thallium (Tl)	ug/g	<0.050	0.050	7347619	<0.050	0.050	7349784	0.14	0.050	7347619
Acid Extractable Uranium (U)	ug/g	0.44	0.050	7347619	1.4	0.050	7349784	0.47	0.050	7347619
Acid Extractable Vanadium (V)	ug/g	15	5.0	7347619	13	5.0	7349784	29	5.0	7347619
Acid Extractable Zinc (Zn)	ug/g	11	5.0	7347619	45	5.0	7349784	41	5.0	7347619
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7347619	<0.050	0.050	7349784	<0.050	0.050	7347619

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ055			PNJ056	PNJ057	PNJ058	PNJ059		
Sampling Date		2021/04/27 14:30			2021/04/28 15:45	2021/04/28 15:55	2021/04/28 16:05	2021/04/28 15:55		
COC Number		341727			341727	341727	341727	341727		
	UNITS	Dup 6	RDL	QC Batch	BH21-49-1	BH21-49-3	BH21-49-4	Dup 8	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.50		7343922	0.28 (1)	0.27 (1)	0.33 (1)	0.22 (1)		7344349
Inorganics										
Conductivity	mS/cm	0.16	0.002	7347902	0.14	0.15	0.11	0.23	0.002	7347902
Moisture	%	13	1.0	7344857						
Available (CaCl2) pH	pH	7.66		7348838	7.78	7.77	7.84	7.59		7347074
WAD Cyanide (Free)	ug/g	<0.01	0.01	7348092	<0.01	<0.01	<0.01	<0.01	0.01	7346401
Chromium (VI)	ug/g	<0.18	0.18	7347815	<0.18	<0.18	<0.18	<0.18	0.18	7346399
Metals										
Hot Water Ext. Boron (B)	ug/g	0.082	0.050	7347755	0.076	<0.050	0.051	0.054	0.050	7347755
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7347619	<0.20	<0.20	<0.20	<0.20	0.20	7347617
Acid Extractable Arsenic (As)	ug/g	1.5	1.0	7347619	1.8	<1.0	<1.0	1.3	1.0	7347617
Acid Extractable Barium (Ba)	ug/g	97	0.50	7347619	47	35	26	69	0.50	7347617
Acid Extractable Beryllium (Be)	ug/g	0.40	0.20	7347619	0.21	0.24	<0.20	0.39	0.20	7347617
Acid Extractable Boron (B)	ug/g	7.5	5.0	7347619	<5.0	<5.0	<5.0	5.3	5.0	7347617
Acid Extractable Cadmium (Cd)	ug/g	0.15	0.10	7347619	<0.10	<0.10	<0.10	<0.10	0.10	7347617
Acid Extractable Chromium (Cr)	ug/g	17	1.0	7347619	9.6	9.1	8.2	15	1.0	7347617
Acid Extractable Cobalt (Co)	ug/g	6.3	0.10	7347619	4.5	3.0	2.4	4.9	0.10	7347617
Acid Extractable Copper (Cu)	ug/g	11	0.50	7347619	25	4.5	4.6	8.7	0.50	7347617
Acid Extractable Lead (Pb)	ug/g	4.6	1.0	7347619	7.4	2.7	2.2	3.9	1.0	7347617
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7347619	<0.50	<0.50	<0.50	<0.50	0.50	7347617
Acid Extractable Nickel (Ni)	ug/g	12	0.50	7347619	6.1	5.4	4.3	9.4	0.50	7347617
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7347619	<0.50	<0.50	<0.50	<0.50	0.50	7347617
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7347619	<0.20	<0.20	<0.20	<0.20	0.20	7347617
Acid Extractable Thallium (Tl)	ug/g	0.12	0.050	7347619	<0.050	<0.050	<0.050	0.096	0.050	7347617
Acid Extractable Uranium (U)	ug/g	0.44	0.050	7347619	0.53	0.43	0.46	0.49	0.050	7347617
Acid Extractable Vanadium (V)	ug/g	27	5.0	7347619	17	19	16	27	5.0	7347617
Acid Extractable Zinc (Zn)	ug/g	40	5.0	7347619	85	19	20	26	5.0	7347617
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7347619	<0.050	<0.050	<0.050	<0.050	0.050	7347617

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

BV Labs - Partial/Rush Results

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs - Partial/Rush Results

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ060	PNJ061	PNJ062		PNJ063		
Sampling Date		2021/04/28 08:40	2021/04/28 09:15	2021/04/28 14:50		2021/04/30 08:50		
COC Number		341727	341727	341727		341727		
	UNITS	BH21-13-1	BH21-13-4	BH21-13-14	QC Batch	BH21-33-1	RDL	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A	0.30 (1)	0.33 (1)	0.83	7344349	0.24 (1)		7344349
Inorganics								
Conductivity	mS/cm	0.13	0.10	0.14	7350409	0.16	0.002	7347902
Available (CaCl2) pH	pH	7.86	7.82	8.02	7348910	7.51		7348838
WAD Cyanide (Free)	ug/g	<0.01	<0.01	<0.01	7347805	<0.01	0.01	7348092
Chromium (VI)	ug/g	<0.18	<0.18	<0.18	7347720	<0.18	0.18	7347815
Metals								
Hot Water Ext. Boron (B)	ug/g	0.21	<0.050	<0.050	7350576	0.067	0.050	7347755
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	<0.20	7350471	<0.20	0.20	7347617
Acid Extractable Arsenic (As)	ug/g	2.2	<1.0	<1.0	7350471	1.4	1.0	7347617
Acid Extractable Barium (Ba)	ug/g	73	30	11	7350471	73	0.50	7347617
Acid Extractable Beryllium (Be)	ug/g	0.43	0.21	<0.20	7350471	0.48	0.20	7347617
Acid Extractable Boron (B)	ug/g	12	<5.0	<5.0	7350471	<5.0	5.0	7347617
Acid Extractable Cadmium (Cd)	ug/g	0.17	<0.10	<0.10	7350471	0.14	0.10	7347617
Acid Extractable Chromium (Cr)	ug/g	11	7.5	5.5	7350471	18	1.0	7347617
Acid Extractable Cobalt (Co)	ug/g	4.6	2.7	1.2	7350471	6.2	0.10	7347617
Acid Extractable Copper (Cu)	ug/g	14	4.7	1.8	7350471	12	0.50	7347617
Acid Extractable Lead (Pb)	ug/g	12	2.6	1.3	7350471	6.4	1.0	7347617
Acid Extractable Molybdenum (Mo)	ug/g	0.89	<0.50	<0.50	7350471	<0.50	0.50	7347617
Acid Extractable Nickel (Ni)	ug/g	18	4.6	2.2	7350471	10	0.50	7347617
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	7350471	<0.50	0.50	7347617
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	7350471	<0.20	0.20	7347617
Acid Extractable Thallium (Tl)	ug/g	0.068	0.054	<0.050	7350471	0.12	0.050	7347617
Acid Extractable Uranium (U)	ug/g	1.1	0.50	0.38	7350471	0.46	0.050	7347617
Acid Extractable Vanadium (V)	ug/g	13	17	10	7350471	36	5.0	7347617
Acid Extractable Zinc (Zn)	ug/g	43	20	9.2	7350471	47	5.0	7347617
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	<0.050	7350471	<0.050	0.050	7347617

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

BV Labs - Partial/Rush Results

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ064			PNJ064			PNJ065		
Sampling Date		2021/04/30 09:00			2021/04/30 09:00			2021/04/30 09:30		
COC Number		341727			341727			341727		
	UNITS	BH21-33-2	RDL	QC Batch	BH21-33-2 Lab-Dup	RDL	QC Batch	BH21-33-4	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.23 (1)		7343922				0.33 (1)		7343922
Inorganics										
Conductivity	mS/cm	0.18	0.002	7350409				0.10	0.002	7347902
Moisture	%	20	1.0	7345085	18	1.0	7345085	6.9	1.0	7344857
Available (CaCl2) pH	pH	7.57		7349204				7.84		7348838
WAD Cyanide (Free)	ug/g	<0.01	0.01	7348092				<0.01	0.01	7348092
Chromium (VI)	ug/g	<0.18	0.18	7347815				<0.18	0.18	7347815
Metals										
Hot Water Ext. Boron (B)	ug/g	<0.050	0.050	7347890				<0.050	0.050	7347755
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7347619				<0.20	0.20	7347619
Acid Extractable Arsenic (As)	ug/g	1.4	1.0	7347619				1.1	1.0	7347619
Acid Extractable Barium (Ba)	ug/g	86	0.50	7347619				41	0.50	7347619
Acid Extractable Beryllium (Be)	ug/g	0.49	0.20	7347619				0.27	0.20	7347619
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7347619				5.2	5.0	7347619
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7347619				<0.10	0.10	7347619
Acid Extractable Chromium (Cr)	ug/g	18	1.0	7347619				11	1.0	7347619
Acid Extractable Cobalt (Co)	ug/g	5.7	0.10	7347619				3.6	0.10	7347619
Acid Extractable Copper (Cu)	ug/g	10	0.50	7347619				7.0	0.50	7347619
Acid Extractable Lead (Pb)	ug/g	5.2	1.0	7347619				2.9	1.0	7347619
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7347619				<0.50	0.50	7347619
Acid Extractable Nickel (Ni)	ug/g	11	0.50	7347619				6.5	0.50	7347619
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7347619				<0.50	0.50	7347619
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7347619				<0.20	0.20	7347619
Acid Extractable Thallium (Tl)	ug/g	0.10	0.050	7347619				0.071	0.050	7347619
Acid Extractable Uranium (U)	ug/g	0.47	0.050	7347619				0.45	0.050	7347619
Acid Extractable Vanadium (V)	ug/g	32	5.0	7347619				20	5.0	7347619
Acid Extractable Zinc (Zn)	ug/g	36	5.0	7347619				21	5.0	7347619
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7347619				<0.050	0.050	7347619

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs - Partial/Rush Results

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ066			PNJ066			PNJ067		
Sampling Date		2021/04/30 14:30			2021/04/30 14:30			2021/04/30 12:40		
COC Number		341727			341727			341727		
	UNITS	BH21-32-4	RDL	QC Batch	BH21-32-4 Lab-Dup	RDL	QC Batch	BH21-34-1	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.38 (1)		7344349				0.29 (1)		7343922
Inorganics										
Conductivity	mS/cm	0.081	0.002	7349998				0.12	0.002	7347952
Moisture	%							5.0	1.0	7344857
Available (CaCl2) pH	pH	7.91		7348910	7.90		7348910	7.82		7349204
WAD Cyanide (Free)	ug/g	<0.01	0.01	7347805	<0.01	0.01	7347805	<0.01	0.01	7348092
Chromium (VI)	ug/g	<0.18	0.18	7347720	<0.18	0.18	7347720	<0.18	0.18	7347815
Metals										
Hot Water Ext. Boron (B)	ug/g	<0.050	0.050	7349822				0.078	0.050	7347890
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7349785				0.21	0.20	7347617
Acid Extractable Arsenic (As)	ug/g	<1.0	1.0	7349785				8.9	1.0	7347617
Acid Extractable Barium (Ba)	ug/g	26	0.50	7349785				46	0.50	7347617
Acid Extractable Beryllium (Be)	ug/g	<0.20	0.20	7349785				0.23	0.20	7347617
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7349785				<5.0	5.0	7347617
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7349785				<0.10	0.10	7347617
Acid Extractable Chromium (Cr)	ug/g	6.8	1.0	7349785				9.2	1.0	7347617
Acid Extractable Cobalt (Co)	ug/g	2.3	0.10	7349785				3.9	0.10	7347617
Acid Extractable Copper (Cu)	ug/g	3.1	0.50	7349785				8.6	0.50	7347617
Acid Extractable Lead (Pb)	ug/g	1.9	1.0	7349785				4.8	1.0	7347617
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7349785				0.52	0.50	7347617
Acid Extractable Nickel (Ni)	ug/g	3.8	0.50	7349785				13	0.50	7347617
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7349785				<0.50	0.50	7347617
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7349785				<0.20	0.20	7347617
Acid Extractable Thallium (Tl)	ug/g	<0.050	0.050	7349785				0.069	0.050	7347617
Acid Extractable Uranium (U)	ug/g	0.46	0.050	7349785				0.51	0.050	7347617
Acid Extractable Vanadium (V)	ug/g	16	5.0	7349785				17	5.0	7347617
Acid Extractable Zinc (Zn)	ug/g	14	5.0	7349785				49	5.0	7347617
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7349785				<0.050	0.050	7347617

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

BV Labs - Partial/Rush Results

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ068			PNJ069			PNJ069		
Sampling Date		2021/04/30 13:10			2021/04/30 10:45			2021/04/30 10:45		
COC Number		341727			341727			341727		
	UNITS	BH21-34-4	RDL	QC Batch	BH21-35-3A	RDL	QC Batch	BH21-35-3A Lab-Dup	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.33 (1)		7344349	0.27 (1)		7344349			
Inorganics										
Conductivity	mS/cm	0.092	0.002	7347952	0.14	0.002	7347902			
Moisture	%	7.0	1.0	7344939						
Available (CaCl2) pH	pH	7.92		7348838	7.66		7345659			
WAD Cyanide (Free)	ug/g	<0.01	0.01	7348092	<0.01	0.01	7345948	<0.01	0.01	7345948
Chromium (VI)	ug/g	<0.18	0.18	7347815	<0.18	0.18	7346041			
Metals										
Hot Water Ext. Boron (B)	ug/g	<0.050	0.050	7347890	0.058	0.050	7347755			
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7347617	<0.20	0.20	7347617			
Acid Extractable Arsenic (As)	ug/g	<1.0	1.0	7347617	1.1	1.0	7347617			
Acid Extractable Barium (Ba)	ug/g	24	0.50	7347617	61	0.50	7347617			
Acid Extractable Beryllium (Be)	ug/g	<0.20	0.20	7347617	0.38	0.20	7347617			
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7347617	<5.0	5.0	7347617			
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7347617	<0.10	0.10	7347617			
Acid Extractable Chromium (Cr)	ug/g	7.3	1.0	7347617	16	1.0	7347617			
Acid Extractable Cobalt (Co)	ug/g	2.4	0.10	7347617	4.7	0.10	7347617			
Acid Extractable Copper (Cu)	ug/g	4.0	0.50	7347617	8.8	0.50	7347617			
Acid Extractable Lead (Pb)	ug/g	2.1	1.0	7347617	4.0	1.0	7347617			
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7347617	<0.50	0.50	7347617			
Acid Extractable Nickel (Ni)	ug/g	4.0	0.50	7347617	9.4	0.50	7347617			
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7347617	<0.50	0.50	7347617			
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7347617	<0.20	0.20	7347617			
Acid Extractable Thallium (Tl)	ug/g	<0.050	0.050	7347617	0.092	0.050	7347617			
Acid Extractable Uranium (U)	ug/g	0.38	0.050	7347617	0.69	0.050	7347617			
Acid Extractable Vanadium (V)	ug/g	16	5.0	7347617	30	5.0	7347617			
Acid Extractable Zinc (Zn)	ug/g	20	5.0	7347617	33	5.0	7347617			
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7347617	<0.050	0.050	7347617			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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BV Labs - Partial/Rush Results

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ070		PNJ071		PNJ072		
Sampling Date		2021/04/30 10:55		2021/04/29 09:40		2021/04/29 10:10		
COC Number		341727		341727		341727		
	UNITS	BH21-35-4	QC Batch	BH21-15-1	QC Batch	BH21-15-4	RDL	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A	0.33 (1)	7344349	0.24 (1)	7343922	0.32 (1)		7343922
Inorganics								
Conductivity	mS/cm	0.096	7347952	0.15	7347952	0.12	0.002	7347902
Moisture	%	9.0	7344939	17	7344857	6.2	1.0	7344857
Available (CaCl2) pH	pH	7.92	7349204	7.43	7349204	7.98		7349204
WAD Cyanide (Free)	ug/g	<0.01	7348086	<0.01	7348092	<0.01	0.01	7348092
Chromium (VI)	ug/g	<0.18	7347720	<0.18	7347815	<0.18	0.18	7347815
Metals								
Hot Water Ext. Boron (B)	ug/g	<0.050	7347890	0.096	7347890	0.097	0.050	7347755
Acid Extractable Antimony (Sb)	ug/g	<0.20	7347617	<0.20	7347619	<0.20	0.20	7347619
Acid Extractable Arsenic (As)	ug/g	<1.0	7347617	1.8	7347619	1.2	1.0	7347619
Acid Extractable Barium (Ba)	ug/g	29	7347617	59	7347619	31	0.50	7347619
Acid Extractable Beryllium (Be)	ug/g	<0.20	7347617	0.49	7347619	0.20	0.20	7347619
Acid Extractable Boron (B)	ug/g	<5.0	7347617	5.5	7347619	<5.0	5.0	7347619
Acid Extractable Cadmium (Cd)	ug/g	<0.10	7347617	0.13	7347619	<0.10	0.10	7347619
Acid Extractable Chromium (Cr)	ug/g	7.6	7347617	15	7347619	11	1.0	7347619
Acid Extractable Cobalt (Co)	ug/g	2.5	7347617	4.4	7347619	2.9	0.10	7347619
Acid Extractable Copper (Cu)	ug/g	4.5	7347617	9.2	7347619	7.6	0.50	7347619
Acid Extractable Lead (Pb)	ug/g	2.6	7347617	5.3	7347619	2.7	1.0	7347619
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	7347617	<0.50	7347619	<0.50	0.50	7347619
Acid Extractable Nickel (Ni)	ug/g	4.8	7347617	9.2	7347619	5.5	0.50	7347619
Acid Extractable Selenium (Se)	ug/g	<0.50	7347617	<0.50	7347619	<0.50	0.50	7347619
Acid Extractable Silver (Ag)	ug/g	<0.20	7347617	<0.20	7347619	<0.20	0.20	7347619
Acid Extractable Thallium (Tl)	ug/g	<0.050	7347617	0.093	7347619	<0.050	0.050	7347619
Acid Extractable Uranium (U)	ug/g	0.80	7347617	0.52	7347619	0.50	0.050	7347619
Acid Extractable Vanadium (V)	ug/g	16	7347617	26	7347619	19	5.0	7347619
Acid Extractable Zinc (Zn)	ug/g	29	7347617	44	7347619	24	5.0	7347619
Acid Extractable Mercury (Hg)	ug/g	<0.050	7347617	<0.050	7347619	<0.050	0.050	7347619

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ073			PNJ074			PNJ075	PNJ076		
Sampling Date		2021/04/29 11:05			2021/04/29 11:20			2021/04/29 11:40	2021/04/29 13:30		
COC Number		341727			341727			341727	341727		
	UNITS	BH12-50-1	RDL	QC Batch	BH12-50-3	RDL	QC Batch	BH21-50-5	BH21-16-1	RDL	QC Batch
Calculated Parameters											
Sodium Adsorption Ratio	N/A	0.28 (1)		7343922	0.19 (1)		7343922	0.26	0.31 (1)		7344349
Inorganics											
Conductivity	mS/cm	0.15	0.002	7347902	0.31	0.002	7347902	0.33	0.10	0.002	7347902
Moisture	%				5.9	1.0	7344857				
Available (CaCl2) pH	pH	7.94		7348910	7.92		7348838	7.80	6.83		7348910
WAD Cyanide (Free)	ug/g	<0.01	0.01	7347805	<0.01	0.01	7348092	<0.01	<0.01	0.01	7347805
Chromium (VI)	ug/g	<0.18	0.18	7347720	<0.18	0.18	7347815	<0.18	<0.18	0.18	7347720
Metals											
Hot Water Ext. Boron (B)	ug/g	0.11	0.050	7347755	0.16	0.050	7347755	0.15	0.21	0.050	7347755
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7347617	<0.20	0.20	7347617	<0.20	<0.20	0.20	7347617
Acid Extractable Arsenic (As)	ug/g	1.2	1.0	7347617	<1.0	1.0	7347617	<1.0	<1.0	1.0	7347617
Acid Extractable Barium (Ba)	ug/g	52	0.50	7347617	47	0.50	7347617	39	30	0.50	7347617
Acid Extractable Beryllium (Be)	ug/g	0.20	0.20	7347617	0.21	0.20	7347617	<0.20	0.27	0.20	7347617
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7347617	5.2	5.0	7347617	<5.0	<5.0	5.0	7347617
Acid Extractable Cadmium (Cd)	ug/g	0.15	0.10	7347617	<0.10	0.10	7347617	<0.10	0.13	0.10	7347617
Acid Extractable Chromium (Cr)	ug/g	9.4	1.0	7347617	8.7	1.0	7347617	6.8	11	1.0	7347617
Acid Extractable Cobalt (Co)	ug/g	3.3	0.10	7347617	2.5	0.10	7347617	1.9	3.3	0.10	7347617
Acid Extractable Copper (Cu)	ug/g	10	0.50	7347617	4.6	0.50	7347617	4.8	4.1	0.50	7347617
Acid Extractable Lead (Pb)	ug/g	3.8	1.0	7347617	2.7	1.0	7347617	3.1	5.6	1.0	7347617
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7347617	<0.50	0.50	7347617	<0.50	<0.50	0.50	7347617
Acid Extractable Nickel (Ni)	ug/g	6.6	0.50	7347617	4.9	0.50	7347617	4.1	6.4	0.50	7347617
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7347617	<0.50	0.50	7347617	<0.50	<0.50	0.50	7347617
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7347617	<0.20	0.20	7347617	<0.20	<0.20	0.20	7347617
Acid Extractable Thallium (Tl)	ug/g	0.068	0.050	7347617	<0.050	0.050	7347617	<0.050	<0.050	0.050	7347617
Acid Extractable Uranium (U)	ug/g	0.55	0.050	7347617	0.65	0.050	7347617	0.56	0.35	0.050	7347617
Acid Extractable Vanadium (V)	ug/g	19	5.0	7347617	16	5.0	7347617	14	20	5.0	7347617
Acid Extractable Zinc (Zn)	ug/g	30	5.0	7347617	18	5.0	7347617	17	23	5.0	7347617
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7347617	<0.050	0.050	7347617	<0.050	<0.050	0.050	7347617

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

BV Labs - Partial/Rush Results

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs - Partial/Rush Results

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ076			PNJ077			PNJ077	
Sampling Date		2021/04/29 13:30			2021/04/29 14:05			2021/04/29 14:05	
COC Number		341727			341727			341727	
	UNITS	BH21-16-1 Lab-Dup	RDL	QC Batch	BH12-16-4	RDL	QC Batch	BH12-16-4 Lab-Dup	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A				0.36 (1)		7343922		
Inorganics									
Conductivity	mS/cm	0.099	0.002	7347902	0.089	0.002	7347952		
Moisture	%				6.6	1.0	7344939		
Available (CaCl2) pH	pH				7.97		7349204	8.00	7349204
WAD Cyanide (Free)	ug/g				<0.01	0.01	7348092		
Chromium (VI)	ug/g				<0.18	0.18	7347815		
Metals									
Hot Water Ext. Boron (B)	ug/g	0.20	0.050	7347755	<0.050	0.050	7347890		
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7347617	<0.20	0.20	7347617		
Acid Extractable Arsenic (As)	ug/g	1.1	1.0	7347617	<1.0	1.0	7347617		
Acid Extractable Barium (Ba)	ug/g	29	0.50	7347617	10	0.50	7347617		
Acid Extractable Beryllium (Be)	ug/g	0.26	0.20	7347617	<0.20	0.20	7347617		
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7347617	<5.0	5.0	7347617		
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7347617	<0.10	0.10	7347617		
Acid Extractable Chromium (Cr)	ug/g	11	1.0	7347617	5.2	1.0	7347617		
Acid Extractable Cobalt (Co)	ug/g	3.4	0.10	7347617	1.6	0.10	7347617		
Acid Extractable Copper (Cu)	ug/g	4.4	0.50	7347617	10	0.50	7347617		
Acid Extractable Lead (Pb)	ug/g	5.8	1.0	7347617	1.5	1.0	7347617		
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7347617	<0.50	0.50	7347617		
Acid Extractable Nickel (Ni)	ug/g	6.5	0.50	7347617	2.6	0.50	7347617		
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7347617	<0.50	0.50	7347617		
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7347617	<0.20	0.20	7347617		
Acid Extractable Thallium (Tl)	ug/g	<0.050	0.050	7347617	<0.050	0.050	7347617		
Acid Extractable Uranium (U)	ug/g	0.39	0.050	7347617	0.39	0.050	7347617		
Acid Extractable Vanadium (V)	ug/g	21	5.0	7347617	12	5.0	7347617		
Acid Extractable Zinc (Zn)	ug/g	24	5.0	7347617	8.7	5.0	7347617		
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7347617	<0.050	0.050	7347617		

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ078			PNJ079		PNJ080		
Sampling Date		2021/04/29 14:40			2021/04/29 14:50		2021/04/29 15:15		
COC Number		341727			341727		341727		
	UNITS	BH21-48-1	RDL	QC Batch	BH21-48-2	QC Batch	BH21-48-5	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	0.28 (1)		7344349	0.32 (1)	7343922	0.41 (1)		7343922
Inorganics									
Conductivity	mS/cm	0.12	0.002	7349998	0.083	7347952	0.063	0.002	7347902
Moisture	%				8.9	7344939	5.6	1.0	7344939
Available (CaCl2) pH	pH	7.47		7348910	7.89	7349204	8.09		7349204
WAD Cyanide (Free)	ug/g	<0.01	0.01	7347805	<0.01	7348092	<0.01	0.01	7348092
Chromium (VI)	ug/g	<0.18	0.18	7347720	<0.18	7347815	<0.18	0.18	7347815
Metals									
Hot Water Ext. Boron (B)	ug/g	0.15	0.050	7349822	0.054	7347890	<0.050	0.050	7347755
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7349785	<0.20	7347619	<0.20	0.20	7347619
Acid Extractable Arsenic (As)	ug/g	1.3	1.0	7349785	<1.0	7347619	<1.0	1.0	7347619
Acid Extractable Barium (Ba)	ug/g	35	0.50	7349785	10	7347619	6.7	0.50	7347619
Acid Extractable Beryllium (Be)	ug/g	0.39	0.20	7349785	<0.20	7347619	<0.20	0.20	7347619
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7349785	<5.0	7347619	<5.0	5.0	7347619
Acid Extractable Cadmium (Cd)	ug/g	0.14	0.10	7349785	<0.10	7347619	<0.10	0.10	7347619
Acid Extractable Chromium (Cr)	ug/g	12	1.0	7349785	5.3	7347619	3.8	1.0	7347619
Acid Extractable Cobalt (Co)	ug/g	3.5	0.10	7349785	1.4	7347619	1.1	0.10	7347619
Acid Extractable Copper (Cu)	ug/g	2.9	0.50	7349785	1.6	7347619	1.8	0.50	7347619
Acid Extractable Lead (Pb)	ug/g	4.3	1.0	7349785	1.4	7347619	1.1	1.0	7347619
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7349785	<0.50	7347619	<0.50	0.50	7347619
Acid Extractable Nickel (Ni)	ug/g	6.1	0.50	7349785	2.6	7347619	1.7	0.50	7347619
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7349785	<0.50	7347619	<0.50	0.50	7347619
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7349785	<0.20	7347619	<0.20	0.20	7347619
Acid Extractable Thallium (Tl)	ug/g	0.052	0.050	7349785	<0.050	7347619	<0.050	0.050	7347619
Acid Extractable Uranium (U)	ug/g	0.43	0.050	7349785	0.39	7347619	0.33	0.050	7347619
Acid Extractable Vanadium (V)	ug/g	22	5.0	7349785	13	7347619	9.3	5.0	7347619
Acid Extractable Zinc (Zn)	ug/g	26	5.0	7349785	6.9	7347619	5.6	5.0	7347619
Acid Extractable Mercury (Hg)	ug/g	0.054	0.050	7349785	<0.050	7347619	<0.050	0.050	7347619

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

BV Labs - Partial/Rush Results

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BV Labs - Partial/Rush Results

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ081			PNJ082		PNJ083		
Sampling Date		2021/05/03 09:10			2021/05/03 09:20		2021/05/03 09:35		
COC Number		341727			341727		341727		
	UNITS	BH21-31-1	RDL	QC Batch	BH21-31-2	QC Batch	BH21-31-5	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	0.26 (1)		7344349	0.38	7343922	0.30 (1)		7343922
Inorganics									
Conductivity	mS/cm	0.16	0.002	7349998	0.17	7347952	0.12	0.002	7347952
Moisture	%				20	7344857	9.9	1.0	7344857
Available (CaCl2) pH	pH	7.62		7348910	7.66	7349204	7.82		7349204
WAD Cyanide (Free)	ug/g	<0.01	0.01	7347805	<0.01	7348092	<0.01	0.01	7348092
Chromium (VI)	ug/g	<0.18	0.18	7347720	<0.18	7347815	<0.18	0.18	7347815
Metals									
Hot Water Ext. Boron (B)	ug/g	0.094	0.050	7349822	0.058	7347890	<0.050	0.050	7347890
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7349784	<0.20	7347619	<0.20	0.20	7347617
Acid Extractable Arsenic (As)	ug/g	1.4	1.0	7349784	1.8	7347619	<1.0	1.0	7347617
Acid Extractable Barium (Ba)	ug/g	45	0.50	7349784	170	7347619	33	0.50	7347617
Acid Extractable Beryllium (Be)	ug/g	0.31	0.20	7349784	0.67	7347619	<0.20	0.20	7347617
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7349784	9.9	7347619	<5.0	5.0	7347617
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7349784	0.10	7347619	<0.10	0.10	7347617
Acid Extractable Chromium (Cr)	ug/g	13	1.0	7349784	29	7347619	6.7	1.0	7347617
Acid Extractable Cobalt (Co)	ug/g	4.3	0.10	7349784	9.2	7347619	2.3	0.10	7347617
Acid Extractable Copper (Cu)	ug/g	8.4	0.50	7349784	16	7347619	3.7	0.50	7347617
Acid Extractable Lead (Pb)	ug/g	4.3	1.0	7349784	6.5	7347619	2.2	1.0	7347617
Acid Extractable Molybdenum (Mo)	ug/g	0.58	0.50	7349784	<0.50	7347619	<0.50	0.50	7347617
Acid Extractable Nickel (Ni)	ug/g	8.2	0.50	7349784	19	7347619	4.0	0.50	7347617
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7349784	<0.50	7347619	<0.50	0.50	7347617
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7349784	<0.20	7347619	<0.20	0.20	7347617
Acid Extractable Thallium (Tl)	ug/g	0.10	0.050	7349784	0.20	7347619	<0.050	0.050	7347617
Acid Extractable Uranium (U)	ug/g	0.48	0.050	7349784	0.50	7347619	0.43	0.050	7347617
Acid Extractable Vanadium (V)	ug/g	24	5.0	7349784	44	7347619	14	5.0	7347617
Acid Extractable Zinc (Zn)	ug/g	37	5.0	7349784	49	7347619	19	5.0	7347617
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7349784	<0.050	7347619	<0.050	0.050	7347617

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

BV Labs - Partial/Rush Results

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ084		PNJ085	PNJ086			PNJ087		
Sampling Date		2021/05/03 14:15		2021/05/03 14:45	2021/05/03 14:45			2021/05/03 12:50		
COC Number		341727		341727	341727			341727		
	UNITS	BH21-6-1	QC Batch	BH21-6-5	Dup 11	RDL	QC Batch	BH21-24-1	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.30 (1)	7344349	0.30 (1)	0.28 (1)		7344349	2.3		7344349
Inorganics										
Conductivity	mS/cm	0.11	7349998	0.13	0.15	0.002	7350409	0.20	0.002	7349998
Moisture	%	6.0	7347980	8.5	8.3	1.0	7344857			
Available (CaCl2) pH	pH	7.83	7348910	7.83	7.83		7349204	7.78		7349204
WAD Cyanide (Free)	ug/g	<0.01	7347805	<0.01	<0.01	0.01	7348092	<0.01	0.01	7348086
Chromium (VI)	ug/g	<0.18	7347720	<0.18	<0.18	0.18	7347815	<0.18	0.18	7347720
Metals										
Hot Water Ext. Boron (B)	ug/g	0.096	7349822	<0.050	<0.050	0.050	7347890	0.14	0.050	7349822
Acid Extractable Antimony (Sb)	ug/g	<0.20	7349784	<0.20	<0.20	0.20	7347617	<0.20	0.20	7349784
Acid Extractable Arsenic (As)	ug/g	1.4	7349784	1.1	<1.0	1.0	7347617	1.6	1.0	7349784
Acid Extractable Barium (Ba)	ug/g	26	7349784	37	41	0.50	7347617	81	0.50	7349784
Acid Extractable Beryllium (Be)	ug/g	0.21	7349784	<0.20	0.22	0.20	7347617	0.24	0.20	7349784
Acid Extractable Boron (B)	ug/g	<5.0	7349784	<5.0	<5.0	5.0	7347617	6.0	5.0	7349784
Acid Extractable Cadmium (Cd)	ug/g	<0.10	7349784	<0.10	<0.10	0.10	7347617	0.13	0.10	7349784
Acid Extractable Chromium (Cr)	ug/g	8.9	7349784	8.4	9.3	1.0	7347617	9.6	1.0	7349784
Acid Extractable Cobalt (Co)	ug/g	2.9	7349784	2.7	3.1	0.10	7347617	3.8	0.10	7349784
Acid Extractable Copper (Cu)	ug/g	5.9	7349784	4.4	4.8	0.50	7347617	31	0.50	7349784
Acid Extractable Lead (Pb)	ug/g	3.5	7349784	2.7	2.9	1.0	7347617	9.9	1.0	7349784
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	7349784	<0.50	<0.50	0.50	7347617	<0.50	0.50	7349784
Acid Extractable Nickel (Ni)	ug/g	6.3	7349784	4.9	5.5	0.50	7347617	7.5	0.50	7349784
Acid Extractable Selenium (Se)	ug/g	<0.50	7349784	<0.50	<0.50	0.50	7347617	<0.50	0.50	7349784
Acid Extractable Silver (Ag)	ug/g	<0.20	7349784	<0.20	<0.20	0.20	7347617	<0.20	0.20	7349784
Acid Extractable Thallium (Tl)	ug/g	0.060	7349784	<0.050	<0.050	0.050	7347617	0.057	0.050	7349784
Acid Extractable Uranium (U)	ug/g	0.56	7349784	0.40	0.43	0.050	7347617	0.57	0.050	7349784
Acid Extractable Vanadium (V)	ug/g	20	7349784	16	17	5.0	7347617	16	5.0	7349784
Acid Extractable Zinc (Zn)	ug/g	24	7349784	25	27	5.0	7347617	76	5.0	7349784
Acid Extractable Mercury (Hg)	ug/g	<0.050	7349784	<0.050	<0.050	0.050	7347617	<0.050	0.050	7349784

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ088			PNJ088			PNJ089		
Sampling Date		2021/05/03 13:10			2021/05/03 13:10			2021/05/03 10:45		
COC Number		341727			341727			341727		
	UNITS	BH21-24-3	RDL	QC Batch	BH21-24-3 Lab-Dup	RDL	QC Batch	BH21-23-1	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	2.4		7344349				1.3		7344349
Inorganics										
Conductivity	mS/cm	0.24	0.002	7347952				0.38	0.002	7349998
Moisture	%	17	1.0	7344857	17	1.0	7344857			
Available (CaCl2) pH	pH	7.71		7349204				7.44		7348910
WAD Cyanide (Free)	ug/g	<0.01	0.01	7348092	<0.01	0.01	7348092	<0.01	0.01	7347805
Chromium (VI)	ug/g	<0.18	0.18	7347815	<0.18	0.18	7347815	<0.18	0.18	7347720
Metals										
Hot Water Ext. Boron (B)	ug/g	0.098	0.050	7347890				0.40	0.050	7349822
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7347619				<0.20	0.20	7349784
Acid Extractable Arsenic (As)	ug/g	1.3	1.0	7347619				2.4	1.0	7349784
Acid Extractable Barium (Ba)	ug/g	170	0.50	7347619				120	0.50	7349784
Acid Extractable Beryllium (Be)	ug/g	0.59	0.20	7347619				0.73	0.20	7349784
Acid Extractable Boron (B)	ug/g	9.0	5.0	7347619				6.6	5.0	7349784
Acid Extractable Cadmium (Cd)	ug/g	0.11	0.10	7347619				0.31	0.10	7349784
Acid Extractable Chromium (Cr)	ug/g	27	1.0	7347619				26	1.0	7349784
Acid Extractable Cobalt (Co)	ug/g	10	0.10	7347619				7.8	0.10	7349784
Acid Extractable Copper (Cu)	ug/g	20	0.50	7347619				13	0.50	7349784
Acid Extractable Lead (Pb)	ug/g	5.8	1.0	7347619				12	1.0	7349784
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7347619				<0.50	0.50	7349784
Acid Extractable Nickel (Ni)	ug/g	19	0.50	7347619				14	0.50	7349784
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7347619				0.55	0.50	7349784
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7347619				<0.20	0.20	7349784
Acid Extractable Thallium (Tl)	ug/g	0.19	0.050	7347619				0.15	0.050	7349784
Acid Extractable Uranium (U)	ug/g	0.65	0.050	7347619				0.77	0.050	7349784
Acid Extractable Vanadium (V)	ug/g	44	5.0	7347619				42	5.0	7349784
Acid Extractable Zinc (Zn)	ug/g	52	5.0	7347619				61	5.0	7349784
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7347619				<0.050	0.050	7349784

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

BV Labs - Partial/Rush Results

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs - Partial/Rush Results

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PNJ090			PNJ090			PNJ096		
Sampling Date		2021/05/03 11:00			2021/05/03 11:00			2021/05/04 14:05		
COC Number		341727			341727			341727		
	UNITS	BH21-23-3	RDL	QC Batch	BH21-23-3 Lab-Dup	RDL	QC Batch	BH21-1-2	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	1.5		7344349				0.30 (1)		7344349
Inorganics										
Conductivity	mS/cm	0.18	0.002	7347902				0.11	0.002	7347902
Moisture	%	15	1.0	7344939	15	1.0	7344939			
Available (CaCl2) pH	pH	7.71		7349204				7.84		7347074
WAD Cyanide (Free)	ug/g	<0.01	0.01	7348086				<0.01	0.01	7346401
Chromium (VI)	ug/g	<0.18	0.18	7347720				<0.18	0.18	7346399
Metals										
Hot Water Ext. Boron (B)	ug/g	0.070	0.050	7347755				<0.050	0.050	7347755
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7347617				<0.20	0.20	7347617
Acid Extractable Arsenic (As)	ug/g	1.4	1.0	7347617				<1.0	1.0	7347617
Acid Extractable Barium (Ba)	ug/g	140	0.50	7347617				30	0.50	7347617
Acid Extractable Beryllium (Be)	ug/g	0.49	0.20	7347617				0.23	0.20	7347617
Acid Extractable Boron (B)	ug/g	8.2	5.0	7347617				<5.0	5.0	7347617
Acid Extractable Cadmium (Cd)	ug/g	0.11	0.10	7347617				<0.10	0.10	7347617
Acid Extractable Chromium (Cr)	ug/g	23	1.0	7347617				8.8	1.0	7347617
Acid Extractable Cobalt (Co)	ug/g	8.4	0.10	7347617				2.7	0.10	7347617
Acid Extractable Copper (Cu)	ug/g	15	0.50	7347617				4.7	0.50	7347617
Acid Extractable Lead (Pb)	ug/g	5.4	1.0	7347617				2.5	1.0	7347617
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7347617				<0.50	0.50	7347617
Acid Extractable Nickel (Ni)	ug/g	17	0.50	7347617				5.2	0.50	7347617
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7347617				<0.50	0.50	7347617
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7347617				<0.20	0.20	7347617
Acid Extractable Thallium (Tl)	ug/g	0.14	0.050	7347617				<0.050	0.050	7347617
Acid Extractable Uranium (U)	ug/g	0.48	0.050	7347617				0.47	0.050	7347617
Acid Extractable Vanadium (V)	ug/g	36	5.0	7347617				17	5.0	7347617
Acid Extractable Zinc (Zn)	ug/g	46	5.0	7347617				20	5.0	7347617
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7347617				<0.050	0.050	7347617

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PNJ071	PNJ072	PNJ073	PNJ074	PNJ075	PNJ076		
Sampling Date		2021/04/29 09:40	2021/04/29 10:10	2021/04/29 11:05	2021/04/29 11:20	2021/04/29 11:40	2021/04/29 13:30		
COC Number		341727	341727	341727	341727	341727	341727		
	UNITS	BH21-15-1	BH21-15-4	BH12-50-1	BH12-50-3	BH21-50-5	BH21-16-1	RDL	QC Batch
Calculated Parameters									
Chlordane (Total)	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7343265
o,p-DDD + p,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7343265
o,p-DDE + p,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7343265
o,p-DDT + p,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7343265
Total Endosulfan	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7343265
Total PCB	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	7343265
Pesticides & Herbicides									
Aldrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
a-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
g-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
o,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
p,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
o,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
p,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
o,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
p,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
Dieldrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
Lindane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
Endrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
Heptachlor	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
Heptachlor epoxide	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
Hexachlorobenzene	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
Hexachloroethane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7353106
Methoxychlor	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7353106
Aroclor 1242	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	7353106
Aroclor 1248	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	7353106
Aroclor 1254	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	7353106
Aroclor 1260	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	7353106
Surrogate Recovery (%)									
2,4,5,6-Tetrachloro-m-xylene	%	83	93	79	81	77	77		7353106

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs - Partial/Rush Results

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PNJ071	PNJ072	PNJ073	PNJ074	PNJ075	PNJ076		
Sampling Date		2021/04/29 09:40	2021/04/29 10:10	2021/04/29 11:05	2021/04/29 11:20	2021/04/29 11:40	2021/04/29 13:30		
COC Number		341727	341727	341727	341727	341727	341727		
	UNITS	**BH21-15-1**	**BH21-15-4**	**BH12-50-1**	**BH12-50-3**	**BH21-50-5**	**BH21-16-1**	**RDL**	**QC Batch**
Decachlorobiphenyl	%	115	122	113	97	88	89		7353106

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs - Partial/Rush Results

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BV Labs - Partial/Rush Results

O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PNJ077	PNJ078			PNJ078			PNJ079		
Sampling Date		2021/04/29 14:05	2021/04/29 14:40			2021/04/29 14:40			2021/04/29 14:50		
COC Number		341727	341727			341727			341727		
	UNITS	BH12-16-4	BH21-48-1	RDL	QC Batch	BH21-48-1 Lab-Dup	RDL	QC Batch	BH21-48-2	RDL	QC Batch
Calculated Parameters											
Chlordane (Total)	ug/g	<0.0020	<0.0020	0.0020	7343265				<0.0020	0.0020	7343265
o,p-DDD + p,p-DDD	ug/g	<0.0020	<0.0020	0.0020	7343265				<0.0020	0.0020	7343265
o,p-DDE + p,p-DDE	ug/g	<0.0020	<0.0020	0.0020	7343265				<0.0020	0.0020	7343265
o,p-DDT + p,p-DDT	ug/g	<0.0020	<0.0020	0.0020	7343265				<0.0020	0.0020	7343265
Total Endosulfan	ug/g	<0.0020	<0.0020	0.0020	7343265				<0.0020	0.0020	7343265
Total PCB	ug/g	<0.015	<0.015	0.015	7343265				<0.015	0.015	7343265
Pesticides & Herbicides											
Aldrin	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
a-Chlordane	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
g-Chlordane	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
o,p-DDD	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
p,p-DDD	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
o,p-DDE	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
p,p-DDE	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
o,p-DDT	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
p,p-DDT	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
Dieldrin	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
Lindane	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
Endrin	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
Heptachlor	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
Heptachlor epoxide	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
Hexachlorobenzene	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
Hexachloroethane	ug/g	<0.0020	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106	<0.0020	0.0020	7353106
Methoxychlor	ug/g	<0.0050	<0.0050	0.0050	7353106	<0.0050	0.0050	7353106	<0.0050	0.0050	7353106
Aroclor 1242	ug/g	<0.015	<0.015	0.015	7353106	<0.015	0.015	7353106	<0.015	0.015	7353106
Aroclor 1248	ug/g	<0.015	<0.015	0.015	7353106	<0.015	0.015	7353106	<0.015	0.015	7353106
Aroclor 1254	ug/g	<0.015	<0.015	0.015	7353106	<0.015	0.015	7353106	<0.015	0.015	7353106
Aroclor 1260	ug/g	<0.015	<0.015	0.015	7353106	<0.015	0.015	7353106	<0.015	0.015	7353106
Surrogate Recovery (%)											
2,4,5,6-Tetrachloro-m-xylene	%	81	83		7353106	83		7353106	82		7353106

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PNJ077	PNJ078			PNJ078			PNJ079		
Sampling Date		2021/04/29 14:05	2021/04/29 14:40			2021/04/29 14:40			2021/04/29 14:50		
COC Number		341727	341727			341727			341727		
	UNITS	BH12-16-4	BH21-48-1	RDL	QC Batch	BH21-48-1 Lab-Dup	RDL	QC Batch	BH21-48-2	RDL	QC Batch
Decachlorobiphenyl	%	98	96		7353106	101		7353106	96		7353106

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

BV Labs - Partial/Rush Results

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BV Labs - Partial/Rush Results

O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PNJ080		
Sampling Date		2021/04/29 15:15		
COC Number		341727		
	UNITS	BH21-48-5	RDL	QC Batch
Calculated Parameters				
Chlordane (Total)	ug/g	<0.0020	0.0020	7343265
o,p-DDD + p,p-DDD	ug/g	<0.0020	0.0020	7343265
o,p-DDE + p,p-DDE	ug/g	<0.0020	0.0020	7343265
o,p-DDT + p,p-DDT	ug/g	<0.0020	0.0020	7343265
Total Endosulfan	ug/g	<0.0020	0.0020	7343265
Total PCB	ug/g	<0.015	0.015	7343265
Pesticides & Herbicides				
Aldrin	ug/g	<0.0020	0.0020	7353106
a-Chlordane	ug/g	<0.0020	0.0020	7353106
g-Chlordane	ug/g	<0.0020	0.0020	7353106
o,p-DDD	ug/g	<0.0020	0.0020	7353106
p,p-DDD	ug/g	<0.0020	0.0020	7353106
o,p-DDE	ug/g	<0.0020	0.0020	7353106
p,p-DDE	ug/g	<0.0020	0.0020	7353106
o,p-DDT	ug/g	<0.0020	0.0020	7353106
p,p-DDT	ug/g	<0.0020	0.0020	7353106
Dieldrin	ug/g	<0.0020	0.0020	7353106
Lindane	ug/g	<0.0020	0.0020	7353106
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	7353106
Endosulfan II (beta)	ug/g	<0.0020	0.0020	7353106
Endrin	ug/g	<0.0020	0.0020	7353106
Heptachlor	ug/g	<0.0020	0.0020	7353106
Heptachlor epoxide	ug/g	<0.0020	0.0020	7353106
Hexachlorobenzene	ug/g	<0.0020	0.0020	7353106
Hexachlorobutadiene	ug/g	<0.0020	0.0020	7353106
Hexachloroethane	ug/g	<0.0020	0.0020	7353106
Methoxychlor	ug/g	<0.0050	0.0050	7353106
Aroclor 1242	ug/g	<0.015	0.015	7353106
Aroclor 1248	ug/g	<0.015	0.015	7353106
Aroclor 1254	ug/g	<0.015	0.015	7353106
Aroclor 1260	ug/g	<0.015	0.015	7353106
Surrogate Recovery (%)				
2,4,5,6-Tetrachloro-m-xylene	%	81		7353106

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PNJ080		
Sampling Date		2021/04/29 15:15		
COC Number		341727		
	UNITS	BH21-48-5	RDL	QC Batch
Decachlorobiphenyl	%	100		7353106

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs - Partial/Rush Results

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BV Labs - Partial/Rush Results

O.REG 153 PAHS (SOIL)

BV Labs ID		PNJ048		PNJ049	PNJ050		PNJ051	PNJ052		
Sampling Date		2021/04/27 09:00		2021/04/27 10:10	2021/04/27 10:30		2021/04/27 12:15	2021/04/27 12:20		
COC Number		341727		341727	341727		341727	341727		
	UNITS	BH21-27-4	QC Batch	BH21-25-1	BH21-25-3	QC Batch	BH21-28-1	BH21-28-3	RDL	QC Batch
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	7344345	<0.0071	<0.0071	7344345	0.024	<0.0071	0.0071	7344345
Polyaromatic Hydrocarbons										
Acenaphthene	ug/g	<0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	<0.0050	0.0050	7349271
Acenaphthylene	ug/g	<0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	<0.0050	0.0050	7349271
Anthracene	ug/g	<0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	<0.0050	0.0050	7349271
Benzo(a)anthracene	ug/g	<0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	<0.0050	0.0050	7349271
Benzo(a)pyrene	ug/g	<0.0050	7349271	0.0085	<0.0050	7348499	<0.0050	<0.0050	0.0050	7349271
Benzo(b/j)fluoranthene	ug/g	<0.0050	7349271	0.015	<0.0050	7348499	<0.0050	<0.0050	0.0050	7349271
Benzo(g,h,i)perylene	ug/g	<0.0050	7349271	0.011	<0.0050	7348499	<0.0050	<0.0050	0.0050	7349271
Benzo(k)fluoranthene	ug/g	<0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	<0.0050	0.0050	7349271
Chrysene	ug/g	<0.0050	7349271	0.0053	<0.0050	7348499	<0.0050	<0.0050	0.0050	7349271
Dibenzo(a,h)anthracene	ug/g	<0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	<0.0050	0.0050	7349271
Fluoranthene	ug/g	<0.0050	7349271	0.0098	<0.0050	7348499	<0.0050	<0.0050	0.0050	7349271
Fluorene	ug/g	<0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	<0.0050	0.0050	7349271
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	7349271	0.0088	<0.0050	7348499	<0.0050	<0.0050	0.0050	7349271
1-Methylnaphthalene	ug/g	<0.0050	7349271	<0.0050	<0.0050	7348499	0.011	<0.0050	0.0050	7349271
2-Methylnaphthalene	ug/g	<0.0050	7349271	<0.0050	<0.0050	7348499	0.013	<0.0050	0.0050	7349271
Naphthalene	ug/g	<0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	<0.0050	0.0050	7349271
Phenanthrene	ug/g	<0.0050	7349271	<0.0050	<0.0050	7348499	0.0061	<0.0050	0.0050	7349271
Pyrene	ug/g	<0.0050	7349271	0.0085	<0.0050	7348499	<0.0050	<0.0050	0.0050	7349271
Surrogate Recovery (%)										
D10-Anthracene	%	85	7349271	67	71	7348499	83	88		7349271
D14-Terphenyl (FS)	%	83	7349271	71	73	7348499	81	90		7349271
D8-Acenaphthylene	%	83	7349271	66	69	7348499	83	84		7349271

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs - Partial/Rush Results

O.REG 153 PAHS (SOIL)

BV Labs ID		PNJ053			PNJ054	PNJ055		PNJ063		
Sampling Date		2021/04/27 14:15			2021/04/27 14:30	2021/04/27 14:30		2021/04/30 08:50		
COC Number		341727			341727	341727		341727		
	UNITS	BH21-29-1	RDL	QC Batch	BH21-29-4	Dup 6	QC Batch	BH21-33-1	RDL	QC Batch
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/g	0.070	0.0071	7344345	<0.0071	<0.0071	7344345	<0.0071	0.0071	7344345
Polyaromatic Hydrocarbons										
Acenaphthene	ug/g	<0.030 (1)	0.030	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Acenaphthylene	ug/g	<0.0050	0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Anthracene	ug/g	0.0068	0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Benzo(a)anthracene	ug/g	<0.0050	0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Benzo(a)pyrene	ug/g	<0.0050	0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Benzo(b/j)fluoranthene	ug/g	0.0084	0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Chrysene	ug/g	0.034	0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Fluoranthene	ug/g	0.010	0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Fluorene	ug/g	<0.0070 (1)	0.0070	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
1-Methylnaphthalene	ug/g	0.036	0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
2-Methylnaphthalene	ug/g	0.034	0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Naphthalene	ug/g	0.0060	0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Phenanthrene	ug/g	0.040	0.0050	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Pyrene	ug/g	<0.0070 (1)	0.0070	7349271	<0.0050	<0.0050	7348499	<0.0050	0.0050	7349271
Surrogate Recovery (%)										
D10-Anthracene	%	82		7349271	75	74	7348499	80		7349271
D14-Terphenyl (FS)	%	86		7349271	78	76	7348499	76		7349271
D8-Acenaphthylene	%	79		7349271	74	70	7348499	79		7349271

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) DL was raised due to matrix interference.

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BV Labs - Partial/Rush Results

O.REG 153 PAHS (SOIL)

BV Labs ID		PNJ064		PNJ065			PNJ066		
Sampling Date		2021/04/30 09:00		2021/04/30 09:30			2021/04/30 14:30		
COC Number		341727		341727			341727		
	UNITS	BH21-33-2	QC Batch	BH21-33-4	RDL	QC Batch	BH21-32-4	RDL	QC Batch
Inorganics									
Moisture	%						6.8	1.0	7344939
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	7344345	<0.0071	0.0071	7344345	<0.0071	0.0071	7344059
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Acenaphthylene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Anthracene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Benzo(a)anthracene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Benzo(a)pyrene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Benzo(b/j)fluoranthene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Benzo(g,h,i)perylene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Benzo(k)fluoranthene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Chrysene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Dibenzo(a,h)anthracene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Fluoranthene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Fluorene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
1-Methylnaphthalene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
2-Methylnaphthalene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Naphthalene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Phenanthrene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Pyrene	ug/g	<0.0050	7349271	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271
Surrogate Recovery (%)									
D10-Anthracene	%	86	7349271	72		7348499	85		7349271
D14-Terphenyl (FS)	%	87	7349271	73		7348499	83		7349271
D8-Acenaphthylene	%	83	7349271	67		7348499	75		7349271

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs - Partial/Rush Results

O.REG 153 PAHS (SOIL)

BV Labs ID		PNJ066			PNJ067		PNJ068		
Sampling Date		2021/04/30 14:30			2021/04/30 12:40		2021/04/30 13:10		
COC Number		341727			341727		341727		
	UNITS	BH21-32-4 Lab-Dup	RDL	QC Batch	BH21-34-1	QC Batch	BH21-34-4	RDL	QC Batch
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g				0.045	7344345	<0.0071	0.0071	7344345
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0050	0.0050	7349271	<0.0050	7348499	<0.0050	0.0050	7349271
Acenaphthylene	ug/g	<0.0050	0.0050	7349271	<0.0050	7348499	<0.0050	0.0050	7349271
Anthracene	ug/g	<0.0050	0.0050	7349271	<0.0050	7348499	<0.0050	0.0050	7349271
Benzo(a)anthracene	ug/g	<0.0050	0.0050	7349271	<0.0050	7348499	<0.0050	0.0050	7349271
Benzo(a)pyrene	ug/g	<0.0050	0.0050	7349271	<0.0050	7348499	<0.0050	0.0050	7349271
Benzo(b/j)fluoranthene	ug/g	<0.0050	0.0050	7349271	<0.0050	7348499	<0.0050	0.0050	7349271
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	7349271	<0.0050	7348499	<0.0050	0.0050	7349271
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	7349271	<0.0050	7348499	<0.0050	0.0050	7349271
Chrysene	ug/g	<0.0050	0.0050	7349271	<0.0050	7348499	<0.0050	0.0050	7349271
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	7349271	<0.0050	7348499	<0.0050	0.0050	7349271
Fluoranthene	ug/g	<0.0050	0.0050	7349271	<0.0050	7348499	<0.0050	0.0050	7349271
Fluorene	ug/g	<0.0050	0.0050	7349271	<0.0050	7348499	<0.0050	0.0050	7349271
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	7349271	<0.0050	7348499	<0.0050	0.0050	7349271
1-Methylnaphthalene	ug/g	<0.0050	0.0050	7349271	0.021	7348499	<0.0050	0.0050	7349271
2-Methylnaphthalene	ug/g	<0.0050	0.0050	7349271	0.025	7348499	<0.0050	0.0050	7349271
Naphthalene	ug/g	<0.0050	0.0050	7349271	0.0052	7348499	<0.0050	0.0050	7349271
Phenanthrene	ug/g	<0.0050	0.0050	7349271	0.0091	7348499	<0.0050	0.0050	7349271
Pyrene	ug/g	<0.0050	0.0050	7349271	<0.0050	7348499	<0.0050	0.0050	7349271
Surrogate Recovery (%)									
D10-Anthracene	%	87		7349271	72	7348499	81		7349271
D14-Terphenyl (FS)	%	87		7349271	73	7348499	83		7349271
D8-Acenaphthylene	%	82		7349271	70	7348499	79		7349271

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

BV Labs - Partial/Rush Results

O.REG 153 PAHS (SOIL)

BV Labs ID		PNJ069		PNJ070			PNJ081		
Sampling Date		2021/04/30 10:45		2021/04/30 10:55			2021/05/03 09:10		
COC Number		341727		341727			341727		
	UNITS	BH21-35-3A	QC Batch	BH21-35-4	RDL	QC Batch	BH21-31-1	RDL	QC Batch
Inorganics									
Moisture	%						11	1.0	7344857
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	7344345	<0.0071	0.0071	7344345	<0.0071	0.0071	7344059
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Acenaphthylene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Anthracene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Benzo(a)anthracene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Benzo(a)pyrene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Benzo(b/j)fluoranthene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Benzo(g,h,i)perylene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Benzo(k)fluoranthene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Chrysene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Dibenzo(a,h)anthracene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Fluoranthene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Fluorene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
1-Methylnaphthalene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
2-Methylnaphthalene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Naphthalene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Phenanthrene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Pyrene	ug/g	<0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Surrogate Recovery (%)									
D10-Anthracene	%	69	7348499	87		7349271	70		7348499
D14-Terphenyl (FS)	%	69	7348499	88		7349271	72		7348499
D8-Acenaphthylene	%	64	7348499	85		7349271	67		7348499

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PAHS (SOIL)

BV Labs ID		PNJ082	PNJ083			PNJ084			PNJ085		
Sampling Date		2021/05/03 09:20	2021/05/03 09:35			2021/05/03 14:15			2021/05/03 14:45		
COC Number		341727	341727			341727			341727		
	UNITS	BH21-31-2	BH21-31-5	RDL	QC Batch	BH21-6-1	RDL	QC Batch	BH21-6-5	RDL	QC Batch
Calculated Parameters											
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	0.0071	7344059	0.047	0.0071	7344059	<0.0071	0.0071	7344345
Polyaromatic Hydrocarbons											
Acenaphthene	ug/g	<0.0050	<0.0050	0.0050	7348499	<0.020 (1)	0.020	7349271	<0.0050	0.0050	7348499
Acenaphthylene	ug/g	<0.0050	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Anthracene	ug/g	<0.0050	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Benzo(a)anthracene	ug/g	<0.0050	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Benzo(a)pyrene	ug/g	<0.0050	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Benzo(b/j)fluoranthene	ug/g	<0.0050	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Benzo(g,h,i)perylene	ug/g	<0.0050	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Benzo(k)fluoranthene	ug/g	<0.0050	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Chrysene	ug/g	<0.0050	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Dibenzo(a,h)anthracene	ug/g	<0.0050	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Fluoranthene	ug/g	<0.0050	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Fluorene	ug/g	<0.0050	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	0.0050	7348499	0.022	0.0050	7349271	<0.0050	0.0050	7348499
2-Methylnaphthalene	ug/g	<0.0050	<0.0050	0.0050	7348499	0.025	0.0050	7349271	<0.0050	0.0050	7348499
Naphthalene	ug/g	<0.0050	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Phenanthrene	ug/g	<0.0050	<0.0050	0.0050	7348499	0.012	0.0050	7349271	<0.0050	0.0050	7348499
Pyrene	ug/g	<0.0050	<0.0050	0.0050	7348499	<0.0050	0.0050	7349271	<0.0050	0.0050	7348499
Surrogate Recovery (%)											
D10-Anthracene	%	69	73		7348499	92		7349271	79		7348499
D14-Terphenyl (FS)	%	70	74		7348499	92		7349271	79		7348499
D8-Acenaphthylene	%	66	70		7348499	90		7349271	74		7348499

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) DL was raised due to matrix interference.

BV Labs - Partial/Rush Results

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs - Partial/Rush Results

O.REG 153 PAHS (SOIL)

BV Labs ID		PNJ086		PNJ087		PNJ088	PNJ089		
Sampling Date		2021/05/03 14:45		2021/05/03 12:50		2021/05/03 13:10	2021/05/03 10:45		
COC Number		341727		341727		341727	341727		
	UNITS	Dup 11	QC Batch	BH21-24-1	QC Batch	BH21-24-3	BH21-23-1	RDL	QC Batch
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	7344345	<0.0071	7344059	<0.0071	<0.0071	0.0071	7344059
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Acenaphthylene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Anthracene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Benzo(a)anthracene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Benzo(a)pyrene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Benzo(b/j)fluoranthene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Benzo(g,h,i)perylene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Benzo(k)fluoranthene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Chrysene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Dibenzo(a,h)anthracene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Fluoranthene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Fluorene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
1-Methylnaphthalene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
2-Methylnaphthalene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Naphthalene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Phenanthrene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Pyrene	ug/g	<0.0050	7348499	<0.0050	7349271	<0.0050	<0.0050	0.0050	7348499
Surrogate Recovery (%)									
D10-Anthracene	%	73	7348499	88	7349271	76	69		7348499
D14-Terphenyl (FS)	%	74	7348499	85	7349271	76	73		7348499
D8-Acenaphthylene	%	71	7348499	87	7349271	74	68		7348499

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs - Partial/Rush Results

O.REG 153 PAHS (SOIL)

BV Labs ID		PNJ090			PNJ093		PNJ094		PNJ095		
Sampling Date		2021/05/03 11:00			2021/05/04 10:00		2021/05/04 10:00		2021/05/04 12:20		
COC Number		341727			341727		341727		341727		
	UNITS	BH21-23-3	RDL	QC Batch	BH21-4-1	QC Batch	Dup 15	RDL	BH21-5-2	RDL	QC Batch
Inorganics											
Moisture	%				12	7347980	14	1.0	49	1.0	7344939
Calculated Parameters											
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	0.0071	7344059	<0.0071	7344059	<0.0071	0.0071	<0.014	0.014	7344059
Polyaromatic Hydrocarbons											
Acenaphthene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Acenaphthylene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Anthracene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Benzo(a)anthracene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Benzo(a)pyrene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Benzo(b/j)fluoranthene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Chrysene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Fluoranthene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Fluorene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
1-Methylnaphthalene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
2-Methylnaphthalene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Naphthalene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Phenanthrene	ug/g	<0.0050	0.0050	7349271	0.035	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Pyrene	ug/g	<0.0050	0.0050	7349271	<0.0050	7349271	<0.0050	0.0050	<0.010	0.010	7349271
Surrogate Recovery (%)											
D10-Anthracene	%	87		7349271	90	7349271	87		85		7349271
D14-Terphenyl (FS)	%	90		7349271	93	7349271	83		82		7349271
D8-Acenaphthylene	%	85		7349271	91	7349271	84		81		7349271

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs - Partial/Rush Results

O.REG 153 PCBS (SOIL)

BV Labs ID		PNJ048			PNJ049			PNJ050		
Sampling Date		2021/04/27 09:00			2021/04/27 10:10			2021/04/27 10:30		
COC Number		341727			341727			341727		
	UNITS	BH21-27-4	RDL	QC Batch	BH21-25-1	RDL	QC Batch	BH21-25-3	RDL	QC Batch
Inorganics										
Moisture	%				21	1.0	7344857			
PCBs										
Aroclor 1242	ug/g	<0.010	0.010	7349973	<0.010	0.010	7349245	<0.010	0.010	7349973
Aroclor 1248	ug/g	<0.010	0.010	7349973	<0.010	0.010	7349245	<0.010	0.010	7349973
Aroclor 1254	ug/g	<0.010	0.010	7349973	<0.010	0.010	7349245	<0.010	0.010	7349973
Aroclor 1260	ug/g	<0.010	0.010	7349973	<0.010	0.010	7349245	<0.010	0.010	7349973
Total PCB	ug/g	<0.010	0.010	7349973	<0.010	0.010	7349245	<0.010	0.010	7349973
Surrogate Recovery (%)										
Decachlorobiphenyl	%	103		7349973	124		7349245	111		7349973

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs ID		PNJ051		PNJ052			PNJ053		
Sampling Date		2021/04/27 12:15		2021/04/27 12:20			2021/04/27 14:15		
COC Number		341727		341727			341727		
	UNITS	BH21-28-1	QC Batch	BH21-28-3	RDL	QC Batch	BH21-29-1	RDL	QC Batch
Inorganics									
Moisture	%						3.5	1.0	7345085
PCBs									
Aroclor 1242	ug/g	<0.010	7349245	<0.010	0.010	7349268	<0.010	0.010	7349245
Aroclor 1248	ug/g	<0.010	7349245	<0.010	0.010	7349268	<0.010	0.010	7349245
Aroclor 1254	ug/g	<0.010	7349245	<0.010	0.010	7349268	<0.010	0.010	7349245
Aroclor 1260	ug/g	<0.010	7349245	<0.010	0.010	7349268	<0.010	0.010	7349245
Total PCB	ug/g	<0.010	7349245	<0.010	0.010	7349268	<0.010	0.010	7349245
Surrogate Recovery (%)									
Decachlorobiphenyl	%	114	7349245	91		7349268	115		7349245

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs - Partial/Rush Results

O.REG 153 PCBS (SOIL)

BV Labs ID		PNJ054		PNJ055			PNJ060	PNJ061		
Sampling Date		2021/04/27 14:30		2021/04/27 14:30			2021/04/28 08:40	2021/04/28 09:15		
COC Number		341727		341727			341727	341727		
	UNITS	BH21-29-4	QC Batch	Dup 6	RDL	QC Batch	BH21-13-1	BH21-13-4	RDL	QC Batch
Inorganics										
Moisture	%						4.6	5.3	1.0	7344939
PCBs										
Aroclor 1242	ug/g	<0.010	7349245	<0.010	0.010	7349973	<0.010	<0.010	0.010	7349245
Aroclor 1248	ug/g	<0.010	7349245	<0.010	0.010	7349973	<0.010	<0.010	0.010	7349245
Aroclor 1254	ug/g	<0.010	7349245	<0.010	0.010	7349973	<0.010	<0.010	0.010	7349245
Aroclor 1260	ug/g	<0.010	7349245	<0.010	0.010	7349973	<0.010	<0.010	0.010	7349245
Total PCB	ug/g	<0.010	7349245	<0.010	0.010	7349973	<0.010	<0.010	0.010	7349245
Surrogate Recovery (%)										
Decachlorobiphenyl	%	120	7349245	111		7349973	98	91		7349245

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs ID		PNJ062			PNJ063			PNJ064		
Sampling Date		2021/04/28 14:50			2021/04/30 08:50			2021/04/30 09:00		
COC Number		341727			341727			341727		
	UNITS	BH21-13-14	RDL	QC Batch	BH21-33-1	RDL	QC Batch	BH21-33-2	RDL	QC Batch
Inorganics										
Moisture	%				15	1.0	7345085			
PCBs										
Aroclor 1242	ug/g	<0.010	0.010	7349245	<0.010	0.010	7349268	<0.010	0.010	7349245
Aroclor 1248	ug/g	<0.010	0.010	7349245	<0.010	0.010	7349268	<0.010	0.010	7349245
Aroclor 1254	ug/g	<0.010	0.010	7349245	<0.010	0.010	7349268	<0.010	0.010	7349245
Aroclor 1260	ug/g	<0.010	0.010	7349245	<0.010	0.010	7349268	<0.010	0.010	7349245
Total PCB	ug/g	<0.010	0.010	7349245	<0.010	0.010	7349268	<0.010	0.010	7349245
Surrogate Recovery (%)										
Decachlorobiphenyl	%	100		7349245	90		7349268	110		7349245

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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BV Labs - Partial/Rush Results

O.REG 153 PCBS (SOIL)

BV Labs ID		PNJ065	PNJ065		PNJ067	PNJ068			PNJ069		
Sampling Date		2021/04/30 09:30	2021/04/30 09:30		2021/04/30 12:40	2021/04/30 13:10			2021/04/30 10:45		
COC Number		341727	341727		341727	341727			341727		
	UNITS	BH21-33-4	BH21-33-4 Lab-Dup	QC Batch	BH21-34-1	BH21-34-4	RDL	QC Batch	BH21-35-3A	RDL	QC Batch
Inorganics											
Moisture	%								18	1.0	7344857
PCBs											
Aroclor 1242	ug/g	<0.010	<0.010	7349973	<0.010	<0.010	0.010	7349268	<0.010	0.010	7346709
Aroclor 1248	ug/g	<0.010	<0.010	7349973	<0.010	<0.010	0.010	7349268	<0.010	0.010	7346709
Aroclor 1254	ug/g	<0.010	<0.010	7349973	<0.010	<0.010	0.010	7349268	<0.010	0.010	7346709
Aroclor 1260	ug/g	<0.010	<0.010	7349973	<0.010	<0.010	0.010	7349268	<0.010	0.010	7346709
Total PCB	ug/g	<0.010	<0.010	7349973	<0.010	<0.010	0.010	7349268	<0.010	0.010	7346709
Surrogate Recovery (%)											
Decachlorobiphenyl	%	109	108	7349973	90	92		7349268	86		7346709

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

BV Labs ID		PNJ070	PNJ084		PNJ085		PNJ086		
Sampling Date		2021/04/30 10:55	2021/05/03 14:15		2021/05/03 14:45		2021/05/03 14:45		
COC Number		341727	341727		341727		341727		
	UNITS	BH21-35-4	BH21-6-1	QC Batch	BH21-6-5	QC Batch	Dup 11	RDL	QC Batch
PCBs									
Aroclor 1242	ug/g	<0.010	<0.010	7349245	<0.010	7349268	<0.010	0.010	7349245
Aroclor 1248	ug/g	<0.010	<0.010	7349245	<0.010	7349268	<0.010	0.010	7349245
Aroclor 1254	ug/g	<0.010	<0.010	7349245	<0.010	7349268	<0.010	0.010	7349245
Aroclor 1260	ug/g	<0.010	<0.010	7349245	<0.010	7349268	<0.010	0.010	7349245
Total PCB	ug/g	<0.010	<0.010	7349245	<0.010	7349268	<0.010	0.010	7349245
Surrogate Recovery (%)									
Decachlorobiphenyl	%	110	94	7349245	92	7349268	104		7349245

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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BV Labs - Partial/Rush Results

O.REG 153 PCBS (SOIL)

BV Labs ID		PNJ087			PNJ088			PNJ089		
Sampling Date		2021/05/03 12:50			2021/05/03 13:10			2021/05/03 10:45		
COC Number		341727			341727			341727		
	UNITS	BH21-24-1	RDL	QC Batch	BH21-24-3	RDL	QC Batch	BH21-23-1	RDL	QC Batch
Inorganics										
Moisture	%	7.3	1.0	7344939				21	1.0	7344857
PCBs										
Aroclor 1242	ug/g	<0.010	0.010	7349245	<0.010	0.010	7349268	<0.010	0.010	7349245
Aroclor 1248	ug/g	<0.010	0.010	7349245	<0.010	0.010	7349268	<0.010	0.010	7349245
Aroclor 1254	ug/g	<0.010	0.010	7349245	<0.010	0.010	7349268	<0.010	0.010	7349245
Aroclor 1260	ug/g	<0.010	0.010	7349245	<0.010	0.010	7349268	<0.010	0.010	7349245
Total PCB	ug/g	<0.010	0.010	7349245	<0.010	0.010	7349268	<0.010	0.010	7349245
Surrogate Recovery (%)										
Decachlorobiphenyl	%	100		7349245	95		7349268	126		7349245

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs ID		PNJ090			PNJ091			PNJ091		
Sampling Date		2021/05/03 11:00			2021/05/04 08:45			2021/05/04 08:45		
COC Number		341727			341727			341727		
	UNITS	BH21-23-3	RDL	QC Batch	BH21-3-1	RDL	QC Batch	BH21-3-1 Lab-Dup	RDL	QC Batch
Inorganics										
Moisture	%				6.6	1.0	7344939			
PCBs										
Aroclor 1242	ug/g	<0.010	0.010	7349245	<0.010	0.010	7349245	<0.010	0.010	7349245
Aroclor 1248	ug/g	<0.010	0.010	7349245	<0.010	0.010	7349245	<0.010	0.010	7349245
Aroclor 1254	ug/g	<0.010	0.010	7349245	<0.010	0.010	7349245	<0.010	0.010	7349245
Aroclor 1260	ug/g	<0.010	0.010	7349245	<0.010	0.010	7349245	<0.010	0.010	7349245
Total PCB	ug/g	<0.010	0.010	7349245	<0.010	0.010	7349245	<0.010	0.010	7349245
Surrogate Recovery (%)										
Decachlorobiphenyl	%	121		7349245	121		7349245	116		7349245

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PCBS (SOIL)

BV Labs ID		PNJ092			PNJ093	PNJ094		PNJ095		
Sampling Date		2021/05/04 08:45			2021/05/04 10:00	2021/05/04 10:00		2021/05/04 12:20		
COC Number		341727			341727	341727		341727		
	UNITS	Dup 13	RDL	QC Batch	BH21-4-1	Dup 15	RDL	BH21-5-2	RDL	QC Batch
Inorganics										
Moisture	%	6.3	1.0	7344939						
PCBs										
Aroclor 1242	ug/g	<0.010	0.010	7349245	<0.010	<0.010	0.010	<0.020	0.020	7349245
Aroclor 1248	ug/g	<0.010	0.010	7349245	<0.010	<0.010	0.010	<0.020	0.020	7349245
Aroclor 1254	ug/g	<0.010	0.010	7349245	<0.010	<0.010	0.010	<0.020	0.020	7349245
Aroclor 1260	ug/g	<0.010	0.010	7349245	<0.010	<0.010	0.010	<0.020	0.020	7349245
Total PCB	ug/g	<0.010	0.010	7349245	<0.010	<0.010	0.010	<0.020	0.020	7349245
Surrogate Recovery (%)										
Decachlorobiphenyl	%	74		7349245	107	131 (1)		155 (1)		7349245

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Surrogate recovery was above the upper control limit. This may represent a high bias in some results. For results that were not detected (ND), this potential bias has no impact.

