Canadian Nuclear Safety Commission | Commission canadienne de sûreté nucléaire

CMD 25-H9.2

Date: 2025-09-15

Written Submission from Birch Narrows Dene Nation

Mémoire de la Nation des Dénés de Birch Narrows

In the matter of

À l'égard de

Denison Mines Corporation

Denison Mines Corporation

Licence Application to Prepare Site and Construct for Denison Mines' Wheeler River Mine and Mill Project

Demande de permis pour la préparation de l'emplacement et la construction du projet de mine et d'usine de concentration d'uranium Wheeler River de Denison Mines

Commission Public Hearing

Audience publique de la Commission

December 2025

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Birch Narrows Dene Nation
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Subject: Denison Mines Wheeler River Project – Failure of the Crown's Duty to Consult and Accommodate Birch Narrows Dene Nation

Hello,

This letter serves as both a response to Denison Mines Corp.'s letter from July 7, 2025, and as a formal notice to the Province of Saskatchewan and the Canadian Nuclear Safety Commission (CNSC) that Birch Narrows Dene Nation (BNDN) considers the Crown's constitutional duty to consult and accommodate to be unfulfilled with respect to the Wheeler River Project (the "Project"). The positions advanced by Denison, and the Province's and CNSC's apparent endorsement of those positions, represent a breach of the Crown's obligations under section 35 of the *Constitution Act, 1982*, Treaty 10, and Canada's commitments under the *United Nations Declaration on the Rights of Indigenous Peoples Act (2021)*.

Denison's position, as stated in the letter, that BNDN is not owed "deep consultation or engagement" is not only wrong—it is unlawful, offensive, and a direct denial of our existence as a Treaty Nation. It strikes at the very heart of reconciliation, and it will not stand unchallenged.

Denison's so-called "systematic and comprehensive process" is nothing more than a paper exercise designed to exclude inconvenient Nations. It relies on third-party data and bureaucratic boundaries while ignoring the knowledge, presence, and lived reality of our people on the land. No mining company—no matter how long it has held tenure on paper—knows this territory better than the Dene who have lived, hunted, trapped, and protected it since time immemorial. For Denison to claim otherwise because they have owned the property since 2004, is not only absurd, but also deeply insulting.

What makes this situation even more concerning is Denison's claim that its approach has been endorsed by the Province of Saskatchewan and the CNSC. If true, then both the Province and the CNSC have failed in their legal obligations. The Supreme Court of Canada has been unequivocal in *Haida Nation v. British Columbia*, *Taku River Tlingit*, *Mikisew Cree*, and *Rio Tinto Alcan*: the Crown has a duty to consult and accommodate whenever our rights may be impacted. That duty cannot be delegated away to a mining company. By endorsing Denison's erasure of our Nation, the Crown is in breach of its highest constitutional obligations.

Canada has further committed, through the *United Nations Declaration on the Rights of Indigenous Peoples Act (2021)*, to uphold the standard of free, prior, and informed consent (FPIC). Yet here we face the same old colonial pattern: a corporation decides which Nations count, and the Crown nods along.

BNDN has not been silent. Since May 2021 we have consistently raised our rights, our land use, and our environmental concerns. We provided a technical review of the Wheeler River Project identifying serious gaps, and we still await answers to 64 outstanding comments. We are now completing Indigenous Knowledge and land use research, which will confirm what we have said all along: this Project will cause adverse impacts to our Treaty rights, to our way of life, and to the land and waters we hold sacred. If Denison expects BNDN to even consider supporting this Project, then it must mitigate those impacts and accommodate our Nation in a meaningful way. Anything less will never secure our consent.

As it stands, the duty to consult and accommodate has not been met. Denison's dismissive approach, combined with the Province and CNSC's apparent willingness to endorse it, is legally indefensible, ethically shameful, and an assault on Treaty 10 itself. If these failures are not corrected, BNDN will use every tool available to us to ensure that our rights are protected.

Our Treaty rights are not optional, our voice is not expendable, and our people will not be erased. We remain ready to engage in a process rooted in respect, recognition, and reconciliation. But if Denison, the Province, and the CNSC continue down this path of denial, Birch Narrows Dene Nation will stand firm, defend our lands, and uphold our Treaty rights as we have done for generations.

Sincerely,

Chief Jonathon Sylvestre
Birch Narrows Dene Nation

May 26, 2025

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Re: Birch Narrows Dene Nation – Withdrawal of Support Letters and Outstanding Concerns on the Wheeler River Project

Dear Ms. Way, Mr. McKeown, and Ms. Switzer,

I am writing this letter to communicate two important messages on behalf of Birch Narrows Dene Nation (BNDN) regarding Denison Mines Corp.'s proposed Wheeler River Project.

1. Withdrawal of Support for the Wheeler River Project

BNDN no longer supports the Wheeler River Project. We formally rescind any prior correspondence on the public registry that could be interpreted as support for the Project.

This includes letters submitted by the Birch Narrows Dene Development Inc. (BNDDI), which were issued without undergoing any process that appropriately considered the concerns and interests of BNDN members. These letters were not informed by community direction and do not reflect the best interests of our Nation. As such, they are not valid expressions of support and must not be used to indicate the existence of free, prior, and informed consent.

We communicated this withdrawal of support to Denison Mines Corp. in a letter dated March 3, 2025, a copy of which is enclosed for your records. Denison responded in a letter dated March 12, 2025, which we have reviewed. While we appreciate Denison's acknowledgement of our position, we wish to ensure that this change is also formally and clearly conveyed to the Canadian Nuclear Safety Commission (CNSC), the federal authority overseeing the licensing of the Project.

We respectfully request that any past letters suggesting BNDN support be removed from the public registry and disregarded in the CNSC's environmental assessment and licensing decision-making Processes

2. Denison's Failure to Respect BNDN's Treaty Rights and Land Use

We are deeply concerned by Denison's ongoing assertion that BNDN does not have recognized land use in the project area. This claim is false and disregards our ancestral and ongoing presence in the region. As Dene

Sųłiné people and signatories to Treaty 10, we have longstanding and active use of lands and waters in and around the Wheeler River area, particularly throughout the Cree Lake region. These activities—hunting, trapping, fishing, and gathering—are central to our culture, governance, and identity, not incidental.

Denison has taken the unacceptable position that BNDN warrants less consultation and accommodation than other Nations, despite the fact that our members continue to exercise Treaty and Aboriginal rights in the region and that we are geographically closer to the project than some Nations that have already signed agreements.

We are particularly alarmed by the following behaviors:

- Denison's repeated dismissal of our land use and rights in the project area.
- The refusal to recognize this as Treaty 10 territory, where the Crown and all proponents have a legal duty to consult and accommodate BNDN.
- Denison's denial of funding for a BNDN-led Indigenous Knowledge study, while simultaneously demanding that we "prove" our land connection.
- The use of colonial frameworks to determine which Nations are "relevant," thereby marginalizing BNDN.

These actions reflect a pattern of exclusion and undermine the legitimacy and integrity of consultation processes. Denison is not in a position to define our land use, identity, or governance. That authority lies with our Nation.

3. Summary of Outstanding Technical Concerns

BNDN is also submitting a technical review of Denison's responses to our comments on the Wheeler River Project Technical Review Table. This review reflects our Nation's ongoing concerns regarding the adequacy of the Proponent's responses and the Project's potential impacts on our lands, waters, and ability to meaningfully exercise our Treaty and Aboriginal rights.

Our concerns were developed through internal BNDN technical review processes and validated by leadership. The attached table (Appendix A) provides a detailed summary of each comment raised, Denison's corresponding response, and BNDN's assessment of whether the response is adequate.

Our primary concern is that Denison continues to tell our community that we are not directly impacted and are warranted a lower level of consultation and accommodation than other groups. Denison mischaracterizes BNDN as not being part of "Indigenous Communities of Interest with reserves and residential communities most proximal to the Project". BNDN is closer to the Project than other communities who have signed accommodation agreements. The project is located within BNDN's treaty and ancestral lands where members have deep ancestral ties and continue to exercise rights to this day. Denison's position of BNDN requiring less consultation and accommodation than other communities is unacceptable and wrong. Denison is not in a position to define BNDNs territory or land use.

Summary of Comment Disposition

Based on our review, we categorize the responses to our comments as follows:

- Addressed: 30
- Provisionally Addressed: 5

- Partially Addressed: 7
- Not Addressed: 64

All comments that are not fully addressed remain outstanding concerns for our Nation. We request that the Proponent and CNSC engage with BNDN to collaboratively resolve these issues. We emphasize that the duty to consult includes the obligation to substantially address concerns raised by Indigenous Nations—what Canadian law refers to as accommodation. This duty cannot be satisfied without a meaningful process for issue resolution.

4. Path Forward

BNDN is committed to engaging in good faith with both Denison and the CNSC in respect of the federal assessment and licensing of the Wheeler River Project. We expect all future engagement to take place directly with our elected leadership, with full transparency, and in a manner that respects our governance structures, rights, and protocols.

We remain open to working with both the Proponent and the Commission to ensure that BNDN's concerns are thoroughly addressed and that the integrity of our decision-making processes is upheld.

Sincerely,

Chief Jonathon Sylvestre
Birch Narrows Dene Nation

CC:
BNDN Council
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Denison's Responses to Comment from Birch Narrows Dene Nation (February 28, 2023) for the Wheeler River Project Environmental Impact Statement

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
2	Birch Narrows Dene Nation (BNDN) (February 28, 2023)	Section 5.7; 5.8.1	Comment #1: The Project is located within the treaty and ancestral lands of BNDN and maintains both current and historical significance to the community. BNDN Indigenous Knowledge, Land Use and Occupancy are not currently considered within the EIS. Should the Project proceed without the consideration of BNDN's Knowledge, Land Use and Occupancy, it may cause irreparable loss of culturally significant sites and access to resources that the community depends upon. It may also contribute to a loss in cultural transmission. Request/recommendation: a) Denison should provide BNDN with funds to conduct a community-led Indigenous Knowledge, Land Use and Occupancy Study for consideration within the EIS process. At minimum, the Study should consider BNDN's Indigenous Ecological Knowledge, commercial and non-commercial harvesting practices, and cultural occupation of the region (including historical sites). The Study should also	Denison's engagement with BNDN is consistent with the identification of BNDN as an Indigenous Community who has expressed an interest in the Project. However, Denison acknowledges and understands this information from BNDN. As such, over the past year(s), Denison has met with BNDN and has respectfully requested further information from BNDN in respect to the land use activities occurring in and around the Project in order to more meaningfully understand the potential for adverse impacts to BNDN and therefore consider the potential for further studies and/or integration into the EIS of such information. Denison remains of the perspective that receipt of this information from BNDN is a necessary first step in this process, and has not received information in this regard to date. Project effects have been mitigated for the most intensive resource user(s), irrespective of affiliation. Denison continues to work with its Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a community specific monitoring regime, suited to each of their interests and needs, in an agreed-upon fashion. Denison is committed to continual improvement in relation to such collaborative monitoring programs, in order to adapt to areas of interest which can change over time. It is expected that the data collected through such monitoring regimes would also be relevant to other Indigenous nations who may have interest in the Project. Therefore, Denison does not anticipate separate funding for BNDN at this time.	**Not Addressed.** While the proponent has requested Indigenous Knowledge from BNDN, they have not made any resources available for BNDN to collect it, nor has the company engaged in any efforts to sign any agreements that provide assurances around confidentiality. BNDN lacks capacity and requires such resources and assurances to be able to provide Indigenous Knowledge; further, it is standard procedure for proponents to provide such financial capacity. The project is located in a critically important area for BNDN; Cree Lake and surrounding areas fosters important caribou habitat that BNDN members rely on. BNDN carries out rights protected activities throughout the project location, which falls within BNDN's treaty and ancestral lands. BNDN's rights and interests will be impacted by the project if it is approved. I) BNDN requires capacity funding from the proponent to conduct a community-led and project-specific Indigenous Knowledge study so BNDN can evaluate the impacts the project will have

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
			consider cultural transmission, information about the history of the area and BNDN community members' perspectives on the Project. b) The community-led Indigenous Knowledge, Land Use and Occupancy Study should be a component of a broader process agreement between BNDN and Denison that serves as a pathway for obtaining BNDN's consent for the Project. c) Denison should work with BNDN to consider the appropriate integration of the results into all aspects of the EIS and management/monitoring plans, as well as any additional appropriate mitigation and/or accommodation measures. See Section 4.1 for additional information on this topic.	Further, the assessment has been completed based on Valued Components (VCs), including the VC of Indigenous Land and Resource Use. Key indicators for Indigenous Land and Resource Use include: • resource availability for harvesting subsistence resources (distribution and abundance of animals, plants, and wildlife for harvest and suitability of animals, plants, and wildlife for consumption); • land/water availability to practice traditional land use (TLU); and • perceived suitability of lands and resources therein. Measurable parameters are identified for each of the key indicators, as presented in Table 11.1-1 of the EIS. The assessment does not take a distinctions based approach (i.e., the potential impact on each Indigenous community is not evaluated separately), but rather on the key indicators and associated measurable parameters. Mitigation to eliminate, reduce, or control potential adverse effects of the Project on Indigenous Land and Resource Use would apply to any BNDN uses proximal to the Project. Given proven mitigation is to be applied to traffic disturbances, noise, air quality, and increased competition for resources, the effects are expected to be minimal. As outlined in Denison's Indigenous Peoples Policy, Denison is committed to respecting Indigenous knowledge and values regarding environmental stewardship and Indigenous peoples' connection to the land, and to minimize potential effects, wherever possible.	on BNDN and so the results of the study may inform the project and its evaluation. BNDN requires the EIS to be updated based on the results of BNDN's Indigenous Knowledge Study. BNDN must be engaged on how its results are used to update the EIS.
3	BNDN (February 28, 2023)	Heritage Baseline Study 2017 (Golder); Heritage Resource	Comment #2: Archaeology as a profession has been dominated in North America by non- Indigenous researchers, despite most sites being Indigenous in origin. It is	Denison's engagement with BNDN is consistent with the identification of BNDN as an Indigenous Community who has expressed an interest in the Project. However, Denison understands this information from BNDN. As such, over the past year(s), Denison has met with BNDN and has	**Not Addressed.** While the proponent has requested Indigenous Knowledge from BNDN, they

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
		Impact Assessment 2020 (Golder); Heritage Resources Management Plan 2022 (Canada North)	positive that Golder Associates made efforts to engage and involve Indigenous communities (by including an ERFN representative in fieldwork and by considering ERFN and Pinehouse Kineepik Metis land use maps) in their 2017 heritage baseline study and 2020 heritage resource impact assessment. Notwithstanding, the proposed Project area is within BNDN's treaty and ancestral lands and there may be heritage sites that the community is aware of. BNDN was not involved in either of these studies and BNDN may have Indigenous Knowledge of important heritage sites within the Study Area that should be considered. Request/recommendation: a) Denison should provide BNDN with funds to conduct a community-led Indigenous Knowledge, Land Use and Occupancy Study for consideration within the EIS process. b) The Heritage Resources Management Plan should be updated following the consideration of Indigenous Knowledge, Land Use and Occupancy provided by BNDN. This may result in the requirement for further assessment and/or	respectfully requested further information from BNDN in respect to the land use activities to occurring in and around the Project, in order to more meaningfully understand the potential for adverse impacts to BNDN and therefore consider the potential for further studies and / or integration into the EIS of such information. Denison remains of the perspective that receipt of this information from BNDN is a necessary first step in this process, and has not received information in this regard to date. Project effects have been mitigated for the most intensive resource user(s), irrespective of affiliation. Denison continues to work with its Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a community specific monitoring regime, suited to each of their interests and needs, in an agreed-upon fashion. Denison is committed to continual improvement in relation to such collaborative monitoring programs, in order to adapt to areas of interest which can change over time. It is expected that the data collected through such monitoring regimes would also be relevant to other Indigenous nations who may have interest in the Project. Therefore, Denison does not anticipate separate funding for BNDN at this time. Following the implementation of the mitigation measures outlined in the Heritage Resource Management Plan (HRMP), the likelihood of residual effects is considered low and residual effects on Heritage Resources will occur infrequently and can be mitigated with the HRMP. Known archaeological resources identified in the Project Area were deemed to have low potential for archaeological interpretation and additional work or mitigation measures were not required for the sites; the Heritage Conservation Branch had no further concerns with these sites and work	have not made any resources available for BNDN to collect it, nor has the company engaged in any efforts to sign any agreements that provide assurances around confidentiality. BNDN lacks capacity and requires such resources and assurances to be able to provide Indigenous Knowledge; further, it is standard procedure for proponents to provide such financial capacity. Proposed mitigation measures for project effects are inadequate to BNDN and have been developed without consideration of BNDN land use and knowledge; the proponents' suggestion that the mitigation measures are adequate for impacts to BNDN that have not been assessed is deficient. The project is located within BNDN's treaty and ancestral lands where members have deep ancestral ties and continue to exercise rights to this day. Most archaeological material in Canada is Indigenous in origin; there is a significant chance that any archaeological material found on site derives from BNDN ancestors. BNDN has inherent rights to its cultural heritage, as affirmed by UNDRIP. I) BNDN requires capacity funding from the proponent to conduct a community-led and project-specific Indigenous Knowledge study so BNDN can evaluate the impacts the project will have

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
			mitigation measures, which should be developed in consultation with BNDN. c) Denison should facilitate BNDN involvement in any additional archaeological fieldwork that takes place, including providing BNDN with capacity funding for members who participate. Terms to facilitate BNDN involvement in future archaeological work should be a component of a broader process agreement between BNDN and Denison. See Section 4.1 for additional information on this topic (p. 12-14).	could proceed as planned. Should unknown archaeological and cultural resources be identified during the Project, effects will be mitigated using the HRMP. While effects to archaeological resources are irreversible, they can be mitigated by following the HRMP, by either avoiding additional damage to the resource by creating a buffer zone around the site, or by assessing the resource according to The Heritage Property Act to enable the full interpretation of the site before continuing with work. Furthermore, based on the low occurrence of known Heritage Resources in the Project Area (two), and the location of the Heritage Resources (near waterbodies, along an existing trail and away from the main developments), there is a low potential for the identification or disturbance of previously unknown archaeological sites throughout the life of the Project. Therefore, any residual effects (i.e., destruction of Heritage Resources) is considered to be negligible. Further, HRMP includes feedback from Indigenous nations with demonstrated significant land use activities in and around the Project. As outlined in Denison's Indigenous Peoples Policy, Denison is committed to respecting Indigenous knowledge and values regarding environmental stewardship and Indigenous peoples' connection to the land, and to minimize potential effects, wherever possible. Please see Section 11.3.2 Influence of Indigenous Knowledge, Local Knowledge, and Engagement on the Assessment for Heritage Resources. The Section describes how field assistants from local Indigenous communities were involved with the HRIA baseline studies, allowing for in-field consultation during the assessment to make sure that areas deemed to have potential by the land users were surveyed.	on BNDN and so the results of the study may inform the project and its evaluation. II) The Heritage Resources Management Plan should be updated following the consideration of BNDN's Indigenous Knowledge study. III) The proponent must engage with BNDN to discuss opportunities for BNDN to participate in archaeological work moving forward.

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4	BNDN (February 28, 2023)	Heritage Baseline Study 2017 (Golder) – methods; Heritage Resource Impact Assessment 2020 (Golder) – methods	Comment #3: The methodology within both the 2017 and 2020 heritage studies included 'judgmental' shovel probing and initial troweling through soil to identify cultural heritage material. While the discretion of a professional archaeologist needs to be taken into account, relying subjectively on which areas to shovel test and not employing a systematic approach is not reproduceable and may result in sites being missed; this is of particular concern given that large sections of the areas retaining potential were not subject to shovel testing. Further, troweling through soil rather than subjecting all excavated soil to sifting through 6mm mesh means that artifacts/ecofacts may easily be overlooked. Given that the north of Saskatchewan has not been thoroughly investigated archaeologically and given that 76 sites and nine find areas were recorded just 35 km south of the Project area as part of Dr. David Meyer's multi-year archaeological investigation, the results of these assessments do not seem rigorous. Request/recommendation: a) BNDN recommends that Denison undertake further	The 2017 and 2020 heritage studies were reviewed by the Heritage Conservation Branch. The HRIA was completed using standard pedestrian reconnaissance and visual inspection field techniques, complimented by the excavation of shovel probes and shovel tests and it was determined the site has limited interpretive potential. Please see Section 11.3.2 Influence of Indigenous Knowledge, Local Knowledge, and Engagement on the Assessment for Heritage Resources. The Section describes how field assistants from local Indigenous communities were involved with the HRIA baseline studies, allowing for in-field consultation during the assessment to make sure that areas deemed to have potential by the land users were surveyed. The details of monitoring and follow-up plans are being developed to support the separate process of Project licensing and permitting. The specific means by which provincial and federal authorities, and Indigenous Nations and communities will be engaged in developing the follow-up and monitoring program, including the information-sharing program, are currently under consideration with the Denison project team. It is noted that Section 4.2.1 of the draft EIS provides the variety of ways in which Denison has engaged with Interested Parties to date and it is assumed it would continue to use these means and others that may be identified to fulfill its key corporate principals for developing positive relationships (see draft EIS Section 4.2). Denison continues to work with its Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a community specific monitoring regime, suited to each of their interests and needs, in an agreed-upon fashion. Denison is committed to continual improvement in relation to such collaborative monitoring programs, in order to adapt to areas of interest	**Not Addressed.** BNDN will not retain confidence in the results of the heritage assessments until the nation is able to complete an Indigenous Knowledge Study and the results are incorporated into the EIS. The project is located within BNDN's treaty and ancestral lands where members have deep ancestral ties and continue to exercise rights to this day. Most archaeological material in Canada is Indigenous in origin; there is a significant chance that any archaeological material found on site derives from BNDN ancestors. BNDN has inherent rights to its cultural heritage, as affirmed by UNDRIP. I) BNDN requires capacity funding from the proponent to conduct a community-led and project-specific Indigenous Knowledge study so BNDN can evaluate the impacts the project will have on BNDN and so the results of the study may inform the project and its evaluation. II) BNDN requires the EIS to be updated based on the results of BNDN's Indigenous Knowledge Study. BNDN must be engaged on how its

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			archaeological investigations based on the results of the BNDN TKLU study prior to construction of the project. b) Future archaeological assessment programs should be designed collaboratively with BNDN and other Impacted Indigenous Nations. See Section 4.1 for additional information on this topic (p. 12-14).	which can change over time. It is expected that the data collected through such monitoring regimes would also be relevant to other Indigenous nations who may have interest in the Project. Therefore, Denison does not anticipate separate funding for BNDN at this time. Please see Section 11.3.2 Influence of Indigenous Knowledge, Local Knowledge, and Engagement on the Assessment for Heritage Resources. The Section describes how field assistants from local Indigenous communities were involved with the HRIA baseline studies, allowing for in-field consultation during the assessment to make sure that areas deemed to have potential by the land users were surveyed.	III) The proponent must commit to engaging Indigenous Nations, including BNDN in decision making related to Indigenous archaeological material and sites rather than merely informing these nations. results are used to update the EIS.
5	BNDN (February 28, 2023)	Heritage Baseline Study 2017 (Golder) – methods; Heritage Resource Impact Assessment 2020 (Golder) – methods	Comment #4: The presence of strandlines are noted as being an indicator of archaeological potential; however, it is unclear within the reports whether any strandlines are present within the Study Area. Most of the investigations and shovel probes that took place were around existing waterbodies. Request/recommendation: Please indicate whether strandlines are present anywhere in the Study Area. See Section 4.1 for additional information on this topic (p. 12-14).	Strandlines, like other linear landforms, do increase archaeological potential, however heritage resources are only directly effected by Project activities and there are no strandlines located in the Phoenix Site area (Government of Saskatchewan. N.d. 250K Surficial Geology Linear Landforms. Available at: https://geohub.saskatchewan.ca/datasets/saskatchewan::250k-surficial-geology-linear-landforms/explore?location=57.247957%2C-106.370278%2C6.33 [Accessed November 29, 2023]).	**Addressed.**
6	BNDN (February 28, 2023)	Heritage Baseline Study 2017 (Golder) – methods; Heritage	Comment #5: It is unclear whether the locations identified by other Indigenous communities in their Land Use maps were investigated archaeologically and subject where	Please see Section 11.3.2 Influence of Indigenous Knowledge, Local Knowledge, and Engagement on the Assessment for Heritage Resources. The Section describes how field assistants from local Indigenous communities were involved with the HRIA baseline studies, allowing for	**Addressed.**