BV Labs - Partial/Rush Results

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BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PNJ048	PNJ049	PNJ050	PNJ051	PNJ052	PNJ053	PNJ054		
Sampling Date		2021/04/27 09:00	2021/04/27 10:10	2021/04/27 10:30	2021/04/27 12:15	2021/04/27 12:20	2021/04/27 14:15	2021/04/27 14:30		
COC Number		341727	341727	341727	341727	341727	341727	341727		
	UNITS	**BH21-27-4**	**BH21-25-1**	**BH21-25-3**	**BH21-28-1**	**BH21-28-3**	**BH21-29-1**	**BH21-29-4**	**RDL**	**QC Batch**
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7345027
Toluene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7345027
Ethylbenzene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7345027
o-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7345027
p+m-Xylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.046	<0.040	0.040	7345027
Total Xylenes	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.046	<0.040	0.040	7345027
F1 (C6-C10)	ug/g	<10	<10	<10	<10	<10	11	<10	10	7345027
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	<10	<10	11	<10	10	7345027
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	<10	<10	71	<10	10	7345592
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	<50	<50	<50	400	<50	50	7345592
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	<50	<50	<50	180	<50	50	7345592
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes	Yes	Yes	Yes		7345592
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	88	89	85	89	95	87	87		7345027
4-Bromofluorobenzene	%	102	102	97	100	96	99	96		7345027
D10-o-Xylene	%	96	97	93	95	89	94	97		7345027
D4-1,2-Dichloroethane	%	93	95	90	93	101	92	93		7345027
o-Terphenyl	%	99	98	94	97	107	97	99		7345592

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs - Partial/Rush Results

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BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PNJ055			PNJ056	PNJ057	PNJ058		PNJ059		
Sampling Date		2021/04/27 14:30			2021/04/28 15:45	2021/04/28 15:55	2021/04/28 16:05		2021/04/28 15:55		
COC Number		341727			341727	341727	341727		341727		
	UNITS	Dup 6	RDL	QC Batch	BH21-49-1	BH21-49-3	BH21-49-4	QC Batch	Dup 8	RDL	QC Batch
Inorganics											
Moisture	%				4.3	8.6	6.5	7344939	7.4	1.0	7345085
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	0.020	7346020	<0.020	<0.020	<0.020	7347393	<0.020	0.020	7347393
Toluene	ug/g	<0.020	0.020	7346020	<0.020	<0.020	<0.020	7347393	<0.020	0.020	7347393
Ethylbenzene	ug/g	<0.020	0.020	7346020	<0.020	<0.020	<0.020	7347393	<0.020	0.020	7347393
o-Xylene	ug/g	<0.020	0.020	7346020	<0.020	<0.020	<0.020	7347393	<0.020	0.020	7347393
p+m-Xylene	ug/g	<0.040	0.040	7346020	<0.040	<0.040	<0.040	7347393	<0.040	0.040	7347393
Total Xylenes	ug/g	<0.040	0.040	7346020	<0.040	<0.040	<0.040	7347393	<0.040	0.040	7347393
F1 (C6-C10)	ug/g	<10	10	7346020	<10	<10	<10	7347393	<10	10	7347393
F1 (C6-C10) - BTEX	ug/g	<10	10	7346020	<10	<10	<10	7347393	<10	10	7347393
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7345592	<10	<10	<10	7347733	<10	10	7346998
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7345592	<50	<50	<50	7347733	<50	50	7346998
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7345592	<50	<50	<50	7347733	<50	50	7346998
Reached Baseline at C50	ug/g	Yes		7345592	Yes	Yes	Yes	7347733	Yes		7346998
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	101		7346020	99	101	98	7347393	98		7347393
4-Bromofluorobenzene	%	91		7346020	96	96	98	7347393	98		7347393
D10-o-Xylene	%	102		7346020	86	91	85	7347393	82		7347393
D4-1,2-Dichloroethane	%	107		7346020	100	99	99	7347393	102		7347393
o-Terphenyl	%	97		7345592	85	88	86	7347733	92		7346998

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs - Partial/Rush Results

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PNJ060			PNJ060			PNJ061		
Sampling Date		2021/04/28 08:40			2021/04/28 08:40			2021/04/28 09:15		
COC Number		341727			341727			341727		
	UNITS	BH21-13-1	RDL	QC Batch	BH21-13-1 Lab-Dup	RDL	QC Batch	BH21-13-4	RDL	QC Batch
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	0.020	7347393	<0.020	0.020	7347393	<0.020	0.020	7347393
Toluene	ug/g	<0.020	0.020	7347393	<0.020	0.020	7347393	<0.020	0.020	7347393
Ethylbenzene	ug/g	<0.020	0.020	7347393	<0.020	0.020	7347393	<0.020	0.020	7347393
o-Xylene	ug/g	<0.020	0.020	7347393	<0.020	0.020	7347393	<0.020	0.020	7347393
p+m-Xylene	ug/g	<0.040	0.040	7347393	<0.040	0.040	7347393	<0.040	0.040	7347393
Total Xylenes	ug/g	<0.040	0.040	7347393	<0.040	0.040	7347393	<0.040	0.040	7347393
F1 (C6-C10)	ug/g	<10	10	7347393	<10	10	7347393	<10	10	7347393
F1 (C6-C10) - BTEX	ug/g	<10	10	7347393	<10	10	7347393	<10	10	7347393
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	74	10	7347733				<10	10	7347733
F3 (C16-C34 Hydrocarbons)	ug/g	220	50	7347733				<50	50	7347733
F4 (C34-C50 Hydrocarbons)	ug/g	75	50	7347733				<50	50	7347733
Reached Baseline at C50	ug/g	Yes		7347733				Yes		7347733
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	98		7347393	100		7347393	98		7347393
4-Bromofluorobenzene	%	97		7347393	97		7347393	98		7347393
D10-o-Xylene	%	93		7347393	88		7347393	86		7347393
D4-1,2-Dichloroethane	%	102		7347393	100		7347393	100		7347393
o-Terphenyl	%	85		7347733				86		7347733

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

BV Labs - Partial/Rush Results

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs - Partial/Rush Results

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PNJ062			PNJ063	PNJ064		PNJ065		
Sampling Date		2021/04/28 14:50			2021/04/30 08:50	2021/04/30 09:00		2021/04/30 09:30		
COC Number		341727			341727	341727		341727		
	UNITS	BH21-13-14	RDL	QC Batch	BH21-33-1	BH21-33-2	QC Batch	BH21-33-4	RDL	QC Batch
Inorganics										
Moisture	%	11	1.0	7344939						
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	0.020	7347393	<0.020	<0.020	7347393	<0.020	0.020	7347393
Toluene	ug/g	<0.020	0.020	7347393	<0.020	<0.020	7347393	<0.020	0.020	7347393
Ethylbenzene	ug/g	<0.020	0.020	7347393	<0.020	<0.020	7347393	<0.020	0.020	7347393
o-Xylene	ug/g	<0.020	0.020	7347393	<0.020	<0.020	7347393	<0.020	0.020	7347393
p+m-Xylene	ug/g	<0.040	0.040	7347393	<0.040	<0.040	7347393	<0.040	0.040	7347393
Total Xylenes	ug/g	<0.040	0.040	7347393	<0.040	<0.040	7347393	<0.040	0.040	7347393
F1 (C6-C10)	ug/g	<10	10	7347393	<10	<10	7347393	<10	10	7347393
F1 (C6-C10) - BTEX	ug/g	<10	10	7347393	<10	<10	7347393	<10	10	7347393
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7347733	<10	<10	7346998	<10	10	7347029
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7347733	<50	<50	7346998	<50	50	7347029
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7347733	<50	<50	7346998	<50	50	7347029
Reached Baseline at C50	ug/g	Yes		7347733	Yes	Yes	7346998	Yes		7347029
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	98		7347393	99	99	7347393	99		7347393
4-Bromofluorobenzene	%	97		7347393	97	97	7347393	96		7347393
D10-o-Xylene	%	90		7347393	88	84	7347393	88		7347393
D4-1,2-Dichloroethane	%	101		7347393	97	100	7347393	100		7347393
o-Terphenyl	%	88		7347733	94	92	7346998	94		7347029

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PNJ066		PNJ067		PNJ068		PNJ069		
Sampling Date		2021/04/30 14:30		2021/04/30 12:40		2021/04/30 13:10		2021/04/30 10:45		
COC Number		341727		341727		341727		341727		
	UNITS	BH21-32-4	QC Batch	BH21-34-1	QC Batch	BH21-34-4	QC Batch	BH21-35-3A	RDL	QC Batch
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	7347393	<0.020	7347393	<0.020	7347393	<0.020	0.020	7347393
Toluene	ug/g	<0.020	7347393	<0.020	7347393	<0.020	7347393	<0.020	0.020	7347393
Ethylbenzene	ug/g	<0.020	7347393	<0.020	7347393	<0.020	7347393	<0.020	0.020	7347393
o-Xylene	ug/g	<0.020	7347393	<0.020	7347393	<0.020	7347393	<0.020	0.020	7347393
p+m-Xylene	ug/g	<0.040	7347393	<0.040	7347393	<0.040	7347393	<0.040	0.040	7347393
Total Xylenes	ug/g	<0.040	7347393	<0.040	7347393	<0.040	7347393	<0.040	0.040	7347393
F1 (C6-C10)	ug/g	<10	7347393	<10	7347393	<10	7347393	<10	10	7347393
F1 (C6-C10) - BTEX	ug/g	<10	7347393	<10	7347393	<10	7347393	<10	10	7347393
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7347733	27	7347029	<10	7347733	<10	10	7347029
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7347733	77	7347029	<50	7347733	<50	50	7347029
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7347733	<50	7347029	<50	7347733	<50	50	7347029
Reached Baseline at C50	ug/g	Yes	7347733	Yes	7347029	Yes	7347733	Yes		7347029
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	99	7347393	100	7347393	99	7347393	97		7347393
4-Bromofluorobenzene	%	96	7347393	96	7347393	97	7347393	96		7347393
D10-o-Xylene	%	87	7347393	90	7347393	85	7347393	90		7347393
D4-1,2-Dichloroethane	%	97	7347393	98	7347393	102	7347393	101		7347393
o-Terphenyl	%	86	7347733	90	7347029	88	7347733	92		7347029

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs - Partial/Rush Results

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BV Labs - Partial/Rush Results

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PNJ070		PNJ071	PNJ072			PNJ073		
Sampling Date		2021/04/30 10:55		2021/04/29 09:40	2021/04/29 10:10			2021/04/29 11:05		
COC Number		341727		341727	341727			341727		
	UNITS	BH21-35-4	QC Batch	BH21-15-1	BH21-15-4	RDL	QC Batch	BH12-50-1	RDL	QC Batch
Inorganics										
Moisture	%							8.1	1.0	7344857
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	7347393	<0.020	<0.020	0.020	7347393	<0.020	0.020	7347393
Toluene	ug/g	<0.020	7347393	<0.020	<0.020	0.020	7347393	<0.020	0.020	7347393
Ethylbenzene	ug/g	<0.020	7347393	<0.020	<0.020	0.020	7347393	<0.020	0.020	7347393
o-Xylene	ug/g	<0.020	7347393	<0.020	<0.020	0.020	7347393	<0.020	0.020	7347393
p+m-Xylene	ug/g	<0.040	7347393	<0.040	<0.040	0.040	7347393	<0.040	0.040	7347393
Total Xylenes	ug/g	<0.040	7347393	<0.040	<0.040	0.040	7347393	<0.040	0.040	7347393
F1 (C6-C10)	ug/g	<10	7347393	<10	<10	10	7347393	<10	10	7347393
F1 (C6-C10) - BTEX	ug/g	<10	7347393	<10	<10	10	7347393	<10	10	7347393
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7347733	<10	<10	10	7347029	<10	10	7347029
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7347733	<50	<50	50	7347029	<50	50	7347029
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7347733	<50	<50	50	7347029	<50	50	7347029
Reached Baseline at C50	ug/g	Yes	7347733	Yes	Yes		7347029	Yes		7347029
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	99	7347393	98	100		7347393	97		7347393
4-Bromofluorobenzene	%	95	7347393	97	97		7347393	96		7347393
D10-o-Xylene	%	92	7347393	90	87		7347393	85		7347393
D4-1,2-Dichloroethane	%	100	7347393	100	101		7347393	101		7347393
o-Terphenyl	%	89	7347733	88	92		7347029	89		7347029

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PNJ074			PNJ074			PNJ075		PNJ076		
Sampling Date		2021/04/29 11:20			2021/04/29 11:20			2021/04/29 11:40		2021/04/29 13:30		
COC Number		341727			341727			341727		341727		
	UNITS	BH12-50-3	RDL	QC Batch	BH12-50-3 Lab-Dup	RDL	QC Batch	BH21-50-5	QC Batch	BH21-16-1	RDL	QC Batch
Inorganics												
Moisture	%							6.6	7344857	15	1.0	7344857
BTEX & F1 Hydrocarbons												
Benzene	ug/g	<0.020	0.020	7347393				<0.020	7347393	<0.020	0.020	7347810
Toluene	ug/g	<0.020	0.020	7347393				<0.020	7347393	<0.020	0.020	7347810
Ethylbenzene	ug/g	<0.020	0.020	7347393				<0.020	7347393	<0.020	0.020	7347810
o-Xylene	ug/g	<0.020	0.020	7347393				<0.020	7347393	<0.020	0.020	7347810
p+m-Xylene	ug/g	<0.040	0.040	7347393				<0.040	7347393	<0.040	0.040	7347810
Total Xylenes	ug/g	<0.040	0.040	7347393				<0.040	7347393	<0.040	0.040	7347810
F1 (C6-C10)	ug/g	<10	10	7347393				<10	7347393	<10	10	7347810
F1 (C6-C10) - BTEX	ug/g	<10	10	7347393				<10	7347393	<10	10	7347810
F2-F4 Hydrocarbons												
F2 (C10-C16 Hydrocarbons)	ug/g	16	10	7347029	12	10	7347029	17	7347029	<10	10	7347029
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7347029	<50	50	7347029	<50	7347029	<50	50	7347029
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7347029	<50	50	7347029	<50	7347029	<50	50	7347029
Reached Baseline at C50	ug/g	Yes		7347029	Yes		7347029	Yes	7347029	Yes		7347029
Surrogate Recovery (%)												
1,4-Difluorobenzene	%	98		7347393				99	7347393	99		7347810
4-Bromofluorobenzene	%	96		7347393				97	7347393	89		7347810
D10-o-Xylene	%	89		7347393				87	7347393	105		7347810
D4-1,2-Dichloroethane	%	101		7347393				99	7347393	103		7347810
o-Terphenyl	%	94		7347029	93		7347029	94	7347029	93		7347029

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

BV Labs - Partial/Rush Results

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PNJ077			PNJ077			PNJ078		
Sampling Date		2021/04/29 14:05			2021/04/29 14:05			2021/04/29 14:40		
COC Number		341727			341727			341727		
	UNITS	BH12-16-4	RDL	QC Batch	BH12-16-4 Lab-Dup	RDL	QC Batch	BH21-48-1	RDL	QC Batch
Inorganics										
Moisture	%							12	1.0	7348145
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	0.020	7347810	<0.020	0.020	7347810	<0.020	0.020	7347810
Toluene	ug/g	<0.020	0.020	7347810	<0.020	0.020	7347810	<0.020	0.020	7347810
Ethylbenzene	ug/g	<0.020	0.020	7347810	<0.020	0.020	7347810	<0.020	0.020	7347810
o-Xylene	ug/g	<0.020	0.020	7347810	<0.020	0.020	7347810	<0.020	0.020	7347810
p+m-Xylene	ug/g	<0.040	0.040	7347810	<0.040	0.040	7347810	<0.040	0.040	7347810
Total Xylenes	ug/g	<0.040	0.040	7347810	<0.040	0.040	7347810	<0.040	0.040	7347810
F1 (C6-C10)	ug/g	<10	10	7347810	<10	10	7347810	<10	10	7347810
F1 (C6-C10) - BTEX	ug/g	<10	10	7347810	<10	10	7347810	<10	10	7347810
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7347733				<10	10	7346998
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7347733				<50	50	7346998
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7347733				<50	50	7346998
Reached Baseline at C50	ug/g	Yes		7347733				Yes		7346998
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	99		7347810	100		7347810	101		7347810
4-Bromofluorobenzene	%	92		7347810	94		7347810	94		7347810
D10-o-Xylene	%	96		7347810	94		7347810	96		7347810
D4-1,2-Dichloroethane	%	105		7347810	105		7347810	101		7347810
o-Terphenyl	%	86		7347733				91		7346998

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

BV Labs - Partial/Rush Results

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BV Labs - Partial/Rush Results

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PNJ079	PNJ080			PNJ080			PNJ081		
Sampling Date		2021/04/29 14:50	2021/04/29 15:15			2021/04/29 15:15			2021/05/03 09:10		
COC Number		341727	341727			341727			341727		
	UNITS	BH21-48-2	BH21-48-5	RDL	QC Batch	BH21-48-5 Lab-Dup	RDL	QC Batch	BH21-31-1	RDL	QC Batch
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	0.030	0.020	7347810				<0.020	0.020	7347810
Toluene	ug/g	<0.020	0.043	0.020	7347810				<0.020	0.020	7347810
Ethylbenzene	ug/g	<0.020	<0.020	0.020	7347810				<0.020	0.020	7347810
o-Xylene	ug/g	<0.020	<0.020	0.020	7347810				<0.020	0.020	7347810
p+m-Xylene	ug/g	<0.040	<0.040	0.040	7347810				<0.040	0.040	7347810
Total Xylenes	ug/g	<0.040	<0.040	0.040	7347810				<0.040	0.040	7347810
F1 (C6-C10)	ug/g	<10	<10	10	7347810				<10	10	7347810
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	7347810				<10	10	7347810
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	7347733	<10	10	7347733	<10	10	7347029
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	7347733	<50	50	7347733	<50	50	7347029
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	7347733	<50	50	7347733	<50	50	7347029
Reached Baseline at C50	ug/g	Yes	Yes		7347733	Yes		7347733	Yes		7347029
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	101	100		7347810				99		7347810
4-Bromofluorobenzene	%	92	89		7347810				94		7347810
D10-o-Xylene	%	96	113		7347810				91		7347810
D4-1,2-Dichloroethane	%	104	105		7347810				104		7347810
o-Terphenyl	%	88	94		7347733	89		7347733	93		7347029

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PNJ082	PNJ083		PNJ084		PNJ085	PNJ086		
Sampling Date		2021/05/03 09:20	2021/05/03 09:35		2021/05/03 14:15		2021/05/03 14:45	2021/05/03 14:45		
COC Number		341727	341727		341727		341727	341727		
	UNITS	BH21-31-2	BH21-31-5	QC Batch	BH21-6-1	QC Batch	BH21-6-5	Dup 11	RDL	QC Batch
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	<0.020	7347810	<0.020	7347810	<0.020	<0.020	0.020	7347810
Toluene	ug/g	<0.020	<0.020	7347810	0.058	7347810	<0.020	<0.020	0.020	7347810
Ethylbenzene	ug/g	<0.020	<0.020	7347810	0.028	7347810	<0.020	<0.020	0.020	7347810
o-Xylene	ug/g	<0.020	<0.020	7347810	0.13	7347810	<0.020	<0.020	0.020	7347810
p+m-Xylene	ug/g	<0.040	<0.040	7347810	0.31	7347810	<0.040	<0.040	0.040	7347810
Total Xylenes	ug/g	<0.040	<0.040	7347810	0.43	7347810	<0.040	<0.040	0.040	7347810
F1 (C6-C10)	ug/g	<10	<10	7347810	23	7347810	<10	<10	10	7347810
F1 (C6-C10) - BTEX	ug/g	<10	<10	7347810	22	7347810	<10	<10	10	7347810
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	7347029	17	7346998	<10	<10	10	7347029
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	7347029	55	7346998	<50	<50	50	7347029
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	7347029	<50	7346998	<50	<50	50	7347029
Reached Baseline at C50	ug/g	Yes	Yes	7347029	Yes	7346998	Yes	Yes		7347029
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	99	100	7347810	96	7347810	98	100		7347810
4-Bromofluorobenzene	%	97	83	7347810	98	7347810	81	97		7347810
D10-o-Xylene	%	97	94	7347810	96	7347810	92	98		7347810
D4-1,2-Dichloroethane	%	105	104	7347810	98	7347810	107	104		7347810
o-Terphenyl	%	93	92	7347029	95	7346998	91	96		7347029

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs - Partial/Rush Results

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PNJ087		PNJ088	PNJ089		PNJ090	PNJ091		
Sampling Date		2021/05/03 12:50		2021/05/03 13:10	2021/05/03 10:45		2021/05/03 11:00	2021/05/04 08:45		
COC Number		341727		341727	341727		341727	341727		
	UNITS	BH21-24-1	QC Batch	BH21-24-3	BH21-23-1	QC Batch	BH21-23-3	BH21-3-1	RDL	QC Batch
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	7347810	<0.020	<0.020	7347810	<0.020	<0.020	0.020	7347810
Toluene	ug/g	<0.020	7347810	<0.020	<0.020	7347810	<0.020	<0.020	0.020	7347810
Ethylbenzene	ug/g	<0.020	7347810	<0.020	<0.020	7347810	<0.020	<0.020	0.020	7347810
o-Xylene	ug/g	<0.020	7347810	<0.020	<0.020	7347810	<0.020	<0.020	0.020	7347810
p+m-Xylene	ug/g	<0.040	7347810	<0.040	<0.040	7347810	<0.040	<0.040	0.040	7347810
Total Xylenes	ug/g	<0.040	7347810	<0.040	<0.040	7347810	<0.040	<0.040	0.040	7347810
F1 (C6-C10)	ug/g	14	7347810	<10	<10	7347810	<10	<10	10	7347810
F1 (C6-C10) - BTEX	ug/g	14	7347810	<10	<10	7347810	<10	<10	10	7347810
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7347733	<10	<10	7347029	<10	<10	10	7347733
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7347733	<50	77	7347029	<50	<50	50	7347733
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7347733	<50	61	7347029	<50	<50	50	7347733
Reached Baseline at C50	ug/g	Yes	7347733	Yes	Yes	7347029	Yes	Yes		7347733
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	99	7347810	99	101	7347810	99	98		7347810
4-Bromofluorobenzene	%	100	7347810	89	98	7347810	97	98		7347810
D10-o-Xylene	%	96	7347810	87	98	7347810	88	89		7347810
D4-1,2-Dichloroethane	%	104	7347810	103	102	7347810	102	105		7347810
o-Terphenyl	%	90	7347733	94	96	7347029	83	88		7347733

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs - Partial/Rush Results

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PNJ092		PNJ093		PNJ094		PNJ095		
Sampling Date		2021/05/04 08:45		2021/05/04 10:00		2021/05/04 10:00		2021/05/04 12:20		
COC Number		341727		341727		341727		341727		
	UNITS	Dup 13	QC Batch	BH21-4-1	QC Batch	Dup 15	RDL	BH21-5-2	RDL	QC Batch
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	7347810	<0.020	7347810	<0.020	0.020	<0.040	0.040	7347810
Toluene	ug/g	<0.020	7347810	<0.020	7347810	<0.020	0.020	<0.040	0.040	7347810
Ethylbenzene	ug/g	<0.020	7347810	<0.020	7347810	<0.020	0.020	<0.040	0.040	7347810
o-Xylene	ug/g	<0.020	7347810	<0.020	7347810	<0.020	0.020	<0.040	0.040	7347810
p+m-Xylene	ug/g	<0.040	7347810	<0.040	7347810	<0.040	0.040	<0.080	0.080	7347810
Total Xylenes	ug/g	<0.040	7347810	<0.040	7347810	<0.040	0.040	<0.080	0.080	7347810
F1 (C6-C10)	ug/g	<10	7347810	<10	7347810	<10	10	<20	20	7347810
F1 (C6-C10) - BTEX	ug/g	<10	7347810	<10	7347810	<10	10	<20	20	7347810
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7347733	<10	7346998	<10	10	<20	20	7347733
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7347733	300	7346998	<50	50	<100	100	7347733
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7347733	<50	7346998	<50	50	<100	100	7347733
Reached Baseline at C50	ug/g	Yes	7347733	Yes	7346998	Yes		Yes		7347733
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	102	7347810	99	7347810	103		100		7347810
4-Bromofluorobenzene	%	93	7347810	93	7347810	89		95		7347810
D10-o-Xylene	%	89	7347810	89	7347810	104		94		7347810
D4-1,2-Dichloroethane	%	102	7347810	104	7347810	107		106		7347810
o-Terphenyl	%	86	7347733	97	7346998	87		91		7347733

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs - Partial/Rush Results

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PNJ096		
Sampling Date		2021/05/04 14:05		
COC Number		341727		
	UNITS	BH21-1-2	RDL	QC Batch
Inorganics				
Moisture	%	6.1	1.0	7344939
BTEX & F1 Hydrocarbons				
Benzene	ug/g	<0.020	0.020	7347907
Toluene	ug/g	<0.020	0.020	7347907
Ethylbenzene	ug/g	<0.020	0.020	7347907
o-Xylene	ug/g	<0.020	0.020	7347907
p+m-Xylene	ug/g	<0.040	0.040	7347907
Total Xylenes	ug/g	<0.040	0.040	7347907
F1 (C6-C10)	ug/g	<10	10	7347907
F1 (C6-C10) - BTEX	ug/g	<10	10	7347907
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7347733
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7347733
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7347733
Reached Baseline at C50	ug/g	Yes		7347733
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	91		7347907
4-Bromofluorobenzene	%	96		7347907
D10-o-Xylene	%	97		7347907
D4-1,2-Dichloroethane	%	97		7347907
o-Terphenyl	%	91		7347733

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs - Partial/Rush Results

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs - Partial/Rush Results

O.REG 153 SEMIVOLATILES PACKAGE (SOIL)

BV Labs ID		PNJ060	PNJ061	PNJ062	PNJ091	PNJ092		
Sampling Date		2021/04/28 08:40	2021/04/28 09:15	2021/04/28 14:50	2021/05/04 08:45	2021/05/04 08:45		
COC Number		341727	341727	341727	341727	341727		
	UNITS	BH21-13-1	BH21-13-4	BH21-13-14	BH21-3-1	Dup 13	RDL	QC Batch
Semivolatile Organics								
1,2,4-Trichlorobenzene	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	7347573
1-Methylnaphthalene	ug/g	0.04	<0.03	<0.03	<0.03	<0.03	0.03	7347573
2,4,5-Trichlorophenol	ug/g	<0.08	<0.08	<0.08	<0.08	<0.08	0.08	7347573
2,4,6-Trichlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	7347573
2,4-Dichlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	7347573
2,4-Dimethylphenol	ug/g	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	7347573
2,4-Dinitrophenol	ug/g	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	7347573
2,4-Dinitrotoluene	ug/g	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	7347573
2,6-Dinitrotoluene	ug/g	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	7347573
2-Chlorophenol	ug/g	<0.08	<0.08	<0.08	<0.08	<0.08	0.08	7347573
2-Methylnaphthalene	ug/g	0.04	<0.03	<0.03	<0.03	<0.03	0.03	7347573
3,3'-Dichlorobenzidine	ug/g	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	7347573
Acenaphthene	ug/g	<0.03	<0.03	<0.03	<0.03	<0.03	0.03	7347573
Acenaphthylene	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	7347573
Anthracene	ug/g	<0.03	<0.03	<0.03	<0.03	<0.03	0.03	7347573
Benzo(a)anthracene	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	7347573
Benzo(a)pyrene	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	7347573
Benzo(b/j)fluoranthene	ug/g	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	7347573
Benzo(g,h,i)perylene	ug/g	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	7347573
Benzo(k)fluoranthene	ug/g	<0.03	<0.03	<0.03	<0.03	<0.03	0.03	7347573
Biphenyl	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	7347573
Bis(2-chloroethyl)ether	ug/g	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	7347573
Bis(2-chloroisopropyl)ether	ug/g	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	7347573
Bis(2-ethylhexyl)phthalate	ug/g	<1	<1	<1	<1	<1	1	7347573
Chrysene	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	7347573
Dibenzo(a,h)anthracene	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	7347573
Diethyl phthalate	ug/g	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	7347573
Dimethyl phthalate	ug/g	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	7347573
Fluoranthene	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	7347573
Fluorene	ug/g	<0.03	<0.03	<0.03	<0.03	<0.03	0.03	7347573
Indeno(1,2,3-cd)pyrene	ug/g	<0.08	<0.08	<0.08	<0.08	<0.08	0.08	7347573
Naphthalene	ug/g	<0.03	<0.03	<0.03	<0.03	<0.03	0.03	7347573
p-Chloroaniline	ug/g	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	7347573

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 SEMIVOLATILES PACKAGE (SOIL)

BV Labs ID		PNJ060	PNJ061	PNJ062	PNJ091	PNJ092		
Sampling Date		2021/04/28 08:40	2021/04/28 09:15	2021/04/28 14:50	2021/05/04 08:45	2021/05/04 08:45		
COC Number		341727	341727	341727	341727	341727		
	UNITS	BH21-13-1	BH21-13-4	BH21-13-14	BH21-3-1	Dup 13	RDL	QC Batch
Pentachlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	7347573
Phenanthrene	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	7347573
Phenol	ug/g	<0.09	<0.09	<0.09	<0.09	<0.09	0.09	7347573
Pyrene	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	7347573
Calculated Parameters								
2,4- & 2,6-Dinitrotoluene	ug/g	<0.14	<0.14	<0.14	<0.14	<0.14	0.14	7343216
Methylnaphthalene, 2-(1-)	ug/g	0.083	<0.042	<0.042	<0.042	<0.042	0.042	7344059
Surrogate Recovery (%)								
2,4,6-Tribromophenol	%	70	69	66	66	56		7347573
2-Fluorobiphenyl	%	77	69	52	78	77		7347573
D14-Terphenyl (FS)	%	87	94	92	92	90		7347573
D5-Nitrobenzene	%	82	87	76	85	85		7347573

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs - Partial/Rush Results

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

PETROLEUM HYDROCARBONS (CCME)

BV Labs ID		PNJ097		
Sampling Date		2021/05/09 14:50		
COC Number		341727		
	UNITS	Trip Blank	RDL	QC Batch
BTEX & F1 Hydrocarbons				
Benzene	ug/g	<0.020	0.020	7347907
Toluene	ug/g	<0.020	0.020	7347907
Ethylbenzene	ug/g	<0.020	0.020	7347907
o-Xylene	ug/g	<0.020	0.020	7347907
p+m-Xylene	ug/g	<0.040	0.040	7347907
Total Xylenes	ug/g	<0.040	0.040	7347907
F1 (C6-C10)	ug/g	<10	10	7347907
F1 (C6-C10) - BTEX	ug/g	<10	10	7347907
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	94		7347907
4-Bromofluorobenzene	%	95		7347907
D10-o-Xylene	%	100		7347907
D4-1,2-Dichloroethane	%	98		7347907

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs - Partial/Rush Results

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TEST SUMMARY

BV Labs ID: PNJ047 **Collected:** 2021/04/27
Sample ID: BH21-27-1 **Shipped:**
Matrix: Soil **Received:** 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	7348910	2021/05/12	2021/05/13	Surinder Rai

BV Labs ID: PNJ048 **Collected:** 2021/04/27
Sample ID: BH21-27-4 **Shipped:**
Matrix: Soil **Received:** 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/15	Automated Statchk
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7345027	N/A	2021/05/11	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7345592	2021/05/11	2021/05/12	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7347619	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7345085	N/A	2021/05/12	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/14	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349973	2021/05/13	2021/05/13	Svitlana Shaula
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ048 Dup **Collected:** 2021/04/27
Sample ID: BH21-27-4 **Shipped:**
Matrix: Soil **Received:** 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	7347619	2021/05/12	2021/05/12	Daniel Teclu

BV Labs ID: PNJ049 **Collected:** 2021/04/27
Sample ID: BH21-25-1 **Shipped:**
Matrix: Soil **Received:** 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/13	Automated Statchk
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7348086	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7345027	N/A	2021/05/11	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7345592	2021/05/11	2021/05/12	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7348499	2021/05/12	2021/05/13	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs - Partial/Rush Results

TEST SUMMARY

BV Labs ID: PNJ049
Sample ID: BH21-25-1
Matrix: Soil

Collected: 2021/04/27
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ050
Sample ID: BH21-25-3
Matrix: Soil

Collected: 2021/04/27
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/13	Automated Statchk
Hot Water Extractable Boron	ICP	7347890	2021/05/12	2021/05/13	Jolly John
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347952	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7345027	N/A	2021/05/11	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7345592	2021/05/11	2021/05/12	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7347619	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7348499	2021/05/12	2021/05/13	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349973	2021/05/13	2021/05/13	Svitlana Shaula
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/13	Automated Statchk

BV Labs ID: PNJ051
Sample ID: BH21-28-1
Matrix: Soil

Collected: 2021/04/27
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/15	Automated Statchk
Hot Water Extractable Boron	ICP	7349822	2021/05/13	2021/05/13	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7347805	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7349998	2021/05/13	2021/05/13	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7345027	N/A	2021/05/11	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7345592	2021/05/11	2021/05/12	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7349785	2021/05/13	2021/05/13	Daniel Teclu
Moisture	BAL	7347980	N/A	2021/05/12	Anita Cheema
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/14	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang
pH CaCl2 EXTRACT	AT	7348910	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/13	Automated Statchk

BV Labs - Partial/Rush Results

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TEST SUMMARY

BV Labs ID: PNJ052
Sample ID: BH21-28-3
Matrix: Soil

Collected: 2021/04/27
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/15	Automated Statchk
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7345027	N/A	2021/05/11	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7345592	2021/05/11	2021/05/13	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7347619	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/14	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349268	2021/05/12	2021/05/13	Sarah Huang
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ053
Sample ID: BH21-29-1
Matrix: Soil

Collected: 2021/04/27
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/15	Automated Statchk
Hot Water Extractable Boron	ICP	7349822	2021/05/13	2021/05/13	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7347805	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7349998	2021/05/13	2021/05/13	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7345027	N/A	2021/05/11	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7345592	2021/05/11	2021/05/12	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7349784	2021/05/13	2021/05/13	Viviana Canzonieri
Moisture	BAL	7345085	N/A	2021/05/12	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/14	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang
pH CaCl2 EXTRACT	AT	7348910	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/13	Automated Statchk

BV Labs ID: PNJ054
Sample ID: BH21-29-4
Matrix: Soil

Collected: 2021/04/27
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/13	Automated Statchk
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7348086	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7345027	N/A	2021/05/11	Lincoln Ramdahin

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs - Partial/Rush Results

TEST SUMMARY

BV Labs ID: PNJ054
Sample ID: BH21-29-4
Matrix: Soil

Collected: 2021/04/27
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7345592	2021/05/11	2021/05/12	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7347619	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7348499	2021/05/12	2021/05/13	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ055
Sample ID: Dup 6
Matrix: Soil

Collected: 2021/04/27
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/13	Automated Statchk
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7346020	N/A	2021/05/12	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7345592	2021/05/11	2021/05/12	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7347619	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7348499	2021/05/12	2021/05/13	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349973	2021/05/13	2021/05/13	Svitlana Shaula
pH CaCl2 EXTRACT	AT	7348838	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ056
Sample ID: BH21-49-1
Matrix: Soil

Collected: 2021/04/28
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7346401	2021/05/11	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7346399	2021/05/11	2021/05/13	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7347074	2021/05/12	2021/05/12	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

BV Labs - Partial/Rush Results

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TEST SUMMARY

BV Labs ID: PNJ057
Sample ID: BH21-49-3
Matrix: Soil

Collected: 2021/04/28
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7346401	2021/05/11	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7346399	2021/05/11	2021/05/13	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7347074	2021/05/12	2021/05/12	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ058
Sample ID: BH21-49-4
Matrix: Soil

Collected: 2021/04/28
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7346401	2021/05/11	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7346399	2021/05/11	2021/05/13	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7347074	2021/05/12	2021/05/12	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ059
Sample ID: Dup 8
Matrix: Soil

Collected: 2021/04/28
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7346401	2021/05/11	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7346399	2021/05/11	2021/05/13	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7346998	2021/05/12	2021/05/12	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7345085	N/A	2021/05/12	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7347074	2021/05/12	2021/05/12	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

BV Labs - Partial/Rush Results

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BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

TEST SUMMARY

BV Labs ID: PNJ060
Sample ID: BH21-13-1
Matrix: Soil

Collected: 2021/04/28
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/14	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	7347573	2021/05/12	2021/05/13	Milijana Avramovic
Hot Water Extractable Boron	ICP	7350576	2021/05/13	2021/05/13	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7347805	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7350409	2021/05/13	2021/05/13	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Dinitrotoluene Sum	CALC	7343216	2021/05/14	2021/05/14	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7350471	2021/05/13	2021/05/14	Viviana Canzonieri
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang
pH CaCl2 EXTRACT	AT	7348910	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ060 Dup
Sample ID: BH21-13-1
Matrix: Soil

Collected: 2021/04/28
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu

BV Labs ID: PNJ061
Sample ID: BH21-13-4
Matrix: Soil

Collected: 2021/04/28
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/17	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	7347573	2021/05/12	2021/05/12	Milijana Avramovic
Hot Water Extractable Boron	ICP	7350576	2021/05/13	2021/05/13	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7347805	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7350409	2021/05/13	2021/05/13	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Dinitrotoluene Sum	CALC	7343216	2021/05/17	2021/05/17	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7350471	2021/05/13	2021/05/14	Viviana Canzonieri
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang
pH CaCl2 EXTRACT	AT	7348910	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

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TEST SUMMARY

BV Labs ID: PNJ062
Sample ID: BH21-13-14
Matrix: Soil

Collected: 2021/04/28
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/17	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	7347573	2021/05/12	2021/05/13	Milijana Avramovic
Hot Water Extractable Boron	ICP	7350576	2021/05/13	2021/05/13	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7347805	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7350409	2021/05/13	2021/05/13	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Dinitrotoluene Sum	CALC	7343216	2021/05/17	2021/05/17	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7350471	2021/05/13	2021/05/14	Viviana Canzonieri
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang
pH CaCl2 EXTRACT	AT	7348910	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ063
Sample ID: BH21-33-1
Matrix: Soil

Collected: 2021/04/30
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/15	Automated Statchk
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7346998	2021/05/12	2021/05/12	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7345085	N/A	2021/05/12	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/14	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349268	2021/05/12	2021/05/13	Sarah Huang
pH CaCl2 EXTRACT	AT	7348838	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ064
Sample ID: BH21-33-2
Matrix: Soil

Collected: 2021/04/30
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/15	Automated Statchk
Hot Water Extractable Boron	ICP	7347890	2021/05/12	2021/05/13	Jolly John
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7350409	2021/05/13	2021/05/13	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila

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TEST SUMMARY

BV Labs ID: PNJ064
Sample ID: BH21-33-2
Matrix: Soil

Collected: 2021/04/30
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7346998	2021/05/12	2021/05/12	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7347619	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7345085	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/14	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ064 Dup
Sample ID: BH21-33-2
Matrix: Soil

Collected: 2021/04/30
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7345085	N/A	2021/05/12	Gurpreet Kaur (ONT)

BV Labs ID: PNJ065
Sample ID: BH21-33-4
Matrix: Soil

Collected: 2021/04/30
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/13	Automated Statchk
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7347619	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7348499	2021/05/12	2021/05/13	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349973	2021/05/13	2021/05/13	Svitlana Shaula
pH CaCl2 EXTRACT	AT	7348838	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ065 Dup
Sample ID: BH21-33-4
Matrix: Soil

Collected: 2021/04/30
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Polychlorinated Biphenyl in Soil	GC/ECD	7349973	2021/05/13	2021/05/13	Svitlana Shaula

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TEST SUMMARY

BV Labs ID: PNJ066
Sample ID: BH21-32-4
Matrix: Soil

Collected: 2021/04/30
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/15	Automated Statchk
Hot Water Extractable Boron	ICP	7349822	2021/05/13	2021/05/13	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7347805	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7349998	2021/05/13	2021/05/13	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7349785	2021/05/13	2021/05/13	Daniel Teclu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/13	Mitesh Raj
pH CaCl2 EXTRACT	AT	7348910	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/13	Automated Statchk

BV Labs ID: PNJ066 Dup
Sample ID: BH21-32-4
Matrix: Soil

Collected: 2021/04/30
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7347805	2021/05/12	2021/05/13	Aditiben Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/13	Mitesh Raj
pH CaCl2 EXTRACT	AT	7348910	2021/05/12	2021/05/13	Surinder Rai

BV Labs ID: PNJ067
Sample ID: BH21-34-1
Matrix: Soil

Collected: 2021/04/30
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/13	Automated Statchk
Hot Water Extractable Boron	ICP	7347890	2021/05/12	2021/05/13	Jolly John
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347952	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7348499	2021/05/12	2021/05/13	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349268	2021/05/12	2021/05/13	Sarah Huang
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/13	Automated Statchk

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TEST SUMMARY

BV Labs ID: PNJ068
Sample ID: BH21-34-4
Matrix: Soil

Collected: 2021/04/30
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/15	Automated Statchk
Hot Water Extractable Boron	ICP	7347890	2021/05/12	2021/05/13	Jolly John
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347952	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/14	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349268	2021/05/12	2021/05/13	Sarah Huang
pH CaCl2 EXTRACT	AT	7348838	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/13	Automated Statchk

BV Labs ID: PNJ069
Sample ID: BH21-35-3A
Matrix: Soil

Collected: 2021/04/30
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/13	Automated Statchk
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7345948	2021/05/11	2021/05/12	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7346041	2021/05/11	2021/05/12	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7348499	2021/05/12	2021/05/13	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7346709	2021/05/11	2021/05/12	Sarah Huang
pH CaCl2 EXTRACT	AT	7345659	2021/05/11	2021/05/11	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ069 Dup
Sample ID: BH21-35-3A
Matrix: Soil

Collected: 2021/04/30
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7345948	2021/05/11	2021/05/12	Aditiben Patel

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TEST SUMMARY

BV Labs ID: PNJ070
Sample ID: BH21-35-4
Matrix: Soil

Collected: 2021/04/30
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/15	Automated Statchk
Hot Water Extractable Boron	ICP	7347890	2021/05/12	2021/05/13	Jolly John
Free (WAD) Cyanide	TECH	7348086	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347952	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/14	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/13	Automated Statchk

BV Labs ID: PNJ071
Sample ID: BH21-15-1
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7347890	2021/05/12	2021/05/13	Jolly John
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347952	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7347619	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7353106	2021/05/14	2021/05/15	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	7343265	N/A	2021/05/12	Automated Statchk
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/13	Automated Statchk

BV Labs ID: PNJ072
Sample ID: BH21-15-4
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7347619	2021/05/12	2021/05/12	Daniel Teclu

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs - Partial/Rush Results

TEST SUMMARY

BV Labs ID: PNJ072
Sample ID: BH21-15-4
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7353106	2021/05/14	2021/05/15	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	7343265	N/A	2021/05/12	Automated Statchk
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ073
Sample ID: BH12-50-1
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7347805	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7353106	2021/05/14	2021/05/15	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	7343265	N/A	2021/05/12	Automated Statchk
pH CaCl2 EXTRACT	AT	7348910	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ074
Sample ID: BH12-50-3
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7353106	2021/05/14	2021/05/15	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	7343265	N/A	2021/05/12	Automated Statchk
pH CaCl2 EXTRACT	AT	7348838	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/14	Automated Statchk

BV Labs - Partial/Rush Results

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TEST SUMMARY

BV Labs ID: PNJ074 Dup
Sample ID: BH12-50-3
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li

BV Labs ID: PNJ075
Sample ID: BH21-50-5
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7347805	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347393	N/A	2021/05/12	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7353106	2021/05/14	2021/05/15	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	7343265	N/A	2021/05/12	Automated Statchk
pH CaCl2 EXTRACT	AT	7348910	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ076
Sample ID: BH21-16-1
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7347805	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7353106	2021/05/14	2021/05/15	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	7343265	N/A	2021/05/12	Automated Statchk
pH CaCl2 EXTRACT	AT	7348910	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ076 Dup
Sample ID: BH21-16-1
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs - Partial/Rush Results

TEST SUMMARY

BV Labs ID: PNJ076 Dup
Sample ID: BH21-16-1
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu

BV Labs ID: PNJ077
Sample ID: BH12-16-4
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7347890	2021/05/12	2021/05/13	Jolly John
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347952	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7353106	2021/05/14	2021/05/15	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	7343265	N/A	2021/05/12	Automated Statchk
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/13	Automated Statchk

BV Labs ID: PNJ077 Dup
Sample ID: BH12-16-4
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai

BV Labs ID: PNJ078
Sample ID: BH21-48-1
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7349822	2021/05/13	2021/05/13	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7347805	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7349998	2021/05/13	2021/05/13	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7346998	2021/05/12	2021/05/12	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7349785	2021/05/13	2021/05/13	Daniel Teclu
Moisture	BAL	7348145	N/A	2021/05/12	Anita Cheema
OC Pesticides (Selected) & PCB	GC/ECD	7353106	2021/05/14	2021/05/15	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	7343265	N/A	2021/05/12	Automated Statchk

BV Labs - Partial/Rush Results

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TEST SUMMARY

BV Labs ID: PNJ078
Sample ID: BH21-48-1
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	7348910	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/13	Automated Statchk

BV Labs ID: PNJ078 Dup
Sample ID: BH21-48-1
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	7353106	2021/05/14	2021/05/15	Mahmudul Khan

BV Labs ID: PNJ079
Sample ID: BH21-48-2
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7347890	2021/05/12	2021/05/13	Jolly John
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347952	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7347619	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7353106	2021/05/14	2021/05/15	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	7343265	N/A	2021/05/12	Automated Statchk
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/13	Automated Statchk

BV Labs ID: PNJ080
Sample ID: BH21-48-5
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7347619	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7353106	2021/05/14	2021/05/15	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	7343265	N/A	2021/05/12	Automated Statchk
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai

BV Labs - Partial/Rush Results

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TEST SUMMARY

BV Labs ID: PNJ080
Sample ID: BH21-48-5
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ080 Dup
Sample ID: BH21-48-5
Matrix: Soil

Collected: 2021/04/29
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu

BV Labs ID: PNJ081
Sample ID: BH21-31-1
Matrix: Soil

Collected: 2021/05/03
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/13	Automated Statchk
Hot Water Extractable Boron	ICP	7349822	2021/05/13	2021/05/13	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7347805	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7349998	2021/05/13	2021/05/13	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7349784	2021/05/13	2021/05/13	Viviana Canzonieri
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7348499	2021/05/12	2021/05/13	Mitesh Raj
pH CaCl2 EXTRACT	AT	7348910	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/13	Automated Statchk

BV Labs ID: PNJ082
Sample ID: BH21-31-2
Matrix: Soil

Collected: 2021/05/03
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/13	Automated Statchk
Hot Water Extractable Boron	ICP	7347890	2021/05/12	2021/05/13	Jolly John
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347952	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7347619	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7348499	2021/05/12	2021/05/13	Mitesh Raj
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/13	Automated Statchk

BV Labs - Partial/Rush Results

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TEST SUMMARY

BV Labs ID: PNJ083
Sample ID: BH21-31-5
Matrix: Soil

Collected: 2021/05/03
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/13	Automated Statchk
Hot Water Extractable Boron	ICP	7347890	2021/05/12	2021/05/13	Jolly John
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347952	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7348499	2021/05/12	2021/05/13	Mitesh Raj
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7343922	N/A	2021/05/13	Automated Statchk

BV Labs ID: PNJ084
Sample ID: BH21-6-1
Matrix: Soil

Collected: 2021/05/03
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/15	Automated Statchk
Hot Water Extractable Boron	ICP	7349822	2021/05/13	2021/05/13	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7347805	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7349998	2021/05/13	2021/05/13	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7346998	2021/05/12	2021/05/12	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7349784	2021/05/13	2021/05/13	Viviana Canzonieri
Moisture	BAL	7347980	N/A	2021/05/12	Anita Cheema
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/14	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang
pH CaCl2 EXTRACT	AT	7348910	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/13	Automated Statchk

BV Labs ID: PNJ085
Sample ID: BH21-6-5
Matrix: Soil

Collected: 2021/05/03
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/13	Automated Statchk
Hot Water Extractable Boron	ICP	7347890	2021/05/12	2021/05/13	Jolly John
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7350409	2021/05/13	2021/05/13	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs - Partial/Rush Results

TEST SUMMARY

BV Labs ID: PNJ085
Sample ID: BH21-6-5
Matrix: Soil

Collected: 2021/05/03
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7348499	2021/05/12	2021/05/13	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349268	2021/05/12	2021/05/13	Sarah Huang
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ086
Sample ID: Dup 11
Matrix: Soil

Collected: 2021/05/03
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344345	N/A	2021/05/13	Automated Statchk
Hot Water Extractable Boron	ICP	7347890	2021/05/12	2021/05/13	Jolly John
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7350409	2021/05/13	2021/05/13	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7348499	2021/05/12	2021/05/13	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ087
Sample ID: BH21-24-1
Matrix: Soil

Collected: 2021/05/03
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/15	Automated Statchk
Hot Water Extractable Boron	ICP	7349822	2021/05/13	2021/05/13	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7348086	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7349998	2021/05/13	2021/05/13	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7349784	2021/05/13	2021/05/13	Viviana Canzonieri
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/14	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/13	Automated Statchk

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs - Partial/Rush Results

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TEST SUMMARY

BV Labs ID: PNJ088
Sample ID: BH21-24-3
Matrix: Soil

Collected: 2021/05/03
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/13	Automated Statchk
Hot Water Extractable Boron	ICP	7347890	2021/05/12	2021/05/13	Jolly John
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347952	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7347619	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7348499	2021/05/12	2021/05/13	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349268	2021/05/12	2021/05/13	Sarah Huang
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/13	Automated Statchk

BV Labs ID: PNJ088 Dup
Sample ID: BH21-24-3
Matrix: Soil

Collected: 2021/05/03
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7348092	2021/05/12	2021/05/13	Aditiben Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347815	2021/05/12	2021/05/13	Violeta Porcila
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)

BV Labs ID: PNJ089
Sample ID: BH21-23-1
Matrix: Soil

Collected: 2021/05/03
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/13	Automated Statchk
Hot Water Extractable Boron	ICP	7349822	2021/05/13	2021/05/13	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7347805	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7349998	2021/05/13	2021/05/13	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347029	2021/05/12	2021/05/12	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7349784	2021/05/13	2021/05/13	Viviana Canzonieri
Moisture	BAL	7344857	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7348499	2021/05/12	2021/05/13	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang
pH CaCl2 EXTRACT	AT	7348910	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/13	Automated Statchk

BV Labs - Partial/Rush Results

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TEST SUMMARY

BV Labs ID: PNJ090
Sample ID: BH21-23-3
Matrix: Soil

Collected: 2021/05/03
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/15	Automated Statchk
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7348086	2021/05/12	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7347720	2021/05/12	2021/05/13	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/14	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang
pH CaCl2 EXTRACT	AT	7349204	2021/05/12	2021/05/13	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ090 Dup
Sample ID: BH21-23-3
Matrix: Soil

Collected: 2021/05/03
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)

BV Labs ID: PNJ091
Sample ID: BH21-3-1
Matrix: Soil

Collected: 2021/05/04
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/17	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	7347573	2021/05/12	2021/05/13	Milijana Avramovic
Dinitrotoluene Sum	CALC	7343216	2021/05/17	2021/05/17	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang

BV Labs ID: PNJ091 Dup
Sample ID: BH21-3-1
Matrix: Soil

Collected: 2021/05/04
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang

BV Labs - Partial/Rush Results

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TEST SUMMARY

BV Labs ID: PNJ092
Sample ID: Dup 13
Matrix: Soil

Collected: 2021/05/04
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/17	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	7347573	2021/05/12	2021/05/13	Milijana Avramovic
Dinitrotoluene Sum	CALC	7343216	2021/05/17	2021/05/17	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang

BV Labs ID: PNJ093
Sample ID: BH21-4-1
Matrix: Soil

Collected: 2021/05/04
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/15	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7346998	2021/05/12	2021/05/12	Jeevaraj Jeevaratrnam
Moisture	BAL	7347980	N/A	2021/05/12	Anita Cheema
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/14	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang

BV Labs ID: PNJ094
Sample ID: Dup 15
Matrix: Soil

Collected: 2021/05/04
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/15	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/14	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang

BV Labs ID: PNJ095
Sample ID: BH21-5-2
Matrix: Soil

Collected: 2021/05/04
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7344059	N/A	2021/05/15	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347810	N/A	2021/05/13	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7349271	2021/05/12	2021/05/14	Mitesh Raj
Polychlorinated Biphenyl in Soil	GC/ECD	7349245	2021/05/12	2021/05/16	Sarah Huang

BV Labs - Partial/Rush Results

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BV Labs Job #: C1C4985
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: DC

TEST SUMMARY

BV Labs ID: PNJ096
Sample ID: BH21-1-2
Matrix: Soil

Collected: 2021/05/04
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7347755	2021/05/12	2021/05/12	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	7346401	2021/05/11	2021/05/13	Aditiben Patel
Conductivity	AT	7347902	2021/05/12	2021/05/12	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7346399	2021/05/11	2021/05/13	Lusine Khachatryan
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347907	N/A	2021/05/12	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7347733	2021/05/12	2021/05/12	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7347617	2021/05/12	2021/05/12	Daniel Teclu
Moisture	BAL	7344939	N/A	2021/05/11	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7347074	2021/05/12	2021/05/12	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7344349	N/A	2021/05/14	Automated Statchk

BV Labs ID: PNJ097
Sample ID: Trip Blank
Matrix: Soil

Collected: 2021/05/09
Shipped:
Received: 2021/05/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7347907	N/A	2021/05/12	Anca Ganea

BV Labs - Partial/Rush Results

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BV Labs - Partial/Rush Results

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.0°C
Package 2	0.3°C
Package 3	0.3°C
Package 4	0.0°C

Sample PNJ048 [BH21-27-4] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ049 [BH21-25-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ050 [BH21-25-3] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ051 [BH21-28-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ052 [BH21-28-3] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ056 [BH21-49-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ057 [BH21-49-3] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ058 [BH21-49-4] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ059 [Dup 8] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ061 [BH21-13-4] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ063 [BH21-33-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ065 [BH21-33-4] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ066 [BH21-32-4] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ067 [BH21-34-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ068 [BH21-34-4] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

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BV Labs - Partial/Rush Results

Sample PNJ069 [BH21-35-3A] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ070 [BH21-35-4] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ072 [BH21-15-4] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ073 [BH12-50-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ074 [BH12-50-3] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ075 [BH21-50-5] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ077 [BH12-16-4] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ078 [BH21-48-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ079 [BH21-48-2] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ081 [BH21-31-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ082 [BH21-31-2] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ083 [BH21-31-5] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ085 [BH21-6-5] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ086 [Dup 11] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ090 [BH21-23-3] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ091 [BH21-3-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ092 [Dup 13] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PNJ095 [BH21-5-2] : F2-F4 Analysis: Detection limits were adjusted for high moisture content.

F1/BTEX analysis:
Detection limits were adjusted for high moisture content and sample weight.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

PAH analysis: Detection limits were adjusted for high moisture content.

PCB Analysis: Detection limits were adjusted for high moisture content.

Sample PNJ096 [BH21-1-2] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

O.REG 153 PCBS (SOIL)

Polychlorinated Biphenyl in Soil: Duplicate results exceeded RPD acceptance criteria. This may be due to sample heterogeneity.

Results relate only to the items tested.

BV Labs - Partial/Rush Results

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7344857	MUC	RPD [PNJ088-02]	Moisture	2021/05/11	1.7		%	20
7344939	MUC	RPD [PNJ090-02]	Moisture	2021/05/11	0		%	20
7345027	LRA	Matrix Spike	1,4-Difluorobenzene	2021/05/11		85	%	60 - 140
			4-Bromofluorobenzene	2021/05/11		107	%	60 - 140
			D10-o-Xylene	2021/05/11		102	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/11		89	%	60 - 140
			Benzene	2021/05/11		80	%	50 - 140
			Toluene	2021/05/11		89	%	50 - 140
			Ethylbenzene	2021/05/11		114	%	50 - 140
			o-Xylene	2021/05/11		113	%	50 - 140
			p+m-Xylene	2021/05/11		104	%	50 - 140
			F1 (C6-C10)	2021/05/11		92	%	60 - 140
7345027	LRA	Spiked Blank	1,4-Difluorobenzene	2021/05/11		91	%	60 - 140
			4-Bromofluorobenzene	2021/05/11		96	%	60 - 140
			D10-o-Xylene	2021/05/11		95	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/11		88	%	60 - 140
			Benzene	2021/05/11		88	%	50 - 140
			Toluene	2021/05/11		85	%	50 - 140
			Ethylbenzene	2021/05/11		103	%	50 - 140
			o-Xylene	2021/05/11		99	%	50 - 140
			p+m-Xylene	2021/05/11		93	%	50 - 140
			F1 (C6-C10)	2021/05/11		89	%	80 - 120
7345027	LRA	Method Blank	1,4-Difluorobenzene	2021/05/11		97	%	60 - 140
			4-Bromofluorobenzene	2021/05/11		99	%	60 - 140
			D10-o-Xylene	2021/05/11		94	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/11		100	%	60 - 140
			Benzene	2021/05/11	<0.020		ug/g	
			Toluene	2021/05/11	<0.020		ug/g	
			Ethylbenzene	2021/05/11	<0.020		ug/g	
			o-Xylene	2021/05/11	<0.020		ug/g	
			p+m-Xylene	2021/05/11	<0.040		ug/g	
			Total Xylenes	2021/05/11	<0.040		ug/g	
			F1 (C6-C10)	2021/05/11	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/05/11	<10		ug/g	
7345027	LRA	RPD	Benzene	2021/05/11	NC		%	50
			Toluene	2021/05/11	NC		%	50
			Ethylbenzene	2021/05/11	NC		%	50
			o-Xylene	2021/05/11	NC		%	50
			p+m-Xylene	2021/05/11	NC		%	50
			Total Xylenes	2021/05/11	NC		%	50
			F1 (C6-C10)	2021/05/11	NC		%	30
			F1 (C6-C10) - BTEX	2021/05/11	NC		%	30
7345085	MUC	RPD [PNJ064-02]	Moisture	2021/05/12	7.4		%	20
7345592	DN0	Matrix Spike	o-Terphenyl	2021/05/12		96	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/12		NC	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/05/12		104	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/05/12		108	%	50 - 130
7345592	DN0	Spiked Blank	o-Terphenyl	2021/05/12		94	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/12		107	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/05/12		107	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/05/12		108	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7345592	DN0	Method Blank	o-Terphenyl	2021/05/12		94	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/12	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/05/12	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/05/12	<50		ug/g	
7345592	DN0	RPD	F2 (C10-C16 Hydrocarbons)	2021/05/12	21		%	30
			F3 (C16-C34 Hydrocarbons)	2021/05/12	8.2		%	30
			F4 (C34-C50 Hydrocarbons)	2021/05/12	NC		%	30
7345659	NYS	Spiked Blank	Available (CaCl2) pH	2021/05/11		100	%	97 - 103
7345659	NYS	RPD	Available (CaCl2) pH	2021/05/11	0.61		%	N/A
7345948	ABP	Matrix Spike [PNJ069-01]	WAD Cyanide (Free)	2021/05/12		89	%	75 - 125
7345948	ABP	Spiked Blank	WAD Cyanide (Free)	2021/05/12		90	%	80 - 120
7345948	ABP	Method Blank	WAD Cyanide (Free)	2021/05/12	<0.01		ug/g	
7345948	ABP	RPD [PNJ069-01]	WAD Cyanide (Free)	2021/05/12	NC		%	35
7346020	AGA	Matrix Spike	1,4-Difluorobenzene	2021/05/11		97	%	60 - 140
			4-Bromofluorobenzene	2021/05/11		99	%	60 - 140
			D10-o-Xylene	2021/05/11		102	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/11		97	%	60 - 140
			Benzene	2021/05/11		105	%	50 - 140
			Toluene	2021/05/11		106	%	50 - 140
			Ethylbenzene	2021/05/11		119	%	50 - 140
			o-Xylene	2021/05/11		115	%	50 - 140
			p+m-Xylene	2021/05/11		115	%	50 - 140
			F1 (C6-C10)	2021/05/11		100	%	60 - 140
7346020	AGA	Spiked Blank	1,4-Difluorobenzene	2021/05/11		98	%	60 - 140
			4-Bromofluorobenzene	2021/05/11		99	%	60 - 140
			D10-o-Xylene	2021/05/11		91	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/11		101	%	60 - 140
			Benzene	2021/05/11		97	%	50 - 140
			Toluene	2021/05/11		95	%	50 - 140
			Ethylbenzene	2021/05/11		106	%	50 - 140
			o-Xylene	2021/05/11		103	%	50 - 140
			p+m-Xylene	2021/05/11		102	%	50 - 140
			F1 (C6-C10)	2021/05/11		89	%	80 - 120
7346020	AGA	Method Blank	1,4-Difluorobenzene	2021/05/11		98	%	60 - 140
			4-Bromofluorobenzene	2021/05/11		95	%	60 - 140
			D10-o-Xylene	2021/05/11		89	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/11		101	%	60 - 140
			Benzene	2021/05/11	<0.020		ug/g	
			Toluene	2021/05/11	<0.020		ug/g	
			Ethylbenzene	2021/05/11	<0.020		ug/g	
			o-Xylene	2021/05/11	<0.020		ug/g	
			p+m-Xylene	2021/05/11	<0.040		ug/g	
			Total Xylenes	2021/05/11	<0.040		ug/g	
			F1 (C6-C10)	2021/05/11	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/05/11	<10		ug/g	
7346020	AGA	RPD	Benzene	2021/05/11	NC		%	50
			Toluene	2021/05/11	NC		%	50
			Ethylbenzene	2021/05/11	NC		%	50
			o-Xylene	2021/05/11	NC		%	50
			p+m-Xylene	2021/05/11	NC		%	50
			Total Xylenes	2021/05/11	NC		%	50

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F1 (C6-C10)	2021/05/11	NC		%	30
			F1 (C6-C10) - BTEX	2021/05/11	NC		%	30
7346041	VP2	Matrix Spike	Chromium (VI)	2021/05/12		74	%	70 - 130
7346041	VP2	Spiked Blank	Chromium (VI)	2021/05/12		91	%	80 - 120
7346041	VP2	Method Blank	Chromium (VI)	2021/05/12	<0.18		ug/g	
7346041	VP2	RPD	Chromium (VI)	2021/05/12	1.3		%	35
7346399	LKH	Matrix Spike	Chromium (VI)	2021/05/13		20 (1)	%	70 - 130
7346399	LKH	Spiked Blank	Chromium (VI)	2021/05/13		90	%	80 - 120
7346399	LKH	Method Blank	Chromium (VI)	2021/05/13	<0.18		ug/g	
7346399	LKH	RPD	Chromium (VI)	2021/05/13	NC		%	35
7346401	ABP	Matrix Spike	WAD Cyanide (Free)	2021/05/13		76	%	75 - 125
7346401	ABP	Spiked Blank	WAD Cyanide (Free)	2021/05/13		99	%	80 - 120
7346401	ABP	Method Blank	WAD Cyanide (Free)	2021/05/13	<0.01		ug/g	
7346401	ABP	RPD	WAD Cyanide (Free)	2021/05/13	NC		%	35
7346709	SHG	Matrix Spike	Decachlorobiphenyl	2021/05/12		95	%	60 - 130
			Aroclor 1260	2021/05/12		93	%	30 - 130
			Total PCB	2021/05/12		NC	%	30 - 130
7346709	SHG	Spiked Blank	Decachlorobiphenyl	2021/05/12		87	%	60 - 130
			Aroclor 1260	2021/05/12		119	%	30 - 130
			Total PCB	2021/05/12		119	%	30 - 130
7346709	SHG	Method Blank	Decachlorobiphenyl	2021/05/12		93	%	60 - 130
			Aroclor 1242	2021/05/12	<0.010		ug/g	
			Aroclor 1248	2021/05/12	<0.010		ug/g	
			Aroclor 1254	2021/05/12	<0.010		ug/g	
			Aroclor 1260	2021/05/12	<0.010		ug/g	
			Total PCB	2021/05/12	<0.010		ug/g	
7346709	SHG	RPD	Aroclor 1242	2021/05/12	8.7		%	50
			Aroclor 1248	2021/05/12	NC		%	50
			Aroclor 1254	2021/05/12	16		%	50
			Aroclor 1260	2021/05/12	NC		%	50
			Total PCB	2021/05/12	15		%	50
7346998	JJE	Matrix Spike	o-Terphenyl	2021/05/12		89	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/12		103	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/05/12		102	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/05/12		102	%	50 - 130
7346998	JJE	Spiked Blank	o-Terphenyl	2021/05/12		97	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/12		107	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/05/12		107	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/05/12		107	%	80 - 120
7346998	JJE	Method Blank	o-Terphenyl	2021/05/12		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/12	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/05/12	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/05/12	<50		ug/g	
7346998	JJE	RPD	F2 (C10-C16 Hydrocarbons)	2021/05/12	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/05/12	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/05/12	NC		%	30
7347029	KLI	Matrix Spike [PNJ074-02]	o-Terphenyl	2021/05/12		86	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/12		95	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/05/12		97	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/05/12		99	%	50 - 130
7347029	KLI	Spiked Blank	o-Terphenyl	2021/05/12		87	%	60 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F2 (C10-C16 Hydrocarbons)	2021/05/12		102	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/05/12		106	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/05/12		108	%	80 - 120
7347029	KLI	Method Blank	o-Terphenyl	2021/05/12		94	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/12	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/05/12	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/05/12	<50		ug/g	
7347029	KLI	RPD [PNJ074-02]	F2 (C10-C16 Hydrocarbons)	2021/05/12	28		%	30
			F3 (C16-C34 Hydrocarbons)	2021/05/12	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/05/12	NC		%	30
7347074	SAU	Spiked Blank	Available (CaCl2) pH	2021/05/12		100	%	97 - 103
7347074	SAU	RPD	Available (CaCl2) pH	2021/05/12	0.40		%	N/A
7347393	DAN	Matrix Spike [PNJ060-03]	1,4-Difluorobenzene	2021/05/12		97	%	60 - 140
			4-Bromofluorobenzene	2021/05/12		98	%	60 - 140
			D10-o-Xylene	2021/05/12		92	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/12		96	%	60 - 140
			Benzene	2021/05/12		100	%	50 - 140
			Toluene	2021/05/12		104	%	50 - 140
			Ethylbenzene	2021/05/12		112	%	50 - 140
			o-Xylene	2021/05/12		108	%	50 - 140
			p+m-Xylene	2021/05/12		120	%	50 - 140
			F1 (C6-C10)	2021/05/12		89	%	60 - 140
7347393	DAN	Spiked Blank	1,4-Difluorobenzene	2021/05/12		97	%	60 - 140
			4-Bromofluorobenzene	2021/05/12		98	%	60 - 140
			D10-o-Xylene	2021/05/12		96	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/12		94	%	60 - 140
			Benzene	2021/05/12		102	%	50 - 140
			Toluene	2021/05/12		107	%	50 - 140
			Ethylbenzene	2021/05/12		115	%	50 - 140
			o-Xylene	2021/05/12		111	%	50 - 140
			p+m-Xylene	2021/05/12		124	%	50 - 140
			F1 (C6-C10)	2021/05/12		90	%	80 - 120
7347393	DAN	Method Blank	1,4-Difluorobenzene	2021/05/12		98	%	60 - 140
			4-Bromofluorobenzene	2021/05/12		98	%	60 - 140
			D10-o-Xylene	2021/05/12		92	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/12		102	%	60 - 140
			Benzene	2021/05/12	<0.020		ug/g	
			Toluene	2021/05/12	<0.020		ug/g	
			Ethylbenzene	2021/05/12	<0.020		ug/g	
			o-Xylene	2021/05/12	<0.020		ug/g	
			p+m-Xylene	2021/05/12	<0.040		ug/g	
			Total Xylenes	2021/05/12	<0.040		ug/g	
			F1 (C6-C10)	2021/05/12	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/05/12	<10		ug/g	
7347393	DAN	RPD [PNJ060-03]	Benzene	2021/05/12	NC		%	50
			Toluene	2021/05/12	NC		%	50
			Ethylbenzene	2021/05/12	NC		%	50
			o-Xylene	2021/05/12	NC		%	50
			p+m-Xylene	2021/05/12	NC		%	50
			Total Xylenes	2021/05/12	NC		%	50
			F1 (C6-C10)	2021/05/12	NC		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F1 (C6-C10) - BTEX	2021/05/12	NC		%	30
7347573	MA	Matrix Spike	2,4,6-Tribromophenol	2021/05/12		62	%	50 - 130
			2-Fluorobiphenyl	2021/05/12		64	%	50 - 130
			D14-Terphenyl (FS)	2021/05/12		71	%	50 - 130
			D5-Nitrobenzene	2021/05/12		68	%	50 - 130
			1,2,4-Trichlorobenzene	2021/05/12		51	%	50 - 130
			1-Methylnaphthalene	2021/05/12		69	%	50 - 130
			2,4,5-Trichlorophenol	2021/05/12		75	%	50 - 130
			2,4,6-Trichlorophenol	2021/05/12		72	%	50 - 130
			2,4-Dichlorophenol	2021/05/12		85	%	50 - 130
			2,4-Dimethylphenol	2021/05/12		74	%	30 - 130
			2,4-Dinitrophenol	2021/05/12		29 (2)	%	30 - 130
			2,4-Dinitrotoluene	2021/05/12		84	%	50 - 130
			2,6-Dinitrotoluene	2021/05/12		80	%	50 - 130
			2-Chlorophenol	2021/05/12		70	%	50 - 130
			2-Methylnaphthalene	2021/05/12		64	%	50 - 130
			3,3'-Dichlorobenzidine	2021/05/12		73	%	30 - 130
			Acenaphthene	2021/05/12		72	%	50 - 130
			Acenaphthylene	2021/05/12		71	%	50 - 130
			Anthracene	2021/05/12		74	%	50 - 130
			Benzo(a)anthracene	2021/05/12		81	%	50 - 130
			Benzo(a)pyrene	2021/05/12		62	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/12		80	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/12		67	%	50 - 130
			Benzo(k)fluoranthene	2021/05/12		84	%	50 - 130
			Biphenyl	2021/05/12		70	%	50 - 130
			Bis(2-chloroethyl)ether	2021/05/12		61	%	50 - 130
			Bis(2-chloroisopropyl)ether	2021/05/12		46 (2)	%	50 - 130
			Bis(2-ethylhexyl)phthalate	2021/05/12		75	%	50 - 130
			Chrysene	2021/05/12		78	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/12		70	%	50 - 130
			Diethyl phthalate	2021/05/12		65	%	50 - 130
			Dimethyl phthalate	2021/05/12		65	%	50 - 130
			Fluoranthene	2021/05/12		83	%	50 - 130
			Fluorene	2021/05/12		71	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/12		67	%	50 - 130
			Naphthalene	2021/05/12		66	%	50 - 130
			p-Chloroaniline	2021/05/12		64	%	30 - 130
			Pentachlorophenol	2021/05/12		55	%	50 - 130
			Phenanthrene	2021/05/12		74	%	50 - 130
			Phenol	2021/05/12		82	%	30 - 130
			Pyrene	2021/05/12		89	%	50 - 130
7347573	MA	Spiked Blank	2,4,6-Tribromophenol	2021/05/13		77	%	50 - 130
			2-Fluorobiphenyl	2021/05/13		76	%	50 - 130
			D14-Terphenyl (FS)	2021/05/13		100	%	50 - 130
			D5-Nitrobenzene	2021/05/13		65	%	50 - 130
			1,2,4-Trichlorobenzene	2021/05/13		85	%	50 - 130
			1-Methylnaphthalene	2021/05/13		92	%	50 - 130
			2,4,5-Trichlorophenol	2021/05/13		82	%	50 - 130
			2,4,6-Trichlorophenol	2021/05/13		78	%	50 - 130
			2,4-Dichlorophenol	2021/05/13		94	%	50 - 130

BV Labs - Partial/Rush Results

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			2,4-Dimethylphenol	2021/05/13		82	%	30 - 130
			2,4-Dinitrophenol	2021/05/13		29 (2)	%	30 - 130
			2,4-Dinitrotoluene	2021/05/13		111	%	50 - 130
			2,6-Dinitrotoluene	2021/05/13		97	%	50 - 130
			2-Chlorophenol	2021/05/13		81	%	50 - 130
			2-Methylnaphthalene	2021/05/13		90	%	50 - 130
			3,3'-Dichlorobenzidine	2021/05/13		47	%	30 - 130
			Acenaphthene	2021/05/13		83	%	50 - 130
			Acenaphthylene	2021/05/13		81	%	50 - 130
			Anthracene	2021/05/13		89	%	50 - 130
			Benzo(a)anthracene	2021/05/13		110	%	50 - 130
			Benzo(a)pyrene	2021/05/13		88	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/13		116	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/13		89	%	50 - 130
			Benzo(k)fluoranthene	2021/05/13		100	%	50 - 130
			Biphenyl	2021/05/13		77	%	50 - 130
			Bis(2-chloroethyl)ether	2021/05/13		70	%	50 - 130
			Bis(2-chloroisopropyl)ether	2021/05/13		68	%	50 - 130
			Bis(2-ethylhexyl)phthalate	2021/05/13		73	%	50 - 130
			Chrysene	2021/05/13		112	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/13		88	%	50 - 130
			Diethyl phthalate	2021/05/13		81	%	50 - 130
			Dimethyl phthalate	2021/05/13		78	%	50 - 130
			Fluoranthene	2021/05/13		103	%	50 - 130
			Fluorene	2021/05/13		91	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/13		87	%	50 - 130
			Naphthalene	2021/05/13		85	%	50 - 130
			p-Chloroaniline	2021/05/13		50	%	30 - 130
			Pentachlorophenol	2021/05/13		70	%	50 - 130
			Phenanthrene	2021/05/13		90	%	50 - 130
			Phenol	2021/05/13		74	%	30 - 130
			Pyrene	2021/05/13		98	%	50 - 130
7347573	MA	Method Blank	2,4,6-Tribromophenol	2021/05/12		51	%	50 - 130
			2-Fluorobiphenyl	2021/05/12		70	%	50 - 130
			D14-Terphenyl (FS)	2021/05/12		75	%	50 - 130
			D5-Nitrobenzene	2021/05/12		76	%	50 - 130
			1,2,4-Trichlorobenzene	2021/05/12	<0.05		ug/g	
			1-Methylnaphthalene	2021/05/12	<0.03		ug/g	
			2,4,5-Trichlorophenol	2021/05/12	<0.08		ug/g	
			2,4,6-Trichlorophenol	2021/05/12	<0.1		ug/g	
			2,4-Dichlorophenol	2021/05/12	<0.1		ug/g	
			2,4-Dimethylphenol	2021/05/12	<0.2		ug/g	
			2,4-Dinitrophenol	2021/05/12	<0.5		ug/g	
			2,4-Dinitrotoluene	2021/05/12	<0.1		ug/g	
			2,6-Dinitrotoluene	2021/05/12	<0.1		ug/g	
			2-Chlorophenol	2021/05/12	<0.08		ug/g	
			2-Methylnaphthalene	2021/05/12	<0.03		ug/g	
			3,3'-Dichlorobenzidine	2021/05/12	<0.5		ug/g	
			Acenaphthene	2021/05/12	<0.03		ug/g	
			Acenaphthylene	2021/05/12	<0.05		ug/g	
			Anthracene	2021/05/12	<0.03		ug/g	

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BV Labs - Partial/Rush Results

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzo(a)anthracene	2021/05/12	<0.05		ug/g	
			Benzo(a)pyrene	2021/05/12	<0.05		ug/g	
			Benzo(b/j)fluoranthene	2021/05/12	<0.1		ug/g	
			Benzo(g,h,i)perylene	2021/05/12	<0.1		ug/g	
			Benzo(k)fluoranthene	2021/05/12	<0.03		ug/g	
			Biphenyl	2021/05/12	<0.05		ug/g	
			Bis(2-chloroethyl)ether	2021/05/12	<0.2		ug/g	
			Bis(2-chloroisopropyl)ether	2021/05/12	<0.1		ug/g	
			Bis(2-ethylhexyl)phthalate	2021/05/12	<1		ug/g	
			Chrysene	2021/05/12	<0.05		ug/g	
			Dibenzo(a,h)anthracene	2021/05/12	<0.05		ug/g	
			Diethyl phthalate	2021/05/12	<0.2		ug/g	
			Dimethyl phthalate	2021/05/12	<0.2		ug/g	
			Fluoranthene	2021/05/12	<0.05		ug/g	
			Fluorene	2021/05/12	<0.03		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/05/12	<0.08		ug/g	
			Naphthalene	2021/05/12	<0.03		ug/g	
			p-Chloroaniline	2021/05/12	<0.2		ug/g	
			Pentachlorophenol	2021/05/12	<0.1		ug/g	
			Phenanthrene	2021/05/12	<0.05		ug/g	
			Phenol	2021/05/12	<0.09		ug/g	
			Pyrene	2021/05/12	<0.05		ug/g	
7347573	MA	RPD	1,2,4-Trichlorobenzene	2021/05/12	NC		%	40
			1-Methylnaphthalene	2021/05/12	NC		%	40
			2,4-Dimethylphenol	2021/05/12	NC		%	40
			2,4-Dinitrophenol	2021/05/12	NC		%	40
			2,4-Dinitrotoluene	2021/05/12	NC		%	40
			2,6-Dinitrotoluene	2021/05/12	NC		%	40
			2-Methylnaphthalene	2021/05/12	NC		%	40
			3,3'-Dichlorobenzidine	2021/05/12	NC		%	40
			Acenaphthene	2021/05/12	NC		%	40
			Acenaphthylene	2021/05/12	NC		%	40
			Anthracene	2021/05/12	NC		%	40
			Benzo(a)anthracene	2021/05/12	NC		%	40
			Benzo(a)pyrene	2021/05/12	NC		%	40
			Benzo(b/j)fluoranthene	2021/05/12	NC		%	40
			Benzo(g,h,i)perylene	2021/05/12	NC		%	40
			Benzo(k)fluoranthene	2021/05/12	NC		%	40
			Biphenyl	2021/05/12	NC		%	40
			Bis(2-chloroethyl)ether	2021/05/12	NC		%	40
			Bis(2-chloroisopropyl)ether	2021/05/12	NC		%	40
			Bis(2-ethylhexyl)phthalate	2021/05/12	NC		%	40
			Chrysene	2021/05/12	NC		%	40
			Dibenzo(a,h)anthracene	2021/05/12	NC		%	40
			Diethyl phthalate	2021/05/12	NC		%	40
			Dimethyl phthalate	2021/05/12	NC		%	40
			Fluoranthene	2021/05/12	82 (3)		%	40
			Fluorene	2021/05/12	NC		%	40
			Indeno(1,2,3-cd)pyrene	2021/05/12	13		%	40
			Naphthalene	2021/05/12	NC		%	40
			p-Chloroaniline	2021/05/12	NC		%	40

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BV Labs - Partial/Rush Results

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Phenanthrene	2021/05/12	77 (3)		%	40
			Phenol	2021/05/12	NC		%	40
			Pyrene	2021/05/12	84 (3)		%	40
7347617	DT1	Matrix Spike [PNJ076-01]	Acid Extractable Antimony (Sb)	2021/05/12		92	%	75 - 125
			Acid Extractable Arsenic (As)	2021/05/12		95	%	75 - 125
			Acid Extractable Barium (Ba)	2021/05/12		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/05/12		99	%	75 - 125
			Acid Extractable Boron (B)	2021/05/12		98	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/05/12		96	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/05/12		99	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/05/12		99	%	75 - 125
			Acid Extractable Copper (Cu)	2021/05/12		95	%	75 - 125
			Acid Extractable Lead (Pb)	2021/05/12		97	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/05/12		99	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/05/12		100	%	75 - 125
			Acid Extractable Selenium (Se)	2021/05/12		100	%	75 - 125
			Acid Extractable Silver (Ag)	2021/05/12		96	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/05/12		96	%	75 - 125
			Acid Extractable Uranium (U)	2021/05/12		99	%	75 - 125
			Acid Extractable Vanadium (V)	2021/05/12		98	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/05/12		96	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/05/12		86	%	75 - 125
7347617	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2021/05/12		99	%	80 - 120
			Acid Extractable Arsenic (As)	2021/05/12		103	%	80 - 120
			Acid Extractable Barium (Ba)	2021/05/12		100	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/05/12		102	%	80 - 120
			Acid Extractable Boron (B)	2021/05/12		102	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/05/12		101	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/05/12		105	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/05/12		102	%	80 - 120
			Acid Extractable Copper (Cu)	2021/05/12		100	%	80 - 120
			Acid Extractable Lead (Pb)	2021/05/12		100	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/05/12		101	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/05/12		101	%	80 - 120
			Acid Extractable Selenium (Se)	2021/05/12		105	%	80 - 120
			Acid Extractable Silver (Ag)	2021/05/12		102	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/05/12		98	%	80 - 120
			Acid Extractable Uranium (U)	2021/05/12		101	%	80 - 120
			Acid Extractable Vanadium (V)	2021/05/12		105	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/05/12		99	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/05/12		85	%	80 - 120
7347617	DT1	Method Blank	Acid Extractable Antimony (Sb)	2021/05/12	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/05/12	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/05/12	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/05/12	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/05/12	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/05/12	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/05/12	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/05/12	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/05/12	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/05/12	<1.0		ug/g	

BV Labs - Partial/Rush Results

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Molybdenum (Mo)	2021/05/12	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/05/12	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/05/12	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/05/12	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/05/12	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/05/12	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/05/12	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/05/12	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/05/12	<0.050		ug/g	
7347617	DT1	RPD [PNJ076-01]	Acid Extractable Antimony (Sb)	2021/05/12	NC		%	30
			Acid Extractable Arsenic (As)	2021/05/12	6.2		%	30
			Acid Extractable Barium (Ba)	2021/05/12	1.7		%	30
			Acid Extractable Beryllium (Be)	2021/05/12	1.1		%	30
			Acid Extractable Boron (B)	2021/05/12	NC		%	30
			Acid Extractable Cadmium (Cd)	2021/05/12	26		%	30
			Acid Extractable Chromium (Cr)	2021/05/12	4.6		%	30
			Acid Extractable Cobalt (Co)	2021/05/12	3.1		%	30
			Acid Extractable Copper (Cu)	2021/05/12	6.1		%	30
			Acid Extractable Lead (Pb)	2021/05/12	3.7		%	30
			Acid Extractable Molybdenum (Mo)	2021/05/12	NC		%	30
			Acid Extractable Nickel (Ni)	2021/05/12	1.5		%	30
			Acid Extractable Selenium (Se)	2021/05/12	NC		%	30
			Acid Extractable Silver (Ag)	2021/05/12	NC		%	30
			Acid Extractable Thallium (Tl)	2021/05/12	NC		%	30
			Acid Extractable Uranium (U)	2021/05/12	8.8		%	30
			Acid Extractable Vanadium (V)	2021/05/12	6.0		%	30
			Acid Extractable Zinc (Zn)	2021/05/12	1.7		%	30
			Acid Extractable Mercury (Hg)	2021/05/12	NC		%	30
7347619	DT1	Matrix Spike [PNJ048-01]	Acid Extractable Antimony (Sb)	2021/05/12		90	%	75 - 125
			Acid Extractable Arsenic (As)	2021/05/12		89	%	75 - 125
			Acid Extractable Barium (Ba)	2021/05/12		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/05/12		88	%	75 - 125
			Acid Extractable Boron (B)	2021/05/12		84	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/05/12		90	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/05/12		92	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/05/12		91	%	75 - 125
			Acid Extractable Copper (Cu)	2021/05/12		85	%	75 - 125
			Acid Extractable Lead (Pb)	2021/05/12		86	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/05/12		93	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/05/12		90	%	75 - 125
			Acid Extractable Selenium (Se)	2021/05/12		91	%	75 - 125
			Acid Extractable Silver (Ag)	2021/05/12		88	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/05/12		85	%	75 - 125
			Acid Extractable Uranium (U)	2021/05/12		90	%	75 - 125
			Acid Extractable Vanadium (V)	2021/05/12		90	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/05/12		86	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/05/12		76	%	75 - 125
7347619	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2021/05/12		100	%	80 - 120
			Acid Extractable Arsenic (As)	2021/05/12		102	%	80 - 120
			Acid Extractable Barium (Ba)	2021/05/12		103	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/05/12		101	%	80 - 120

BV Labs - Partial/Rush Results

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Boron (B)	2021/05/12		102	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/05/12		99	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/05/12		102	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/05/12		101	%	80 - 120
			Acid Extractable Copper (Cu)	2021/05/12		99	%	80 - 120
			Acid Extractable Lead (Pb)	2021/05/12		100	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/05/12		102	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/05/12		100	%	80 - 120
			Acid Extractable Selenium (Se)	2021/05/12		104	%	80 - 120
			Acid Extractable Silver (Ag)	2021/05/12		99	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/05/12		99	%	80 - 120
			Acid Extractable Uranium (U)	2021/05/12		101	%	80 - 120
			Acid Extractable Vanadium (V)	2021/05/12		100	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/05/12		99	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/05/12		86	%	80 - 120
7347619	DT1	Method Blank	Acid Extractable Antimony (Sb)	2021/05/12	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/05/12	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/05/12	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/05/12	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/05/12	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/05/12	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/05/12	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/05/12	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/05/12	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/05/12	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/05/12	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/05/12	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/05/12	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/05/12	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/05/12	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/05/12	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/05/12	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/05/12	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/05/12	<0.050		ug/g	
7347619	DT1	RPD [PNJ048-01]	Acid Extractable Antimony (Sb)	2021/05/12	NC		%	30
			Acid Extractable Arsenic (As)	2021/05/12	NC		%	30
			Acid Extractable Barium (Ba)	2021/05/12	6.1		%	30
			Acid Extractable Beryllium (Be)	2021/05/12	4.2		%	30
			Acid Extractable Boron (B)	2021/05/12	NC		%	30
			Acid Extractable Cadmium (Cd)	2021/05/12	NC		%	30
			Acid Extractable Chromium (Cr)	2021/05/12	1.7		%	30
			Acid Extractable Cobalt (Co)	2021/05/12	2.9		%	30
			Acid Extractable Copper (Cu)	2021/05/12	1.3		%	30
			Acid Extractable Lead (Pb)	2021/05/12	3.0		%	30
			Acid Extractable Molybdenum (Mo)	2021/05/12	NC		%	30
			Acid Extractable Nickel (Ni)	2021/05/12	5.0		%	30
			Acid Extractable Selenium (Se)	2021/05/12	NC		%	30
			Acid Extractable Silver (Ag)	2021/05/12	NC		%	30
			Acid Extractable Thallium (Tl)	2021/05/12	NC		%	30
			Acid Extractable Uranium (U)	2021/05/12	1.3		%	30
			Acid Extractable Vanadium (V)	2021/05/12	0.34		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Zinc (Zn)	2021/05/12	6.8		%	30
			Acid Extractable Mercury (Hg)	2021/05/12	NC		%	30
7347720	VP2	Matrix Spike [PNJ066-01]	Chromium (VI)	2021/05/13		89	%	70 - 130
7347720	VP2	Spiked Blank	Chromium (VI)	2021/05/13		94	%	80 - 120
7347720	VP2	Method Blank	Chromium (VI)	2021/05/13	<0.18		ug/g	
7347720	VP2	RPD [PNJ066-01]	Chromium (VI)	2021/05/13	NC		%	35
7347733	RGA	Matrix Spike [PNJ080-02]	o-Terphenyl	2021/05/12		89	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/12		98	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/05/12		98	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/05/12		99	%	50 - 130
7347733	RGA	Spiked Blank	o-Terphenyl	2021/05/12		86	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/12		96	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/05/12		95	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/05/12		95	%	80 - 120
7347733	RGA	Method Blank	o-Terphenyl	2021/05/12		83	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/12	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/05/12	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/05/12	<50		ug/g	
7347733	RGA	RPD [PNJ080-02]	F2 (C10-C16 Hydrocarbons)	2021/05/12	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/05/12	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/05/12	NC		%	30
7347755	SUK	Matrix Spike [PNJ076-01]	Hot Water Ext. Boron (B)	2021/05/12		104	%	75 - 125
7347755	SUK	Spiked Blank	Hot Water Ext. Boron (B)	2021/05/12		104	%	75 - 125
7347755	SUK	Method Blank	Hot Water Ext. Boron (B)	2021/05/12	<0.050		ug/g	
7347755	SUK	RPD [PNJ076-01]	Hot Water Ext. Boron (B)	2021/05/12	5.8		%	40
7347805	ABP	Matrix Spike [PNJ066-01]	WAD Cyanide (Free)	2021/05/13		93	%	75 - 125
7347805	ABP	Spiked Blank	WAD Cyanide (Free)	2021/05/13		91	%	80 - 120
7347805	ABP	Method Blank	WAD Cyanide (Free)	2021/05/13	<0.01		ug/g	
7347805	ABP	RPD [PNJ066-01]	WAD Cyanide (Free)	2021/05/13	NC		%	35
7347810	AGA	Matrix Spike [PNJ077-03]	1,4-Difluorobenzene	2021/05/13		93	%	60 - 140
			4-Bromofluorobenzene	2021/05/13		102	%	60 - 140
			D10-o-Xylene	2021/05/13		111	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/13		97	%	60 - 140
			Benzene	2021/05/13		115	%	50 - 140
			Toluene	2021/05/13		111	%	50 - 140
			Ethylbenzene	2021/05/13		127	%	50 - 140
			o-Xylene	2021/05/13		125	%	50 - 140
			p+m-Xylene	2021/05/13		122	%	50 - 140
			F1 (C6-C10)	2021/05/13		97	%	60 - 140
7347810	AGA	Spiked Blank	1,4-Difluorobenzene	2021/05/13		94	%	60 - 140
			4-Bromofluorobenzene	2021/05/13		100	%	60 - 140
			D10-o-Xylene	2021/05/13		100	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/13		97	%	60 - 140
			Benzene	2021/05/13		107	%	50 - 140
			Toluene	2021/05/13		102	%	50 - 140
			Ethylbenzene	2021/05/13		118	%	50 - 140
			o-Xylene	2021/05/13		115	%	50 - 140
			p+m-Xylene	2021/05/13		113	%	50 - 140
			F1 (C6-C10)	2021/05/13		98	%	80 - 120
7347810	AGA	Method Blank	1,4-Difluorobenzene	2021/05/13		98	%	60 - 140
			4-Bromofluorobenzene	2021/05/13		96	%	60 - 140

BV Labs - Partial/Rush Results

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BV Labs - Partial/Rush Results

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			D10-o-Xylene	2021/05/13		99	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/13		103	%	60 - 140
			Benzene	2021/05/13	<0.020		ug/g	
			Toluene	2021/05/13	<0.020		ug/g	
			Ethylbenzene	2021/05/13	<0.020		ug/g	
			o-Xylene	2021/05/13	<0.020		ug/g	
			p+m-Xylene	2021/05/13	<0.040		ug/g	
			Total Xylenes	2021/05/13	<0.040		ug/g	
			F1 (C6-C10)	2021/05/13	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/05/13	<10		ug/g	
7347810	AGA	RPD [PNJ077-03]	Benzene	2021/05/13	NC		%	50
			Toluene	2021/05/13	NC		%	50
			Ethylbenzene	2021/05/13	NC		%	50
			o-Xylene	2021/05/13	NC		%	50
			p+m-Xylene	2021/05/13	NC		%	50
			Total Xylenes	2021/05/13	NC		%	50
			F1 (C6-C10)	2021/05/13	NC		%	30
			F1 (C6-C10) - BTEX	2021/05/13	NC		%	30
7347815	VP2	Matrix Spike [PNJ088-04]	Chromium (VI)	2021/05/13		96	%	70 - 130
7347815	VP2	Spiked Blank	Chromium (VI)	2021/05/13		95	%	80 - 120
7347815	VP2	Method Blank	Chromium (VI)	2021/05/13	<0.18		ug/g	
7347815	VP2	RPD [PNJ088-04]	Chromium (VI)	2021/05/13	NC		%	35
7347890	JOH	Matrix Spike	Hot Water Ext. Boron (B)	2021/05/13		102	%	75 - 125
7347890	JOH	Spiked Blank	Hot Water Ext. Boron (B)	2021/05/13		101	%	75 - 125
7347890	JOH	Method Blank	Hot Water Ext. Boron (B)	2021/05/13	<0.050		ug/g	
7347890	JOH	RPD	Hot Water Ext. Boron (B)	2021/05/13	0.68		%	40
7347902	KHP	Spiked Blank	Conductivity	2021/05/12		103	%	90 - 110
7347902	KHP	Method Blank	Conductivity	2021/05/12	<0.002		mS/cm	
7347902	KHP	RPD [PNJ076-01]	Conductivity	2021/05/12	3.0		%	10
7347907	AGA	Matrix Spike	1,4-Difluorobenzene	2021/05/12		91	%	60 - 140
			4-Bromofluorobenzene	2021/05/12		93	%	60 - 140
			D10-o-Xylene	2021/05/12		98	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/12		92	%	60 - 140
			Benzene	2021/05/12		100	%	50 - 140
			Toluene	2021/05/12		102	%	50 - 140
			Ethylbenzene	2021/05/12		116	%	50 - 140
			o-Xylene	2021/05/12		107	%	50 - 140
			p+m-Xylene	2021/05/12		104	%	50 - 140
			F1 (C6-C10)	2021/05/12		96	%	60 - 140
7347907	AGA	Spiked Blank	1,4-Difluorobenzene	2021/05/12		98	%	60 - 140
			4-Bromofluorobenzene	2021/05/12		97	%	60 - 140
			D10-o-Xylene	2021/05/12		96	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/12		98	%	60 - 140
			Benzene	2021/05/12		98	%	50 - 140
			Toluene	2021/05/12		96	%	50 - 140
			Ethylbenzene	2021/05/12		105	%	50 - 140
			o-Xylene	2021/05/12		101	%	50 - 140
			p+m-Xylene	2021/05/12		96	%	50 - 140
			F1 (C6-C10)	2021/05/12		92	%	80 - 120
7347907	AGA	Method Blank	1,4-Difluorobenzene	2021/05/12		98	%	60 - 140
			4-Bromofluorobenzene	2021/05/12		95	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			D10-o-Xylene	2021/05/12		100	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/12		100	%	60 - 140
			Benzene	2021/05/12	<0.020		ug/g	
			Toluene	2021/05/12	<0.020		ug/g	
			Ethylbenzene	2021/05/12	<0.020		ug/g	
			o-Xylene	2021/05/12	<0.020		ug/g	
			p+m-Xylene	2021/05/12	<0.040		ug/g	
			Total Xylenes	2021/05/12	<0.040		ug/g	
			F1 (C6-C10)	2021/05/12	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/05/12	<10		ug/g	
7347907	AGA	RPD	Benzene	2021/05/12	NC		%	50
			Toluene	2021/05/12	NC		%	50
			Ethylbenzene	2021/05/12	NC		%	50
			o-Xylene	2021/05/12	NC		%	50
			p+m-Xylene	2021/05/12	NC		%	50
			Total Xylenes	2021/05/12	NC		%	50
			F1 (C6-C10)	2021/05/12	NC		%	30
			F1 (C6-C10) - BTEX	2021/05/12	NC		%	30
7347952	KHP	Spiked Blank	Conductivity	2021/05/12		102	%	90 - 110
7347952	KHP	Method Blank	Conductivity	2021/05/12	<0.002		mS/cm	
7347952	KHP	RPD	Conductivity	2021/05/12	8.7		%	10
7347980	MUC	RPD	Moisture	2021/05/12	2.8		%	20
7348086	ABP	Matrix Spike	WAD Cyanide (Free)	2021/05/13		89	%	75 - 125
7348086	ABP	Spiked Blank	WAD Cyanide (Free)	2021/05/13		97	%	80 - 120
7348086	ABP	Method Blank	WAD Cyanide (Free)	2021/05/13	<0.01		ug/g	
7348086	ABP	RPD	WAD Cyanide (Free)	2021/05/13	NC		%	35
7348092	ABP	Matrix Spike [PNJ088-04]	WAD Cyanide (Free)	2021/05/13		91	%	75 - 125
7348092	ABP	Spiked Blank	WAD Cyanide (Free)	2021/05/13		94	%	80 - 120
7348092	ABP	Method Blank	WAD Cyanide (Free)	2021/05/13	<0.01		ug/g	
7348092	ABP	RPD [PNJ088-04]	WAD Cyanide (Free)	2021/05/13	NC		%	35
7348145	MUC	RPD	Moisture	2021/05/12	13		%	20
7348499	RAJ	Matrix Spike	D10-Anthracene	2021/05/13		71	%	50 - 130
			D14-Terphenyl (FS)	2021/05/13		73	%	50 - 130
			D8-Acenaphthylene	2021/05/13		67	%	50 - 130
			Acenaphthene	2021/05/13		71	%	50 - 130
			Acenaphthylene	2021/05/13		66	%	50 - 130
			Anthracene	2021/05/13		68	%	50 - 130
			Benzo(a)anthracene	2021/05/13		74	%	50 - 130
			Benzo(a)pyrene	2021/05/13		68	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/13		82	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/13		72	%	50 - 130
			Benzo(k)fluoranthene	2021/05/13		87	%	50 - 130
			Chrysene	2021/05/13		81	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/13		73	%	50 - 130
			Fluoranthene	2021/05/13		78	%	50 - 130
			Fluorene	2021/05/13		75	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/13		75	%	50 - 130
			1-Methylnaphthalene	2021/05/13		71	%	50 - 130
			2-Methylnaphthalene	2021/05/13		68	%	50 - 130
			Naphthalene	2021/05/13		63	%	50 - 130
			Phenanthrene	2021/05/13		76	%	50 - 130

BV Labs - Partial/Rush Results

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Pyrene	2021/05/13		78	%	50 - 130
7348499	RAJ	Spiked Blank	D10-Anthracene	2021/05/13		77	%	50 - 130
			D14-Terphenyl (FS)	2021/05/13		82	%	50 - 130
			D8-Acenaphthylene	2021/05/13		71	%	50 - 130
			Acenaphthene	2021/05/13		78	%	50 - 130
			Acenaphthylene	2021/05/13		69	%	50 - 130
			Anthracene	2021/05/13		70	%	50 - 130
			Benzo(a)anthracene	2021/05/13		75	%	50 - 130
			Benzo(a)pyrene	2021/05/13		72	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/13		94	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/13		80	%	50 - 130
			Benzo(k)fluoranthene	2021/05/13		86	%	50 - 130
			Chrysene	2021/05/13		85	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/13		81	%	50 - 130
			Fluoranthene	2021/05/13		82	%	50 - 130
			Fluorene	2021/05/13		81	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/13		80	%	50 - 130
			1-Methylnaphthalene	2021/05/13		80	%	50 - 130
			2-Methylnaphthalene	2021/05/13		76	%	50 - 130
			Naphthalene	2021/05/13		74	%	50 - 130
			Phenanthrene	2021/05/13		81	%	50 - 130
			Pyrene	2021/05/13		83	%	50 - 130
7348499	RAJ	Method Blank	D10-Anthracene	2021/05/13		74	%	50 - 130
			D14-Terphenyl (FS)	2021/05/13		78	%	50 - 130
			D8-Acenaphthylene	2021/05/13		71	%	50 - 130
			Acenaphthene	2021/05/13	<0.0050		ug/g	
			Acenaphthylene	2021/05/13	<0.0050		ug/g	
			Anthracene	2021/05/13	<0.0050		ug/g	
			Benzo(a)anthracene	2021/05/13	<0.0050		ug/g	
			Benzo(a)pyrene	2021/05/13	<0.0050		ug/g	
			Benzo(b/j)fluoranthene	2021/05/13	<0.0050		ug/g	
			Benzo(g,h,i)perylene	2021/05/13	<0.0050		ug/g	
			Benzo(k)fluoranthene	2021/05/13	<0.0050		ug/g	
			Chrysene	2021/05/13	<0.0050		ug/g	
			Dibenzo(a,h)anthracene	2021/05/13	<0.0050		ug/g	
			Fluoranthene	2021/05/13	<0.0050		ug/g	
			Fluorene	2021/05/13	<0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/05/13	<0.0050		ug/g	
			1-Methylnaphthalene	2021/05/13	<0.0050		ug/g	
			2-Methylnaphthalene	2021/05/13	<0.0050		ug/g	
			Naphthalene	2021/05/13	<0.0050		ug/g	
			Phenanthrene	2021/05/13	<0.0050		ug/g	
			Pyrene	2021/05/13	<0.0050		ug/g	
7348499	RAJ	RPD	Acenaphthene	2021/05/13	NC		%	40
			Acenaphthylene	2021/05/13	NC		%	40
			Anthracene	2021/05/13	NC		%	40
			Benzo(a)anthracene	2021/05/13	NC		%	40
			Benzo(a)pyrene	2021/05/13	NC		%	40
			Benzo(b/j)fluoranthene	2021/05/13	NC		%	40
			Benzo(g,h,i)perylene	2021/05/13	NC		%	40
			Benzo(k)fluoranthene	2021/05/13	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Chrysene	2021/05/13	NC		%	40
			Dibenzo(a,h)anthracene	2021/05/13	NC		%	40
			Fluoranthene	2021/05/13	NC		%	40
			Fluorene	2021/05/13	NC		%	40
			Indeno(1,2,3-cd)pyrene	2021/05/13	NC		%	40
			1-Methylnaphthalene	2021/05/13	NC		%	40
			2-Methylnaphthalene	2021/05/13	NC		%	40
			Naphthalene	2021/05/13	NC		%	40
			Phenanthrene	2021/05/13	NC		%	40
			Pyrene	2021/05/13	NC		%	40
7348838	SAU	Spiked Blank	Available (CaCl2) pH	2021/05/13		99	%	97 - 103
7348838	SAU	RPD	Available (CaCl2) pH	2021/05/13	0		%	N/A
7348910	SAU	Spiked Blank	Available (CaCl2) pH	2021/05/13		100	%	97 - 103
7348910	SAU	RPD [PNJ066-01]	Available (CaCl2) pH	2021/05/13	0.18		%	N/A
7349204	SAU	Spiked Blank	Available (CaCl2) pH	2021/05/13		100	%	97 - 103
7349204	SAU	RPD [PNJ077-04]	Available (CaCl2) pH	2021/05/13	0.28		%	N/A
7349245	SHG	Matrix Spike [PNJ091-01]	Decachlorobiphenyl	2021/05/16		115	%	60 - 130
			Aroclor 1260	2021/05/16		118	%	30 - 130
			Total PCB	2021/05/16		118	%	30 - 130
7349245	SHG	Spiked Blank	Decachlorobiphenyl	2021/05/16		118	%	60 - 130
			Aroclor 1260	2021/05/16		118	%	30 - 130
			Total PCB	2021/05/16		118	%	30 - 130
7349245	SHG	Method Blank	Decachlorobiphenyl	2021/05/16		111	%	60 - 130
			Aroclor 1242	2021/05/16	<0.010		ug/g	
			Aroclor 1248	2021/05/16	<0.010		ug/g	
			Aroclor 1254	2021/05/16	<0.010		ug/g	
			Aroclor 1260	2021/05/16	<0.010		ug/g	
			Total PCB	2021/05/16	<0.010		ug/g	
7349245	SHG	RPD [PNJ091-01]	Aroclor 1242	2021/05/16	NC		%	50
			Aroclor 1248	2021/05/16	NC		%	50
			Aroclor 1254	2021/05/16	NC		%	50
			Aroclor 1260	2021/05/16	NC		%	50
			Total PCB	2021/05/16	NC		%	50
7349268	SHG	Matrix Spike	Decachlorobiphenyl	2021/05/13		80	%	60 - 130
			Aroclor 1260	2021/05/13		91	%	30 - 130
			Total PCB	2021/05/13		91	%	30 - 130
7349268	SHG	Spiked Blank	Decachlorobiphenyl	2021/05/13		94	%	60 - 130
			Aroclor 1260	2021/05/13		112	%	30 - 130
			Total PCB	2021/05/13		112	%	30 - 130
7349268	SHG	Method Blank	Decachlorobiphenyl	2021/05/13		96	%	60 - 130
			Aroclor 1242	2021/05/13	<0.010		ug/g	
			Aroclor 1248	2021/05/13	<0.010		ug/g	
			Aroclor 1254	2021/05/13	<0.010		ug/g	
			Aroclor 1260	2021/05/13	<0.010		ug/g	
			Total PCB	2021/05/13	<0.010		ug/g	
7349268	SHG	RPD	Aroclor 1242	2021/05/13	NC		%	50
			Aroclor 1248	2021/05/13	NC		%	50
			Aroclor 1254	2021/05/13	77 (2)		%	50
			Aroclor 1260	2021/05/13	17		%	50
			Total PCB	2021/05/13	96 (2)		%	50
7349271	RAJ	Matrix Spike [PNJ066-02]	D10-Anthracene	2021/05/14		86	%	50 - 130

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BV Labs - Partial/Rush Results

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			D14-Terphenyl (FS)	2021/05/14		88	%	50 - 130
			D8-Acenaphthylene	2021/05/14		80	%	50 - 130
			Acenaphthene	2021/05/14		87	%	50 - 130
			Acenaphthylene	2021/05/14		78	%	50 - 130
			Anthracene	2021/05/14		85	%	50 - 130
			Benzo(a)anthracene	2021/05/14		89	%	50 - 130
			Benzo(a)pyrene	2021/05/14		80	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/14		93	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/14		88	%	50 - 130
			Benzo(k)fluoranthene	2021/05/14		93	%	50 - 130
			Chrysene	2021/05/14		91	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/14		87	%	50 - 130
			Fluoranthene	2021/05/14		94	%	50 - 130
			Fluorene	2021/05/14		91	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/14		90	%	50 - 130
			1-Methylnaphthalene	2021/05/14		84	%	50 - 130
			2-Methylnaphthalene	2021/05/14		82	%	50 - 130
			Naphthalene	2021/05/14		79	%	50 - 130
			Phenanthrene	2021/05/14		91	%	50 - 130
			Pyrene	2021/05/14		93	%	50 - 130
7349271	RAJ	Spiked Blank	D10-Anthracene	2021/05/13		86	%	50 - 130
			D14-Terphenyl (FS)	2021/05/13		86	%	50 - 130
			D8-Acenaphthylene	2021/05/13		83	%	50 - 130
			Acenaphthene	2021/05/13		89	%	50 - 130
			Acenaphthylene	2021/05/13		79	%	50 - 130
			Anthracene	2021/05/13		86	%	50 - 130
			Benzo(a)anthracene	2021/05/13		89	%	50 - 130
			Benzo(a)pyrene	2021/05/13		81	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/13		95	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/13		92	%	50 - 130
			Benzo(k)fluoranthene	2021/05/13		91	%	50 - 130
			Chrysene	2021/05/13		92	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/13		88	%	50 - 130
			Fluoranthene	2021/05/13		95	%	50 - 130
			Fluorene	2021/05/13		91	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/13		93	%	50 - 130
			1-Methylnaphthalene	2021/05/13		88	%	50 - 130
			2-Methylnaphthalene	2021/05/13		86	%	50 - 130
			Naphthalene	2021/05/13		83	%	50 - 130
			Phenanthrene	2021/05/13		91	%	50 - 130
			Pyrene	2021/05/13		93	%	50 - 130
7349271	RAJ	Method Blank	D10-Anthracene	2021/05/13		86	%	50 - 130
			D14-Terphenyl (FS)	2021/05/13		81	%	50 - 130
			D8-Acenaphthylene	2021/05/13		82	%	50 - 130
			Acenaphthene	2021/05/13	<0.0050		ug/g	
			Acenaphthylene	2021/05/13	<0.0050		ug/g	
			Anthracene	2021/05/13	<0.0050		ug/g	
			Benzo(a)anthracene	2021/05/13	<0.0050		ug/g	
			Benzo(a)pyrene	2021/05/13	<0.0050		ug/g	
			Benzo(b/j)fluoranthene	2021/05/13	<0.0050		ug/g	
			Benzo(g,h,i)perylene	2021/05/13	<0.0050		ug/g	

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BV Labs - Partial/Rush Results

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzo(k)fluoranthene	2021/05/13	<0.0050		ug/g	
			Chrysene	2021/05/13	<0.0050		ug/g	
			Dibenzo(a,h)anthracene	2021/05/13	<0.0050		ug/g	
			Fluoranthene	2021/05/13	<0.0050		ug/g	
			Fluorene	2021/05/13	<0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/05/13	<0.0050		ug/g	
			1-Methylnaphthalene	2021/05/13	<0.0050		ug/g	
			2-Methylnaphthalene	2021/05/13	<0.0050		ug/g	
			Naphthalene	2021/05/13	<0.0050		ug/g	
			Phenanthrene	2021/05/13	<0.0050		ug/g	
			Pyrene	2021/05/13	<0.0050		ug/g	
7349271	RAJ	RPD [PNJ066-02]	Acenaphthene	2021/05/13	NC		%	40
			Acenaphthylene	2021/05/13	NC		%	40
			Anthracene	2021/05/13	NC		%	40
			Benzo(a)anthracene	2021/05/13	NC		%	40
			Benzo(a)pyrene	2021/05/13	NC		%	40
			Benzo(b/j)fluoranthene	2021/05/13	NC		%	40
			Benzo(g,h,i)perylene	2021/05/13	NC		%	40
			Benzo(k)fluoranthene	2021/05/13	NC		%	40
			Chrysene	2021/05/13	NC		%	40
			Dibenzo(a,h)anthracene	2021/05/13	NC		%	40
			Fluoranthene	2021/05/13	NC		%	40
			Fluorene	2021/05/13	NC		%	40
			Indeno(1,2,3-cd)pyrene	2021/05/13	NC		%	40
			1-Methylnaphthalene	2021/05/13	NC		%	40
			2-Methylnaphthalene	2021/05/13	NC		%	40
			Naphthalene	2021/05/13	NC		%	40
			Phenanthrene	2021/05/13	NC		%	40
			Pyrene	2021/05/13	NC		%	40
7349784	VIV	Matrix Spike	Acid Extractable Antimony (Sb)	2021/05/13		81	%	75 - 125
			Acid Extractable Arsenic (As)	2021/05/13		89	%	75 - 125
			Acid Extractable Barium (Ba)	2021/05/13		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/05/13		90	%	75 - 125
			Acid Extractable Boron (B)	2021/05/13		89	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/05/13		90	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/05/13		NC	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/05/13		90	%	75 - 125
			Acid Extractable Copper (Cu)	2021/05/13		88	%	75 - 125
			Acid Extractable Lead (Pb)	2021/05/13		92	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/05/13		94	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/05/13		NC	%	75 - 125
			Acid Extractable Selenium (Se)	2021/05/13		93	%	75 - 125
			Acid Extractable Silver (Ag)	2021/05/13		92	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/05/13		88	%	75 - 125
			Acid Extractable Uranium (U)	2021/05/13		95	%	75 - 125
			Acid Extractable Vanadium (V)	2021/05/13		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/05/13		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/05/13		76	%	75 - 125
7349784	VIV	Spiked Blank	Acid Extractable Antimony (Sb)	2021/05/13		98	%	80 - 120
			Acid Extractable Arsenic (As)	2021/05/13		98	%	80 - 120
			Acid Extractable Barium (Ba)	2021/05/13		93	%	80 - 120

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BV Labs - Partial/Rush Results

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Beryllium (Be)	2021/05/13		92	%	80 - 120
			Acid Extractable Boron (B)	2021/05/13		93	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/05/13		95	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/05/13		100	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/05/13		100	%	80 - 120
			Acid Extractable Copper (Cu)	2021/05/13		93	%	80 - 120
			Acid Extractable Lead (Pb)	2021/05/13		96	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/05/13		98	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/05/13		100	%	80 - 120
			Acid Extractable Selenium (Se)	2021/05/13		98	%	80 - 120
			Acid Extractable Silver (Ag)	2021/05/13		99	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/05/13		95	%	80 - 120
			Acid Extractable Uranium (U)	2021/05/13		98	%	80 - 120
			Acid Extractable Vanadium (V)	2021/05/13		99	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/05/13		96	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/05/13		82	%	80 - 120
7349784	VIV	Method Blank	Acid Extractable Antimony (Sb)	2021/05/13	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/05/13	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/05/13	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/05/13	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/05/13	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/05/13	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/05/13	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/05/13	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/05/13	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/05/13	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/05/13	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/05/13	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/05/13	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/05/13	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/05/13	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/05/13	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/05/13	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/05/13	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/05/13	<0.050		ug/g	
7349784	VIV	RPD	Acid Extractable Antimony (Sb)	2021/05/13	NC		%	30
			Acid Extractable Arsenic (As)	2021/05/13	1.2		%	30
			Acid Extractable Barium (Ba)	2021/05/13	3.1		%	30
			Acid Extractable Beryllium (Be)	2021/05/13	3.1		%	30
			Acid Extractable Boron (B)	2021/05/13	2.9		%	30
			Acid Extractable Cadmium (Cd)	2021/05/13	NC		%	30
			Acid Extractable Chromium (Cr)	2021/05/13	1.1		%	30
			Acid Extractable Cobalt (Co)	2021/05/13	4.3		%	30
			Acid Extractable Copper (Cu)	2021/05/13	1.6		%	30
			Acid Extractable Lead (Pb)	2021/05/13	1.3		%	30
			Acid Extractable Molybdenum (Mo)	2021/05/13	NC		%	30
			Acid Extractable Nickel (Ni)	2021/05/13	6.1		%	30
			Acid Extractable Selenium (Se)	2021/05/13	NC		%	30
			Acid Extractable Silver (Ag)	2021/05/13	NC		%	30
			Acid Extractable Thallium (Tl)	2021/05/13	12		%	30
			Acid Extractable Uranium (U)	2021/05/13	4.1		%	30

BV Labs - Partial/Rush Results

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Vanadium (V)	2021/05/13	2.4		%	30
			Acid Extractable Zinc (Zn)	2021/05/13	3.9		%	30
			Acid Extractable Mercury (Hg)	2021/05/13	NC		%	30
7349785	DT1	Matrix Spike	Acid Extractable Antimony (Sb)	2021/05/13		92	%	75 - 125
			Acid Extractable Arsenic (As)	2021/05/13		95	%	75 - 125
			Acid Extractable Barium (Ba)	2021/05/13		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/05/13		93	%	75 - 125
			Acid Extractable Boron (B)	2021/05/13		91	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/05/13		93	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/05/13		99	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/05/13		95	%	75 - 125
			Acid Extractable Copper (Cu)	2021/05/13		92	%	75 - 125
			Acid Extractable Lead (Pb)	2021/05/13		NC	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/05/13		96	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/05/13		94	%	75 - 125
			Acid Extractable Selenium (Se)	2021/05/13		96	%	75 - 125
			Acid Extractable Silver (Ag)	2021/05/13		97	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/05/13		94	%	75 - 125
			Acid Extractable Uranium (U)	2021/05/13		98	%	75 - 125
			Acid Extractable Vanadium (V)	2021/05/13		99	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/05/13		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/05/13		83	%	75 - 125
7349785	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2021/05/13		100	%	80 - 120
			Acid Extractable Arsenic (As)	2021/05/13		101	%	80 - 120
			Acid Extractable Barium (Ba)	2021/05/13		94	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/05/13		95	%	80 - 120
			Acid Extractable Boron (B)	2021/05/13		97	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/05/13		96	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/05/13		100	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/05/13		100	%	80 - 120
			Acid Extractable Copper (Cu)	2021/05/13		97	%	80 - 120
			Acid Extractable Lead (Pb)	2021/05/13		99	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/05/13		100	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/05/13		102	%	80 - 120
			Acid Extractable Selenium (Se)	2021/05/13		102	%	80 - 120
			Acid Extractable Silver (Ag)	2021/05/13		100	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/05/13		98	%	80 - 120
			Acid Extractable Uranium (U)	2021/05/13		102	%	80 - 120
			Acid Extractable Vanadium (V)	2021/05/13		99	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/05/13		102	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/05/13		87	%	80 - 120
7349785	DT1	Method Blank	Acid Extractable Antimony (Sb)	2021/05/13	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/05/13	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/05/13	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/05/13	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/05/13	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/05/13	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/05/13	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/05/13	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/05/13	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/05/13	<1.0		ug/g	

BV Labs - Partial/Rush Results

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Molybdenum (Mo)	2021/05/13	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/05/13	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/05/13	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/05/13	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/05/13	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/05/13	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/05/13	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/05/13	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/05/13	<0.050		ug/g	
7349785	DT1	RPD	Acid Extractable Antimony (Sb)	2021/05/13	11		%	30
			Acid Extractable Arsenic (As)	2021/05/13	1.2		%	30
			Acid Extractable Barium (Ba)	2021/05/13	3.3		%	30
			Acid Extractable Beryllium (Be)	2021/05/13	5.6		%	30
			Acid Extractable Boron (B)	2021/05/13	3.8		%	30
			Acid Extractable Cadmium (Cd)	2021/05/13	16		%	30
			Acid Extractable Chromium (Cr)	2021/05/13	4.2		%	30
			Acid Extractable Cobalt (Co)	2021/05/13	3.0		%	30
			Acid Extractable Copper (Cu)	2021/05/13	4.0		%	30
			Acid Extractable Lead (Pb)	2021/05/13	0.58		%	30
			Acid Extractable Molybdenum (Mo)	2021/05/13	5.5		%	30
			Acid Extractable Nickel (Ni)	2021/05/13	7.4		%	30
			Acid Extractable Selenium (Se)	2021/05/13	NC		%	30
			Acid Extractable Silver (Ag)	2021/05/13	NC		%	30
			Acid Extractable Thallium (Tl)	2021/05/13	6.4		%	30
			Acid Extractable Uranium (U)	2021/05/13	3.4		%	30
			Acid Extractable Vanadium (V)	2021/05/13	4.6		%	30
			Acid Extractable Zinc (Zn)	2021/05/13	0.98		%	30
			Acid Extractable Mercury (Hg)	2021/05/13	14		%	30
7349822	SUK	Matrix Spike	Hot Water Ext. Boron (B)	2021/05/13		NC	%	75 - 125
7349822	SUK	Spiked Blank	Hot Water Ext. Boron (B)	2021/05/13		92	%	75 - 125
7349822	SUK	Method Blank	Hot Water Ext. Boron (B)	2021/05/13	<0.050		ug/g	
7349822	SUK	RPD	Hot Water Ext. Boron (B)	2021/05/13	0.035		%	40
7349973	SVS	Matrix Spike [PNJ065-04]	Decachlorobiphenyl	2021/05/13		108	%	60 - 130
			Aroclor 1260	2021/05/13		98	%	30 - 130
			Total PCB	2021/05/13		98	%	30 - 130
7349973	SVS	Spiked Blank	Decachlorobiphenyl	2021/05/13		101	%	60 - 130
			Aroclor 1260	2021/05/13		96	%	30 - 130
			Total PCB	2021/05/13		96	%	30 - 130
7349973	SVS	Method Blank	Decachlorobiphenyl	2021/05/13		111	%	60 - 130
			Aroclor 1242	2021/05/13	<0.010		ug/g	
			Aroclor 1248	2021/05/13	<0.010		ug/g	
			Aroclor 1254	2021/05/13	<0.010		ug/g	
			Aroclor 1260	2021/05/13	<0.010		ug/g	
			Total PCB	2021/05/13	<0.010		ug/g	
7349973	SVS	RPD [PNJ065-04]	Aroclor 1242	2021/05/13	NC		%	50
			Aroclor 1248	2021/05/13	NC		%	50
			Aroclor 1254	2021/05/13	NC		%	50
			Aroclor 1260	2021/05/13	NC		%	50
			Total PCB	2021/05/13	NC		%	50
7349998	KHP	Spiked Blank	Conductivity	2021/05/13		103	%	90 - 110
7349998	KHP	Method Blank	Conductivity	2021/05/13	<0.002		mS/cm	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7349998	KHP	RPD	Conductivity	2021/05/13	0.71		%	10
7350409	KHP	Spiked Blank	Conductivity	2021/05/13		102	%	90 - 110
7350409	KHP	Method Blank	Conductivity	2021/05/13	<0.002		mS/cm	
7350409	KHP	RPD	Conductivity	2021/05/13	2.0		%	10
7350471	VIV	Matrix Spike	Acid Extractable Antimony (Sb)	2021/05/14		93	%	75 - 125
			Acid Extractable Arsenic (As)	2021/05/14		98	%	75 - 125
			Acid Extractable Barium (Ba)	2021/05/14		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/05/14		101	%	75 - 125
			Acid Extractable Boron (B)	2021/05/14		94	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/05/14		101	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/05/14		101	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/05/14		99	%	75 - 125
			Acid Extractable Copper (Cu)	2021/05/14		NC	%	75 - 125
			Acid Extractable Lead (Pb)	2021/05/14		97	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/05/14		100	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/05/14		NC	%	75 - 125
			Acid Extractable Selenium (Se)	2021/05/14		101	%	75 - 125
			Acid Extractable Silver (Ag)	2021/05/14		96	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/05/14		93	%	75 - 125
			Acid Extractable Uranium (U)	2021/05/14		101	%	75 - 125
			Acid Extractable Vanadium (V)	2021/05/14		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/05/14		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/05/14		89	%	75 - 125
7350471	VIV	Spiked Blank	Acid Extractable Antimony (Sb)	2021/05/14		102	%	80 - 120
			Acid Extractable Arsenic (As)	2021/05/14		100	%	80 - 120
			Acid Extractable Barium (Ba)	2021/05/14		99	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/05/14		99	%	80 - 120
			Acid Extractable Boron (B)	2021/05/14		94	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/05/14		99	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/05/14		99	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/05/14		101	%	80 - 120
			Acid Extractable Copper (Cu)	2021/05/14		96	%	80 - 120
			Acid Extractable Lead (Pb)	2021/05/14		101	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/05/14		102	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/05/14		101	%	80 - 120
			Acid Extractable Selenium (Se)	2021/05/14		99	%	80 - 120
			Acid Extractable Silver (Ag)	2021/05/14		96	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/05/14		97	%	80 - 120
			Acid Extractable Uranium (U)	2021/05/14		102	%	80 - 120
			Acid Extractable Vanadium (V)	2021/05/14		98	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/05/14		97	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/05/14		90	%	80 - 120
7350471	VIV	Method Blank	Acid Extractable Antimony (Sb)	2021/05/14	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/05/14	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/05/14	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/05/14	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/05/14	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/05/14	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/05/14	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/05/14	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/05/14	<0.50		ug/g	

BV Labs - Partial/Rush Results

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Lead (Pb)	2021/05/14	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/05/14	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/05/14	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/05/14	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/05/14	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/05/14	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/05/14	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/05/14	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/05/14	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/05/14	<0.050		ug/g	
7350471	VIV	RPD	Acid Extractable Antimony (Sb)	2021/05/14	NC		%	30
			Acid Extractable Arsenic (As)	2021/05/14	1.4		%	30
			Acid Extractable Barium (Ba)	2021/05/14	1.4		%	30
			Acid Extractable Beryllium (Be)	2021/05/14	4.8		%	30
			Acid Extractable Boron (B)	2021/05/14	4.4		%	30
			Acid Extractable Cadmium (Cd)	2021/05/14	NC		%	30
			Acid Extractable Chromium (Cr)	2021/05/14	5.6		%	30
			Acid Extractable Cobalt (Co)	2021/05/14	4.2		%	30
			Acid Extractable Copper (Cu)	2021/05/14	4.0		%	30
			Acid Extractable Lead (Pb)	2021/05/14	1.9		%	30
			Acid Extractable Molybdenum (Mo)	2021/05/14	NC		%	30
			Acid Extractable Nickel (Ni)	2021/05/14	5.2		%	30
			Acid Extractable Selenium (Se)	2021/05/14	NC		%	30
			Acid Extractable Silver (Ag)	2021/05/14	NC		%	30
			Acid Extractable Thallium (Tl)	2021/05/14	7.2		%	30
			Acid Extractable Uranium (U)	2021/05/14	3.7		%	30
			Acid Extractable Vanadium (V)	2021/05/14	1.8		%	30
			Acid Extractable Zinc (Zn)	2021/05/14	6.2		%	30
			Acid Extractable Mercury (Hg)	2021/05/14	NC		%	30
7350576	SUK	Matrix Spike	Hot Water Ext. Boron (B)	2021/05/13		101	%	75 - 125
7350576	SUK	Spiked Blank	Hot Water Ext. Boron (B)	2021/05/13		103	%	75 - 125
7350576	SUK	Method Blank	Hot Water Ext. Boron (B)	2021/05/13	<0.050		ug/g	
7350576	SUK	RPD	Hot Water Ext. Boron (B)	2021/05/13	0.30		%	40
7353106	MAK	Matrix Spike [PNJ078-01]	2,4,5,6-Tetrachloro-m-xylene	2021/05/15		82	%	50 - 130
			Decachlorobiphenyl	2021/05/15		120	%	50 - 130
			Aldrin	2021/05/15		82	%	50 - 130
			a-Chlordane	2021/05/15		84	%	50 - 130
			g-Chlordane	2021/05/15		85	%	50 - 130
			o,p-DDD	2021/05/15		98	%	50 - 130
			p,p-DDD	2021/05/15		97	%	50 - 130
			o,p-DDE	2021/05/15		93	%	50 - 130
			p,p-DDE	2021/05/15		108	%	50 - 130
			o,p-DDT	2021/05/15		100	%	50 - 130
			p,p-DDT	2021/05/15		95	%	50 - 130
			Dieldrin	2021/05/15		101	%	50 - 130
			Lindane	2021/05/15		83	%	50 - 130
			Endosulfan I (alpha)	2021/05/15		76	%	50 - 130
			Endosulfan II (beta)	2021/05/15		77	%	50 - 130
			Endrin	2021/05/15		91	%	50 - 130
			Heptachlor	2021/05/15		79	%	50 - 130
			Heptachlor epoxide	2021/05/15		79	%	50 - 130

BV Labs - Partial/Rush Results

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Hexachlorobenzene	2021/05/15		85	%	50 - 130
			Hexachlorobutadiene	2021/05/15		84	%	50 - 130
			Hexachloroethane	2021/05/15		66	%	50 - 130
			Methoxychlor	2021/05/15		93	%	50 - 130
7353106	MAK	Spiked Blank	2,4,5,6-Tetrachloro-m-xylene	2021/05/15		83	%	50 - 130
			Decachlorobiphenyl	2021/05/15		108	%	50 - 130
			Aldrin	2021/05/15		81	%	50 - 130
			a-Chlordane	2021/05/15		87	%	50 - 130
			g-Chlordane	2021/05/15		89	%	50 - 130
			o,p-DDD	2021/05/15		96	%	50 - 130
			p,p-DDD	2021/05/15		96	%	50 - 130
			o,p-DDE	2021/05/15		93	%	50 - 130
			p,p-DDE	2021/05/15		109	%	50 - 130
			o,p-DDT	2021/05/15		101	%	50 - 130
			p,p-DDT	2021/05/15		88	%	50 - 130
			Dieldrin	2021/05/15		100	%	50 - 130
			Lindane	2021/05/15		87	%	50 - 130
			Endosulfan I (alpha)	2021/05/15		85	%	50 - 130
			Endosulfan II (beta)	2021/05/15		71	%	50 - 130
			Endrin	2021/05/15		91	%	50 - 130
			Heptachlor	2021/05/15		79	%	50 - 130
			Heptachlor epoxide	2021/05/15		91	%	50 - 130
			Hexachlorobenzene	2021/05/15		83	%	50 - 130
			Hexachlorobutadiene	2021/05/15		91	%	50 - 130
			Hexachloroethane	2021/05/15		72	%	50 - 130
			Methoxychlor	2021/05/15		88	%	50 - 130
7353106	MAK	RPD	Aldrin	2021/05/15	5.2		%	40
			a-Chlordane	2021/05/15	3.2		%	40
			g-Chlordane	2021/05/15	2.9		%	40
			o,p-DDD	2021/05/15	4.1		%	40
			p,p-DDD	2021/05/15	3.2		%	40
			o,p-DDE	2021/05/15	3.9		%	40
			p,p-DDE	2021/05/15	7.7		%	40
			o,p-DDT	2021/05/15	3.3		%	40
			p,p-DDT	2021/05/15	6.4		%	40
			Dieldrin	2021/05/15	3.2		%	40
			Lindane	2021/05/15	5.3		%	40
			Endosulfan I (alpha)	2021/05/15	10		%	40
			Endosulfan II (beta)	2021/05/15	3.1		%	40
			Endrin	2021/05/15	3.1		%	40
			Heptachlor	2021/05/15	5.5		%	40
			Heptachlor epoxide	2021/05/15	4.9		%	40
			Hexachlorobenzene	2021/05/15	8.1		%	40
			Hexachlorobutadiene	2021/05/15	13		%	40
			Hexachloroethane	2021/05/15	10		%	40
			Methoxychlor	2021/05/15	0.87		%	40
7353106	MAK	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2021/05/15		85	%	50 - 130
			Decachlorobiphenyl	2021/05/15		110	%	50 - 130
			Aldrin	2021/05/15	<0.0020		ug/g	
			a-Chlordane	2021/05/15	<0.0020		ug/g	
			g-Chlordane	2021/05/15	<0.0020		ug/g	

BV Labs - Partial/Rush Results

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			o,p-DDD	2021/05/15	<0.0020		ug/g	
			p,p-DDD	2021/05/15	<0.0020		ug/g	
			o,p-DDE	2021/05/15	<0.0020		ug/g	
			p,p-DDE	2021/05/15	<0.0020		ug/g	
			o,p-DDT	2021/05/15	<0.0020		ug/g	
			p,p-DDT	2021/05/15	<0.0020		ug/g	
			Dieldrin	2021/05/15	<0.0020		ug/g	
			Lindane	2021/05/15	<0.0020		ug/g	
			Endosulfan I (alpha)	2021/05/15	<0.0020		ug/g	
			Endosulfan II (beta)	2021/05/15	<0.0020		ug/g	
			Endrin	2021/05/15	<0.0020		ug/g	
			Heptachlor	2021/05/15	<0.0020		ug/g	
			Heptachlor epoxide	2021/05/15	<0.0020		ug/g	
			Hexachlorobenzene	2021/05/15	<0.0020		ug/g	
			Hexachlorobutadiene	2021/05/15	<0.0020		ug/g	
			Hexachloroethane	2021/05/15	<0.0020		ug/g	
			Methoxychlor	2021/05/15	<0.0050		ug/g	
			Aroclor 1242	2021/05/15	<0.015		ug/g	
			Aroclor 1248	2021/05/15	<0.015		ug/g	
			Aroclor 1254	2021/05/15	<0.015		ug/g	
			Aroclor 1260	2021/05/15	<0.015		ug/g	
7353106	MAK	RPD [PNJ078-01]	Aldrin	2021/05/15	NC		%	40
			a-Chlordane	2021/05/15	NC		%	40
			g-Chlordane	2021/05/15	NC		%	40
			o,p-DDD	2021/05/15	NC		%	40
			p,p-DDD	2021/05/15	NC		%	40
			o,p-DDE	2021/05/15	NC		%	40
			p,p-DDE	2021/05/15	NC		%	40
			o,p-DDT	2021/05/15	NC		%	40
			p,p-DDT	2021/05/15	NC		%	40
			Dieldrin	2021/05/15	NC		%	40
			Lindane	2021/05/15	NC		%	40
			Endosulfan I (alpha)	2021/05/15	NC		%	40
			Endosulfan II (beta)	2021/05/15	NC		%	40
			Endrin	2021/05/15	NC		%	40
			Heptachlor	2021/05/15	NC		%	40
			Heptachlor epoxide	2021/05/15	NC		%	40
			Hexachlorobenzene	2021/05/15	NC		%	40
			Hexachlorobutadiene	2021/05/15	NC		%	40
			Hexachloroethane	2021/05/15	NC		%	40
			Methoxychlor	2021/05/15	NC		%	40
			Aroclor 1242	2021/05/15	NC		%	40
			Aroclor 1248	2021/05/15	NC		%	40
			Aroclor 1254	2021/05/15	NC		%	40

BV Labs - Partial/Rush Results

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Aroclor 1260	2021/05/15	NC		%	40

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was reanalyzed with the same results

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(3) Duplicate results exceeded RPD acceptance criteria. The variability in the results for flagged analytes may be more pronounced.

BV Labs - Partial/Rush Results

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Lincoln Ramdahin, Senior Analyst

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

BV Labs - Partial/Rush Results

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BV Labs - Partial/Rush Results

Custody Tracking Form

eCOC Number
T341727-H

Please use this form for custody tracking when submitting the work instructions via eCOC (electronic Chain of Custody). Please ensure your form **has a barcode or a Bureau Veritas Laboratories eCOC confirmation number** in the top right hand side. This number links your electronic submission to your samples. This form should be **placed in the cooler with your samples**.

Relinquished By				Received By			
DGoff		Date	2021/05/09			Date	2021/05/10
		Time (24 HR)	18:50			Time (24 HR)	14:40
		Date				Date	
		Time (24 HR)				Time (24 HR)	
		Date				Date	
		Time (24 HR)				Time (24 HR)	

Unless otherwise agreed to, submissions and use of services are governed by Bureau Veritas' standard terms and conditions which can be found at www.bvlabs.com.

Triage Information

Sampled By (Print)	# of Coolers/Pkgs	Rush	Immediate Test	Food Residue
		Micro		Food Chemistry

***** Laboratory Use Only *****

Received At

Labeled By

Verified By

Lab Comments:

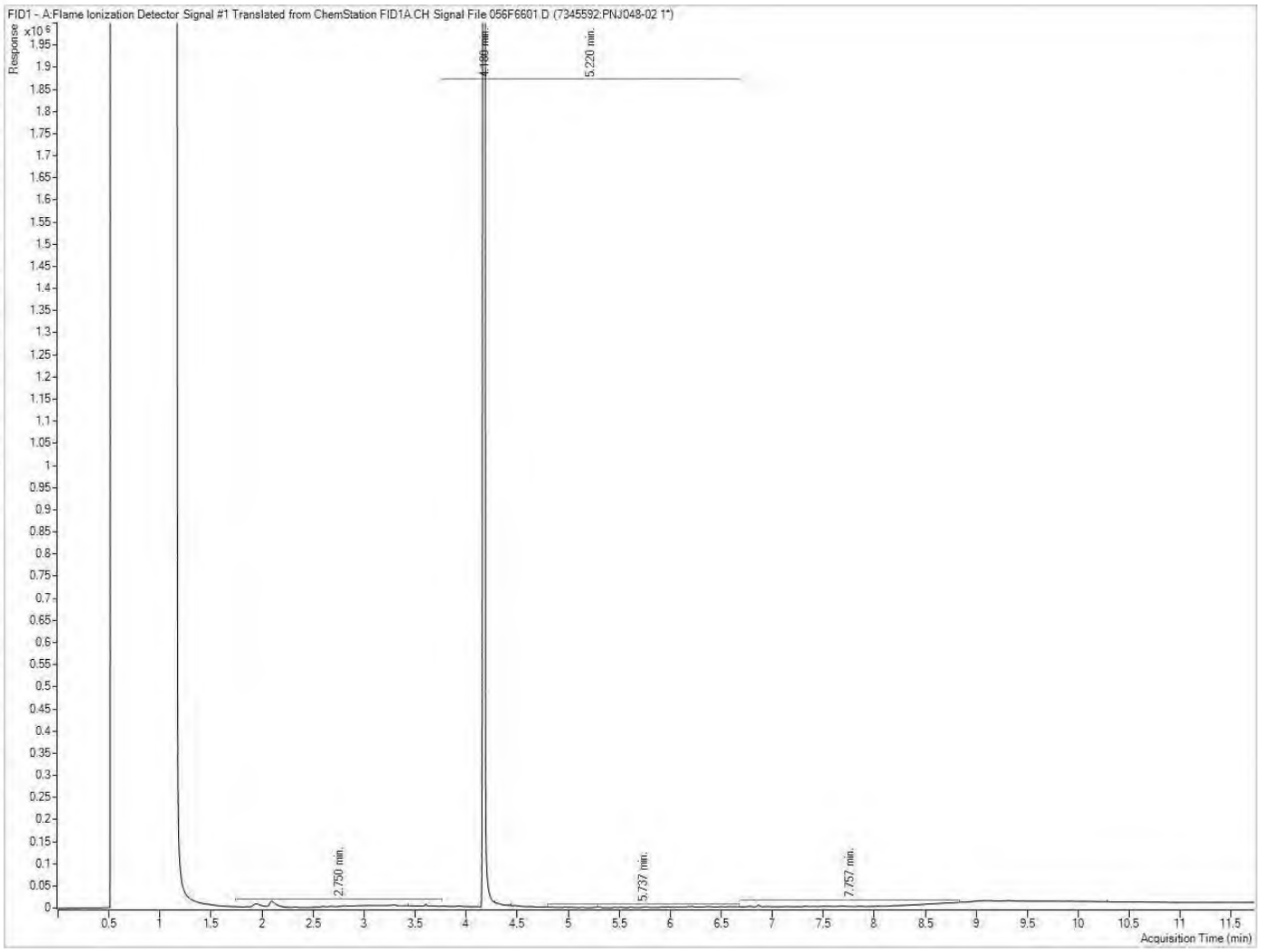
10-May-21 14:40
Ema Gitej
C1C4985
TUD ENV 812

Custody Seal		Cooling Media	Temperature °C		
Present (Y/N)	Intact (Y/N)	Present (Y/N)	1	2	3
Y	Y	Y	3	-2	-1
			1	0	0
			1	0	0
			0	0	0

COR FCD-00340 / 3
PAGE 1 of 1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



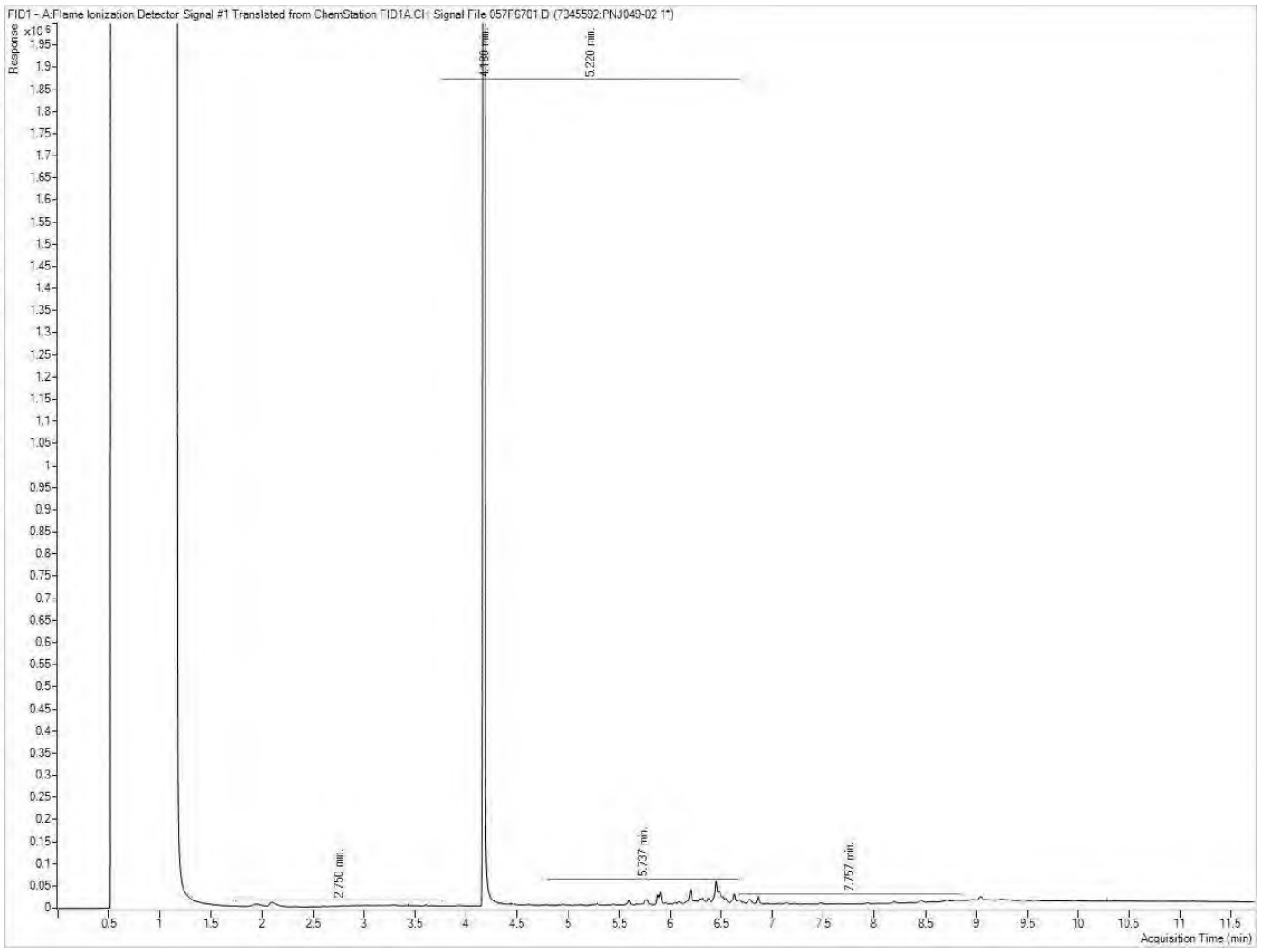
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ049

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-25-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

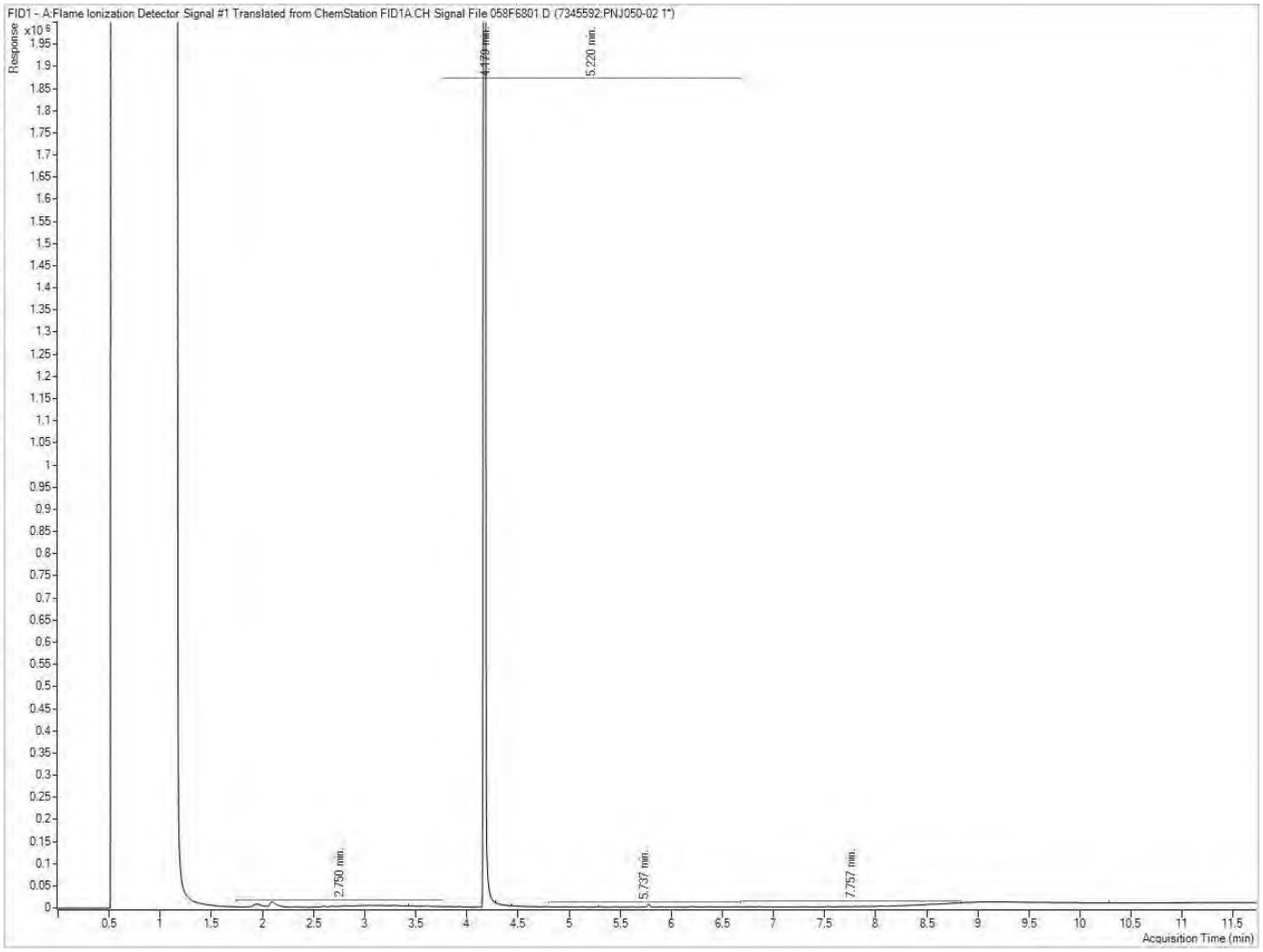
BV Labs - Partial/Rush Results



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



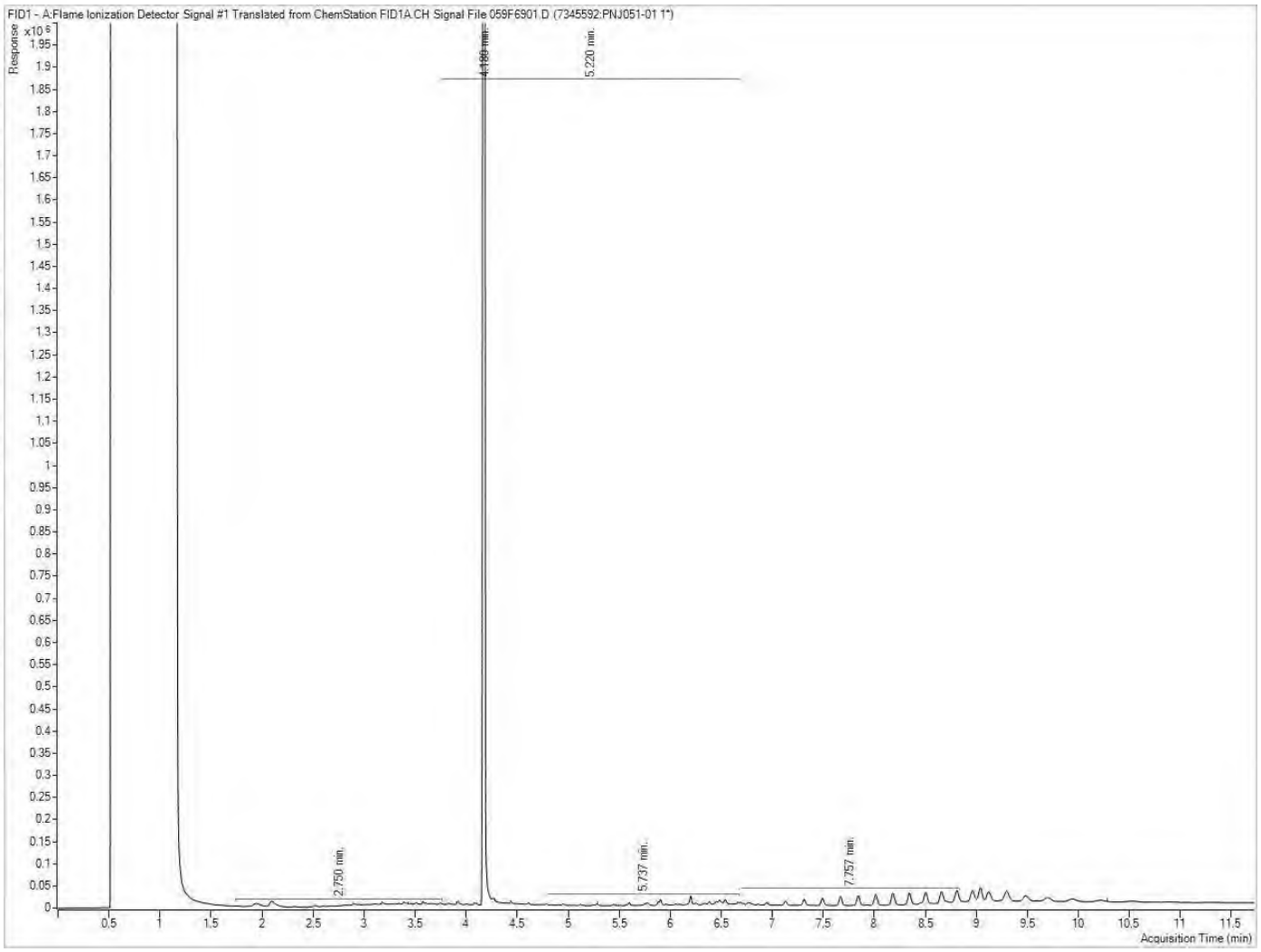
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ051