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
		Resource Impact Assessment 2020 (Golder) – methods	appropriate to shovel testing. Knowing this will give confidence to BNDN that areas they may identify as retaining potential may undergo further assessment if necessary. Request/recommendation: Please indicate whether the areas identified by other Indigenous communities in their Land Use maps were investigated archaeologically. See Section 4.1 for additional information on this topic (p. 12-14).	in-field consultation during the assessment to make sure that areas deemed to have potential by the land users were surveyed.	
7	BNDN (February 28, 2023)	Heritage Resources Management Plan 2022 (Canada North) – 4.0	Comment #6: The archaeological context provided is very Western/Scientific. Denison must also include historical/pre-historical accounts of Indigenous communities to provide an appropriate and comprehensive assessment of the archaeological context of the region. Request/recommendation: Denison must include a write-up of Indigenous historical and prehistorical accounts in consultation with relevant Indigenous communities. This write up must include historic context provided through oral history interviews as part of BNDN's community-led Indigenous	Denison's engagement with BNDN is consistent with the identification of BNDN as an Indigenous Community who has expressed an interest in the Project. However, Denison understands this information from BNDN. As such, over the past year(s), Denison has met with BNDN and has respectfully requested further information from BNDN in respect to the land use activities to occurring in and around the Project, in order to more meaningfully understand the potential for adverse impacts to BNDN and therefore consider the potential for further studies and / or integration into the EIS of such information. Denison remains of the perspective that receipt of this information from BNDN is a necessary first step in this process, and has not received information in this regard to date. Project effects have been mitigated for the most intensive resource user(s), irrespective of affiliation. Denison continues to work with its Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has	**Not Addressed.** Denison's response does not address the recommendation posed by BNDN regarding the revision of the archaeological context to include a write-up of Indigenous historical and prehistorical accounts, in consultation with impacted Indigenous communities. Further, while the proponent has requested Indigenous Knowledge from BNDN, they have not made any resources available for BNDN to collect it, nor has the company engaged in any efforts to sign any agreements that provide assurances around confidentiality. BNDN lacks capacity and requires such resources and assurances to be able to provide Indigenous Knowledge; further, it is standard procedure for proponents to provide such financial

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			Knowledge, Land Use and Occupancy Study for the Project. See Section 4.1 for additional information on this topic (p. 12-14).	committed to collaborating with English River First Nation and Kineepik Métis Local on a community specific monitoring regime, suited to each of their interests and needs, in an agreed-upon fashion. Denison is committed to continual improvement in relation to such collaborative monitoring programs, in order to adapt to areas of interest which can change over time. It is expected that the data collected through such monitoring regimes would also be relevant to other Indigenous nations who may have interest in the Project. Following the implementation of the mitigation measures outlined in the Heritage Resource Management Plan (HRMP), the likelihood of residual effects is considered low and residual effects on Heritage Resources will occur infrequently and can be mitigated with the HRMP. Known archaeological resources identified in the Project Area were deemed to have low potential for archaeological interpretation and additional work or mitigation measures were not required for the sites; the Heritage Conservation Branch had no further concerns with these sites and work could proceed as planned. Should unknown archaeological and cultural resources be identified during the Project, effects will be mitigated using the HRMP. While effects to archaeological resources are irreversible, they can be mitigated by following the HRMP, by either avoiding additional damage to the resource by creating a buffer zone around the site, or by assessing the resource according to The Heritage Property Act to enable the full interpretation of the site before continuing with work. Furthermore, based on the low occurrence of known Heritage Resources in the Project Area (two), and the location of the Heritage Resources (near waterbodies, along an existing trail and away from the main developments), there is a low potential for the identification or disturbance of previously unknown archaeological sites throughout the life of the Project.	capacity. Proposed mitigation measures for project effects are inadequate to BNDN and have been developed without consideration of BNDN land use and knowledge; the proponents' suggestion that the mitigation measures are adequate for impacts to BNDN that have not been assessed is deficient. I) BNDN requires capacity funding from the proponent to conduct a community-led and project-specific Indigenous Knowledge study so BNDN can evaluate the impacts the project will have on BNDN and so the results of the study may inform the project and its evaluation. II) BNDN requires all documents, including the HRMP to be updated based on the results of BNDN's Indigenous Knowledge Study. BNDN must be engaged on how its results are used to update the HRMP.

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				Therefore, any residual effects (i.e., destruction of Heritage Resources) is considered to be negligible. Further, HRMP includes feedback from Indigenous nations with demonstrated significant land use activities in and around the Project. As outlined in Denison's Indigenous Peoples Policy, Denison is committed to respecting Indigenous knowledge and values regarding environmental stewardship and Indigenous peoples' connection to the land, and to minimize potential effects, wherever possible. Please see Section 11.3.2 Influence of Indigenous Knowledge, Local Knowledge, and Engagement on the Assessment for Heritage Resources. The Section describes how field assistants from local Indigenous communities were involved with the HRIA baseline studies, allowing for in-field consultation during the assessment to make sure that areas deemed to have potential by the land users were surveyed.	
8	BNDN (February 28, 2023)	Heritage Resources Management Plan 2022 (Canada North) – 5.1 1e & 1f	Comment #7: BNDN notes that there has been limited engagement of our Nation as part of the archaeological baseline studies undertaken at the site. The Wheeler River Project is within our Treaty and Ancestral Lands where our members have deep ancestral ties and continue to exercise our rights to this day. As stewards of the land since time immemorial and holders of both Treaty and Aboriginal rights in the Project area, Denison must engage with us as partners on their activities on our lands. This includes their planning and decision-making	Please see Section 11.3.2 Influence of Indigenous Knowledge, Local Knowledge, and Engagement on the Assessment for Heritage Resources. The Section describes how field assistants from local Indigenous communities were involved with the HRIA baseline studies, allowing for in-field consultation during the assessment to make sure that areas deemed to have potential by the land users were surveyed. Even the most thorough investigations may not identify all archaeological materials that may be present. Denison advises that if unanticipated archaeological materials or features are encountered as a result of construction or reclamation activities, all work in the immediate area should cease and the Heritage Conservation Branch and local authorities (if applicable) contacted.	**Not addressed.** Denison's engagement efforts related to archaeology have been deficient. No representatives from BNDN were involved in field assessments nor has BNDN Indigenous Knowledge been considered. The project is located within BNDN's treaty and ancestral lands where members have deep ancestral ties and continue to exercise rights to this day. Most archaeological material in Canada is Indigenous in origin; there is a significant chance that any archaeological material found on site derives from BNDN ancestors. BNDN has inherent

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			related to archaeological materials to which our members have ancestral and spiritual ties. Request/recommendation: • Indigenous communities should be consulted and engaged in decision making rather than merely informed if the archaeological material is expected to be Indigenous in origin. See Section 4.1 for additional information on this topic (p. 12-14).		rights to its cultural heritage, as affirmed by UNDRIP. The proponent must commit to engaging Indigenous Nations, including BNDN in decision making related to Indigenous archaeological material and sites rather than merely informing these nations.
9	BNDN (February 28, 2023)	Heritage Resources Management Plan 2022 (Canada North) – 5.1 7	Comment #8: Given the Ancestral and Treaty ties our members have to the project area, our members have valuable knowledge and context to inform the Heritage Resource Impact Assessment (HRIA) for the Project that must be considered prior to being reviewed or approved by any regulatory body. Request/recommendation: • The draft HRIA should be reviewed by BNDN and other impacted Indigenous Nations prior to being submitted for regulatory approval. See Section 4.1 for additional information on this topic (p. 12-14).	Denison's engagement with BNDN is consistent with the identification of BNDN as an Indigenous Community who has expressed an interest in the Project. However, Denison understands this information from BNDN. As such, over the past year(s), Denison has met with BNDN and has respectfully requested further information from BNDN in respect to the land use activities to occurring in and around the Project, in order to more meaningfully understand the potential for adverse impacts to BNDN and therefore consider the potential for further studies and / or integration into the EIS of such information. Denison remains of the perspective that receipt of this information from BNDN is a necessary first step in this process, and has not received information in this regard to date. Project effects have been mitigated for the most intensive resource user(s), irrespective of affiliation. Denison continues to work with its Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation	**Not Addressed.** Denison's response does not address the request put forward by BNDN to be given an opportunity to review the draft HRIA. Further, while the proponent has requested Indigenous Knowledge from BNDN, they have not made any resources available for BNDN to collect it, nor has the company engaged in any efforts to sign any agreements that provide assurances around confidentiality. BNDN lacks capacity and requires such resources and assurances to be able to provide Indigenous Knowledge; further, it is standard procedure for proponents to provide such financial capacity.

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				and Kineepik Métis Local on a community specific monitoring regime, suited to each of their interests and needs, in an agreed-upon fashion. Denison is committed to continual improvement in relation to such collaborative monitoring programs, in order to adapt to areas of interest which can change over time. It is expected that the data collected through such monitoring regimes would also be relevant to other Indigenous nations who may have interest in the Project. Following the implementation of the mitigation measures outlined in the Heritage Resource Management Plan (HRMP), the likelihood of residual effects is considered low and residual effects on Heritage Resources will occur infrequently and can be mitigated with the HRMP. Known archaeological resources identified in the Project Area were deemed to have low potential for archaeological interpretation and additional work or mitigation measures were not required for the sites; the Heritage Conservation Branch had no further concerns with these sites and work could proceed as planned. Should unknown archaeological and cultural resources be identified during the Project, effects will be mitigated using the HRMP. While effects to archaeological resources are irreversible, they can be mitigated by following the HRMP, by either avoiding additional damage to the resource by creating a buffer zone around the site, or by assessing the resource according to The Heritage Property Act to enable the full interpretation of the site before continuing with work. Furthermore, based on the low occurrence of known Heritage Resources in the Project Area (two), and the location of the Heritage Resources (near waterbodies, along an existing trail and away from the main developments), there is a low potential for the identification or disturbance of previously unknown archaeological sites throughout the life of the Project. Therefore, any residual effects (i.e., destruction of Heritage	I) II)	The draft HRIA should be reviewed by BNDN and other impacted Indigenous Nations prior to being submitted for regulatory approval. BNDN requires capacity funding from the proponent to conduct a community-led and project-specific Indigenous Knowledge study so BNDN can evaluate the impacts the project will have on BNDN and so the results of the study may inform the project and its evaluation.

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				Resources) is considered to be negligible. Further, HRMP includes feedback from Indigenous nations with demonstrated significant land use activities in and around the Project. As outlined in Denison's Indigenous Peoples Policy, Denison is committed to respecting Indigenous knowledge and values regarding environmental stewardship and Indigenous peoples' connection to the land, and to minimize potential effects, wherever possible. Please see Section 11.3.2 Influence of Indigenous Knowledge, Local Knowledge, and Engagement on the Assessment for Heritage Resources. The Section describes how field assistants from local Indigenous communities were involved with the HRIA baseline studies, allowing for in-field consultation during the assessment to make sure that areas deemed to have potential by the land users were surveyed.	
10	BNDN (February 28, 2023)	Heritage Resources Management Plan 2022 (Canada North) – 5.1 1	Comment #9: Discerning archaeological artifacts/ecofacts is difficult at times even to the trained eye; consequently, it is important to undergo training to understand what you could be looking for. Request/recommendation: a) Staff should undergo training regarding the cultural material they may encounter while on site b) BNDN and other Indigenous communities should be invited to attend this training See Section 4.1 for additional information on this topic (p. 12-14).	Section 5.1.1 describes how all staff working on the Project should be informed of the possibility that they could encounter archaeological resources during their work or leisure time, which will include the proper procedure to follow in the case of a chance find. This could be facilitated by a short archaeological education section in the employee orientation, outlining the types of sites and artifacts that could be encountered in the area, as well as what to do when a potential artifact or site is found. If the chance find is deemed to be an archaeological site, then an HRIA is required and a qualified archaeologist must complete the assessment. Section 11.3.5 Mitigation Measures describes the management of archaeological resources and includes the assessment of the discovery by a qualified archaeologist and mitigation measures including avoidance of the site, shovel testing, systematic and intensive shovel testing, excavation, and/or construction monitoring. The HRMP	**Not Addressed.** I) Stronger language must be used to ensure archaeological education does occur as part of staff orientation. The proponent must commit to the requirement that staff undergo training by a qualified archaeologist regarding the cultural material they may encounter while on site as part of staff orientation. BNDN requires confirmation that BNDN and other impacted Indigenous Nations will be

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				outlines mechanisms for Indigenous engagement including the communities and implementation of appropriate cultural protocols.	invited to attend this training. The project is located in BNDN's treaty and ancestral lands; given that no Indigenous Knowledge research has been completed to date for this project by BNDN, there is significant concern that ancestral materials will be encountered but not identified, leading to irreparable damage.
11	BNDN (February 28, 2023)	Heritage Resources Management Plan 2022 (Canada North) – 5.3	Comment #10: In numerous instances the Heritage Resources Management Plan (HRMP), Denison has used noncommittal language to describe future Indigenous engagement related to heritage resources. BNDN notes that engagement of impacted Nations is essential for proper heritage resource management and as such the language in the HRMP should reflect the necessity of this engagement. Request/recommendation: • Throughout the HRMP, Denison must change the language of "should" to "will" where appropriate. For example: management options will be presented to the applicable Indigenous communities for feedback and will include consultation. See Section 4.1 for additional information on this topic (p. 12-14).	The Heritage Resources Management Plan will be revisited for use of language 'should' to 'will' where appropriate.	**Partially addressed.** The proponent should report back to BNDN regarding how the language was updated and whether there were any instances the proponent did not update the language from 'should' to 'will'; justification should be provided in these instances.

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12	BNDN (February 28, 2023)	Heritage Resources Management Plan 2022 (Canada North) – 5.3.1	Comment #11: BNDN notes that Section 5.3.1 does not confirm that impacted Indigenous Nations will have the opportunity to participate in future archaeological fieldwork. While BNDN understands that many impacted Nations will have arrangements directly with Denison to facilitate member participation, this should additionally be made available to all impacted Indigenous Nations as part of best practices at the Project. Request/recommendation: • In addition to any provisions developed in a Project Agreement between BNDN and Denison for the Wheeler River Project, Denison should include a clause that confirms that all impacted Indigenous communities will be invited to have monitors participate in any additional fieldwork and that Denison will provide capacity funding for Nations that wish to participate. See Section 4.1 for additional information on this topic (p. 12-14).	As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. Denison does not anticipate separate funding for BNDN at this time. BNDN will be informed throughout the monitoring program design and implementation process. Monitoring program design and implementation will be guided by the following principles: meet regulatory requirements, confirm the effectiveness of mitigation measures and predictions made in the assessment, implementing adaptive management (if/where applicable) to reduce effects during the lifetime of the Project, and will ensure that spatial boundaries are sufficiently extensive to measure EIS predictions.	**Not addressed.** The project is located within BNDN's treaty and ancestral lands where members have deep ancestral ties and continue to exercise rights to this day. Most archaeological material in Canada is Indigenous in origin; there is a significant chance that any archaeological material found on site derives from BNDN ancestors. BNDN has inherent rights to its cultural heritage, as affirmed by UNDRIP. The proponent must engage with BNDN to discuss opportunities for BNDN to participate in archaeological work moving forward.
13	BNDN (February 28, 2023)	Section 13.0	Comments #12, 14 and 15: BNDN is not included as a Local Study Area (LSA) Community despite being closer to the Project than other LSA	Spatial boundaries for the Economy VC were selected to reflect the geographic areas where economic impacts from the Project are likely to be detectable and measurable. These impacts are expected to be driven primarily by the	**Not Addressed.** BNDN is still not being considered a Local Study Area (LSA) community despite being

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			Communities. The Project is situated on BNDN's ancestral lands. BNDN members currently and historically use the LSA for harvesting (commercial and personal) and ceremonial purposes. Without the LSA Community designation, BNDN members are less likely to be employed or trained through the Project. BNDN members are not entitled to priority training and employment provisions from Denison on the Project. Further, BNDN businesses and partnerships are not entitled to priority procurement provisions from Denison on the Project. Request/recommendation: • BNDN must be identified as a LSA Community. BNDN members and businesses must be eligible for LSA priority status for employment, training, and contracting opportunities. The EIS should be revised accordingly. • A formal agreement between BNDN and Denison is required to outline socioeconomic offsetting measures and benefits should the Project move forward. This must include ways for BNDN	relationship and interactions between the Project and the COI. Economic benefits surrounding Project employment (including income and training) are likely to be targeted toward the communities identified within the spatial boundaries. Economic impacts extending beyond the LSA are likely to be diffused and undetectable within the broader economy. The spatial boundaries were selected based on the consideration of communities where Project recruitment is likely to be prioritized, consideration of previous EAs conducted in the region, and consideration of information shared through key persons in the interview program. The LSA for the assessment of the economy includes the following communities: ERFN (including Indian Reserve Wapachewunak 192D and Indian Reserve La Plonge 192) and Patuanak, Northern Hamlet (Patuanak); Pinehouse Lake, Northern Village; and Beauval, Northern Village. Denison, through a Human Resource Development Plan, will initially prioritize Indigenous and non-Indigenous communities in the LSA in terms of employment and training opportunities (anticipated to be in institutions in northern Saskatchewan) and will work with the leadership of these communities to assist in determining hiring and training practices during all phases of the Project, which could include such items as on-the-job training and career counselling to help with advancement from foundational positions, advance sharing of job qualification requirements, clearly identifying training requirements and working with various training institutions to make sure such appropriate training is available, and creation of scholarship and support programs. Priority for employment and training will then focus on Indigenous and non-Indigenous residents of the RSA and then beyond the RSA.	closer to the Project than other LSA communities. Without the LSA Community designation, BNDN members are less likely to be employed or trained through the Project. BNDN members are not entitled to priority training and employment provisions from Denison on the Project. Further, BNDN businesses and partnerships are not entitled to priority procurement provisions from Denison on the Project. This is unacceptable. Denison and BNDN must work together to develop an Accommodation Agreement (e.g. Impact Benefit Agreement or Mutual Benefit Agreement) in order to accommodate for the impacts of the Project on BNDNs rights, interests, and the environment.

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			businesses and member owned businesses to participate in the Project. Denison references a Human Resource Development Plan (HRDP) as a mitigation measure to ensure local and regional community members are hired in priority. However, Denison does not provide sufficient details to allow Birch to assess the adequacy of the HRDP. Request/recommendation: • BNDN requests the ability to review and comment on Denison's Human Resource Development Plan to provide input and recommendations to encourage community participation and employment in the Project. See Section 4.2 for additional information on this topic (p. 19-23).		
14	BNDN (February 28, 2023)	Section 12.0 and 13.0	Comment #13: There is no BNDN specific Indigenous Knowledge or socioeconomic data presented in the EIS. Request/recommendation: • Denison must conduct Indigenous Knowledge and Community well-being Study (or similar) to gather BNDN specific information. These	Denison's engagement with BNDN is consistent with the identification of BNDN as an Indigenous Community who has expressed an interest in the Project. However, Denison understands this information from BNDN. As such, over the past year(s), Denison has met with BNDN and has respectfully requested further information from BNDN in respect to the land use activities to occurring in and around the Project, in order to more meaningfully understand the potential for adverse impacts to BNDN and therefore consider the potential for further studies and /	**Not Addressed.** While the proponent has requested Indigenous Knowledge from BNDN, they have not made any resources available for BNDN to collect it, nor has the company engaged in any efforts to sign any agreements that provide assurances around confidentiality. BNDN lacks capacity and requires such resources and assurances to

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			studies will allow for a more fulsome assessment of the Project on BNDN rights and interests. Additionally, BNDN specific data will enhance Denison's baseline data and help to inform mitigation and monitoring measures. See Section 4.2 for additional information on this topic (p. 19-22).	or integration into the EIS of such information. Denison remains of the perspective that receipt of this information from BNDN is a necessary first step in this process, and has not received information in this regard to date. Spatial boundaries for the Economy VC were selected to reflect the geographic areas where economic impacts from the Project are likely to be detectable and measurable. These impacts are expected to be driven primarily by the relationship and interactions between the Project and the COI. Economic benefits surrounding Project employment (including income and training) are likely to be targeted toward the communities identified within the spatial boundaries. Economic impacts extending beyond the LSA are likely to be diffused and undetectable within the broader economy. The spatial boundaries were selected based on the consideration of communities where Project recruitment is likely to be prioritized, consideration of previous EAs conducted in the region, and consideration of information shared through key persons in the interview program. The LSA for the assessment of the economy includes the following communities: ERFN (including Indian Reserve Wapachewunak 192D and Indian Reserve La Plonge 192) and Patuanak, Northern Hamlet (Patuanak); Pinehouse Lake, Northern Village; and Beauval, Northern Village. The spatial boundaries selected for Community Well-being were chosen because they permit baseline characterization in sufficient detail to enable potential interactions between the Project and the well-being of the community. These boundaries were developed in consideration of where interactions are likely to occur. The spatial boundaries were derived based on the consideration of communities where Project recruitment is likely to be prioritized, consideration of previous EAs conducted in the region, and consideration of information	be able to provide Indigenous Knowledge; further, it is standard procedure for proponents to provide such financial capacity. The project is located in a critically important area for BNDN; Cree Lake and surrounding areas fosters important caribou habitat that BNDN members rely on; impacts to these animals and areas will undoubtedly impact BNDN's well-being. However, this and related issues have not been considered in the project. Further, BNDN carries out economic activities in within the study area; however, the economic impacts of the project on BNDN has not been assessed. I) BNDN requires capacity funding from the proponent to conduct a community-led and project-specific Indigenous Knowledge study so BNDN can evaluate the impacts the project will have on BNDN and so the results of the study may inform the project and its evaluation. II) BNDN requires the EIS to be updated based on the results of BNDN's Indigenous Knowledge study – including the sections on economy and community well-being VCs. BNDN must be engaged on how its results are used to update the EIS.

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				shared through key persons in the interview program. The LSA for the Community Well-being VC includes ERFN (including Indian Reserves Wapachewunak 192D and La Plonge 192) and Patuanak, Northern Hamlet; Pinehouse Lake, Northern Village; and Beauval, Northern Village.	
15	BNDN (February 28, 2023)	Section 12.0	Comment #16: While EIS does consider the effects of population changes related to the Project on social adaptability, demand for services and housing, it does not address the full range of potential impacts associated with a transient workforce. Significant research has been conducted to demonstrate the negative impacts of remote workers and work camps on Indigenous women and girls. This must be considered in the EIS. The EIS must include an assessment of all potential effects of a transient workforce and changes to population dynamics, including those disproportionately experienced by Indigenous women and girls, and other segments of the population. This must incorporate findings of research like the 2017 study completed by Lake Babine Nation and Nak'azdli Whut'en (Indigenous Communities and Industrial Camps), and/or related research in the context of the LSA.	Both the construction and operation camps will operate on a fly-in/out basis, meaning the opportunities for interactions between the workforce and Indigenous communities are limited as workers will be transported by air directly to the site. Section 12.2.4.2.1 provides the actions to minimize the extent the Project contributes to in- and out- migration in the LSA, including: • Denison will initially prioritize the COI in terms of employment opportunities and will work with the leadership of these communities to assist in determining hiring practices during all phases of the Project. Priority for hiring will then focus on Indigenous and non-Indigenous residents of the RSA and then beyond the RSA. • Employees will not be permitted to commute to the site by any means other than the fly-in/fly-out worker rotation systems (i.e., they cannot drive to the site). • Pick-up and drop-off points are being planned at two locally central points in communities within the LSA, at one additional site in Saskatchewan (i.e., Saskatoon), and potentially at other locations. • Housing for workers will be provided at the camps with free accommodations and meals. Although difficult to predict, communities in the LSA are not expected to experience any substantial population growth or change in demographics as a result of the Project, particularly with mitigation measures identified. Although the potential exists for some individuals to return to the COI, it is anticipated that this would be difficult to discern from existing in-/out-migration rates. As population	**Not Addressed.** Fly-in/fly-out (FIFO) work camps for mining operations in Canada do not eliminate interactions between the workforce and Indigenous communities and the social problems that arise as a result. The FIFO approach may create new issues. The discussion and mitigation measures the proponent proposes does not include a fulsome analysis of all the potential effects of transient workforce and population dynamics, and understates the potential impacts on community well-being. The proponent's response furthermore does not discuss nor address BNDN's concern regarding the impacts of the project on Indigenous women and girls, and other segments of the population. I) BNDN requires the proponent to include a fulsome assessment of the potential impacts of transient workforce and the FIFO approach on Indigenous communities, including on Indigenous women and girls

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			See Section 4.2 for additional information on this topic (p. 19-21).	and demographics are not expected to experience any change as a result of the Project, this pathway will not be carried forward to the residual effects assessment.	and other segments of the population. The EIS must incorporate the findings of research like the 2017 study completed by Lake Babine Nation and Nak'azdli Whut'en (Indigenous Communities and Industrial Camps), and/or related research in the context of the LSA.
16	BNDN (February 28, 2023)	Section 12.0 and 13.0	Comment #17: BNDN notes that no specific management or monitoring plan has been included in the EIS documentation related to the verification of residual socio-economic impacts, both positive and negative, for the local economy. Request/recommendation: a) Denison must develop a Socio-Economic Monitoring Plan for the life of the Project to verify the effects assessment included in the EIS and to be included in the Project's approach to adaptive management. This Plan would include an approach, co-developed with Indigenous groups in the LSA (including BNDN), to monitoring the realization of the benefits and impacts of the Project (e.g., employment and procurement targets, training and capacity building, community investments, etc.) as mitigation and enhancement measures are implemented. Monitoring and	As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. Denison does not anticipate separate funding for BNDN at this time. BNDN will be informed throughout the monitoring program design and implementation process. Monitoring program design and implementation will be guided by the following principles: meet regulatory requirements, confirm the effectiveness of mitigation measures and predictions made in the assessment, implementing adaptive management (if/where applicable) to reduce effects during the lifetime of the Project, and will ensure that spatial boundaries are sufficiently extensive to measure EIS predictions.	**Not Addressed.** Denison does not commit to monitoring BNDN specific socio-economic indicators as part of the Project and continues to exclude BNDN from fulsome consultation and engagement in favour of other Indigenous groups. Denison mischaracterizes BNDN as not being part of "Indigenous Communities of Interest with reserves and residential communities most proximal to the Project". BNDN is located closer (232 km) to the Project than Kineepik Métis Local (235 km). Further, the Project is located on BNDN's Treaty Lands (Treaty 10), whereas Kineepik Métis Local has no Treaty lands or Treaty rights. As such, BNDN must be treated as a Indigenous Community of Interest with reserves and residential communities most proximal to the Project, not as some secondary community. Denison's position of BNDN requiring consultation and accommodation that is less meaningful than KML is unacceptable and wrong. Denison and BNDN must work together to develop an Accommodation Agreement (e.g.

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			subsequent regular evaluation would allow for the real-time adjustment of targets and/or an approach to adjusting enhancement measures or identifying offsetting benefits where targets are not met. See Section 4.2 for additional information on this topic (p. 19-21). [Additional questions on this topic directed to regulators or government entities are included in the CNSC table]		Impact Benefit Agreement or Mutual Benefit Agreement) in order to accommodate for the impacts of the Project on BNDNs rights, interests, and the environment. This will include provisions to monitor socioeconomic indicators.
17	BNDN (February 28, 2023)	Section 12.0 and 13.0	Comment #17: BNDN notes that no specific management or monitoring plan has been included in the EIS documentation related to the verification of residual socio-economic impacts, both positive and negative, for the local economy. Request/recommendation: b) The Crown must include the development of a Socio-Economic Monitoring Plan as a condition of approval for the Project. See Section 4.2 for additional information on this topic (p. 19-21). [Additional questions on this topic directed to the proponent are included in the CNSC table]	As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. Denison does not anticipate separate funding for BNDN at this time. BNDN will be informed throughout the monitoring program design and implementation process. Monitoring program design and implementation will be guided by the following principles: meet regulatory requirements, confirm the effectiveness of mitigation measures and predictions made in the assessment, implementing adaptive management (if/where applicable) to reduce effects during the lifetime of the Project, and will ensure	**Not Addressed.** Denison does not commit to monitoring BNDN specific socio-economic indicators as part of the Project and continues to exclude BNDN from fulsome consultation and engagement in favour of other Indigenous groups. Denison mischaracterizes BNDN as not being part of "Indigenous Communities of Interest with reserves and residential communities most proximal to the Project". BNDN is located closer (232 km) to the Project than Kineepik Métis Local (235 km). Further, the Project is located on BNDN's Treaty Lands (Treaty 10), whereas Kineepik Métis Local has no Treaty lands or Treaty rights. As such, BNDN must be treated as a Indigenous Community of Interest with reserves and residential communities most proximal to the Project, not as some secondary

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				that spatial boundaries are sufficiently extensive to measure EIS predictions.	community. Denison's position of BNDN requiring consultation and accommodation that is less meaningful than KML is unacceptable and wrong. Denison and BNDN must work together to develop an Accommodation Agreement (e.g. Impact Benefit Agreement or Mutual Benefit Agreement) in order to accommodate for the impacts of the Project on BNDNs rights, interests, and the environment. This will include provisions to monitor socioeconomic indicators.
18	BNDN (February 28, 2023)	Appendix 9B Section 2.5.1 Appendix 8E Table 4	Comment #18: In several instances in the draft EIS Denison has noted that Indigenous Nations are concerned with the possibility of mercury contamination from mining operations. BNDN shares these concerns with other Indigenous Nations. Due to the very low concentrations of mercury present in the Phoenix deposit, Denison has not meaningfully studied the potential impacts the Project may have on altering mercury biogeochemistry in the downstream environment. BNDN notes that background mercury concentrations can be elevated in many unexpected and remote locations due to atmospheric deposition (often due to coal plants) (Jackson, 1997). BNDN is very concerned that	Although baseline concentrations of total mercury in sediment were not collected during the baseline program, Denison will collect background information pertaining to sediment total and methyl mercury from LSA lakes and rivers prior to site development. As indicated in draft EIS Section 8.4.6.1, Residual Effects Characterization, mercury is not associated with the local geology and is not expected to be released in the effluent at measurable levels and was therefore not identified as a COPC. Denison notes that there is potential for increased methylmercury production in the receiving environment under a certain combination of factors to which the Project may contribute; however, prediction of methylmercury production is not practical. Denison commits to monitoring mercury and methylmercury in the aquatic environment over the life of the Project to determine the potential changes in mercury concentrations in fish tissue over time. As the Project advances and operational monitoring is underway, Denison will assess health risks from fish consumption by comparing fish tissue data collected during operation from the monitoring program against Health Canada's mercury guideline of 0.5 ug/g wet weight.	**a. Partially Addressed** BNDN notes that Denison has committed to monitoring total and methyl mercury in lakes and rivers in the LSA prior to site development and over the life of the Project. However, as stated in the original comment, monitoring of *wetlands* is of high importance for BNDN. Wetlands are a well-known source of mercury accumulation, with conditions that favour the development of methylmercury (Zhang et al., 2023). Where developments cause changes to these wetlands, such as altered water levels, it can precipitate changes that cause increases in the discharge of mercury to downstream environments (Ullrich, Tanton, & Abdrashitova, 2001). For this reason, omitting wetlands from mercury monitoring is a glaring gap that must be addressed.

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			Denison has not analyzed for mercury as part of their baseline soil geochemistry assessments for the Project, especially in wetlands downstream of the Project. Mercury concentrations in wetland soils are sensitive to changes in water chemistry that can lead to increased mercury methylation. This is especially acute from increases in nutrients and sulphates which can active sulfate reducing microorganisms that methylate mercury (Liu, Li, & Cai, 2012). Table 4 of Appendix 8e shows that the effluent discharged to Whitefish Lake will have mercury concentrations almost 5,700 times background concentrations. This dramatic increase in sulfate loading to Whitefish Lake may not exceed water quality objectives unto itself but may be sufficient to meaningfully change mercury biogeochemistry in downstream wetlands. BNDN is very concerned with the complete lack of assessment and analysis of baseline mercury concentrations and the potential changes to mercury cycling that could be induced by the Project. Request/recommendation: a) BNDN requests that Denison undertake baseline studies of	This is a human health risk-based maximum permissible concentration. Mercury data presented throughout the draft EIS represents total mercury. Denison agrees to include methylmercury as part of the constituents monitored in fish throughout all project phases. Engagement on licensing requirements, such as the development of the environmental monitoring program and the associated monitoring regime will occur to support Project permitting and licensing efforts.	Ullrich, S. M., Tanton, T. W., & Abdrashitova, S. A. (2001). Mercury in the aquatic environment: a review of factors affecting methylation. *Critical reviews in environmental science and technology*, *31*(3), 241-293. Zhang, J., Li, C., Tang, W., Wu, M., Chen, M., He, H., ... & Zhong, H. (2023). Mercury in wetlands over 60 years: research progress and emerging trends. *Science of the Total Environment*, *869*, 161862. **b. Not Addressed** Comments for regulators will be addressed through future engagement with the appropriate regulator. **c. Not Addressed.** BNDN requires active involvement in the mercury monitoring program design and implementation. BNDN's involvement must be formalized in a mutual benefits agreement between Denison and BNDN for the Wheeler River Project.

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			mercury concentrations in soils, with a focus on baseline concentrations of mercury in organic wetland soils downstream of the project. Note that mercury sampling should sample total mercury and methylmercury in all analyses, as well as porewater total mercury and methylmercury. The study design and implementation should be undertaken collaboratively with BNDN. b) BNDN recommends that the CNSC requires Denison to undertake a baseline assessment of mercury in soils (with a focus on wetlands) prior to construction of the Project. This may be established as a condition of approval for the Project. c) Depending on the findings of the baseline mercury in soils and wetlands studies, the CNSC should include a condition of approval on the Project that requires Denison to monitor mercury biogeochemistry in the receiving environment over the life of mine. See Section 4.3 for additional information on this topic (p. 25-28). [Additional questions on this topic directed to regulators or government entities are included in the CNSC table]		

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19	BNDN (February 28, 2023)	Appendix 7C Section 3.5.6.2.1 Figures 7.6-10 and 7.6-11	Comment #19: Figure 7.6-10 and 7.6-11 of the draft EIS show the results of Denison's modelling of uranium mobility and adsorption from the ore body following the decommissioning of the mine. The figures show that the model indicates that all dissolved uranium will be effectively removed from solution within a short distance of the orebody via adsorption to clays present in the bedrock. In Section 3.5.6.2.1 of Appendix 7c of the draft EIS Denison notes that there is very limited literature available on uranium fate and transport, especially in similar environments to the Wheeler River Project. Denison's uranium speciation model relies almost entirely on a single academic article studying the partitioning of uranium in the alteration halo surrounding the Cigar Lake uranium deposit. Of very important note is that this paper is focused on the pre-mining environment at Cigar Lake and does not examine how uranium partitioning may be dramatically altered by ISR mining. Health Canada published a document on uranium in drinking water in 2017 literature review of uranium mobility, complexation and chemistry in groundwater which documents the widely varying	Denison's engagement with BNDN is consistent with the identification of BNDN as an Indigenous Community who has expressed an interest in the Project. As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation (ERFN) and Kineepik Métis Local (KML) on details and updates to the decommissioning plan which includes mining area remediation plans and associated post-decommissioning modelling of groundwater from the remediated mining area, suited to each of their interests and needs. As part of these updates, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that updates to the decommissioning plan and groundwater modelling would also be relevant to other Indigenous nations who may have an interest in the Project. As such, Denison will not be developing a process agreement with the BNDN to address concerns raised about pertaining to long-term groundwater quality for the Wheeler River Project. This comment is also applicable to other comments where the same request was made by the BNDN. The balance of this response pertains to groundwater quality and the numerical groundwater model presented in draft EIS will focus on the technical content of the concerns raised. Denison's groundwater SME and author of the modelling report (Appendix 7C) acknowledges that the modelling report did not include a lengthy discussion of uranium speciation and mobility. However, the reactive transport modelling done using the PHREEC geochemical code was carefully informed by relevant literature, and was certainly not restricted to consideration of one study (Cigar Lake). In Section 3.5.3 of Appendix 7C we reference important studies pertaining to uranium complexation in solution by carbonate species (Guillaumont et al. 2003; Gorman-Lewis	**a. Not Addressed** – Denison mischaracterizes BNDN as not being part of "Indigenous Communities of Interest with reserves and residential communities most proximal to the Project". BNDN is located closer (232 km) to the Project than Kineepik Métis Local (235 km). Further, the Project is located on BNDN's Treaty Lands (Treaty 10), whereas Kineepik Métis Local has no Treaty lands or Treaty rights. As such, BNDN must be treated as a Indigenous Community of Interest with reserves and residential communities most proximal to the Project, not as some secondary community. Denison's position of BNDN requiring consultation and accommodation that is less meaningful than KML is unacceptable and wrong. Denison and BNDN must work together to develop an Accommodation Agreement (e.g. Impact Benefit Agreement or Mutual Benefit Agreement) in order to accommodate for the impacts of the Project on BNDNs rights, interests, and the environment. This will include provisions to monitor groundwater and surface water; and to keep consult with BNDN as an impacted First Nation. **b. Not Addressed** – BNDN notes that Denison did not agree to bench scale testing as requested. BNDN further notes that the position Denison has taken around the appropriateness of water quality modelling has to be taken at Denison's word. BNDN

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			behaviour of uranium in groundwater depending on redox conditions, pH, pressure, and other ions available for complexation which may increase or decrease uranium mobility (Health Canada, 2017). Uranium will be present in extremely high concentrations (100 mg/l) in the restoration solution. Many other anions and cations which uranium is known to form complexes with will also be present in the solution at very high concentrations. The limited literature upon which Denison has developed their models to predict uranium mobility post-decommissioning is insufficient to confidently assert that the very concentrated restoration solution will behave as predicted. Uranium is a common groundwater contaminant around the world and is known to be stable in dissolved forms in groundwater in many locations. Furthermore, some studies have indicated that the effectiveness of adsorption as a mechanism for attenuation of uranium in solution is significantly overstated, especially in environments where there is competition from other ions, as there will be in the restoration	et al., 2008; Grenthe et al., 2020) and ternary complexes of uranium with calcium and magnesium and carbonates in solution (Dong and Brooks, 2006). These complexation reactions were added into the Project-specific PHREEQC database developed as part of the work presented in Appendix 7C. The database was updated to include solution-phase complexes of uranium in Guillaumont, 2003, which is a comprehensive summary of known reaction constants for uranium with dissolved-phase ligands. Further, the consideration of sorption of uranium-carbonate complexes to quartz, geothite and illite is shown in Appendix E of Appendix 7C, and relies on information from multiple publications. The reactive transport modelling was done using piChem (FELOW + PHREEQC) because of the ability of that approach to carefully consider speciation of uranium, and the potential interactions of uranium with other species in solution. The comment to which the BNDN refer in Section 3.5.6.2.1 of Appendix 7C is: "[t]o the best of our knowledge, there is very little information published about the solid-phase speciation of uranium and other constituents associated with ore bodies and the overlying and underlying rocks in the Athabasca basin". This is not speaking specifically to the speciation of uranium in the solid phase. Experimental work that provide information on solid-phase speciation include sequential extraction schemes and spectroscopic studies, such as recent work by Bayle et al., 2023 (https://pubmed.ncbi.nlm.nih.gov/37417589/). Research on the solid-phase speciation of uranium is not addressed in Health Canada (2017). As indicated, we were not able to find research pertaining to sequential extractions of spectroscopic studies of uranium in the solid phase for relevant materials/conditions. It is for this reason that we presented results of solid-phase uranium speciation in the available study by Percival 1989. It is acknowledged that	requires an opportunity to review the effluent quality models input and outputs, followed by a discussion between BNDN, Denison and the CNSC to have confidence that the modelling has been done in a manner that BNDN can trust that the findings are a reasonable forecast of what will occur when the mine operates. Future discussions on this matter should occur within the framework of a BNDN-Denison process agreement for the Project.

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			solution (Gandhi, Sampath, & Maliyekkal, 2022). BNDN is very concerned that Denison has portrayed their groundwater contamination model in Appendix 7c with an inappropriate level of confidence given the level of uncertainty reasonably inferred from the lack of foundational literature relevant to the circumstances at Wheeler River and the well- understood complexity of uranium fate and transport in groundwater. It is not impossible to imagine that surface water contamination could eventually occur, especially given the exceptionally high concentrations of uranium in the restoration solution. By consenting to the Wheeler River Project, BNDN is supporting a process that will be irreversible once it commences and may be very difficult to manage should the underlying modeling assumption prove to be inaccurate by a significant margin. As a Nation whose members put a very high emphasis on the protection of groundwater resources, BNDN requires substantially greater reassurance through dialogue with Denison and further studies to have confidence that the Project	this study was for Cigar Lake. The relevance of the work for the Wheeler River Project is high.	

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			will not irreparably degrade the natural environment in our Ancestral Lands. Request/recommendation: • Denison must develop a process agreement with BNDN to work through our concerns related to long-term groundwater contamination from the Project. This process agreement would lay out the pathway to obtaining BNDN consent for the Project through providing our Nation with confidence that the groundwater and surface water near to the project will not be irreparably contaminated. The process agreement will include additional studies and consultation activities with BNDN that Denison must undertake. The satisfaction of all terms in the process agreement would be defined by the signing of a Project Agreement between Denison and BNDN. • BNDN recommends that Denison commit to funding bench-scale studies to validate the outputs from their FEFLOW and PHREEQC modelling. The bench-scale		

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			studies should be undertaken by an independent academic. See Section 4.3 for additional information on this topic (p. 25-28).		
20	BNDN (February 28, 2023)	Section 7.6.2.1 Appendix 7C Section 4.6	Comment #20: In Section 7.6.2.1 of the draft EIS, Denison mentions that they anticipate the outward migration of lixiviant as is observed at other ISR operations globally and has incorporated their assumed concentrations of metals and the extent of area affected by flare from the ISR operations. Section 4.6 of Appendix 7c states that the flare zone is expected to extend 11 to 13 m but have modelled with a "conservative 50 m flare zone. It is not clear how Denison derived their assessment that the flare zone would extend 11 to 13 m and that a 50 m flare zone is considered conservative for the purposes of modelling. BNDN requires further information to have confidence that the design is as conservative as the Proponent has suggested. Request/recommendation: • BNDN requests that Denison provide further information on how the size of the area above the deposit affected by flare was calculated and how	Groundwater modelling and flow path analysis calibrated to field conditions have evaluated upward solution migration and demonstrated that the maximum height that injected fluids will migrate upwards from the ore zone during active mining is likely between 11 to 13 m (Section 2 of the draft EIS). For conservatism, a 50-m vertical zone above the deposit was assumed to be potentially disturbed by mining activities. Denison specified 50m flare threshold based on their commitment to maintain inward hydraulic gradients, and or adding extraction wells as necessary to limit the migration of the flare. With the engineered controls described above, flare is not anticipated above 11-13 m. However, the decision was made to assume 50% of the restored solution uniformly between 15 and 50 m above the mineralized zone because there will be a natural gradient from 100% restored solution to 0% restored solution (i.e., baseline conditions) over this distance. The uncertainty associated with this decision was addressed in the uncertainty analysis presented in Section 4.7 of Appendix 7C, where 100% restored solution was assumed to be present over the entire 50 m height above the ore zone. The results of the model under both scenarios was consistent: no water quality effects above groundwater screening criteria, apart from those that reflect natural conditions, in Whitefish Lake. Over the life of the Project, groundwater quantity and quality monitoring activities will be completed to assess the performance of various components of the Project associated with engineering mining designs and	**Not Addressed.** BNDN notes that the Proponent has not provided any reason that the flare is reasonably estimated to migrate 11 – 13m upwards. This number appears to be arbitrarily selected from BNDN's perspective. BNDN requests that the Proponent provide case studies from comparable sites (or other evidence) that justifies their estimated flare distance. Future discussions on this matter should occur within the framework of a BNDN-Denison process agreement for the Project.

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			they determined that 50% restoration solution was determined as the appropriate concentration to base water quality modelling. This item would be best addressed and resolved with BNDN through the process agreement to address BNDN's concerns related to long term groundwater contamination from the Project. See Section 4.3 for additional information on this topic (p. 25-28).	performance and infrastructure designs to protect groundwater. A detailed Groundwater Monitoring Plan (GWMP) will be prepared to support licensing. The GWMP will include an Excursion Contingency Plan, and measures for adaptive management. The GWMP will be informed by the understanding of existing groundwater conditions at the Project Area (Appendix 7-A), the reactive transport modelling of groundwater COPCs associated with the restored mining area (Appendix 7-C), and the commitments made within the Geology and Groundwater section of the EIS. Please refer to the first part of Denison's response to BNDN comment #19 in regard to BNDN's suggestion of a process agreement.	
21	BNDN (February 28, 2023)	Appendix 7C Section 3.2.2.1	Comment #21: Section 3.2.2.1 of Appendix 7C of the draft EIS describes the natural redox conditions in the ore zone as naturally reducing. The operation of the wellfield will result in the groundwater in the ore zone becoming oxidizing. Post decommissioning, the groundwater in the ore zone can be reasonably anticipated to return to baseline (reducing) redox conditions. BNDN notes that as redox conditions becoming increasingly reducing post closure, adsorption kinetics of contaminants adsorbed to clays could shift so that contaminants desorb from clays and are remobilized into solution. It is not clear to BNDN that the	Solution-phase concentrations of metals and uranium are what influence the desorption of these elements from clays over time; but the BNDN is correct that there may be hysteresis, or a kinetic component to desorption to equilibrium conditions. Re-establishment of reducing redox conditions - primarily through scavenging of residual oxidant with pyrite - with progressive movement of natural groundwater through the mining area in the Decommissioning period is anticipated to result in concentrations of metals and uranium at baseline conditions because the same mineral phases as are present now are expected to control the solubility of those elements. Secondary minerals may influence concentrations for a small number of constituents. In all cases. concentrations of these elements will not exceed those assumed in the model. In the model as presented, desorption from clays was taken into account for protons that had sorbed to chlorite in the mining area as a sensitivity analysis. The desorption of protons did not have an adverse effect on the water	**Not Addressed.** Similar to comment 19b, BNDN requests the opportunity to review the modelling work completed by Denison prior to considering this comment satisfactorily addressed. This comment can be addressed simultaneously with comment 19b. This discussion should occur within the framework of a BNDN-Denison process agreement for the Project.

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			evolution of redox geochemistry and its implication on adsorption kinetics has been adequately considered by Denison. Request/recommendation: • BNDN requests further information on how increasingly reducing groundwater conditions post decommissioning may impact adsorption kinetics of contaminants expected to adsorb to clays. This item would be best addressed and resolved with BNDN through the process agreement to address BNDN's concerns related to long term groundwater contamination from the Project. See Section 4.3 for additional information on this topic (p. 25-28).	quality in Whitefish Lake. See draft EIS Appendix 7-C Sections 3.5.6.4 and 4.7. Please refer to the first part of Denison's response to BNDN comment #19 in regard to BNDN's suggestion of a process agreement.	
22	BNDN (February 28, 2023)	Appendix 7C Section 3.4	Comment #22: In Section 3.4 of Appendix 7C Denison reports that they have excluded colloids from their post- decommissioning geochemical modelling. Denison has also noted that colloids would serve to enhance mobility of contaminants and they could precipitate out of solution. BNDN is concerned that by excluding the precipitation of colloids with adsorbed	The authors acknowledged in Appendix 7C the potential for transport of COPCs in association with colloids was possible, and used previous research in a highly relevant system (Cigar Lake) to make the professional judgement that this process would not significantly alter the results of the numerical model. Colloid transport is not included routinely in reactive transport modelling because of the difficulty in a) accurately measuring the colloidal fraction in groundwater under existing conditions as the basis for the numerous assumptions that would need to made to include them in numerical modelling and b) the challenges with applying modelling approaches that have been	**Not Addressed** BNDN sees the lack of assessment of the risks from colloids as a significant gap in the modelling for the Project. The fact that it is difficult to model the impacts of colloids does not diminish the need to assess their potential impacts when they are a known risk to the receiving environment. It is essential that Denison work with our Nation within the context of a process agreement to develop mutually agreeable

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			contaminants as a pathway for contaminant transport, Denison has significantly underestimated the mobility of contaminants and the consequent risks to the receiving environment. Request/recommendation: • BNDN requests that Denison prepare an additional geochemical model that considers the roles that colloids could potentially contribute to contaminant transport. The findings of this additional model (along with the other models) should be reviewed with BNDN. This item would be best addressed and resolved with BNDN through the process agreement to address BNDN's concerns related to long term groundwater contamination from the Project. See Section 4.3 for additional information on this topic (p. 25-28).	developed at the scale of regional models (e.g., Molnar et al., https://www.pure.ed.ac.uk/ws/portalfiles/portal/109261315/109261203._Molnar._PFV.pdf). Refinement of the mining area decommissioning objectives and associated modelling will be done as the Project progresses through updates to the Decommissioning Plan; nevertheless, the objectives as they may evolve will be bound by the objectives evaluated in the EIS, which as shown are protective of aquatic biota in Whitefish Lake. The final acceptable mining area decommissioning objectives will be developed prior to initiation of groundwater remediation, as part of the Detailed Decommissioning Plan (DDP). Prior to executing decommissioning activities, Denison shall prepare and submit the DDP to regulators for acceptance. In this case the DDP would reflect input that will be solicited from Indigenous Nations and communities and others prior to its submission and would also be informed by conditions on the ground at the site at that time, operational experience that has been gained and the regulatory landscape at that time. As is highlighted above, the decommissioning plan will evolve over time and the plan will become more refined as the Project advances. Please refer to the first part of Denison's response to BNDN comment #19 in regard to BNDN's suggestion of a process agreement.	mitigation measures to monitor this risk to the receiving environment.
23	BNDN (February 28, 2023)	Appendix 7C Section 4.0	Comment #23: In Section 4.0 of Appendix 7c of the draft EIS, Denison reports that the composition of restoration solution 1 and restoration solution 2 were derived from metallurgical testing. While this is likely the best, BNDN notes that the initial solution used	Further information on how the chemistry in restoration solutions #1 and #2 were derived and evidence providing confidence that the reflect conditions that are expected in the mining area with remediation of the mining area is provided in the Denison Feasibility Report (2023) and a summary is attached here as part of Denison's response to Federal Indigenous Review Team (FIRT) information requirement #67.	**Not Addressed.** BNDN requires discussion with Denison and their SMEs to better understand their findings, especially the replicability and clarification on the suitability of the methodology chosen. This discussion should occur within the framework of a BNDN-Denison process agreement for the Project.