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-28-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



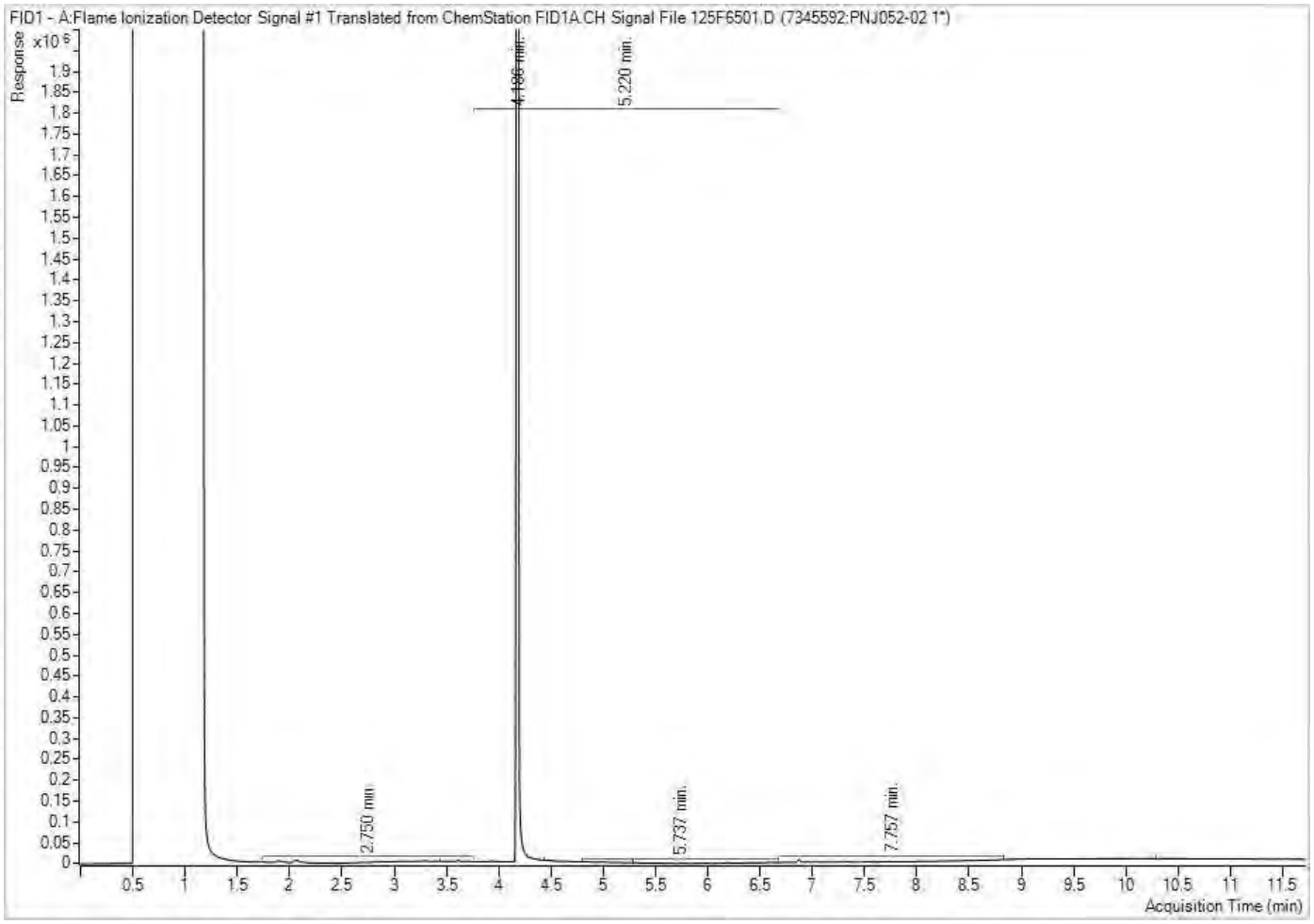
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ052

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-28-3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



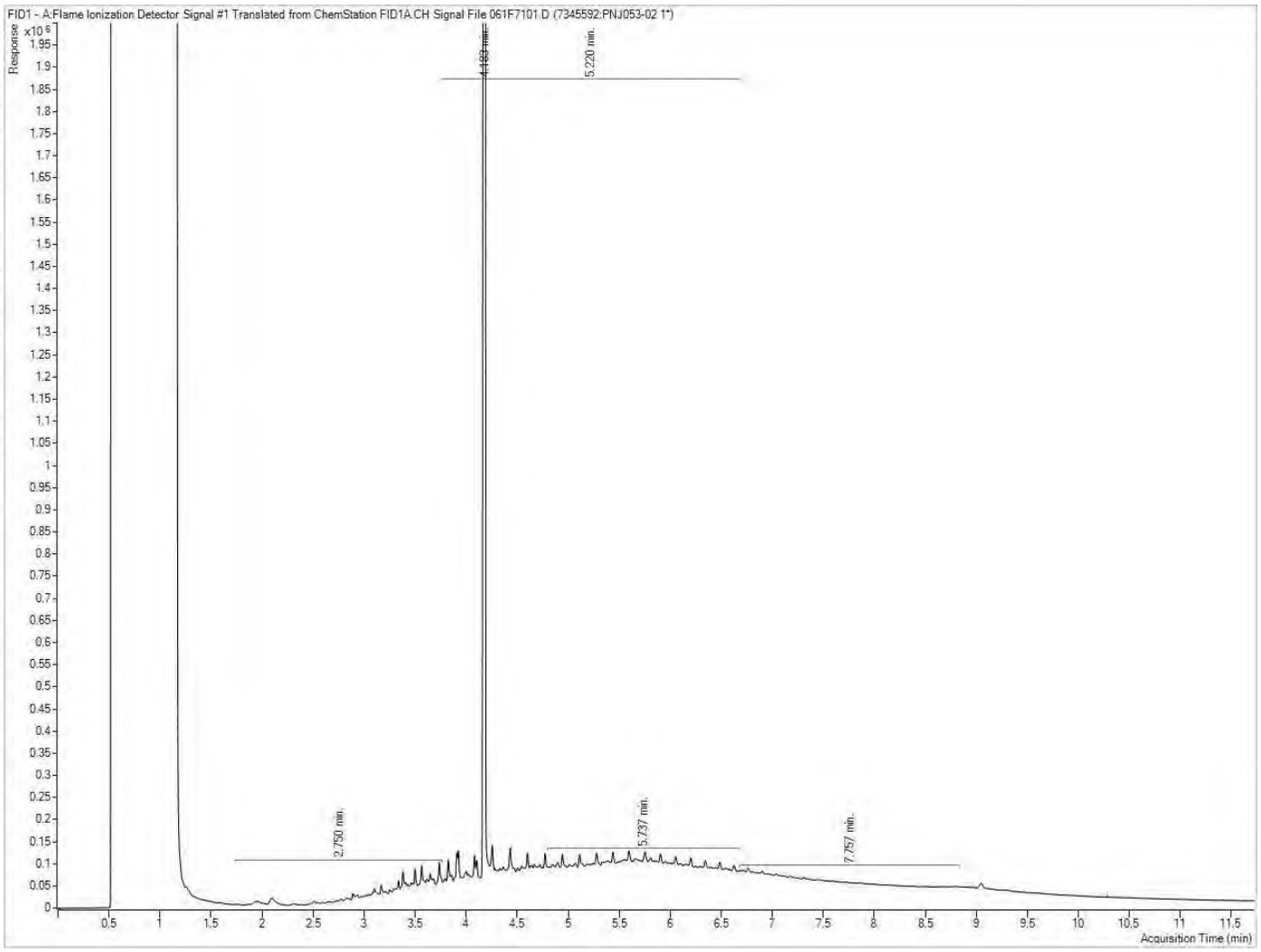
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ053

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-29-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



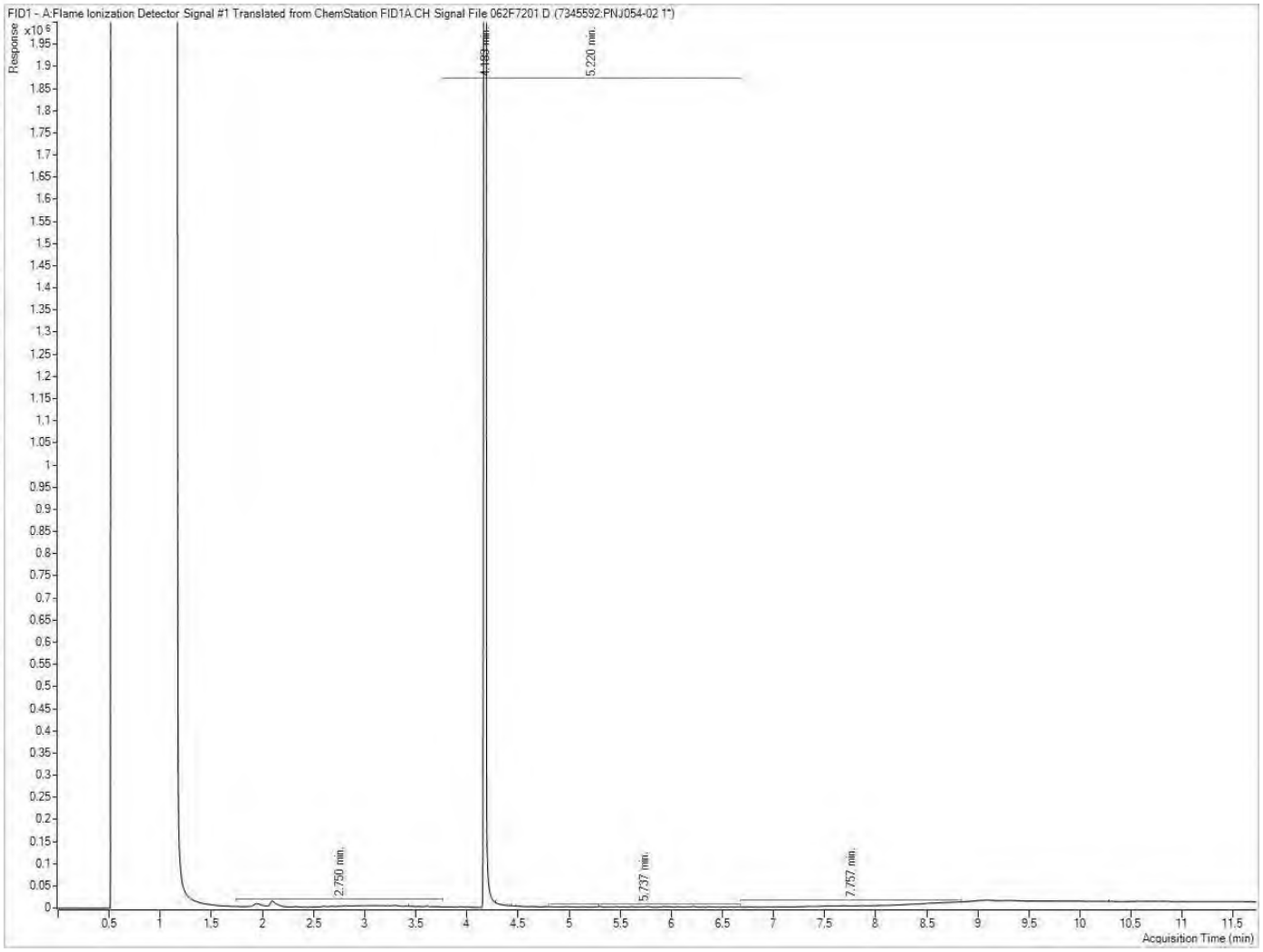
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ054

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-29-4

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

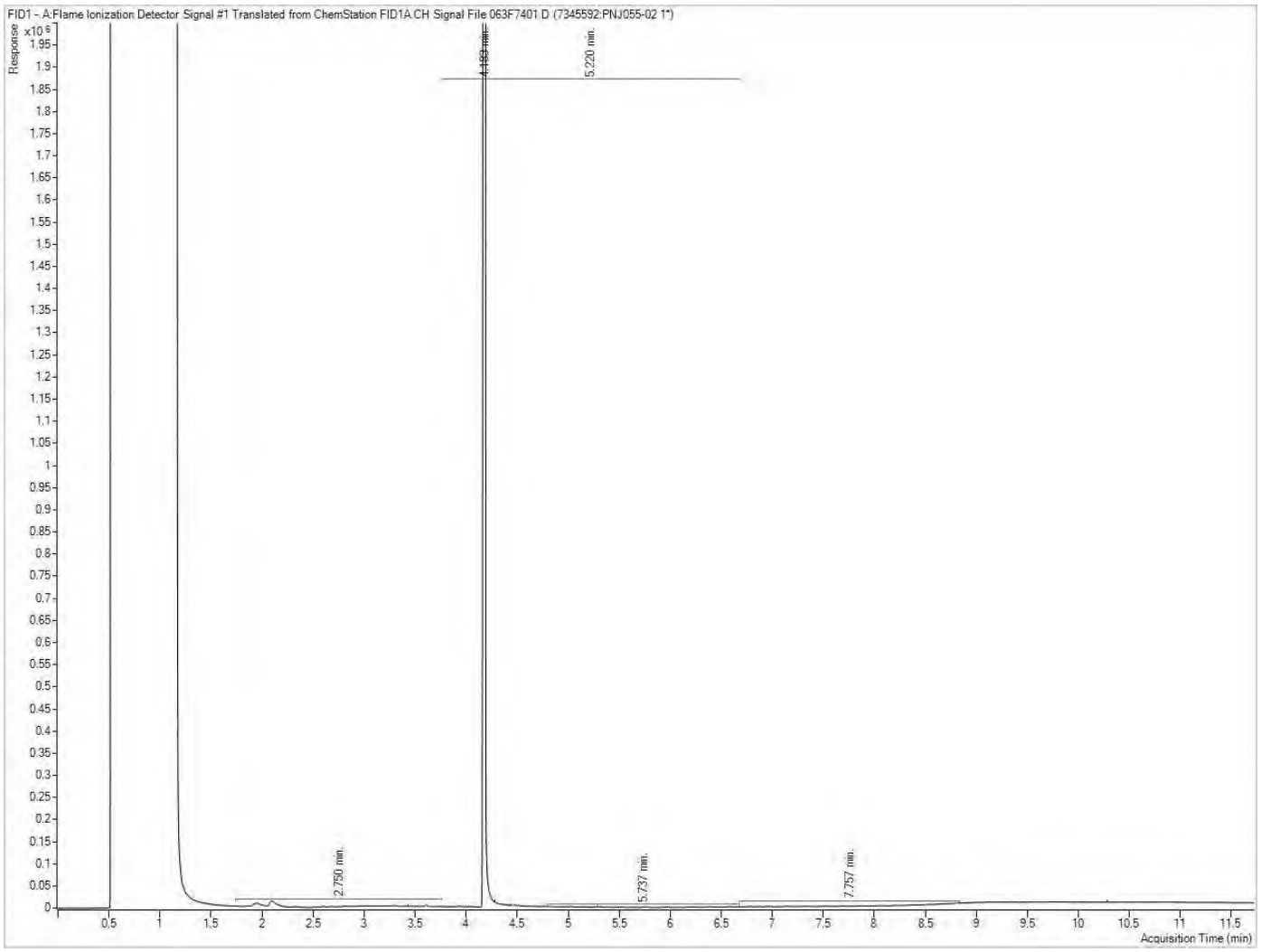
BV Labs - Partial/Rush Results



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



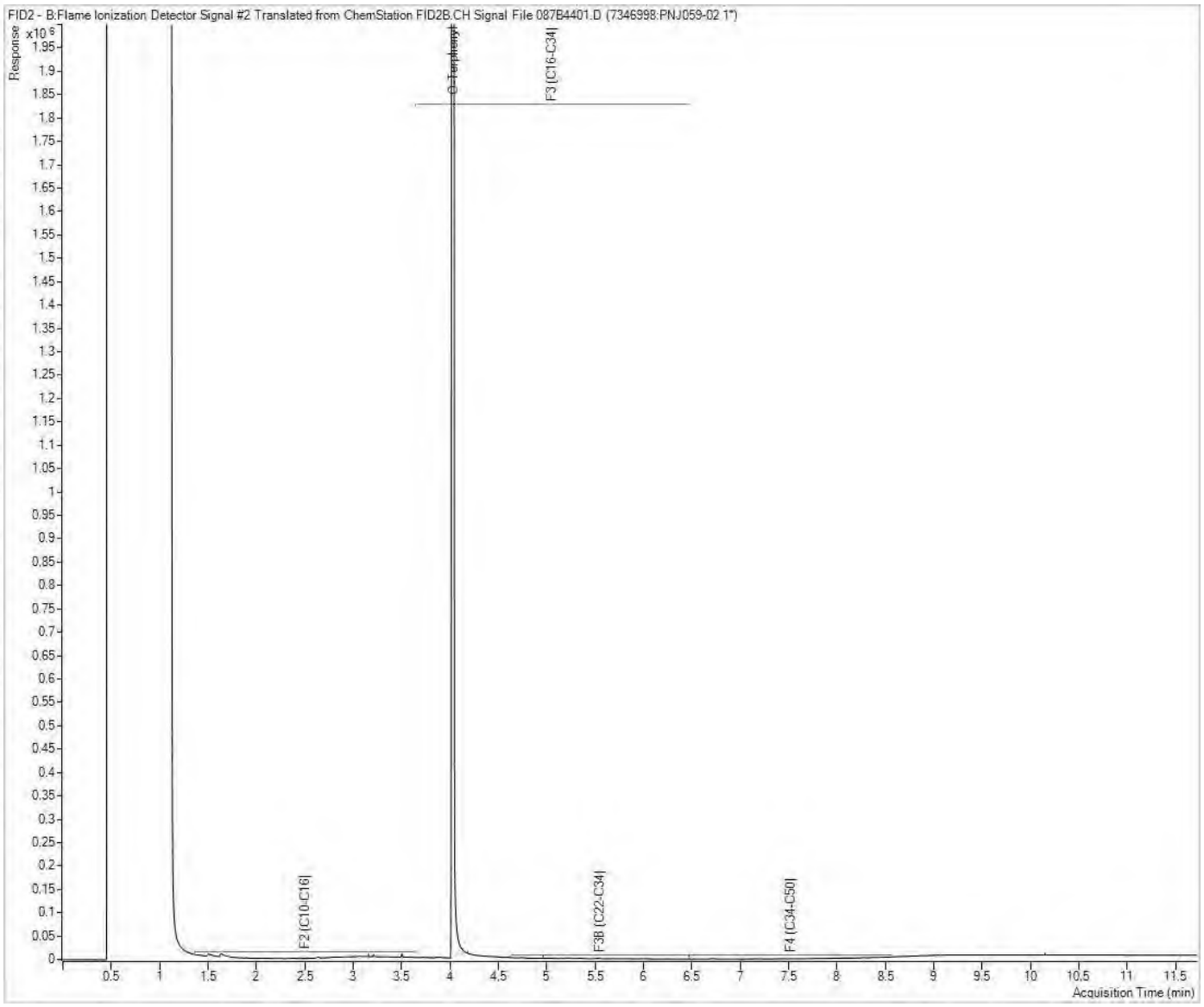
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ059

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: Dup 8

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

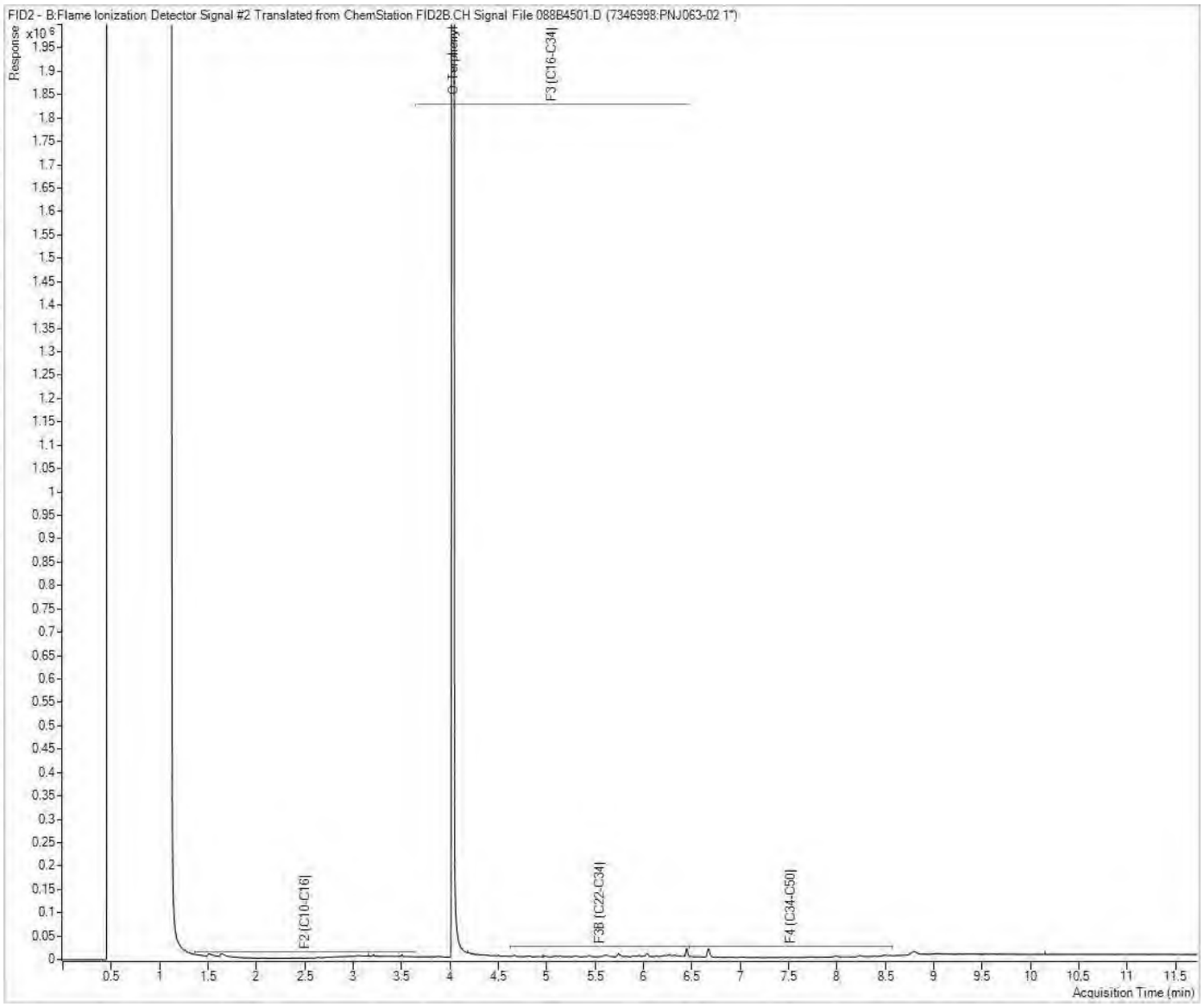
BV Labs - Partial/Rush Results



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



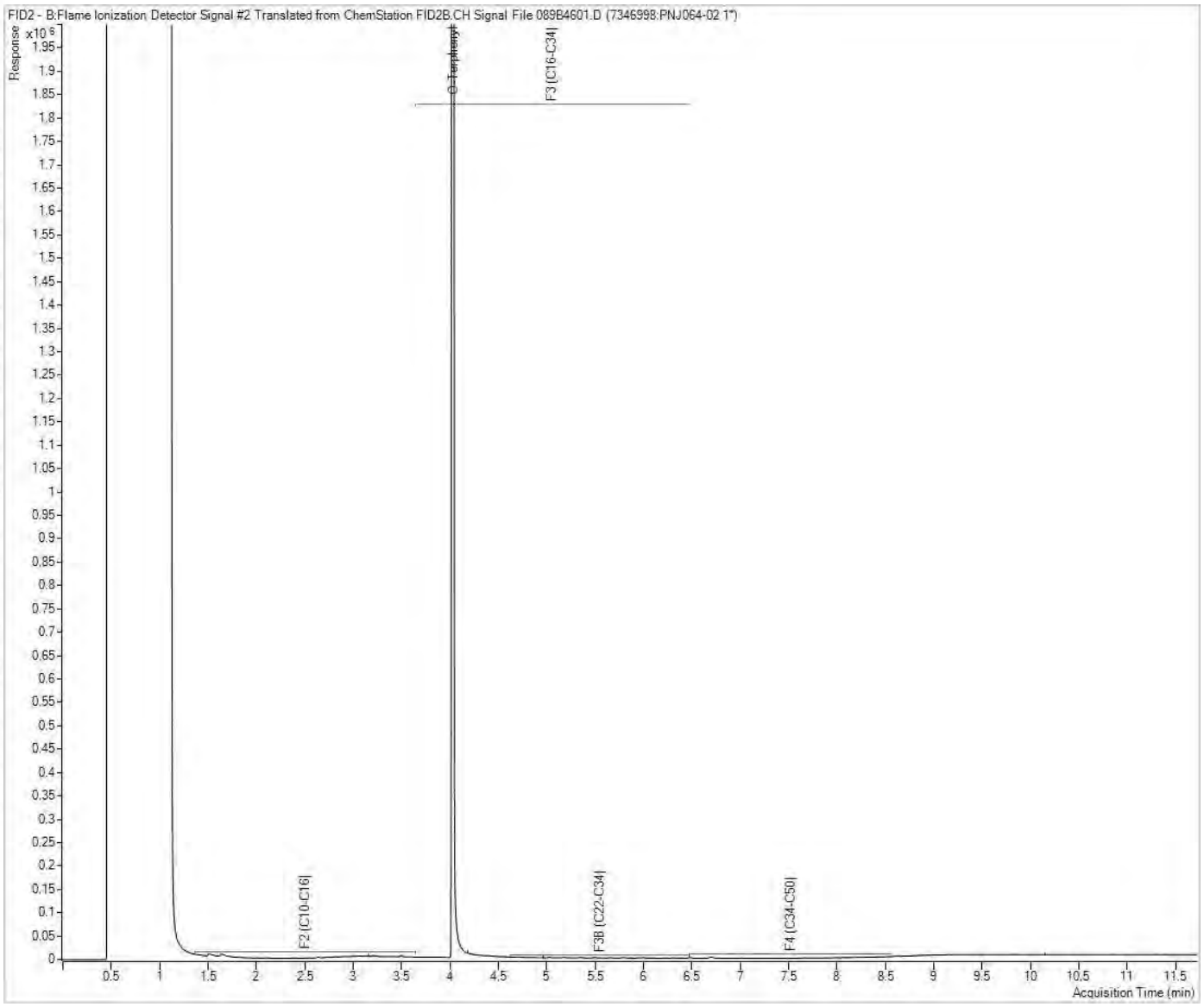
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ064

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-33-2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



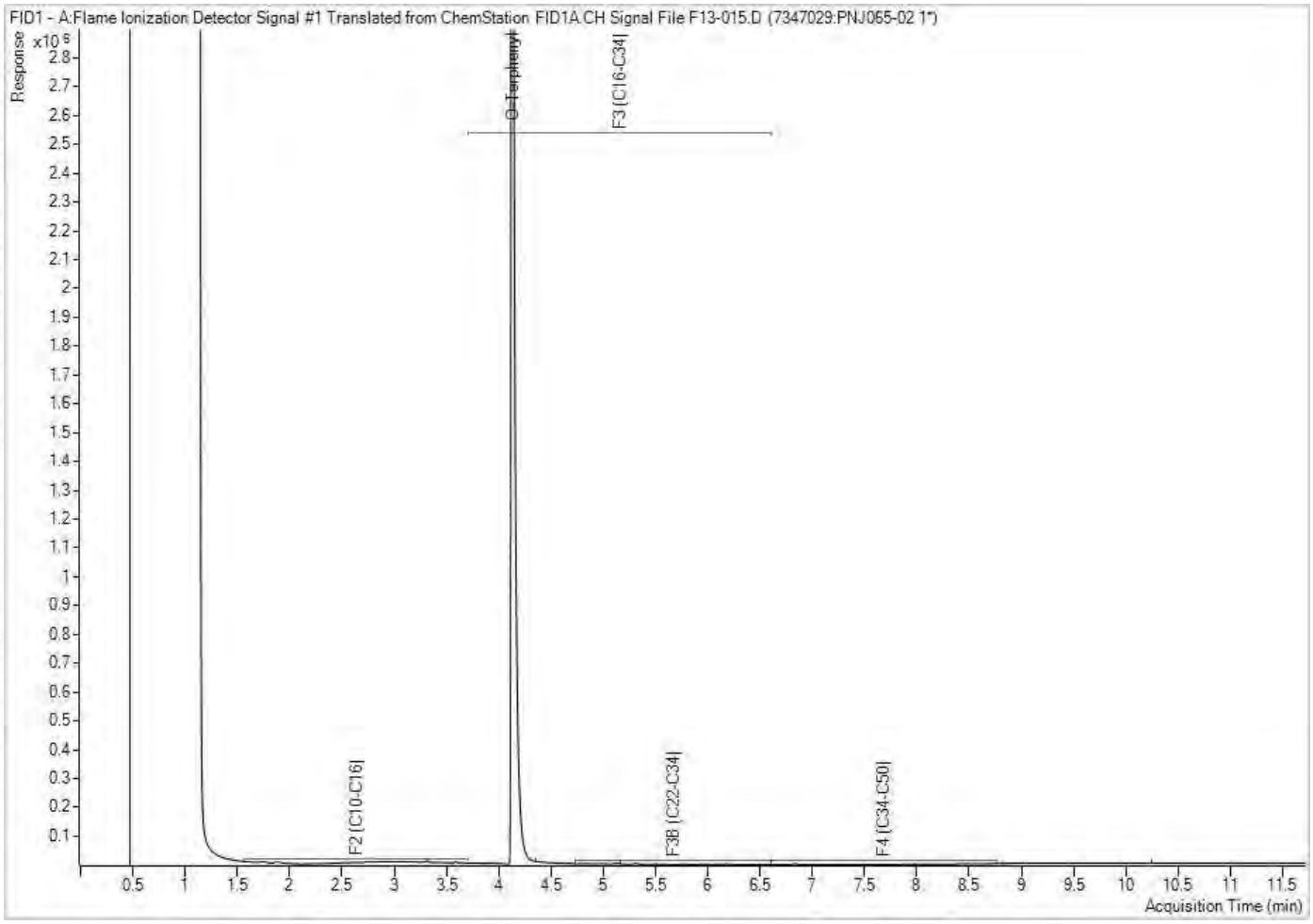
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ065

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-33-4

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

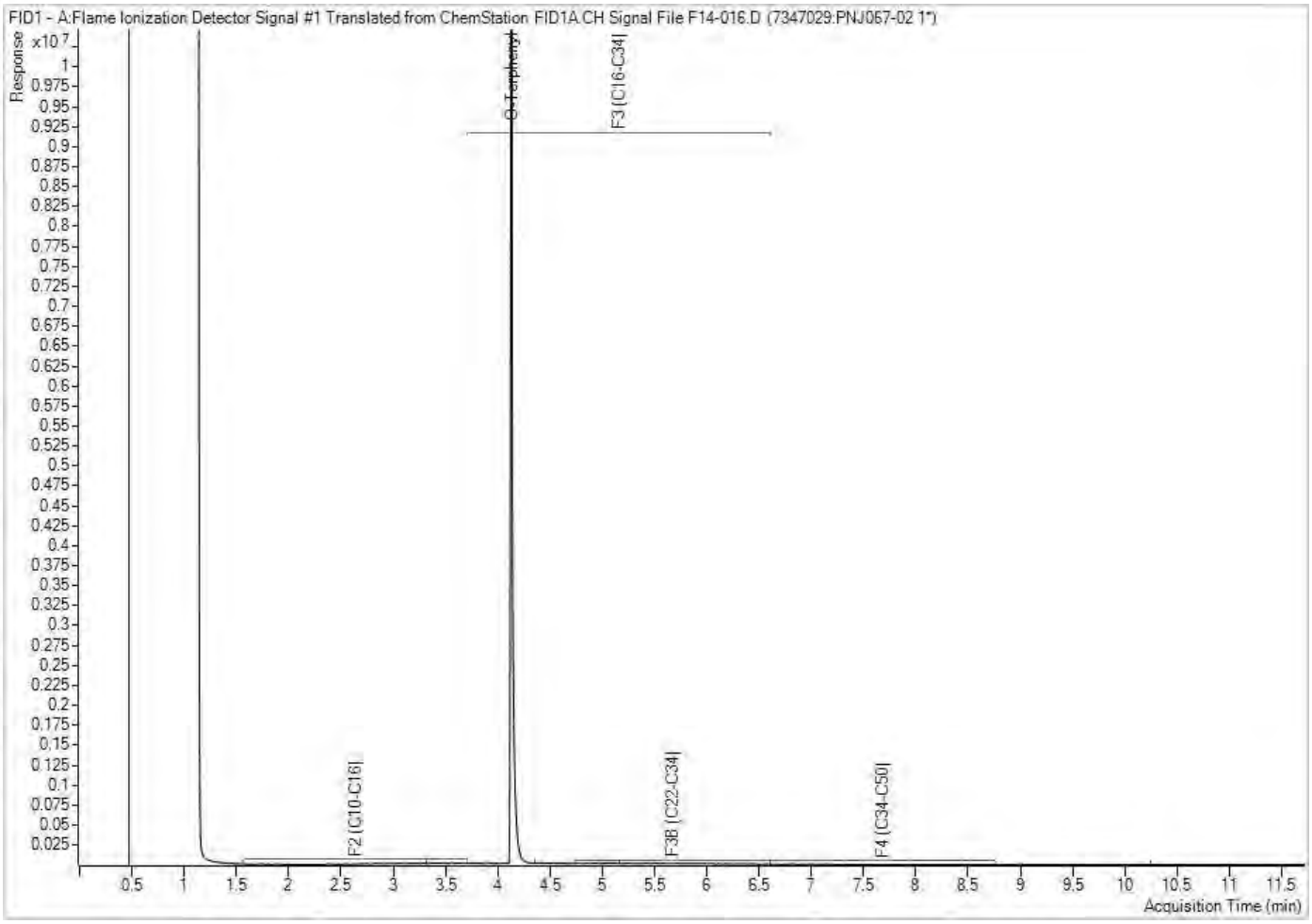
BV Labs - Partial/Rush Results



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



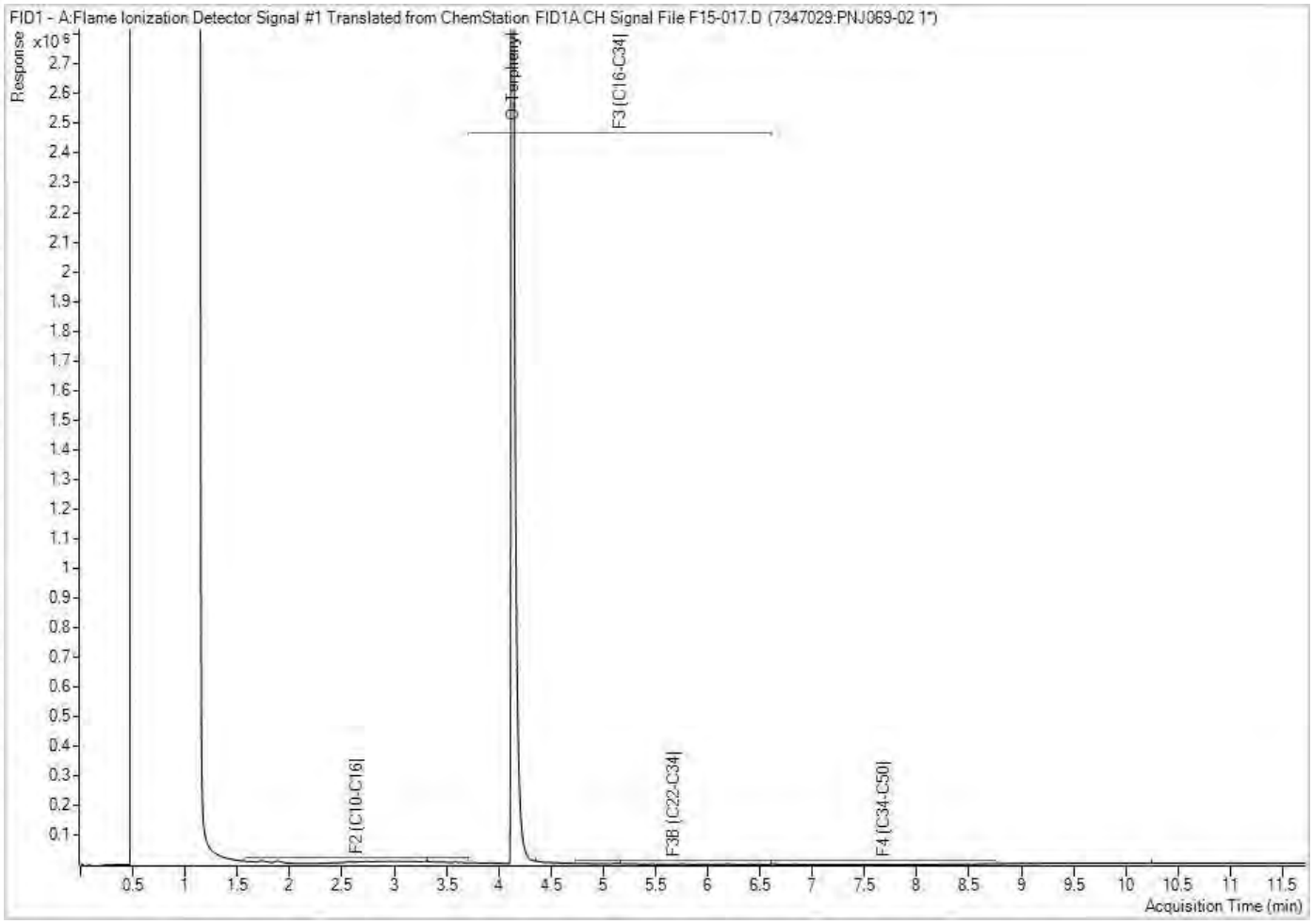
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ069

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-35-3A

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



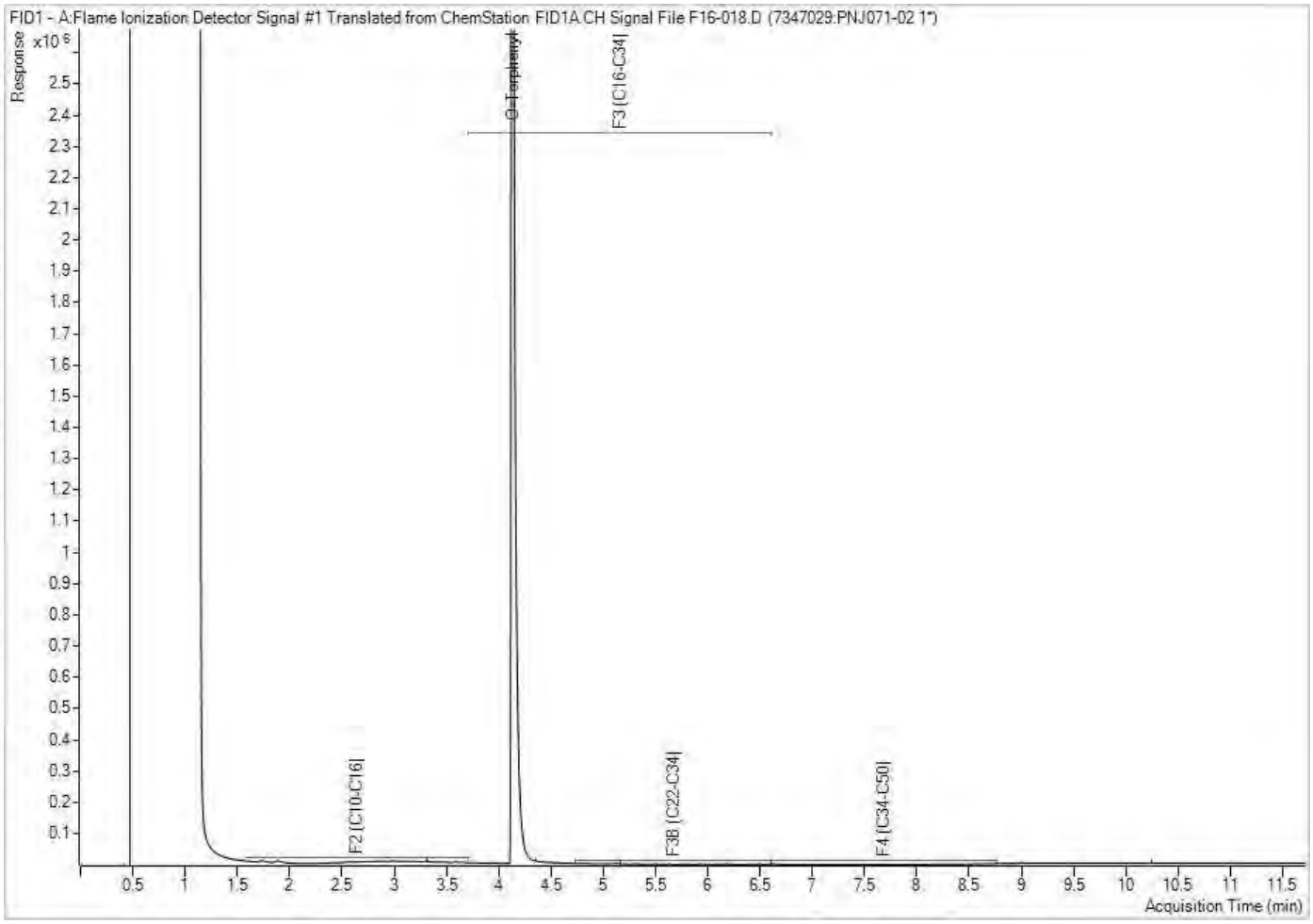
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ071

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-15-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

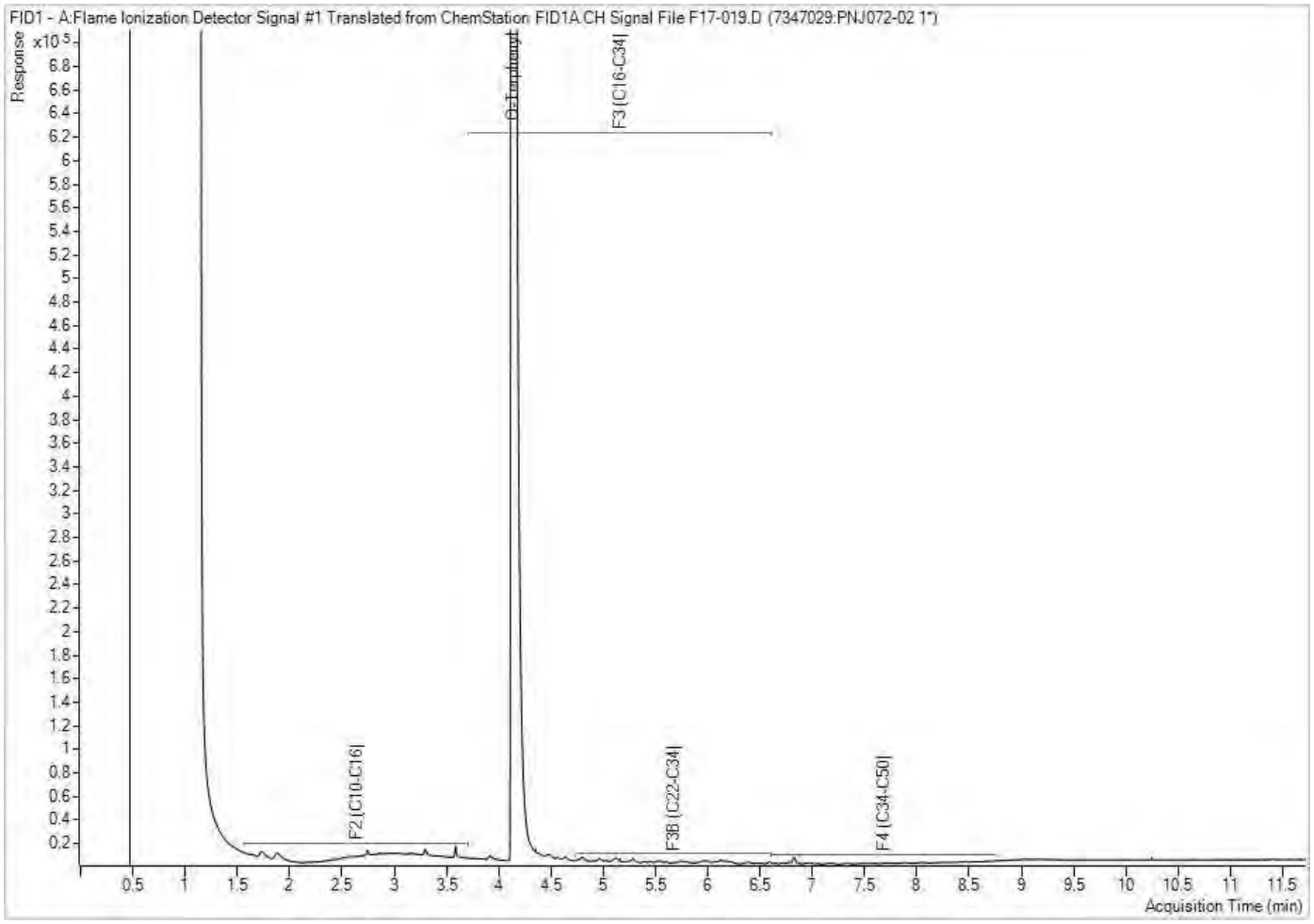
BV Labs - Partial/Rush Results



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



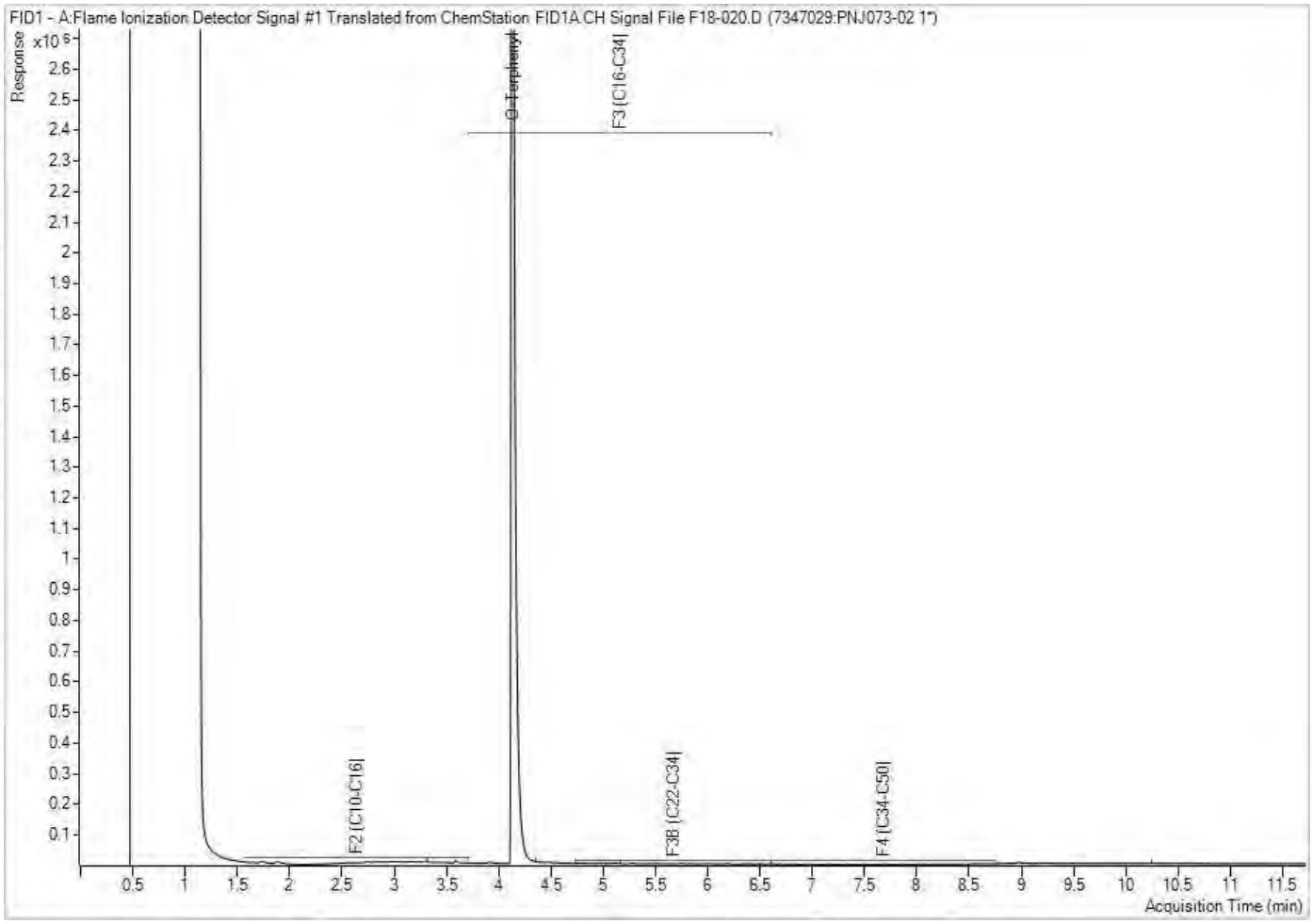
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ073

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH12-50-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



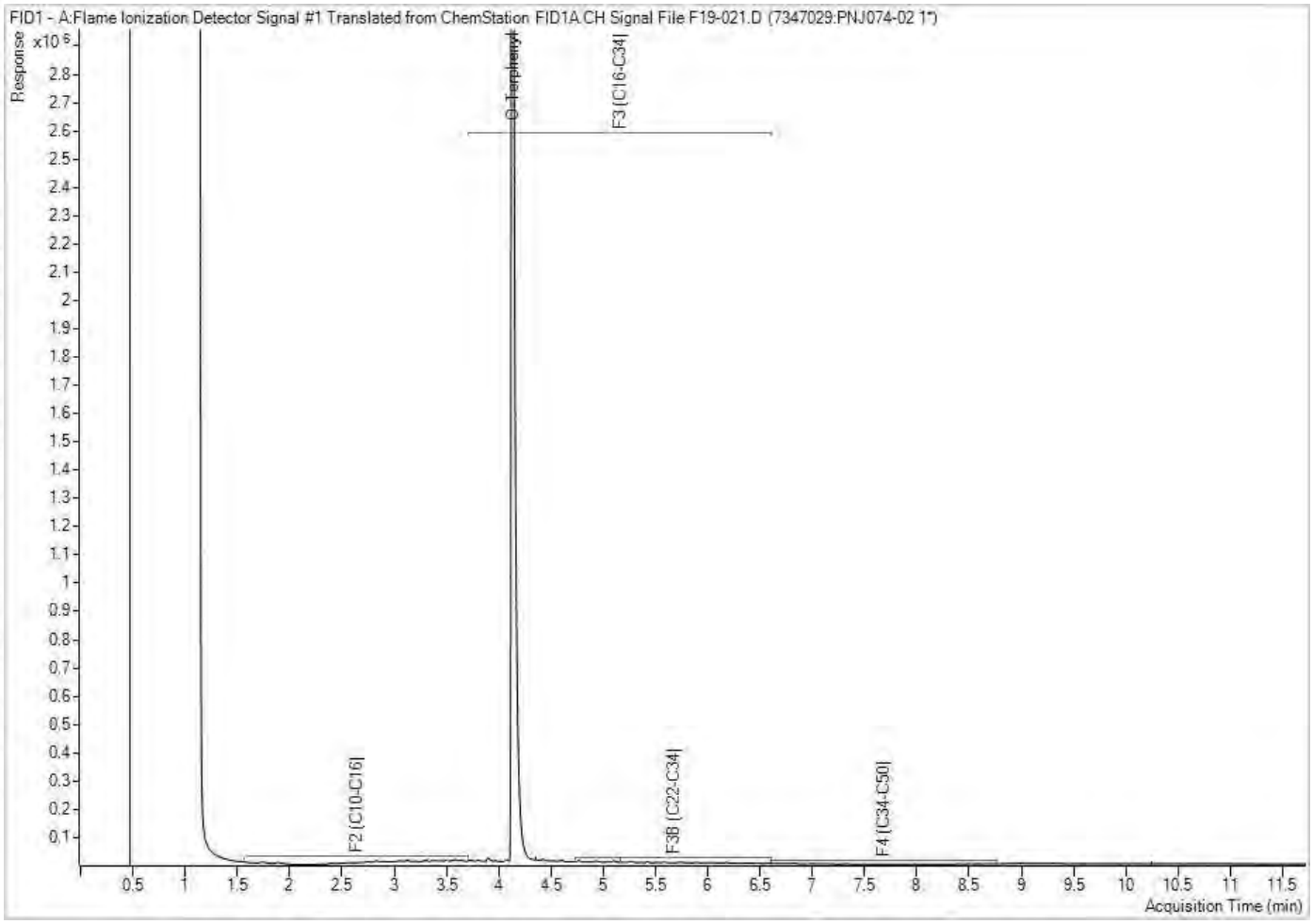
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ074

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH12-50-3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



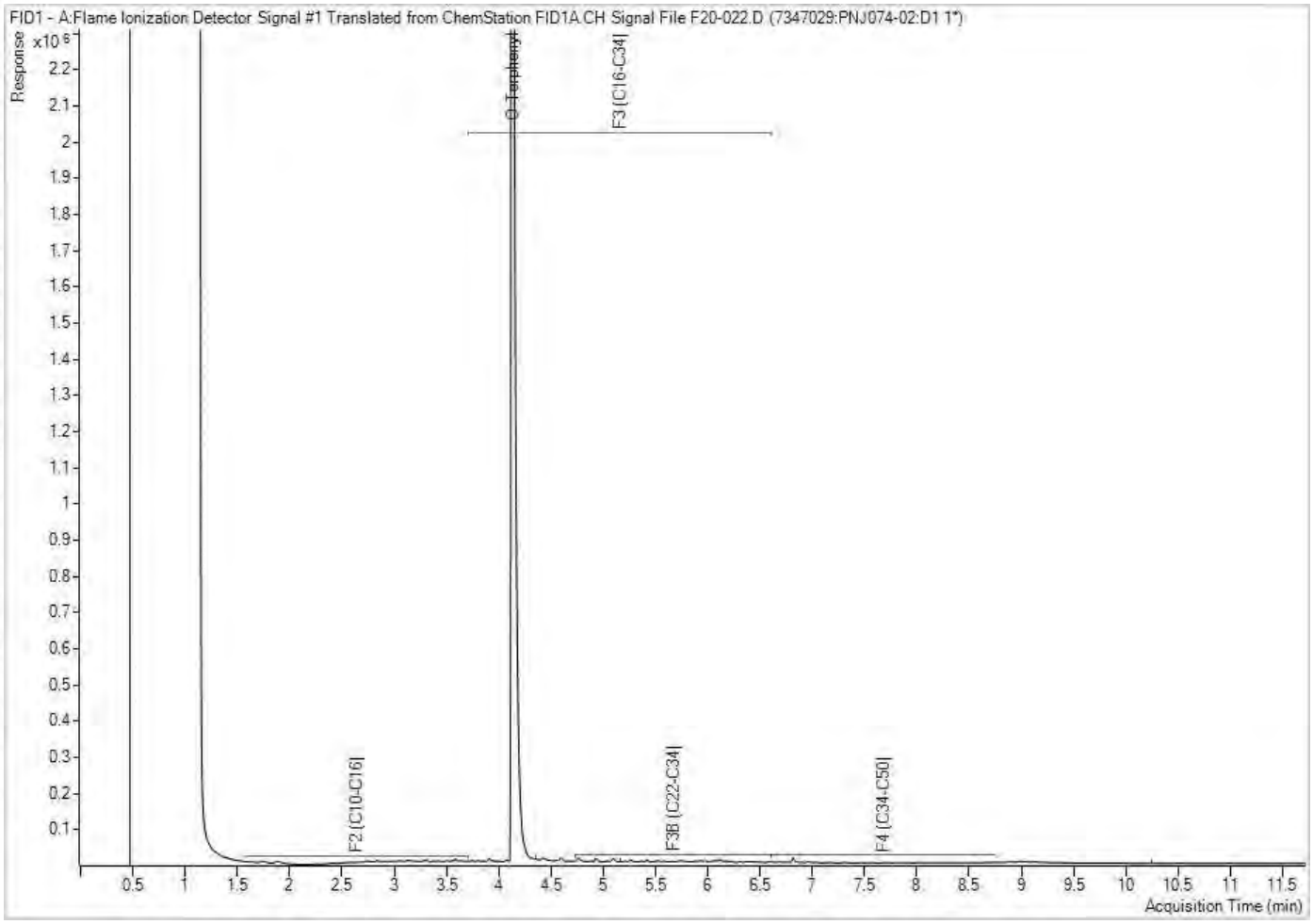
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ074 Lab-Dup

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH12-50-3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



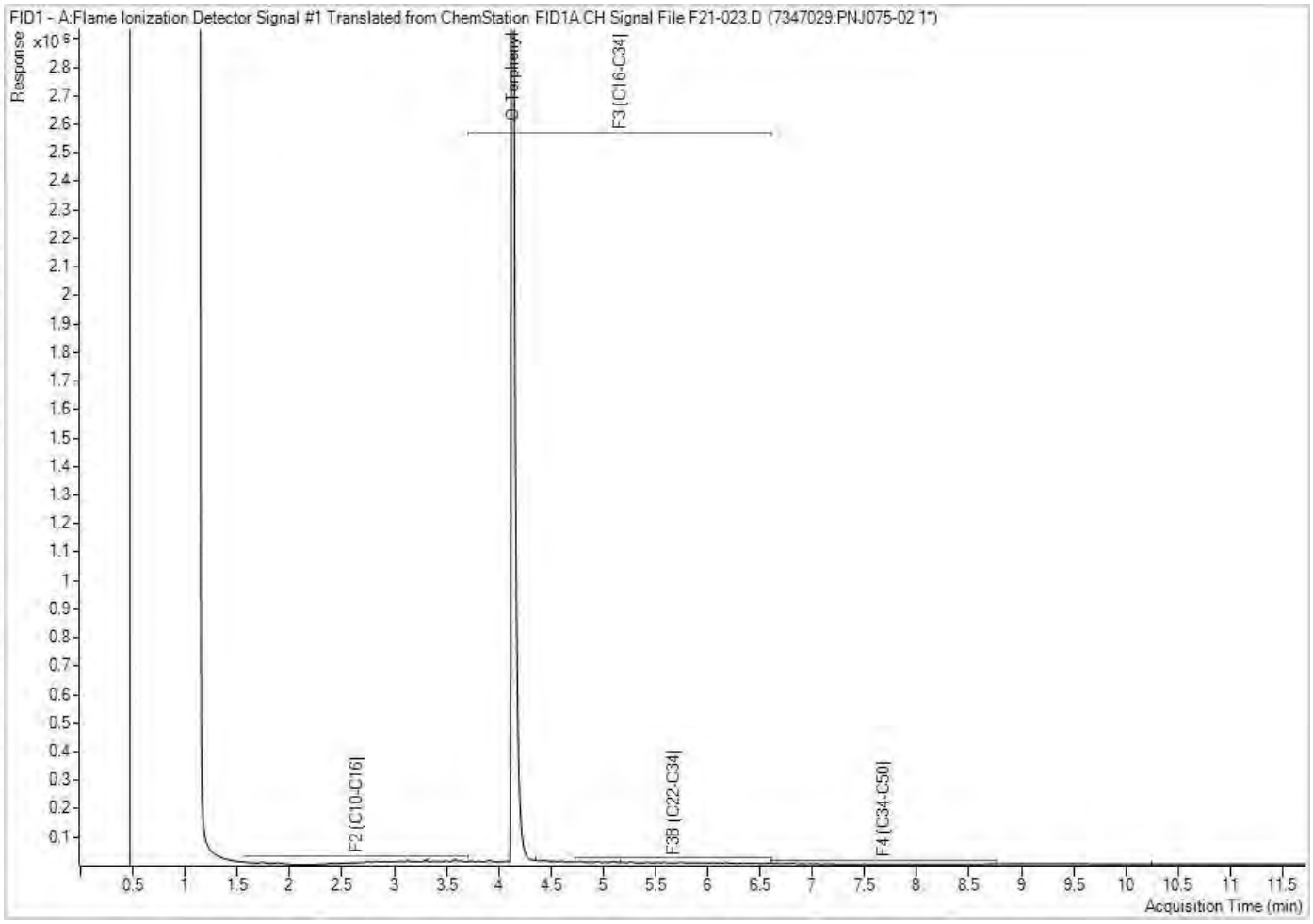
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ075

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-50-5

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



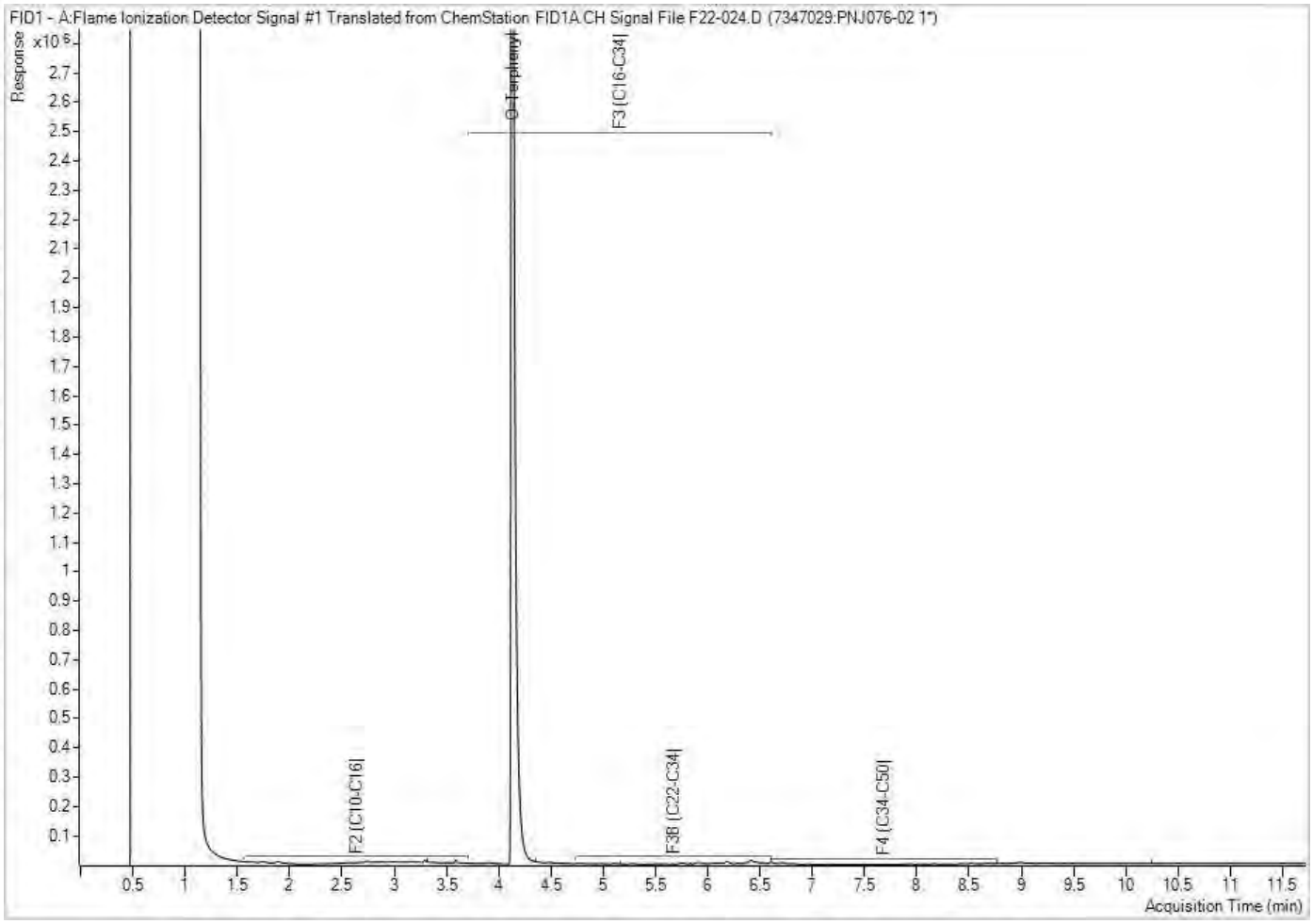
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ076

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-16-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

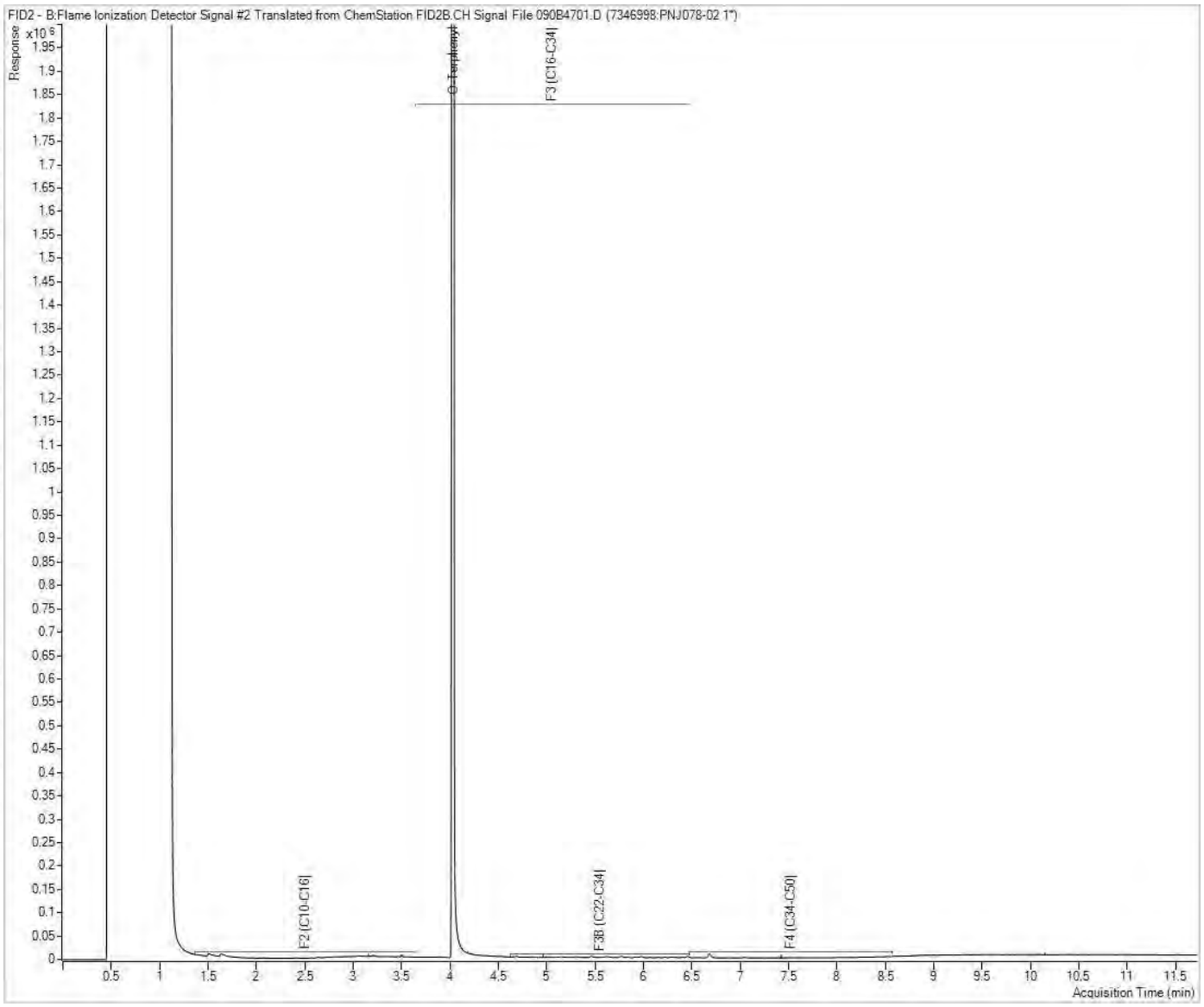
BV Labs - Partial/Rush Results



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



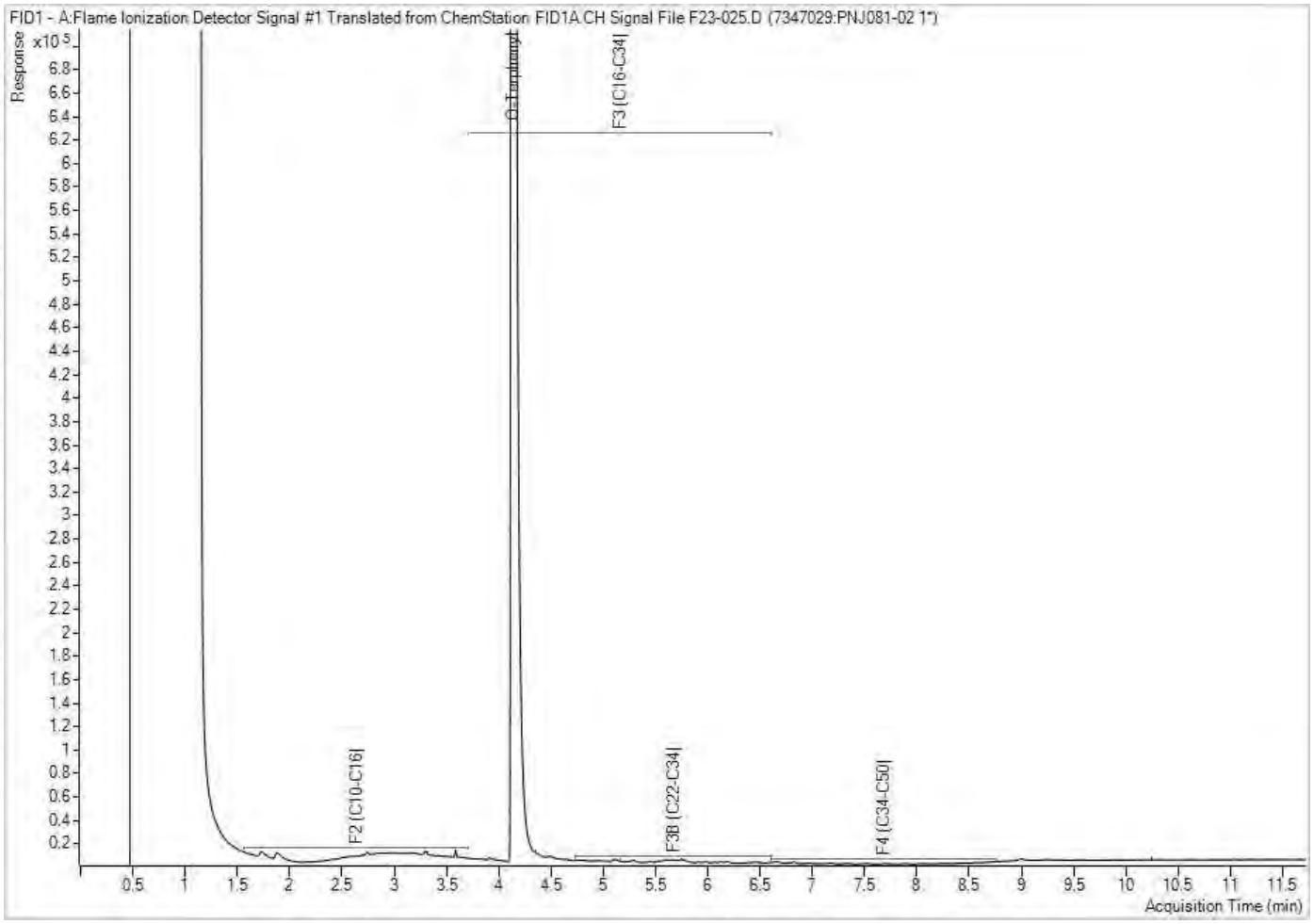
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ081

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-31-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