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			in the geochemical modelling is enormously consequential in the accuracy of the modelling and require further confirmation and confidence that the restoration solutions are accurate to within a reasonable margin of error for the geochemical modelling. Request/recommendation: • BNDN requests that Denison provide further information on how the chemistry in restoration solution 1 and restoration solution 2 were derived and any evidence they can provide that gives them confidence that these solutions are an accurate reflection of what will be observed in the wellfield. This item would be best addressed and resolved with BNDN through the process agreement to address BNDN's concerns related to long term groundwater contamination from the Project. See Section 4.3 for additional information on this topic (p. 25-28).	Please refer to the first part of Denison's response to BNDN comment #19 in regard to BNDN's suggestion of a process agreement.	
24	BNDN (February 28, 2023)	Appendix 7C	Comment #24: BNDN notes that Denison has not provided any discussion on the extent to which the lixiviant and the solution used to flush the wellfield at the end of	In the modelling presented in Appendix 7-C, the mining area is assumed to span the entirety of the depth of the paleoweathered zone within the area of the freeze wall, as described in Section 4.6. Thus, in the Decommissioning period, the water quality in that entire portion of the	**Provisionally Addressed.** BNDN understands the modelling assumptions and would accept them assuming that the other unaddressed

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			operations will interact with the underlying paleo weathered bedrock. BNDN notes that is it possible that there are mineral phases within the paleo weathered bedrock that are also readily soluble when exposed to the lixiviant. While BNDN recognizes that the paleo weathered bedrock has a low permeability, it is unclear to BNDN as to whether the lixiviant will contribute to mobilization of contaminants from the paleo weathered bedrock that requires consideration in the post-decommissioning groundwater model. Request/recommendation: • BNDN requests that Denison provide any available information on how the bedrock may be altered (through dissolution of soluble mineral phases) by the lixiviant and the flushing of the wellfield during decommissioning, and whether this has been factored into their post-decommissioning groundwater model. This item would be best addressed and resolved with BNDN through the process agreement to address BNDN's concerns related to long	paleoweathered zone was assumed to be equivalent to that of the "restored solution". This reflects, as the BNDN notes, the dissolution of soluble minerals associated with the paleoweathered zone due to interaction with the mining solutions. This assumption is conservative because the whole of the paleoweathered zone does not have the uranium mineralization of the ore zone, nor the concentrations of other COPC-containing mineral phases. Some alteration of the clays is expected, as is some bleaching (loss of iron-rich minerals); however, there is uncertainty with respect to the specific changes in the nature of the paleoweathered zone that have continued to be explored by Denison through experimental/metallurgical work. The decision was made in the numeric modelling to treat the portion of the paleoweathered zone within the freeze as geochemically unreactive - meaning that no sorption to clays or desorption from clays (with the exception of chlorite in the "pH tail" scenario (Section 3.5.6.4) was assumed for this zone. Thus, sorption of COPCs to clays in the paleoweathered zone within the numeric model occurred only outside of the freeze wall footprint, where the minerals will not have been exposed to mining solutions and will not have been altered. Please refer to the first part of Denison's response to BNDN comment #19 in regard to BNDN's suggestion of a process agreement.	comments regarding modeling assumptions are addressed. Note that this does not address the need for a process agreement for the entirety of the Wheeler River Project with our Nation.

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			term groundwater contamination from the Project. See Section 4.3 for additional information on this topic (p. 25-28).		
25	BNDN (February 28, 2023)	Appendix 7C Section 5.2.2	Comment #25: In section 5.2.2 of Appendix 7c of the draft EIS Denison reports the assumptions built into their post-decommissioning groundwater modelling. BNDN notes that Denison has assumed that adsorption reaction sites are assumed to be available uniformly throughout the subsurface parameter zones. The presence of sufficient adsorption sites is a primary variable which determines the outcomes of the groundwater modelling, as adsorption of ions out of solution is the primary means by which contaminant transport is attenuated in Denison's modelling. BNDN is concerned that the presence of a variable that is so consequential to the findings of the model is based primarily on assumptions with limited information to base the assumptions upon. Request/recommendation: • BNDN requests that Denison provide justification for the assumption that adsorption sites will be uniformly	We note the uncertainty assessment in the draft EIS tests conditions where less sorption sites are available (1/10th of the characterized amount). Further, refinement of the mining area decommissioning objectives and associated modelling will be done as the Project progresses through updates to the Decommissioning Plan; nevertheless, the objectives as they may evolve will be bound by the objectives evaluated in the EIS, which as shown are protective of aquatic biota in Whitefish Lake. The final acceptable mining area decommissioning objectives will be developed prior to initiation of groundwater remediation, as part of the Detailed Decommissioning Plan (DDP). Prior to executing decommissioning activities, Denison shall prepare and submit the DDP to regulators for acceptance. In this case the DDP would reflect input that will be solicited from Indigenous Nations and communities and others prior to its submission and would also be informed by conditions on the ground at the site at that time, operational experience that has been gained and the regulatory landscape at that time. As is highlighted above, the decommissioning plan will evolve over time and the plan will become more refined as the Project advances. Denison is committed to continue to engage with Indigenous Nations and communities to solicit input. Please refer to the first part of Denison's response to BNDN comment #19 in regard to BNDN's suggestion of a process agreement.	**Not Addressed** BNDN notes that should the assumptions turn out to be incorrect (for example, contaminants in solution are not effectively removed from solution via adsorption), then it will be extremely challenging for Denison to prevent the migration of contaminants in the restored solution. BNDN requires additional understanding of the modelling assumptions (as discussed above) and agreement on potential mitigation measures should attenuation of contaminants through adsorption occur at much lower rates than anticipated.

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			available throughout the sub-surface parameter zones. BNDN requests that Denison provide information on how they estimated the extent to which adsorption sites are already saturated prior to mining. This item would be best addressed and resolved with BNDN through the process agreement to address BNDN's concerns related to long term groundwater contamination from the Project. See Section 4.3 for additional information on this topic (p. 25-28).		
26	BNDN (February 28, 2023)	Appendix 7C Table 3-10	Comment #26: Table 3-10 of Appendix 7c of the draft EIS shows the expected adsorbing mineral properties of the mineral phases to which contaminants are expected to adsorb out of solution. BNDN notes that the lixiviant and restoration solution could affect the ability of adsorption. In particular, the clays immediately surrounding the orebody are within the freeze wall and will be directly exposed to the lixiviant during operations, which may impact the clay's ability to adsorb contaminants out of solution. BNDN notes that the clays immediately surrounding the	Please see Denison's response above to BNDN Comment #24. Sorbing phases including clays were excluded from the mining area in the numeric model. Sorption occurs only to materials outside of the mining area that are not exposed to, and thus no altered by interaction with the mining solutions. Please refer to the first part of Denison's response to BNDN comment #19 in regard to BNDN's suggestion of a process agreement.	**Provisionally Addressed.** BNDN understands the modelling assumptions and would accept them assuming that the other unaddressed comments regarding modeling assumptions are addressed. Note that this does not address the need for a process agreement for the entirety of the Wheeler River Project with our Nation.

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			orebody may be soluble in the presence of the lixiviant or may be altered to have a lower capacity to adsorb metals. BNDN requires further information from Denison to have confidence that the clay phases which play a crucial role in contaminant attenuation will not have their adsorptive capacity impacted by the operation of the wellfield. Request/recommendation: • BNDN requests that Denison provide available information on whether clay mineral phases are anticipated to dissolve through the ISR mining process, and whether the restoration solution will impact the ability of clays to effectively adsorb contaminants. This item would be best addressed and resolved with BNDN through the process agreement to address BNDN's concerns related to long term groundwater contamination from the Project. See Section 4.3 for additional information on this topic (p. 25-28).		
27	BNDN (February 28, 2023)	Section 1.1.1	Comment #26: In Section 1.1.1 of the Draft EIS, Denison notes that "the Gryphon deposit is not	Denison acknowledges that, if development of the Gryphon deposit as an underground mine is proposed in the future, this would require additional regulatory review	**Addressed** BNDN notes that the acknowledgement addressed the concern specific to this

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			amenable to ISR mining and, accordingly, is not included in the EIS". Denison has previously reported that the Gryphon deposit has nearly as much uranium as the Phoenix deposit. While the Gryphon deposit is not amenable to ISR, it is potentially still an economic resource which Denison may wish to mine. While the Gryphon deposit is not in scope for this environmental assessment, BNDN expects to be kept informed of future potential mining activities on the Wheeler River Project which Denison may be considering, including additional exploration on the Property, as future activities on the Property will also have impacts on our Treaty and aboriginal rights and interests. Request/recommendation: • Given the potential longer term mining activities at the Wheeler River project beyond the Phoenix deposit, BNDN requests that any project agreement between BNDN and Denison include terms for ongoing dialogue related to future exploration and project development activities at the Wheeler River Project and at	and approval as well as engagement with Indigenous Communities of Interest. Please also refer to the first part of Denison's response to BNDN comment #19 in regard to BNDN's suggestion of a process agreement.	comment but does not address the need for a process agreement for the entirety of the Wheeler River Project with our Nation.

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			all Denison Projects on BNDN Ancestral Lands. See Section 4.3 for additional information on this topic (p. 25-28).		
28	BNDN (February 28, 2023)	Section 2.3.3.1.3	Comment #28: In Section 2.3.3.1.3 of the draft EIS Denison describes the proposed decontamination, demolition and disposal activities at the Project. BNDN notes that Denison has described a detailed process for decommissioning the injection and recovery wells but has not described how the freeze wells will be decommissioned. BNDN notes that the freeze well holes may serve as preferential pathways for contaminated groundwater movement. Given the proximity of freeze wells to the orebody and the number of freeze wells proposed to be drilled, proper closure of freeze wells is also important for protection water quality long term. Request/recommendation: a) BNDN request that Denison clarify the process by which they will decommission the freeze wells. b) BNDN requests that Denison decommission the freeze wells using the same process as is proposed for the decommissioning of the injection and recovery wells.	The freeze holes will be decommissioned in the same manner as the ISR wellfield injection and recovery wells. All wells once decommissioned will undergo a mechanical integrity and leak off test prior to being grouted and sealed internally preventing interaction of surface water from the underlying aquifer at the mineralized depth. The freeze pipes, which will be located inside the freeze holes, will simply be unthreaded and removed from site after the freeze wall is no longer required.	**Addressed**, pending future engagement on environmental matters with BNDN through a process agreement and eventual mutual benefits agreement.

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			See Section 4.3 for additional information on this topic (p. 25-28).		
29	BNDN (February 28, 2023)	Section 2.3.3.1.3	Comment #29: Denison describes the thawing of the freeze wall as part of the decommissioning of the mine. BNDN notes that water expands when frozen and could potentially be capable of expanding pre-existing joints and fractures within the host rock. BNDN is concerned that the thawing of the freeze wall could lead to expanded joints and fractures which would allow for far more rapid contaminant transport away from the ore body and restoration solution than is modelled in the post-decommissioning groundwater model. Request/recommendation: • BNDN request that Denison provide evidence from academic literature or other mine sites employing freeze wall technology to determine the extent the freeze wall could expands joints and fractures within the rock once thawed, including at unconformities or other pre-existing structural weaknesses within the host rock.	Please refer to Attachment IR-10 for information on the freeze wall integrity and basis for the design, which relies on site field data and lived experience from several existing Saskatchewan mining operations.	**Addressed**, pending future engagement on environmental matters with BNDN through a process agreement and eventual mutual benefits agreement.

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			See Section 4.3 for additional information on this topic (p. 25-28).		
30	BNDN (February 28, 2023)	Figure 2.2-15 Section 2.2.3	Comment #30: Denison notes that they have made the conservative assumption that no water would be recycled as mining solution as part of their water balance calculations. BNDN agrees that this conservative assumption is appropriate for assessment of potential impacts of the Project. While this assumption is appropriate for the environmental assessment, BNDN wishes to understand the proportion of industrial wastewater that may be recycled on site and any commitments Denison is willing to make regarding continual refinement of the water treatment process to increase the proportion of water that is recycled. Request/recommendation: a) BNDN requests that Denison commit to continual refinement of the Industrial Wastewater Treatment Plant (IWWTP) treatment process to maximize the amount of water that is recycled to the deposit. b) BNDN recommends that the Crown include a condition of approval for the project regarding	The EIS carried forward two options for the source of freshwater: 1) surface water and 2) groundwater. This freshwater will meet all Project needs for potable water, drilling, and process water and allow Denison to obtain the water from groundwater wells or from the surface water (Whitefish lake). The effluent quality and volume predictions in the EIS provide a bounding scenario of the basis of the assessment of Project effects. Denison is undertaking a sequential EA and licensing process under the Nuclear Safety and Control Act. For context, the EA process for a Project under CEAA 2012 and the Saskatchewan Environmental Assessment Act is long and complex. As such, the inputs and outputs (including IWWTP water recycle volumes and effluent quality) developed for the IWWTP were necessary and determined by Denison's Project engineers early in the EA process to allow for the EIS biophysical and human assessments to advance. Detailed design information on the IWWTP, including recycle volumes, were not available, which is standard for engineering and EA sequencing for major projects. Denison intends to continue to refine effluent quality and volume predictions as part of the BATEA assessment and licensing phase of the Project. The predictions provided in the EIS will continue to bound the assessment and provide a conservative representation of risk to human health and the environment. Further, more detailed information regarding the design and operation of the IWWTP and water management infrastructure (including discharge rates, recycle rates among many other things), as informed in part by the BATEA assessment, will be included with Denison's application for the license to operate which will provide opportunity for review and comment by Interested Parties. For reference, the IWWTP	**Addressed**, pending future engagement on environmental matters with BNDN through a process agreement and eventual mutual benefits agreement. **Comments for regulators are not addressed** and will be addressed through future engagement with the appropriate regulator.

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			continual improvement of water treatment to maximize recycling. c) BNDN requests that Denison share available information on the proportion of water that they currently anticipate being able to recycle. See Section 4.3 for additional information on this topic (p. 25-28). [Additional questions on this topic directed to regulators or government entities are included in the CNSC table]	would be commissioned prior to the Operation phase as no discharge of treated effluent would occur until that time.	
31	BNDN (February 28, 2023)	Figure 2.2-15 Section 2.2.3.2	Comment #31: In Section 2.2.3.2 and Figure 2.2-15 of the draft EIS, Denison describes their water balance for the project and anticipated water needs to operate the ISR wellfield. BNDN notes that the EIS does not describe how Denison derived their estimate for the quantity of water required to operate the ISR wellfield. BNDN is concerned that the volume of water required to operate the wellfield may be substantially greater than is estimated in the draft EIS. Utilizing greater volumes of water in the wellfield would have cascading effects throughout the water balance, including greater demand on the IWWTP, greater storage	a) Based on Denison's site-specific drilling, development, and pumping requirements over several years of exploration activities, the wellfield drilling water estimates presented in the EIS water balances are achievable. Denison's recently released feasibility study reaffirms the EIS assumptions related to water use and water recycle abilities. b) A key aspect of Denison's management system will be ongoing evaluation of the Project's performance compared to EIS predictions as well as continual improvement and adaptive management, as required. Should water consumption needs fall below those outlined in the EIS, Denison will follow all required permitting, licensing, and engagement with Indigenous nations and communities to describe and assess what those continency measures would be. c) The near-field analysis (Section 8.2.4.2.3) identified that under all flow regime scenarios (i.e., 7Q10, monthly low, and monthly average), constituents are expected to be well mixed within Whitefish Lake (LA-5) and below the	**a. Addressed** **b. Addressed**, pending future engagement on environmental matters with BNDN through a process agreement and eventual mutual benefits agreement. **c. Addressed**, pending future engagement on environmental matters with BNDN through a process agreement and eventual mutual benefits agreement. **d. Not Addressed.** Denison has not provided information on the implications of operating the wellfield at substantially higher pressures than currently anticipated. This is important as ISR technology for ore extraction is novel in the Athabasca Basin and higher pressures than currently modeled may be required to achieve the uranium recovery rates anticipated by the Proponent.

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			volumes required in the process water storage pond, greater UBS holding pond capacity and greater volumes of effluent discharge to Whitefish Lake. BNDN is concerned with the potential cascading risks associated with an inaccurate assessment of the volume of water required to operate the ISR wellfield. BNDN also wishes to understand whether it is possible that Denison will be required to operate the wellfields at a higher pressure, even if only temporarily. BNDN notes that operating wells at higher pressure come with additional workplace and environmental hazards, especially when dealing with a strongly acidic lixiviant. Request/recommendation: a) To demonstrate that Denison has not significantly underestimated the volume of water required to operate the wellfield, BNDN requests that Denison provide evidence that the volume of water required to operate the wellfield is accurate. This should include an assessment of their level of confidence they have in their estimated water consumption. b) BNDN requests that Denison provide BNDN with information on	most restrictive criteria for the protection of aquatic life (Table 8.2-10; Appendix 8-C and Appendix 8-D). Additionally, the extent of the mixing zone in Whitefish Lake is estimated to be less than 5 m under all flow scenarios assessed (Table 8.2-11). Denison will comply with the Water Security Agency's Guidelines for Effluent Mixing Zones and Denison would update modeling if the base assumptions associated with the discharge of treated effluent to Whitefish Lake were changed, as needed. d) Wellfield pressures were described in the daft EIS, Sections 2.2.1.4.2 and 2.2.1.4.3. In terms of pressures, ISR mining is planned at nominal pressures of 100 psi and intermittent pressures of up 250 psi.	Further discussions on this matter should be done within the terms set out in a process agreement between Denison and BNDN for the Wheeler River Project.

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			potential contingency measures (such as constructing additional process water pond capacity) should their estimated water consumption be underestimated c) Denison must commit to updating their mixing zone assessment should they find it necessary to discharge greater quantities of effluent to Whitefish Lake than is estimated in the draft EIS. d) Denison must document the implications of operating the wellfield at a substantially higher pressure than currently expected. See Section 4.3 for additional information on this topic (p. 25-28).		
32	BNDN (February 28, 2023)	Table 2.3-3	Comment #32: Table 2.3-3 of the draft EIS shows Denison's proposed mining area decommissioning objectives, which are the groundwater quality objectives for the residual water in the ore zone following the flushing of the system during mine decommissioning. BNDN is surprised to see that relatively high concentrations of metals are expected to remain in the restoration solution as a final objective, such as 100 mg/l uranium and 2 mg/l cobalt, amongst many other metals.	Groundwater remediation targets provided in the draft EIS were from derived from metallurgical test results completed from 2017 to 2021 with over 125 kg of material recovered from Phoenix deposit that underwent leaching and neutralization test work (see response to IR-67). In 2022 and 2023, metallurgical test work continued to further optimize remediation and strategies and confirm test work results presented in the draft EIS. It is expected that metallurgical test work will continue in the future to further optimize remediation targets, and this will be advanced through updates to the Decommissioning Plan. The Feasibility Field Test (FFT) provided additional confirmation that pH target and remediation targets could be met. Data gathered during the neutralization phase of the FFT provide confidence that groundwater targets proposed in the draft EIS can be met technically and	**a. Not Addressed.** BNDN does not see it as acceptable to postpone the commitment to more stringent residual water in the ore zone to later permitting stages. Denison did not respond to our request for additional contextual information on the additional costs to further reduce metals concentrations in the residual solution. BNDN reiterates this request and recommends that it be addressed within the protocols established in a process agreement between Denison and BNDN. **b. Not Addressed.** BNDN reiterates our request to address these concerns through a

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			BNDN notes that potential risks to groundwater and surface water could be dramatically reduced through more stringent mining area decommissioning objectives. It is also feasible that processing efficiencies and high uranium prices may allow for substantially lower concentrations of uranium to be mined economically. The long-term contamination of groundwater from the high concentration of metals in the restoration solution is one of BNDN's primary concerns with the Wheeler River Project, and BNDN would strongly prefer that Denison strive to minimize the residual contamination remaining in groundwater following decommissioning to the greatest extent possible. Request/recommendation: a) BNDN requests that Denison provide documentation that estimates the time, efforts and costs associated with reducing concentrations of metals in the restoration solution by 1 order of magnitude and 2 orders of magnitude. Note that these calculations should include costs that could be recovered by processing subeconomic UBS.	economically. Based on laboratory testing and the results of the 2022 field testing, subsurface remediation is planned to consist of rinsing the ore zone with 35 pore volumes of fresh water, slowly raising the pH and then pumping about 75 pore volumes of basic solution through the same portion of the ore zone. This basic solution will in effect further raise the pH to a level that impedes further leaching of the deposit and reduces aqueous concentrations of contaminants of concern to below their environmental target levels. Refinement of the mining area decommissioning objectives and associated modelling will be done as the Project progresses through updates to the Decommissioning Plan; nevertheless, the objectives as they may evolve will be bound by the objectives evaluated in the EIS, which as shown are protective of aquatic biota in Whitefish Lake. The final mining area decommissioning objectives will be developed prior to initiation of groundwater remediation as part of the Detailed Decommissioning Plan (DDP). Prior to executing decommissioning activities, Denison shall prepare and submit the DDP to regulators for approval. The DDP would reflect input that will be solicited from Indigenous Nations and communities and others prior to its submission and would also be informed by conditions on the ground at the site at that time, operational experience that has been gained and the regulatory landscape at that time. As is highlighted above, the decommissioning plan will evolve over time and the plan will become more refined as the Project advances. As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part	process agreement and eventual mutual benefits agreement for the Project. **c. Not Addressed.** BNDN intends to work with the Crown on this condition of approval. **d. Not Addressed.** BNDN reiterates the request for the comparative analysis of reasonably achievable concentrations of uranium in the residual water. **Comments for regulators are not addressed** and will be addressed through future engagement with the appropriate regulator.

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			b) BNDN requests that Denison work with BNDN through terms defined in a BNDN project agreement to establish achievable decommissioning objectives that would be satisfactory to BNDN. c) BNDN requests that the Crown place a condition of approval upon the Wheeler River Project that Denison is required to work with BNDN to establish mutually agreeable mining area decommissioning objectives. d) BNDN requests that Denison undertake a study of ISR operations elsewhere in the world to determine the lowest concentrations of UBS that could be processed economically utilizing industry best practices and commit to exceeding global standards. See Section 4.3 for additional information on this topic (p. 25-28). [Additional questions on this topic directed to regulators or government entities are included in the CNSC table]	of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. Denison does not anticipate separate funding for BNDN at this time.	
33	BNDN (February 28, 2023)	Section 2.2.2.2.2 Figure 2.2-18	Comment #33: In Figure 2.2-18 of the draft EIS, Denison shows the proposed design of the double composite liner system for the ponds on site and the uranium bearing solution (UBS) holding	As outlined in draft EIS Section 2.2.2.2.2, Denison will evaluate options to use tanks instead of holding area as engineering advances. It is also important to note that Denison is completing a sequential EA and licensing process for the Project (see draft EIS Section 1).Denison considers the EA to be a planning and decision-making tool that assesses the potential effects of the Project in a	**a. Not Addressed.** BNDN sees it as a reasonable and necessary precaution to store UBS in tanks instead of open air storage. BNDN reiterates this request and recommends that it be addressed within the

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			area. BNDN notes that the risks associated with temporary storage of UBS is much greater than other contact water on site which is proposed to be stored in a similar means. As such, BNDN is concerned that the proposed UBS holding area does not have adequate leak detection given the additional risk associated with the UBS relative to contact water on site. BNDN also notes that open air storage of UBS presents the risk of incidental interactions with wildlife near to the project (such as birds), which would potentially be acutely toxic. BNDN is also concerned that there is no leak detection system below the secondary HDPE geomembrane and geosynthetic clay liner. Should the secondary containment layers also become compromised, Denison does not have a system planned to detect this. Request/recommendation: a) BNDN requests that Denison commit to storing UBS in appropriate tanks as opposed to open air storage. b) BNDN requests that Denison include a leak detection pipe in the prepared subgrade below the secondary containment as well as between the primary and	careful and precautionary manner and integrates results of engagement with Indigenous nations and communities. The details requested by BNDN will be developed to support licensing and will be included in Management System programs / plans including for example the Groundwater Monitoring Plan and the Emergency Response and Preparedness Plan.	protocols established in a process agreement between Denison and BNDN. **b. Not Addressed.** BNDN sees it as a reasonable and necessary precaution to incorporate a leak detection system into UBS storage. BNDN reiterates this request and recommends that it be addressed within the protocols established in a process agreement between Denison and BNDN.