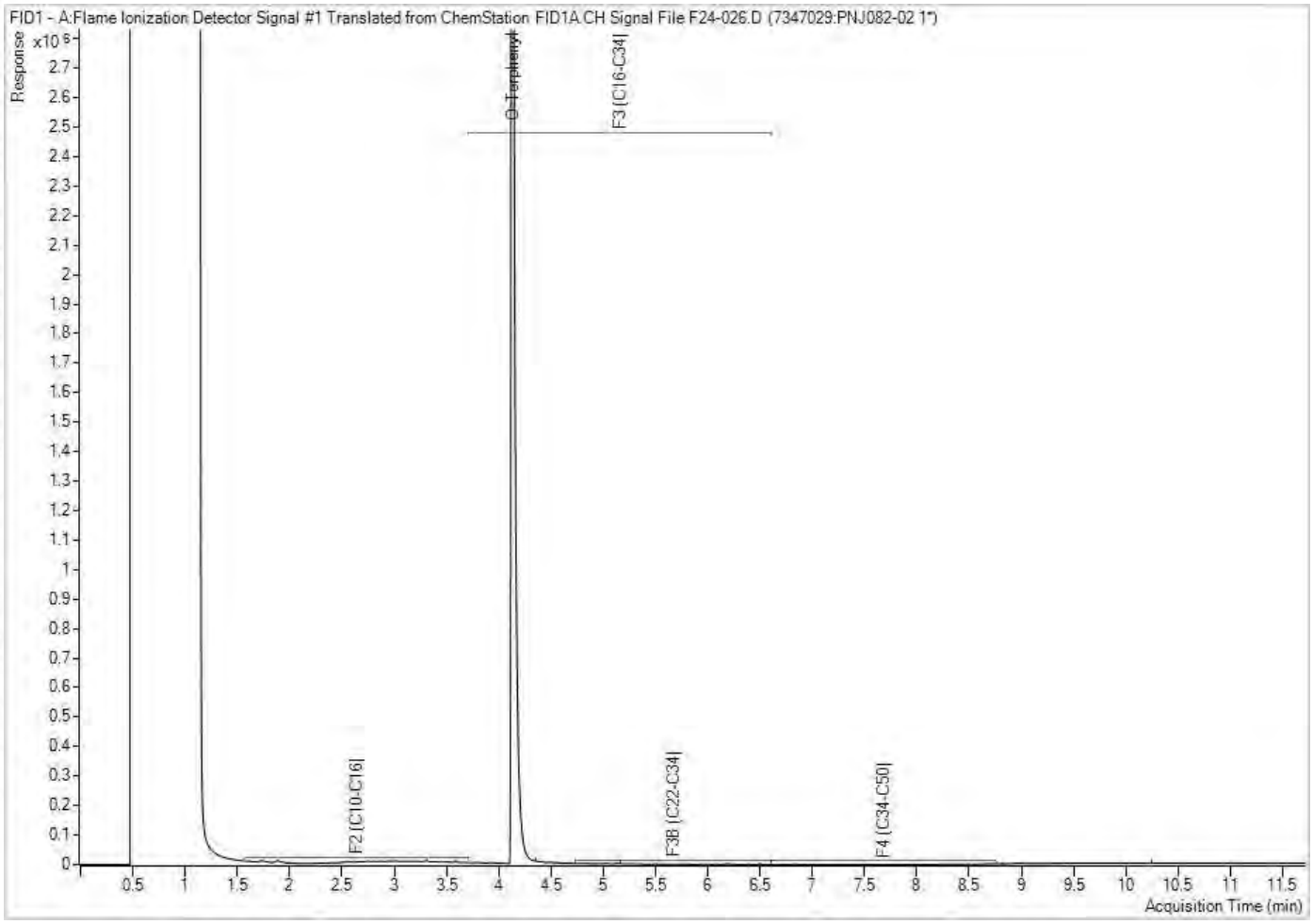
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ082

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-31-2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



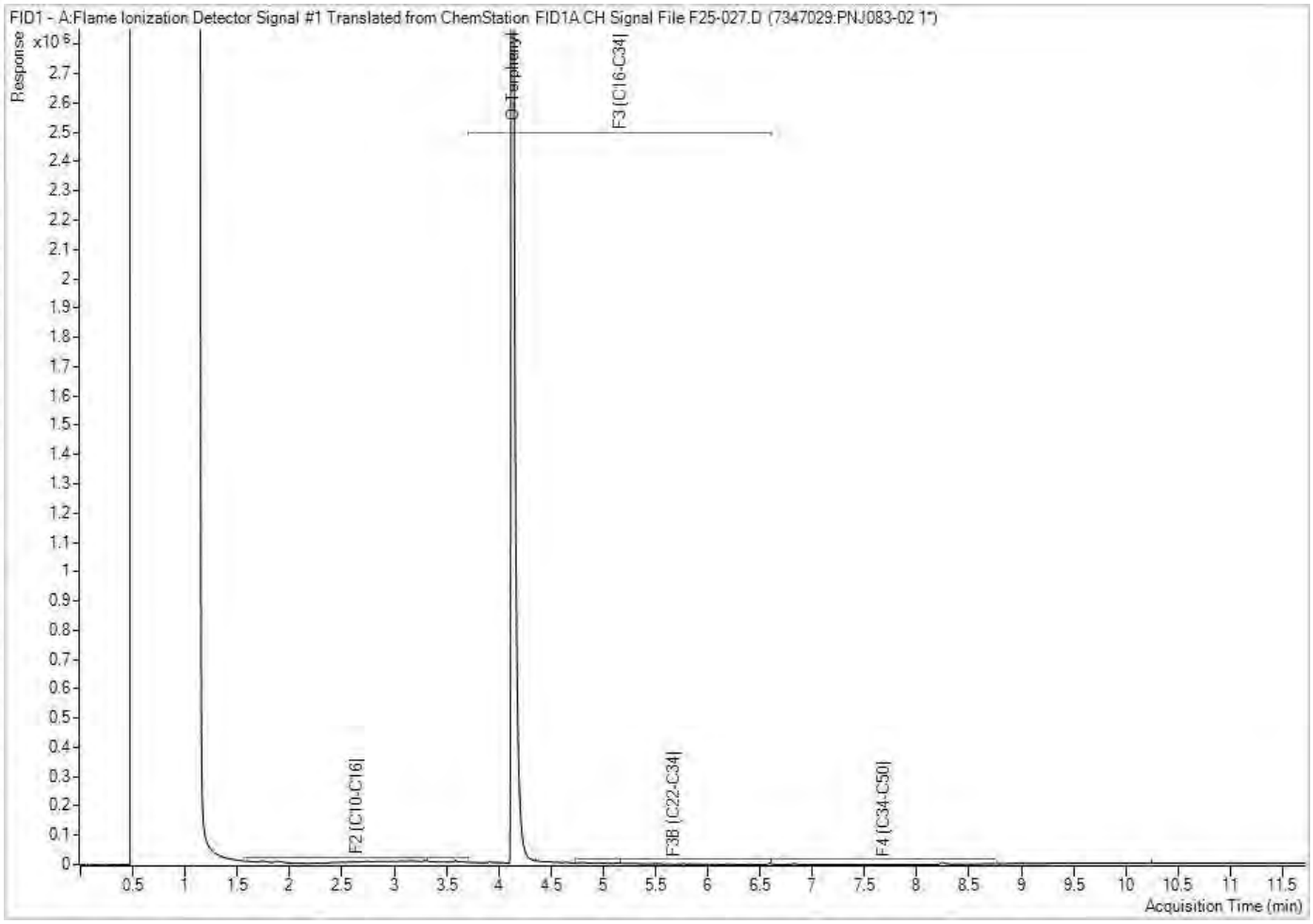
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ083

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-31-5

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

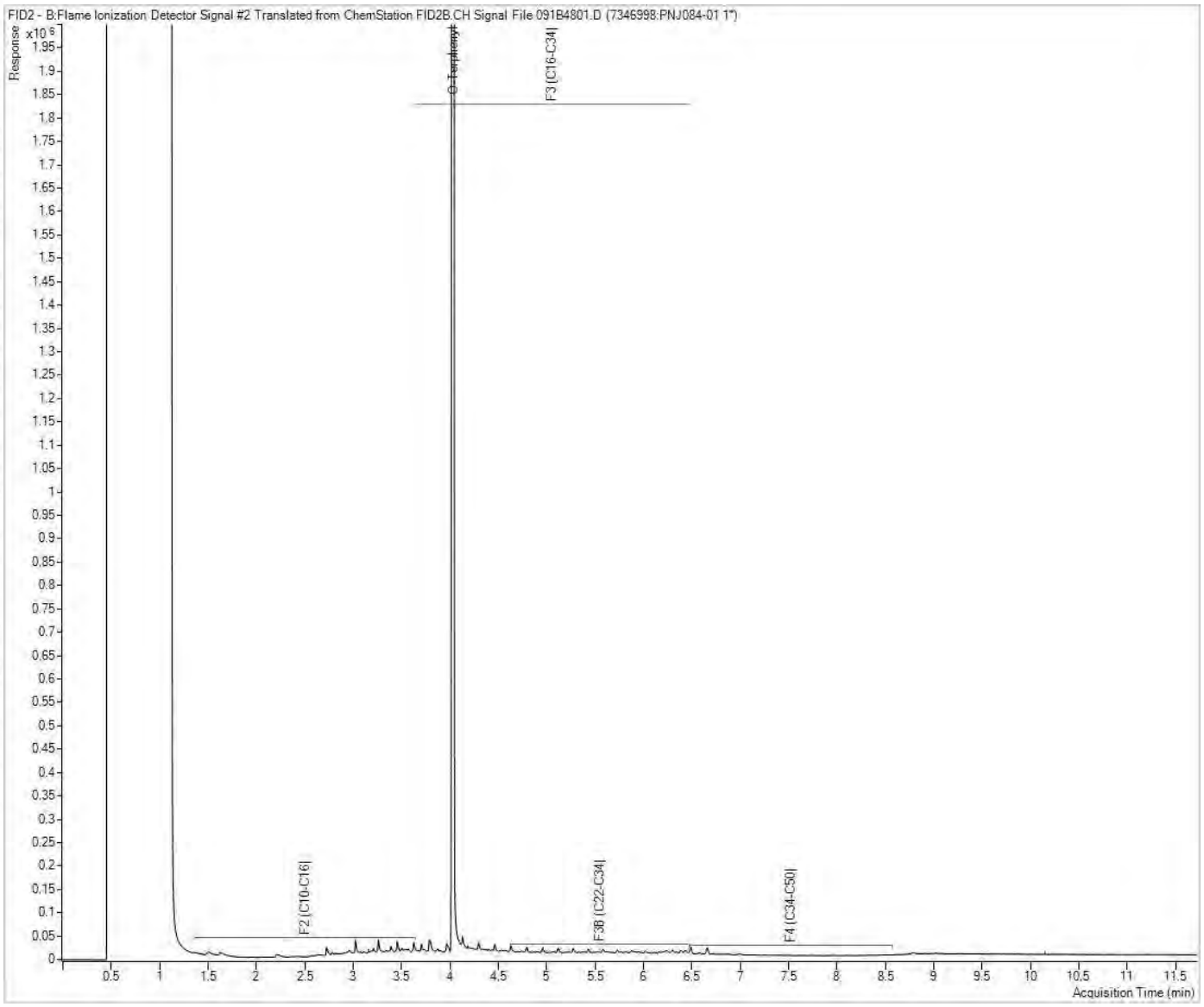
BV Labs - Partial/Rush Results



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



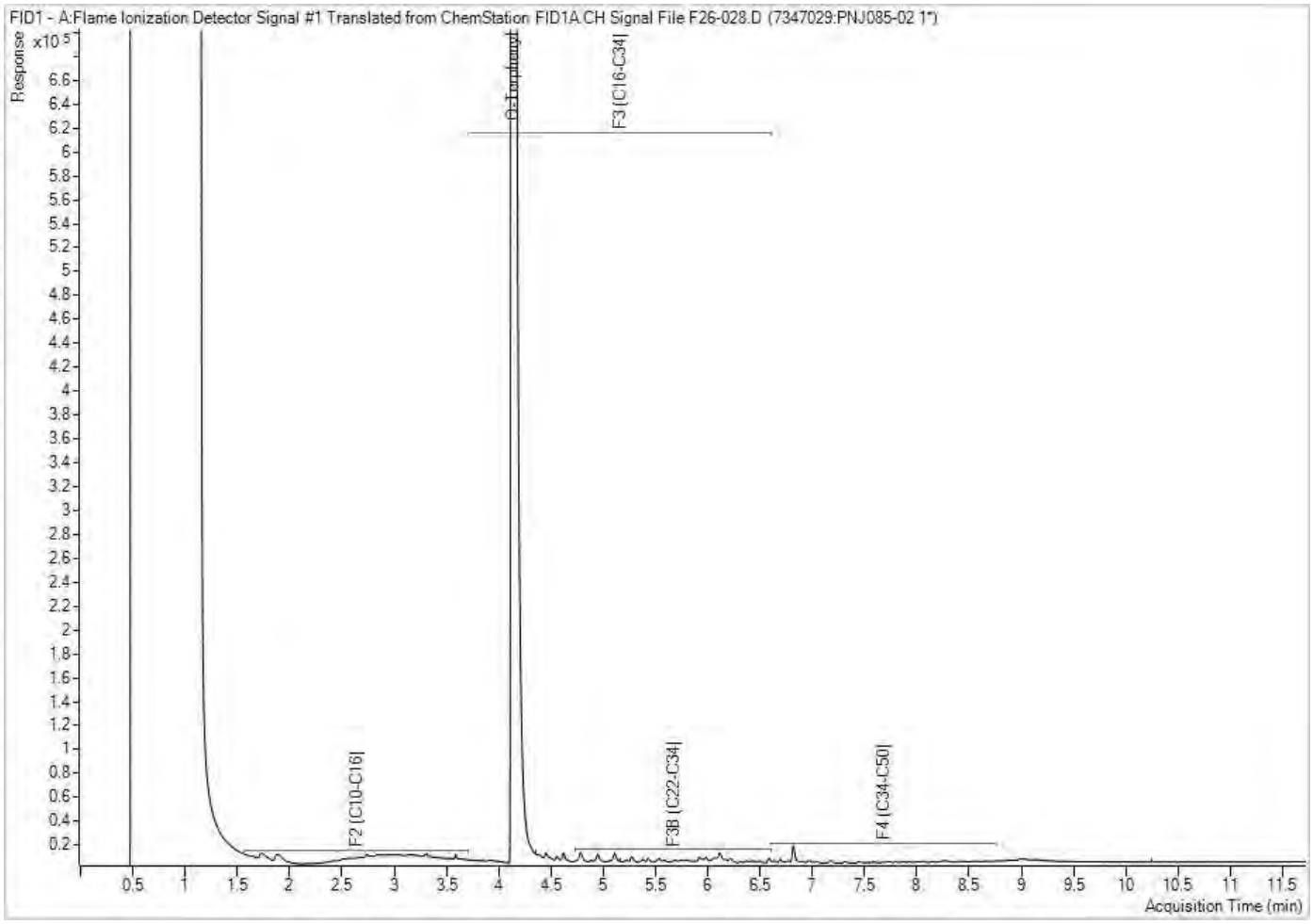
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ085

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-6-5

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

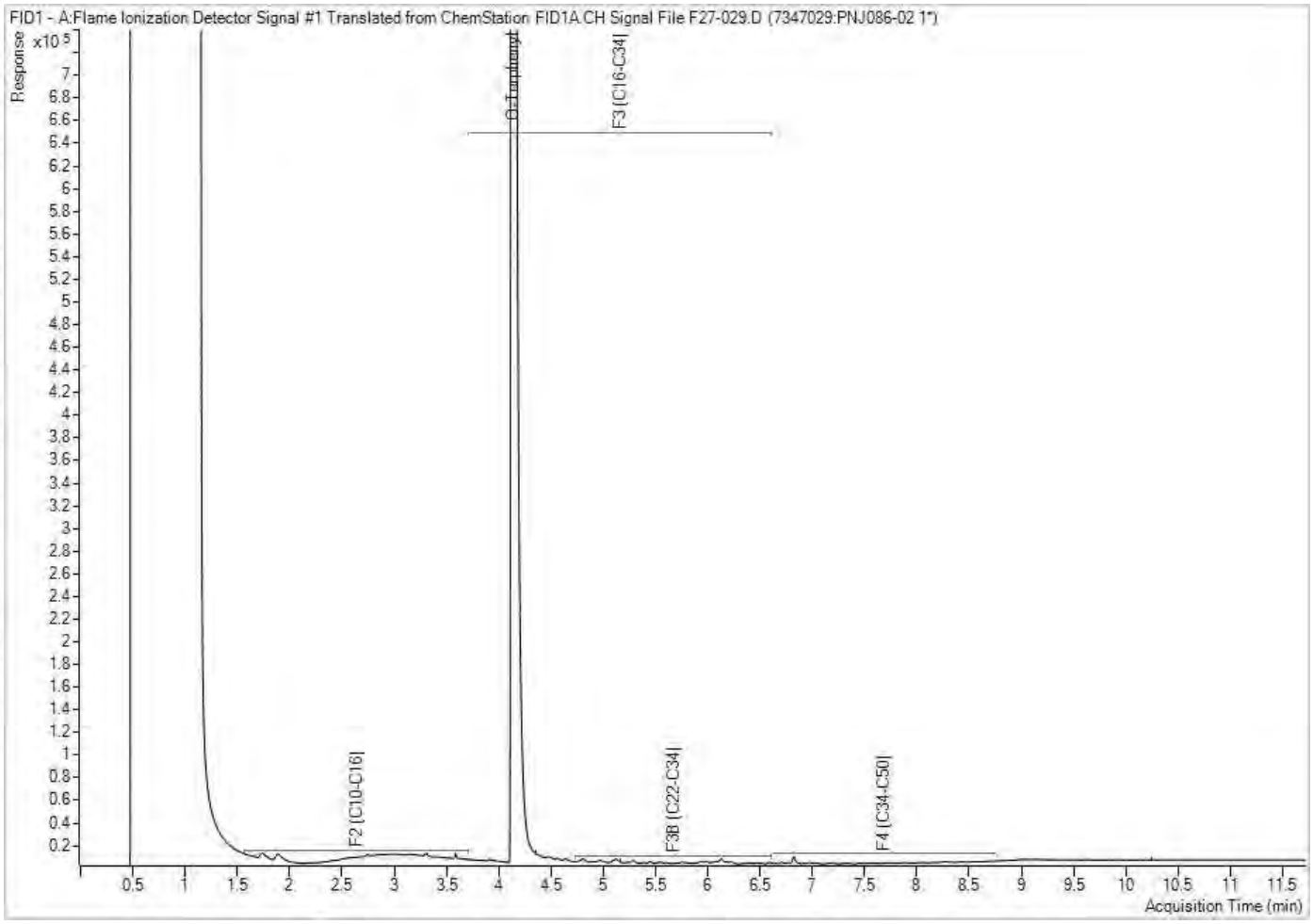
BV Labs - Partial/Rush Results



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

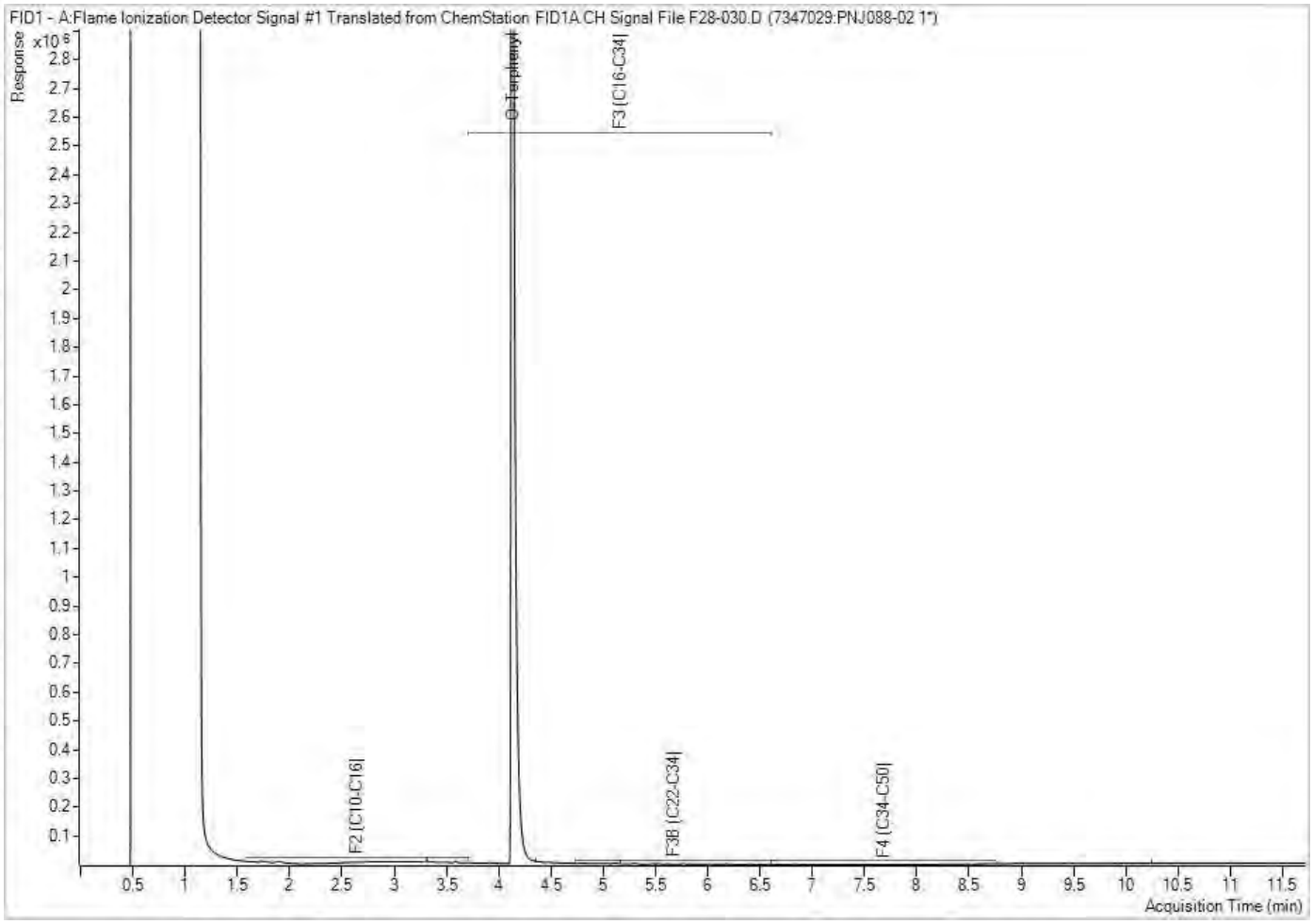
BV Labs - Partial/Rush Results



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



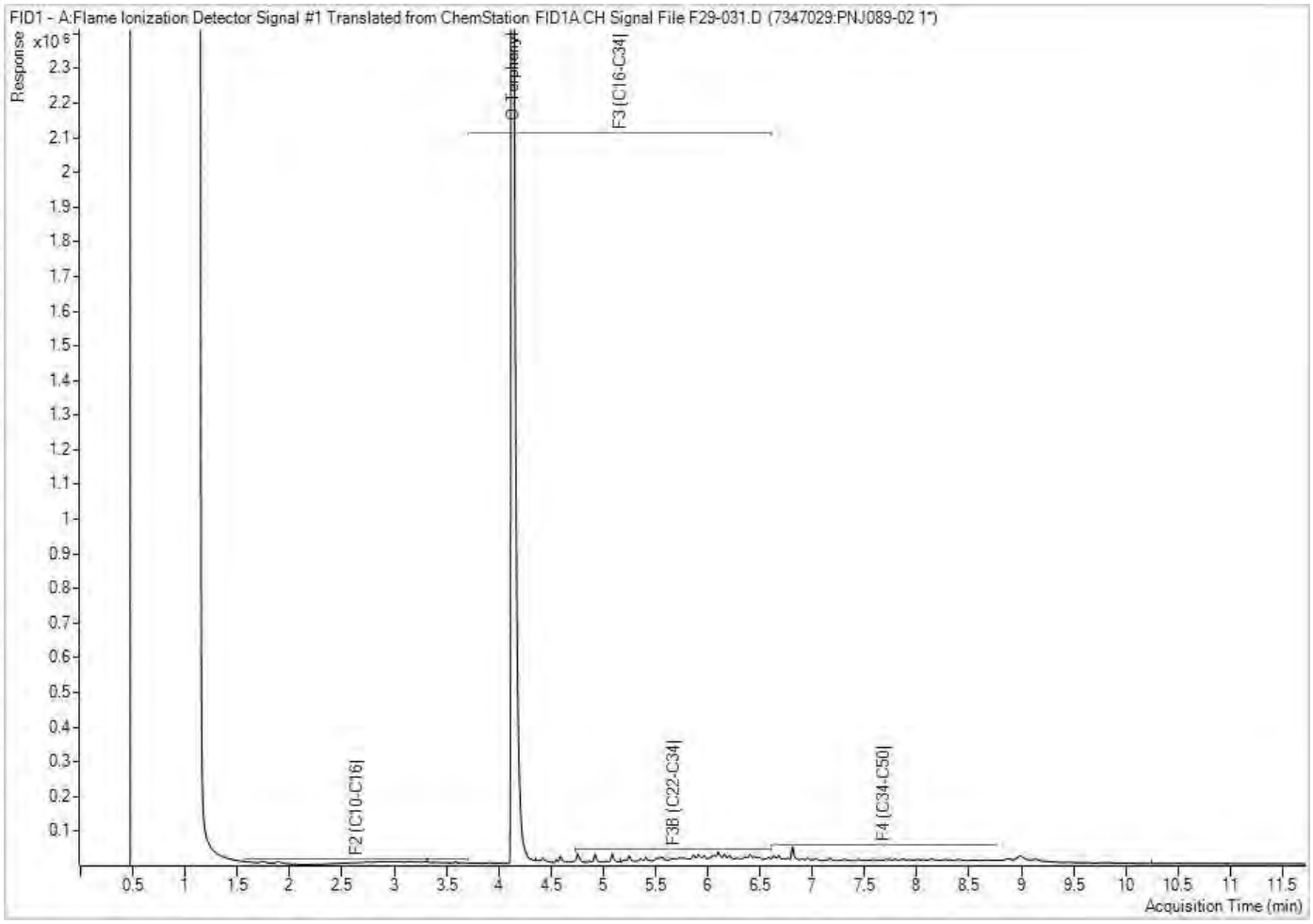
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ089

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-23-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



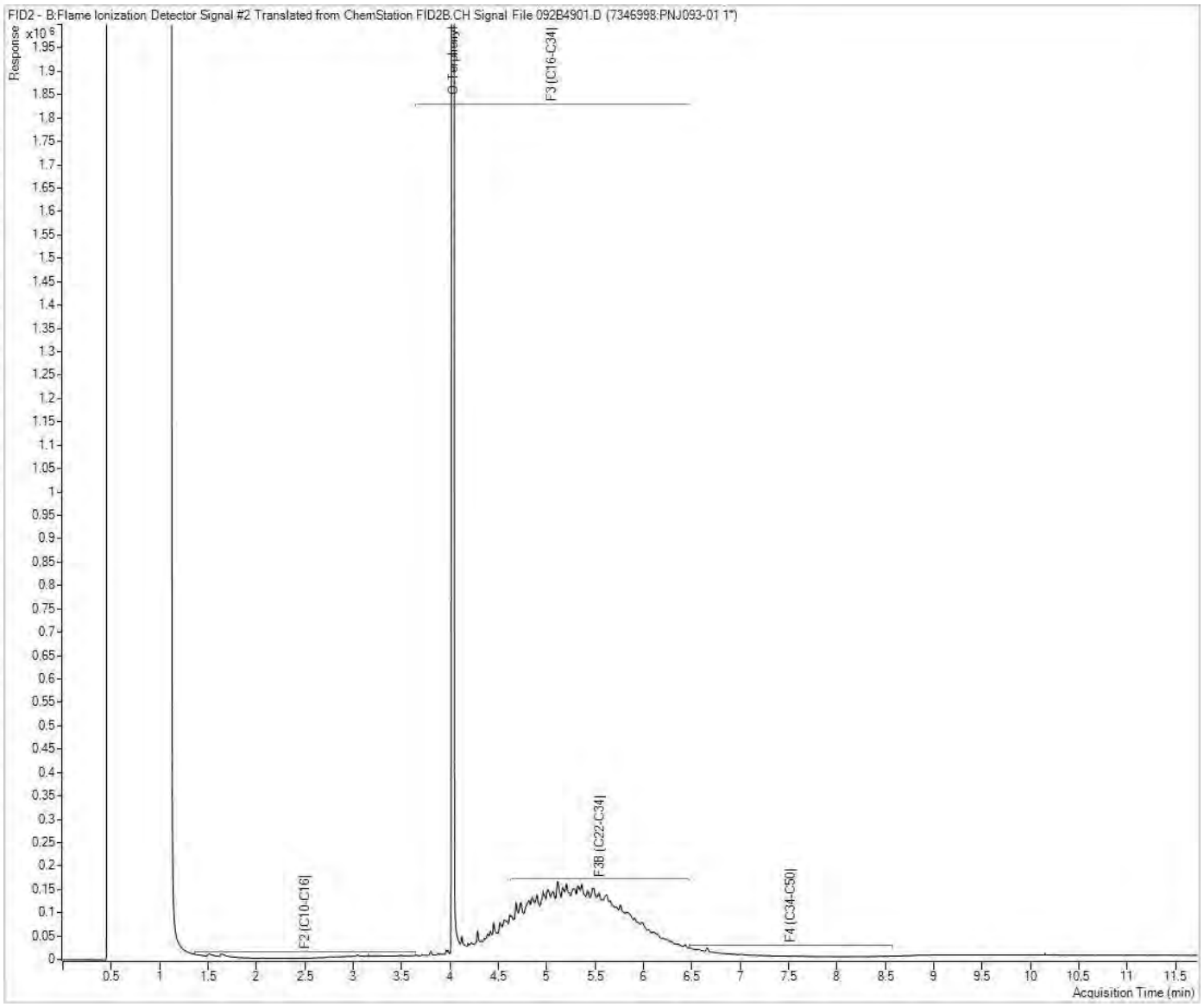
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1C4985
Report Date: 2021/05/27
BV Labs Sample: PNJ093

Golder Associates Ltd
Client Project #: 20368429
Project name: OPG Darlington
Client ID: BH21-4-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

BV Labs - Partial/Rush Results



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 20368429
Your C.O.C. #: 825263-01-01

Attention: Kevan Browne (20368429)

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/05/27
Report #: R6650103
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1D2548
Received: 2021/05/17, 14:15

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	2	N/A	2021/05/25	CAM SOP-00301	EPA 8270D m
ABN Compounds in Water by SIM GC/MS	2	2021/05/21	2021/05/21	CAM SOP-00301	EPA 8270 m
1,3-Dichloropropene Sum	2	N/A	2021/05/21		EPA 8260C m
Chloride by Automated Colourimetry	2	N/A	2021/05/19	CAM SOP-00463	SM 23 4500-Cl E m
Conductivity	2	N/A	2021/05/20	CAM SOP-00414	SM 23 2510 m
Chromium (VI) in Water	2	N/A	2021/05/19	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide	2	N/A	2021/05/20	CAM SOP-00457	OMOE E3015 m
Dinitrotoluene Sum	2	N/A	2021/05/25	CAM SOP - 00301	EPA 8270
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2021/05/19	2021/05/20	CAM SOP-00316	CCME PHC-CWS m
Mercury	2	2021/05/20	2021/05/21	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	2	N/A	2021/05/19	CAM SOP-00447	EPA 6020B m
OC Pesticides (Selected) & PCB (2)	2	2021/05/21	2021/05/23	CAM SOP-00307	EPA 8081A/8082B m
OC Pesticides Summed Parameters	2	N/A	2021/05/19	CAM SOP-00307	EPA 8081A/8082B m
Sodium Adsorption Ratio (SAR)	2	N/A	2021/05/20	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs	2	N/A	2021/05/21	CAM SOP-00230	EPA 8260C m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope

Your Project #: 20368429
Your C.O.C. #: 825263-01-01

Attention: Kevan Browne (20368429)

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/05/27
Report #: R6650103
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1D2548
Received: 2021/05/17, 14:15

dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(2) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key



Bureau Veritas
27 May 2021 11:48:48

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: emese.gitej@bureauveritas.com
Phone# (905)817-5829

==========

This report has been generated and distributed using a secure automated process.
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BV Labs Job #: C1D2548
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Sampler Initials: DC

RESULTS OF ANALYSES OF WATER

BV Labs ID		POX995		POX995		POX996		
Sampling Date		2021/05/07 13:00		2021/05/07 13:00		2021/05/14 14:00		
COC Number		825263-01-01		825263-01-01		825263-01-01		
	UNITS	RINSATE 1	QC Batch	RINSATE 1 Lab-Dup	QC Batch	RINSATE 2	RDL	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A	0.018	7359245			NC		7359245
Inorganics								
Conductivity	mS/cm	0.062	7361989	0.062	7361989	0.006	0.001	7361989

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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O.REG 153 METALS & INORGANICS PKG (WTR)

BV Labs ID		POX995			POX995			POX996		
Sampling Date		2021/05/07 13:00			2021/05/07 13:00			2021/05/14 14:00		
COC Number		825263-01-01			825263-01-01			825263-01-01		
	UNITS	RINSATE 1	RDL	QC Batch	RINSATE 1 Lab-Dup	RDL	QC Batch	RINSATE 2	RDL	QC Batch
Inorganics										
WAD Cyanide (Free)	ug/L	<1	1	7363169	<1	1	7363169	<1	1	7363169
Dissolved Chloride (Cl-)	mg/L	11	1.0	7360347				<1.0	1.0	7360347
Metals										
Chromium (VI)	ug/L	<0.50	0.50	7358365				<0.50	0.50	7358365
Mercury (Hg)	ug/L	<0.10	0.10	7363029				<0.10	0.10	7363029
Dissolved Antimony (Sb)	ug/L	<0.50	0.50	7360074				<0.50	0.50	7360074
Dissolved Arsenic (As)	ug/L	<1.0	1.0	7360074				<1.0	1.0	7360074
Dissolved Barium (Ba)	ug/L	<2.0	2.0	7360074				<2.0	2.0	7360074
Dissolved Beryllium (Be)	ug/L	<0.40	0.40	7360074				<0.40	0.40	7360074
Dissolved Boron (B)	ug/L	<10	10	7360074				<10	10	7360074
Dissolved Cadmium (Cd)	ug/L	<0.090	0.090	7360074				<0.090	0.090	7360074
Dissolved Chromium (Cr)	ug/L	<5.0	5.0	7360074				<5.0	5.0	7360074
Dissolved Cobalt (Co)	ug/L	<0.50	0.50	7360074				<0.50	0.50	7360074
Dissolved Copper (Cu)	ug/L	<0.90	0.90	7360074				<0.90	0.90	7360074
Dissolved Lead (Pb)	ug/L	<0.50	0.50	7360074				<0.50	0.50	7360074
Dissolved Molybdenum (Mo)	ug/L	<0.50	0.50	7360074				<0.50	0.50	7360074
Dissolved Nickel (Ni)	ug/L	<1.0	1.0	7360074				<1.0	1.0	7360074
Dissolved Selenium (Se)	ug/L	<2.0	2.0	7360074				<2.0	2.0	7360074
Dissolved Silver (Ag)	ug/L	<0.090	0.090	7360074				<0.090	0.090	7360074
Dissolved Sodium (Na)	ug/L	170	100	7360074				<100	100	7360074
Dissolved Thallium (Tl)	ug/L	<0.050	0.050	7360074				<0.050	0.050	7360074
Dissolved Uranium (U)	ug/L	<0.10	0.10	7360074				<0.10	0.10	7360074
Dissolved Vanadium (V)	ug/L	<0.50	0.50	7360074				<0.50	0.50	7360074
Dissolved Zinc (Zn)	ug/L	<5.0	5.0	7360074				<5.0	5.0	7360074

RDL = Reportable Detection Limit
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O.REG 153 OC PESTICIDES (WATER)

BV Labs ID		POX995	POX996			POX996		
Sampling Date		2021/05/07 13:00	2021/05/14 14:00			2021/05/14 14:00		
COC Number		825263-01-01	825263-01-01			825263-01-01		
	UNITS	RINSATE 1	RINSATE 2	RDL	QC Batch	RINSATE 2 Lab-Dup	RDL	QC Batch
Calculated Parameters								
Chlordane (Total)	ug/L	<0.005	<0.005	0.005	7358455			
o,p-DDD + p,p-DDD	ug/L	<0.005	<0.005	0.005	7358455			
o,p-DDE + p,p-DDE	ug/L	<0.005	<0.005	0.005	7358455			
o,p-DDT + p,p-DDT	ug/L	<0.005	<0.005	0.005	7358455			
Total Endosulfan	ug/L	<0.005	<0.005	0.005	7358455			
Total PCB	ug/L	<0.05	<0.05	0.05	7358455			
Pesticides & Herbicides								
Aldrin	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
Dieldrin	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
a-Chlordane	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
g-Chlordane	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
o,p-DDD	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
p,p-DDD	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
o,p-DDE	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
p,p-DDE	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
o,p-DDT	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
p,p-DDT	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
Lindane	ug/L	<0.003	<0.003	0.003	7365732	<0.003	0.003	7365732
Endosulfan I (alpha)	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
Endosulfan II (beta)	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
Endrin	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
Heptachlor	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
Heptachlor epoxide	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
Hexachlorobenzene	ug/L	<0.005	<0.005	0.005	7365732	<0.005	0.005	7365732
Hexachlorobutadiene	ug/L	<0.009	<0.009	0.009	7365732	<0.009	0.009	7365732
Hexachloroethane	ug/L	<0.01	<0.01	0.01	7365732	<0.01	0.01	7365732
Methoxychlor	ug/L	<0.01	<0.01	0.01	7365732	<0.01	0.01	7365732
Aroclor 1242	ug/L	<0.05	<0.05	0.05	7365732	<0.05	0.05	7365732
Aroclor 1248	ug/L	<0.05	<0.05	0.05	7365732	<0.05	0.05	7365732
Aroclor 1254	ug/L	<0.05	<0.05	0.05	7365732	<0.05	0.05	7365732
Aroclor 1260	ug/L	<0.05	<0.05	0.05	7365732	<0.05	0.05	7365732
Surrogate Recovery (%)								
2,4,5,6-Tetrachloro-m-xylene	%	52	60		7365732	60		7365732

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 OC PESTICIDES (WATER)

BV Labs ID		POX995	POX996			POX996		
Sampling Date		2021/05/07 13:00	2021/05/14 14:00			2021/05/14 14:00		
COC Number		825263-01-01	825263-01-01			825263-01-01		
	UNITS	RINSATE 1	RINSATE 2	RDL	QC Batch	RINSATE 2 Lab-Dup	RDL	QC Batch
Decachlorobiphenyl	%	60	70		7365732	73		7365732

RDL = Reportable Detection Limit
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O.REG 153 VOCS BY HS & F1-F4 (WATER)

BV Labs ID		POX995	POX996		
Sampling Date		2021/05/07 13:00	2021/05/14 14:00		
COC Number		825263-01-01	825263-01-01		
	UNITS	RINSATE 1	RINSATE 2	RDL	QC Batch
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	0.50	7358139
Volatile Organics					
Acetone (2-Propanone)	ug/L	<10	<10	10	7354621
Benzene	ug/L	<0.20	<0.20	0.20	7354621
Bromodichloromethane	ug/L	<0.50	<0.50	0.50	7354621
Bromoform	ug/L	<1.0	<1.0	1.0	7354621
Bromomethane	ug/L	<0.50	<0.50	0.50	7354621
Carbon Tetrachloride	ug/L	<0.20	<0.20	0.20	7354621
Chlorobenzene	ug/L	<0.20	<0.20	0.20	7354621
Chloroform	ug/L	<0.20	<0.20	0.20	7354621
Dibromochloromethane	ug/L	<0.50	<0.50	0.50	7354621
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	7354621
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	7354621
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	7354621
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	1.0	7354621
1,1-Dichloroethane	ug/L	<0.20	<0.20	0.20	7354621
1,2-Dichloroethane	ug/L	<0.50	<0.50	0.50	7354621
1,1-Dichloroethylene	ug/L	<0.20	<0.20	0.20	7354621
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	7354621
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	7354621
1,2-Dichloropropane	ug/L	<0.20	<0.20	0.20	7354621
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	0.30	7354621
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	0.40	7354621
Ethylbenzene	ug/L	<0.20	<0.20	0.20	7354621
Ethylene Dibromide	ug/L	<0.20	<0.20	0.20	7354621
Hexane	ug/L	<1.0	<1.0	1.0	7354621
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	2.0	7354621
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	10	7354621
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	5.0	7354621
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	0.50	7354621
Styrene	ug/L	<0.50	<0.50	0.50	7354621
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	7354621
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	7354621
Tetrachloroethylene	ug/L	<0.20	<0.20	0.20	7354621
Toluene	ug/L	<0.20	<0.20	0.20	7354621

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QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 VOCS BY HS & F1-F4 (WATER)

BV Labs ID		POX995	POX996		
Sampling Date		2021/05/07 13:00	2021/05/14 14:00		
COC Number		825263-01-01	825263-01-01		
	UNITS	RINSATE 1	RINSATE 2	RDL	QC Batch
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	0.20	7354621
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	0.50	7354621
Trichloroethylene	ug/L	<0.20	<0.20	0.20	7354621
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	0.50	7354621
Vinyl Chloride	ug/L	<0.20	<0.20	0.20	7354621
p+m-Xylene	ug/L	<0.20	<0.20	0.20	7354621
o-Xylene	ug/L	<0.20	<0.20	0.20	7354621
Total Xylenes	ug/L	<0.20	<0.20	0.20	7354621
F1 (C6-C10)	ug/L	<25	<25	25	7354621
F1 (C6-C10) - BTEX	ug/L	<25	<25	25	7354621
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	100	7360065
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	200	7360065
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	200	7360065
Reached Baseline at C50	ug/L	Yes	Yes		7360065
Surrogate Recovery (%)					
o-Terphenyl	%	89	90		7360065
4-Bromofluorobenzene	%	87	88		7354621
D4-1,2-Dichloroethane	%	106	109		7354621
D8-Toluene	%	98	98		7354621

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 SEMIVOLATILES PACKAGE (WATER)

BV Labs ID		POX995	POX996		
Sampling Date		2021/05/07 13:00	2021/05/14 14:00		
COC Number		825263-01-01	825263-01-01		
	UNITS	RINSATE 1	RINSATE 2	RDL	QC Batch
Semivolatile Organics					
1,2,4-Trichlorobenzene	ug/L	<0.1	<0.1	0.1	7364958
1-Methylnaphthalene	ug/L	<0.2	<0.2	0.2	7364958
2,4,5-Trichlorophenol	ug/L	<0.2	<0.2	0.2	7364958
2,4,6-Trichlorophenol	ug/L	<0.2	<0.2	0.2	7364958
2,4-Dichlorophenol	ug/L	<0.1	<0.1	0.1	7364958
2,4-Dimethylphenol	ug/L	<0.5	<0.5	0.5	7364958
2,4-Dinitrophenol	ug/L	<2	<2	2	7364958
2,4-Dinitrotoluene	ug/L	<0.3	<0.3	0.3	7364958
2,6-Dinitrotoluene	ug/L	<0.3	<0.3	0.3	7364958
2-Chlorophenol	ug/L	<0.1	<0.1	0.1	7364958
2-Methylnaphthalene	ug/L	<0.2	<0.2	0.2	7364958
3,3'-Dichlorobenzidine	ug/L	<0.5	<0.5	0.5	7364958
Acenaphthene	ug/L	<0.2	<0.2	0.2	7364958
Acenaphthylene	ug/L	<0.2	<0.2	0.2	7364958
Anthracene	ug/L	<0.05	<0.05	0.05	7364958
Benzo(a)anthracene	ug/L	<0.05	<0.05	0.05	7364958
Benzo(a)pyrene	ug/L	<0.01	<0.01	0.01	7364958
Benzo(b/j)fluoranthene	ug/L	<0.05	<0.05	0.05	7364958
Benzo(g,h,i)perylene	ug/L	<0.05	<0.05	0.05	7364958
Benzo(k)fluoranthene	ug/L	<0.05	<0.05	0.05	7364958
Biphenyl	ug/L	<0.1	<0.1	0.1	7364958
Bis(2-chloroethyl)ether	ug/L	<0.5	<0.5	0.5	7364958
Bis(2-chloroisopropyl)ether	ug/L	<0.5	<0.5	0.5	7364958
Bis(2-ethylhexyl)phthalate	ug/L	<1	<1	1	7364958
Chrysene	ug/L	<0.05	<0.05	0.05	7364958
Dibenzo(a,h)anthracene	ug/L	<0.1	<0.1	0.1	7364958
Diethyl phthalate	ug/L	<0.1	<0.1	0.1	7364958
Dimethyl phthalate	ug/L	<0.1	<0.1	0.1	7364958
Fluoranthene	ug/L	<0.2	<0.2	0.2	7364958
Fluorene	ug/L	<0.2	<0.2	0.2	7364958
Indeno(1,2,3-cd)pyrene	ug/L	<0.1	<0.1	0.1	7364958
Naphthalene	ug/L	<0.2	<0.2	0.2	7364958
p-Chloroaniline	ug/L	<1	<1	1	7364958
Pentachlorophenol	ug/L	<0.1	<0.1	0.1	7364958
Phenanthrene	ug/L	<0.1	<0.1	0.1	7364958

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QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 SEMIVOLATILES PACKAGE (WATER)

BV Labs ID		POX995	POX996		
Sampling Date		2021/05/07 13:00	2021/05/14 14:00		
COC Number		825263-01-01	825263-01-01		
	UNITS	RINSATE 1	RINSATE 2	RDL	QC Batch
Phenol	ug/L	<0.5	<0.5	0.5	7364958
Pyrene	ug/L	<0.05	<0.05	0.05	7364958
Calculated Parameters					
2,4- & 2,6-Dinitrotoluene	ug/L	<0.35	<0.35	0.35	7359243
Methylnaphthalene, 2-(1-)	ug/L	<0.28	<0.28	0.28	7357804
Surrogate Recovery (%)					
2,4,6-Tribromophenol	%	66	79		7364958
2-Fluorobiphenyl	%	80	73		7364958
D14-Terphenyl (FS)	%	101	101		7364958
D5-Nitrobenzene	%	73	64		7364958

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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TEST SUMMARY

BV Labs ID: POX995
Sample ID: RINSATE 1
Matrix: Water

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357804	N/A	2021/05/25	Automated Statchk
ABN Compounds in Water by SIM GC/MS	GC/MS	7364958	2021/05/21	2021/05/21	Milijana Avramovic
1,3-Dichloropropene Sum	CALC	7358139	N/A	2021/05/21	Automated Statchk
Chloride by Automated Colourimetry	KONE	7360347	N/A	2021/05/19	Avneet Kour Sudan
Conductivity	AT	7361989	N/A	2021/05/20	Surinder Rai
Chromium (VI) in Water	IC	7358365	N/A	2021/05/19	Lang Le
Free (WAD) Cyanide	SKAL/CN	7363169	N/A	2021/05/20	Aditiben Patel
Dinitrotoluene Sum	CALC	7359243	N/A	2021/05/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7360065	2021/05/19	2021/05/20	(Kent) Maolin Li
Mercury	CV/AA	7363029	2021/05/20	2021/05/21	Medhat Nasr
Dissolved Metals by ICPMS	ICP/MS	7360074	N/A	2021/05/19	Azita Fazaeli
OC Pesticides (Selected) & PCB	GC/ECD	7365732	2021/05/21	2021/05/23	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358455	N/A	2021/05/19	Automated Statchk
Sodium Adsorption Ratio (SAR)	CALC/MET	7359245	N/A	2021/05/20	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7354621	N/A	2021/05/21	Denis Reid

BV Labs ID: POX995 Dup
Sample ID: RINSATE 1
Matrix: Water

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	7361989	N/A	2021/05/20	Surinder Rai
Free (WAD) Cyanide	SKAL/CN	7363169	N/A	2021/05/20	Aditiben Patel

BV Labs ID: POX996
Sample ID: RINSATE 2
Matrix: Water

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357804	N/A	2021/05/25	Automated Statchk
ABN Compounds in Water by SIM GC/MS	GC/MS	7364958	2021/05/21	2021/05/21	Milijana Avramovic
1,3-Dichloropropene Sum	CALC	7358139	N/A	2021/05/21	Automated Statchk
Chloride by Automated Colourimetry	KONE	7360347	N/A	2021/05/19	Avneet Kour Sudan
Conductivity	AT	7361989	N/A	2021/05/20	Surinder Rai
Chromium (VI) in Water	IC	7358365	N/A	2021/05/19	Lang Le
Free (WAD) Cyanide	SKAL/CN	7363169	N/A	2021/05/20	Aditiben Patel
Dinitrotoluene Sum	CALC	7359243	N/A	2021/05/25	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7360065	2021/05/19	2021/05/20	(Kent) Maolin Li
Mercury	CV/AA	7363029	2021/05/20	2021/05/21	Medhat Nasr
Dissolved Metals by ICPMS	ICP/MS	7360074	N/A	2021/05/19	Azita Fazaeli
OC Pesticides (Selected) & PCB	GC/ECD	7365732	2021/05/21	2021/05/23	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358455	N/A	2021/05/19	Automated Statchk
Sodium Adsorption Ratio (SAR)	CALC/MET	7359245	N/A	2021/05/20	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7354621	N/A	2021/05/21	Denis Reid

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BV Labs Job #: C1D2548
Report Date: 2021/05/27

Golder Associates Ltd
Client Project #: 20368429
Sampler Initials: DC

TEST SUMMARY

BV Labs ID: POX996 Dup
Sample ID: RINSATE 2
Matrix: Water

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
OC Pesticides (Selected) & PCB	GC/ECD	7365732	2021/05/21	2021/05/23	Joy Zhang

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	-1.3°C

Sample POX996 [RINSATE 2] : SAR Analysis: NC = Not Calculable as Calcium and Magnesium were not detected.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7354621	DR1	Matrix Spike	4-Bromofluorobenzene	2021/05/21		106	%	70 - 130
			D4-1,2-Dichloroethane	2021/05/21		106	%	70 - 130
			D8-Toluene	2021/05/21		102	%	70 - 130
			Acetone (2-Propanone)	2021/05/21		106	%	60 - 140
			Benzene	2021/05/21		91	%	70 - 130
			Bromodichloromethane	2021/05/21		99	%	70 - 130
			Bromoform	2021/05/21		102	%	70 - 130
			Bromomethane	2021/05/21		99	%	60 - 140
			Carbon Tetrachloride	2021/05/21		97	%	70 - 130
			Chlorobenzene	2021/05/21		96	%	70 - 130
			Chloroform	2021/05/21		95	%	70 - 130
			Dibromochloromethane	2021/05/21		97	%	70 - 130
			1,2-Dichlorobenzene	2021/05/21		97	%	70 - 130
			1,3-Dichlorobenzene	2021/05/21		99	%	70 - 130
			1,4-Dichlorobenzene	2021/05/21		95	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2021/05/21		85	%	60 - 140
			1,1-Dichloroethane	2021/05/21		92	%	70 - 130
			1,2-Dichloroethane	2021/05/21		97	%	70 - 130
			1,1-Dichloroethylene	2021/05/21		96	%	70 - 130
			cis-1,2-Dichloroethylene	2021/05/21		99	%	70 - 130
			trans-1,2-Dichloroethylene	2021/05/21		96	%	70 - 130
			1,2-Dichloropropane	2021/05/21		95	%	70 - 130
			cis-1,3-Dichloropropene	2021/05/21		103	%	70 - 130
			trans-1,3-Dichloropropene	2021/05/21		114	%	70 - 130
			Ethylbenzene	2021/05/21		89	%	70 - 130
			Ethylene Dibromide	2021/05/21		98	%	70 - 130
			Hexane	2021/05/21		94	%	70 - 130
			Methylene Chloride(Dichloromethane)	2021/05/21		110	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/05/21		109	%	60 - 140
			Methyl Isobutyl Ketone	2021/05/21		103	%	70 - 130
			Methyl t-butyl ether (MTBE)	2021/05/21		92	%	70 - 130
			Styrene	2021/05/21		85	%	70 - 130
			1,1,1,2-Tetrachloroethane	2021/05/21		98	%	70 - 130
			1,1,2,2-Tetrachloroethane	2021/05/21		96	%	70 - 130
			Tetrachloroethylene	2021/05/21		89	%	70 - 130
			Toluene	2021/05/21		90	%	70 - 130
			1,1,1-Trichloroethane	2021/05/21		100	%	70 - 130
			1,1,2-Trichloroethane	2021/05/21		100	%	70 - 130
			Trichloroethylene	2021/05/21		100	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2021/05/21		94	%	70 - 130
			Vinyl Chloride	2021/05/21		92	%	70 - 130
			p+m-Xylene	2021/05/21		96	%	70 - 130
			o-Xylene	2021/05/21		92	%	70 - 130
			F1 (C6-C10)	2021/05/21		101	%	60 - 140
7354621	DR1	Spiked Blank	4-Bromofluorobenzene	2021/05/21		107	%	70 - 130
			D4-1,2-Dichloroethane	2021/05/21		101	%	70 - 130
			D8-Toluene	2021/05/21		103	%	70 - 130
			Acetone (2-Propanone)	2021/05/21		97	%	60 - 140
			Benzene	2021/05/21		87	%	70 - 130
			Bromodichloromethane	2021/05/21		94	%	70 - 130
			Bromoform	2021/05/21		97	%	70 - 130
			Bromomethane	2021/05/21		91	%	60 - 140

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Carbon Tetrachloride	2021/05/21		94	%	70 - 130
			Chlorobenzene	2021/05/21		94	%	70 - 130
			Chloroform	2021/05/21		90	%	70 - 130
			Dibromochloromethane	2021/05/21		94	%	70 - 130
			1,2-Dichlorobenzene	2021/05/21		97	%	70 - 130
			1,3-Dichlorobenzene	2021/05/21		101	%	70 - 130
			1,4-Dichlorobenzene	2021/05/21		99	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2021/05/21		84	%	60 - 140
			1,1-Dichloroethane	2021/05/21		87	%	70 - 130
			1,2-Dichloroethane	2021/05/21		91	%	70 - 130
			1,1-Dichloroethylene	2021/05/21		93	%	70 - 130
			cis-1,2-Dichloroethylene	2021/05/21		94	%	70 - 130
			trans-1,2-Dichloroethylene	2021/05/21		92	%	70 - 130
			1,2-Dichloropropane	2021/05/21		90	%	70 - 130
			cis-1,3-Dichloropropene	2021/05/21		95	%	70 - 130
			trans-1,3-Dichloropropene	2021/05/21		105	%	70 - 130
			Ethylbenzene	2021/05/21		90	%	70 - 130
			Ethylene Dibromide	2021/05/21		93	%	70 - 130
			Hexane	2021/05/21		92	%	70 - 130
			Methylene Chloride(Dichloromethane)	2021/05/21		102	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/05/21		101	%	60 - 140
			Methyl Isobutyl Ketone	2021/05/21		98	%	70 - 130
			Methyl t-butyl ether (MTBE)	2021/05/21		89	%	70 - 130
			Styrene	2021/05/21		86	%	70 - 130
			1,1,1,2-Tetrachloroethane	2021/05/21		96	%	70 - 130
			1,1,2,2-Tetrachloroethane	2021/05/21		91	%	70 - 130
			Tetrachloroethylene	2021/05/21		88	%	70 - 130
			Toluene	2021/05/21		89	%	70 - 130
			1,1,1-Trichloroethane	2021/05/21		97	%	70 - 130
			1,1,2-Trichloroethane	2021/05/21		96	%	70 - 130
			Trichloroethylene	2021/05/21		97	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2021/05/21		92	%	70 - 130
			Vinyl Chloride	2021/05/21		88	%	70 - 130
			p+m-Xylene	2021/05/21		97	%	70 - 130
			o-Xylene	2021/05/21		93	%	70 - 130
			F1 (C6-C10)	2021/05/21		100	%	60 - 140
7354621	DR1	Method Blank	4-Bromofluorobenzene	2021/05/21		89	%	70 - 130
			D4-1,2-Dichloroethane	2021/05/21		103	%	70 - 130
			D8-Toluene	2021/05/21		98	%	70 - 130
			Acetone (2-Propanone)	2021/05/21	<10		ug/L	
			Benzene	2021/05/21	<0.20		ug/L	
			Bromodichloromethane	2021/05/21	<0.50		ug/L	
			Bromoform	2021/05/21	<1.0		ug/L	
			Bromomethane	2021/05/21	<0.50		ug/L	
			Carbon Tetrachloride	2021/05/21	<0.20		ug/L	
			Chlorobenzene	2021/05/21	<0.20		ug/L	
			Chloroform	2021/05/21	<0.20		ug/L	
			Dibromochloromethane	2021/05/21	<0.50		ug/L	
			1,2-Dichlorobenzene	2021/05/21	<0.50		ug/L	
			1,3-Dichlorobenzene	2021/05/21	<0.50		ug/L	
			1,4-Dichlorobenzene	2021/05/21	<0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2021/05/21	<1.0		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,1-Dichloroethane	2021/05/21	<0.20		ug/L	
			1,2-Dichloroethane	2021/05/21	<0.50		ug/L	
			1,1-Dichloroethylene	2021/05/21	<0.20		ug/L	
			cis-1,2-Dichloroethylene	2021/05/21	<0.50		ug/L	
			trans-1,2-Dichloroethylene	2021/05/21	<0.50		ug/L	
			1,2-Dichloropropane	2021/05/21	<0.20		ug/L	
			cis-1,3-Dichloropropene	2021/05/21	<0.30		ug/L	
			trans-1,3-Dichloropropene	2021/05/21	<0.40		ug/L	
			Ethylbenzene	2021/05/21	<0.20		ug/L	
			Ethylene Dibromide	2021/05/21	<0.20		ug/L	
			Hexane	2021/05/21	<1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2021/05/21	<2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2021/05/21	<10		ug/L	
			Methyl Isobutyl Ketone	2021/05/21	<5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2021/05/21	<0.50		ug/L	
			Styrene	2021/05/21	<0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2021/05/21	<0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2021/05/21	<0.50		ug/L	
			Tetrachloroethylene	2021/05/21	<0.20		ug/L	
			Toluene	2021/05/21	<0.20		ug/L	
			1,1,1-Trichloroethane	2021/05/21	<0.20		ug/L	
			1,1,2-Trichloroethane	2021/05/21	<0.50		ug/L	
			Trichloroethylene	2021/05/21	<0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2021/05/21	<0.50		ug/L	
			Vinyl Chloride	2021/05/21	<0.20		ug/L	
			p+m-Xylene	2021/05/21	<0.20		ug/L	
			o-Xylene	2021/05/21	<0.20		ug/L	
			Total Xylenes	2021/05/21	<0.20		ug/L	
			F1 (C6-C10)	2021/05/21	<25		ug/L	
			F1 (C6-C10) - BTEX	2021/05/21	<25		ug/L	
7354621	DR1	RPD	Acetone (2-Propanone)	2021/05/21	NC		%	30
			Benzene	2021/05/21	NC		%	30
			Bromodichloromethane	2021/05/21	NC		%	30
			Bromoform	2021/05/21	NC		%	30
			Bromomethane	2021/05/21	NC		%	30
			Carbon Tetrachloride	2021/05/21	NC		%	30
			Chlorobenzene	2021/05/21	NC		%	30
			Chloroform	2021/05/21	NC		%	30
			Dibromochloromethane	2021/05/21	NC		%	30
			1,2-Dichlorobenzene	2021/05/21	NC		%	30
			1,3-Dichlorobenzene	2021/05/21	NC		%	30
			1,4-Dichlorobenzene	2021/05/21	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2021/05/21	NC		%	30
			1,1-Dichloroethane	2021/05/21	NC		%	30
			1,2-Dichloroethane	2021/05/21	NC		%	30
			1,1-Dichloroethylene	2021/05/21	NC		%	30
			cis-1,2-Dichloroethylene	2021/05/21	NC		%	30
			trans-1,2-Dichloroethylene	2021/05/21	NC		%	30
			1,2-Dichloropropane	2021/05/21	NC		%	30
			cis-1,3-Dichloropropene	2021/05/21	NC		%	30
			trans-1,3-Dichloropropene	2021/05/21	NC		%	30
			Ethylbenzene	2021/05/21	NC		%	30

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Ethylene Dibromide	2021/05/21	NC		%	30
			Hexane	2021/05/21	NC		%	30
			Methylene Chloride(Dichloromethane)	2021/05/21	NC		%	30
			Methyl Ethyl Ketone (2-Butanone)	2021/05/21	NC		%	30
			Methyl Isobutyl Ketone	2021/05/21	NC		%	30
			Methyl t-butyl ether (MTBE)	2021/05/21	NC		%	30
			Styrene	2021/05/21	NC		%	30
			1,1,1,2-Tetrachloroethane	2021/05/21	NC		%	30
			1,1,2,2-Tetrachloroethane	2021/05/21	NC		%	30
			Tetrachloroethylene	2021/05/21	NC		%	30
			Toluene	2021/05/21	NC		%	30
			1,1,1-Trichloroethane	2021/05/21	NC		%	30
			1,1,2-Trichloroethane	2021/05/21	NC		%	30
			Trichloroethylene	2021/05/21	NC		%	30
			Trichlorofluoromethane (FREON 11)	2021/05/21	NC		%	30
			Vinyl Chloride	2021/05/21	NC		%	30
			p+m-Xylene	2021/05/21	NC		%	30
			o-Xylene	2021/05/21	NC		%	30
			Total Xylenes	2021/05/21	NC		%	30
			F1 (C6-C10)	2021/05/21	NC		%	30
			F1 (C6-C10) - BTEX	2021/05/21	NC		%	30
7358365	LLE	Matrix Spike	Chromium (VI)	2021/05/19		100	%	80 - 120
7358365	LLE	Spiked Blank	Chromium (VI)	2021/05/19		99	%	80 - 120
7358365	LLE	Method Blank	Chromium (VI)	2021/05/19	<0.50		ug/L	
7358365	LLE	RPD	Chromium (VI)	2021/05/19	NC		%	20
7360065	KLI	Matrix Spike	o-Terphenyl	2021/05/19		91	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/19		102	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2021/05/19		101	%	60 - 130
			F4 (C34-C50 Hydrocarbons)	2021/05/19		103	%	60 - 130
7360065	KLI	Spiked Blank	o-Terphenyl	2021/05/19		92	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/19		103	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2021/05/19		105	%	60 - 130
			F4 (C34-C50 Hydrocarbons)	2021/05/19		106	%	60 - 130
7360065	KLI	Method Blank	o-Terphenyl	2021/05/19		92	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/19	<100		ug/L	
			F3 (C16-C34 Hydrocarbons)	2021/05/19	<200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2021/05/19	<200		ug/L	
7360065	KLI	RPD	F2 (C10-C16 Hydrocarbons)	2021/05/20	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/05/20	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/05/20	NC		%	30
7360074	AFZ	Matrix Spike	Dissolved Antimony (Sb)	2021/05/19		104	%	80 - 120
			Dissolved Arsenic (As)	2021/05/19		101	%	80 - 120
			Dissolved Barium (Ba)	2021/05/19		100	%	80 - 120
			Dissolved Beryllium (Be)	2021/05/19		98	%	80 - 120
			Dissolved Boron (B)	2021/05/19		98	%	80 - 120
			Dissolved Cadmium (Cd)	2021/05/19		101	%	80 - 120
			Dissolved Chromium (Cr)	2021/05/19		98	%	80 - 120
			Dissolved Cobalt (Co)	2021/05/19		96	%	80 - 120
			Dissolved Copper (Cu)	2021/05/19		98	%	80 - 120
			Dissolved Lead (Pb)	2021/05/19		95	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/05/19		103	%	80 - 120
			Dissolved Nickel (Ni)	2021/05/19		95	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Selenium (Se)	2021/05/19		100	%	80 - 120
			Dissolved Silver (Ag)	2021/05/19		98	%	80 - 120
			Dissolved Sodium (Na)	2021/05/19		100	%	80 - 120
			Dissolved Thallium (Tl)	2021/05/19		96	%	80 - 120
			Dissolved Uranium (U)	2021/05/19		101	%	80 - 120
			Dissolved Vanadium (V)	2021/05/19		99	%	80 - 120
			Dissolved Zinc (Zn)	2021/05/19		98	%	80 - 120
7360074	AFZ	Spiked Blank	Dissolved Antimony (Sb)	2021/05/19		102	%	80 - 120
			Dissolved Arsenic (As)	2021/05/19		99	%	80 - 120
			Dissolved Barium (Ba)	2021/05/19		97	%	80 - 120
			Dissolved Beryllium (Be)	2021/05/19		96	%	80 - 120
			Dissolved Boron (B)	2021/05/19		95	%	80 - 120
			Dissolved Cadmium (Cd)	2021/05/19		100	%	80 - 120
			Dissolved Chromium (Cr)	2021/05/19		97	%	80 - 120
			Dissolved Cobalt (Co)	2021/05/19		97	%	80 - 120
			Dissolved Copper (Cu)	2021/05/19		100	%	80 - 120
			Dissolved Lead (Pb)	2021/05/19		95	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/05/19		101	%	80 - 120
			Dissolved Nickel (Ni)	2021/05/19		95	%	80 - 120
			Dissolved Selenium (Se)	2021/05/19		99	%	80 - 120
			Dissolved Silver (Ag)	2021/05/19		98	%	80 - 120
			Dissolved Sodium (Na)	2021/05/19		98	%	80 - 120
			Dissolved Thallium (Tl)	2021/05/19		95	%	80 - 120
			Dissolved Uranium (U)	2021/05/19		101	%	80 - 120
			Dissolved Vanadium (V)	2021/05/19		97	%	80 - 120
			Dissolved Zinc (Zn)	2021/05/19		95	%	80 - 120
7360074	AFZ	Method Blank	Dissolved Antimony (Sb)	2021/05/19	<0.50		ug/L	
			Dissolved Arsenic (As)	2021/05/19	<1.0		ug/L	
			Dissolved Barium (Ba)	2021/05/19	<2.0		ug/L	
			Dissolved Beryllium (Be)	2021/05/19	<0.40		ug/L	
			Dissolved Boron (B)	2021/05/19	<10		ug/L	
			Dissolved Cadmium (Cd)	2021/05/19	<0.090		ug/L	
			Dissolved Chromium (Cr)	2021/05/19	<5.0		ug/L	
			Dissolved Cobalt (Co)	2021/05/19	<0.50		ug/L	
			Dissolved Copper (Cu)	2021/05/19	<0.90		ug/L	
			Dissolved Lead (Pb)	2021/05/19	<0.50		ug/L	
			Dissolved Molybdenum (Mo)	2021/05/19	<0.50		ug/L	
			Dissolved Nickel (Ni)	2021/05/19	<1.0		ug/L	
			Dissolved Selenium (Se)	2021/05/19	<2.0		ug/L	
			Dissolved Silver (Ag)	2021/05/19	<0.090		ug/L	
			Dissolved Sodium (Na)	2021/05/19	<100		ug/L	
			Dissolved Thallium (Tl)	2021/05/19	<0.050		ug/L	
			Dissolved Uranium (U)	2021/05/19	<0.10		ug/L	
			Dissolved Vanadium (V)	2021/05/19	<0.50		ug/L	
			Dissolved Zinc (Zn)	2021/05/19	<5.0		ug/L	
7360074	AFZ	RPD	Dissolved Antimony (Sb)	2021/05/19	NC		%	20
			Dissolved Arsenic (As)	2021/05/19	NC		%	20
			Dissolved Barium (Ba)	2021/05/19	1.1		%	20
			Dissolved Beryllium (Be)	2021/05/19	NC		%	20
			Dissolved Boron (B)	2021/05/19	NC		%	20
			Dissolved Cadmium (Cd)	2021/05/19	NC		%	20
			Dissolved Chromium (Cr)	2021/05/19	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Cobalt (Co)	2021/05/19	NC		%	20
			Dissolved Copper (Cu)	2021/05/19	2.9		%	20
			Dissolved Lead (Pb)	2021/05/19	NC		%	20
			Dissolved Molybdenum (Mo)	2021/05/19	NC		%	20
			Dissolved Nickel (Ni)	2021/05/19	NC		%	20
			Dissolved Selenium (Se)	2021/05/19	NC		%	20
			Dissolved Silver (Ag)	2021/05/19	NC		%	20
			Dissolved Sodium (Na)	2021/05/19	2.3		%	20
			Dissolved Thallium (Tl)	2021/05/19	NC		%	20
			Dissolved Uranium (U)	2021/05/19	7.4		%	20
			Dissolved Vanadium (V)	2021/05/19	9.7		%	20
			Dissolved Zinc (Zn)	2021/05/19	NC		%	20
7360347	AKD	Matrix Spike	Dissolved Chloride (Cl-)	2021/05/19		NC	%	80 - 120
7360347	AKD	Spiked Blank	Dissolved Chloride (Cl-)	2021/05/19		102	%	80 - 120
7360347	AKD	Method Blank	Dissolved Chloride (Cl-)	2021/05/19	<1.0		mg/L	
7360347	AKD	RPD	Dissolved Chloride (Cl-)	2021/05/19	3.0		%	20
7361989	SAU	Spiked Blank	Conductivity	2021/05/20		101	%	85 - 115
7361989	SAU	Method Blank	Conductivity	2021/05/20	<0.001		mS/cm	
7361989	SAU	RPD [POX995-03]	Conductivity	2021/05/20	0.48		%	25
7363029	MEN	Matrix Spike	Mercury (Hg)	2021/05/21		103	%	75 - 125
7363029	MEN	Spiked Blank	Mercury (Hg)	2021/05/21		96	%	80 - 120
7363029	MEN	Method Blank	Mercury (Hg)	2021/05/21	<0.10		ug/L	
7363029	MEN	RPD	Mercury (Hg)	2021/05/21	NC		%	20
7363169	ABP	Matrix Spike [POX995-06]	WAD Cyanide (Free)	2021/05/20		98	%	80 - 120
7363169	ABP	Spiked Blank	WAD Cyanide (Free)	2021/05/20		100	%	80 - 120
7363169	ABP	Method Blank	WAD Cyanide (Free)	2021/05/20	<1		ug/L	
7363169	ABP	RPD [POX995-06]	WAD Cyanide (Free)	2021/05/20	NC		%	20
7364958	MA	Matrix Spike [POX996-01]	2,4,6-Tribromophenol	2021/05/21		89	%	50 - 130
			2-Fluorobiphenyl	2021/05/21		75	%	50 - 130
			D14-Terphenyl (FS)	2021/05/21		99	%	50 - 130
			D5-Nitrobenzene	2021/05/21		74	%	50 - 130
			1,2,4-Trichlorobenzene	2021/05/21		71	%	50 - 130
			1-Methylnaphthalene	2021/05/21		101	%	50 - 130
			2,4,5-Trichlorophenol	2021/05/21		93	%	50 - 130
			2,4,6-Trichlorophenol	2021/05/21		89	%	50 - 130
			2,4-Dichlorophenol	2021/05/21		107	%	50 - 130
			2,4-Dimethylphenol	2021/05/21		66	%	30 - 130
			2,4-Dinitrophenol	2021/05/21		52	%	30 - 130
			2,4-Dinitrotoluene	2021/05/21		92	%	50 - 130
			2,6-Dinitrotoluene	2021/05/21		86	%	50 - 130
			2-Chlorophenol	2021/05/21		89	%	50 - 130
			2-Methylnaphthalene	2021/05/21		98	%	50 - 130
			3,3'-Dichlorobenzidine	2021/05/21		88	%	30 - 130
			Acenaphthene	2021/05/21		93	%	50 - 130
			Acenaphthylene	2021/05/21		90	%	50 - 130
			Anthracene	2021/05/21		90	%	50 - 130
			Benzo(a)anthracene	2021/05/21		109	%	50 - 130
			Benzo(a)pyrene	2021/05/21		85	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/21		115	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/21		89	%	50 - 130
			Benzo(k)fluoranthene	2021/05/21		95	%	50 - 130
			Biphenyl	2021/05/21		85	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Bis(2-chloroethyl)ether	2021/05/21		79	%	50 - 130
			Bis(2-chloroisopropyl)ether	2021/05/21		71	%	50 - 130
			Bis(2-ethylhexyl)phthalate	2021/05/21		76	%	50 - 130
			Chrysene	2021/05/21		111	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/21		93	%	50 - 130
			Diethyl phthalate	2021/05/21		89	%	50 - 130
			Dimethyl phthalate	2021/05/21		90	%	50 - 130
			Fluoranthene	2021/05/21		102	%	50 - 130
			Fluorene	2021/05/21		101	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/21		93	%	50 - 130
			Naphthalene	2021/05/21		90	%	50 - 130
			p-Chloroaniline	2021/05/21		84	%	30 - 130
			Pentachlorophenol	2021/05/21		65	%	50 - 130
			Phenanthrene	2021/05/21		95	%	50 - 130
			Phenol	2021/05/21		36	%	30 - 130
			Pyrene	2021/05/21		95	%	50 - 130
7364958	MA	Spiked Blank	2,4,6-Tribromophenol	2021/05/21		83	%	50 - 130
			2-Fluorobiphenyl	2021/05/21		72	%	50 - 130
			D14-Terphenyl (FS)	2021/05/21		98	%	50 - 130
			D5-Nitrobenzene	2021/05/21		74	%	50 - 130
			1,2,4-Trichlorobenzene	2021/05/21		72	%	50 - 130
			1-Methylnaphthalene	2021/05/21		96	%	50 - 130
			2,4,5-Trichlorophenol	2021/05/21		94	%	50 - 130
			2,4,6-Trichlorophenol	2021/05/21		89	%	50 - 130
			2,4-Dichlorophenol	2021/05/21		102	%	50 - 130
			2,4-Dimethylphenol	2021/05/21		66	%	30 - 130
			2,4-Dinitrophenol	2021/05/21		79	%	30 - 130
			2,4-Dinitrotoluene	2021/05/21		95	%	50 - 130
			2,6-Dinitrotoluene	2021/05/21		86	%	50 - 130
			2-Chlorophenol	2021/05/21		86	%	50 - 130
			2-Methylnaphthalene	2021/05/21		94	%	50 - 130
			3,3'-Dichlorobenzidine	2021/05/21		91	%	30 - 130
			Acenaphthene	2021/05/21		91	%	50 - 130
			Acenaphthylene	2021/05/21		89	%	50 - 130
			Anthracene	2021/05/21		92	%	50 - 130
			Benzo(a)anthracene	2021/05/21		112	%	50 - 130
			Benzo(a)pyrene	2021/05/21		95	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/21		116	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/21		115	%	50 - 130
			Benzo(k)fluoranthene	2021/05/21		100	%	50 - 130
			Biphenyl	2021/05/21		82	%	50 - 130
			Bis(2-chloroethyl)ether	2021/05/21		78	%	50 - 130
			Bis(2-chloroisopropyl)ether	2021/05/21		71	%	50 - 130
			Bis(2-ethylhexyl)phthalate	2021/05/21		79	%	50 - 130
			Chrysene	2021/05/21		115	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/21		113	%	50 - 130
			Diethyl phthalate	2021/05/21		90	%	50 - 130
			Dimethyl phthalate	2021/05/21		91	%	50 - 130
			Fluoranthene	2021/05/21		105	%	50 - 130
			Fluorene	2021/05/21		101	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/21		112	%	50 - 130
			Naphthalene	2021/05/21		89	%	50 - 130

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			p-Chloroaniline	2021/05/21		80	%	30 - 130
			Pentachlorophenol	2021/05/21		70	%	50 - 130
			Phenanthrene	2021/05/21		95	%	50 - 130
			Phenol	2021/05/21		35	%	30 - 130
			Pyrene	2021/05/21		95	%	50 - 130
7364958	MA	Method Blank	2,4,6-Tribromophenol	2021/05/21		77	%	50 - 130
			2-Fluorobiphenyl	2021/05/21		77	%	50 - 130
			D14-Terphenyl (FS)	2021/05/21		97	%	50 - 130
			D5-Nitrobenzene	2021/05/21		70	%	50 - 130
			1,2,4-Trichlorobenzene	2021/05/21	<0.1		ug/L	
			1-Methylnaphthalene	2021/05/21	<0.2		ug/L	
			2,4,5-Trichlorophenol	2021/05/21	<0.2		ug/L	
			2,4,6-Trichlorophenol	2021/05/21	<0.2		ug/L	
			2,4-Dichlorophenol	2021/05/21	<0.1		ug/L	
			2,4-Dimethylphenol	2021/05/21	<0.5		ug/L	
			2,4-Dinitrophenol	2021/05/21	<2		ug/L	
			2,4-Dinitrotoluene	2021/05/21	<0.3		ug/L	
			2,6-Dinitrotoluene	2021/05/21	<0.3		ug/L	
			2-Chlorophenol	2021/05/21	<0.1		ug/L	
			2-Methylnaphthalene	2021/05/21	<0.2		ug/L	
			3,3'-Dichlorobenzidine	2021/05/21	<0.5		ug/L	
			Acenaphthene	2021/05/21	<0.2		ug/L	
			Acenaphthylene	2021/05/21	<0.2		ug/L	
			Anthracene	2021/05/21	<0.05		ug/L	
			Benzo(a)anthracene	2021/05/21	<0.05		ug/L	
			Benzo(a)pyrene	2021/05/21	<0.01		ug/L	
			Benzo(b/j)fluoranthene	2021/05/21	<0.05		ug/L	
			Benzo(g,h,i)perylene	2021/05/21	<0.05		ug/L	
			Benzo(k)fluoranthene	2021/05/21	<0.05		ug/L	
			Biphenyl	2021/05/21	<0.1		ug/L	
			Bis(2-chloroethyl)ether	2021/05/21	<0.5		ug/L	
			Bis(2-chloroisopropyl)ether	2021/05/21	<0.5		ug/L	
			Bis(2-ethylhexyl)phthalate	2021/05/21	<1		ug/L	
			Chrysene	2021/05/21	<0.05		ug/L	
			Dibenzo(a,h)anthracene	2021/05/21	<0.1		ug/L	
			Diethyl phthalate	2021/05/21	<0.1		ug/L	
			Dimethyl phthalate	2021/05/21	<0.1		ug/L	
			Fluoranthene	2021/05/21	<0.2		ug/L	
			Fluorene	2021/05/21	<0.2		ug/L	
			Indeno(1,2,3-cd)pyrene	2021/05/21	<0.1		ug/L	
			Naphthalene	2021/05/21	<0.2		ug/L	
			p-Chloroaniline	2021/05/21	<1		ug/L	
			Pentachlorophenol	2021/05/21	<0.1		ug/L	
			Phenanthrene	2021/05/21	<0.1		ug/L	
			Phenol	2021/05/21	<0.5		ug/L	
			Pyrene	2021/05/21	<0.05		ug/L	
7364958	MA	RPD	Bis(2-ethylhexyl)phthalate	2021/05/25	NC		%	30
7365732	JZ	Matrix Spike	2,4,5,6-Tetrachloro-m-xylene	2021/05/23		70	%	50 - 130
			Decachlorobiphenyl	2021/05/23		103	%	50 - 130
			Aldrin	2021/05/23		70	%	50 - 130
			Dieldrin	2021/05/23		92	%	50 - 130
			a-Chlordane	2021/05/23		81	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			g-Chlordane	2021/05/23		83	%	50 - 130
			o,p-DDD	2021/05/23		88	%	50 - 130
			p,p-DDD	2021/05/23		91	%	50 - 130
			o,p-DDE	2021/05/23		91	%	50 - 130
			p,p-DDE	2021/05/23		80	%	50 - 130
			o,p-DDT	2021/05/23		86	%	50 - 130
			p,p-DDT	2021/05/23		100	%	50 - 130
			Lindane	2021/05/23		74	%	50 - 130
			Endosulfan I (alpha)	2021/05/23		83	%	50 - 130
			Endosulfan II (beta)	2021/05/23		82	%	50 - 130
			Endrin	2021/05/23		88	%	50 - 130
			Heptachlor	2021/05/23		74	%	50 - 130
			Heptachlor epoxide	2021/05/23		108	%	50 - 130
			Hexachlorobenzene	2021/05/23		82	%	50 - 130
			Hexachlorobutadiene	2021/05/23		77	%	50 - 130
			Hexachloroethane	2021/05/23		71	%	50 - 130
			Methoxychlor	2021/05/23		99	%	50 - 130
7365732	JZ	Spiked Blank	2,4,5,6-Tetrachloro-m-xylene	2021/05/23		62	%	50 - 130
			Decachlorobiphenyl	2021/05/23		104	%	50 - 130
			Aldrin	2021/05/23		71	%	50 - 130
			Dieldrin	2021/05/23		97	%	50 - 130
			a-Chlordane	2021/05/23		87	%	50 - 130
			g-Chlordane	2021/05/23		87	%	50 - 130
			o,p-DDD	2021/05/23		95	%	50 - 130
			p,p-DDD	2021/05/23		91	%	50 - 130
			o,p-DDE	2021/05/23		98	%	50 - 130
			p,p-DDE	2021/05/23		88	%	50 - 130
			o,p-DDT	2021/05/23		90	%	50 - 130
			p,p-DDT	2021/05/23		97	%	50 - 130
			Lindane	2021/05/23		77	%	50 - 130
			Endosulfan I (alpha)	2021/05/23		90	%	50 - 130
			Endosulfan II (beta)	2021/05/23		82	%	50 - 130
			Endrin	2021/05/23		92	%	50 - 130
			Heptachlor	2021/05/23		75	%	50 - 130
			Heptachlor epoxide	2021/05/23		101	%	50 - 130
			Hexachlorobenzene	2021/05/23		84	%	50 - 130
			Hexachlorobutadiene	2021/05/23		74	%	50 - 130
			Hexachloroethane	2021/05/23		70	%	50 - 130
			Methoxychlor	2021/05/23		102	%	50 - 130
7365732	JZ	RPD	Aldrin	2021/05/23	0.75		%	30
			Dieldrin	2021/05/23	4.5		%	30
			a-Chlordane	2021/05/23	4.3		%	30
			g-Chlordane	2021/05/23	4.3		%	30
			o,p-DDD	2021/05/23	3.9		%	30
			p,p-DDD	2021/05/23	2.0		%	30
			o,p-DDE	2021/05/23	17		%	30
			p,p-DDE	2021/05/23	11		%	30
			o,p-DDT	2021/05/23	4.9		%	30
			p,p-DDT	2021/05/23	4.4		%	30
			Lindane	2021/05/23	0.79		%	30
			Endosulfan I (alpha)	2021/05/23	9.3		%	30
			Endosulfan II (beta)	2021/05/23	1.4		%	30

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Endrin	2021/05/23	3.5		%	30
			Heptachlor	2021/05/23	2.1		%	30
			Heptachlor epoxide	2021/05/23	3.1		%	30
			Hexachlorobenzene	2021/05/23	0.84		%	30
			Hexachlorobutadiene	2021/05/23	5.8		%	30
			Hexachloroethane	2021/05/23	3.8		%	30
			Methoxychlor	2021/05/23	0.64		%	30
7365732	JZ	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2021/05/23		60	%	50 - 130
			Decachlorobiphenyl	2021/05/23		89	%	50 - 130
			Aldrin	2021/05/23	<0.005		ug/L	
			Dieldrin	2021/05/23	<0.005		ug/L	
			a-Chlordane	2021/05/23	<0.005		ug/L	
			g-Chlordane	2021/05/23	<0.005		ug/L	
			o,p-DDD	2021/05/23	<0.005		ug/L	
			p,p-DDD	2021/05/23	<0.005		ug/L	
			o,p-DDE	2021/05/23	<0.005		ug/L	
			p,p-DDE	2021/05/23	<0.005		ug/L	
			o,p-DDT	2021/05/23	<0.005		ug/L	
			p,p-DDT	2021/05/23	<0.005		ug/L	
			Lindane	2021/05/23	<0.003		ug/L	
			Endosulfan I (alpha)	2021/05/23	<0.005		ug/L	
			Endosulfan II (beta)	2021/05/23	<0.005		ug/L	
			Endrin	2021/05/23	<0.005		ug/L	
			Heptachlor	2021/05/23	<0.005		ug/L	
			Heptachlor epoxide	2021/05/23	<0.005		ug/L	
			Hexachlorobenzene	2021/05/23	<0.005		ug/L	
			Hexachlorobutadiene	2021/05/23	<0.009		ug/L	
			Hexachloroethane	2021/05/23	<0.01		ug/L	
			Methoxychlor	2021/05/23	<0.01		ug/L	
			Aroclor 1242	2021/05/23	<0.05		ug/L	
			Aroclor 1248	2021/05/23	<0.05		ug/L	
			Aroclor 1254	2021/05/23	<0.05		ug/L	
			Aroclor 1260	2021/05/23	<0.05		ug/L	
7365732	JZ	RPD [POX996-02]	Aldrin	2021/05/23	NC		%	30
			Dieldrin	2021/05/23	NC		%	30
			a-Chlordane	2021/05/23	NC		%	30
			g-Chlordane	2021/05/23	NC		%	30
			o,p-DDD	2021/05/23	NC		%	30
			p,p-DDD	2021/05/23	NC		%	30
			o,p-DDE	2021/05/23	NC		%	30
			p,p-DDE	2021/05/23	NC		%	30
			o,p-DDT	2021/05/23	NC		%	30
			p,p-DDT	2021/05/23	NC		%	30
			Lindane	2021/05/23	NC		%	30
			Endosulfan I (alpha)	2021/05/23	NC		%	30
			Endosulfan II (beta)	2021/05/23	NC		%	30
			Endrin	2021/05/23	NC		%	30
			Heptachlor	2021/05/23	NC		%	30
			Heptachlor epoxide	2021/05/23	NC		%	30
			Hexachlorobenzene	2021/05/23	NC		%	30
			Hexachlorobutadiene	2021/05/23	NC		%	30
			Hexachloroethane	2021/05/23	NC		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methoxychlor	2021/05/23	NC		%	30
			Aroclor 1242	2021/05/23	NC		%	30
			Aroclor 1248	2021/05/23	NC		%	30
			Aroclor 1254	2021/05/23	NC		%	30
			Aroclor 1260	2021/05/23	NC		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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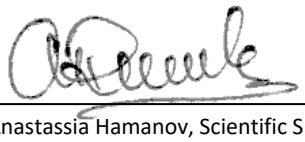
VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Anastassia Hamanov, Scientific Specialist

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Your Project #: 20368429
Site Location: OPG Darlington
Your C.O.C. #: 345314

Attention: Kevan Browne (20368429)

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/05/26
Report #: R6648969
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1D3619
Received: 2021/05/17, 14:25

Sample Matrix: Soil
Samples Received: 75

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	1	N/A	2021/05/20	CAM SOP-00301	EPA 8270D m
Methylnaphthalene Sum	24	N/A	2021/05/21	CAM SOP-00301	EPA 8270D m
Methylnaphthalene Sum	4	N/A	2021/05/25	CAM SOP-00301	EPA 8270D m
ABN Compounds in soil by GC/MS	4	2021/05/20	2021/05/21	CAM SOP-00301	EPA 8270 m
Hot Water Extractable Boron	38	2021/05/20	2021/05/20	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron	1	2021/05/21	2021/05/21	CAM SOP-00408	R153 Ana. Prot. 2011
Free (WAD) Cyanide	19	2021/05/19	2021/05/20	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide	20	2021/05/19	2021/05/21	CAM SOP-00457	OMOE E3015 m
Conductivity	21	2021/05/21	2021/05/21	CAM SOP-00414	OMOE E3530 v1 m
Conductivity	18	2021/05/25	2021/05/25	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	19	2021/05/19	2021/05/20	CAM SOP-00436	EPA 3060/7199 m
Hexavalent Chromium in Soil by IC (1)	20	2021/05/20	2021/05/21	CAM SOP-00436	EPA 3060/7199 m
Dinitrotoluene Sum	4	2021/05/18	2021/05/25	CAM SOP - 00301	EPA 8270
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	9	N/A	2021/05/19	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	62	N/A	2021/05/20	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	5	2021/05/18	2021/05/19	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	16	2021/05/19	2021/05/19	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	44	2021/05/19	2021/05/20	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	5	2021/05/20	2021/05/20	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	39	2021/05/20	2021/05/21	CAM SOP-00447	EPA 6020B m
Moisture	70	N/A	2021/05/19	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	4	N/A	2021/05/20	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (4)	2	2021/05/20	2021/05/20	CAM SOP-00307	SW846 8081, 8082
OC Pesticides (Selected) & PCB (4)	3	2021/05/20	2021/05/21	CAM SOP-00307	SW846 8081, 8082
OC Pesticides (Selected) & PCB (4)	9	2021/05/22	2021/05/23	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	14	N/A	2021/05/20	CAM SOP-00307	EPA 8081/8082 m
PAH Compounds in Soil by GC/MS (SIM)	1	2021/05/18	2021/05/19	CAM SOP-00318	EPA 8270D m
PAH Compounds in Soil by GC/MS (SIM)	4	2021/05/20	2021/05/20	CAM SOP-00318	EPA 8270D m
PAH Compounds in Soil by GC/MS (SIM)	20	2021/05/20	2021/05/21	CAM SOP-00318	EPA 8270D m
Polychlorinated Biphenyl in Soil	7	2021/05/19	2021/05/20	CAM SOP-00309	EPA 8082A m
pH CaCl2 EXTRACT	39	2021/05/20	2021/05/20	CAM SOP-00413	EPA 9045 D m

Your Project #: 20368429
Site Location: OPG Darlington
Your C.O.C. #: 345314

Attention: Kevan Browne (20368429)

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/05/26
Report #: R6648969
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1D3619
Received: 2021/05/17, 14:25

Sample Matrix: Soil
Samples Received: 75

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sodium Adsorption Ratio (SAR)	21	N/A	2021/05/21	CAM SOP-00102	EPA 6010C
Sodium Adsorption Ratio (SAR)	18	N/A	2021/05/25	CAM SOP-00102	EPA 6010C

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
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Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.
(2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(4) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

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Your Project #: 20368429
Site Location: OPG Darlington
Your C.O.C. #: 345314

Attention: Kevan Browne (20368429)

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/05/26
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Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1D3619
Received: 2021/05/17, 14:25

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Bureau Veritas
26 May 2021 16:04:57

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: emese.gitej@bureauveritas.com
Phone# (905)817-5829
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BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PPD783			PPD783			PPD784	PPD785		
Sampling Date		2021/05/14 15:05			2021/05/14 15:05			2021/05/14 15:10	2021/05/14 15:15		
COC Number		345314			345314			345314	345314		
	UNITS	BH21-6-1A	RDL	QC Batch	BH21-6-1A Lab-Dup	RDL	QC Batch	BH21-23-1A	BH21-24-1A	RDL	QC Batch
Calculated Parameters											
Sodium Adsorption Ratio	N/A	1.2		7358915				1.6	2.8		7358915
Inorganics											
Conductivity	mS/cm	0.28	0.002	7369001				0.23	0.35	0.002	7365038
Moisture	%	10	1.0	7361436				19	17	1.0	7361436
Available (CaCl2) pH	pH	7.86		7362920				7.47	7.58		7362920
WAD Cyanide (Free)	ug/g	<0.01	0.01	7361106	<0.01	0.01	7361106	0.02	<0.01	0.01	7361106
Chromium (VI)	ug/g	<0.18	0.18	7362629				<0.18	<0.18	0.18	7362629
Metals											
Hot Water Ext. Boron (B)	ug/g	0.24	0.050	7363627				0.24	0.27	0.050	7363044
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7363472				<0.20	<0.20	0.20	7363510
Acid Extractable Arsenic (As)	ug/g	1.4	1.0	7363472				1.7	1.7	1.0	7363510
Acid Extractable Barium (Ba)	ug/g	40	0.50	7363472				89	140	0.50	7363510
Acid Extractable Beryllium (Be)	ug/g	0.23	0.20	7363472				0.45	0.60	0.20	7363510
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7363472				6.2	8.3	5.0	7363510
Acid Extractable Cadmium (Cd)	ug/g	0.12	0.10	7363472				0.13	0.18	0.10	7363510
Acid Extractable Chromium (Cr)	ug/g	15	1.0	7363472				19	26	1.0	7363510
Acid Extractable Cobalt (Co)	ug/g	3.3	0.10	7363472				5.5	8.1	0.10	7363510
Acid Extractable Copper (Cu)	ug/g	13	0.50	7363472				13	17	0.50	7363510
Acid Extractable Lead (Pb)	ug/g	7.2	1.0	7363472				7.6	7.8	1.0	7363510
Acid Extractable Molybdenum (Mo)	ug/g	1.4	0.50	7363472				<0.50	<0.50	0.50	7363510
Acid Extractable Nickel (Ni)	ug/g	21	0.50	7363472				11	17	0.50	7363510
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7363472				<0.50	<0.50	0.50	7363510
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7363472				<0.20	<0.20	0.20	7363510
Acid Extractable Thallium (Tl)	ug/g	0.073	0.050	7363472				0.11	0.14	0.050	7363510
Acid Extractable Uranium (U)	ug/g	0.44	0.050	7363472				0.60	0.77	0.050	7363510
Acid Extractable Vanadium (V)	ug/g	18	5.0	7363472				31	39	5.0	7363510
Acid Extractable Zinc (Zn)	ug/g	45	5.0	7363472				50	59	5.0	7363510
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7363472				<0.050	<0.050	0.050	7363510

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PPD786			PPD786			PPD787		
Sampling Date		2021/05/14 15:20			2021/05/14 15:20			2021/05/14 15:25		
COC Number		345314			345314			345314		
	UNITS	BH21-27-1A	RDL	QC Batch	BH21-27-1A Lab-Dup	RDL	QC Batch	BH21-32-1A	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.25 (1)		7358915				0.31 (1)		7358915
Inorganics										
Conductivity	mS/cm	0.18	0.002	7365038				0.11	0.002	7369001
Moisture	%	6.9	1.0	7361436						
Available (CaCl2) pH	pH	7.71		7362920				7.45		7362920
WAD Cyanide (Free)	ug/g	<0.01	0.01	7361106				<0.01	0.01	7361106
Chromium (VI)	ug/g	<0.18	0.18	7362629	<0.18	0.18	7362629	<0.18	0.18	7362629
Metals										
Hot Water Ext. Boron (B)	ug/g	0.19	0.050	7363044				<0.050	0.050	7363627
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7363510				<0.20	0.20	7363472
Acid Extractable Arsenic (As)	ug/g	1.1	1.0	7363510				1.4	1.0	7363472
Acid Extractable Barium (Ba)	ug/g	31	0.50	7363510				32	0.50	7363472
Acid Extractable Beryllium (Be)	ug/g	<0.20	0.20	7363510				0.30	0.20	7363472
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7363510				<5.0	5.0	7363472
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7363510				0.14	0.10	7363472
Acid Extractable Chromium (Cr)	ug/g	8.6	1.0	7363510				11	1.0	7363472
Acid Extractable Cobalt (Co)	ug/g	2.9	0.10	7363510				4.0	0.10	7363472
Acid Extractable Copper (Cu)	ug/g	7.4	0.50	7363510				6.6	0.50	7363472
Acid Extractable Lead (Pb)	ug/g	4.2	1.0	7363510				5.2	1.0	7363472
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7363510				<0.50	0.50	7363472
Acid Extractable Nickel (Ni)	ug/g	5.3	0.50	7363510				6.9	0.50	7363472
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7363510				<0.50	0.50	7363472
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7363510				<0.20	0.20	7363472
Acid Extractable Thallium (Tl)	ug/g	<0.050	0.050	7363510				0.085	0.050	7363472
Acid Extractable Uranium (U)	ug/g	0.46	0.050	7363510				0.43	0.050	7363472
Acid Extractable Vanadium (V)	ug/g	21	5.0	7363510				26	5.0	7363472
Acid Extractable Zinc (Zn)	ug/g	58	5.0	7363510				36	5.0	7363472
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7363510				<0.050	0.050	7363472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PPD788	PPD789			PPD789			PPD790		
Sampling Date		2021/04/30 14:10	2021/05/05 07:55			2021/05/05 07:55			2021/05/05 07:55		
COC Number		345314	345314			345314			345314		
	UNITS	BH21-32-2	BH21-2-2	RDL	QC Batch	BH21-2-2 Lab-Dup	RDL	QC Batch	Dup 19	RDL	QC Batch
Calculated Parameters											
Sodium Adsorption Ratio	N/A	0.33 (1)	0.29 (1)		7358915				0.33 (1)		7358512
Inorganics											
Conductivity	mS/cm	0.10	0.14	0.002	7365038				0.11	0.002	7369001
Available (CaCl2) pH	pH	7.76	7.97		7362906				8.00		7362920
WAD Cyanide (Free)	ug/g	<0.01	<0.01	0.01	7361102				<0.01	0.01	7361106
Chromium (VI)	ug/g	<0.18	<0.18	0.18	7361008	<0.18	0.18	7361008	<0.18	0.18	7362629
Metals											
Hot Water Ext. Boron (B)	ug/g	<0.050	<0.050	0.050	7363044				<0.050	0.050	7363627
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	0.20	7363510				<0.20	0.20	7363472
Acid Extractable Arsenic (As)	ug/g	<1.0	<1.0	1.0	7363510				<1.0	1.0	7363472
Acid Extractable Barium (Ba)	ug/g	28	39	0.50	7363510				37	0.50	7363472
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	0.20	7363510				<0.20	0.20	7363472
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	5.0	7363510				<5.0	5.0	7363472
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	0.10	7363510				<0.10	0.10	7363472
Acid Extractable Chromium (Cr)	ug/g	8.0	7.5	1.0	7363510				7.0	1.0	7363472
Acid Extractable Cobalt (Co)	ug/g	2.2	2.3	0.10	7363510				2.0	0.10	7363472
Acid Extractable Copper (Cu)	ug/g	4.2	3.8	0.50	7363510				3.1	0.50	7363472
Acid Extractable Lead (Pb)	ug/g	2.5	2.4	1.0	7363510				2.1	1.0	7363472
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	0.50	7363510				<0.50	0.50	7363472
Acid Extractable Nickel (Ni)	ug/g	4.8	4.7	0.50	7363510				3.9	0.50	7363472
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	0.50	7363510				<0.50	0.50	7363472
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	0.20	7363510				<0.20	0.20	7363472
Acid Extractable Thallium (Tl)	ug/g	<0.050	<0.050	0.050	7363510				<0.050	0.050	7363472
Acid Extractable Uranium (U)	ug/g	0.42	0.53	0.050	7363510				0.53	0.050	7363472
Acid Extractable Vanadium (V)	ug/g	17	15	5.0	7363510				14	5.0	7363472
Acid Extractable Zinc (Zn)	ug/g	19	19	5.0	7363510				20	5.0	7363472
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	0.050	7363510				<0.050	0.050	7363472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PPD803	PPD807	PPD809	PPD813		PPD817		
Sampling Date		2021/05/07 08:45	2021/05/07 09:15	2021/05/07 10:00	2021/05/07 10:30		2021/05/07 13:05		
COC Number		345314	345314	345314	345314		345314		
	UNITS	BH21-17-1	BH21-17-5	BH21-19-1	BH21-19-4	QC Batch	BH21-20-1	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	6.3	0.35	1.6	0.51 (1)	7358512	0.26 (1)		7358512
Inorganics									
Conductivity	mS/cm	0.53	0.14	0.29	0.17	7369001	0.19	0.002	7365308
Available (CaCl2) pH	pH	8.04	7.99	7.92	8.06	7362920	8.04		7362906
WAD Cyanide (Free)	ug/g	<0.01	<0.01	<0.01	<0.01	7361106	<0.01	0.01	7361102
Chromium (VI)	ug/g	<0.18	<0.18	<0.18	<0.18	7362629	<0.18	0.18	7361008
Metals									
Hot Water Ext. Boron (B)	ug/g	0.12	<0.050	0.19	<0.050	7363627	0.38	0.050	7365086
Acid Extractable Antimony (Sb)	ug/g	0.28	<0.20	<0.20	<0.20	7363472	<0.20	0.20	7363472
Acid Extractable Arsenic (As)	ug/g	1.3	<1.0	1.2	<1.0	7363472	3.5	1.0	7363472
Acid Extractable Barium (Ba)	ug/g	32	29	69	30	7363472	62	0.50	7363472
Acid Extractable Beryllium (Be)	ug/g	0.22	<0.20	0.31	<0.20	7363472	0.46	0.20	7363472
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	6.2	<5.0	7363472	11	5.0	7363472
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	<0.10	<0.10	7363472	<0.10	0.10	7363472
Acid Extractable Chromium (Cr)	ug/g	7.6	7.0	13	6.6	7363472	10	1.0	7363472
Acid Extractable Cobalt (Co)	ug/g	2.8	2.2	4.1	1.9	7363472	3.9	0.10	7363472
Acid Extractable Copper (Cu)	ug/g	7.4	3.4	10	3.0	7363472	19	0.50	7363472
Acid Extractable Lead (Pb)	ug/g	4.5	2.4	5.6	2.2	7363472	16	1.0	7363472
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	<0.50	<0.50	7363472	1.6	0.50	7363472
Acid Extractable Nickel (Ni)	ug/g	6.6	4.2	11	4.0	7363472	20	0.50	7363472
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	<0.50	7363472	<0.50	0.50	7363472
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	<0.20	7363472	<0.20	0.20	7363472
Acid Extractable Thallium (Tl)	ug/g	0.056	<0.050	0.060	<0.050	7363472	0.070	0.050	7363472
Acid Extractable Uranium (U)	ug/g	0.43	0.41	0.60	0.45	7363472	1.1	0.050	7363472
Acid Extractable Vanadium (V)	ug/g	16	15	22	13	7363472	14	5.0	7363472
Acid Extractable Zinc (Zn)	ug/g	44	24	28	23	7363472	25	5.0	7363472
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	<0.050	<0.050	7363472	<0.050	0.050	7363472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PPD819		PPD826		PPD827		
Sampling Date		2021/05/07 13:10		2021/05/10 13:55		2021/05/10 14:30		
COC Number		345314		345314		345314		
	UNITS	BH21-20-2	QC Batch	BH21-44-1	QC Batch	BH21-44-5	RDL	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A	0.51	7358512	1.1	7358512	0.32 (1)		7358512
Inorganics								
Conductivity	mS/cm	0.15	7369001	0.23	7365038	0.12	0.002	7369001
Available (CaCl2) pH	pH	7.99	7362920	8.09	7362920	8.02		7362906
WAD Cyanide (Free)	ug/g	<0.01	7361106	<0.01	7361106	<0.01	0.01	7361102
Chromium (VI)	ug/g	<0.18	7362629	<0.18	7362629	<0.18	0.18	7361008
Metals								
Hot Water Ext. Boron (B)	ug/g	0.080	7363627	0.063	7363044	<0.050	0.050	7363627
Acid Extractable Antimony (Sb)	ug/g	<0.20	7363472	<0.20	7363510	<0.20	0.20	7363472
Acid Extractable Arsenic (As)	ug/g	<1.0	7363472	<1.0	7363510	<1.0	1.0	7363472
Acid Extractable Barium (Ba)	ug/g	46	7363472	29	7363510	43	0.50	7363472
Acid Extractable Beryllium (Be)	ug/g	0.21	7363472	<0.20	7363510	0.20	0.20	7363472
Acid Extractable Boron (B)	ug/g	5.5	7363472	<5.0	7363510	<5.0	5.0	7363472
Acid Extractable Cadmium (Cd)	ug/g	<0.10	7363472	<0.10	7363510	<0.10	0.10	7363472
Acid Extractable Chromium (Cr)	ug/g	8.6	7363472	6.6	7363510	7.1	1.0	7363472
Acid Extractable Cobalt (Co)	ug/g	2.6	7363472	2.0	7363510	2.1	0.10	7363472
Acid Extractable Copper (Cu)	ug/g	4.2	7363472	3.5	7363510	3.6	0.50	7363472
Acid Extractable Lead (Pb)	ug/g	3.4	7363472	2.2	7363510	2.7	1.0	7363472
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	7363472	<0.50	7363510	<0.50	0.50	7363472
Acid Extractable Nickel (Ni)	ug/g	5.4	7363472	3.8	7363510	4.3	0.50	7363472
Acid Extractable Selenium (Se)	ug/g	<0.50	7363472	<0.50	7363510	<0.50	0.50	7363472
Acid Extractable Silver (Ag)	ug/g	<0.20	7363472	<0.20	7363510	<0.20	0.20	7363472
Acid Extractable Thallium (Tl)	ug/g	0.050	7363472	<0.050	7363510	<0.050	0.050	7363472
Acid Extractable Uranium (U)	ug/g	0.43	7363472	0.45	7363510	0.43	0.050	7363472
Acid Extractable Vanadium (V)	ug/g	14	7363472	14	7363510	14	5.0	7363472
Acid Extractable Zinc (Zn)	ug/g	26	7363472	17	7363510	24	5.0	7363472
Acid Extractable Mercury (Hg)	ug/g	<0.050	7363472	<0.050	7363510	<0.050	0.050	7363472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
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O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PPD827			PPD828		PPD829		
Sampling Date		2021/05/10 14:30			2021/05/10 15:30		2021/05/10 16:20		
COC Number		345314			345314		345314		
	UNITS	BH21-44-5 Lab-Dup	RDL	QC Batch	BH21-44-9	QC Batch	BH21-14-1	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A				0.32 (1)	7358512	6.7		7358512
Inorganics									
Conductivity	mS/cm				0.13	7365038	0.26	0.002	7365038
Available (CaCl2) pH	pH				8.22	7362906	8.08		7362920
WAD Cyanide (Free)	ug/g	<0.01	0.01	7361102	<0.01	7361102	<0.01	0.01	7361106
Chromium (VI)	ug/g				<0.18	7361008	<0.18	0.18	7362629
Metals									
Hot Water Ext. Boron (B)	ug/g				0.079	7363044	0.21	0.050	7363044
Acid Extractable Antimony (Sb)	ug/g				<0.20	7363510	<0.20	0.20	7363510
Acid Extractable Arsenic (As)	ug/g				<1.0	7363510	1.3	1.0	7363510
Acid Extractable Barium (Ba)	ug/g				38	7363510	40	0.50	7363510
Acid Extractable Beryllium (Be)	ug/g				<0.20	7363510	0.23	0.20	7363510
Acid Extractable Boron (B)	ug/g				<5.0	7363510	5.4	5.0	7363510
Acid Extractable Cadmium (Cd)	ug/g				<0.10	7363510	0.12	0.10	7363510
Acid Extractable Chromium (Cr)	ug/g				7.4	7363510	8.9	1.0	7363510
Acid Extractable Cobalt (Co)	ug/g				1.9	7363510	3.5	0.10	7363510
Acid Extractable Copper (Cu)	ug/g				3.3	7363510	9.2	0.50	7363510
Acid Extractable Lead (Pb)	ug/g				2.1	7363510	4.8	1.0	7363510
Acid Extractable Molybdenum (Mo)	ug/g				<0.50	7363510	<0.50	0.50	7363510
Acid Extractable Nickel (Ni)	ug/g				3.6	7363510	8.1	0.50	7363510
Acid Extractable Selenium (Se)	ug/g				<0.50	7363510	<0.50	0.50	7363510
Acid Extractable Silver (Ag)	ug/g				<0.20	7363510	<0.20	0.20	7363510
Acid Extractable Thallium (Tl)	ug/g				<0.050	7363510	0.053	0.050	7363510
Acid Extractable Uranium (U)	ug/g				0.51	7363510	0.50	0.050	7363510
Acid Extractable Vanadium (V)	ug/g				13	7363510	18	5.0	7363510
Acid Extractable Zinc (Zn)	ug/g				17	7363510	49	5.0	7363510
Acid Extractable Mercury (Hg)	ug/g				<0.050	7363510	<0.050	0.050	7363510

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PPD829		PPD830		PPD831		PPD838		
Sampling Date		2021/05/10 16:20		2021/05/11 08:30		2021/05/11 11:00		2021/05/12 11:00		
COC Number		345314		345314		345314		345314		
	UNITS	BH21-14-1 Lab-Dup	QC Batch	BH21-14-6	QC Batch	BH21-14-12	QC Batch	BH21-47-1	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A			0.33 (1)	7358512	0.34 (1)	7358512	0.30 (1)		7358512
Inorganics										
Conductivity	mS/cm			0.11	7365038	0.11	7365038	0.12	0.002	7369001
Available (CaCl2) pH	pH	8.07	7362920	8.20	7362920	8.15	7362906	7.84		7362920
WAD Cyanide (Free)	ug/g			<0.01	7361106	<0.01	7361102	<0.01	0.01	7361106
Chromium (VI)	ug/g			<0.18	7362629	<0.18	7361008	<0.18	0.18	7362629
Metals										
Hot Water Ext. Boron (B)	ug/g			0.065	7363044	0.076	7363044	0.072	0.050	7363627
Acid Extractable Antimony (Sb)	ug/g			<0.20	7363510	<0.20	7363510	<0.20	0.20	7363472
Acid Extractable Arsenic (As)	ug/g			1.6	7363510	<1.0	7363510	<1.0	1.0	7363472
Acid Extractable Barium (Ba)	ug/g			34	7363510	44	7363510	34	0.50	7363472
Acid Extractable Beryllium (Be)	ug/g			<0.20	7363510	<0.20	7363510	<0.20	0.20	7363472
Acid Extractable Boron (B)	ug/g			<5.0	7363510	<5.0	7363510	<5.0	5.0	7363472
Acid Extractable Cadmium (Cd)	ug/g			<0.10	7363510	<0.10	7363510	<0.10	0.10	7363472
Acid Extractable Chromium (Cr)	ug/g			6.9	7363510	7.1	7363510	8.4	1.0	7363472
Acid Extractable Cobalt (Co)	ug/g			1.9	7363510	1.9	7363510	2.5	0.10	7363472
Acid Extractable Copper (Cu)	ug/g			2.9	7363510	3.9	7363510	4.4	0.50	7363472
Acid Extractable Lead (Pb)	ug/g			2.6	7363510	2.0	7363510	2.6	1.0	7363472
Acid Extractable Molybdenum (Mo)	ug/g			<0.50	7363510	<0.50	7363510	<0.50	0.50	7363472
Acid Extractable Nickel (Ni)	ug/g			4.0	7363510	3.7	7363510	5.1	0.50	7363472
Acid Extractable Selenium (Se)	ug/g			<0.50	7363510	<0.50	7363510	<0.50	0.50	7363472
Acid Extractable Silver (Ag)	ug/g			<0.20	7363510	<0.20	7363510	<0.20	0.20	7363472
Acid Extractable Thallium (Tl)	ug/g			<0.050	7363510	<0.050	7363510	<0.050	0.050	7363472
Acid Extractable Uranium (U)	ug/g			0.50	7363510	0.50	7363510	0.45	0.050	7363472
Acid Extractable Vanadium (V)	ug/g			14	7363510	15	7363510	17	5.0	7363472
Acid Extractable Zinc (Zn)	ug/g			17	7363510	13	7363510	20	5.0	7363472
Acid Extractable Mercury (Hg)	ug/g			<0.050	7363510	<0.050	7363510	<0.050	0.050	7363472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PPD839	PPD840			PPD840			PPD841		
Sampling Date		2021/05/12 11:15	2021/05/12 11:15			2021/05/12 11:15			2021/05/12 11:30		
COC Number		345314	345314			345314			345314		
	UNITS	BH21-47-3	Dup 49	RDL	QC Batch	Dup 49 Lab-Dup	RDL	QC Batch	BH21-47-6	RDL	QC Batch
Calculated Parameters											
Sodium Adsorption Ratio	N/A	0.33	0.69		7358512				1.4		7358512
Inorganics											
Conductivity	mS/cm	0.29	0.34	0.002	7365038				0.29	0.002	7369001
Available (CaCl2) pH	pH	7.36	7.27		7362920				7.88		7362906
WAD Cyanide (Free)	ug/g	<0.01	<0.01	0.01	7361106				<0.01	0.01	7361102
Chromium (VI)	ug/g	<0.18	<0.18	0.18	7362629				<0.18	0.18	7361008
Metals											
Hot Water Ext. Boron (B)	ug/g	0.66	0.38	0.050	7363044				0.45	0.050	7363627
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	0.20	7363510	<0.20	0.20	7363510	<0.20	0.20	7363472
Acid Extractable Arsenic (As)	ug/g	2.2	3.0	1.0	7363510	3.1	1.0	7363510	3.0	1.0	7363472
Acid Extractable Barium (Ba)	ug/g	82	130	0.50	7363510	130	0.50	7363510	27	0.50	7363472
Acid Extractable Beryllium (Be)	ug/g	0.42	0.57	0.20	7363510	0.55	0.20	7363510	0.44	0.20	7363472
Acid Extractable Boron (B)	ug/g	7.6	9.1	5.0	7363510	8.2	5.0	7363510	10	5.0	7363472
Acid Extractable Cadmium (Cd)	ug/g	0.18	0.16	0.10	7363510	0.14	0.10	7363510	<0.10	0.10	7363472
Acid Extractable Chromium (Cr)	ug/g	16	23	1.0	7363510	23	1.0	7363510	13	1.0	7363472
Acid Extractable Cobalt (Co)	ug/g	5.0	7.5	0.10	7363510	7.4	0.10	7363510	5.4	0.10	7363472
Acid Extractable Copper (Cu)	ug/g	10	13	0.50	7363510	12	0.50	7363510	11	0.50	7363472
Acid Extractable Lead (Pb)	ug/g	9.8	8.2	1.0	7363510	8.0	1.0	7363510	11	1.0	7363472
Acid Extractable Molybdenum (Mo)	ug/g	0.55	<0.50	0.50	7363510	<0.50	0.50	7363510	<0.50	0.50	7363472
Acid Extractable Nickel (Ni)	ug/g	11	15	0.50	7363510	15	0.50	7363510	11	0.50	7363472
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	0.50	7363510	<0.50	0.50	7363510	<0.50	0.50	7363472
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	0.20	7363510	<0.20	0.20	7363510	<0.20	0.20	7363472
Acid Extractable Thallium (Tl)	ug/g	0.10	0.14	0.050	7363510	0.13	0.050	7363510	0.094	0.050	7363472
Acid Extractable Uranium (U)	ug/g	0.54	0.58	0.050	7363510	0.55	0.050	7363510	0.49	0.050	7363472
Acid Extractable Vanadium (V)	ug/g	26	36	5.0	7363510	34	5.0	7363510	12	5.0	7363472
Acid Extractable Zinc (Zn)	ug/g	50	55	5.0	7363510	51	5.0	7363510	23	5.0	7363472
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	0.050	7363510	<0.050	0.050	7363510	<0.050	0.050	7363472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PPD842			PPD842			PPD843	PPD844		
Sampling Date		2021/05/12 11:45			2021/05/12 11:45			2021/05/12 15:20	2021/05/12 15:35		
COC Number		345314			345314			345314	345314		
	UNITS	BH21-47-9	RDL	QC Batch	BH21-47-9 Lab-Dup	RDL	QC Batch	BH21-45-1	BH21-45-4	RDL	QC Batch
Calculated Parameters											
Sodium Adsorption Ratio	N/A	1.3		7358512				0.25 (1)	0.27 (1)		7358512
Inorganics											
Conductivity	mS/cm	0.18	0.002	7365038	0.18	0.002	7365038	0.18	0.17	0.002	7369001
Available (CaCl2) pH	pH	8.00		7362920				7.91	7.99		7362920
WAD Cyanide (Free)	ug/g	<0.01	0.01	7361106				<0.01	<0.01	0.01	7361106
Chromium (VI)	ug/g	<0.18	0.18	7362629				<0.18	<0.18	0.18	7362629
Metals											
Hot Water Ext. Boron (B)	ug/g	0.059	0.050	7363044				0.083	0.12	0.050	7363627
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7363472				<0.20	<0.20	0.20	7363472
Acid Extractable Arsenic (As)	ug/g	1.2	1.0	7363472				1.3	1.3	1.0	7363472
Acid Extractable Barium (Ba)	ug/g	73	0.50	7363472				95	31	0.50	7363472
Acid Extractable Beryllium (Be)	ug/g	0.31	0.20	7363472				0.35	0.22	0.20	7363472
Acid Extractable Boron (B)	ug/g	6.8	5.0	7363472				6.7	<5.0	5.0	7363472
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7363472				<0.10	<0.10	0.10	7363472
Acid Extractable Chromium (Cr)	ug/g	14	1.0	7363472				16	9.3	1.0	7363472
Acid Extractable Cobalt (Co)	ug/g	4.1	0.10	7363472				5.2	2.5	0.10	7363472
Acid Extractable Copper (Cu)	ug/g	7.4	0.50	7363472				9.6	5.8	0.50	7363472
Acid Extractable Lead (Pb)	ug/g	3.8	1.0	7363472				4.6	3.3	1.0	7363472
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7363472				<0.50	<0.50	0.50	7363472
Acid Extractable Nickel (Ni)	ug/g	8.8	0.50	7363472				11	5.3	0.50	7363472
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7363472				<0.50	<0.50	0.50	7363472
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7363472				<0.20	<0.20	0.20	7363472
Acid Extractable Thallium (Tl)	ug/g	0.073	0.050	7363472				0.11	<0.050	0.050	7363472
Acid Extractable Uranium (U)	ug/g	0.45	0.050	7363472				0.51	0.47	0.050	7363472
Acid Extractable Vanadium (V)	ug/g	22	5.0	7363472				25	15	5.0	7363472
Acid Extractable Zinc (Zn)	ug/g	30	5.0	7363472				33	22	5.0	7363472
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7363472				<0.050	<0.050	0.050	7363472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PPD845		PPD846		PPD847		
Sampling Date		2021/05/12 13:50		2021/05/12 14:30		2021/05/13 13:20		
COC Number		345314		345314		345314		
	UNITS	BH21-46-1	QC Batch	BH21-46-5B	QC Batch	BH21-54-1	RDL	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A	1.1	7358512	0.48	7358512	0.20 (1)		7358512
Inorganics								
Conductivity	mS/cm	0.48	7369001	0.18	7365038	0.25	0.002	7369001
Available (CaCl2) pH	pH	7.71	7362906	7.77	7362906	7.33		7362906
WAD Cyanide (Free)	ug/g	<0.01	7361102	<0.01	7361102	<0.01	0.01	7361102
Chromium (VI)	ug/g	<0.18	7361008	<0.18	7361008	<0.18	0.18	7361008
Metals								
Hot Water Ext. Boron (B)	ug/g	0.11	7363627	<0.050	7363044	0.19	0.050	7363627
Acid Extractable Antimony (Sb)	ug/g	<0.20	7363510	<0.20	7363510	<0.20	0.20	7363472
Acid Extractable Arsenic (As)	ug/g	1.5	7363510	1.1	7363510	1.8	1.0	7363472
Acid Extractable Barium (Ba)	ug/g	130	7363510	92	7363510	140	0.50	7363472
Acid Extractable Beryllium (Be)	ug/g	0.54	7363510	0.35	7363510	0.74	0.20	7363472
Acid Extractable Boron (B)	ug/g	9.6	7363510	7.3	7363510	6.2	5.0	7363472
Acid Extractable Cadmium (Cd)	ug/g	<0.10	7363510	<0.10	7363510	0.14	0.10	7363472
Acid Extractable Chromium (Cr)	ug/g	23	7363510	16	7363510	29	1.0	7363472
Acid Extractable Cobalt (Co)	ug/g	7.5	7363510	5.0	7363510	8.2	0.10	7363472
Acid Extractable Copper (Cu)	ug/g	16	7363510	9.7	7363510	15	0.50	7363472
Acid Extractable Lead (Pb)	ug/g	6.4	7363510	4.2	7363510	8.1	1.0	7363472
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	7363510	<0.50	7363510	<0.50	0.50	7363472
Acid Extractable Nickel (Ni)	ug/g	17	7363510	11	7363510	17	0.50	7363472
Acid Extractable Selenium (Se)	ug/g	<0.50	7363510	<0.50	7363510	<0.50	0.50	7363472
Acid Extractable Silver (Ag)	ug/g	<0.20	7363510	<0.20	7363510	<0.20	0.20	7363472
Acid Extractable Thallium (Tl)	ug/g	0.16	7363510	0.11	7363510	0.17	0.050	7363472
Acid Extractable Uranium (U)	ug/g	0.70	7363510	0.44	7363510	0.63	0.050	7363472
Acid Extractable Vanadium (V)	ug/g	33	7363510	25	7363510	45	5.0	7363472
Acid Extractable Zinc (Zn)	ug/g	46	7363510	36	7363510	59	5.0	7363472
Acid Extractable Mercury (Hg)	ug/g	<0.050	7363510	<0.050	7363510	<0.050	0.050	7363472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PPD847			PPD848		PPD849	PPD850		
Sampling Date		2021/05/13 13:20			2021/05/13 13:50		2021/05/13 11:00	2021/05/13 11:25		
COC Number		345314			345314		345314	345314		
	UNITS	BH21-54-1 Lab-Dup	RDL	QC Batch	BH21-54-5	QC Batch	BH21-55-2	BH21-55-5	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A				0.35 (1)	7358512	0.33 (1)	0.33 (1)		7358512
Inorganics										
Conductivity	mS/cm				0.11	7369001	0.11	0.11	0.002	7365038
Available (CaCl2) pH	pH				8.14	7362906	7.90	8.08		7362906
WAD Cyanide (Free)	ug/g				<0.01	7361102	<0.01	<0.01	0.01	7361102
Chromium (VI)	ug/g				<0.18	7361008	<0.18	<0.18	0.18	7361008
Metals										
Hot Water Ext. Boron (B)	ug/g				0.055	7363627	<0.050	0.050	0.050	7363044
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7363472	<0.20	7363472	<0.20	<0.20	0.20	7363510
Acid Extractable Arsenic (As)	ug/g	1.9	1.0	7363472	<1.0	7363472	<1.0	<1.0	1.0	7363510
Acid Extractable Barium (Ba)	ug/g	140	0.50	7363472	22	7363472	27	23	0.50	7363510
Acid Extractable Beryllium (Be)	ug/g	0.68	0.20	7363472	<0.20	7363472	<0.20	<0.20	0.20	7363510
Acid Extractable Boron (B)	ug/g	5.8	5.0	7363472	<5.0	7363472	<5.0	<5.0	5.0	7363510
Acid Extractable Cadmium (Cd)	ug/g	0.15	0.10	7363472	<0.10	7363472	<0.10	<0.10	0.10	7363510
Acid Extractable Chromium (Cr)	ug/g	29	1.0	7363472	8.6	7363472	7.6	7.7	1.0	7363510
Acid Extractable Cobalt (Co)	ug/g	8.4	0.10	7363472	2.3	7363472	2.4	1.9	0.10	7363510
Acid Extractable Copper (Cu)	ug/g	15	0.50	7363472	3.3	7363472	4.3	3.3	0.50	7363510
Acid Extractable Lead (Pb)	ug/g	7.9	1.0	7363472	1.9	7363472	2.6	1.9	1.0	7363510
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7363472	<0.50	7363472	<0.50	<0.50	0.50	7363510
Acid Extractable Nickel (Ni)	ug/g	17	0.50	7363472	4.1	7363472	4.4	3.6	0.50	7363510
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7363472	<0.50	7363472	<0.50	<0.50	0.50	7363510
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7363472	<0.20	7363472	<0.20	<0.20	0.20	7363510
Acid Extractable Thallium (Tl)	ug/g	0.17	0.050	7363472	<0.050	7363472	<0.050	<0.050	0.050	7363510
Acid Extractable Uranium (U)	ug/g	0.62	0.050	7363472	0.45	7363472	0.41	0.40	0.050	7363510
Acid Extractable Vanadium (V)	ug/g	44	5.0	7363472	15	7363472	16	14	5.0	7363510
Acid Extractable Zinc (Zn)	ug/g	56	5.0	7363472	15	7363472	22	15	5.0	7363510
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7363472	<0.050	7363472	<0.050	<0.050	0.050	7363510

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PPD851		PPD852			PPD852	
Sampling Date		2021/05/14 12:45		2021/05/14 13:05			2021/05/14 13:05	
COC Number		345314		345314			345314	
	UNITS	BH21-56-1	QC Batch	BH21-56-5	RDL	QC Batch	BH21-56-5 Lab-Dup	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A	0.19 (1)	7358512	0.26 (1)		7358512		
Inorganics								
Conductivity	mS/cm	0.28	7365038	0.18	0.002	7369001		
Available (CaCl2) pH	pH	7.07	7362906	7.76		7362906	7.77	7362906
WAD Cyanide (Free)	ug/g	<0.01	7361102	<0.01	0.01	7361102		
Chromium (VI)	ug/g	<0.18	7361008	<0.18	0.18	7361008		
Metals								
Hot Water Ext. Boron (B)	ug/g	0.70	7363044	<0.050	0.050	7363044		
Acid Extractable Antimony (Sb)	ug/g	<0.20	7363510	<0.20	0.20	7363472		
Acid Extractable Arsenic (As)	ug/g	2.1	7363510	1.5	1.0	7363472		
Acid Extractable Barium (Ba)	ug/g	110	7363510	150	0.50	7363472		
Acid Extractable Beryllium (Be)	ug/g	0.68	7363510	0.54	0.20	7363472		
Acid Extractable Boron (B)	ug/g	5.5	7363510	9.5	5.0	7363472		
Acid Extractable Cadmium (Cd)	ug/g	0.27	7363510	<0.10	0.10	7363472		
Acid Extractable Chromium (Cr)	ug/g	25	7363510	24	1.0	7363472		
Acid Extractable Cobalt (Co)	ug/g	6.9	7363510	8.5	0.10	7363472		
Acid Extractable Copper (Cu)	ug/g	16	7363510	16	0.50	7363472		
Acid Extractable Lead (Pb)	ug/g	10	7363510	5.7	1.0	7363472		
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	7363510	<0.50	0.50	7363472		
Acid Extractable Nickel (Ni)	ug/g	13	7363510	18	0.50	7363472		
Acid Extractable Selenium (Se)	ug/g	0.56	7363510	<0.50	0.50	7363472		
Acid Extractable Silver (Ag)	ug/g	<0.20	7363510	<0.20	0.20	7363472		
Acid Extractable Thallium (Tl)	ug/g	0.12	7363510	0.17	0.050	7363472		
Acid Extractable Uranium (U)	ug/g	1.1	7363510	0.52	0.050	7363472		
Acid Extractable Vanadium (V)	ug/g	39	7363510	36	5.0	7363472		
Acid Extractable Zinc (Zn)	ug/g	61	7363510	47	5.0	7363472		
Acid Extractable Mercury (Hg)	ug/g	<0.050	7363510	<0.050	0.050	7363472		

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PPD853		PPD854			PPD854		
Sampling Date		2021/05/14 10:10		2021/05/14 10:45			2021/05/14 10:45		
COC Number		345314		345314			345314		
	UNITS	BH21-53-1	QC Batch	BH21-53-4	RDL	QC Batch	BH21-53-4 Lab-Dup	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	0.27 (1)	7358512	0.40 (1)		7358512			
Inorganics									
Conductivity	mS/cm	0.13	7369001	0.073	0.002	7365038			
Available (CaCl2) pH	pH	7.26	7362906	8.02		7362906			
WAD Cyanide (Free)	ug/g	<0.01	7361102	<0.01	0.01	7361102			
Chromium (VI)	ug/g	<0.18	7361008	<0.18	0.18	7361008			
Metals									
Hot Water Ext. Boron (B)	ug/g	0.15	7363627	<0.050	0.050	7363044	<0.050	0.050	7363044
Acid Extractable Antimony (Sb)	ug/g	<0.20	7363472	<0.20	0.20	7363510			
Acid Extractable Arsenic (As)	ug/g	1.7	7363472	<1.0	1.0	7363510			
Acid Extractable Barium (Ba)	ug/g	44	7363472	11	0.50	7363510			
Acid Extractable Beryllium (Be)	ug/g	0.38	7363472	<0.20	0.20	7363510			
Acid Extractable Boron (B)	ug/g	<5.0	7363472	<5.0	5.0	7363510			
Acid Extractable Cadmium (Cd)	ug/g	0.20	7363472	<0.10	0.10	7363510			
Acid Extractable Chromium (Cr)	ug/g	13	7363472	6.0	1.0	7363510			
Acid Extractable Cobalt (Co)	ug/g	3.7	7363472	1.4	0.10	7363510			
Acid Extractable Copper (Cu)	ug/g	5.4	7363472	2.9	0.50	7363510			
Acid Extractable Lead (Pb)	ug/g	4.7	7363472	1.7	1.0	7363510			
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	7363472	<0.50	0.50	7363510			
Acid Extractable Nickel (Ni)	ug/g	8.2	7363472	3.3	0.50	7363510			
Acid Extractable Selenium (Se)	ug/g	<0.50	7363472	<0.50	0.50	7363510			
Acid Extractable Silver (Ag)	ug/g	<0.20	7363472	<0.20	0.20	7363510			
Acid Extractable Thallium (Tl)	ug/g	0.065	7363472	<0.050	0.050	7363510			
Acid Extractable Uranium (U)	ug/g	0.52	7363472	0.38	0.050	7363510			
Acid Extractable Vanadium (V)	ug/g	24	7363472	13	5.0	7363510			
Acid Extractable Zinc (Zn)	ug/g	32	7363472	12	5.0	7363510			
Acid Extractable Mercury (Hg)	ug/g	<0.050	7363472	<0.050	0.050	7363510			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		PPD855			PPD855			PPD856		
Sampling Date		2021/05/14 09:20			2021/05/14 09:20			2021/05/14 09:40		
COC Number		345314			345314			345314		
	UNITS	BH21-52-1	RDL	QC Batch	BH21-52-1 Lab-Dup	RDL	QC Batch	BH21-52-5	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.25 (1)		7358512				0.33 (1)		7358512
Inorganics										
Conductivity	mS/cm	0.15	0.002	7365038				0.10	0.002	7365038
Available (CaCl2) pH	pH	7.26		7362906				8.00		7362906
WAD Cyanide (Free)	ug/g	<0.01	0.01	7361102				<0.01	0.01	7361102
Chromium (VI)	ug/g	<0.18	0.18	7361008				<0.18	0.18	7361008
Metals										
Hot Water Ext. Boron (B)	ug/g	0.13	0.050	7363627	0.11	0.050	7363627	<0.050	0.050	7363044
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7363472				<0.20	0.20	7363510
Acid Extractable Arsenic (As)	ug/g	1.9	1.0	7363472				1.0	1.0	7363510
Acid Extractable Barium (Ba)	ug/g	150	0.50	7363472				44	0.50	7363510
Acid Extractable Beryllium (Be)	ug/g	0.80	0.20	7363472				0.24	0.20	7363510
Acid Extractable Boron (B)	ug/g	6.3	5.0	7363472				<5.0	5.0	7363510
Acid Extractable Cadmium (Cd)	ug/g	0.13	0.10	7363472				<0.10	0.10	7363510
Acid Extractable Chromium (Cr)	ug/g	30	1.0	7363472				10	1.0	7363510
Acid Extractable Cobalt (Co)	ug/g	8.2	0.10	7363472				3.2	0.10	7363510
Acid Extractable Copper (Cu)	ug/g	15	0.50	7363472				7.1	0.50	7363510
Acid Extractable Lead (Pb)	ug/g	6.8	1.0	7363472				3.1	1.0	7363510
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7363472				<0.50	0.50	7363510
Acid Extractable Nickel (Ni)	ug/g	20	0.50	7363472				6.4	0.50	7363510
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7363472				<0.50	0.50	7363510
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7363472				<0.20	0.20	7363510
Acid Extractable Thallium (Tl)	ug/g	0.17	0.050	7363472				0.059	0.050	7363510
Acid Extractable Uranium (U)	ug/g	0.61	0.050	7363472				0.43	0.050	7363510
Acid Extractable Vanadium (V)	ug/g	44	5.0	7363472				18	5.0	7363510
Acid Extractable Zinc (Zn)	ug/g	48	5.0	7363472				23	5.0	7363510
Acid Extractable Mercury (Hg)	ug/g	0.067	0.050	7363472				<0.050	0.050	7363510

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PPD822	PPD823		PPD824		PPD825		
Sampling Date		2021/05/07 14:45	2021/05/07 14:45		2021/05/10 08:30		2021/05/10 08:50		
COC Number		345314	345314		345314		345314		
	UNITS	BH21-9-1	Dup42	QC Batch	BH21-10-1	QC Batch	BH21-10-3	RDL	QC Batch
Calculated Parameters									
Chlordane (Total)	ug/g	<0.0020	<0.0020	7358459	<0.0020	7358459	<0.0020	0.0020	7358459
o,p-DDD + p,p-DDD	ug/g	<0.0020	<0.0020	7358459	<0.0020	7358459	<0.0020	0.0020	7358459
o,p-DDE + p,p-DDE	ug/g	<0.0020	<0.0020	7358459	<0.0020	7358459	<0.0020	0.0020	7358459
o,p-DDT + p,p-DDT	ug/g	<0.0020	<0.0020	7358459	<0.0020	7358459	<0.0020	0.0020	7358459
Total Endosulfan	ug/g	<0.0020	<0.0020	7358459	<0.0020	7358459	<0.0020	0.0020	7358459
Total PCB	ug/g	<0.015	<0.015	7358459	<0.015	7358459	<0.015	0.015	7358459
Pesticides & Herbicides									
Aldrin	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
a-Chlordane	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
g-Chlordane	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
o,p-DDD	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
p,p-DDD	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
o,p-DDE	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
p,p-DDE	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
o,p-DDT	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
p,p-DDT	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
Dieldrin	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
Lindane	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
Endrin	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
Heptachlor	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
Heptachlor epoxide	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
Hexachlorobenzene	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
Hexachloroethane	ug/g	<0.0020	<0.0020	7362538	<0.0020	7367472	<0.0020	0.0020	7362538
Methoxychlor	ug/g	<0.0050	<0.0050	7362538	<0.0050	7367472	<0.0050	0.0050	7362538
Aroclor 1242	ug/g	<0.015	<0.015	7362538	<0.015	7367472	<0.015	0.015	7362538
Aroclor 1248	ug/g	<0.015	<0.015	7362538	<0.015	7367472	<0.015	0.015	7362538
Aroclor 1254	ug/g	<0.015	<0.015	7362538	<0.015	7367472	<0.015	0.015	7362538
Aroclor 1260	ug/g	<0.015	<0.015	7362538	<0.015	7367472	<0.015	0.015	7362538
Surrogate Recovery (%)									
2,4,5,6-Tetrachloro-m-xylene	%	81	85	7362538	79	7367472	81		7362538

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PPD822	PPD823		PPD824		PPD825		
Sampling Date		2021/05/07 14:45	2021/05/07 14:45		2021/05/10 08:30		2021/05/10 08:50		
COC Number		345314	345314		345314		345314		
	UNITS	BH21-9-1	Dup42	QC Batch	BH21-10-1	QC Batch	BH21-10-3	RDL	QC Batch
Decachlorobiphenyl	%	95	102	7362538	105	7367472	100		7362538

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PPD847		PPD848	PPD849		PPD850	PPD851		
Sampling Date		2021/05/13 13:20		2021/05/13 13:50	2021/05/13 11:00		2021/05/13 11:25	2021/05/14 12:45		
COC Number		345314		345314	345314		345314	345314		
	UNITS	BH21-54-1	QC Batch	BH21-54-5	BH21-55-2	QC Batch	BH21-55-5	BH21-56-1	RDL	QC Batch
Calculated Parameters										
Chlordane (Total)	ug/g	<0.0020	7358459	<0.0020	<0.0020	7358459	<0.0020	<0.0020	0.0020	7358459
o,p-DDD + p,p-DDD	ug/g	<0.0020	7358459	<0.0020	<0.0020	7358459	<0.0020	<0.0020	0.0020	7358459
o,p-DDE + p,p-DDE	ug/g	<0.0020	7358459	<0.0020	<0.0020	7358459	<0.0020	<0.0020	0.0020	7358459
o,p-DDT + p,p-DDT	ug/g	<0.0020	7358459	<0.0020	<0.0020	7358459	<0.0020	<0.0020	0.0020	7358459
Total Endosulfan	ug/g	<0.0020	7358459	<0.0020	<0.0020	7358459	<0.0020	<0.0020	0.0020	7358459
Total PCB	ug/g	<0.015	7358459	<0.015	<0.015	7358459	<0.015	<0.015	0.015	7358459
Pesticides & Herbicides										
Aldrin	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
a-Chlordane	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
g-Chlordane	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
o,p-DDD	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
p,p-DDD	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
o,p-DDE	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
p,p-DDE	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
o,p-DDT	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
p,p-DDT	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
Dieldrin	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
Lindane	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
Endosulfan I (alpha)	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
Endosulfan II (beta)	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
Endrin	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
Heptachlor	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
Heptachlor epoxide	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
Hexachlorobenzene	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
Hexachlorobutadiene	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
Hexachloroethane	ug/g	<0.0020	7367472	<0.0020	<0.0020	7362538	<0.0020	<0.0020	0.0020	7367472
Methoxychlor	ug/g	<0.0050	7367472	<0.0050	<0.0050	7362538	<0.0050	<0.0050	0.0050	7367472
Aroclor 1242	ug/g	<0.015	7367472	<0.015	<0.015	7362538	<0.015	<0.015	0.015	7367472
Aroclor 1248	ug/g	<0.015	7367472	<0.015	<0.015	7362538	<0.015	<0.015	0.015	7367472
Aroclor 1254	ug/g	<0.015	7367472	<0.015	<0.015	7362538	<0.015	<0.015	0.015	7367472
Aroclor 1260	ug/g	<0.015	7367472	<0.015	<0.015	7362538	<0.015	<0.015	0.015	7367472
Surrogate Recovery (%)										
2,4,5,6-Tetrachloro-m-xylene	%	80	7367472	68	91	7362538	76	80		7367472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PPD847		PPD848	PPD849		PPD850	PPD851		
Sampling Date		2021/05/13 13:20		2021/05/13 13:50	2021/05/13 11:00		2021/05/13 11:25	2021/05/14 12:45		
COC Number		345314		345314	345314		345314	345314		
	UNITS	BH21-54-1	QC Batch	BH21-54-5	BH21-55-2	QC Batch	BH21-55-5	BH21-56-1	RDL	QC Batch
Decachlorobiphenyl	%	108	7367472	96	113	7362538	110	109		7367472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PPD852	PPD853	PPD854	PPD855	PPD856		
Sampling Date		2021/05/14 13:05	2021/05/14 10:10	2021/05/14 10:45	2021/05/14 09:20	2021/05/14 09:40		
COC Number		345314	345314	345314	345314	345314		
	UNITS	BH21-56-5	BH21-53-1	BH21-53-4	BH21-52-1	BH21-52-5	RDL	QC Batch
Calculated Parameters								
Chlordane (Total)	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7358459
o,p-DDD + p,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7358459
o,p-DDE + p,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7358459
o,p-DDT + p,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7358459
Total Endosulfan	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7358459
Total PCB	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	7358459
Pesticides & Herbicides								
Aldrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
a-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
g-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
o,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
p,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
o,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
p,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
o,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
p,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
Dieldrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
Lindane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
Endrin	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
Heptachlor	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
Heptachlor epoxide	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
Hexachlorobenzene	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
Hexachloroethane	ug/g	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7367472
Methoxychlor	ug/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7367472
Aroclor 1242	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	7367472
Aroclor 1248	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	7367472
Aroclor 1254	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	7367472
Aroclor 1260	ug/g	<0.015	<0.015	<0.015	<0.015	<0.015	0.015	7367472
Surrogate Recovery (%)								
2,4,5,6-Tetrachloro-m-xylene	%	68	81	79	88	75		7367472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 OC PESTICIDES (SOIL)

BV Labs ID		PPD852	PPD853	PPD854	PPD855	PPD856		
Sampling Date		2021/05/14 13:05	2021/05/14 10:10	2021/05/14 10:45	2021/05/14 09:20	2021/05/14 09:40		
COC Number		345314	345314	345314	345314	345314		
	UNITS	BH21-56-5	BH21-53-1	BH21-53-4	BH21-52-1	BH21-52-5	RDL	QC Batch
Decachlorobiphenyl	%	97	105	107	110	106		7367472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 PAHS (SOIL)

BV Labs ID		PPD786			PPD787		PPD788		
Sampling Date		2021/05/14 15:20			2021/05/14 15:25		2021/04/30 14:10		
COC Number		345314			345314		345314		
	UNITS	BH21-27-1A	RDL	QC Batch	BH21-32-1A	QC Batch	BH21-32-2	RDL	QC Batch
Inorganics									
Moisture	%				14	7361674	7.5	1.0	7360235
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	0.0071	7358910	<0.0071	7357854	<0.0071	0.0071	7357854
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Acenaphthylene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Anthracene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Benzo(a)anthracene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Benzo(a)pyrene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Benzo(b/j)fluoranthene	ug/g	0.0067	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Benzo(g,h,i)perylene	ug/g	0.0052	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Chrysene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Fluoranthene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Fluorene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
1-Methylnaphthalene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
2-Methylnaphthalene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Naphthalene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Phenanthrene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Pyrene	ug/g	<0.0050	0.0050	7362754	<0.0050	7363767	<0.0050	0.0050	7359715
Surrogate Recovery (%)									
D10-Anthracene	%	83		7362754	84	7363767	87		7359715
D14-Terphenyl (FS)	%	95		7362754	88	7363767	87		7359715
D8-Acenaphthylene	%	82		7362754	80	7363767	81		7359715

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 PAHS (SOIL)

BV Labs ID		PPD793			PPD794		PPD795		PPD796		
Sampling Date		2021/05/06 15:05			2021/05/06 15:05		2021/05/06 15:10		2021/05/06 15:10		
COC Number		345314			345314		345314		345314		
	UNITS	BH21-18-1	RDL	QC Batch	Dup21	RDL	BH21-18-2	RDL	Dup 22	RDL	QC Batch
Inorganics											
Moisture	%	3.9	1.0	7360997	4.4	1.0	12	1.0	12	1.0	7361674
Calculated Parameters											
Methylnaphthalene, 2-(1-)	ug/g	0.064	0.0071	7358910	0.69	0.0071	0.018	0.0071	<0.0071	0.0071	7358910
Polyaromatic Hydrocarbons											
Acenaphthene	ug/g	<0.0050	0.0050	7362754	<0.30 (1)	0.30	<0.0070 (1)	0.0070	<0.0050	0.0050	7363767
Acenaphthylene	ug/g	<0.020 (2)	0.020	7362754	<0.030 (1)	0.030	<0.0050	0.0050	<0.0050	0.0050	7363767
Anthracene	ug/g	<0.0050	0.0050	7362754	0.077	0.0050	<0.0050	0.0050	<0.0050	0.0050	7363767
Benzo(a)anthracene	ug/g	<0.0050	0.0050	7362754	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	7363767
Benzo(a)pyrene	ug/g	<0.0050	0.0050	7362754	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	7363767
Benzo(b/j)fluoranthene	ug/g	0.0070	0.0050	7362754	0.014	0.0050	<0.0050	0.0050	<0.0050	0.0050	7363767
Benzo(g,h,i)perylene	ug/g	0.0064	0.0050	7362754	0.0055	0.0050	<0.0050	0.0050	<0.0050	0.0050	7363767
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	7362754	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	7363767
Chrysene	ug/g	0.017	0.0050	7362754	0.031	0.0050	<0.0050	0.0050	<0.0050	0.0050	7363767
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	7362754	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	7363767
Fluoranthene	ug/g	<0.0050	0.0050	7362754	<0.040 (1)	0.040	<0.0050	0.0050	<0.0050	0.0050	7363767
Fluorene	ug/g	<0.0050	0.0050	7362754	<0.070 (1)	0.070	<0.0050	0.0050	<0.0050	0.0050	7363767
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	7362754	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	7363767
1-Methylnaphthalene	ug/g	0.034	0.0050	7362754	0.34	0.0050	0.0094	0.0050	<0.0050	0.0050	7363767
2-Methylnaphthalene	ug/g	0.030	0.0050	7362754	0.34	0.0050	0.0084	0.0050	<0.0050	0.0050	7363767
Naphthalene	ug/g	<0.0090 (2)	0.0090	7362754	0.055	0.0050	<0.0050	0.0050	<0.0050	0.0050	7363767
Phenanthrene	ug/g	0.051	0.0050	7362754	0.27	0.0050	0.012	0.0050	<0.0050	0.0050	7363767
Pyrene	ug/g	0.0059	0.0050	7362754	<0.030 (1)	0.030	<0.0050	0.0050	<0.0050	0.0050	7363767
Surrogate Recovery (%)											
D10-Anthracene	%	91		7362754	88		90		86		7363767
D14-Terphenyl (FS)	%	102		7362754	91		90		90		7363767
D8-Acenaphthylene	%	83		7362754	86		88		88		7363767

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Detection Limit was raised due to matrix interferences.
(2) DL was raised due to matrix interference.