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			secondary containment layers. BNDN also requests that the prepared subgrade be engineered to facilitate maximum utility of the leak detection below the secondary containment. See Section 4.3 for additional information on this topic (p. 25-28).		
34	BNDN (February 28, 2023)	Figure 2.3-1	Comment #34: Denison shows an additional ore body to the Southwest of Phase 5. Denison has not included this additional ore body in the mine plan in the draft EIS and has not discussed whether they have intentions to mine this ore body or undertaking a project change at a later date to include this additional ore body. It is unclear whether this additional ore body has any implications for the long-term groundwater quality modelling either through the additional orebody altering anticipated groundwater chemistry, or the restoration solution dissolving metals in the additional orebody increasing overall metal loading. Given the probable difference in groundwater and mineral geochemistry in the additional orebody relative to the overlying sandstone and underlying basement rock, there is likely to be interaction between the restored	a) and b) The small deposit to the SW of Phase 5 is amendable to ISR but is of lower grade than the areas targeted in mining phases 1 through 5 and mining of that low grade areas is not being considered at this time. It is noted that The Project mining and milling capacity will be bound by the assumptions in the EIS, which includes a production rate higher than the current reserves. The Project would be reviewed to determine what if any changes to the design basis would be anticipated and then what permitting would be required, should additional mining beyond what is contemplate by the EA be considered in the future. c) The additional modelling recommended by the review comment is unnecessary at this time. The low grade area is not considered in the mine plan at this time. Should that change, as noted above, the Project would be reviewed to determine what if any changes to the design basis would be anticipated and then what permitting would be required. Such modeling as envisioned by the review comment would be done that time as may be required. Hydrogeological investigations have been ongoing in the field and in laboratories since 2014. Packer, open hole, and cross hole tests have been completed in conjunction with exploration drilling programs. As well, permeability tests have been completed on sections of available competent core within the Phoenix deposit. Open hole water level	**Addressed**

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			solution and the additional orebody post-closure. Request/recommendation: a) BNDN requests that Denison clarify whether they are considering adding the additional orebody to the southwest of Phase 5 into the mine plan, including clarifying whether the additional ore body is amenable to ISR mining. b) BNDN requests that Denison clarify what the anticipated permitting associated with the additional ore body would be. c) BNDN requests that the post-decommissioning groundwater modelling for the Project include interactions between the additional ore body and the restoration solution to understand if the ore body poses a risk of additional metal loading to groundwater. See Section 4.3 for additional information on this topic (p. 25-28).	surveys have been completed across the site in 2015, 2017, 2021 and 2022. Data gathered during the field tests have been utilized for both the EA groundwater model as well as the mining model. The primary direction of groundwater flow at depth is to the north east, which means restored solutions will move away from the small deposit to the SW. Additionally, as noted in the response to BNDN Comment #32, the restored solution will be basic and will further raise the pH to a level that impedes further leaching of the deposit and reduces aqueous concentrations of contaminants of concern to below their environmental target levels.	
35	BNDN (February 28, 2023)	Section 2.2.1.3 Section 7.6.2.1	Comment #35: Denison intends to use a freeze wall as tertiary containment for the operation of the wellfield during operations. In general, BNDN is supportive of this containment measure but requires further information to have	a) Please refer to Attachment IR-10 for information on the freeze wall integrity and basis for the design, which relies on site field data and lived experience from several existing Saskatchewan mining operations. b) The following explains how the continuous freeze wall will be monitored. The alignment of the freeze wall is located 25 m offset from the lateral extent of the	**a. Addressed**, pending future engagement on environmental matters with BNDN through a process agreement and eventual mutual benefits agreement. **b. Addressed**, pending future engagement on environmental matters with BNDN

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			confidence that the freeze walls will operate as designed. In particular, BNDN notes that while the freeze wall will be continuous from the ground surface all the way into the basement rocks underlying the orebody, the freeze wall is by far the most consequential immediately around the ore body itself. The orebody is approximately 400 m below the ground surface (where the earth would be significantly warmer) and the lixiviant is expected to be at least 10 degrees warmer than the surrounding groundwater would be. Considering that the cold brine will need to be injected nearly half a kilometer into the earth where warm lixiviant will be injected into the wellfield, BNDN is concerned that the freeze wall may be ineffective in and around the ore body where it is required. Furthermore, BNDN is concerned that the monitoring system for assessing the stability of the freeze wall may not adequately detect the continuity of the freeze wall at depth. As such, BNDN is concerned that the freeze wall may be ineffective and in fact obscure our ability to recognize contamination of the surrounding groundwater from the freeze wall operating ineffectively.	recoverable ore and the freeze wall will grow in thickness both towards the ore and away from the ore. The freeze wall will solidify all liquid porewater and develop into a contiguous impermeable barrier many metres thick. Ground temperature monitoring will be installed through a series of continuous fiberoptic temperature and pressure wells from surface to the depth of impermeable basement rock below the unconformity. Such monitoring wells/systems will be installed on both the ore (inside) and non-ore (outside) sides of the freeze wall to confirm the thickness of frozen ground. There will be sufficient operational controls in place to verify that the freeze plant is operating, to measure the temperature in the ore zone, and to measure the temperature on opposite sides (inside and outside) of the freeze wall so that early detection of any upset conditions can be identified and addressed. Options for addressing issues include: lowering the temperature of the freeze system to draw more heat out; increasing the freeze coolant flow rates in freeze wells nearer to active ISR cells; and/or to adaptively manage the lixiviant injection and recovery rates in cells located nearest to the freeze wall. c) Regarding the monitoring program: A framework for the groundwater monitoring plan was provided in Section 7.8.2 of the draft EIS and is commensurate with the level of development of the Project. Further details regarding the Environmental Management Program and its associated plans (of which the groundwater monitoring plan is one) will be developed later in 2023 and 2024 as part of the licensing process. Engagement on licensing requirements, including on program and plan documentation will occur at that time. d) As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project,	through a process agreement and eventual mutual benefits agreement. **c. Not Addressed**, BNDN requires a commitment from Denison to include BNDN into the development and implementation of the monitoring plan, which should be formalized in a BNDN-Denison process agreement and eventual Mutual Benefits Agreement. **d. Not Addressed**, BNDN requires a commitment from Denison to include BNDN into the development and implementation of the monitoring plan, which should be formalized in a BNDN-Denison process agreement and eventual Mutual Benefits Agreement.

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			Request/recommendation: a) BNDN requests that Denison provide information to demonstrate that the freeze wall will in fact be frozen in and around the ore body. If there is any doubt that the freeze wall will indeed be frozen around the ore body, Denison should describe further measures they can undertake to ensure that the freeze wall is frozen as intended around the ore body. b) Denison must provide BNDN with further information on how they will monitor the performance and continuity of the freeze wall. c) BNDN requests further information on the proposed groundwater monitoring program around the wellfield. d) BNDN requests the opportunity to review the groundwater monitoring plan and to review groundwater monitoring data as part of a BNDN-Denison environmental committee developed through a BNDN-Denison project agreement. See Section 4.3 for additional information on this topic (p. 25-28).	Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on monitoring regimes, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project, such as BNDN. Denison does not anticipate separate funding for BNDN at this time.	
36	BNDN	Section 2.9.1.3.1	Comment #36: Denison documents their conceptual level	As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project,	**a. Not Addressed.** BNDN requires a commitment from Denison to include BNDN

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	(February 28, 2023)		environmental protection program, including several proposed management and monitoring plans which they will develop to manage operations on site. The environmental protection measures which Denison undertakes at the Project site are highly consequential to BNDN, and BNDN requires the opportunity to provide our knowledge and input into environmental protection measures developed for activities within our Ancestral Lands. Request/recommendation: a) BNDN requests that Denison commit to involving BNDN in the development, review and approval of all environmental monitoring plans developed for the Project. Details of BNDN involvement in the development of environmental monitoring plans should be undertaken within an Environmental Committee, with specific terms defined within a BNDN-Denison Project Agreement for the Wheeler River Project b) BNDN requests that the CNSC impose a condition of approval on the project which states the requirement for Denison to consult with BNDN on all environmental management and monitoring plans for the project.	Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. Denison does not anticipate separate funding for BNDN at this time. BNDN will be informed throughout the monitoring program design and implementation process. Monitoring program design and implementation will be guided by the following principles: meet regulatory requirements, confirm the effectiveness of mitigation measures and predictions made in the assessment, implementing adaptive management (if/where applicable) to reduce effects during the lifetime of the Project, and will ensure that spatial boundaries are sufficiently extensive to measure EIS predictions. The details of monitoring and follow-up plans are being developed to support the separate process of Project licensing and permitting. The specific means by which provincial and federal authorities, and Indigenous Nations and communities will be engaged in developing the follow-up and monitoring program, including the information-sharing program, are currently under consideration with the Denison project team. It is noted that Section 4.2.1 of the draft EIS provides the variety of ways in which Denison has engaged with Interested Parties to date and it is assumed it would continue to use these means and others that may be identified to fulfil its key corporate principals for developing positive relationships (see draft EIS Section 4.2).	into the development and implementation of all project environmental management and monitoring plans, which should be formalized in a BNDN-Denison process agreement and eventual Mutual Benefits Agreement. **b. Not Addressed**, Comments for regulators are not addressed and will be addressed through future engagement with the appropriate regulator.

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
			See Section 4.3 for additional information on this topic (p. 25-28). [Additional questions on this topic directed to regulators or government entities are included in the CNSC table]		
37	BNDN (February 28, 2023)	Section 7.6.2.3	Comment #37: In Section 7.6.2.3 of the draft EIS and the geology and groundwater summary table in Appendix 16A, Denison states that they expect no residual effects to groundwater quality during the operations, decommissioning or future centuries period of the Project. Denison has also not placed a significance determination on the impacts to groundwater quality based on the findings of the draft EIS due to groundwater being considered an intermediate VC. BNDN disagrees with both the residual effects assessment and the fact that groundwater quality has been assessed solely as an intermediate VC. The protection of groundwater resources is highly important to BNDN. Our members place immense value on clean spring water and the protection of groundwater more generally. The advancement of the Wheeler River Project will permanently impair groundwater resources in and around the Wheeler River Project.	The Groundwater Quality VC was carried through the EIS as an intermediate VC. The shallow and deeper groundwaters are not considered to be a potable water source currently nor in the future within the LSA (defined in Section 7.1.3.1), as detailed in Section 7.1.1.1.Within the LSA, the Groundwater VC was considered an intermediate VC as it is a pathway to the aquatic environment and considered in the future centuries period in Section 8. It is also important to note that the mining area is 400 m below surface and the existing/baseline groundwater quality in the ore zone area is poor (e.g., high in iron and uranium compared to shallower groundwater; Figure 7.3-11). Section 7.6 describes the residual effects evaluation for geology and groundwater, including for the life of mine (0 to 38 years) and the future centuries period. It is Denison's opinion that the approach associated with evaluating Project effects to groundwater quality is appropriate and reasonable for the reasons presented in the draft EIS. Denison continues to work with its Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a community specific monitoring regime, suited to each of their interests and needs, in an agreed-upon fashion. One of the key goals of such collaboration with each Indigenous nation will be to provide the information necessary to the communities such that it provides confidence to community members	**a. Not Addressed**. BNDN reiterates our request to carry through groundwater as a receptor VC, as groundwater resources are highly culturally and spiritually important to our Nation. **b. Not Addressed**. BNDN reiterates our request to carry through groundwater as a receptor VC into the future centuries period, as groundwater resources are highly culturally and spiritually important to our Nation. **c. Not Addressed.** Comments for regulators are not addressed and will be addressed through future engagement with the appropriate regulator.

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			The contamination of groundwater at the Project will have a significant impact on our members' connection to the land and ability to exercise our Treaty and Aboriginal rights. BNDN see the limited interpretation of residual effects and the lack of inclusion of groundwater quality as a receptor VC as a significant oversight in the assessment of impacts of the Project on the environment and BNDN Treaty and Aboriginal rights. This must be corrected to properly assess the Project and thus ensure that project impacts are appropriately mitigated and accommodated. Request/recommendation: a) Denison must apply a significant determination to groundwater quality and quantity for all projects phases, including the future centuries period. The significance determination must be developed following consultation and engagement with BNDN. b) Denison must re-evaluate the residual effects of the project on groundwater quality including the future centuries period. This re-evaluation must be following consultation and engagement with BNDN.	regarding the impacts from the Project to the aspects of the environment which matter the most to them. Denison is committed to continual improvement in relation to such collaborative monitoring programs, in order to adapt to areas of interest which can change over time. It is expected that the data collected through such monitoring regimes would also be relevant to other Indigenous First Nations who may have interest in the Project. The details of monitoring and follow-up plans are being developed to support the separate process of Project licensing and permitting. The specific means by which provincial and federal authorities, and Indigenous Nations and communities will be engaged in developing the follow-up and monitoring program, including the information-sharing program, are currently under consideration with the Denison project team. It is noted that Section 4.2.1 of the draft EIS provides the variety of ways in which Denison has engaged with Interested Parties to date and it is assumed it would continue to use these means and others that may be identified to fulfil its key corporate principals for developing positive relationships (see draft EIS Section 4.2).	

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
			c) BNDN requests that the CNSC work with our Nation to understand the significant impacts that the permanent contamination of groundwater caused by the project will have on our Treaty and Aboriginal rights. See Section 4.3 for additional information on this topic (p. 25-28). [Additional questions on this topic directed to regulators or government entities are included in the CNSC table]		
38	BNDN (February 28, 2023)	Section 7.8.2	Comment #38: Section 7.8.2 of the draft EIS documents the groundwater monitoring proposed for the surface facilities and the ISR recovery area. It also describes a conceptual excursion contingency plan wherein Denison has proposed their plans to manage situations where groundwater contamination occurs beyond what is predicted in the EIS. BNDN notes that Section 7.8.2 lacks information on the involvement of Indigenous Nations related to groundwater monitoring. As stated previously, BNDN is highly concerned with the level of impact the Project will have on groundwater resources. As such BNDN requires Denison to communicate excursions of	Denison agrees with BNDN's comment that groundwater monitoring will be an important component of the Project as it advances. As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. BNDN will be informed throughout the monitoring program design and implementation process. Monitoring program design and implementation will be guided by the following principles: meet regulatory requirements, confirm the effectiveness of mitigation measures and predictions made in the assessment, implementing adaptive management (if/where applicable) to reduce effects during the lifetime	**a. Not Addressed**. BNDN requires Denison to commit to ongoing engagement with our Nation on groundwater monitoring through a process should be formalized in a BNDN-Denison process agreement and eventual Mutual Benefits Agreement. **b. Not Addressed**. BNDN intends to work with the Crown on this condition of approval. **c. Not Addressed.** Comments for regulators are not addressed and will be addressed through future engagement with the appropriate regulator.

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
			groundwater and the consequent management of excursions to our Nation. Request/recommendation: a) BNDN requests that Denison revise Section 7.8.2 to include Indigenous engagement and input for groundwater monitoring results and the management of observed groundwater excursions. The manner in which Denison engages BNDN on groundwater monitoring and management will likely occur through an Environmental Committee, which should be defined in a BNDN-Denison Project Agreement. b) BNDN requests that the CNSC impose a condition of approval on the Project that clarifies that Denison is required to engage with impacted Indigenous Nations such as BNDN on groundwater monitoring and management. See Section 4.3 for additional information on this topic (p. 25-28). [Additional questions on this topic directed to regulators or government entities are included in the CNSC table]	of the Project, and will ensure that spatial boundaries are sufficiently extensive to measure EIS predictions. The details of monitoring and follow-up plans are being developed to support the separate process of Project licensing and permitting. The specific means by which provincial and federal authorities, and Indigenous Nations and communities will be engaged in developing the follow-up and monitoring program, including the information-sharing program, are currently under consideration with the Denison project team. It is noted that Section 4.2.1 of the draft EIS provides the variety of ways in which Denison has engaged with Interested Parties to date and it is assumed it would continue to use these means and others that may be identified to fulfil its key corporate principals for developing positive relationships (see draft EIS Section 4.2).	
39	BNDN (February 28, 2023)	Appendix 8D	Comment #39: In Appendix 8d, Denison documents their baseline aquatics studies undertaken for the	Denison appreciates and acknowledges the recommendation. At this time Denison believes suitable candidate references areas are available upstream of the	**Not Addressed** BNDN has reasonably requested that Denison work with our Nation in identifying

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			Wheeler River EIS. Denison has included some lakes and rivers upstream of the Project as background sites for understanding project impacts to the aquatic environment. BNDN notes that there are many additional sites throughout our Ancestral Lands which would benefit from ongoing aquatic monitoring and would be potentially suitable for the Project as background sampling sites. Request/recommendation: • BNDN requests that Denison work with our Nation to identify potential additional background sampling sites within our Ancestral Lands for aquatic monitoring for the life of Project. The details of such should be defined in the BNDN-Denison project agreement. See Section 4.3 for additional information on this topic (p. 25-28).	Project site in areas located in the same drainage system / watershed. While proximity to the Project is only one of many considerations for suitable reference area selection in this case the ability to be able to compare relevant measurement endpoints between "reference" vs "potentially influence" sampling locations where the primary difference between locations is the point source discharge is compelling rationale. Additionally, data that have been collected from upstream areas as part of baseline programs provides the opportunity to implement aquatic monitoring according to a BACI design which is a powerful means by which to assess and isolate potential mine related effects from natural environmental change. Given the above, Denison does not see that there is rationale for investigating lakes over a regional extent to establish reference areas for aquatic monitoring as is suggested.	background sampling sites. It is expected that such sites could be chosen in such a way that aligns with Denison's goals of obtaining reference information and implementing a BACI design for ongoing monitoring. The outright refusal of even discussing such a possibility with BNDN is not reflective of the need for meaningful consultation on this Project.
40	BNDN (February 28, 2023)	Section 2.2.1.4.2	Comment #40: In Section 2.2.1.4.2 of the Draft EIS Denison discusses the operation of the wellfield during the operations phase of the mine. BNDN notes that many of the details in this section are conceptual in nature and thus could require significant refinements in design to achieve	a) It is important to note that Denison is completing a sequential EA and licensing process for the Project (see draft EIS Section 1). Detailed ISR mining-related information needed to support licensing and permitting has not been included in the EIS; it will be provided to regulators as part of permitting and licensing. For the EIS, an initial understanding of the mine plan and mining area remediation was needed to initiate the assessment of migration of constituents of potential concern in	**a. Not Addressed**. BNDN note that Denison has not provided BNDN with the information that the Nation requested regarding changes in chemical composition of the lixiviant (other than changes in acid concentrations). BNDN reiterates the request for additional information.

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
			the desired recovery consistently throughout the life of mine. Amongst other concerns related to operations of the ISR wellfield, BNDN is concerned that Denison may alter the chemical composition of the lixiviant used in the ISR wellfield which could cause inadequately understood changes in potential effects of the Project to the environment. These effects could include significant changes to the final restorative solution at the end of mine life or significant changes in the treatment requirements for the IWWTP that impact the ability of Denison to achieve effluent quality criteria for significant periods of time. Request/recommendation: a) BNDN requests that Denison provide information on: • The likelihood of the chemical composition of the lixiviant changing throughout the life of project • Potential changes to the lixiviant composition • The implications for long term groundwater quality and effluent treatment from changes in lixiviant chemistry b) BNDN requests that Denison commit to ongoing	groundwater out of this area in the post-decommissioning period. The findings and conclusions of the EIS were also used, in turn, to inform and bound the engineering and feasibility work. As part of the metallurgical test program, over 125kg of core from the Phoenix deposit has been leached in a variety of settings, including bottle rolls, column tests, and intact core tests. This has helped to predict concentrations of both the lixiviant as well as the production solutions. The lixiviant (mining solution) concentrations will vary depending on each individual well production profile. To ensure reagent consumption is effective and efficient it will be varied during the life of each well dependent on its characteristics. The initial acidification of the well requires a lower acid content to ensure the formation does not plug due to precipitation, whereas during periods of high production the well can accept a higher acid concentration. Towards the end of the recovery curve, the uranium is more difficult to access and therefore the strength of the acid or the flow rate to the well need to be optimized to ensure efficient use of reagents. It is expected that the lixiviant concentrations will vary between 0-60 g/L H_2SO_4, and 0-20g/L H_2O_2 and will be situationally dependent. There is also the capability to add $Fe_2(SO_4)_3$, however it is not expected that this will be required in significant concentration due to the natural abundance of iron in the deposit. b) Please see response to Comment #19 for Denison's response on a Project agreement.	**b. Not Addressed**. Denison has thus far denied BNDN's reasonable request for a process agreement and eventual project agreement despite the projects impacts to our Nations rights and interests; BNDN reiterates our request.

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
			communications and engagement with BNDN regarding changes to the wellfield operation throughout the life of mine. The terms of engagement should be defined in a BNDN-Denison project Agreement. See Section 4.3 for additional information on this topic (p. 25-28).		
41	BNDN (February 28, 2023)	Appendix 8E Table 4	Comment #41: Table 4 of Appendix 8e of the draft EIS shows the predicted site discharge concentrations of the contaminants of potential concern (COPCs). BNDN notes that the concentrations of a number of COPCs do not achieve water quality objectives that is the best available technology economically achievable (BATEA). Example COPCs include copper, molybdenum, selenium, uranium, vanadium, zinc and ammonia. BNDN requires proponents operating on our Ancestral Lands to, at a minimum, achieve BATEA standards for effluent treatment and discharge. This takes reasonable and appropriate precaution without imposing unreasonable costs on the operation. Request/recommendation:	a) Denison is undertaking a sequential EA and licensing process under the NSCA. For context, the EA process for a Project under CEAA 2012 and the Saskatchewan Environmental Assessment Act is long and complex. As such, the inputs and outputs (e.g., effluent quality) needed for the EIS were developed by Denison's Project engineers early in the EA process to allow for the biophysical and human assessments to advance. An example of one of these outputs is the IWWTP effluent quality. The effluent quality predictions in the EIS provide a bounding scenario of the basis of the assessment of Project effects. As stated in the Draft REGDOC 2.9.2 Denison understands that a BATEA assessment be conducted to determine the predicted design release characteristics as part of the licence application for a new facility or activity. Outside of the EIS process, the Project detailed engineering is progressing, including the design of the IWWTP and associated refinement of effluent quality predictions. Denison is following Draft REGDOC 2.9.2 to arrive at a treatment option that remains within the bounds of the EA, which ultimately predicts no significant impacts to the receiving environment. The maximum design release characteristics for the IWWTP will be provided as part of Denison's licence application to the CNSC. b) As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project,	**a. Not Addressed**. BNDN notes that Denison has not made the requested commitment around achieving BATEA for all effluent COPCs. **b. Not Addressed**. BNDN requires Denison to commit to ongoing engagement with our Nation on determining suitable effluent discharge criteria for the IWWTP. The engagement process should be formalized in a BNDN-Denison process agreement and eventual Mutual Benefits Agreement. **Comments for regulators are not addressed** and will be addressed through future engagement with the appropriate regulator.