O.REG 153 PAHS (SOIL)

BV Labs ID		PPD797	PPD798			PPD798			PPD799		
Sampling Date		2021/05/06 15:30	2021/05/06 15:30			2021/05/06 15:30			2021/05/06 15:45		
COC Number		345314	345314			345314			345314		
	UNITS	BH21-18-4	Dup24	RDL	QC Batch	Dup24 Lab-Dup	RDL	QC Batch	BH21-18-5	RDL	QC Batch
Inorganics											
Moisture	%	7.6	8.4	1.0	7361674	7.7	1.0	7361674	7.1	1.0	7361436
Calculated Parameters											
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	0.0071	7358910				<0.0071	0.0071	7358910
Polyaromatic Hydrocarbons											
Acenaphthene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Acenaphthylene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Anthracene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Benzo(a)anthracene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Benzo(a)pyrene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Benzo(b/j)fluoranthene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Benzo(g,h,i)perylene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Benzo(k)fluoranthene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Chrysene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Dibenzo(a,h)anthracene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Fluoranthene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Fluorene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
2-Methylnaphthalene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Naphthalene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Phenanthrene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Pyrene	ug/g	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Surrogate Recovery (%)											
D10-Anthracene	%	86	79		7363767	86		7363767	83		7363767
D14-Terphenyl (FS)	%	87	82		7363767	87		7363767	85		7363767
D8-Acenaphthylene	%	82	78		7363767	85		7363767	79		7363767

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PAHS (SOIL)

BV Labs ID		PPD803		PPD807			PPD809		
Sampling Date		2021/05/07 08:45		2021/05/07 09:15			2021/05/07 10:00		
COC Number		345314		345314			345314		
	UNITS	BH21-17-1	RDL	BH21-17-5	RDL	QC Batch	BH21-19-1	RDL	QC Batch
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	0.022	0.0071	<0.0071	0.0071	7358910	0.45	0.0071	7358909
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0070 (1)	0.0070	<0.0050	0.0050	7363767	<0.30 (1)	0.30	7363767
Acenaphthylene	ug/g	<0.0050	0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Anthracene	ug/g	<0.0050	0.0050	<0.0050	0.0050	7363767	0.040	0.0050	7363767
Benzo(a)anthracene	ug/g	<0.0050	0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Benzo(a)pyrene	ug/g	<0.0050	0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Benzo(b/j)fluoranthene	ug/g	<0.0050	0.0050	<0.0050	0.0050	7363767	0.0066	0.0050	7363767
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Chrysene	ug/g	<0.0050	0.0050	<0.0050	0.0050	7363767	0.024	0.0050	7363767
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Fluoranthene	ug/g	<0.0050	0.0050	<0.0050	0.0050	7363767	<0.020 (1)	0.020	7363767
Fluorene	ug/g	<0.0050	0.0050	<0.0050	0.0050	7363767	<0.040 (1)	0.040	7363767
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
1-Methylnaphthalene	ug/g	0.010	0.0050	<0.0050	0.0050	7363767	0.22	0.0050	7363767
2-Methylnaphthalene	ug/g	0.012	0.0050	<0.0050	0.0050	7363767	0.22	0.0050	7363767
Naphthalene	ug/g	<0.0050	0.0050	<0.0050	0.0050	7363767	0.039	0.0050	7363767
Phenanthrene	ug/g	0.0078	0.0050	<0.0050	0.0050	7363767	0.14	0.0050	7363767
Pyrene	ug/g	<0.0050	0.0050	<0.0050	0.0050	7363767	<0.020 (1)	0.020	7363767
Surrogate Recovery (%)									
D10-Anthracene	%	84		82		7363767	86		7363767
D14-Terphenyl (FS)	%	88		84		7363767	88		7363767
D8-Acenaphthylene	%	86		81		7363767	86		7363767

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Detection Limit was raised due to matrix interferences.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PAHS (SOIL)

BV Labs ID		PPD810		PPD811		PPD812			PPD813		
Sampling Date		2021/05/07 10:00		2021/05/07 10:10		2021/05/07 10:10			2021/05/07 10:30		
COC Number		345314		345314		345314			345314		
	UNITS	Dup 32	RDL	BH21-19-2	QC Batch	Dup33	RDL	QC Batch	BH21-19-4	RDL	QC Batch
Inorganics											
Moisture	%	4.4	1.0	16	7361674	12	1.0	7361218			
Calculated Parameters											
Methylnaphthalene, 2-(1-)	ug/g	0.64	0.0071	<0.0071	7357854	<0.0071	0.0071	7357854	<0.0071	0.0071	7357854
Polyaromatic Hydrocarbons											
Acenaphthene	ug/g	<0.30 (1)	0.30	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Acenaphthylene	ug/g	<0.0050	0.0050	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Anthracene	ug/g	0.049	0.0050	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Benzo(a)anthracene	ug/g	<0.0050	0.0050	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Benzo(a)pyrene	ug/g	<0.0050	0.0050	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Benzo(b/j)fluoranthene	ug/g	0.0078	0.0050	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Chrysene	ug/g	0.025	0.0050	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Fluoranthene	ug/g	<0.030 (1)	0.030	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Fluorene	ug/g	<0.050 (1)	0.050	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
1-Methylnaphthalene	ug/g	0.30	0.0050	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
2-Methylnaphthalene	ug/g	0.33	0.0050	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Naphthalene	ug/g	0.062	0.0050	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Phenanthrene	ug/g	0.17	0.0050	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Pyrene	ug/g	<0.020 (1)	0.020	<0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Surrogate Recovery (%)											
D10-Anthracene	%	86		88	7363767	85		7363767	92		7362754
D14-Terphenyl (FS)	%	88		89	7363767	88		7363767	92		7362754
D8-Acenaphthylene	%	86		87	7363767	87		7363767	83		7362754

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Detection Limit was raised due to matrix interferences.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PAHS (SOIL)

BV Labs ID		PPD814	PPD815	PPD816			PPD817		
Sampling Date		2021/05/07 10:30	2021/05/07 10:40	2021/05/07 10:40			2021/05/07 13:05		
COC Number		345314	345314	345314			345314		
	UNITS	Dup35	BH21-19-5	Dup36	RDL	QC Batch	BH21-20-1	RDL	QC Batch
Inorganics									
Moisture	%	4.6	4.5	4.6	1.0	7361218			
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	<0.0071	0.0071	7357854	1.1	0.0071	7357854
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	<0.40 (1)	0.40	7363767
Acenaphthylene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	<0.030 (1)	0.030	7363767
Anthracene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	0.075	0.0050	7363767
Benzo(a)anthracene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Benzo(a)pyrene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Benzo(b/j)fluoranthene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	0.011	0.0050	7363767
Benzo(g,h,i)perylene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Benzo(k)fluoranthene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Chrysene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	0.030	0.0050	7363767
Dibenzo(a,h)anthracene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
Fluoranthene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	<0.030 (1)	0.030	7363767
Fluorene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	<0.060 (1)	0.060	7363767
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	0.52	0.0050	7363767
2-Methylnaphthalene	ug/g	0.0050	<0.0050	<0.0050	0.0050	7363767	0.62	0.0050	7363767
Naphthalene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	0.12	0.0050	7363767
Phenanthrene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	0.22	0.0050	7363767
Pyrene	ug/g	<0.0050	<0.0050	<0.0050	0.0050	7363767	<0.030 (1)	0.030	7363767
Surrogate Recovery (%)									
D10-Anthracene	%	92	83	87		7363767	89		7363767
D14-Terphenyl (FS)	%	91	87	91		7363767	90		7363767
D8-Acenaphthylene	%	92	86	91		7363767	89		7363767

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Detection Limit was raised due to matrix interferences.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PAHS (SOIL)

BV Labs ID		PPD818			PPD819			PPD820		
Sampling Date		2021/05/07 13:05			2021/05/07 13:10			2021/05/07 13:10		
COC Number		345314			345314			345314		
	UNITS	Dup 37	RDL	QC Batch	BH21-20-2	RDL	QC Batch	Dup38	RDL	QC Batch
Inorganics										
Moisture	%	5.1	1.0	7361218				8.5	1.0	7360635
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/g	0.11	0.0071	7357854	<0.0071	0.0071	7357854	0.032	0.0071	7357854
Polyaromatic Hydrocarbons										
Acenaphthene	ug/g	<0.050 (1)	0.050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Acenaphthylene	ug/g	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Anthracene	ug/g	0.0095	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Benzo(a)anthracene	ug/g	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Benzo(a)pyrene	ug/g	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Benzo(b/j)fluoranthene	ug/g	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Chrysene	ug/g	0.0072	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Fluoranthene	ug/g	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Fluorene	ug/g	<0.0080 (1)	0.0080	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
1-Methylnaphthalene	ug/g	0.056	0.0050	7363767	<0.0050	0.0050	7363767	0.014	0.0050	7362754
2-Methylnaphthalene	ug/g	0.058	0.0050	7363767	<0.0050	0.0050	7363767	0.017	0.0050	7362754
Naphthalene	ug/g	0.010	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Phenanthrene	ug/g	0.031	0.0050	7363767	<0.0050	0.0050	7363767	0.0094	0.0050	7362754
Pyrene	ug/g	<0.0050	0.0050	7363767	<0.0050	0.0050	7363767	<0.0050	0.0050	7362754
Surrogate Recovery (%)										
D10-Anthracene	%	90		7363767	87		7363767	90		7362754
D14-Terphenyl (FS)	%	91		7363767	89		7363767	96		7362754
D8-Acenaphthylene	%	94		7363767	86		7363767	82		7362754

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Detection Limit was raised due to matrix interferences.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PAHS (SOIL)

BV Labs ID		PPD821		
Sampling Date		2021/05/07 13:25		
COC Number		345314		
	UNITS	BH21-20-5	RDL	QC Batch
Inorganics				
Moisture	%	11	1.0	7360635
Calculated Parameters				
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	0.0071	7357854
Polyaromatic Hydrocarbons				
Acenaphthene	ug/g	<0.0050	0.0050	7363767
Acenaphthylene	ug/g	<0.0050	0.0050	7363767
Anthracene	ug/g	<0.0050	0.0050	7363767
Benzo(a)anthracene	ug/g	<0.0050	0.0050	7363767
Benzo(a)pyrene	ug/g	<0.0050	0.0050	7363767
Benzo(b/j)fluoranthene	ug/g	<0.0050	0.0050	7363767
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	7363767
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	7363767
Chrysene	ug/g	<0.0050	0.0050	7363767
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	7363767
Fluoranthene	ug/g	<0.0050	0.0050	7363767
Fluorene	ug/g	<0.0050	0.0050	7363767
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	7363767
1-Methylnaphthalene	ug/g	<0.0050	0.0050	7363767
2-Methylnaphthalene	ug/g	<0.0050	0.0050	7363767
Naphthalene	ug/g	<0.0050	0.0050	7363767
Phenanthrene	ug/g	<0.0050	0.0050	7363767
Pyrene	ug/g	<0.0050	0.0050	7363767
Surrogate Recovery (%)				
D10-Anthracene	%	84		7363767
D14-Terphenyl (FS)	%	89		7363767
D8-Acenaphthylene	%	87		7363767

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 PCBS (SOIL)

BV Labs ID		PPD786			PPD803	PPD807		PPD809		
Sampling Date		2021/05/14 15:20			2021/05/07 08:45	2021/05/07 09:15		2021/05/07 10:00		
COC Number		345314			345314	345314		345314		
	UNITS	BH21-27-1A	RDL	QC Batch	BH21-17-1	BH21-17-5	QC Batch	BH21-19-1	RDL	QC Batch
Inorganics										
Moisture	%				6.3	8.0	7361218	9.0	1.0	7361674
PCBs										
Aroclor 1242	ug/g	<0.010	0.010	7362064	<0.010	<0.010	7362064	<0.010	0.010	7362064
Aroclor 1248	ug/g	<0.010	0.010	7362064	<0.010	<0.010	7362064	<0.010	0.010	7362064
Aroclor 1254	ug/g	<0.010	0.010	7362064	<0.010	<0.010	7362064	<0.010	0.010	7362064
Aroclor 1260	ug/g	<0.010	0.010	7362064	<0.010	<0.010	7362064	<0.010	0.010	7362064
Total PCB	ug/g	<0.010	0.010	7362064	<0.010	<0.010	7362064	<0.010	0.010	7362064
Surrogate Recovery (%)										
Decachlorobiphenyl	%	124		7362064	84	102	7362064	84		7362064

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs ID		PPD813		PPD817	PPD819		
Sampling Date		2021/05/07 10:30		2021/05/07 13:05	2021/05/07 13:10		
COC Number		345314		345314	345314		
	UNITS	BH21-19-4	QC Batch	BH21-20-1	BH21-20-2	RDL	QC Batch
Inorganics							
Moisture	%	5.1	7364139	2.3	8.5	1.0	7361218
PCBs							
Aroclor 1242	ug/g	<0.010	7362064	<0.010	<0.010	0.010	7362064
Aroclor 1248	ug/g	<0.010	7362064	<0.010	<0.010	0.010	7362064
Aroclor 1254	ug/g	<0.010	7362064	<0.010	<0.010	0.010	7362064
Aroclor 1260	ug/g	<0.010	7362064	<0.010	<0.010	0.010	7362064
Total PCB	ug/g	<0.010	7362064	<0.010	<0.010	0.010	7362064
Surrogate Recovery (%)							
Decachlorobiphenyl	%	90	7362064	86	104		7362064

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD787		PPD788			PPD789	PPD790	PPD791		
Sampling Date		2021/05/14 15:25		2021/04/30 14:10			2021/05/05 07:55	2021/05/05 07:55	2021/05/05 10:05		
COC Number		345314		345314			345314	345314	345314		
	UNITS	BH21-32-1A	QC Batch	BH21-32-2	RDL	QC Batch	BH21-2-2	Dup 19	BH21-42-2	RDL	QC Batch
Inorganics											
Moisture	%						5.4	6.6	9.5	1.0	7360235
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	7362577	<0.020	0.020	7360972	<0.020	<0.020	<0.020	0.020	7360972
Toluene	ug/g	<0.020	7362577	<0.020	0.020	7360972	<0.020	<0.020	<0.020	0.020	7360972
Ethylbenzene	ug/g	<0.020	7362577	<0.020	0.020	7360972	<0.020	<0.020	<0.020	0.020	7360972
o-Xylene	ug/g	<0.020	7362577	<0.020	0.020	7360972	<0.020	<0.020	<0.020	0.020	7360972
p+m-Xylene	ug/g	<0.040	7362577	<0.040	0.040	7360972	<0.040	<0.040	<0.040	0.040	7360972
Total Xylenes	ug/g	<0.040	7362577	<0.040	0.040	7360972	<0.040	<0.040	<0.040	0.040	7360972
F1 (C6-C10)	ug/g	<10	7362577	<10	10	7360972	<10	<10	<10	10	7360972
F1 (C6-C10) - BTEX	ug/g	<10	7362577	<10	10	7360972	<10	<10	<10	10	7360972
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7361023	<10	10	7359716	<10	<10	<10	10	7359716
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7361023	<50	50	7359716	<50	<50	<50	50	7359716
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7361023	<50	50	7359716	<50	<50	<50	50	7359716
Reached Baseline at C50	ug/g	Yes	7361023	Yes		7359716	Yes	Yes	Yes		7359716
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	95	7362577	100		7360972	103	104	104		7360972
4-Bromofluorobenzene	%	98	7362577	96		7360972	95	92	87		7360972
D10-o-Xylene	%	84	7362577	103		7360972	98	99	101		7360972
D4-1,2-Dichloroethane	%	106	7362577	104		7360972	105	104	104		7360972
o-Terphenyl	%	86	7361023	80		7359716	89	88	88		7359716

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD792			PPD793		PPD794	PPD795	PPD796		
Sampling Date		2021/05/05 13:00			2021/05/06 15:05		2021/05/06 15:05	2021/05/06 15:10	2021/05/06 15:10		
COC Number		345314			345314		345314	345314	345314		
	UNITS	BH21-42-8	RDL	QC Batch	BH21-18-1	QC Batch	Dup21	BH21-18-2	Dup 22	RDL	QC Batch
Inorganics											
Moisture	%	11	1.0	7360235							
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	0.020	7360972	<0.020 (1)	7360972	<0.020	<0.020	<0.020	0.020	7360972
Toluene	ug/g	<0.020	0.020	7360972	0.028	7360972	0.024	<0.020	<0.020	0.020	7360972
Ethylbenzene	ug/g	<0.020	0.020	7360972	0.12	7360972	0.090	<0.020	<0.020	0.020	7360972
o-Xylene	ug/g	<0.020	0.020	7360972	0.059	7360972	0.053	<0.020	<0.020	0.020	7360972
p+m-Xylene	ug/g	<0.040	0.040	7360972	0.36	7360972	0.46	<0.040	<0.040	0.040	7360972
Total Xylenes	ug/g	<0.040	0.040	7360972	0.42	7360972	0.51	<0.040	<0.040	0.040	7360972
F1 (C6-C10)	ug/g	<10	10	7360972	110	7360972	94	<10	<10	10	7360972
F1 (C6-C10) - BTEX	ug/g	<10	10	7360972	110	7360972	93	<10	<10	10	7360972
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7359716	22	7362426	350	15	<10	10	7361023
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7359716	76	7362426	780	54	<50	50	7361023
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7359716	<50	7362426	230	<50	<50	50	7361023
Reached Baseline at C50	ug/g	Yes		7359716	Yes	7362426	Yes	Yes	Yes		7361023
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	104		7360972	100	7360972	97	103	103		7360972
4-Bromofluorobenzene	%	85		7360972	92	7360972	95	92	91		7360972
D10-o-Xylene	%	100		7360972	90	7360972	116	107	84		7360972
D4-1,2-Dichloroethane	%	103		7360972	100	7360972	101	104	103		7360972
o-Terphenyl	%	88		7359716	86	7362426	90	87	87		7361023

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Detection limits raised due to matrix interference.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD797	PPD798			PPD798			PPD799		
Sampling Date		2021/05/06 15:30	2021/05/06 15:30			2021/05/06 15:30			2021/05/06 15:45		
COC Number		345314	345314			345314			345314		
	UNITS	BH21-18-4	Dup24	RDL	QC Batch	Dup24 Lab-Dup	RDL	QC Batch	BH21-18-5	RDL	QC Batch
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	<0.020	0.020	7360972				<0.020	0.020	7362577
Toluene	ug/g	<0.020	<0.020	0.020	7360972				<0.020	0.020	7362577
Ethylbenzene	ug/g	<0.020	<0.020	0.020	7360972				<0.020	0.020	7362577
o-Xylene	ug/g	<0.020	<0.020	0.020	7360972				<0.020	0.020	7362577
p+m-Xylene	ug/g	<0.040	<0.040	0.040	7360972				<0.040	0.040	7362577
Total Xylenes	ug/g	<0.040	<0.040	0.040	7360972				<0.040	0.040	7362577
F1 (C6-C10)	ug/g	<10	<10	10	7360972				<10	10	7362577
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	7360972				<10	10	7362577
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	7361023	<10	10	7361023	<10	10	7361426
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	7361023	<50	50	7361023	<50	50	7361426
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	7361023	<50	50	7361023	<50	50	7361426
Reached Baseline at C50	ug/g	Yes	Yes		7361023	Yes		7361023	Yes		7361426
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	105	104		7360972				97		7362577
4-Bromofluorobenzene	%	93	91		7360972				95		7362577
D10-o-Xylene	%	106	95		7360972				82		7362577
D4-1,2-Dichloroethane	%	103	101		7360972				106		7362577
o-Terphenyl	%	86	91		7361023	86		7361023	71		7361426

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD799			PPD800		PPD801		PPD802		
Sampling Date		2021/05/06 15:45			2021/05/06 10:25		2021/05/06 10:25		2021/05/06 11:20		
COC Number		345314			345314		345314		345314		
	UNITS	BH21-18-5 Lab-Dup	RDL	QC Batch	BH21-43-2	QC Batch	Dup 20	QC Batch	BH21-43-8	RDL	QC Batch
Inorganics											
Moisture	%				9.6	7361436	9.0	7361674	7.5	1.0	7360635
BTEX & F1 Hydrocarbons											
Benzene	ug/g				<0.020	7362577	<0.020	7362577	<0.020	0.020	7362577
Toluene	ug/g				<0.020	7362577	<0.020	7362577	<0.020	0.020	7362577
Ethylbenzene	ug/g				<0.020	7362577	<0.020	7362577	<0.020	0.020	7362577
o-Xylene	ug/g				<0.020	7362577	<0.020	7362577	<0.020	0.020	7362577
p+m-Xylene	ug/g				<0.040	7362577	<0.040	7362577	<0.040	0.040	7362577
Total Xylenes	ug/g				<0.040	7362577	<0.040	7362577	<0.040	0.040	7362577
F1 (C6-C10)	ug/g				<10	7362577	<10	7362577	<10	10	7362577
F1 (C6-C10) - BTEX	ug/g				<10	7362577	<10	7362577	<10	10	7362577
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7361426	<10	7361426	<10	7361023	<10	10	7361337
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7361426	<50	7361426	<50	7361023	<50	50	7361337
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7361426	<50	7361426	<50	7361023	<50	50	7361337
Reached Baseline at C50	ug/g	Yes		7361426	Yes	7361426	Yes	7361023	Yes		7361337
Surrogate Recovery (%)											
1,4-Difluorobenzene	%				98	7362577	95	7362577	95		7362577
4-Bromofluorobenzene	%				97	7362577	96	7362577	99		7362577
D10-o-Xylene	%				86	7362577	87	7362577	92		7362577
D4-1,2-Dichloroethane	%				107	7362577	107	7362577	107		7362577
o-Terphenyl	%	73		7361426	88	7361426	88	7361023	84		7361337

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD802			PPD803			PPD804	PPD805		
Sampling Date		2021/05/06 11:20			2021/05/07 08:45			2021/05/07 08:45	2021/05/07 09:00		
COC Number		345314			345314			345314	345314		
	UNITS	BH21-43-8 Lab-Dup	RDL	QC Batch	BH21-17-1	RDL	QC Batch	Dup 27	BH21-17-3	RDL	QC Batch
Inorganics											
Moisture	%							20	9.1	1.0	7361674
BTEX & F1 Hydrocarbons											
Benzene	ug/g				<0.020	0.020	7362577	0.053	<0.020	0.020	7362577
Toluene	ug/g				<0.020	0.020	7362577	0.065	<0.020	0.020	7362577
Ethylbenzene	ug/g				<0.020	0.020	7362577	0.17	<0.020	0.020	7362577
o-Xylene	ug/g				0.027	0.020	7362577	0.25	<0.020	0.020	7362577
p+m-Xylene	ug/g				0.11	0.040	7362577	1.1	<0.040	0.040	7362577
Total Xylenes	ug/g				0.14	0.040	7362577	1.3	<0.040	0.040	7362577
F1 (C6-C10)	ug/g				<10	10	7362577	92	<10	10	7362577
F1 (C6-C10) - BTEX	ug/g				<10	10	7362577	90	<10	10	7362577
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7361337	<10	10	7361426	12	<10	10	7361023
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7361337	59	50	7361426	<50	<50	50	7361023
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7361337	<50	50	7361426	<50	<50	50	7361023
Reached Baseline at C50	ug/g	Yes		7361337	Yes		7361426	Yes	Yes		7361023
Surrogate Recovery (%)											
1,4-Difluorobenzene	%				98		7362577	96	98		7362577
4-Bromofluorobenzene	%				95		7362577	95	98		7362577
D10-o-Xylene	%				85		7362577	100	89		7362577
D4-1,2-Dichloroethane	%				111		7362577	101	103		7362577
o-Terphenyl	%	89		7361337	83		7361426	85	89		7361023

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD806			PPD807			PPD808		
Sampling Date		2021/05/07 09:00			2021/05/07 09:15			2021/05/07 09:15		
COC Number		345314			345314			345314		
	UNITS	Dup 29	RDL	QC Batch	BH21-17-5	RDL	QC Batch	Dup 31	RDL	QC Batch
Inorganics										
Moisture	%	8.7	1.0	7361674				8.0	1.0	7361674
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	0.020	7362577	<0.020	0.020	7362577	<0.020	0.020	7362577
Toluene	ug/g	<0.020	0.020	7362577	<0.020	0.020	7362577	<0.020	0.020	7362577
Ethylbenzene	ug/g	<0.020	0.020	7362577	<0.020	0.020	7362577	<0.020	0.020	7362577
o-Xylene	ug/g	<0.020	0.020	7362577	<0.020	0.020	7362577	<0.020	0.020	7362577
p+m-Xylene	ug/g	<0.040	0.040	7362577	<0.040	0.040	7362577	<0.040	0.040	7362577
Total Xylenes	ug/g	<0.040	0.040	7362577	<0.040	0.040	7362577	<0.040	0.040	7362577
F1 (C6-C10)	ug/g	<10	10	7362577	<10	10	7362577	<10	10	7362577
F1 (C6-C10) - BTEX	ug/g	<10	10	7362577	<10	10	7362577	<10	10	7362577
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7361023	<10	10	7361426	<10	10	7361023
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7361023	<50	50	7361426	<50	50	7361023
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7361023	<50	50	7361426	<50	50	7361023
Reached Baseline at C50	ug/g	Yes		7361023	Yes		7361426	Yes		7361023
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	96		7362577	97		7362577	98		7362577
4-Bromofluorobenzene	%	99		7362577	99		7362577	98		7362577
D10-o-Xylene	%	87		7362577	84		7362577	90		7362577
D4-1,2-Dichloroethane	%	113		7362577	112		7362577	115		7362577
o-Terphenyl	%	87		7361023	88		7361426	87		7361023

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD809	PPD810	PPD811		PPD812			PPD813		
Sampling Date		2021/05/07 10:00	2021/05/07 10:00	2021/05/07 10:10		2021/05/07 10:10			2021/05/07 10:30		
COC Number		345314	345314	345314		345314			345314		
	UNITS	BH21-19-1	Dup 32	BH21-19-2	QC Batch	Dup33	RDL	QC Batch	BH21-19-4	RDL	QC Batch
BTEX & F1 Hydrocarbons											
Benzene	ug/g	0.062	<0.020	<0.020	7362577	<0.020	0.020	7362577	<0.020	0.020	7362577
Toluene	ug/g	<0.020	<0.020	<0.020	7362577	<0.020	0.020	7362577	0.031	0.020	7362577
Ethylbenzene	ug/g	0.19	0.091	<0.020	7362577	<0.020	0.020	7362577	<0.020	0.020	7362577
o-Xylene	ug/g	0.025	0.029	<0.020	7362577	<0.020	0.020	7362577	<0.020	0.020	7362577
p+m-Xylene	ug/g	0.41	0.52	<0.040	7362577	<0.040	0.040	7362577	<0.050 (1)	0.050	7362577
Total Xylenes	ug/g	0.43	0.55	<0.040	7362577	<0.040	0.040	7362577	<0.050 (2)	0.050	7362577
F1 (C6-C10)	ug/g	110	92	<10	7362577	<10	10	7362577	<10	10	7362577
F1 (C6-C10) - BTEX	ug/g	110	92	<10	7362577	<10	10	7362577	<10	10	7362577
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	200	220	<10	7361023	<10	10	7361426	<10	10	7361337
F3 (C16-C34 Hydrocarbons)	ug/g	450	480	<50	7361023	<50	50	7361426	<50	50	7361337
F4 (C34-C50 Hydrocarbons)	ug/g	150	150	<50	7361023	<50	50	7361426	<50	50	7361337
Reached Baseline at C50	ug/g	Yes	Yes	Yes	7361023	Yes		7361426	Yes		7361337
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	94	95	97	7362577	98		7362577	97		7362577
4-Bromofluorobenzene	%	97	96	100	7362577	96		7362577	97		7362577
D10-o-Xylene	%	85	89	86	7362577	85		7362577	107		7362577
D4-1,2-Dichloroethane	%	104	105	110	7362577	115		7362577	115		7362577
o-Terphenyl	%	90	93	87	7361023	75		7361426	89		7361337

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) F1 BTEX Analysis: The p+m-Xylene detection limit was raised due to background interference.
(2) F1 BTEX Analysis: The Total Xylene detection limit was raised due to background interference.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD814	PPD815	PPD816	PPD817			PPD817		
Sampling Date		2021/05/07 10:30	2021/05/07 10:40	2021/05/07 10:40	2021/05/07 13:05			2021/05/07 13:05		
COC Number		345314	345314	345314	345314			345314		
	UNITS	Dup35	BH21-19-5	Dup36	BH21-20-1	RDL	QC Batch	BH21-20-1 Lab-Dup	RDL	QC Batch
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	<0.020	<0.020	0.025	0.020	7362577	<0.023	0.023	7362577
Toluene	ug/g	<0.020	<0.020	<0.020	0.026	0.020	7362577	0.026	0.020	7362577
Ethylbenzene	ug/g	<0.020	<0.020	<0.020	0.10	0.020	7362577	0.097	0.020	7362577
o-Xylene	ug/g	<0.020	<0.020	<0.020	0.068	0.020	7362577	0.067	0.020	7362577
p+m-Xylene	ug/g	<0.040	<0.040	<0.040	0.87	0.040	7362577	0.83	0.040	7362577
Total Xylenes	ug/g	<0.040	<0.040	<0.040	0.93	0.040	7362577	0.90	0.040	7362577
F1 (C6-C10)	ug/g	<10	<10	<10	75	10	7362577	69	10	7362577
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	74	10	7362577	68	10	7362577
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	460	10	7361426			
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	<50	1000	50	7361426			
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	<50	350	50	7361426			
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		7361426			
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	97	94	98	97		7362577	97		7362577
4-Bromofluorobenzene	%	97	100	99	94		7362577	96		7362577
D10-o-Xylene	%	85	87	92	84		7362577	82		7362577
D4-1,2-Dichloroethane	%	114	121	105	99		7362577	97		7362577
o-Terphenyl	%	74	87	91	90		7361426			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD818			PPD818			PPD819		
Sampling Date		2021/05/07 13:05			2021/05/07 13:05			2021/05/07 13:10		
COC Number		345314			345314			345314		
	UNITS	Dup 37	RDL	QC Batch	Dup 37 Lab-Dup	RDL	QC Batch	BH21-20-2	RDL	QC Batch
BTEX & F1 Hydrocarbons										
Benzene	ug/g	0.13	0.020	7362830	0.13	0.020	7362830	<0.020	0.020	7362830
Toluene	ug/g	0.45	0.020	7362830	0.44	0.020	7362830	<0.020	0.020	7362830
Ethylbenzene	ug/g	0.48	0.020	7362830	0.46	0.020	7362830	<0.020	0.020	7362830
o-Xylene	ug/g	1.1	0.020	7362830	1.1	0.020	7362830	<0.020	0.020	7362830
p+m-Xylene	ug/g	4.1	0.040	7362830	4.0	0.040	7362830	<0.040	0.040	7362830
Total Xylenes	ug/g	5.2	0.040	7362830	5.1	0.040	7362830	<0.040	0.040	7362830
F1 (C6-C10)	ug/g	230	10	7362830	230	10	7362830	<10	10	7362830
F1 (C6-C10) - BTEX	ug/g	220	10	7362830	230	10	7362830	<10	10	7362830
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	70	10	7361426				<10	10	7361426
F3 (C16-C34 Hydrocarbons)	ug/g	200	50	7361426				<50	50	7361426
F4 (C34-C50 Hydrocarbons)	ug/g	75	50	7361426				<50	50	7361426
Reached Baseline at C50	ug/g	Yes		7361426				Yes		7361426
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	96		7362830	97		7362830	97		7362830
4-Bromofluorobenzene	%	97		7362830	96		7362830	98		7362830
D10-o-Xylene	%	94		7362830	91		7362830	92		7362830
D4-1,2-Dichloroethane	%	99		7362830	101		7362830	100		7362830
o-Terphenyl	%	91		7361426				90		7361426

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD820	PPD821			PPD822	PPD823		PPD824		
Sampling Date		2021/05/07 13:10	2021/05/07 13:25			2021/05/07 14:45	2021/05/07 14:45		2021/05/10 08:30		
COC Number		345314	345314			345314	345314		345314		
	UNITS	Dup38	BH21-20-5	RDL	QC Batch	BH21-9-1	Dup42	QC Batch	BH21-10-1	RDL	QC Batch
Inorganics											
Moisture	%					8.9	6.1	7360635	9.9	1.0	7360635
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	<0.020	0.020	7362830	<0.020	<0.020	7362830	<0.020	0.020	7362830
Toluene	ug/g	<0.020	<0.020	0.020	7362830	<0.020	<0.020	7362830	<0.020	0.020	7362830
Ethylbenzene	ug/g	<0.020	<0.020	0.020	7362830	<0.020	<0.020	7362830	<0.020	0.020	7362830
o-Xylene	ug/g	<0.020	<0.020	0.020	7362830	<0.020	<0.020	7362830	<0.020	0.020	7362830
p+m-Xylene	ug/g	<0.040	<0.040	0.040	7362830	<0.040	<0.040	7362830	<0.040	0.040	7362830
Total Xylenes	ug/g	<0.040	<0.040	0.040	7362830	<0.040	<0.040	7362830	<0.040	0.040	7362830
F1 (C6-C10)	ug/g	<10	<10	10	7362830	<10	<10	7362830	<10	10	7362830
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	7362830	<10	<10	7362830	<10	10	7362830
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	7361337	<10	<10	7361337	<10	10	7362473
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	7361337	<50	<50	7361337	<50	50	7362473
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	7361337	<50	<50	7361337	<50	50	7362473
Reached Baseline at C50	ug/g	Yes	Yes		7361337	Yes	Yes	7361337	Yes		7362473
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	98	99		7362830	98	98	7362830	98		7362830
4-Bromofluorobenzene	%	97	97		7362830	97	96	7362830	98		7362830
D10-o-Xylene	%	95	90		7362830	88	89	7362830	94		7362830
D4-1,2-Dichloroethane	%	100	100		7362830	102	102	7362830	100		7362830
o-Terphenyl	%	86	88		7361337	88	87	7361337	87		7362473

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD825	PPD826		PPD827			PPD827		
Sampling Date		2021/05/10 08:50	2021/05/10 13:55		2021/05/10 14:30			2021/05/10 14:30		
COC Number		345314	345314		345314			345314		
	UNITS	BH21-10-3	BH21-44-1	QC Batch	BH21-44-5	RDL	QC Batch	BH21-44-5 Lab-Dup	RDL	QC Batch
Inorganics										
Moisture	%	15	6.4	7360635	8.2	1.0	7361218	9.0	1.0	7361218
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	<0.020	7362830	<0.020	0.020	7362830			
Toluene	ug/g	<0.020	<0.020	7362830	<0.020	0.020	7362830			
Ethylbenzene	ug/g	<0.020	<0.020	7362830	<0.020	0.020	7362830			
o-Xylene	ug/g	<0.020	<0.020	7362830	<0.020	0.020	7362830			
p+m-Xylene	ug/g	<0.040	<0.040	7362830	<0.040	0.040	7362830			
Total Xylenes	ug/g	<0.040	<0.040	7362830	<0.040	0.040	7362830			
F1 (C6-C10)	ug/g	<10	<10	7362830	<10	10	7362830			
F1 (C6-C10) - BTEX	ug/g	<10	<10	7362830	<10	10	7362830			
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	7361337	<10	10	7361426			
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	7361337	<50	50	7361426			
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	7361337	<50	50	7361426			
Reached Baseline at C50	ug/g	Yes	Yes	7361337	Yes		7361426			
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	98	97	7362830	98		7362830			
4-Bromofluorobenzene	%	96	97	7362830	97		7362830			
D10-o-Xylene	%	90	84	7362830	88		7362830			
D4-1,2-Dichloroethane	%	103	100	7362830	103		7362830			
o-Terphenyl	%	85	88	7361337	88		7361426			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD828		PPD829		PPD830	PPD831		PPD832		
Sampling Date		2021/05/10 15:30		2021/05/10 16:20		2021/05/11 08:30	2021/05/11 11:00		2021/05/11 14:00		
COC Number		345314		345314		345314	345314		345314		
	UNITS	BH21-44-9	QC Batch	BH21-14-1	QC Batch	BH21-14-6	BH21-14-12	QC Batch	BH21-8-1	RDL	QC Batch
Inorganics											
Moisture	%	5.8	7360635	4.2	7361218	5.9	10	7360635	4.2	1.0	7361674
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	7362830	<0.020	7362830	<0.020	<0.020	7362830	0.19	0.020	7362830
Toluene	ug/g	<0.020	7362830	<0.020	7362830	<0.020	<0.020	7362830	0.021	0.020	7362830
Ethylbenzene	ug/g	<0.020	7362830	<0.020	7362830	<0.020	<0.020	7362830	0.56	0.020	7362830
o-Xylene	ug/g	<0.020	7362830	<0.020	7362830	<0.020	<0.020	7362830	0.061	0.020	7362830
p+m-Xylene	ug/g	<0.040	7362830	<0.040	7362830	<0.040	<0.040	7362830	3.9	0.040	7362830
Total Xylenes	ug/g	<0.040	7362830	<0.040	7362830	<0.040	<0.040	7362830	4.0	0.040	7362830
F1 (C6-C10)	ug/g	<10	7362830	<10	7362830	<10	<10	7362830	200	10	7362830
F1 (C6-C10) - BTEX	ug/g	<10	7362830	<10	7362830	<10	<10	7362830	190	10	7362830
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7361337	39	7361426	<10	<10	7361337	150	10	7361023
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7361337	100	7361426	<50	<50	7361337	350	50	7361023
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7361337	<50	7361426	<50	<50	7361337	110	50	7361023
Reached Baseline at C50	ug/g	Yes	7361337	Yes	7361426	Yes	Yes	7361337	Yes		7361023
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	99	7362830	97	7362830	99	98	7362830	97		7362830
4-Bromofluorobenzene	%	97	7362830	96	7362830	96	99	7362830	96		7362830
D10-o-Xylene	%	89	7362830	88	7362830	90	91	7362830	93		7362830
D4-1,2-Dichloroethane	%	100	7362830	102	7362830	101	101	7362830	101		7362830
o-Terphenyl	%	87	7361337	90	7361426	86	84	7361337	87		7361023

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD833		PPD834		PPD835		PPD836	PPD837		
Sampling Date		2021/05/11 14:00		2021/05/11 14:50		2021/05/11 14:50		2021/05/12 08:40	2021/05/12 08:40		
COC Number		345314		345314		345314		345314	345314		
	UNITS	Dup45	QC Batch	BH21-8-5	QC Batch	Dup46	QC Batch	BH21-7-1	Dup47	RDL	QC Batch
Inorganics											
Moisture	%	5.0	7360635	21	7361674	21	7361218	9.8	5.8	1.0	7360635
BTEX & F1 Hydrocarbons											
Benzene	ug/g	0.028	7362830	<0.020	7362830	<0.020	7362830	0.21	0.13	0.020	7362830
Toluene	ug/g	<0.020	7362830	<0.020	7362830	<0.020	7362830	0.41	0.39	0.020	7362830
Ethylbenzene	ug/g	0.11	7362830	<0.020	7362830	<0.020	7362830	0.55	0.33	0.020	7362830
o-Xylene	ug/g	0.022	7362830	<0.020	7362830	<0.020	7362830	0.94	0.64	0.020	7362830
p+m-Xylene	ug/g	0.71	7362830	<0.040	7362830	<0.040	7362830	4.0	2.5	0.040	7362830
Total Xylenes	ug/g	0.73	7362830	<0.040	7362830	<0.040	7362830	5.0	3.2	0.040	7362830
F1 (C6-C10)	ug/g	73	7362830	<10	7362830	<10	7362830	270	170	10	7362830
F1 (C6-C10) - BTEX	ug/g	72	7362830	<10	7362830	<10	7362830	260	160	10	7362830
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	310	7361337	<10	7361023	<10	7361426	<10	170	10	7361337
F3 (C16-C34 Hydrocarbons)	ug/g	520	7361337	<50	7361023	<50	7361426	<50	370	50	7361337
F4 (C34-C50 Hydrocarbons)	ug/g	150	7361337	<50	7361023	<50	7361426	<50	120	50	7361337
Reached Baseline at C50	ug/g	Yes	7361337	Yes	7361023	Yes	7361426	Yes	Yes		7361337
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	98	7362830	98	7362830	97	7362830	97	97		7362830
4-Bromofluorobenzene	%	94	7362830	97	7362830	98	7362830	97	95		7362830
D10-o-Xylene	%	87	7362830	88	7362830	91	7362830	102	93		7362830
D4-1,2-Dichloroethane	%	99	7362830	103	7362830	103	7362830	100	101		7362830
o-Terphenyl	%	84	7361337	91	7361023	88	7361426	87	89		7361337

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD838		PPD839			PPD839		
Sampling Date		2021/05/12 11:00		2021/05/12 11:15			2021/05/12 11:15		
COC Number		345314		345314			345314		
	UNITS	BH21-47-1	QC Batch	BH21-47-3	RDL	QC Batch	BH21-47-3 Lab-Dup	RDL	QC Batch
Inorganics									
Moisture	%	4.4	7361436	13	1.0	7361218			
BTEX & F1 Hydrocarbons									
Benzene	ug/g	<0.020	7362452	<0.020	0.020	7362452	<0.020	0.020	7362452
Toluene	ug/g	<0.020	7362452	<0.020	0.020	7362452	<0.020	0.020	7362452
Ethylbenzene	ug/g	<0.020	7362452	<0.020	0.020	7362452	<0.020	0.020	7362452
o-Xylene	ug/g	<0.020	7362452	<0.020	0.020	7362452	<0.020	0.020	7362452
p+m-Xylene	ug/g	<0.040	7362452	<0.040	0.040	7362452	<0.040	0.040	7362452
Total Xylenes	ug/g	<0.040	7362452	<0.040	0.040	7362452	<0.040	0.040	7362452
F1 (C6-C10)	ug/g	<10	7362452	<10	10	7362452	<10	10	7362452
F1 (C6-C10) - BTEX	ug/g	<10	7362452	<10	10	7362452	<10	10	7362452
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7362473	<10	10	7361426			
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7362473	<50	50	7361426			
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7362473	<50	50	7361426			
Reached Baseline at C50	ug/g	Yes	7362473	Yes		7361426			
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	97	7362452	98		7362452	97		7362452
4-Bromofluorobenzene	%	96	7362452	92		7362452	94		7362452
D10-o-Xylene	%	90	7362452	95		7362452	94		7362452
D4-1,2-Dichloroethane	%	93	7362452	89		7362452	90		7362452
o-Terphenyl	%	86	7362473	87		7361426			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD840		PPD841		PPD842		PPD843	PPD844		
Sampling Date		2021/05/12 11:15		2021/05/12 11:30		2021/05/12 11:45		2021/05/12 15:20	2021/05/12 15:35		
COC Number		345314		345314		345314		345314	345314		
	UNITS	Dup 49	QC Batch	BH21-47-6	QC Batch	BH21-47-9	QC Batch	BH21-45-1	BH21-45-4	RDL	QC Batch
Inorganics											
Moisture	%	13	7361218	6.9	7364139	19	7361218	6.5	4.7	1.0	7361674
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	7362452	<0.020	<0.020	0.020	7362452
Toluene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	7362452	<0.020	<0.020	0.020	7362452
Ethylbenzene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	7362452	<0.020	<0.020	0.020	7362452
o-Xylene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	7362452	<0.020	<0.020	0.020	7362452
p+m-Xylene	ug/g	<0.040	7362452	<0.040	7362452	<0.040	7362452	<0.040	<0.040	0.040	7362452
Total Xylenes	ug/g	<0.040	7362452	<0.040	7362452	<0.040	7362452	<0.040	<0.040	0.040	7362452
F1 (C6-C10)	ug/g	<10	7362452	<10	7362452	<10	7362452	<10	<10	10	7362452
F1 (C6-C10) - BTEX	ug/g	<10	7362452	<10	7362452	<10	7362452	<10	<10	10	7362452
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7361426	<10	7362473	<10	7361426	<10	<10	10	7361023
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7361426	<50	7362473	<50	7361426	<50	<50	50	7361023
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7361426	<50	7362473	<50	7361426	<50	<50	50	7361023
Reached Baseline at C50	ug/g	Yes	7361426	Yes	7362473	Yes	7361426	Yes	Yes		7361023
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	97	7362452	96	7362452	98	7362452	97	98		7362452
4-Bromofluorobenzene	%	90	7362452	100	7362452	93	7362452	94	98		7362452
D10-o-Xylene	%	89	7362452	95	7362452	92	7362452	90	125		7362452
D4-1,2-Dichloroethane	%	91	7362452	90	7362452	90	7362452	90	89		7362452
o-Terphenyl	%	87	7361426	87	7362473	91	7361426	90	89		7361023

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD845		PPD846		PPD847	PPD848	PPD849		
Sampling Date		2021/05/12 13:50		2021/05/12 14:30		2021/05/13 13:20	2021/05/13 13:50	2021/05/13 11:00		
COC Number		345314		345314		345314	345314	345314		
	UNITS	BH21-46-1	QC Batch	BH21-46-5B	QC Batch	BH21-54-1	BH21-54-5	BH21-55-2	RDL	QC Batch
Inorganics										
Moisture	%	13	7360635	12	7361218	19	6.1	8.8	1.0	7360635
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	<0.020	<0.020	0.020	7362452
Toluene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	<0.020	<0.020	0.020	7362452
Ethylbenzene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	<0.020	<0.020	0.020	7362452
o-Xylene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	<0.020	<0.020	0.020	7362452
p+m-Xylene	ug/g	<0.040	7362452	<0.040	7362452	<0.040	<0.040	<0.040	0.040	7362452
Total Xylenes	ug/g	<0.040	7362452	<0.040	7362452	<0.040	<0.040	<0.040	0.040	7362452
F1 (C6-C10)	ug/g	<10	7362452	<10	7362452	<10	<10	<10	10	7362452
F1 (C6-C10) - BTEX	ug/g	<10	7362452	<10	7362452	<10	<10	<10	10	7362452
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7361337	<10	7361426	<10	<10	<10	10	7361337
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7361337	<50	7361426	<50	<50	<50	50	7361337
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7361337	<50	7361426	<50	<50	<50	50	7361337
Reached Baseline at C50	ug/g	Yes	7361337	Yes	7361426	Yes	Yes	Yes		7361337
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	96	7362452	98	7362452	95	99	98		7362452
4-Bromofluorobenzene	%	97	7362452	95	7362452	91	86	96		7362452
D10-o-Xylene	%	96	7362452	103	7362452	96	106	89		7362452
D4-1,2-Dichloroethane	%	91	7362452	91	7362452	87	90	90		7362452
o-Terphenyl	%	87	7361337	90	7361426	86	88	87		7361337

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD850		PPD851		PPD852			PPD852		
Sampling Date		2021/05/13 11:25		2021/05/14 12:45		2021/05/14 13:05			2021/05/14 13:05		
COC Number		345314		345314		345314			345314		
	UNITS	BH21-55-5	QC Batch	BH21-56-1	QC Batch	BH21-56-5	RDL	QC Batch	BH21-56-5 Lab-Dup	RDL	QC Batch
Inorganics											
Moisture	%	5.7	7361218	23	7361436	15	1.0	7360635	15	1.0	7360635
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	0.020	7362452			
Toluene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	0.020	7362452			
Ethylbenzene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	0.020	7362452			
o-Xylene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	0.020	7362452			
p+m-Xylene	ug/g	<0.040	7362452	<0.040	7362452	<0.040	0.040	7362452			
Total Xylenes	ug/g	<0.040	7362452	<0.040	7362452	<0.040	0.040	7362452			
F1 (C6-C10)	ug/g	<10	7362452	<10	7362452	<10	10	7362452			
F1 (C6-C10) - BTEX	ug/g	<10	7362452	<10	7362452	<10	10	7362452			
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7361426	<10	7362473	<10	10	7361337			
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7361426	<50	7362473	<50	50	7361337			
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7361426	<50	7362473	<50	50	7361337			
Reached Baseline at C50	ug/g	Yes	7361426	Yes	7362473	Yes		7361337			
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	99	7362452	98	7362452	99		7362452			
4-Bromofluorobenzene	%	98	7362452	91	7362452	93		7362452			
D10-o-Xylene	%	93	7362452	98	7362452	103		7362452			
D4-1,2-Dichloroethane	%	88	7362452	91	7362452	91		7362452			
o-Terphenyl	%	92	7361426	85	7362473	88		7361337			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

BV Labs ID		PPD853		PPD854		PPD855		PPD856		
Sampling Date		2021/05/14 10:10		2021/05/14 10:45		2021/05/14 09:20		2021/05/14 09:40		
COC Number		345314		345314		345314		345314		
	UNITS	BH21-53-1	QC Batch	BH21-53-4	QC Batch	BH21-52-1	QC Batch	BH21-52-5	RDL	QC Batch
Inorganics										
Moisture	%	13	7361674	11	7360635	15	7361674	8.3	1.0	7361218
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	7362452	<0.020	0.020	7362452
Toluene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	7362452	<0.020	0.020	7362452
Ethylbenzene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	7362452	<0.020	0.020	7362452
o-Xylene	ug/g	<0.020	7362452	<0.020	7362452	<0.020	7362452	<0.020	0.020	7362452
p+m-Xylene	ug/g	<0.040	7362452	<0.040	7362452	<0.040	7362452	<0.040	0.040	7362452
Total Xylenes	ug/g	<0.040	7362452	<0.040	7362452	<0.040	7362452	<0.040	0.040	7362452
F1 (C6-C10)	ug/g	<10	7362452	<10	7362452	<10	7362452	<10	10	7362452
F1 (C6-C10) - BTEX	ug/g	<10	7362452	<10	7362452	<10	7362452	<10	10	7362452
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	7361023	<10	7361337	<10	7361023	<10	10	7361426
F3 (C16-C34 Hydrocarbons)	ug/g	<50	7361023	<50	7361337	<50	7361023	<50	50	7361426
F4 (C34-C50 Hydrocarbons)	ug/g	<50	7361023	<50	7361337	<50	7361023	<50	50	7361426
Reached Baseline at C50	ug/g	Yes	7361023	Yes	7361337	Yes	7361023	Yes		7361426
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	98	7362452	98	7362452	99	7362452	98		7362452
4-Bromofluorobenzene	%	90	7362452	95	7362452	90	7362452	94		7362452
D10-o-Xylene	%	94	7362452	89	7362452	102	7362452	93		7362452
D4-1,2-Dichloroethane	%	90	7362452	90	7362452	91	7362452	93		7362452
o-Terphenyl	%	88	7361023	91	7361337	87	7361023	79		7361426

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 SEMIVOLATILES PACKAGE (SOIL)

BV Labs ID		PPD822	PPD823			PPD823			PPD824		
Sampling Date		2021/05/07 14:45	2021/05/07 14:45			2021/05/07 14:45			2021/05/10 08:30		
COC Number		345314	345314			345314			345314		
	UNITS	BH21-9-1	Dup42	RDL	QC Batch	Dup42 Lab-Dup	RDL	QC Batch	BH21-10-1	RDL	QC Batch
Semivolatile Organics											
1,2,4-Trichlorobenzene	ug/g	<0.05	<0.05	0.05	7363416	<0.05	0.05	7363416	<0.05	0.05	7363416
1-Methylnaphthalene	ug/g	<0.03	<0.03	0.03	7363416	<0.03	0.03	7363416	<0.03	0.03	7363416
2,4,5-Trichlorophenol	ug/g	<0.08	<0.08	0.08	7363416	<0.08	0.08	7363416	<0.08	0.08	7363416
2,4,6-Trichlorophenol	ug/g	<0.1	<0.1	0.1	7363416	<0.1	0.1	7363416	<0.1	0.1	7363416
2,4-Dichlorophenol	ug/g	<0.1	<0.1	0.1	7363416	<0.1	0.1	7363416	<0.1	0.1	7363416
2,4-Dimethylphenol	ug/g	<0.2	<0.2	0.2	7363416	<0.2	0.2	7363416	<0.2	0.2	7363416
2,4-Dinitrophenol	ug/g	<0.5	<0.5	0.5	7363416	<0.5	0.5	7363416	<0.5	0.5	7363416
2,4-Dinitrotoluene	ug/g	<0.1	<0.1	0.1	7363416	<0.1	0.1	7363416	<0.1	0.1	7363416
2,6-Dinitrotoluene	ug/g	<0.1	<0.1	0.1	7363416	<0.1	0.1	7363416	<0.1	0.1	7363416
2-Chlorophenol	ug/g	<0.08	<0.08	0.08	7363416	<0.08	0.08	7363416	<0.08	0.08	7363416
2-Methylnaphthalene	ug/g	<0.03	<0.03	0.03	7363416	<0.03	0.03	7363416	<0.03	0.03	7363416
3,3'-Dichlorobenzidine	ug/g	<0.5	<0.5	0.5	7363416	<0.5	0.5	7363416	<0.5	0.5	7363416
Acenaphthene	ug/g	<0.03	<0.03	0.03	7363416	<0.03	0.03	7363416	<0.03	0.03	7363416
Acenaphthylene	ug/g	<0.05	<0.05	0.05	7363416	<0.05	0.05	7363416	<0.05	0.05	7363416
Anthracene	ug/g	<0.03	<0.03	0.03	7363416	<0.03	0.03	7363416	<0.03	0.03	7363416
Benzo(a)anthracene	ug/g	<0.05	<0.05	0.05	7363416	<0.05	0.05	7363416	<0.05	0.05	7363416
Benzo(a)pyrene	ug/g	<0.05	<0.05	0.05	7363416	<0.05	0.05	7363416	<0.05	0.05	7363416
Benzo(b/j)fluoranthene	ug/g	<0.1	<0.1	0.1	7363416	<0.1	0.1	7363416	<0.1	0.1	7363416
Benzo(g,h,i)perylene	ug/g	<0.1	<0.1	0.1	7363416	<0.1	0.1	7363416	<0.1	0.1	7363416
Benzo(k)fluoranthene	ug/g	<0.03	<0.03	0.03	7363416	<0.03	0.03	7363416	<0.03	0.03	7363416
Biphenyl	ug/g	<0.05	<0.05	0.05	7363416	<0.05	0.05	7363416	<0.05	0.05	7363416
Bis(2-chloroethyl)ether	ug/g	<0.2	<0.2	0.2	7363416	<0.2	0.2	7363416	<0.2	0.2	7363416
Bis(2-chloroisopropyl)ether	ug/g	<0.1	<0.1	0.1	7363416	<0.1	0.1	7363416	<0.1	0.1	7363416
Bis(2-ethylhexyl)phthalate	ug/g	<1	<1	1	7363416	<1	1	7363416	<1	1	7363416
Chrysene	ug/g	<0.05	<0.05	0.05	7363416	<0.05	0.05	7363416	<0.05	0.05	7363416
Dibenzo(a,h)anthracene	ug/g	<0.05	<0.05	0.05	7363416	<0.05	0.05	7363416	<0.05	0.05	7363416
Diethyl phthalate	ug/g	<0.2	<0.2	0.2	7363416	<0.2	0.2	7363416	<0.2	0.2	7363416
Dimethyl phthalate	ug/g	<0.2	<0.2	0.2	7363416	<0.2	0.2	7363416	<0.2	0.2	7363416
Fluoranthene	ug/g	<0.05	<0.05	0.05	7363416	<0.05	0.05	7363416	<0.05	0.05	7363416
Fluorene	ug/g	<0.03	<0.03	0.03	7363416	<0.03	0.03	7363416	<0.03	0.03	7363416
Indeno(1,2,3-cd)pyrene	ug/g	<0.08	<0.08	0.08	7363416	<0.08	0.08	7363416	<0.08	0.08	7363416
Naphthalene	ug/g	<0.03	<0.03	0.03	7363416	<0.03	0.03	7363416	<0.03	0.03	7363416
p-Chloroaniline	ug/g	<0.2	<0.2	0.2	7363416	<0.2	0.2	7363416	<0.2	0.2	7363416

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

O.REG 153 SEMIVOLATILES PACKAGE (SOIL)

BV Labs ID		PPD822	PPD823			PPD823			PPD824		
Sampling Date		2021/05/07 14:45	2021/05/07 14:45			2021/05/07 14:45			2021/05/10 08:30		
COC Number		345314	345314			345314			345314		
	UNITS	BH21-9-1	Dup42	RDL	QC Batch	Dup42 Lab-Dup	RDL	QC Batch	BH21-10-1	RDL	QC Batch
Pentachlorophenol	ug/g	<0.1	<0.1	0.1	7363416	<0.1	0.1	7363416	<0.1	0.1	7363416
Phenanthrene	ug/g	<0.05	<0.05	0.05	7363416	<0.05	0.05	7363416	<0.05	0.05	7363416
Phenol	ug/g	<0.09	<0.09	0.09	7363416	<0.09	0.09	7363416	<0.09	0.09	7363416
Pyrene	ug/g	<0.05	<0.05	0.05	7363416	<0.05	0.05	7363416	<0.05	0.05	7363416
Calculated Parameters											
2,4- & 2,6-Dinitrotoluene	ug/g	<0.14	<0.14	0.14	7358024				<0.14	0.14	7358024
Methylnaphthalene, 2-(1-)	ug/g	<0.042	<0.042	0.042	7357854				<0.042	0.042	7357854
Surrogate Recovery (%)											
2,4,6-Tribromophenol	%	64	63		7363416	61		7363416	66		7363416
2-Fluorobiphenyl	%	67	69		7363416	72		7363416	60		7363416
D14-Terphenyl (FS)	%	87	88		7363416	86		7363416	90		7363416
D5-Nitrobenzene	%	85	77		7363416	80		7363416	79		7363416

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QC Batch = Quality Control Batch
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O.REG 153 SEMIVOLATILES PACKAGE (SOIL)

BV Labs ID		PPD825		
Sampling Date		2021/05/10 08:50		
COC Number		345314		
	UNITS	BH21-10-3	RDL	QC Batch
Semivolatile Organics				
1,2,4-Trichlorobenzene	ug/g	<0.05	0.05	7363416
1-Methylnaphthalene	ug/g	<0.03	0.03	7363416
2,4,5-Trichlorophenol	ug/g	<0.08	0.08	7363416
2,4,6-Trichlorophenol	ug/g	<0.1	0.1	7363416
2,4-Dichlorophenol	ug/g	<0.1	0.1	7363416
2,4-Dimethylphenol	ug/g	<0.2	0.2	7363416
2,4-Dinitrophenol	ug/g	<0.5	0.5	7363416
2,4-Dinitrotoluene	ug/g	<0.1	0.1	7363416
2,6-Dinitrotoluene	ug/g	<0.1	0.1	7363416
2-Chlorophenol	ug/g	<0.08	0.08	7363416
2-Methylnaphthalene	ug/g	<0.03	0.03	7363416
3,3'-Dichlorobenzidine	ug/g	<0.5	0.5	7363416
Acenaphthene	ug/g	<0.03	0.03	7363416
Acenaphthylene	ug/g	<0.05	0.05	7363416
Anthracene	ug/g	<0.03	0.03	7363416
Benzo(a)anthracene	ug/g	<0.05	0.05	7363416
Benzo(a)pyrene	ug/g	<0.05	0.05	7363416
Benzo(b/j)fluoranthene	ug/g	<0.1	0.1	7363416
Benzo(g,h,i)perylene	ug/g	<0.1	0.1	7363416
Benzo(k)fluoranthene	ug/g	<0.03	0.03	7363416
Biphenyl	ug/g	<0.05	0.05	7363416
Bis(2-chloroethyl)ether	ug/g	<0.2	0.2	7363416
Bis(2-chloroisopropyl)ether	ug/g	<0.1	0.1	7363416
Bis(2-ethylhexyl)phthalate	ug/g	<1	1	7363416
Chrysene	ug/g	<0.05	0.05	7363416
Dibenzo(a,h)anthracene	ug/g	<0.05	0.05	7363416
Diethyl phthalate	ug/g	<0.2	0.2	7363416
Dimethyl phthalate	ug/g	<0.2	0.2	7363416
Fluoranthene	ug/g	<0.05	0.05	7363416
Fluorene	ug/g	<0.03	0.03	7363416
Indeno(1,2,3-cd)pyrene	ug/g	<0.08	0.08	7363416
Naphthalene	ug/g	<0.03	0.03	7363416
p-Chloroaniline	ug/g	<0.2	0.2	7363416

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 SEMIVOLATILES PACKAGE (SOIL)

BV Labs ID		PPD825		
Sampling Date		2021/05/10 08:50		
COC Number		345314		
	UNITS	BH21-10-3	RDL	QC Batch
Pentachlorophenol	ug/g	<0.1	0.1	7363416
Phenanthrene	ug/g	<0.05	0.05	7363416
Phenol	ug/g	<0.09	0.09	7363416
Pyrene	ug/g	<0.05	0.05	7363416
Calculated Parameters				
2,4- & 2,6-Dinitrotoluene	ug/g	<0.14	0.14	7358024
Methylnaphthalene, 2-(1-)	ug/g	<0.042	0.042	7357854
Surrogate Recovery (%)				
2,4,6-Tribromophenol	%	62		7363416
2-Fluorobiphenyl	%	82		7363416
D14-Terphenyl (FS)	%	88		7363416
D5-Nitrobenzene	%	92		7363416

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

PETROLEUM HYDROCARBONS (CCME)

BV Labs ID		PPD857		
Sampling Date		2021/05/16 14:20		
COC Number		345314		
	UNITS	Trip Blank	RDL	QC Batch
BTEX & F1 Hydrocarbons				
Benzene	ug/g	<0.020	0.020	7362452
Toluene	ug/g	<0.020	0.020	7362452
Ethylbenzene	ug/g	<0.020	0.020	7362452
o-Xylene	ug/g	<0.020	0.020	7362452
p+m-Xylene	ug/g	<0.040	0.040	7362452
Total Xylenes	ug/g	<0.040	0.040	7362452
F1 (C6-C10)	ug/g	<10	10	7362452
F1 (C6-C10) - BTEX	ug/g	<10	10	7362452
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	97		7362452
4-Bromofluorobenzene	%	93		7362452
D10-o-Xylene	%	92		7362452
D4-1,2-Dichloroethane	%	90		7362452

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

TEST SUMMARY

BV Labs ID: PPD783
Sample ID: BH21-6-1A
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361436	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358915	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD783 Dup
Sample ID: BH21-6-1A
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel

BV Labs ID: PPD784
Sample ID: BH21-23-1A
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361436	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358915	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD785
Sample ID: BH21-24-1A
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361436	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358915	N/A	2021/05/21	Automated Statchk

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TEST SUMMARY

BV Labs ID: PPD786
Sample ID: BH21-27-1A
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7358910	N/A	2021/05/21	Automated Statchk
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361436	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7362754	2021/05/20	2021/05/20	Jonghan Yoon
Polychlorinated Biphenyl in Soil	GC/ECD	7362064	2021/05/19	2021/05/20	Sarah Huang
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358915	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD786 Dup
Sample ID: BH21-27-1A
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota

BV Labs ID: PPD787
Sample ID: BH21-32-1A
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/21	Automated Statchk
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361674	N/A	2021/05/20	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358915	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD788
Sample ID: BH21-32-2
Matrix: Soil

Collected: 2021/04/30
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/20	Automated Statchk
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel

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TEST SUMMARY

BV Labs ID: PPD788
Sample ID: BH21-32-2
Matrix: Soil

Collected: 2021/04/30
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7360972	N/A	2021/05/20	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7359716	2021/05/18	2021/05/19	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7360235	N/A	2021/05/19	Prgya Panchal
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7359715	2021/05/18	2021/05/19	Mitesh Raj
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358915	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD789
Sample ID: BH21-2-2
Matrix: Soil

Collected: 2021/05/05
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7360972	N/A	2021/05/19	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7359716	2021/05/18	2021/05/19	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7360235	N/A	2021/05/19	Prgya Panchal
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358915	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD789 Dup
Sample ID: BH21-2-2
Matrix: Soil

Collected: 2021/05/05
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern

BV Labs ID: PPD790
Sample ID: Dup 19
Matrix: Soil

Collected: 2021/05/05
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7360972	N/A	2021/05/19	Haibin Wu

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TEST SUMMARY

BV Labs ID: PPD790
Sample ID: Dup 19
Matrix: Soil

Collected: 2021/05/05
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7359716	2021/05/18	2021/05/19	(Kent) Maolin Li
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7360235	N/A	2021/05/19	Prgya Panchal
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD791
Sample ID: BH21-42-2
Matrix: Soil

Collected: 2021/05/05
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7360972	N/A	2021/05/19	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7359716	2021/05/18	2021/05/19	(Kent) Maolin Li
Moisture	BAL	7360235	N/A	2021/05/19	Prgya Panchal

BV Labs ID: PPD792
Sample ID: BH21-42-8
Matrix: Soil

Collected: 2021/05/05
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7360972	N/A	2021/05/19	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7359716	2021/05/18	2021/05/19	(Kent) Maolin Li
Moisture	BAL	7360235	N/A	2021/05/19	Prgya Panchal

BV Labs ID: PPD793
Sample ID: BH21-18-1
Matrix: Soil

Collected: 2021/05/06
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7358910	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7360972	N/A	2021/05/19	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7362426	2021/05/20	2021/05/20	Ravinder Gaidhu
Moisture	BAL	7360997	N/A	2021/05/19	Manpreet Kaur
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7362754	2021/05/20	2021/05/20	Jonghan Yoon

BV Labs ID: PPD794
Sample ID: Dup21
Matrix: Soil

Collected: 2021/05/06
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7358910	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7360972	N/A	2021/05/20	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

TEST SUMMARY

BV Labs ID: PPD795
Sample ID: BH21-18-2
Matrix: Soil

Collected: 2021/05/06
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7358910	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7360972	N/A	2021/05/19	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon

BV Labs ID: PPD796
Sample ID: Dup 22
Matrix: Soil

Collected: 2021/05/06
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7358910	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7360972	N/A	2021/05/19	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon

BV Labs ID: PPD797
Sample ID: BH21-18-4
Matrix: Soil

Collected: 2021/05/06
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7358910	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7360972	N/A	2021/05/19	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon

BV Labs ID: PPD798
Sample ID: Dup24
Matrix: Soil

Collected: 2021/05/06
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7358910	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7360972	N/A	2021/05/19	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon

BV Labs ID: PPD798 Dup
Sample ID: Dup24
Matrix: Soil

Collected: 2021/05/06
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam

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TEST SUMMARY

BV Labs ID: PPD798 Dup
Sample ID: Dup24
Matrix: Soil

Collected: 2021/05/06
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon

BV Labs ID: PPD799
Sample ID: BH21-18-5
Matrix: Soil

Collected: 2021/05/06
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7358910	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Moisture	BAL	7361436	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon

BV Labs ID: PPD799 Dup
Sample ID: BH21-18-5
Matrix: Soil

Collected: 2021/05/06
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam

BV Labs ID: PPD800
Sample ID: BH21-43-2
Matrix: Soil

Collected: 2021/05/06
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Moisture	BAL	7361436	N/A	2021/05/19	Gurpreet Kaur (ONT)

BV Labs ID: PPD801
Sample ID: Dup 20
Matrix: Soil

Collected: 2021/05/06
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)

BV Labs ID: PPD802
Sample ID: BH21-43-8
Matrix: Soil

Collected: 2021/05/06
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea

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TEST SUMMARY

BV Labs ID: PPD802
Sample ID: BH21-43-8
Matrix: Soil

Collected: 2021/05/06
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)

BV Labs ID: PPD802 Dup
Sample ID: BH21-43-8
Matrix: Soil

Collected: 2021/05/06
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu

BV Labs ID: PPD803
Sample ID: BH21-17-1
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7358910	N/A	2021/05/21	Automated Statchk
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon
Polychlorinated Biphenyl in Soil	GC/ECD	7362064	2021/05/19	2021/05/20	Sarah Huang
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD804
Sample ID: Dup 27
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)

BV Labs ID: PPD805
Sample ID: BH21-17-3
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam

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TEST SUMMARY

BV Labs ID: PPD805 **Collected:** 2021/05/07
Sample ID: BH21-17-3 **Shipped:**
Matrix: Soil **Received:** 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)

BV Labs ID: PPD806 **Collected:** 2021/05/07
Sample ID: Dup 29 **Shipped:**
Matrix: Soil **Received:** 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)

BV Labs ID: PPD807 **Collected:** 2021/05/07
Sample ID: BH21-17-5 **Shipped:**
Matrix: Soil **Received:** 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7358910	N/A	2021/05/21	Automated Statchk
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon
Polychlorinated Biphenyl in Soil	GC/ECD	7362064	2021/05/19	2021/05/20	Sarah Huang
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD808 **Collected:** 2021/05/07
Sample ID: Dup 31 **Shipped:**
Matrix: Soil **Received:** 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)

BV Labs ID: PPD809 **Collected:** 2021/05/07
Sample ID: BH21-19-1 **Shipped:**
Matrix: Soil **Received:** 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7358909	N/A	2021/05/21	Automated Statchk

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TEST SUMMARY

BV Labs ID: PPD809
Sample ID: BH21-19-1
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon
Polychlorinated Biphenyl in Soil	GC/ECD	7362064	2021/05/19	2021/05/20	Sarah Huang
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD810
Sample ID: Dup 32
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon

BV Labs ID: PPD811
Sample ID: BH21-19-2
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon

BV Labs ID: PPD812
Sample ID: Dup33
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)

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TEST SUMMARY

BV Labs ID: PPD812
Sample ID: Dup33
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon

BV Labs ID: PPD813
Sample ID: BH21-19-4
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/21	Automated Statchk
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7364139	N/A	2021/05/20	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7362754	2021/05/20	2021/05/20	Jonghan Yoon
Polychlorinated Biphenyl in Soil	GC/ECD	7362064	2021/05/19	2021/05/20	Sarah Huang
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD814
Sample ID: Dup35
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon

BV Labs ID: PPD815
Sample ID: BH21-19-5
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon

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BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

TEST SUMMARY

BV Labs ID: PPD816
Sample ID: Dup36
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon

BV Labs ID: PPD817
Sample ID: BH21-20-1
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/21	Automated Statchk
Hot Water Extractable Boron	ICP	7365086	2021/05/21	2021/05/21	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7365308	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon
Polychlorinated Biphenyl in Soil	GC/ECD	7362064	2021/05/19	2021/05/20	Sarah Huang
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD817 Dup
Sample ID: BH21-20-1
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362577	N/A	2021/05/20	Anca Ganea

BV Labs ID: PPD818
Sample ID: Dup 37
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon

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TEST SUMMARY

BV Labs ID: PPD818 Dup
Sample ID: Dup 37
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu

BV Labs ID: PPD819
Sample ID: BH21-20-2
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/21	Automated Statchk
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon
Polychlorinated Biphenyl in Soil	GC/ECD	7362064	2021/05/19	2021/05/20	Sarah Huang
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD820
Sample ID: Dup38
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7362754	2021/05/20	2021/05/20	Jonghan Yoon

BV Labs ID: PPD821
Sample ID: BH21-20-5
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7363767	2021/05/20	2021/05/21	Jonghan Yoon

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TEST SUMMARY

BV Labs ID: PPD822
Sample ID: BH21-9-1
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/25	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	7363416	2021/05/20	2021/05/21	Milijana Avramovic
Dinitrotoluene Sum	CALC	7358024	2021/05/25	2021/05/25	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7362538	2021/05/20	2021/05/20	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358459	N/A	2021/05/20	Automated Statchk

BV Labs ID: PPD823
Sample ID: Dup42
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/25	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	7363416	2021/05/20	2021/05/21	Milijana Avramovic
Dinitrotoluene Sum	CALC	7358024	2021/05/25	2021/05/25	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7362538	2021/05/20	2021/05/20	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358459	N/A	2021/05/20	Automated Statchk

BV Labs ID: PPD823 Dup
Sample ID: Dup42
Matrix: Soil

Collected: 2021/05/07
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	7363416	2021/05/20	2021/05/21	Milijana Avramovic

BV Labs ID: PPD824
Sample ID: BH21-10-1
Matrix: Soil

Collected: 2021/05/10
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/25	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	7363416	2021/05/20	2021/05/21	Milijana Avramovic
Dinitrotoluene Sum	CALC	7358024	2021/05/25	2021/05/25	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7362473	2021/05/20	2021/05/20	Anna Stuglik Rolland
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7367472	2021/05/22	2021/05/23	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358459	N/A	2021/05/20	Automated Statchk

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TEST SUMMARY

BV Labs ID: PPD825
Sample ID: BH21-10-3
Matrix: Soil

Collected: 2021/05/10
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7357854	N/A	2021/05/25	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	7363416	2021/05/20	2021/05/21	Milijana Avramovic
Dinitrotoluene Sum	CALC	7358024	2021/05/25	2021/05/25	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7362538	2021/05/20	2021/05/21	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358459	N/A	2021/05/20	Automated Statchk

BV Labs ID: PPD826
Sample ID: BH21-44-1
Matrix: Soil

Collected: 2021/05/10
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD827
Sample ID: BH21-44-5
Matrix: Soil

Collected: 2021/05/10
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

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TEST SUMMARY

BV Labs ID: PPD827 Dup
Sample ID: BH21-44-5
Matrix: Soil

Collected: 2021/05/10
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)

BV Labs ID: PPD828
Sample ID: BH21-44-9
Matrix: Soil

Collected: 2021/05/10
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD829
Sample ID: BH21-14-1
Matrix: Soil

Collected: 2021/05/10
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD829 Dup
Sample ID: BH21-14-1
Matrix: Soil

Collected: 2021/05/10
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake

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TEST SUMMARY

BV Labs ID: PPD830
Sample ID: BH21-14-6
Matrix: Soil

Collected: 2021/05/11
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD831
Sample ID: BH21-14-12
Matrix: Soil

Collected: 2021/05/11
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD832
Sample ID: BH21-8-1
Matrix: Soil

Collected: 2021/05/11
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)

BV Labs ID: PPD833
Sample ID: Dup45
Matrix: Soil

Collected: 2021/05/11
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)

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BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

TEST SUMMARY

BV Labs ID: PPD834
Sample ID: BH21-8-5
Matrix: Soil

Collected: 2021/05/11
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/19	Jeevaraj Jeevaratrnam
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)

BV Labs ID: PPD835
Sample ID: Dup46
Matrix: Soil

Collected: 2021/05/11
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)

BV Labs ID: PPD836
Sample ID: BH21-7-1
Matrix: Soil

Collected: 2021/05/12
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)

BV Labs ID: PPD837
Sample ID: Dup47
Matrix: Soil

Collected: 2021/05/12
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362830	N/A	2021/05/20	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)

BV Labs ID: PPD838
Sample ID: BH21-47-1
Matrix: Soil

Collected: 2021/05/12
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7362473	2021/05/20	2021/05/20	Anna Stuglik Rolland
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361436	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

TEST SUMMARY

BV Labs ID: PPD838
Sample ID: BH21-47-1
Matrix: Soil

Collected: 2021/05/12
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD839
Sample ID: BH21-47-3
Matrix: Soil

Collected: 2021/05/12
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD839 Dup
Sample ID: BH21-47-3
Matrix: Soil

Collected: 2021/05/12
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino

BV Labs ID: PPD840
Sample ID: Dup 49
Matrix: Soil

Collected: 2021/05/12
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

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TEST SUMMARY

BV Labs ID: PPD840 Dup
Sample ID: Dup 49
Matrix: Soil

Collected: 2021/05/12
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu

BV Labs ID: PPD841
Sample ID: BH21-47-6
Matrix: Soil

Collected: 2021/05/12
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7362473	2021/05/20	2021/05/20	Anna Stuglik Rolland
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7364139	N/A	2021/05/20	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD842
Sample ID: BH21-47-9
Matrix: Soil

Collected: 2021/05/12
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD842 Dup
Sample ID: BH21-47-9
Matrix: Soil

Collected: 2021/05/12
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

TEST SUMMARY

BV Labs ID: PPD843
Sample ID: BH21-45-1
Matrix: Soil

Collected: 2021/05/12
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD844
Sample ID: BH21-45-4
Matrix: Soil

Collected: 2021/05/12
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361106	2021/05/19	2021/05/21	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7362629	2021/05/20	2021/05/21	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361674	N/A	2021/05/20	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362920	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD845
Sample ID: BH21-46-1
Matrix: Soil

Collected: 2021/05/12
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

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TEST SUMMARY

BV Labs ID: PPD846
Sample ID: BH21-46-5B
Matrix: Soil

Collected: 2021/05/12
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD847
Sample ID: BH21-54-1
Matrix: Soil

Collected: 2021/05/13
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7367472	2021/05/22	2021/05/23	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358459	N/A	2021/05/20	Automated Statchk
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD847 Dup
Sample ID: BH21-54-1
Matrix: Soil

Collected: 2021/05/13
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu

BV Labs ID: PPD848
Sample ID: BH21-54-5
Matrix: Soil

Collected: 2021/05/13
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

TEST SUMMARY

BV Labs ID: PPD848
Sample ID: BH21-54-5
Matrix: Soil

Collected: 2021/05/13
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7362538	2021/05/20	2021/05/21	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358459	N/A	2021/05/20	Automated Statchk
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD849
Sample ID: BH21-55-2
Matrix: Soil

Collected: 2021/05/13
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7362538	2021/05/20	2021/05/21	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358459	N/A	2021/05/20	Automated Statchk
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD850
Sample ID: BH21-55-5
Matrix: Soil

Collected: 2021/05/13
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7367472	2021/05/22	2021/05/23	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358459	N/A	2021/05/20	Automated Statchk
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

TEST SUMMARY

BV Labs ID: PPD850
Sample ID: BH21-55-5
Matrix: Soil

Collected: 2021/05/13
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD851
Sample ID: BH21-56-1
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7362473	2021/05/20	2021/05/20	Anna Stuglik Rolland
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361436	N/A	2021/05/19	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7367472	2021/05/22	2021/05/23	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358459	N/A	2021/05/20	Automated Statchk
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD852
Sample ID: BH21-56-5
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7367472	2021/05/22	2021/05/23	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358459	N/A	2021/05/20	Automated Statchk
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD852 Dup
Sample ID: BH21-56-5
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)

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TEST SUMMARY

BV Labs ID: PPD852 Dup
Sample ID: BH21-56-5
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake

BV Labs ID: PPD853
Sample ID: BH21-53-1
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7369001	2021/05/25	2021/05/25	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7367472	2021/05/22	2021/05/23	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358459	N/A	2021/05/20	Automated Statchk
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/25	Automated Statchk

BV Labs ID: PPD854
Sample ID: BH21-53-4
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361337	2021/05/19	2021/05/20	Ravinder Gaidhu
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7360635	N/A	2021/05/19	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7367472	2021/05/22	2021/05/23	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358459	N/A	2021/05/20	Automated Statchk
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD854 Dup
Sample ID: BH21-53-4
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

TEST SUMMARY

BV Labs ID: PPD855
Sample ID: BH21-52-1
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361023	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363472	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361674	N/A	2021/05/19	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7367472	2021/05/22	2021/05/23	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358459	N/A	2021/05/20	Automated Statchk
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD855 Dup
Sample ID: BH21-52-1
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363627	2021/05/20	2021/05/20	Archana Patel

BV Labs ID: PPD856
Sample ID: BH21-52-5
Matrix: Soil

Collected: 2021/05/14
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7363044	2021/05/20	2021/05/20	Archana Patel
Free (WAD) Cyanide	TECH	7361102	2021/05/19	2021/05/20	Aditiben Patel
Conductivity	AT	7365038	2021/05/21	2021/05/21	Khushbu Vijay kumar Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7361008	2021/05/19	2021/05/20	Ann-Marie Stern
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7361426	2021/05/19	2021/05/20	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	7363510	2021/05/20	2021/05/21	Daniel Teclu
Moisture	BAL	7361218	N/A	2021/05/19	Gurpreet Kaur (ONT)
OC Pesticides (Selected) & PCB	GC/ECD	7367472	2021/05/22	2021/05/23	Joy Zhang
OC Pesticides Summed Parameters	CALC	7358459	N/A	2021/05/20	Automated Statchk
pH CaCl2 EXTRACT	AT	7362906	2021/05/20	2021/05/20	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	7358512	N/A	2021/05/21	Automated Statchk

BV Labs ID: PPD857
Sample ID: Trip Blank
Matrix: Soil

Collected: 2021/05/16
Shipped:
Received: 2021/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7362452	N/A	2021/05/20	Joe Paino

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	-1.3°C
Package 2	1.7°C
Package 3	-3.0°C
Package 4	-0.7°C
Package 5	-0.7°C

Sample PPD787 [BH21-32-1A] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD788 [BH21-32-2] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD789 [BH21-2-2] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD791 [BH21-42-2] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD792 [BH21-42-8] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD795 [BH21-18-2] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD796 [Dup 22] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD797 [BH21-18-4] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD798 [Dup24] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD799 [BH21-18-5] : 210520CCMENONTB

Sample PPD800 [BH21-43-2] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD802 [BH21-43-8] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD803 [BH21-17-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD805 [BH21-17-3] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD806 [Dup 29] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

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Sample PPD807 [BH21-17-5] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD808 [Dup 31] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD811 [BH21-19-2] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD812 [Dup33] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD815 [BH21-19-5] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD816 [Dup36] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD819 [BH21-20-2] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD820 [Dup38] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD821 [BH21-20-5] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD822 [BH21-9-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD823 [Dup42] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD825 [BH21-10-3] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD826 [BH21-44-1] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD827 [BH21-44-5] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD830 [BH21-14-6] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD831 [BH21-14-12] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD834 [BH21-8-5] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD835 [Dup46] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD840 [Dup 49] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional

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methanol was added to the vial to ensure extraction efficiency.

Sample PPD841 [BH21-47-6] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD844 [BH21-45-4] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD846 [BH21-46-5B] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD848 [BH21-54-5] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample PPD852 [BH21-56-5] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7359715	RAJ	Matrix Spike	D10-Anthracene	2021/05/19		90	%	50 - 130
			D14-Terphenyl (FS)	2021/05/19		94	%	50 - 130
			D8-Acenaphthylene	2021/05/19		89	%	50 - 130
			Acenaphthene	2021/05/19		88	%	50 - 130
			Acenaphthylene	2021/05/19		83	%	50 - 130
			Anthracene	2021/05/19		85	%	50 - 130
			Benzo(a)anthracene	2021/05/19		97	%	50 - 130
			Benzo(a)pyrene	2021/05/19		84	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/19		94	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/19		90	%	50 - 130
			Benzo(k)fluoranthene	2021/05/19		95	%	50 - 130
			Chrysene	2021/05/19		92	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/19		97	%	50 - 130
			Fluoranthene	2021/05/19		100	%	50 - 130
			Fluorene	2021/05/19		92	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/19		96	%	50 - 130
			1-Methylnaphthalene	2021/05/19		94	%	50 - 130
			2-Methylnaphthalene	2021/05/19		91	%	50 - 130
			Naphthalene	2021/05/19		79	%	50 - 130
			Phenanthrene	2021/05/19		90	%	50 - 130
			Pyrene	2021/05/19		99	%	50 - 130
7359715	RAJ	Spiked Blank	D10-Anthracene	2021/05/19		90	%	50 - 130
			D14-Terphenyl (FS)	2021/05/19		90	%	50 - 130
			D8-Acenaphthylene	2021/05/19		91	%	50 - 130
			Acenaphthene	2021/05/19		93	%	50 - 130
			Acenaphthylene	2021/05/19		85	%	50 - 130
			Anthracene	2021/05/19		87	%	50 - 130
			Benzo(a)anthracene	2021/05/19		90	%	50 - 130
			Benzo(a)pyrene	2021/05/19		82	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/19		98	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/19		95	%	50 - 130
			Benzo(k)fluoranthene	2021/05/19		100	%	50 - 130
			Chrysene	2021/05/19		98	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/19		88	%	50 - 130
			Fluoranthene	2021/05/19		98	%	50 - 130
			Fluorene	2021/05/19		92	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/19		100	%	50 - 130
			1-Methylnaphthalene	2021/05/19		102	%	50 - 130
			2-Methylnaphthalene	2021/05/19		98	%	50 - 130
			Naphthalene	2021/05/19		89	%	50 - 130
			Phenanthrene	2021/05/19		95	%	50 - 130
			Pyrene	2021/05/19		95	%	50 - 130
7359715	RAJ	Method Blank	D10-Anthracene	2021/05/19		89	%	50 - 130
			D14-Terphenyl (FS)	2021/05/19		86	%	50 - 130
			D8-Acenaphthylene	2021/05/19		85	%	50 - 130
			Acenaphthene	2021/05/19	<0.0050		ug/g	
			Acenaphthylene	2021/05/19	<0.0050		ug/g	
			Anthracene	2021/05/19	<0.0050		ug/g	
			Benzo(a)anthracene	2021/05/19	<0.0050		ug/g	
			Benzo(a)pyrene	2021/05/19	<0.0050		ug/g	
			Benzo(b/j)fluoranthene	2021/05/19	<0.0050		ug/g	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzo(g,h,i)perylene	2021/05/19	<0.0050		ug/g	
			Benzo(k)fluoranthene	2021/05/19	<0.0050		ug/g	
			Chrysene	2021/05/19	<0.0050		ug/g	
			Dibenzo(a,h)anthracene	2021/05/19	<0.0050		ug/g	
			Fluoranthene	2021/05/19	<0.0050		ug/g	
			Fluorene	2021/05/19	<0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/05/19	<0.0050		ug/g	
			1-Methylnaphthalene	2021/05/19	<0.0050		ug/g	
			2-Methylnaphthalene	2021/05/19	<0.0050		ug/g	
			Naphthalene	2021/05/19	<0.0050		ug/g	
			Phenanthrene	2021/05/19	<0.0050		ug/g	
			Pyrene	2021/05/19	<0.0050		ug/g	
7359715	RAJ	RPD	Acenaphthene	2021/05/19	NC		%	40
			Acenaphthylene	2021/05/19	NC		%	40
			Anthracene	2021/05/19	NC		%	40
			Benzo(a)anthracene	2021/05/19	NC		%	40
			Benzo(a)pyrene	2021/05/19	NC		%	40
			Benzo(b/j)fluoranthene	2021/05/19	NC		%	40
			Benzo(g,h,i)perylene	2021/05/19	NC		%	40
			Benzo(k)fluoranthene	2021/05/19	NC		%	40
			Chrysene	2021/05/19	NC		%	40
			Dibenzo(a,h)anthracene	2021/05/19	NC		%	40
			Fluoranthene	2021/05/19	NC		%	40
			Fluorene	2021/05/19	NC		%	40
			Indeno(1,2,3-cd)pyrene	2021/05/19	NC		%	40
			1-Methylnaphthalene	2021/05/19	NC		%	40
			2-Methylnaphthalene	2021/05/19	NC		%	40
			Naphthalene	2021/05/19	NC		%	40
			Phenanthrene	2021/05/19	NC		%	40
			Pyrene	2021/05/19	NC		%	40
7359716	KLI	Matrix Spike	o-Terphenyl	2021/05/19		85	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/19		100	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/05/19		102	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/05/19		103	%	50 - 130
7359716	KLI	Spiked Blank	o-Terphenyl	2021/05/19		85	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/19		99	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/05/19		101	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/05/19		102	%	80 - 120
7359716	KLI	Method Blank	o-Terphenyl	2021/05/19		93	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/19	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/05/19	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/05/19	<50		ug/g	
7359716	KLI	RPD	F2 (C10-C16 Hydrocarbons)	2021/05/19	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/05/19	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/05/19	NC		%	30
7360235	MUC	RPD	Moisture	2021/05/19	0.69		%	20
7360635	MUC	RPD [PPD852-03]	Moisture	2021/05/19	2.7		%	20
7360972	H_W	Matrix Spike	1,4-Difluorobenzene	2021/05/19		100	%	60 - 140
			4-Bromofluorobenzene	2021/05/19		98	%	60 - 140
			D10-o-Xylene	2021/05/19		99	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/19		100	%	60 - 140

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzene	2021/05/19		91	%	50 - 140
			Toluene	2021/05/19		93	%	50 - 140
			Ethylbenzene	2021/05/19		105	%	50 - 140
			o-Xylene	2021/05/19		104	%	50 - 140
			p+m-Xylene	2021/05/19		100	%	50 - 140
			F1 (C6-C10)	2021/05/19		90	%	60 - 140
7360972	H_W	Spiked Blank	1,4-Difluorobenzene	2021/05/19		100	%	60 - 140
			4-Bromofluorobenzene	2021/05/19		98	%	60 - 140
			D10-o-Xylene	2021/05/19		103	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/19		98	%	60 - 140
			Benzene	2021/05/19		94	%	50 - 140
			Toluene	2021/05/19		95	%	50 - 140
			Ethylbenzene	2021/05/19		106	%	50 - 140
			o-Xylene	2021/05/19		104	%	50 - 140
			p+m-Xylene	2021/05/19		101	%	50 - 140
			F1 (C6-C10)	2021/05/19		89	%	80 - 120
7360972	H_W	Method Blank	1,4-Difluorobenzene	2021/05/19		104	%	60 - 140
			4-Bromofluorobenzene	2021/05/19		96	%	60 - 140
			D10-o-Xylene	2021/05/19		103	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/19		104	%	60 - 140
			Benzene	2021/05/19	<0.020		ug/g	
			Toluene	2021/05/19	<0.020		ug/g	
			Ethylbenzene	2021/05/19	<0.020		ug/g	
			o-Xylene	2021/05/19	<0.020		ug/g	
			p+m-Xylene	2021/05/19	<0.040		ug/g	
			Total Xylenes	2021/05/19	<0.040		ug/g	
			F1 (C6-C10)	2021/05/19	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/05/19	<10		ug/g	
7360972	H_W	RPD	Benzene	2021/05/19	NC		%	50
			Toluene	2021/05/19	NC		%	50
			Ethylbenzene	2021/05/19	NC		%	50
			o-Xylene	2021/05/19	NC		%	50
			p+m-Xylene	2021/05/19	NC		%	50
			Total Xylenes	2021/05/19	NC		%	50
			F1 (C6-C10)	2021/05/19	NC		%	30
			F1 (C6-C10) - BTEX	2021/05/19	NC		%	30
7360997	MUC	RPD	Moisture	2021/05/19	4.0		%	20
7361008	A_S	Matrix Spike [PPD789-01]	Chromium (VI)	2021/05/20		90	%	70 - 130
7361008	A_S	Spiked Blank	Chromium (VI)	2021/05/20		95	%	80 - 120
7361008	A_S	Method Blank	Chromium (VI)	2021/05/20	<0.18		ug/g	
7361008	A_S	RPD [PPD789-01]	Chromium (VI)	2021/05/20	NC		%	35
7361023	JJE	Matrix Spike [PPD798-01]	o-Terphenyl	2021/05/19		85	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/19		103	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/05/19		102	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/05/19		100	%	50 - 130
7361023	JJE	Spiked Blank	o-Terphenyl	2021/05/19		81	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/19		97	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/05/19		94	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/05/19		92	%	80 - 120
7361023	JJE	Method Blank	o-Terphenyl	2021/05/19		89	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/19	<10		ug/g	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F3 (C16-C34 Hydrocarbons)	2021/05/19	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/05/19	<50		ug/g	
7361023	JJE	RPD [PPD798-01]	F2 (C10-C16 Hydrocarbons)	2021/05/19	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/05/19	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/05/19	NC		%	30
7361102	ABP	Matrix Spike [PPD827-01]	WAD Cyanide (Free)	2021/05/20		96	%	75 - 125
7361102	ABP	Spiked Blank	WAD Cyanide (Free)	2021/05/20		96	%	80 - 120
7361102	ABP	Method Blank	WAD Cyanide (Free)	2021/05/20	<0.01		ug/g	
7361102	ABP	RPD [PPD827-01]	WAD Cyanide (Free)	2021/05/20	NC		%	35
7361106	ABP	Matrix Spike [PPD783-01]	WAD Cyanide (Free)	2021/05/21		100	%	75 - 125
7361106	ABP	Spiked Blank	WAD Cyanide (Free)	2021/05/21		93	%	80 - 120
7361106	ABP	Method Blank	WAD Cyanide (Free)	2021/05/21	<0.01		ug/g	
7361106	ABP	RPD [PPD783-01]	WAD Cyanide (Free)	2021/05/21	NC		%	35
7361218	MUC	RPD [PPD827-02]	Moisture	2021/05/19	9.3		%	20
7361337	RGA	Matrix Spike [PPD802-01]	o-Terphenyl	2021/05/20		77	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/20		90	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/05/20		89	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/05/20		90	%	50 - 130
7361337	RGA	Spiked Blank	o-Terphenyl	2021/05/20		80	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/20		92	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/05/20		92	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/05/20		92	%	80 - 120
7361337	RGA	Method Blank	o-Terphenyl	2021/05/20		88	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/20	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/05/20	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/05/20	<50		ug/g	
7361337	RGA	RPD [PPD802-01]	F2 (C10-C16 Hydrocarbons)	2021/05/20	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/05/20	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/05/20	NC		%	30
7361426	JJE	Matrix Spike [PPD799-01]	o-Terphenyl	2021/05/20		95	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/20		113	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/05/20		115	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/05/20		120	%	50 - 130
7361426	JJE	Spiked Blank	o-Terphenyl	2021/05/20		90	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/20		105	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/05/20		106	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/05/20		110	%	80 - 120
7361426	JJE	Method Blank	o-Terphenyl	2021/05/20		81	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/20	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/05/20	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/05/20	<50		ug/g	
7361426	JJE	RPD [PPD799-01]	F2 (C10-C16 Hydrocarbons)	2021/05/20	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/05/20	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/05/20	NC		%	30
7361436	MUC	RPD	Moisture	2021/05/19	8.7		%	20
7361674	AK7	RPD [PPD798-01]	Moisture	2021/05/19	8.7		%	20
7362064	SHG	Matrix Spike	Decachlorobiphenyl	2021/05/20		122	%	60 - 130
			Aroclor 1260	2021/05/20		120	%	30 - 130
			Total PCB	2021/05/20		120	%	30 - 130
7362064	SHG	Spiked Blank	Decachlorobiphenyl	2021/05/19		129	%	60 - 130
			Aroclor 1260	2021/05/19		138 (1)	%	30 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total PCB	2021/05/19		138 (2)	%	30 - 130
7362064	SHG	Method Blank	Decachlorobiphenyl	2021/05/20		127	%	60 - 130
			Aroclor 1242	2021/05/20	<0.010		ug/g	
			Aroclor 1248	2021/05/20	<0.010		ug/g	
			Aroclor 1254	2021/05/20	<0.010		ug/g	
			Aroclor 1260	2021/05/20	<0.010		ug/g	
			Total PCB	2021/05/20	<0.010		ug/g	
7362064	SHG	RPD	Aroclor 1242	2021/05/20	NC		%	50
			Aroclor 1248	2021/05/20	NC		%	50
			Aroclor 1254	2021/05/20	NC		%	50
			Aroclor 1260	2021/05/20	NC		%	50
			Total PCB	2021/05/20	NC		%	50
7362426	RGA	Matrix Spike	o-Terphenyl	2021/05/20		82	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/20		92	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/05/20		91	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/05/20		84	%	50 - 130
7362426	RGA	Spiked Blank	o-Terphenyl	2021/05/20		80	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/20		91	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/05/20		91	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/05/20		92	%	80 - 120
7362426	RGA	Method Blank	o-Terphenyl	2021/05/20		91	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/20	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/05/20	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/05/20	<50		ug/g	
7362426	RGA	RPD	F2 (C10-C16 Hydrocarbons)	2021/05/20	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/05/20	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/05/20	NC		%	30
7362452	JP5	Matrix Spike [PPD839-03]	1,4-Difluorobenzene	2021/05/20		92	%	60 - 140
			4-Bromofluorobenzene	2021/05/20		102	%	60 - 140
			D10-o-Xylene	2021/05/20		88	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/20		91	%	60 - 140
			Benzene	2021/05/20		87	%	50 - 140
			Toluene	2021/05/20		91	%	50 - 140
			Ethylbenzene	2021/05/20		103	%	50 - 140
			o-Xylene	2021/05/20		100	%	50 - 140
			p+m-Xylene	2021/05/20		96	%	50 - 140
			F1 (C6-C10)	2021/05/20		93	%	60 - 140
7362452	JP5	Spiked Blank	1,4-Difluorobenzene	2021/05/20		94	%	60 - 140
			4-Bromofluorobenzene	2021/05/20		103	%	60 - 140
			D10-o-Xylene	2021/05/20		89	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/20		89	%	60 - 140
			Benzene	2021/05/20		87	%	50 - 140
			Toluene	2021/05/20		90	%	50 - 140
			Ethylbenzene	2021/05/20		102	%	50 - 140
			o-Xylene	2021/05/20		99	%	50 - 140
			p+m-Xylene	2021/05/20		96	%	50 - 140
			F1 (C6-C10)	2021/05/20		92	%	80 - 120
7362452	JP5	Method Blank	1,4-Difluorobenzene	2021/05/20		97	%	60 - 140
			4-Bromofluorobenzene	2021/05/20		92	%	60 - 140
			D10-o-Xylene	2021/05/20		93	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/20		90	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzene	2021/05/20	<0.020		ug/g	
			Toluene	2021/05/20	<0.020		ug/g	
			Ethylbenzene	2021/05/20	<0.020		ug/g	
			o-Xylene	2021/05/20	<0.020		ug/g	
			p+m-Xylene	2021/05/20	<0.040		ug/g	
			Total Xylenes	2021/05/20	<0.040		ug/g	
			F1 (C6-C10)	2021/05/20	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/05/20	<10		ug/g	
7362452	JP5	RPD [PPD839-03]	Benzene	2021/05/20	NC		%	50
			Toluene	2021/05/20	NC		%	50
			Ethylbenzene	2021/05/20	NC		%	50
			o-Xylene	2021/05/20	NC		%	50
			p+m-Xylene	2021/05/20	NC		%	50
			Total Xylenes	2021/05/20	NC		%	50
			F1 (C6-C10)	2021/05/20	NC		%	30
			F1 (C6-C10) - BTEX	2021/05/20	NC		%	30
7362473	AS2	Matrix Spike	o-Terphenyl	2021/05/20		85	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/20		100	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/05/20		99	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/05/20		97	%	50 - 130
7362473	AS2	Spiked Blank	o-Terphenyl	2021/05/20		82	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/20		95	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/05/20		93	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/05/20		90	%	80 - 120
7362473	AS2	Method Blank	o-Terphenyl	2021/05/20		85	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/05/20	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/05/20	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/05/20	<50		ug/g	
7362473	AS2	RPD	F2 (C10-C16 Hydrocarbons)	2021/05/20	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/05/20	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/05/20	NC		%	30
7362538	JZ	Matrix Spike	2,4,5,6-Tetrachloro-m-xylene	2021/05/20		88	%	50 - 130
			Decachlorobiphenyl	2021/05/20		110	%	50 - 130
			Aldrin	2021/05/20		81	%	50 - 130
			a-Chlordane	2021/05/20		100	%	50 - 130
			g-Chlordane	2021/05/20		90	%	50 - 130
			o,p-DDD	2021/05/20		97	%	50 - 130
			p,p-DDD	2021/05/20		113	%	50 - 130
			o,p-DDE	2021/05/20		91	%	50 - 130
			p,p-DDE	2021/05/20		92	%	50 - 130
			o,p-DDT	2021/05/20		96	%	50 - 130
			p,p-DDT	2021/05/20		97	%	50 - 130
			Dieldrin	2021/05/20		119	%	50 - 130
			Lindane	2021/05/20		95	%	50 - 130
			Endosulfan I (alpha)	2021/05/20		95	%	50 - 130
			Endosulfan II (beta)	2021/05/20		107	%	50 - 130
			Endrin	2021/05/20		100	%	50 - 130
			Heptachlor	2021/05/20		78	%	50 - 130
			Heptachlor epoxide	2021/05/20		96	%	50 - 130
			Hexachlorobenzene	2021/05/20		84	%	50 - 130
			Hexachlorobutadiene	2021/05/20		86	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Hexachloroethane	2021/05/20		67	%	50 - 130
			Methoxychlor	2021/05/20		88	%	50 - 130
7362538	JZ	Spiked Blank	2,4,5,6-Tetrachloro-m-xylene	2021/05/20		80	%	50 - 130
			Decachlorobiphenyl	2021/05/20		95	%	50 - 130
			Aldrin	2021/05/20		72	%	50 - 130
			a-Chlordane	2021/05/20		80	%	50 - 130
			g-Chlordane	2021/05/20		79	%	50 - 130
			o,p-DDD	2021/05/20		89	%	50 - 130
			p,p-DDD	2021/05/20		85	%	50 - 130
			o,p-DDE	2021/05/20		80	%	50 - 130
			p,p-DDE	2021/05/20		86	%	50 - 130
			o,p-DDT	2021/05/20		75	%	50 - 130
			p,p-DDT	2021/05/20		74	%	50 - 130
			Dieldrin	2021/05/20		96	%	50 - 130
			Lindane	2021/05/20		88	%	50 - 130
			Endosulfan I (alpha)	2021/05/20		93	%	50 - 130
			Endosulfan II (beta)	2021/05/20		79	%	50 - 130
			Endrin	2021/05/20		82	%	50 - 130
			Heptachlor	2021/05/20		69	%	50 - 130
			Heptachlor epoxide	2021/05/20		82	%	50 - 130
			Hexachlorobenzene	2021/05/20		82	%	50 - 130
			Hexachlorobutadiene	2021/05/20		88	%	50 - 130
			Hexachloroethane	2021/05/20		71	%	50 - 130
			Methoxychlor	2021/05/20		71	%	50 - 130
7362538	JZ	RPD	Aldrin	2021/05/20	5.3		%	40
			a-Chlordane	2021/05/20	3.7		%	40
			g-Chlordane	2021/05/20	7.3		%	40
			o,p-DDD	2021/05/20	8.6		%	40
			p,p-DDD	2021/05/20	5.4		%	40
			o,p-DDE	2021/05/20	2.3		%	40
			p,p-DDE	2021/05/20	3.0		%	40
			o,p-DDT	2021/05/20	4.9		%	40
			p,p-DDT	2021/05/20	1.4		%	40
			Dieldrin	2021/05/20	7.1		%	40
			Lindane	2021/05/20	5.4		%	40
			Endosulfan I (alpha)	2021/05/20	9.2		%	40
			Endosulfan II (beta)	2021/05/20	3.6		%	40
			Endrin	2021/05/20	7.5		%	40
			Heptachlor	2021/05/20	3.4		%	40
			Heptachlor epoxide	2021/05/20	8.3		%	40
			Hexachlorobenzene	2021/05/20	5.1		%	40
			Hexachlorobutadiene	2021/05/20	5.8		%	40
			Hexachloroethane	2021/05/20	8.4		%	40
			Methoxychlor	2021/05/20	13		%	40
			Aldrin	2021/05/20	NC		%	40
			a-Chlordane	2021/05/20	NC		%	40
			g-Chlordane	2021/05/20	NC		%	40
			o,p-DDD	2021/05/20	NC		%	40
			p,p-DDD	2021/05/20	NC		%	40
			o,p-DDE	2021/05/20	NC		%	40
			p,p-DDE	2021/05/20	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			o,p-DDT	2021/05/20	NC		%	40
			p,p-DDT	2021/05/20	NC		%	40
			Dieldrin	2021/05/20	NC		%	40
			Lindane	2021/05/20	NC		%	40
			Endosulfan I (alpha)	2021/05/20	NC		%	40
			Endosulfan II (beta)	2021/05/20	NC		%	40
			Endrin	2021/05/20	NC		%	40
			Heptachlor	2021/05/20	NC		%	40
			Heptachlor epoxide	2021/05/20	NC		%	40
			Hexachlorobenzene	2021/05/20	NC		%	40
			Hexachlorobutadiene	2021/05/20	NC		%	40
			Hexachloroethane	2021/05/20	NC		%	40
			Methoxychlor	2021/05/20	NC		%	40
7362538	JZ	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2021/05/20		89	%	50 - 130
			Decachlorobiphenyl	2021/05/20		104	%	50 - 130
			Aldrin	2021/05/20	<0.0020		ug/g	
			a-Chlordane	2021/05/20	<0.0020		ug/g	
			g-Chlordane	2021/05/20	<0.0020		ug/g	
			o,p-DDD	2021/05/20	<0.0020		ug/g	
			p,p-DDD	2021/05/20	<0.0020		ug/g	
			o,p-DDE	2021/05/20	<0.0020		ug/g	
			p,p-DDE	2021/05/20	<0.0020		ug/g	
			o,p-DDT	2021/05/20	<0.0020		ug/g	
			p,p-DDT	2021/05/20	<0.0020		ug/g	
			Dieldrin	2021/05/20	<0.0020		ug/g	
			Lindane	2021/05/20	<0.0020		ug/g	
			Endosulfan I (alpha)	2021/05/20	<0.0020		ug/g	
			Endosulfan II (beta)	2021/05/20	<0.0020		ug/g	
			Endrin	2021/05/20	<0.0020		ug/g	
			Heptachlor	2021/05/20	<0.0020		ug/g	
			Heptachlor epoxide	2021/05/20	<0.0020		ug/g	
			Hexachlorobenzene	2021/05/20	<0.0020		ug/g	
			Hexachlorobutadiene	2021/05/20	<0.0020		ug/g	
			Hexachloroethane	2021/05/20	<0.0020		ug/g	
			Methoxychlor	2021/05/20	<0.0050		ug/g	
			Aroclor 1242	2021/05/20	<0.015		ug/g	
			Aroclor 1248	2021/05/20	<0.015		ug/g	
			Aroclor 1254	2021/05/20	<0.015		ug/g	
			Aroclor 1260	2021/05/20	<0.015		ug/g	
7362577	AGA	Matrix Spike [PPD817-03]	1,4-Difluorobenzene	2021/05/20		89	%	60 - 140
			4-Bromofluorobenzene	2021/05/20		99	%	60 - 140
			D10-o-Xylene	2021/05/20		87	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/20		93	%	60 - 140
			Benzene	2021/05/20		89	%	50 - 140
			Toluene	2021/05/20		88	%	50 - 140
			Ethylbenzene	2021/05/20		105	%	50 - 140
			o-Xylene	2021/05/20		111	%	50 - 140
			p+m-Xylene	2021/05/20		110	%	50 - 140
			F1 (C6-C10)	2021/05/20		100	%	60 - 140
7362577	AGA	Spiked Blank	1,4-Difluorobenzene	2021/05/20		93	%	60 - 140
			4-Bromofluorobenzene	2021/05/20		100	%	60 - 140

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			D10-o-Xylene	2021/05/20		91	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/20		93	%	60 - 140
			Benzene	2021/05/20		88	%	50 - 140
			Toluene	2021/05/20		83	%	50 - 140
			Ethylbenzene	2021/05/20		98	%	50 - 140
			o-Xylene	2021/05/20		97	%	50 - 140
			p+m-Xylene	2021/05/20		95	%	50 - 140
			F1 (C6-C10)	2021/05/20		81	%	80 - 120
7362577	AGA	Method Blank	1,4-Difluorobenzene	2021/05/20		97	%	60 - 140
			4-Bromofluorobenzene	2021/05/20		97	%	60 - 140
			D10-o-Xylene	2021/05/20		89	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/20		114	%	60 - 140
			Benzene	2021/05/20	<0.020		ug/g	
			Toluene	2021/05/20	<0.020		ug/g	
			Ethylbenzene	2021/05/20	<0.020		ug/g	
			o-Xylene	2021/05/20	<0.020		ug/g	
			p+m-Xylene	2021/05/20	<0.040		ug/g	
			Total Xylenes	2021/05/20	<0.040		ug/g	
			F1 (C6-C10)	2021/05/20	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/05/20	<10		ug/g	
7362577	AGA	RPD [PPD817-03]	Benzene	2021/05/20	7.5		%	50
			Toluene	2021/05/20	0.80		%	50
			Ethylbenzene	2021/05/20	6.1		%	50
			o-Xylene	2021/05/20	0.61		%	50
			p+m-Xylene	2021/05/20	4.7		%	50
			Total Xylenes	2021/05/20	4.4		%	50
			F1 (C6-C10)	2021/05/20	9.1		%	30
			F1 (C6-C10) - BTEX	2021/05/20	9.1		%	30
7362629	RSU	Matrix Spike [PPD786-01]	Chromium (VI)	2021/05/21		52 (3)	%	70 - 130
7362629	RSU	Spiked Blank	Chromium (VI)	2021/05/21		92	%	80 - 120
7362629	RSU	Method Blank	Chromium (VI)	2021/05/21	<0.18		ug/g	
7362629	RSU	RPD [PPD786-01]	Chromium (VI)	2021/05/21	NC		%	35
7362754	JYO	Matrix Spike	D10-Anthracene	2021/05/20		86	%	50 - 130
			D14-Terphenyl (FS)	2021/05/20		94	%	50 - 130
			D8-Acenaphthylene	2021/05/20		94	%	50 - 130
			Acenaphthene	2021/05/20		110	%	50 - 130
			Acenaphthylene	2021/05/20		84	%	50 - 130
			Anthracene	2021/05/20		106	%	50 - 130
			Benzo(a)anthracene	2021/05/20		111	%	50 - 130
			Benzo(a)pyrene	2021/05/20		94	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/20		96	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/20		116	%	50 - 130
			Benzo(k)fluoranthene	2021/05/20		90	%	50 - 130
			Chrysene	2021/05/20		108	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/20		106	%	50 - 130
			Fluoranthene	2021/05/20		NC	%	50 - 130
			Fluorene	2021/05/20		125	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/20		114	%	50 - 130
			1-Methylnaphthalene	2021/05/20		NC	%	50 - 130
			2-Methylnaphthalene	2021/05/20		NC	%	50 - 130
			Naphthalene	2021/05/20		NC	%	50 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Phenanthrene	2021/05/20		NC	%	50 - 130
			Pyrene	2021/05/20		NC	%	50 - 130
7362754	JYO	Spiked Blank	D10-Anthracene	2021/05/20		113	%	50 - 130
			D14-Terphenyl (FS)	2021/05/20		113	%	50 - 130
			D8-Acenaphthylene	2021/05/20		104	%	50 - 130
			Acenaphthene	2021/05/20		98	%	50 - 130
			Acenaphthylene	2021/05/20		93	%	50 - 130
			Anthracene	2021/05/20		99	%	50 - 130
			Benzo(a)anthracene	2021/05/20		104	%	50 - 130
			Benzo(a)pyrene	2021/05/20		91	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/20		103	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/20		118	%	50 - 130
			Benzo(k)fluoranthene	2021/05/20		104	%	50 - 130
			Chrysene	2021/05/20		109	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/20		109	%	50 - 130
			Fluoranthene	2021/05/20		109	%	50 - 130
			Fluorene	2021/05/20		102	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/20		116	%	50 - 130
			1-Methylnaphthalene	2021/05/20		109	%	50 - 130
			2-Methylnaphthalene	2021/05/20		100	%	50 - 130
			Naphthalene	2021/05/20		91	%	50 - 130
			Phenanthrene	2021/05/20		105	%	50 - 130
			Pyrene	2021/05/20		109	%	50 - 130
7362754	JYO	Method Blank	D10-Anthracene	2021/05/20		106	%	50 - 130
			D14-Terphenyl (FS)	2021/05/20		105	%	50 - 130
			D8-Acenaphthylene	2021/05/20		91	%	50 - 130
			Acenaphthene	2021/05/20	<0.0050		ug/g	
			Acenaphthylene	2021/05/20	<0.0050		ug/g	
			Anthracene	2021/05/20	<0.0050		ug/g	
			Benzo(a)anthracene	2021/05/20	<0.0050		ug/g	
			Benzo(a)pyrene	2021/05/20	<0.0050		ug/g	
			Benzo(b/j)fluoranthene	2021/05/20	<0.0050		ug/g	
			Benzo(g,h,i)perylene	2021/05/20	<0.0050		ug/g	
			Benzo(k)fluoranthene	2021/05/20	<0.0050		ug/g	
			Chrysene	2021/05/20	<0.0050		ug/g	
			Dibenzo(a,h)anthracene	2021/05/20	<0.0050		ug/g	
			Fluoranthene	2021/05/20	<0.0050		ug/g	
			Fluorene	2021/05/20	<0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/05/20	<0.0050		ug/g	
			1-Methylnaphthalene	2021/05/20	<0.0050		ug/g	
			2-Methylnaphthalene	2021/05/20	<0.0050		ug/g	
			Naphthalene	2021/05/20	<0.0050		ug/g	
			Phenanthrene	2021/05/20	<0.0050		ug/g	
			Pyrene	2021/05/20	<0.0050		ug/g	
7362754	JYO	RPD	Acenaphthene	2021/05/20	27		%	40
			Acenaphthylene	2021/05/20	NC (4)		%	40
			Anthracene	2021/05/20	17		%	40
			Benzo(a)anthracene	2021/05/20	19		%	40
			Benzo(a)pyrene	2021/05/20	23		%	40
			Benzo(b/j)fluoranthene	2021/05/20	23		%	40
			Benzo(g,h,i)perylene	2021/05/20	30		%	40

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzo(k)fluoranthene	2021/05/20	20		%	40
			Chrysene	2021/05/20	16		%	40
			Dibenzo(a,h)anthracene	2021/05/20	29		%	40
			Fluoranthene	2021/05/20	12		%	40
			Fluorene	2021/05/20	21		%	40
			Indeno(1,2,3-cd)pyrene	2021/05/20	27		%	40
			1-Methylnaphthalene	2021/05/20	28		%	40
			2-Methylnaphthalene	2021/05/20	30		%	40
			Naphthalene	2021/05/20	32		%	40
			Phenanthrene	2021/05/20	15		%	40
			Pyrene	2021/05/20	17		%	40
7362830	DAN	Matrix Spike [PPD818-02]	1,4-Difluorobenzene	2021/05/20		96	%	60 - 140
			4-Bromofluorobenzene	2021/05/20		98	%	60 - 140
			D10-o-Xylene	2021/05/20		97	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/20		97	%	60 - 140
			Benzene	2021/05/20		108	%	50 - 140
			Toluene	2021/05/20		108	%	50 - 140
			Ethylbenzene	2021/05/20		120	%	50 - 140
			o-Xylene	2021/05/20		112	%	50 - 140
			p+m-Xylene	2021/05/20		120	%	50 - 140
			F1 (C6-C10)	2021/05/20		113	%	60 - 140
7362830	DAN	Spiked Blank	1,4-Difluorobenzene	2021/05/20		96	%	60 - 140
			4-Bromofluorobenzene	2021/05/20		100	%	60 - 140
			D10-o-Xylene	2021/05/20		93	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/20		100	%	60 - 140
			Benzene	2021/05/20		102	%	50 - 140
			Toluene	2021/05/20		104	%	50 - 140
			Ethylbenzene	2021/05/20		111	%	50 - 140
			o-Xylene	2021/05/20		107	%	50 - 140
			p+m-Xylene	2021/05/20		119	%	50 - 140
			F1 (C6-C10)	2021/05/20		90	%	80 - 120
7362830	DAN	Method Blank	1,4-Difluorobenzene	2021/05/20		96	%	60 - 140
			4-Bromofluorobenzene	2021/05/20		97	%	60 - 140
			D10-o-Xylene	2021/05/20		92	%	60 - 140
			D4-1,2-Dichloroethane	2021/05/20		103	%	60 - 140
			Benzene	2021/05/20	<0.020		ug/g	
			Toluene	2021/05/20	<0.020		ug/g	
			Ethylbenzene	2021/05/20	<0.020		ug/g	
			o-Xylene	2021/05/20	<0.020		ug/g	
			p+m-Xylene	2021/05/20	<0.040		ug/g	
			Total Xylenes	2021/05/20	<0.040		ug/g	
			F1 (C6-C10)	2021/05/20	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/05/20	<10		ug/g	
7362830	DAN	RPD [PPD818-02]	Benzene	2021/05/20	0		%	50
			Toluene	2021/05/20	1.2		%	50
			Ethylbenzene	2021/05/20	3.0		%	50
			o-Xylene	2021/05/20	3.3		%	50
			p+m-Xylene	2021/05/20	3.2		%	50
			Total Xylenes	2021/05/20	3.2		%	50
			F1 (C6-C10)	2021/05/20	1.9		%	30
			F1 (C6-C10) - BTEX	2021/05/20	2.0		%	30

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7362906	NYS	Spiked Blank	Available (CaCl2) pH	2021/05/20		100	%	97 - 103
7362906	NYS	RPD [PPD852-02]	Available (CaCl2) pH	2021/05/20	0.14		%	N/A
7362920	NYS	Spiked Blank	Available (CaCl2) pH	2021/05/20		99	%	97 - 103
7362920	NYS	RPD [PPD829-01]	Available (CaCl2) pH	2021/05/20	0.15		%	N/A
7363044	APT	Matrix Spike [PPD854-01]	Hot Water Ext. Boron (B)	2021/05/20		102	%	75 - 125
7363044	APT	Spiked Blank	Hot Water Ext. Boron (B)	2021/05/20		96	%	75 - 125
7363044	APT	Method Blank	Hot Water Ext. Boron (B)	2021/05/20	<0.050		ug/g	
7363044	APT	RPD [PPD854-01]	Hot Water Ext. Boron (B)	2021/05/20	NC		%	40
7363416	MA	Matrix Spike [PPD823-01]	2,4,6-Tribromophenol	2021/05/21		75	%	50 - 130
			2-Fluorobiphenyl	2021/05/21		78	%	50 - 130
			D14-Terphenyl (FS)	2021/05/21		83	%	50 - 130
			D5-Nitrobenzene	2021/05/21		85	%	50 - 130
			1,2,4-Trichlorobenzene	2021/05/21		76	%	50 - 130
			1-Methylnaphthalene	2021/05/21		88	%	50 - 130
			2,4,5-Trichlorophenol	2021/05/21		88	%	50 - 130
			2,4,6-Trichlorophenol	2021/05/21		85	%	50 - 130
			2,4-Dichlorophenol	2021/05/21		102	%	50 - 130
			2,4-Dimethylphenol	2021/05/21		85	%	30 - 130
			2,4-Dinitrophenol	2021/05/21		50	%	30 - 130
			2,4-Dinitrotoluene	2021/05/21		70	%	50 - 130
			2,6-Dinitrotoluene	2021/05/21		64	%	50 - 130
			2-Chlorophenol	2021/05/21		85	%	50 - 130
			2-Methylnaphthalene	2021/05/21		82	%	50 - 130
			3,3'-Dichlorobenzidine	2021/05/21		87	%	30 - 130
			Acenaphthene	2021/05/21		87	%	50 - 130
			Acenaphthylene	2021/05/21		86	%	50 - 130
			Anthracene	2021/05/21		88	%	50 - 130
			Benzo(a)anthracene	2021/05/21		93	%	50 - 130
			Benzo(a)pyrene	2021/05/21		78	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/21		101	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/21		86	%	50 - 130
			Benzo(k)fluoranthene	2021/05/21		102	%	50 - 130
			Biphenyl	2021/05/21		85	%	50 - 130
			Bis(2-chloroethyl)ether	2021/05/21		86	%	50 - 130
			Bis(2-chloroisopropyl)ether	2021/05/21		68	%	50 - 130
			Bis(2-ethylhexyl)phthalate	2021/05/21		91	%	50 - 130
			Chrysene	2021/05/21		93	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/21		90	%	50 - 130
			Diethyl phthalate	2021/05/21		81	%	50 - 130
			Dimethyl phthalate	2021/05/21		83	%	50 - 130
			Fluoranthene	2021/05/21		95	%	50 - 130
			Fluorene	2021/05/21		83	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/21		84	%	50 - 130
			Naphthalene	2021/05/21		87	%	50 - 130
			p-Chloroaniline	2021/05/21		85	%	30 - 130
			Pentachlorophenol	2021/05/21		70	%	50 - 130
			Phenanthrene	2021/05/21		90	%	50 - 130
			Phenol	2021/05/21		98	%	30 - 130
			Pyrene	2021/05/21		100	%	50 - 130
7363416	MA	Spiked Blank	2,4,6-Tribromophenol	2021/05/21		78	%	50 - 130
			2-Fluorobiphenyl	2021/05/21		88	%	50 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			D14-Terphenyl (FS)	2021/05/21		85	%	50 - 130
			D5-Nitrobenzene	2021/05/21		100	%	50 - 130
			1,2,4-Trichlorobenzene	2021/05/21		95	%	50 - 130
			1-Methylnaphthalene	2021/05/21		99	%	50 - 130
			2,4,5-Trichlorophenol	2021/05/21		93	%	50 - 130
			2,4,6-Trichlorophenol	2021/05/21		91	%	50 - 130
			2,4-Dichlorophenol	2021/05/21		111	%	50 - 130
			2,4-Dimethylphenol	2021/05/21		90	%	30 - 130
			2,4-Dinitrophenol	2021/05/21		25 (1)	%	30 - 130
			2,4-Dinitrotoluene	2021/05/21		76	%	50 - 130
			2,6-Dinitrotoluene	2021/05/21		99	%	50 - 130
			2-Chlorophenol	2021/05/21		96	%	50 - 130
			2-Methylnaphthalene	2021/05/21		93	%	50 - 130
			3,3'-Dichlorobenzidine	2021/05/21		69	%	30 - 130
			Acenaphthene	2021/05/21		93	%	50 - 130
			Acenaphthylene	2021/05/21		92	%	50 - 130
			Anthracene	2021/05/21		92	%	50 - 130
			Benzo(a)anthracene	2021/05/21		94	%	50 - 130
			Benzo(a)pyrene	2021/05/21		100	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/21		101	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/21		87	%	50 - 130
			Benzo(k)fluoranthene	2021/05/21		111	%	50 - 130
			Biphenyl	2021/05/21		93	%	50 - 130
			Bis(2-chloroethyl)ether	2021/05/21		97	%	50 - 130
			Bis(2-chloroisopropyl)ether	2021/05/21		78	%	50 - 130
			Bis(2-ethylhexyl)phthalate	2021/05/21		90	%	50 - 130
			Chrysene	2021/05/21		95	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/21		90	%	50 - 130
			Diethyl phthalate	2021/05/21		83	%	50 - 130
			Dimethyl phthalate	2021/05/21		86	%	50 - 130
			Fluoranthene	2021/05/21		97	%	50 - 130
			Fluorene	2021/05/21		87	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/21		83	%	50 - 130
			Naphthalene	2021/05/21		101	%	50 - 130
			p-Chloroaniline	2021/05/21		76	%	30 - 130
			Pentachlorophenol	2021/05/21		73	%	50 - 130
			Phenanthrene	2021/05/21		93	%	50 - 130
			Phenol	2021/05/21		107	%	30 - 130
			Pyrene	2021/05/21		102	%	50 - 130
7363416	MA	Method Blank	2,4,6-Tribromophenol	2021/05/21		66	%	50 - 130
			2-Fluorobiphenyl	2021/05/21		89	%	50 - 130
			D14-Terphenyl (FS)	2021/05/21		91	%	50 - 130
			D5-Nitrobenzene	2021/05/21		101	%	50 - 130
			1,2,4-Trichlorobenzene	2021/05/21	<0.05		ug/g	
			1-Methylnaphthalene	2021/05/21	<0.03		ug/g	
			2,4,5-Trichlorophenol	2021/05/21	<0.08		ug/g	
			2,4,6-Trichlorophenol	2021/05/21	<0.1		ug/g	
			2,4-Dichlorophenol	2021/05/21	<0.1		ug/g	
			2,4-Dimethylphenol	2021/05/21	<0.2		ug/g	
			2,4-Dinitrophenol	2021/05/21	<0.5		ug/g	
			2,4-Dinitrotoluene	2021/05/21	<0.1		ug/g	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			2,6-Dinitrotoluene	2021/05/21	<0.1		ug/g	
			2-Chlorophenol	2021/05/21	<0.08		ug/g	
			2-Methylnaphthalene	2021/05/21	<0.03		ug/g	
			3,3'-Dichlorobenzidine	2021/05/21	<0.5		ug/g	
			Acenaphthene	2021/05/21	<0.03		ug/g	
			Acenaphthylene	2021/05/21	<0.05		ug/g	
			Anthracene	2021/05/21	<0.03		ug/g	
			Benzo(a)anthracene	2021/05/21	<0.05		ug/g	
			Benzo(a)pyrene	2021/05/21	<0.05		ug/g	
			Benzo(b/j)fluoranthene	2021/05/21	<0.1		ug/g	
			Benzo(g,h,i)perylene	2021/05/21	<0.1		ug/g	
			Benzo(k)fluoranthene	2021/05/21	<0.03		ug/g	
			Biphenyl	2021/05/21	<0.05		ug/g	
			Bis(2-chloroethyl)ether	2021/05/21	<0.2		ug/g	
			Bis(2-chloroisopropyl)ether	2021/05/21	<0.1		ug/g	
			Bis(2-ethylhexyl)phthalate	2021/05/21	<1		ug/g	
			Chrysene	2021/05/21	<0.05		ug/g	
			Dibenzo(a,h)anthracene	2021/05/21	<0.05		ug/g	
			Diethyl phthalate	2021/05/21	<0.2		ug/g	
			Dimethyl phthalate	2021/05/21	<0.2		ug/g	
			Fluoranthene	2021/05/21	<0.05		ug/g	
			Fluorene	2021/05/21	<0.03		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/05/21	<0.08		ug/g	
			Naphthalene	2021/05/21	<0.03		ug/g	
			p-Chloroaniline	2021/05/21	<0.2		ug/g	
			Pentachlorophenol	2021/05/21	<0.1		ug/g	
			Phenanthrene	2021/05/21	<0.05		ug/g	
			Phenol	2021/05/21	<0.09		ug/g	
			Pyrene	2021/05/21	<0.05		ug/g	
7363416	MA	RPD [PPD823-01]	1,2,4-Trichlorobenzene	2021/05/21	NC		%	40
			1-Methylnaphthalene	2021/05/21	NC		%	40
			2,4,5-Trichlorophenol	2021/05/21	NC		%	40
			2,4,6-Trichlorophenol	2021/05/21	NC		%	40
			2,4-Dichlorophenol	2021/05/21	NC		%	40
			2,4-Dimethylphenol	2021/05/21	NC		%	40
			2,4-Dinitrophenol	2021/05/21	NC		%	40
			2,4-Dinitrotoluene	2021/05/21	NC		%	40
			2,6-Dinitrotoluene	2021/05/21	NC		%	40
			2-Chlorophenol	2021/05/21	NC		%	40
			2-Methylnaphthalene	2021/05/21	NC		%	40
			3,3'-Dichlorobenzidine	2021/05/21	NC		%	40
			Acenaphthene	2021/05/21	NC		%	40
			Acenaphthylene	2021/05/21	NC		%	40
			Anthracene	2021/05/21	NC		%	40
			Benzo(a)anthracene	2021/05/21	NC		%	40
			Benzo(a)pyrene	2021/05/21	NC		%	40
			Benzo(b/j)fluoranthene	2021/05/21	NC		%	40
			Benzo(g,h,i)perylene	2021/05/21	NC		%	40
			Benzo(k)fluoranthene	2021/05/21	NC		%	40
			Biphenyl	2021/05/21	NC		%	40
			Bis(2-chloroethyl)ether	2021/05/21	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Bis(2-chloroisopropyl)ether	2021/05/21	NC		%	40
			Bis(2-ethylhexyl)phthalate	2021/05/21	NC		%	40
			Chrysene	2021/05/21	NC		%	40
			Dibenzo(a,h)anthracene	2021/05/21	NC		%	40
			Diethyl phthalate	2021/05/21	NC		%	40
			Dimethyl phthalate	2021/05/21	NC		%	40
			Fluoranthene	2021/05/21	NC		%	40
			Fluorene	2021/05/21	NC		%	40
			Indeno(1,2,3-cd)pyrene	2021/05/21	NC		%	40
			Naphthalene	2021/05/21	NC		%	40
			p-Chloroaniline	2021/05/21	NC		%	40
			Pentachlorophenol	2021/05/21	NC		%	40
			Phenanthrene	2021/05/21	NC		%	40
			Phenol	2021/05/21	NC		%	40
			Pyrene	2021/05/21	NC		%	40
7363472	DT1	Matrix Spike [PPD847-01]	Acid Extractable Antimony (Sb)	2021/05/21		94	%	75 - 125
			Acid Extractable Arsenic (As)	2021/05/21		97	%	75 - 125
			Acid Extractable Barium (Ba)	2021/05/21		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/05/21		101	%	75 - 125
			Acid Extractable Boron (B)	2021/05/21		97	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/05/21		102	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/05/21		NC	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/05/21		105	%	75 - 125
			Acid Extractable Copper (Cu)	2021/05/21		105	%	75 - 125
			Acid Extractable Lead (Pb)	2021/05/21		104	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/05/21		104	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/05/21		109	%	75 - 125
			Acid Extractable Selenium (Se)	2021/05/21		104	%	75 - 125
			Acid Extractable Silver (Ag)	2021/05/21		106	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/05/21		102	%	75 - 125
			Acid Extractable Uranium (U)	2021/05/21		104	%	75 - 125
			Acid Extractable Vanadium (V)	2021/05/21		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/05/21		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/05/21		93	%	75 - 125
7363472	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2021/05/21		103	%	80 - 120
			Acid Extractable Arsenic (As)	2021/05/21		98	%	80 - 120
			Acid Extractable Barium (Ba)	2021/05/21		98	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/05/21		100	%	80 - 120
			Acid Extractable Boron (B)	2021/05/21		103	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/05/21		98	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/05/21		100	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/05/21		99	%	80 - 120
			Acid Extractable Copper (Cu)	2021/05/21		100	%	80 - 120
			Acid Extractable Lead (Pb)	2021/05/21		101	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/05/21		99	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/05/21		99	%	80 - 120
			Acid Extractable Selenium (Se)	2021/05/21		102	%	80 - 120
			Acid Extractable Silver (Ag)	2021/05/21		101	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/05/21		99	%	80 - 120
			Acid Extractable Uranium (U)	2021/05/21		101	%	80 - 120
			Acid Extractable Vanadium (V)	2021/05/21		101	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Zinc (Zn)	2021/05/21		101	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/05/21		91	%	80 - 120
7363472	DT1	Method Blank	Acid Extractable Antimony (Sb)	2021/05/21	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/05/21	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/05/21	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/05/21	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/05/21	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/05/21	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/05/21	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/05/21	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/05/21	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/05/21	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/05/21	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/05/21	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/05/21	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/05/21	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/05/21	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/05/21	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/05/21	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/05/21	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/05/21	<0.050		ug/g	
7363472	DT1	RPD [PPD847-01]	Acid Extractable Antimony (Sb)	2021/05/21	NC		%	30
			Acid Extractable Arsenic (As)	2021/05/21	5.1		%	30
			Acid Extractable Barium (Ba)	2021/05/21	0.32		%	30
			Acid Extractable Beryllium (Be)	2021/05/21	7.4		%	30
			Acid Extractable Boron (B)	2021/05/21	5.4		%	30
			Acid Extractable Cadmium (Cd)	2021/05/21	6.0		%	30
			Acid Extractable Chromium (Cr)	2021/05/21	0.85		%	30
			Acid Extractable Cobalt (Co)	2021/05/21	1.9		%	30
			Acid Extractable Copper (Cu)	2021/05/21	0.24		%	30
			Acid Extractable Lead (Pb)	2021/05/21	2.6		%	30
			Acid Extractable Molybdenum (Mo)	2021/05/21	NC		%	30
			Acid Extractable Nickel (Ni)	2021/05/21	0.017		%	30
			Acid Extractable Selenium (Se)	2021/05/21	NC		%	30
			Acid Extractable Silver (Ag)	2021/05/21	NC		%	30
			Acid Extractable Thallium (Tl)	2021/05/21	0.93		%	30
			Acid Extractable Uranium (U)	2021/05/21	2.5		%	30
			Acid Extractable Vanadium (V)	2021/05/21	2.4		%	30
			Acid Extractable Zinc (Zn)	2021/05/21	4.1		%	30
			Acid Extractable Mercury (Hg)	2021/05/21	NC		%	30
7363510	DT1	Matrix Spike [PPD840-01]	Acid Extractable Antimony (Sb)	2021/05/21		102	%	75 - 125
			Acid Extractable Arsenic (As)	2021/05/21		105	%	75 - 125
			Acid Extractable Barium (Ba)	2021/05/21		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/05/21		107	%	75 - 125
			Acid Extractable Boron (B)	2021/05/21		106	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/05/21		106	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/05/21		109	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/05/21		104	%	75 - 125
			Acid Extractable Copper (Cu)	2021/05/21		101	%	75 - 125
			Acid Extractable Lead (Pb)	2021/05/21		107	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/05/21		108	%	75 - 125

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Nickel (Ni)	2021/05/21		106	%	75 - 125
			Acid Extractable Selenium (Se)	2021/05/21		112	%	75 - 125
			Acid Extractable Silver (Ag)	2021/05/21		109	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/05/21		105	%	75 - 125
			Acid Extractable Uranium (U)	2021/05/21		110	%	75 - 125
			Acid Extractable Vanadium (V)	2021/05/21		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/05/21		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/05/21		96	%	75 - 125
7363510	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2021/05/21		103	%	80 - 120
			Acid Extractable Arsenic (As)	2021/05/21		102	%	80 - 120
			Acid Extractable Barium (Ba)	2021/05/21		98	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/05/21		96	%	80 - 120
			Acid Extractable Boron (B)	2021/05/21		99	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/05/21		99	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/05/21		102	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/05/21		99	%	80 - 120
			Acid Extractable Copper (Cu)	2021/05/21		102	%	80 - 120
			Acid Extractable Lead (Pb)	2021/05/21		101	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/05/21		101	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/05/21		100	%	80 - 120
			Acid Extractable Selenium (Se)	2021/05/21		102	%	80 - 120
			Acid Extractable Silver (Ag)	2021/05/21		104	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/05/21		99	%	80 - 120
			Acid Extractable Uranium (U)	2021/05/21		100	%	80 - 120
			Acid Extractable Vanadium (V)	2021/05/21		99	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/05/21		97	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/05/21		91	%	80 - 120
7363510	DT1	Method Blank	Acid Extractable Antimony (Sb)	2021/05/21	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/05/21	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/05/21	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/05/21	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/05/21	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/05/21	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/05/21	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/05/21	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/05/21	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/05/21	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/05/21	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/05/21	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/05/21	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/05/21	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/05/21	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/05/21	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/05/21	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/05/21	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/05/21	<0.050		ug/g	
7363510	DT1	RPD [PPD840-01]	Acid Extractable Antimony (Sb)	2021/05/21	NC		%	30
			Acid Extractable Arsenic (As)	2021/05/21	2.3		%	30
			Acid Extractable Barium (Ba)	2021/05/21	0.13		%	30
			Acid Extractable Beryllium (Be)	2021/05/21	3.6		%	30
			Acid Extractable Boron (B)	2021/05/21	10		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Cadmium (Cd)	2021/05/21	7.2		%	30
			Acid Extractable Chromium (Cr)	2021/05/21	1.6		%	30
			Acid Extractable Cobalt (Co)	2021/05/21	1.6		%	30
			Acid Extractable Copper (Cu)	2021/05/21	6.0		%	30
			Acid Extractable Lead (Pb)	2021/05/21	2.4		%	30
			Acid Extractable Molybdenum (Mo)	2021/05/21	NC		%	30
			Acid Extractable Nickel (Ni)	2021/05/21	1.1		%	30
			Acid Extractable Selenium (Se)	2021/05/21	NC		%	30
			Acid Extractable Silver (Ag)	2021/05/21	NC		%	30
			Acid Extractable Thallium (Tl)	2021/05/21	10		%	30
			Acid Extractable Uranium (U)	2021/05/21	4.9		%	30
			Acid Extractable Vanadium (V)	2021/05/21	3.7		%	30
			Acid Extractable Zinc (Zn)	2021/05/21	6.4		%	30
			Acid Extractable Mercury (Hg)	2021/05/21	NC		%	30
7363627	APT	Matrix Spike [PPD855-01]	Hot Water Ext. Boron (B)	2021/05/20		100	%	75 - 125
7363627	APT	Spiked Blank	Hot Water Ext. Boron (B)	2021/05/20		97	%	75 - 125
7363627	APT	Method Blank	Hot Water Ext. Boron (B)	2021/05/20	<0.050		ug/g	
7363627	APT	RPD [PPD855-01]	Hot Water Ext. Boron (B)	2021/05/20	15		%	40
7363767	JYO	Matrix Spike [PPD798-01]	D10-Anthracene	2021/05/21		87	%	50 - 130
			D14-Terphenyl (FS)	2021/05/21		87	%	50 - 130
			D8-Acenaphthylene	2021/05/21		81	%	50 - 130
			Acenaphthene	2021/05/21		81	%	50 - 130
			Acenaphthylene	2021/05/21		80	%	50 - 130
			Anthracene	2021/05/21		81	%	50 - 130
			Benzo(a)anthracene	2021/05/21		86	%	50 - 130
			Benzo(a)pyrene	2021/05/21		77	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/21		91	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/21		83	%	50 - 130
			Benzo(k)fluoranthene	2021/05/21		82	%	50 - 130
			Chrysene	2021/05/21		92	%	50 - 130
			Dibenzo(a,h)anthracene	2021/05/21		82	%	50 - 130
			Fluoranthene	2021/05/21		92	%	50 - 130
			Fluorene	2021/05/21		84	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/21		87	%	50 - 130
			1-Methylnaphthalene	2021/05/21		82	%	50 - 130
			2-Methylnaphthalene	2021/05/21		77	%	50 - 130
			Naphthalene	2021/05/21		67	%	50 - 130
			Phenanthrene	2021/05/21		87	%	50 - 130
			Pyrene	2021/05/21		90	%	50 - 130
7363767	JYO	Spiked Blank	D10-Anthracene	2021/05/21		84	%	50 - 130
			D14-Terphenyl (FS)	2021/05/21		86	%	50 - 130
			D8-Acenaphthylene	2021/05/21		83	%	50 - 130
			Acenaphthene	2021/05/21		81	%	50 - 130
			Acenaphthylene	2021/05/21		78	%	50 - 130
			Anthracene	2021/05/21		80	%	50 - 130
			Benzo(a)anthracene	2021/05/21		85	%	50 - 130
			Benzo(a)pyrene	2021/05/21		75	%	50 - 130
			Benzo(b/j)fluoranthene	2021/05/21		93	%	50 - 130
			Benzo(g,h,i)perylene	2021/05/21		86	%	50 - 130
			Benzo(k)fluoranthene	2021/05/21		84	%	50 - 130
			Chrysene	2021/05/21		92	%	50 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dibenzo(a,h)anthracene	2021/05/21		83	%	50 - 130
			Fluoranthene	2021/05/21		89	%	50 - 130
			Fluorene	2021/05/21		85	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/05/21		86	%	50 - 130
			1-Methylnaphthalene	2021/05/21		88	%	50 - 130
			2-Methylnaphthalene	2021/05/21		83	%	50 - 130
			Naphthalene	2021/05/21		79	%	50 - 130
			Phenanthrene	2021/05/21		84	%	50 - 130
			Pyrene	2021/05/21		88	%	50 - 130
7363767	JYO	Method Blank	D10-Anthracene	2021/05/21		84	%	50 - 130
			D14-Terphenyl (FS)	2021/05/21		87	%	50 - 130
			D8-Acenaphthylene	2021/05/21		82	%	50 - 130
			Acenaphthene	2021/05/21	<0.0050		ug/g	
			Acenaphthylene	2021/05/21	<0.0050		ug/g	
			Anthracene	2021/05/21	<0.0050		ug/g	
			Benzo(a)anthracene	2021/05/21	<0.0050		ug/g	
			Benzo(a)pyrene	2021/05/21	<0.0050		ug/g	
			Benzo(b/j)fluoranthene	2021/05/21	<0.0050		ug/g	
			Benzo(g,h,i)perylene	2021/05/21	<0.0050		ug/g	
			Benzo(k)fluoranthene	2021/05/21	<0.0050		ug/g	
			Chrysene	2021/05/21	<0.0050		ug/g	
			Dibenzo(a,h)anthracene	2021/05/21	<0.0050		ug/g	
			Fluoranthene	2021/05/21	<0.0050		ug/g	
			Fluorene	2021/05/21	<0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2021/05/21	<0.0050		ug/g	
			1-Methylnaphthalene	2021/05/21	<0.0050		ug/g	
			2-Methylnaphthalene	2021/05/21	<0.0050		ug/g	
			Naphthalene	2021/05/21	<0.0050		ug/g	
			Phenanthrene	2021/05/21	<0.0050		ug/g	
			Pyrene	2021/05/21	<0.0050		ug/g	
7363767	JYO	RPD [PPD798-01]	Acenaphthene	2021/05/21	NC		%	40
			Acenaphthylene	2021/05/21	NC		%	40
			Anthracene	2021/05/21	NC		%	40
			Benzo(a)anthracene	2021/05/21	NC		%	40
			Benzo(a)pyrene	2021/05/21	NC		%	40
			Benzo(b/j)fluoranthene	2021/05/21	NC		%	40
			Benzo(g,h,i)perylene	2021/05/21	NC		%	40
			Benzo(k)fluoranthene	2021/05/21	NC		%	40
			Chrysene	2021/05/21	NC		%	40
			Dibenzo(a,h)anthracene	2021/05/21	NC		%	40
			Fluoranthene	2021/05/21	NC		%	40
			Fluorene	2021/05/21	NC		%	40
			Indeno(1,2,3-cd)pyrene	2021/05/21	NC		%	40
			1-Methylnaphthalene	2021/05/21	NC		%	40
			2-Methylnaphthalene	2021/05/21	NC		%	40
			Naphthalene	2021/05/21	NC		%	40
			Phenanthrene	2021/05/21	NC		%	40
			Pyrene	2021/05/21	NC		%	40
7364139	MYG	RPD	Moisture	2021/05/20	4.0		%	20
7365038	KHP	Spiked Blank	Conductivity	2021/05/21		103	%	90 - 110
7365038	KHP	Method Blank	Conductivity	2021/05/21	<0.002		mS/cm	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7365038	KHP	RPD [PPD842-01]	Conductivity	2021/05/21	0.27		%	10
7365086	APT	Matrix Spike	Hot Water Ext. Boron (B)	2021/05/21		101	%	75 - 125
7365086	APT	Spiked Blank	Hot Water Ext. Boron (B)	2021/05/21		92	%	75 - 125
7365086	APT	Method Blank	Hot Water Ext. Boron (B)	2021/05/21	<0.050		ug/g	
7365086	APT	RPD	Hot Water Ext. Boron (B)	2021/05/21	5.5		%	40
7365308	KHP	Spiked Blank	Conductivity	2021/05/21		103	%	90 - 110
7365308	KHP	Method Blank	Conductivity	2021/05/21	<0.002		mS/cm	
7365308	KHP	RPD	Conductivity	2021/05/21	2.3		%	10
7367472	JZ	Matrix Spike	2,4,5,6-Tetrachloro-m-xylene	2021/05/23		87	%	50 - 130
			Decachlorobiphenyl	2021/05/23		124	%	50 - 130
			Aldrin	2021/05/23		84	%	50 - 130
			a-Chlordane	2021/05/23		96	%	50 - 130
			g-Chlordane	2021/05/23		92	%	50 - 130
			o,p-DDD	2021/05/23		101	%	50 - 130
			p,p-DDD	2021/05/23		91	%	50 - 130
			o,p-DDE	2021/05/23		117	%	50 - 130
			p,p-DDE	2021/05/23		99	%	50 - 130
			o,p-DDT	2021/05/23		96	%	50 - 130
			p,p-DDT	2021/05/23		112	%	50 - 130
			Dieldrin	2021/05/23		104	%	50 - 130
			Lindane	2021/05/23		83	%	50 - 130
			Endosulfan I (alpha)	2021/05/23		92	%	50 - 130
			Endosulfan II (beta)	2021/05/23		99	%	50 - 130
			Endrin	2021/05/23		99	%	50 - 130
			Heptachlor	2021/05/23		84	%	50 - 130
			Heptachlor epoxide	2021/05/23		106	%	50 - 130
			Hexachlorobenzene	2021/05/23		79	%	50 - 130
			Hexachlorobutadiene	2021/05/23		75	%	50 - 130
			Hexachloroethane	2021/05/23		58	%	50 - 130
			Methoxychlor	2021/05/23		124	%	50 - 130
7367472	JZ	Spiked Blank	2,4,5,6-Tetrachloro-m-xylene	2021/05/23		63	%	50 - 130
			Decachlorobiphenyl	2021/05/23		108	%	50 - 130
			Aldrin	2021/05/23		61	%	50 - 130
			a-Chlordane	2021/05/23		73	%	50 - 130
			g-Chlordane	2021/05/23		75	%	50 - 130
			o,p-DDD	2021/05/23		82	%	50 - 130
			p,p-DDD	2021/05/23		72	%	50 - 130
			o,p-DDE	2021/05/23		73	%	50 - 130
			p,p-DDE	2021/05/23		78	%	50 - 130
			o,p-DDT	2021/05/23		79	%	50 - 130
			p,p-DDT	2021/05/23		64	%	50 - 130
			Dieldrin	2021/05/23		83	%	50 - 130
			Lindane	2021/05/23		59	%	50 - 130
			Endosulfan I (alpha)	2021/05/23		74	%	50 - 130
			Endosulfan II (beta)	2021/05/23		73	%	50 - 130
			Endrin	2021/05/23		79	%	50 - 130
			Heptachlor	2021/05/23		60	%	50 - 130
			Heptachlor epoxide	2021/05/23		93	%	50 - 130
			Hexachlorobenzene	2021/05/23		56	%	50 - 130
			Hexachlorobutadiene	2021/05/23		62	%	50 - 130
			Hexachloroethane	2021/05/23		50	%	50 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methoxychlor	2021/05/23		107	%	50 - 130
7367472	JZ	RPD	Aldrin	2021/05/23	15		%	40
			a-Chlordane	2021/05/23	13		%	40
			g-Chlordane	2021/05/23	13		%	40
			o,p-DDD	2021/05/23	14		%	40
			p,p-DDD	2021/05/23	2.5		%	40
			o,p-DDE	2021/05/23	15		%	40
			p,p-DDE	2021/05/23	10		%	40
			o,p-DDT	2021/05/23	7.6		%	40
			p,p-DDT	2021/05/23	47 (1)		%	40
			Dieldrin	2021/05/23	15		%	40
			Lindane	2021/05/23	18		%	40
			Endosulfan I (alpha)	2021/05/23	16		%	40
			Endosulfan II (beta)	2021/05/23	17		%	40
			Endrin	2021/05/23	16		%	40
			Heptachlor	2021/05/23	16		%	40
			Heptachlor epoxide	2021/05/23	3.3		%	40
			Hexachlorobenzene	2021/05/23	11		%	40
			Hexachlorobutadiene	2021/05/23	14		%	40
			Hexachloroethane	2021/05/23	13		%	40
			Methoxychlor	2021/05/23	9.6		%	40
			Aldrin	2021/05/23	NC		%	40
			a-Chlordane	2021/05/23	NC		%	40
			g-Chlordane	2021/05/23	NC		%	40
			o,p-DDD	2021/05/23	NC		%	40
			p,p-DDD	2021/05/23	NC		%	40
			o,p-DDE	2021/05/23	NC		%	40
			p,p-DDE	2021/05/23	NC		%	40
			o,p-DDT	2021/05/23	NC		%	40
			p,p-DDT	2021/05/23	NC		%	40
			Dieldrin	2021/05/23	NC		%	40
			Lindane	2021/05/23	NC		%	40
			Endosulfan I (alpha)	2021/05/23	NC		%	40
			Endosulfan II (beta)	2021/05/23	NC		%	40
			Endrin	2021/05/23	NC		%	40
			Heptachlor	2021/05/23	NC		%	40
			Heptachlor epoxide	2021/05/23	NC		%	40
			Hexachlorobenzene	2021/05/23	NC		%	40
			Hexachlorobutadiene	2021/05/23	NC		%	40
			Hexachloroethane	2021/05/23	NC		%	40
			Methoxychlor	2021/05/23	NC		%	40
			Aroclor 1242	2021/05/23	NC		%	40
			Aroclor 1248	2021/05/23	NC		%	40
			Aroclor 1254	2021/05/23	NC		%	40
			Aroclor 1260	2021/05/23	NC		%	40
7367472	JZ	Method Blank	2,4,5,6-Tetrachloro-m-xylene	2021/05/23		70	%	50 - 130
			Decachlorobiphenyl	2021/05/23		117	%	50 - 130
			Aldrin	2021/05/23	<0.0020		ug/g	
			a-Chlordane	2021/05/23	<0.0020		ug/g	
			g-Chlordane	2021/05/23	<0.0020		ug/g	
			o,p-DDD	2021/05/23	<0.0020		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			p,p-DDD	2021/05/23	<0.0020		ug/g	
			o,p-DDE	2021/05/23	<0.0020		ug/g	
			p,p-DDE	2021/05/23	<0.0020		ug/g	
			o,p-DDT	2021/05/23	<0.0020		ug/g	
			p,p-DDT	2021/05/23	<0.0020		ug/g	
			Dieldrin	2021/05/23	<0.0020		ug/g	
			Lindane	2021/05/23	<0.0020		ug/g	
			Endosulfan I (alpha)	2021/05/23	<0.0020		ug/g	
			Endosulfan II (beta)	2021/05/23	<0.0020		ug/g	
			Endrin	2021/05/23	<0.0020		ug/g	
			Heptachlor	2021/05/23	<0.0020		ug/g	
			Heptachlor epoxide	2021/05/23	<0.0020		ug/g	
			Hexachlorobenzene	2021/05/23	<0.0020		ug/g	
			Hexachlorobutadiene	2021/05/23	<0.0020		ug/g	
			Hexachloroethane	2021/05/23	<0.0020		ug/g	
			Methoxychlor	2021/05/23	<0.0050		ug/g	
			Aroclor 1242	2021/05/23	<0.015		ug/g	
			Aroclor 1248	2021/05/23	<0.015		ug/g	
			Aroclor 1254	2021/05/23	<0.015		ug/g	
			Aroclor 1260	2021/05/23	<0.015		ug/g	
7369001	KHP	Spiked Blank	Conductivity	2021/05/25		101	%	90 - 110
7369001	KHP	Method Blank	Conductivity	2021/05/25	<0.002		mS/cm	
7369001	KHP	RPD	Conductivity	2021/05/25	0.67		%	10

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) The recovery was above the upper control limit. This may represent a high bias in some results. For results that were not detected (ND), this potential bias has no impact.

(3) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The matrix spike was reanalyzed to confirm result.

(4) DL was raised due to matrix interference.

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BV Labs Job #: C1D3619
Report Date: 2021/05/26

Golder Associates Ltd
Client Project #: 20368429
Site Location: OPG Darlington
Sampler Initials: JC

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

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