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
			a) BNDN requests that Denison commit to achieving BATEA criteria for all COPCs in their effluent. b) Denison must work with BNDN to identify mutually agreeable and appropriate effluent discharge criteria for their effluent. BNDN expects that identifying suitable effluent discharge criteria will be undertaken through an Environmental Committee with a terms of reference defined in a BNDN-Denison project agreement. c) BNDN requests that the CNSC impose a condition of approval on the Project that BNDN is engaged. See Section 4.3 for additional information on this topic (p. 25-28). [Additional questions on this topic directed to regulators or government entities are included in the CNSC table]	Denison has committed to engagement with English River First Nation and Kineepik Métis Local as it relates to effluent discharge criteria, suited to each of their interests and needs. Denison does not anticipate working closely with BNDN on this topic.	
42	BNDN (February 28, 2023)	Appendix 8E Table 7	Comment #42: Table 7 of draft EIS Appendix 8e shows the anticipated size of the mixing zone under 3 different flow conditions, including the calculated 7Q10 flow. While BNDN understands that Denison expects to discharge relatively small volumes of effluent to Whitefish Lake compared to a conventional open pit or underground mining operation,	The prediction uncertainty analysis (i.e., "sensitivity analysis") presented in Appendix 7-C included an evaluation of the change in the model prediction (i.e., plume migration) with respect to changes in the conductivity of materials along the flow path to the receptor, Whitefish Lake (i.e., Scenarios 4, 5, and 6) as well as regarding the hydraulic conductivity of the mined-out ore zone. As such we feel that the work requested by the reviewer has already been completed and reported upon within the draft EIS. In addition, the uncertainty of the Intermediate Sandstone Aquifer was evaluated (see IR55),	**Addressed.**

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			BNDN is concerned that the mixing zone assessment underestimates the magnitude of impact that the project will have on Whitefish Lake. Request/recommendation: • BNDN requests that Denison undertake a plume delineation study and provide BNDN the opportunity to review the findings of the study through the BNDN-Denison Environmental Committee for the Wheeler River Project. See Section 4.3 for additional information on this topic (p. 25-28).	where higher hydraulic conductivity within the Intermediate Sandstone Aquifer were found to reduce the proportion of water from the ore zone reaching Whitefish Lake, which would have the effect of further reducing (i.e., diluting) concentrations simulated and presented in the EIS documentation. As such, the conditions documented in the draft EIS are already conservative with respect to the uncertainty in these parameters. The near-field analysis (Section 8.2.4.2.3) identified that under all flow regime scenarios (i.e., 7Q10, monthly low, and monthly average), constituents are expected to be well mixed within Whitefish Lake (LA-5) and below the most restrictive criteria for the protection of aquatic life (Table 8.2-10; Appendix 8-C and Appendix 8-D). Additionally, the extent of the mixing zone in Whitefish Lake is estimated to be less than 5 m under all flow scenarios assessed (Table 8.2-11). Denison will comply with the Water Security Agency's Guidelines for Effluent Mixing Zones. The above notwithstanding in-field confirmation of the extent of the effluent mixing zone is anticipated following commissioning of the IWWTP and effluent discharge system during the Operation phase of the Project.	
43	BNDN (February 28, 2023)	Appendix 10A	Comment #43: BNDN notes that the environmental risk assessment (draft EIS Appendix 10a) makes no mention of potential impacts the project may have on mercury biogeochemical cycling and the consequent risks to the environment and human health. This is unsurprising given the lack of baseline sampling of mercury in sediments and soils, especially wetland soils.	Although baseline concentrations of total mercury in sediment have not been collected during baseline sampling to date, Denison will collect background information pertaining to sediment total and methyl mercury from LSA lakes and rivers prior to site development. As indicated in EIS Section 8.4.6.1, Residual Effects Characterization, mercury is not associated with the local geology and is not expected to be released in the effluent at measurable levels and was therefore not identified as a COPC. Denison notes that there is potential for increased methylmercury production in the receiving environment under a certain combination of factors to which the Project	**Partially addressed.** BNDN requires Denison to commit to ongoing involvement of our Nation in mercury monitoring on site. The engagement process should be formalized in a BNDN-Denison process agreement and eventual Mutual Benefits Agreement.

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
			The lack of baseline mercury sampling is a significant oversight given the significant impact that mining operations can have on mercury biogeochemistry, including mercury methylation, and mobility of mercury species within the environment. BNDN is very concerned with the complete lack of assessment of this important consideration for the project and the consequent inability for our members to adequately understand the potential risks to our Treaty and Aboriginal rights from these risks. Note that the absence of baseline information gathered can be reasonably considered an impact on our Treaty and Aboriginal rights as our members will avoid exercising our rights if BNDN lack the information to have confidence that it is safe to do so.	may contribute; however, prediction of methylmercury production is not practical. Denison commits to monitoring mercury and methylmercury in the aquatic environment over the life of the Project to determine the potential changes in mercury concentrations in fish tissue over time. As the Project advances and operational monitoring is underway, Denison will assess health risks from fish consumption by comparing fish tissue data collected during operation from the monitoring program against Health Canada's mercury guideline of 0.5 ug/g wet weight. This is a human health risk-based maximum permissible concentration. Mercury data presented throughout the draft EIS represents total mercury. Denison agrees to included methylmercury as part of the constituents monitored in fish throughout all project phases.	
44	BNDN (February 28, 2023)	Table 2.2-4	Comment #44: In Table 2.2-4 of the Draft EIS, Denison documents their planned chemical used for the project. BNDN notes that Denison intends to use zero-valent iron (ZVI) in the IWWTP, but not as part of the remediation solution for the mine. BNDN notes that ZVI is used to treat contaminants in groundwater around the world. Denison has not discussed whether	Refinement of the mining area decommissioning objectives and associated modelling will be done through updates to the Decommissioning Plan, and will be bounded by the objectives evaluated in the EIS. The use of zero-valent iron will be evaluated, as applicable.	**Not Addressed.** BNDN requires a commitment from Denison around groundwater remediation. If Denison wishes to defer certain aspects of BNDN's requests to the Decommissioning Plan, BNDN requires a commitment from Denison negotiate a Project Agreement with our Nation to give confidence that these matters will be addressed in a manner that mitigates impacts to our rights.

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			they have investigated the possibility of utilizing ZVI to remediate the wellfield during decommissioning. Protection of groundwater is of exceptional importance to BNDN. BNDN is concerned that Denison has not made a complete or comprehensive effort to understand how to minimize negative impacts to groundwater from the project using proven technologies that may be suitable for remediating the restoration solution in the wellfield during the decommissioning phase of the mine. Request/recommendation: • BNDN requests that Denison investigate the suitability of using zero-valent iron to remediate the groundwater within the wellfield as part of the decommissioning process. See Section 4.3 for additional information on this topic (p. 25-28).		
45	BNDN (February 28, 2023)	8.2.4.1.1 Site Water Management	Comment #45: BNDN is concerned that the small volume of Effluent Monitoring and Release Ponds may create a lack of operational flexibility. For example, in the EIS, it is stated that: "Treated water from the IWWTP will be pumped to the three	a) During Construction, no effluent is expected to be released to the aquatic environment. Contact water stored in the Clean Waste Rock Pond during Construction will be held onsite until the Industrial Wastewater Treatment Plant (IWWTP) is commissioned. At that time the water from the pond would be conveyed to the IWWTP, treated, and released to Whitefish Lake per permit / license	**a. Not Addressed**. BNDN notes that the Proponent has not addressed the fact that this is a concern for the operational phase of the mine site and is specific to the efficacy of the effluent treatment plant. BNDN reiterates the request for the Proponent to design the

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			Effluent Monitoring and Release Ponds (each 3,300 m3). These ponds will be designed to hold effluent for 72 hours for testing before discharge to the environment." – EIS, pp 723 If water quality in these ponds exceeds discharge criteria, then there may be a need to store water so that additional treatment and monitoring can occur prior to discharge. However, only having capacity for three days of storage means it is unlikely the Proponent would be able to adequately treat water prior to reaching storage capacity, resulting in a need for emergency release of poor- quality water. Request/recommendation: a) BNDN requests that additional storage capacity be included as part of the design for water management system. This must include adequate storage capacity to ensure Denison has the ability to retain water for sufficient time to allow treatment, in the event that exceedances of water quality discharge criteria occur. Alternatively, Denison can commit to halting discharge (and operations if required) should water quality exceed discharge criteria. Discharge into Whitefish Lake would resume once water quality in the Effluent Monitoring and Release Ponds has been	requirements. The sequence for Construction activities will occur in a logical manner based on Project execution plans. For example, construction of the wellfield runoff pond will be prioritized during the early part of Construction and it will able to hold 38,200 m3 of water. This will provide contingency and additional water storage capacity if contact water produced exceeds estimates or the volume available in the Clean Waste Rock Pond. Other secondary contingency measures are also available should the volume of water requiring management exceed site infrastructure storage volume. This could include use a hydrovac for offsite disposal. Section 2 Project Description, Section 2.2.3.9 Treated Effluent Monitoring and Release Ponds of the draft EIS outlines Denison's commitment to test effluent prior to discharge to Whitefish Lake, to ensure it meets federal and provincial discharge limits. Any pond not meeting the criteria will be recycled back to the Industrial Wastewater Treatment Plant via the process water pond. b) Denison expects the Provincial Approval to Operate a Pollutant Control Facility will contain specific effluent quality limits and monitoring to confirm effluent quality meets the approved limits. Denison will also be required to meet conditions in CNSC licensing documentation, as well as MDMER effluent discharge criteria.	effluent monitoring and release ponds to be increased in capacity to have at least 3 weeks of storage capacity. **b. Not Addressed**. BNDN intends to work with the Crown on this condition of approval. **Comments for regulators are not addressed** and will be addressed through future engagement with the appropriate regulator.

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			returned to below discharge criteria. b) BNDN requests that the CNSC impose a condition of approval for the Project that requires Denison to must meet effluent discharge criteria prior to discharge and must halt operations if treated effluent in the monitoring and release ponds does not meet effluent discharge criteria. See Section 4.4 for additional information on this topic (p. 48-51). [Additional questions on this topic directed to regulators or government entities are included in the CNSC table]		
46	BNDN (February 28, 2023)	Appendix 8D Aquatic Environment Baseline Study	Comment #46: Fish community sampling is an important component of baseline studies for many reasons, including identifying species present (including any species at risk) and evaluating relative abundance (e.g., CPUE). A robust program should include multi- season and multi-year approach. This allows improved characterization of seasonal habitat use and accounts for natural variability. In the baseline aquatic assessments, the Proponent has focused fish community sampling in fall 2016, with some limited additional sampling of in spring	It is Denison's and their aquatic SME's opinion that the baseline fish community sampling efforts, including information provide from Indigenous and local resource users, provide a sufficient basis for conducting an effects assessment (draft EIS Section 8.3 Fish and Fish Habitat). Based on the information collected there is a good understanding of fish species presence / absence, relative abundance, fish habitat character tics including areas that contribute to important life history stages (e.g., spawning areas) and fish habitat use. Denison does not believe further extensive baseline collection are needed to support the environmental assessment process but will implement targeted aquatic surveys prior to site development (see below). With respect to inclusion of the additional information requested the following is noted. Both detailed and summary data are presented in the Baseline Aquatic Environment Report that was provided as an appendix to	**46 a. Not Addressed** It is BNDN's opinion that the baseline fish community sampling efforts do not provide a sufficient basis for conducting an effects assessment. It is standard practice for aquatic baseline surveys to be undertaken in spring and fall for at least two years. Conducting relatively low community sampling effort in Sept 2016 and May 2017 does not provide adequate information on species diversity, abundance, or other measures of fish health for meaningful comparison. Such limited data creates a high likelihood of sampling bias and will make it exceedingly difficult to distinguish whether future changes are a result of impacts from the project or simply natural variations.

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			2017. This low level of effort will make it difficult to draw meaningful comparisons with monitoring work that will occur during the life of mine. Furthermore, CPUE has only been reported for electrofishing effort. As a result, there is very limited information available for relative abundance of fish in important waterbodies, including Whitefish Lake, McGowan Lake, and Russell Lake. **BNDN notes that a raw representation of total effort is provided in table A-13 of Appendix 8D but requests that an assessment of total effort, total catch, and CPUE be presented in the EIS for each capture method/location** Request/recommendation: a) BNDN requests that the Proponent build on the existing data for fish community sampling by collecting an additional round of spring and fall sampling. b) BNDN requests that an assessment of total effort, total catch, and CPUE be provided for each capture method/location where fish sampling has occurred.	the draft EIS. Effort and catch by sampling gear type by sampling location are shown for example in Table A-13 of the Baseline Aquatic Environment Report and metrics such as CPUE and total catches can be derived from these data if desired. Denison does not see the need to derive these metrics for presentation in the final version of the EIS (and supporting documents). This is in part related to the fact that the aquatic effects assessment did use abundance / relative abundance metrics such as CPUE as measurable parameters (MPs; a parameter or metric associated with a key indicator that can be used to detect and measure Project-related changes) to represent the fish and fish habitat VC, nor would it have been practical to use them for this purpose. There would be no practical or reliable way to derive such a prediction of change relative to Project-aquatic habitat interactions. While abundance / relative abundance metrics may be reported during future monitoring they would not likely be seen as a key measurable parameters for fish monitoring. More subtle measures of fish health would be used for this purpose - it is reasonable to assume that fish health measures will be more sensitive to change than abundance measures and provide an earlier indication of potential Project-related effects. This is what is envisioned and required by the MDMER EEM program, whereby measures of fish health (e.g., growth, reproduction, condition) are used to assess potential effects. As noted above, Denison will implement targeted aquatic surveys prior to site development. At this time it is envisioned that a pre-development EEM program survey following guidance provided in the Metal Mining Technical Guidance Document will be implemented at the site, with sampling at future effluent exposed and reference areas. Best practice is to undertake an analysis of candidate reference areas using the existing baseline information and investigate their utility as controls prior to project	**46 b. Addressed**

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			See Section 4.4 for additional information on this topic (p. 48-51).	development. Execution of the pre-development EEM represents a Before-After-Control-Impact (BACI) design for aquatic monitoring, that will provide the ability to monitor change temporally (among sampling periods) and spatially (among sampling areas), thereby providing a more robust means by which to assess potential mine related effects.	
47	BNDN (February 28, 2023)	8.2.5 Mitigation Measures	Comment #47: The Proponent has identified one mitigation measure that includes sharing of monitoring results to assess performance of water management system (EIS, pp 8-90, 8.2.5 Mitigation Measures). BNDN is supportive of this type of information sharing and believes that it can be an important component of transparency and trust- building between the Proponent and other parties. However, it is important that information sharing be done in a way that is accessible to community members. Request/recommendation: • BNDN requests involvement in discussions with Denison about sharing of information related to water quality monitoring (and environmental monitoring more broadly). Some methods of communication that may support accessibility of data include: o Public-facing summary reports	Denison agrees with BNDN that water quality monitoring will be interest to Indigenous nations and communities. As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes would also be relevant to other Indigenous nations who may have interest in the Project. BNDN will be informed throughout the monitoring program design and implementation process. Further details on the Public Information Program and Public Disclosure will form part of the documentation submitted in support of the CNSC licensing for the Project. It is also noted for further reference that there are existing, non-Denison monitoring programs such as the CNSC's Independent Environmental Monitoring Program (https://nuclearsafety.gc.ca/eng/resources/maps-of-nuclear-facilities/iemp/index.cfm), and the Eastern Athabasca Regional Monitoring Program (www.earmp.ca/). Results from these programs provide relevant information and can complement Denison's Project-specific monitoring program. One forum for discussion of monitoring results is the Northern Saskatchewan Environmental Quality Committee(https://www.saskatchewan.ca/residents/first-	**Partially Addressed** BNDN agrees that the information shared with English River First Nation and the Kineepik Métis Local is likely to be of interest to BNDN. However, our request for discussions with Denison about information sharing have been ignored. The refusal of even discussing such a possibility with BNDN is not reflective of the need for meaningful consultation on this Project.

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			on a regular schedule (e.g., quarterly or annually) o Real-time access to environmental monitoring data through online database portals. o Semi-regular community meetings hosted in Turnor Lake (e.g., every 12-18 months, as decided in conjunction with BNDN leadership within a Project Agreement with BNDN). o Presentations to BNDN staff, leadership, and/or community members by BNDN Environmental Monitors. The specific methods used for information sharing and appropriate levels of support from Denison can be determined through	nations-citizens/saskatchewan-first-nationsmetis-and-northern-initiatives/northern-saskatchewan-environmental-quality-committee). Please see response to Comment #19 for Denison's response on a Project agreement.	

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			consultation with BNDN. See Section 4.4 for additional information on this topic (p. 48-51).		
48	BNDN (February 28, 2023)	8.5 Fish Health	Comment #48: The Proponent has completed predictive modelling for concentrations of contaminants in fish tissue. For example, results of modeling for selenium indicate that concentrations will fluctuate throughout operations but remain below the recommended criterion of 2.83 mg/kg wet weight (from the US EPA). Should the Project proceed, information on contaminants in fish tissues will be highly relevant for BNDN and land users who eat fish from the area. Request/recommendation: • BNDN requests that results of fish tissue monitoring (e.g., EEM studies) be shared in a publicly available and accessible way. This must include comparisons with guidelines and information on other contaminants of importance (e.g., mercury). Discussions regarding how this information can be shared with BNDN should occur alongside the discussions related to water	Denison agrees with BNDN that results of fish tissue monitoring will be interest to Indigenous nations and communities. As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes would also be relevant to other Indigenous nations who may have interest in the Project. BNDN will be informed throughout the monitoring program design and implementation process. Further details on the Public Information Program and Public Disclosure will form part of the documentation submitted in support of the CNSC licensing for the Project. It is also noted for further reference that there are existing, non-Denison monitoring programs such as the CNSC's Independent Environmental Monitoring Program (https://nuclearsafety.gc.ca/eng/resources/maps-of-nuclear-facilities/iemp/index.cfm), and the Eastern Athabasca Regional Monitoring Program (www.earmp.ca/). Results from these programs provide relevant information and can complement Denison's Project-specific monitoring program. One forum for discussion of monitoring results is the Northern Saskatchewan Environmental Quality Committee(https://www.saskatchewan.ca/residents/first-	**Partially Addressed** BNDN agrees that the information shared with English River First Nation and the Kineepik Métis Local is likely to be of interest to BNDN. However, our request for discussions with Denison about information sharing have been ignored. The refusal of even discussing such a possibility with BNDN is not reflective of the need for meaningful consultation on this Project.

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			quality monitoring results (see comment above). See Section 4.4 for additional information on this topic (p. 48-51).	nations-citizens/saskatchewan-first-nationsmetis-and-northern-initiatives/northern-saskatchewan-environmental-quality-committee). Please see response to Comment #19 for Denison's response on a Project agreement.	
49	BNDN (February 28, 2023)	8.3 Fish and Fish Habitat	Comment #49: Increased fishing pressure in Whitefish Lake from employees working at the Project site and increased ability for visitors due to improved access could negatively impact fish populations. Preferred species, large-bodied fish, and older individuals are most likely to be targeted. This may have negative consequences on the population structure of fish in the lake as well as the ability of BNDN members to exercise fishing rights. Request/recommendation: • BNDN recommends that the policies Denison sets related to staff and contractors fishing while on site are determined collaboratively with BNDN through the Environmental Committee defined in a BNDN-Denison project agreement. See Section 4.4 for additional information on this topic (p. 48-51).	Please note that the Project will not change public access to the area. The existing gate on Highway 914 near Cameco's Key Lake Operation will remain in place and no changes to the gate and the process for controlling access to Highway 914 north of the Key Lake Operation are proposed as part of the Wheeler River Project. As described in the draft EIS, workforce members will be transported to/from site via a fly-in/fly-out rotation and will, therefore, not use ground travel options during shift changes, which will eliminate fishing on local lakes during commutes to/from the site and during time off work. Denison site vehicles will not be available for recreational purposes. While at the Project site and off duty, workers may opt to fish local waterbodies. To protect sustainable use of resources, only catch and release of fish will be encouraged, and fish storage or cooking facilities will not be provided. To prevent entry of land users from entering the Project Area, Denison will control access to the property with both a north and south security gate. Overall, given a lack of resources to access fishing locations and store fish harvests, workforce fishing is expected to cause minimal disturbances to local users. Section 11 of the draft EIS provides the assessment of potential Project effects on Indigenous Land and Resource Use (Section 11.1) and Other Land and Resource Use (Section 11.2). The mitigation measures proposed in the aquatic and terrestrial assessments translated into undetectable changes in resource availability to existing and future users and rightsholders. The assessment does not take a distinctions-based approach (i.e., the potential impact on	**Addressed.**

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				each Indigenous community is not evaluated separately), but rather on the key indicators and associated measurable parameters. Mitigation to eliminate, reduce, or control potential adverse effects of the Project on Indigenous Land and Resource Use would apply to any uses proximal to the Project. Given proven mitigation is to be applied to traffic disturbances, noise, air quality, and increased competition for resources, the effects are expected to be minimal. As outlined in Denison's Indigenous Peoples Policy, Denison is committed to respecting Indigenous knowledge and values regarding environmental stewardship and Indigenous peoples' connection to the land, and to minimize potential effects, wherever possible. Detailed Project plans and programs related to staff and contractor fishing will be developed to support Project permitting and licensing efforts.	
50	BNDN (February 28, 2023)	8.3.4 Assessment of Project- related Effects	Comment #50: The EIS provides very few details regarding how spills, leaks, and other accidents and malfunctions will be managed to mitigate the impacts on fish and fish habitat. Over the life of the mine there will inevitably be accidents and malfunctions. One of the most common environmental issues that will be encountered is leaks and spills. These can typically be managed through good monitoring and preparedness, though if they occur near water, the ability to clean them quickly is difficult and can result in harm to aquatic communities. Request/recommendation:	A standalone Accidents and Malfunctions (A&M) assessment was completed and is summarized in Section 14 of the EIS (full report is Appendix 14-A of the EIS). The A&M assessment considered almost 70 accident scenarios including many that would relate to the unplanned release of chemicals and radiation to the environment with potential to effect country foods. Specific scenarios including the release of chemicals and radiation to the aquatic environment and to the terrestrial environment adjacent to the ERFN and KML culture camps located along Hwy 914. The overall risks in consideration of likelihood and consequence were characterized as low. The assessment concluded that with planned engineering / environmental design features, mitigation measures, and emergency response, as well as implementing industry best practices that the risks to the environment from accidents and malfunctions can be reduced to levels that are as low as reasonably practical.	**Partially Addressed.** BNDN appreciates the additional information provided on accidents and malfunctions and on the Emergency Preparedness and Response Program. However, BNDN notes that the refusal to develop an Environmental Committee or similar mechanism with BNDN is not reflective of the need for meaningful consultation and active involvement on this Project.

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			• BNDN request additional information regarding the development of spill prevention programs, emergency management procedures, and monitoring and remediation programs for accidents and malfunctions. Representatives from BNDN need to be included in the planning and execution of monitoring and remediation activities to provide community perspectives in Project activities. One method through which BNDN can be involved in these discussions is through the development of an Environmental Committee (see comment #51 also). See Section 4.4 for additional information on this topic (p. 48-51).	Section 2.9.1.3 of the draft EIS provides Denison's commitment to develop an Environmental Management System, which includes an Emergency Preparedness and Response Program (EPRP) and an Environmental Protection Program (EPP; including an Environmental Monitoring Plan). The EPRP would be established to identify how the Project will prepare for and addresses emergencies that may affect the health and safety of persons, the environment, and the protection of property. The EPRP would be developed in a manner that aligns with guidance provided by CNSC in REGDOC-2.10.1. The EPP would be established to provide an overarching framework for key environmental monitoring and management plans and to ensure a means to demonstrate compliance with applicable environmental regulatory requirements and other performance targets that Denison may set. As noted on the draft EIS, Denison has opted to execute the overall Project approvals process - that is, the environmental assessment and licensing / permitting processes - in series and not simultaneously. A such, the details of these programs and plans will be developed during the licensing / permitting phase and will be available for review at that time rather than as part of the final EIS. The level of information provided in the draft EIS is appropriate for the current stage of the Project approvals process. As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. Denison does not	

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				anticipate any funding to BNDN at this time. BNDN will be informed throughout the monitoring program design and implementation process. Monitoring program design and implementation will be guided by the following principles: programs will meet regulatory requirements, programs will confirm the effectiveness of mitigation measures and predictions made in the assessment, programs will be implemented in an adaptive management framework (if/where applicable) to reduce effects during the lifetime of the Project, and program spatial boundaries will be sufficiently extensive to measure EIS predictions.	
51	BNDN (February 28, 2023)	8.3.8 Monitoring and Follow-up	Comment #51: There is no discussion on how Indigenous communities, such as BNDN, will be included in environmental management, emergency management, monitoring, and remediation. This includes issues related to ongoing permitting or specific remediation such as in the case of an accident or malfunction. Request/recommendation: • To support BNDN's ongoing participation in monitoring and oversight of the Project, BNDN request the establishment of an Environmental Committee or similar oversight mechanism. The purpose of the committee will be to review monitoring data and monitoring reports produced during the life-of-mine to ensure that the	As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. Denison does not anticipate any funding to BNDN at this time. BNDN will be informed throughout the monitoring program design and implementation process. Monitoring program design and implementation will be guided by the following principles: meet regulatory requirements, confirm the effectiveness of mitigation measures and predictions made in the assessment, implementing adaptive management (if/where applicable) to reduce effects during the lifetime of the Project, and will ensure that spatial boundaries are sufficiently extensive to measure EIS predictions.	**Not Addressed** The refusal to develop an Environmental Committee or similar mechanism with BNDN is not reflective of the need for meaningful consultation and active involvement on this Project.

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			environmental protection is sufficient for all VCs. The committee can also participate in permitting throughout the life-of-mine for all relevant applications (e.g., Fisheries Act Authorizations, water permits, Closure Plan updates etc.) and provide input to management plans (e.g., EPPs, Surface Water Management Plan, Environmental Monitoring Plans, etc.). The specific details of such a committee can be developed through consultation with BNDN and must be formalized through a BNDN-Denison project agreement. See Section 4.4 for additional information on this topic (p. 48-51).		
52	BNDN (February 28, 2023)	8.3.5 Mitigation Measures	Comment #52: Mitigation measures are an important component of Project management which are critical for environmental protection. Upon review of the suggested mitigation measures, BNDN has identified some opportunities for additional mitigation. Request/recommendation:	Denison acknowledges the input and will consider the suggestions as the project moves forward. The draft EIS contains a number of mitigations referenced in different biophysical and human environment assessments; these mitigations together form Denison's fulsome commitment list of Project mitigation measures moving forward. Many of the proposed additional mitigation measures are already included in the draft EIS. A few examples are provided here: • Section 2.2.7.6: No fuels, oils, or other hazardous substances will be stored within 100 m of any water	**Addressed.**

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			• BNDN request that the following standard mitigation measures be included as part of the list described in Section 8.3.5: o Maintain vegetated buffers of at least 100m with all waterbodies wherever practical; o All equipment must be inspected prior to use on-site to ensure that they are clean and free of soil or other contaminants; o Maintain spill kits on all vehicles used on-site; o All machinery will be kept in good working order and inspected regularly for drips, leaks, and spills; o In the event of a spill, Denison will take all necessary actions, where it is safe to do so, to immediately stop the spill, contain contaminants, clean up and dispose of	body. No equipment maintenance or re-fuelling will be conducted within 100 m of a water body. • Section 2.8: Fuel storage and distribution infrastructure will be constructed in accordance with applicable legislation requirements; Fuels will be stored in approved, above-ground, double-walled storage tank(s) equipped with secondary containment in accordance with provincial regulations and standards; Stationary and mobile equipment will be fueled with a fuel-dispensing truck. • Section 9.2.5.2.7: Standard operating procedures will be employed, and regular inspections of equipment and machinery will be completed to verify they are in good working order; Vehicles and equipment will be maintained in good working condition (e.g., no leaks) and furnished with industry-standard spill response kits. Denison also notes that Section 2.9.1.3 of the draft EIS provides Denison's commitment to develop an Environmental Management System, which includes an Emergency Preparedness and Response Program (EPRP) and an Environmental Protection Program (EPP; including an Environmental Monitoring Plan). The EPRP would be established to identify how the Project will prepare for and addresses emergencies that may affect the health and safety of persons, the environment, and the protection of property. The EPRP would be developed in a manner that aligns with guidance provided by CNSC in REGDOC-2.10.1. The EPP would be established to provide an overarching framework for key environmental monitoring and management plans and to ensure a means to demonstrate compliance with applicable environmental regulatory requirements and other performance targets that Denison may set. As noted on the draft EIS, Denison has opted to execute the overall Project approvals process - that is, the	

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			contaminated materials; o Denison will maintain a record of all spills and report upon each spill within 48 hours, including information on spill response, cleanup, and remediation; o Vehicle refueling will occur at a distance of at least 100m; o Fuel tanks will be located in areas that are lined and contained; o Fuel tanks will be located at least 500m from known waterbodies. See Section 4.4 for additional information on this topic (p. 48-51).	environmental assessment and licensing / permitting processes - in series and not simultaneously. A such, the details of these programs and plans will be developed during the licensing / permitting phase and will be available for review at that time rather than as part of the final EIS. The level of information provided in the draft EIS is appropriate for the current stage of the Project approvals process. As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. Denison does not anticipate any funding to BNDN at this time. BNDN will be informed throughout the monitoring program design and implementation process. Monitoring program design and implementation will be guided by the following principles: meet regulatory requirements, confirm the effectiveness of mitigation measures and predictions made in the assessment, implementing adaptive management (if/where applicable) to reduce effects during the lifetime of the Project, and will ensure that spatial boundaries are sufficiently extensive to measure EIS predictions.	
53	BNDN (February 28, 2023)	8.3 Fish and Fish Habitat	Comment #53: Unfortunately, due to the nature of planning and licensing for complex projects such as the Wheeler River mine, there are many documents, plans, licenses and approvals which may not be available for review during	As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous	**Not Addressed** The refusal to commit to involvement of BNDN in ongoing planning and licencing (including the development of an Environmental Committee or similar mechanism) is not reflective of the need for

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			the environmental assessment process, or which will take place subsequent to completion of the assessment. For example, Denison will be preparing important documentation governing environmental management of the Project following the Environmental Assessment. While these are not currently available, there is a need to engage with BNDN to obtain input on these documents as planning progresses. Request/recommendation: • BNDN requests that Denison consult with our staff members and advisors on important environmental documentation/plans/licenses that are not available as part of the EA process. This list includes, but is not limited to: o Surface Water Management Program o Erosion and Sediment Control Plan o Fish Salvage Plan o Spill Response Plan o MDMER approvals and EEM plans o Saskatchewan Water Security Agency permits for o Aquatic habitat protection o Operating a waterworks	community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. Denison does not anticipate any funding to BNDN at this time. BNDN will be informed throughout the monitoring program design and implementation process. Monitoring program design and implementation will be guided by the following principles: meet regulatory requirements, confirm the effectiveness of mitigation measures and predictions made in the assessment, implementing adaptive management (if/where applicable) to reduce effects during the lifetime of the Project, and will ensure that spatial boundaries are sufficiently extensive to measure EIS predictions.	meaningful consultation and active involvement on this Project.

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			○ Operating a sewage works ○ Effluent Monitoring Plan ○ Environmental Monitoring Plan(s) ○ Decommissioning and Reclamation Plan Engagement with BNDN on these plans should occur through an Environmental Committee or similar oversight mechanism (see above). The specific details of such a committee can be developed through consultation with BNDN and must be formalized through a BNDN- Denison project agreement for the Wheeler River Project. See Section 4.4 for additional information on this topic (p. 48-51).		
54	BNDN (February 28, 2023)	8.4.3.1 Methodology and Metrics	Comment #54: The collection of sediment samples was completed using cores and grab petit Ponar in three upstream reference locations (LA-7A, LA-8, and LA-9), Whitefish Lake (LA-5 and LA-6), McGowan Lake (LA-1), and Russell Lake (LAB-1 and LAB-2). Sediment quality testing was conducted to characterize COPC including nutrients, metals, and radionuclides. Only the top 2 cm of cores of grab samples were analyzed in the lab. It is not clear in the methodology	Baseline sediment chemistry was conducted on the 0-2cm horizon as this is the area in contact with surface water and the zone inhabited by benthic invertebrates. It is also the sediment layer in which changes in sediment chemistry would be expected to change in response to Project-related inputs and thus provides the most appropriate data for comparison to follow-up monitoring. As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data	**Addressed.**

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			why laboratory analysis was limited to the top 2 cm. Request/recommendation: • BNDN requests additional information on the rational for only analyzing COPC within the top 2 cm of sediment samples. This should include information on whether this limited data will negatively affect the ability to evaluate potential impacts of groundwater contamination entering Whitefish Lake from below during operations, decommissioning, and future centuries. See Section 4.4 for additional information on this topic (p. 48-51).	collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. Denison does not anticipate any funding to BNDN at this time. BNDN will be informed throughout the monitoring program design and implementation process. Monitoring program design and implementation will be guided by the following principles: meet regulatory requirements, confirm the effectiveness of mitigation measures and predictions made in the assessment, implementing adaptive management (if/where applicable) to reduce effects during the lifetime of the Project, and will ensure that spatial boundaries are sufficiently extensive to measure EIS predictions. The details of monitoring and follow-up plans are being developed to support the separate process of Project licensing and permitting. The specific means by which provincial and federal authorities, and Indigenous Nations and communities will be engaged in developing the follow-up and monitoring program, including the information-sharing program, are currently under consideration with the Denison project team. It is noted that Section 4.2.1 of the draft EIS provides the variety of ways in which Denison has engaged with Interested Parties to date and it is assumed it would continue to use these means and others that may be identified to fulfil its key corporate principals for developing positive relationships (see draft EIS Section 4.2).	
55	BNDN (February 28, 2023)	8.4.3.2.3 Metals	Comment #55: Despite significant concerns regarding the presence of mercury in water and sediment, the Proponent has elected not to test sediments for it. BNDN acknowledges that the mining process does not use mercury and	Denison will collect background information pertaining to sediment total and methyl mercury from LSA lakes and rivers prior to site development.	**Addressed.**

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			it is present in low levels in the background environment. However, for the purposes of good stewardship, communications, and trust, having an assessment of the background levels of mercury is important to BNDN. Request/recommendation: • BNDN requests that the proponent sample sediments for mercury to establish background levels. This is information that is culturally important given the potential harm and the psychological toll of mercury in aquatic ecosystems. Background levels can then be compared with ongoing monitoring throughout the life of mine. See Section 4.4 for additional information on this topic (p. 48-51).		
56	BNDN (February 28, 2023)	Table 8.5-2: Baseline Fish Tissue Chemistry Summary	Comment #56: In Section 8.5 Fish Health, the Proponent has included a summary table with information on contaminants in fish tissue and bone tissue. The information provided does not include total number of samples. Request/recommendation: • BNDN requests table 8.5-2 be updated with information on	The requested information is presented in Appendix 8-D in the draft EIS.	**Addressed** – the information is found in Table 3-10 of Appendix 8-D

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			total number of fish (n) samples for each location. See Section 4.4 for additional information on this topic (p. 48-51).		
57	BNDN (February 28, 2023)	9.2.5.2 Additional Vegetation-specific Mitigation Measures	Comment #57: The Proponent has committed to using seed that is certified weed-free, with a valid "Certificate of Seed Analysis" for the revegetation process. Request/recommendation: • BNDN recommends that, in addition to using weed-free certified seeds, consultation occur with Indigenous communities, including BNDN, to select an appropriate seed mix that closely mimics the pre-construction plant community and includes plants of medicinal and traditional importance. This could be done by either sourcing seed mix from a local seed distributor, or using wild seed propagated from plants collected from the Project Area. In addition, the seed mix should contain native plant species only. See Section 4.5 for additional information on this topic (p. 59-60).	Specific details of the seed mixture and overall reclamation plan will be developed through updates to the Decommissioning Plan, on which Interested Parties will be provided opportunity for review and input. The decommission plan in the EIS is a conceptual plan. A preliminary decommissioning plan will be included with licence application and reviewed and updated during operations. Prior to executing Decommissioning activities, Denison shall prepare and submit a detailed decommissioning plan to regulators for acceptance, which builds on the preliminary decommissioning plan. Additionally, Denison has partnered with the University of Saskatchewan and Northwest Communities Environmental Services (an Indigenous-owned environmental company) under the Developing Eco-Restoration Together (DERT) program. This unique project aims to co-create ecological restoration practices that centre Indigenous peoples, worldviews, and values while also braiding knowledge from the land, Indigenous knowledge, and western science. The project is supported by the three partners but is ultimately guided by the Indigenous Project Advisory Board, and the Community Liaison/Education Coordinator. Through restoration trials, community engagement, and various planting techniques, Denison, with their partners are seeking to return ecosystem functions in areas where they have been previously disturbed (e.g., exploration cutlines). Through collaboration with community members, University of Saskatchewan, industry partners, two graduate students, and local youth, this project is expected to ultimately inform the creation of a framework	**Addressed.**

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
				for effective restoration practices in northern Saskatchewan that centre on caribou and Indigenous communities.	
58	BNDN (February 28, 2023)	9.3.4.2.1 Alteration and/or Loss of Habitat Figure 9.3-9 Available Habitat for Moose	Comment #58: The EIS uses a 500 m buffer around the Project Area to define indirect habitat alteration for moose (Figure 9.3-9). This includes habitat alteration from sensory disturbance such as anthropogenic noises, vehicle traffic, aircraft traffic, and increased predator access. However, the EIS references scientific research that states that roads and vehicle traffic can affect moose habitat selection, resulting in habitat avoidance up to 1 km from roads (Shanley and Pyare 2011). Furthermore, the EIS acknowledges uncertainty concerning the available background and baseline information used to identify available moose habitat in this assessment. Without considering a larger avoidance buffer (as demonstrated in various research) around proposed anthropogenic disturbances, BNDN believe that the EIS underestimates the potential extent of moose habitat alteration. To be more conservative, a 1000 m buffer	It is Denison's and their terrestrial SME's opinion that the approach used to characterize moose habitat alteration provided a sufficient basis for conducting the ungulate (VC) moose (KI) effects assessment (draft EIS Section 9.3). The Project Area had a 500 m buffer applied to account for indirect effects/habitat alteration; this area is within the wildlife LSA. Availability of habitat is not a key limiting factor for moose populations.	**Not Addressed** The response does not adequately address BNDN's concern that the 500 m buffer underestimates the extent of moose habitat alteration. BNDN reiterates the following points. I. The selection of a 500 m buffer appears arbitrary and is not substantiated by peer-reviewed literature. Research (Shanley and Pyare 2011) indicates that moose may avoid habitat up to 1 km from roads and vehicle traffic. Furthermore, the proponent cites professional opinion as justification for using a 500 m buffer. However, BNDN requires reassurances that are substantiated by peer-reviewed scientific literature rather than subjective interpretation. II. The EIS acknowledges uncertainty in available moose habitat data, yet the response does not clarify how this uncertainty was factored into the assessment or whether a precautionary approach was taken.

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			should be used surrounding the Project area. Request/recommendation: • BNDN recommends using a 1000 m buffer surrounding the Project Area to measure the extent of moose habitat alteration. BNDN believe this analysis will provide a more accurate and conservative outcome with respect to potential project impacts to moose. See Section 4.5 for additional information on this topic (p. 59-60).		III. Habitat selection is not simply based on availability but also on predation avoidance. Moose tend to avoid areas with increased risk of predation. Roads, trails, and clearings created by mining facilitate wolf movement, making predation more efficient and therefore reducing the available moose habitat. The proponent's response minimizes this risk by focusing only on habitat availability, failing to acknowledge that increased predator access and moose displacement fundamentally alter predation dynamics. BNDN reiterates our 1,000 m buffer be considered to provide a more conservative and ecologically relevant assessment of moose habitat alteration. Without further justification, the 500 m buffer appears insufficient to capture the full extent of indirect impacts.
59	BNDN (February 28, 2023)	9.3.5.2.7 Mitigation Measures	Comment #59: One of the mitigation measures implemented to protect ungulates, furbearers, and Woodland Caribou includes de-icing the Project roads for winter traction, which will result in fewer wildlife collisions. Salt used for de-icing is likely to attract ungulates, including moose,	Denison has committed to using alternative measures on Project roads for de-icing and winter traction (e.g., sand, gravel) or dust suppression (e.g., water) whenever practicable.	**Addressed.**

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			to roadways to satisfy their mineral requirements (Rea et al 2021). Request/recommendation: • BNDN requests that the Proponent revise this mitigation measure to explicitly state that salt will not be used for de-icing Project roads to avoid attracting ungulates to the Project Area. This mitigation measure can be found in section 9.3.5.2.7 Road and Traffic Management. See Section 4.5 for additional information on this topic (p. 59-60).		
60	BNDN (February 28, 2023)	9.3.6.4.1 Alteration and/or Loss of Habitat Figure 9.3-14	Comment #60: The EIS uses a 500 m buffer around the Project Area to define Woodland Caribou habitat alteration from sensory disturbance. However, scientific research expects up to 5 km (or greater) of Caribou avoidance around mining Projects, and that related semi- permeable barriers, such as roads, likely exacerbate this effective habitat loss [(Smith et al. 2000; Dyer et al. 2001; Courtois et al. 2008; Vistnes and Nellemann 2008; Nagy 2011; Polfus et al. 2011; Leblond et al. 2011, 2013; CPAWS Wildlands League 2013; Johnson et al. 2015)].	It is Denison's and their terrestrial SME's opinion that the approach used to characterize caribou habitat alteration provided a sufficient basis for conducting the caribou effects assessment (draft EIS Section 9.3).The Project Area had a 500 m buffer applied to account for indirect effects/habitat alteration; this area is within the wildlife LSA (refer to Figure 9.3-9 for a map showing the spatial areas). The 500 m buffer for habitat alteration was selected in accordance with ECCC's (2020) assessment of disturbed areas, which buffered (500 m) anthropogenic disturbances to evaluate the habitat. The alteration of available habitat is quantified in this EIS by applying a buffer of 500 m around the Project Area in which Project effects in the form of sensory disturbance are likely to affect available the habitat and make it functionally unavailable for use. Following submission of the draft EIS in October 2022, Denison has met with Saskatchewan Ministry of	**Not Addressed.** The Environmental Assessment (EA) process is meant to safeguard BNDN's lands, waters and wildlife, yet it is fundamentally flawed in its ability to prevent significant adverse impacts on caribou. Despite decades of policy and regulatory measures, caribou populations continue to decline, highlighting the failure of existing approaches to provide effective protection. As Dene people, we have long understood that the EA process is insufficient to ensure the survival of caribou. In recent years, emerging western scientific research has confirmed this understanding, reinforcing the need for stronger protections (Collard et al., 2020; Cameron & Kennedy, 2023). The EA process often downplays the

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			Without considering a larger avoidance buffer (as demonstrated in various research) around proposed anthropogenic disturbances, we believe that the EIS underestimates the potential extent of Caribou habitat alteration. Request/recommendation: • BNDN requests that the Proponent present the extent of caribou habitat alteration/loss from the proposed Project within a range of uncertainty informed by scientific research. Specifically, the percent alteration of habitats must be presented using a 500 m (low end) up to a 5,000 m (high end) buffer. BNDN believe this analysis will provide a more accurate range of outcomes with respect to potential project impacts to caribou. See Section 4.5 for additional information on this topic (p. 59-60).	Environment (SK ENV) staff to develop a framework for future woodland caribou offset. This information has been presented to the provincial and federal review teams as part of the response to federal information requirements in August 2023 as the Conceptual Caribou Mitigation Plan. The Conceptual Caribou Mitigation Plan (the Plan), developed proactively by Denison, has a different objective than the draft EIS. The Plan builds on the assessment of potential Project effects and commitments to consider additional mitigation (offset) to account for non-significant residual effects highlighted in the draft EIS. The Plan is expected to be advanced with ongoing consultation with the SK ENV, as SK ENV finalize the caribou range plan for SK1. The EIS is a conservative planning tool, whereas the Plan is a practical, living document designed to define management works associated with caribou. The Plan is not a requirement for EA determination per se, but is provided as a guidance document to help Denison proactively describe and inform the development and implementation of appropriate mitigation measures related to caribou and their habitat. The Plan is an evergreen document. It will be consistent with the management goals of SK ENV for the SK-1 caribou conservation unit (once available) and will be developed/refined in consultation with local communities including English River First Nation and Kineepik Métis Local in Pinehouse and SK ENV. Denison is continuing to work with SK ENV to estimate habitat offset scenarios based on the current Project design which will be refined as the Project advances. A boreal caribou habitat offset calculator is under development by SK ENV and Denison is collaborating with SK ENV to define key scenario attributes. References: Environment and Climate Change Canada (ECCC). 2020. Amended Recovery Strategy for the Woodland Caribou	risks to caribou populations and underestimates the true extent of impacts (Collard et al., 2020; Cameron & Kennedy, 2023). The reliance on a 500-meter buffer as the basis for assessing habitat alteration is a clear example of this severe underestimation. Denison's reliance on a 500-meter buffer to assess caribou habitat alteration is insufficient and does not align with the broader scientific consensus on caribou avoidance of industrial disturbances. While ECCC (2020) recommends a 500-meter buffer to assess habitat disturbance, this buffer represents the low end of potential impacts and is insufficient to fully account for caribou avoidance behavior. Research has shown that caribou avoidance behavior extends significantly beyond this distance, with many studies supporting avoidance distances of up to 5 kilometers or greater (Dyer et al. 2001; Courtois et al. 2008; Vistnes and Nellemann 2008; Leblond et al. 2011, 2013; Johnson et al. 2015). Furthermore, Other jurisdictions, such as Ontario, apply much larger buffer distances, with recommendations extending to 10 kilometers to better reflect the true impact of sensory disturbances. This stark contrast highlights the severe underestimation in the EIS, where a 500-meter buffer fails to account for the full extent of caribou avoidance behavior. BNDN requests that the percent alteration of habitats be presented using a 500 m (low

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				(Rangifer tarandus caribou), Boreal Population, in Canada. Species at Risk Act Recovery Strategy Series. Environment and Climate Change Canada, Ottawa. xiii + 143pp.	end) up to a 5,000 m (high end) buffer. BNDN believes this analysis will provide a more accurate range of outcomes with respect to potential project impacts on caribou. Collard, R., Dempsey, J., & Holmberg, M. (2020). Extirpation despite regulation? Environmental assessment and caribou. Conservation Science and Practice, 2(9). https://doi.org/10.1111/csp2.166 Cameron, E., & Kennedy, S. (2023). Can environmental assessment protect caribou? Analysis of EA in Nunavut, Canada, 1999-2019. Conservation and Society, 21(2), 121-132. https://doi.org/10.4103/cs.cs_54_22
61	BNDN (February 28, 2023)	9.4.3.3 Bird Species at Risk Appendix 9-B	Comment #61: Incidental observations of Barn Swallow (Hirundo rustica) occurred during baseline studies (Appendix 9- B). This bird SAR was not included as a Key Indicator for this Valued Component. Instead, the EIS represents the Barn Swallow using two other SAR birds including the Olive-sided Flycatcher (Contopus cooperi), and Common Nighthawk (Chordeiles minor). This does not make ecological sense because Barn Swallows use distinct habitat and exhibit distinct breeding behaviour from these other SAR. Therefore, the barn swallow should be its own key indicator because it	The process and rationale for selection of VCs and establishment of KIs and associated MPs is described in Section 5.3 in Section 5. Raptors, Migratory Breeding Birds, and Bird Species at Risk VCs were selected based on their likelihood of interaction with the Project, as well as their contributing roles to biodiversity and ecosystem function. The methodology for the habitat-based assessment appropriately evaluated potential adverse effects on avian species using the accepted VC and KI approach for focus of the assessment. As described in the EIS, the Common Nighthawk (similar to the Barn Swallow) is an aerial insectivore that uses a variety of habitats, including anthropogenically disturbed and cleared areas (Section 9.4.3.3.1). As such, effects on these anthropogenically disturbed areas were appropriately assessed in the habitat-based EA methodology. Since Barn Swallows nest almost exclusively on human-made structures, specific Barn Swallow exclusion methods will be added as mitigation	**Addressed.**

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			will have unique levels of habitat alteration/loss and levels of mortality than the other species. In addition, Barn Swallows have a higher likelihood of being impacted by project activities than the other representative SAR, because they nest directly on artificial structures. The EIS states that species that nest on buildings are more susceptible to entrapment in Project components. This species is listed as Threatened on SARA Schedule 1. In Canada, the Migratory Birds Convention Act, 1994 protects Barn Swallow, its nests, and eggs. Request/recommendation: a) BNDN requests that the Barn Swallow is included as its own key indicator for the VC Bird SAR within the EIS. b) Additional surveys should be conducted to confirm the presence of any Barn Swallow nests on all buildings in the Project Area prior to commencement of construction. c) If Barn Swallow nests are located, contact the SK MOE for regulatory advice on the appropriate actions given the specific situation. d) The Proponent should monitor all barn swallow nests	measures to the EIS (Section 9.4.5). If Barn Swallow nests should be encountered, any subsequent activities would be conducted in accordance with the 2022 Migratory Birds Regulations. The habitat-based approach for the assessment supports the use of surrogates that are known to utilize the same habitat types. Habitat loss and alteration were assessed for the Key Indicator species included in this Valued Component. A conservative approach of identifying available habitat for these species was chosen to include habitat for those species not directly assessed (i.e., Barn Swallow through Common Nighthawk habitat). Subsequent to filing the draft EIS, Denison has developed a new Species at Risk appendix to Section 9 which will be included in the final EIS and has been included in the response to YNLR (a new SAR appendix (new Appendix 9-D) will be added to Section 9 of the final EIS. It has been included here as Attachment IR-131. This new EIS appendix lists all SAR species potentially occurring in the Project study areas, with links to applicable and appropriate mitigation measures described in the draft EIS. The new appendix also includes a summary of the life history requirements, the expected Project effects, proposed mitigation measures, and anticipated residual effects on barn swallow.	

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			found within the Project Area to confirm their continued usage throughout the lifecycle of the mine. If avoidance of nests is observed near Project activities, the Proponent should adopt an adaptive management approach and provide additional nesting sites elsewhere. Specifically, the Proponent could consider installing nesting structures in suitable areas to provide alternative nesting options for Barn Swallows. e) Staff should be trained to identify and report barn swallows and their nests. f) Future monitoring programs during the life of the project must include the barn swallow. See Section 4.5 for additional information on this topic (p. 59-60).		
62	BNDN (February 28, 2023)	9.4.3.3 Bird Species at Risk Appendix 9-B	Comment #62: Incidental observations of Horned Grebe (Podiceps auratus) occurred during baseline studies (Appendix 9- B). This species is listed as Special Concern on SARA Schedule 1. The Horned Grebe was not included as a Key Indicator for this Valued Component. Instead, the EIS represents this species with two other bird SAR, Yellow Rail (Coturnicops noveboracensis), and	The process and rationale for selection of VCs and establishment of KIs and associated MPs is described in Section 5.3 in Section 5. Raptors, Migratory Breeding Birds, and Bird Species at Risk VCs were selected based on their likelihood of interaction with the Project, as well as their contributing roles to biodiversity and ecosystem function. While Horned Grebe was not included as a avian SAR in the draft EIS, the EIS identified Yellow Rail and Rusty Blackbird as a surrogate species. To focus the effects assessment on key species, it was decided to use the provincially listed Yellow Rail (and Rusty Blackbird) as surrogates for Horned Grebe. Horned Grebe use similar wetland habitat types for nesting, foraging and protective	**Not Addressed** The Horned Grebe and Yellow Rail exhibit some similar yet distinct habitat characteristics. While both species rely on wetlands with emergent vegetation, their specific habitat requirements differ significantly. The Horned Grebe is dependent on aquatic habitats year-round, requiring deeper wetlands with open water. It nests along the margins of ponds and marshes, anchoring its floating nest to emergent vegetation

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			Rusty Blackbird (Euphagus carolinus). The Horned Grebe uses distinct habitat from these other species. Therefore, the Horned Grebe should be its own key indicator because it will have different levels of habitat alteration/loss and levels of mortality. Request/recommendation: a) BNDN requests that the Horned Grebe is included as its own Key Indicator for the VC Bird SAR within the EIS. b) b. Future monitoring programs during the life of the Project must include the Horned Grebe. See Section 4.5 for additional information on this topic (p. 59-60).	cover as Yellow Rail. The habitat-based approach for the assessment supports the use of surrogates that are known to utilize the same habitat types. Habitat loss and alteration were assessed for the Key Indicator species included in this Valued Component. A conservative approach of identifying available habitat for these species was chosen to include habitat for those species not directly assessed (i.e., Horned Grebe through Yellow Rail and Rusty Blackbird habitat). As such, potential effects on these habitat types were assessed appropriately in the draft EIS. Subsequent to filing the draft EIS, Denison has developed a new Species at Risk appendix to Section 9 which will be included in the final EIS and has been included in the response to YNLR (a new SAR appendix (new Appendix 9-D) will be added to Section 9 of the final EIS. It has been included here as Attachment IR-131. This new EIS appendix lists all SAR species potentially occurring in the Project study areas, with links to applicable and appropriate mitigation measures described in the draft EIS. The new appendix also includes a summary of the life history requirements, the expected Project effects, proposed mitigation measures, and anticipated residual effects on Horned Grebe. As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project.	(Kuczynski et al., 2012). In contrast, the Yellow Rail prefers shallowly flooded wetlands dominated by dense grasses or sedges. These areas typically have minimal open water and provide the thick ground cover necessary for concealment (Austin & Buhl, 2013). Given these ecological differences, the Horned Grebe should be assessed as its own Key Indicator within the EIS to ensure that its specific habitat needs and potential project-related effects are properly accounted for. Additionally, future monitoring programs must include the Horned Grebe to adequately assess its population trends and response to development activities. Kuczynski, E. C., Paszkowski, C. A., & Gingras, B. A. (2012). *Horned grebe habitat use of constructed wetlands in Alberta, Canada. The Journal of Wildlife Management, 76(8), 1694–1702*. doi:10.1002/jwmg.421 Austin, J. E., & Buhl, D. A. (2013). *Relating Yellow Rail (Coturnicops noveboracensis) occupancy to habitat and landscape features in the context of fire*. *Waterbirds, 36(2), 199-213*. https://doi.org/10.1675/063.036.0209

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63	BNDN (February 28, 2023)	9.4.3.3 Bird Species at Risk	Comment #63: The Bank Swallow (Riparia riparia), a bird SAR may be present within the terrestrial RSA. This species was not included in the EIS as a key indicator for bird SAR. This species is listed as Threatened on SARA Schedule 1. The breeding range of the Bank Swallow (Riparia riparia) overlaps with the terrestrial RSA. Bank swallows breed in varying natural and artificial habitat with sand-silt substrates including vertical banks, riverbanks, bluffs, stockpiles, aggregate pits, and roadcuts (COSEWIC 2013). Suitable habitat may be present because soil surface textures across the RSA are predominantly sand textured (sand, loam sand/sandy loam and silty sand). The creation of soil stockpiles during construction may create suitable breeding habitat for this species. Request/recommendation: a) BNDN requests a justification for excluding the Bank Swallow from the EIS. b) If a valid justification does not exist, BNDN requests this species be added as a Key Indicator for bird SAR unless it can be proven not present in the RSA. c) All soil stockpiles should be monitored for Bank Swallow	The process and rationale for selection of VCs and establishment of KIs and associated MPs is described in Section 5.3 in Section 5. Raptors, Migratory Breeding Birds, and Bird Species at Risk VCs were selected based on their likelihood of interaction with the Project, as well as their contributing roles to biodiversity and ecosystem function. Subsequent to filing the draft EIS, Denison has developed a new Species at Risk appendix to Section 9 which will be included in the final EIS and has been included in the response to YNLR (a new SAR appendix (new Appendix 9-D) will be added to Section 9 of the final EIS. It has been included here as Attachment IR-131. This new EIS appendix lists all SAR species potentially occurring in the Project study areas, with links to applicable and appropriate mitigation measures described in the draft EIS. The new appendix also includes a summary of the life history requirements, the expected Project effects, proposed mitigation measures, and anticipated residual effects on bank swallow.	**Provisionally Addressed** Mitigation measures in Appendix 9-D should include monitoring of potential nesting sites, particularly soil stockpiles, before disturbance. If active nests are found, appropriate avoidance measures should be implemented, and consultation with Saskatchewan Ministry of Environment (SK MOE) should be required to determine regulatory actions.

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			nesting activity before the stockpiles are disturbed when needed for site reclamation. d) If Bank Swallow nests are located, contact the SK MOE for regulatory advice on the appropriate actions given the specific situation. See Section 4.5 for additional information on this topic (p. 59-60).		
64	BNDN (February 28, 2023)	9.4.3.3.2 Information from Indigenous Knowledge, Local Knowledge, and Engagement	Comment #64: The EIS states that knowledge providers reported that multiple Whooping Cranes (Grus americana) have been observed along the Wheeler River, Moore River, and along the Cree River (outside of the terrestrial RSA) (19-LK-ERFNTrap- 134.169) (19-LK-ERFNTrap-134.170). Whooping Cranes are listed as Endangered on SARA Schedule 1. The EIS does not include this species as a key indicator for SAR birds, nor does it include an explanation why this species was omitted despite being reported by a knowledge provider from English River First Nation. Request/recommendation: a) BNDN requests an explanation for excluding this species despite being reported by a Trapper from English River First Nation. If a valid justification does not exist, the	The process and rationale for selection of VCs and establishment of KIs and associated MPs is described in Section 5.3 in Section 5. Raptors, Migratory Breeding Birds, and Bird Species at Risk VCs were selected based on their likelihood of interaction with the Project, as well as their contributing roles to biodiversity and ecosystem function. The local trapper's observation of Whooping Crane was outside of the avian RSA. The rationale for the selection of the SAR Key Indicators was provided in draft EIS Section 9.4.1. For these reasons, Whooping Crane was not included as a SAR Key Indicator in the draft EIS. For further reference as noted above subsequent to filing the draft EIS, Denison has developed a new Species at Risk appendix to Section 9 which will be included in the final EIS and has been included in the response to YNLR (a new SAR appendix (new Appendix 9-D) will be added to Section 9 of the final EIS. It has been included here as Attachment IR-131. This new EIS appendix lists all SAR species potentially occurring in the Project study areas, with links to applicable and appropriate mitigation measures described in the draft EIS. The new appendix also includes a summary of the life history requirements, the expected Project effects, proposed mitigation measures, and anticipated residual effects on bank swallow.	**Provisionally Addressed** The proponent should confirm whether the reference to Bank Swallow was a typo and clarify that the response is intended to address Whooping Crane. The response refers to residual effects, mitigation measures, and project effects for Bank Swallow instead of Whooping Crane, which does not address the original comment

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			species Whooping Crane (Grus americana), should be included as a key indicator for SAR birds. b) Future monitoring programs during the life of the Project must include surveys for the Whooping Crane. See Section 4.5 for additional information on this topic (p. 59-60).	As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project.	
65	BNDN (February 28, 2023)	9.4.3.3.3 Baseline Studies	Comment #65: Short-eared Owls (Asio flammeus) were not observed during the baseline surveys (Appendix 9-B). This is likely because targeted surveys for this species were not conducted. The detection probability of Short-eared Owls is very low at sunrise when the breeding songbird point count surveys were conducted. Short-eared Owls are most detectable from one hour before sunset to half an hour after sunset. Request/recommendation: a) BNDN requests that short-eared Owls continue to be assumed present within suitable habitat, unless proven otherwise by a qualified biologist using the Short-Eared Owl Survey Protocol (Saskatchewan Ministry of Environment 2015). b) Future monitoring programs should utilize the protocol	The process and rationale for selection of VCs and establishment of KIs and associated MPs is described in Section 5.3 in Section 5. Raptors, Migratory Breeding Birds, and Bird Species at Risk VCs were selected based on their likelihood of interaction with the Project, as well as their contributing roles to biodiversity and ecosystem function. Short-eared Owl were included as a KI of the Bird SAR VC in the EIS. A review of life history requirements and discussion on effects assessment are included in the EIS (Section 9.3). In the EIS, Short-eared Owl were assumed to be present and breeding in the Project study areas. As described in the EIS, pre-construction surveys will be conducted prior to the commencement of any vegetation clearing or soil disturbance. Avian species will also be routinely monitored throughout the life of the Project. Results from the surveys and monitoring activities are expected to inform the adaptive management process to update Project design and identify the need for additional mitigation measures, if required.	**Addressed.**

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
			developed by the Saskatchewan Ministry of Environment to better (2015) understand whether this species is present. See Section 4.5 for additional information on this topic (p. 59-60).		
66	BNDN (February 28, 2023)	9.4.3.3.3 Baseline Studies	Comment #66: Yellow Rail (Coturnicops noveboracensis) were not observed during the baseline surveys (Appendix 9-B). This is likely because targeted surveys for this species were not conducted. The Yellow Rail is nocturnal; therefore, survey effort must take place between 23:00-3:00. Therefore, this species would not have been observed when the breeding songbird point count surveys were conducted. Request/recommendation: a) BNDN requests that Yellow Rail should continue to be assumed present within suitable habitat, unless proven otherwise by a qualified biologist using the Yellow Rail Survey Protocol (Saskatchewan Ministry of Environment 2014). b) Future monitoring programs should utilize the protocol developed by the Saskatchewan Ministry of Environment (2014) to better understand whether this species is present.	The process and rationale for selection of VCs and establishment of KIs and associated MPs is described in Section 5.3 in Section 5. Raptors, Migratory Breeding Birds, and Bird Species at Risk VCs were selected based on their likelihood of interaction with the Project, as well as their contributing roles to biodiversity and ecosystem function. Yellow Rail were included as a KI of the Bird SAR VC in the EIS. A review of life history requirements and discussion on effects assessment are included in the EIS (Section 9.3). In the EIS, Yellow Rail were assumed to be present and breeding in the Project study areas. As described in the EIS, pre-construction surveys will be conducted prior to the commencement of any vegetation clearing or soil disturbance. Avian species will also be routinely monitored throughout the life of the Project. Results from the surveys and monitoring activities are expected to inform the adaptive management process to update Project design and identify the need for additional mitigation measures, if required.	**Addressed.**

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			See Section 4.5 for additional information on this topic (p. 59-60).		
67	BNDN (February 28, 2023)	Appendix 9-B	Comment #67: Two bat species, Little Brown Bat (Myotis lucifugus) and Northern Myotis (Myotis septentrionalis) were detected during passive acoustic surveys in 2019 (Appendix 9- b). These species are listed as Endangered by COSEWIC and SARA schedule. Despite being present, bats were completely excluded from the EIS. Areas that will be cleared for mine development and operations could contain maternity roost trees. Based on Appendix 9-b, this habitat was not adequately evaluated through field surveys. Request/recommendation: a) BNDN requests justification for excluding bat species from the EIS despite two Endangered species confirmed present. b) BNDN also request the Proponent put protocols in place to identify and assess bat maternity roost trees prior to clearing and employ mitigation measures such as retaining maternity roost trees, modifying the timing of clearing, and offsetting for the destruction of habitat for endangered species.	Subsequent to filing the draft EIS, Denison has developed a new Species at Risk appendix to Section 9 which will be included in the final EIS and has been included in the response to YNLR (a new SAR appendix (new Appendix 9-D) will be added to Section 9 of the final EIS. It has been included here as Attachment IR-131. This new EIS appendix lists all SAR species potentially occurring in the Project study areas, with links to applicable and appropriate mitigation measures described in the draft EIS. The new appendix also includes a summary of the life history requirements, the expected Project effects, proposed mitigation measures, and anticipated residual effects on bats.	**Addressed.**

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			See Section 4.5 for additional information on this topic (p. 59-60).		
68	BNDN (February 28, 2023)	9 Terrestrial Ecology 9.1.8 Monitoring and Follow-up 9.2.8 Monitoring and Follow-up 9.3.8 Monitoring and Follow-up 9.4.8 Monitoring and Follow-up	Comment #68: Denison's proposed terrestrial ecology mitigations described are generalized and conceptual in the EIS. With the level of detail provided in the EIS, it is not possible for BNDN to comment on the adequacy or effectiveness of the proposed mitigation measures or whether proposed mitigations will meaningfully diminish Project impacts on BNDN rights and interests. Request/recommendation: • BNDN holds invaluable indigenous knowledge related to terrestrial ecology topics including traditional and medicinal plants, ungulates, furbearers, game birds etc. within the RSA. BNDN must be meaningfully involved in the development and implementation of the various management and monitoring plans mentioned throughout Chapter 9 of the EIS to ensure that proposed impacts are sufficiently reduced. These plans include but are not limited to the wildlife monitoring plan, avian	As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. Denison does not anticipate any funding to BNDN at this time. BNDN will be informed throughout the monitoring program design and implementation process. Monitoring program design and implementation will be guided by the following principles: meet regulatory requirements, confirm the effectiveness of mitigation measures and predictions made in the assessment, implementing adaptive management (if/where applicable) to reduce effects during the lifetime of the Project, and will ensure that spatial boundaries are sufficiently extensive to measure EIS predictions. The details of monitoring and follow-up plans are being developed to support the separate process of Project licensing and permitting. The specific means by which provincial and federal authorities, and Indigenous Nations and communities will be engaged in developing the follow-up and monitoring program, including the information-sharing program, are currently under consideration with the Denison project team. It is noted that Section 4.2.1 of the draft EIS provides the variety of ways in which Denison has engaged with Interested Parties to date and it is	**Not Addressed** Denison has failed to acknowledge that the Project is located within Birch Narrows Dene Nation's (BNDN) Treaty 10 territory. BNDN members exercise constitutionally protected rights and actively use the lands surrounding the Project for hunting, trapping, gathering, and other traditional practices that will be directly impacted. BNDN holds rights and knowledge that must be meaningfully considered in the development and implementation of all terrestrial ecology-related monitoring and management plans, including the wildlife monitoring plan, avian monitoring plan, and Woodland Caribou Management Plan. Denison's current approach excludes BNDN from participating in planning processes that directly affect our rights and interests.

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			monitoring, and Woodland Caribou Management Plan. The role that BNDN will have in developing management and monitoring plans should be defined within a project agreement between BNDN and Denison. See Section 4.5 for additional information on this topic (p. 59-60).	assumed it would continue to use these means and others that may be identified to fulfil its key corporate principals for developing positive relationships (see draft EIS Section 4.2).	
69	BNDN (February 28, 2023)	Section 6.0	Comment #69: Denison's air dispersion model does not include any receptor locations related to BNDN traditional land and resources use (TLRU) and Indigenous Knowledge (IK) sites. BNDN members use the lands and waters in the Project area for TLRU and ceremonial purposes. Request/recommendation: • BNDN TLRU and IK sites should be considered in Denison's air quality assessment. The geographic locations for TLRU and IK should be inputted into the air dispersion model as special receptors. This will provide site specific data for BNDN land users who use the LSA so they can effectively assess the Project's impact on land use and rights.	Scoping of the air quality assessment followed a conservative approach and described where modelled concentrations returned to background levels. The air quality assessment included human receptors in the Project Area and Local Study Area (refer to draft EIS, Figure 6.1-3). These receptor locations are consistent with what was presented in the ERA (Section 10.1 and Appendix 10-A). See response to BNDN comment #1 for further details.	**Not Addressed** The response does not adequately address BNDN's concern that no BNDN Indigenous Knowledge or land use locations were included in the air dispersion model as special receptors.

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			See Section 4.6 for additional information on this topic (p. 67-71).		
70	BNDN (February 28, 2023)	Section 6.0	Comment #70: Denison states in the EIS "the Cameco McArthur River Operation and Key Lake sites are currently in Care and Maintenance mode; therefore, there is currently no truck traffic between the sites on Highway 914. When these sites are to become operational again, there is potential for a cumulative effect at sensitive locations near the highway." On November 28th, 2022, operations resumed at Cameco's McArthur River Uranium Mine and Key Lake Mill. Denison did not model Cameco related air emissions in their air dispersion model. The EIS model does not account for any of Cameco's air emissions from the mill, mine, and associated truck traffic between sites. Without this data included in the model, the EIS does not adequately account for the cumulative effects of Cameco's McArthur River Mine and Key Lake Mill on the atmospheric environment. Request/recommendation: • Denison must redo air dispersion modeling to account for the Cameco	Please refer to Section 6.1.3.2 and 6.1.7. The regional SK MOE data presented in Table 6.1-12 were conservatively used to represent background concentrations of TSP, PM10, PM2.5, CO, SO2, and NO2 for the Wheeler River Project air quality assessment. While traffic associated with Cameco Operations was not modelled, conservative regional background concentrations from the Saskatchewan Air Quality Modelling Guideline (SK MOE 2012a) and the La Loche monitoring station were used for particulate matter, NO2, SO2, and CO (see Section 6.1.3.2.5 and Appendix 6-A). The La Loche monitoring station is located near anthropogenic sources, while the Project is in a remote area removed from anthropogenic sources. Accordingly, emissions to air from traffic associated with Cameco's operations are captured by the regional background concentrations used in the air dispersion model and are considered in the assessment of Project-related effects discussed in Section 6.1.4. Model predictions of COPC concentrations and depositions were added to background levels and compared to the available standards summarized in Table 6.1-5 at receptors located outside the property boundary. To confirm the residual effects of the Project on Air Quality and demonstrate compliance with provincial ambient air quality standards, an adaptive air quality management program will be implemented. The air quality management program will contain various plans which will be finalized during permitting and licensing. The plans within the air quality management program will incorporate monitoring requirements directed by provincial and federal regulators and by Indigenous groups and other Interested Parties as requested.	**Addressed.**

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			McArthur River Uranium Mine and Key Lake Mill which have resumed operations since the EIS was released. Without this data included in the model the EIS does not accurately capture baseline conditions or cumulative effects on the atmospheric environment. Fugitive dust and uranium emissions (and potentially other contaminants) have increased potential for exceedances with the resumption of Cameco's operations, as exceedances are already predicted with the Wheeler River Project alone. See Section 4.6 for additional information on this topic (p. 67-71).		
71	BNDN (February 28, 2023)	Section 6.0	Comment #71: The Project is predicted to produce exceedances for TSP of 313% over the regulatory limit. 24-hour TSP concentrations exceed the criterion 28% of the time during Construction, 21% of the time during Operations. These exceedance conditions do not include TSP emissions from Cameco's McArthur River Mine and Key Lake Mill which have now resumed operations. There is also the potential for wildfire smoke to further exacerbate dust emissions.	a) A change in a measurable parameter is not a significant effect, per the EA methodology outlined in Section 5. This threshold approach is both transparent and reasonable with the context of the assessment, though it is acknowledged that some level of change in the VC (or more precisely its measurable parameter) is deemed acceptable on condition that the change is not of a magnitude from which negative effects could accrue. Denison directs BNDN to Table 6.1-19 to 6.1-21 for the complete residual effect characterization for TSP exceedances. This includes a consideration of the residual effect related to TSP in the full context of direction, magnitude, geographic extent, duration, frequency, reversibility, context, and likelihood. In Section 10.1 of the draft EIS, the SMEs concluded that while there were	**Not addressed.** Denison makes no commitment to reduce potential TSP exceedances related to the Project. Dension does not commit to collaborating with BNDN in the design and implementation of air quality monitoring. Denison only commits to informing BNDN which is totally unacceptable. Denison does not specify how it will notify BNDN of project-related air quality exceedances. Denison mischaracterizes BNDN as not being part of "Indigenous Communities of Interest with reserves and residential communities

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			TSP exceedances represent a potential health risk for land users and workers near the Project site. Especially for at-risk groups such as elders, youth, and people with existing respiratory conditions. Request/recommendation: a) Denison must employ additional mitigation measures to reduce TSP emissions on site including enhanced dust suppression efforts. b) Denison must remodel TSP to include emissions from Cameco's McArthur River Mine and Key Lake Mill. c) Please provide information on how TSP will be monitored during the Project and how Denison will know when exceedance conditions are occurring. d) Please provide information on how adaptive management will be used when a TSP exceedance is discovered. Including discussion on how the Project will be managed during poor air quality events caused by wildfire smoke. e) Please provide information on how exceedances conditions near the Project site will be communicated to the public.	predicted exceedances of air quality criteria for particulate matter, they were not identified for further assessment in the HHRA—these COPCs are unlikely to be associated with a human health or environmental risk, and any exposures to people at elevated concentrations would be infrequent, short-term, and highly localized. b) Please refer to Section 6.1.3.2. The regional SK MOE data presented in Table 6.1-12 were conservatively used to represent background concentrations of TSP, PM10, PM2.5, CO, SO2, and NO2 for the Wheeler River Project air quality assessment. While traffic associated with Cameco Operations was not modelled, conservative regional background concentrations from the Saskatchewan Air Quality Modelling Guideline (SK MOE 2012a) and the La Loche monitoring station were used for particulate matter, NO2, SO2, and CO (see Section 6.1.3.2.5 and Appendix 6-A). The La Loche monitoring station is located near anthropogenic sources, while the Project is in a remote area removed from anthropogenic sources. Accordingly, emissions to air from traffic associated with Cameco's operations are captured by the regional background concentrations used in the air dispersion model and are considered in the assessment of Project-related effects discussed in Section 6.1.4. Model predictions of COPC concentrations and depositions were added to background levels and compared to the available standards summarized in Table 6.1-5 at receptors located outside the property boundary. c) and d) To confirm the residual effects of the Project on Air Quality and demonstrate compliance with provincial ambient air quality standards, an adaptive air quality management program will be implemented. The air quality management program will contain various plans which will be finalized during permitting and licensing. The plans within the air quality management program will	most proximal to the Project". BNDN is located closer (232 km) to the Project than Kineepik Métis Local (235 km). Further, the Project is located on BNDN's Treaty Lands (Treaty 10), whereas Kineepik Métis Local has no Treaty lands or Treaty rights. As such, BNDN must be treated as a Indigenous Community of Interest with reserves and residential communities most proximal to the Project, not as some secondary community. Denison's position of BNDN requiring consultation and accommodation that is less meaningful than KML is unacceptable and wrong.

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			See Section 4.6 for additional information on this topic (p. 67-71).	incorporate monitoring requirements directed by provincial and federal regulators and by Indigenous groups and other Interested Parties as requested. In terms of worker health and safety while forest fire smoke is present, Denison will consider this through the Occupational Health and Safety Program. Information on how the Project will prepare for and addresses emergencies that may affect the health and safety of persons, the environment, and the protection of property related to forest fires will be included in the Emergency Preparedness and Response Program. e) As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. Denison does not anticipate any funding to BNDN at this time. BNDN will be informed throughout the monitoring program design and implementation process. Monitoring program design and implementation will be guided by the following principles: meet regulatory requirements, confirm the effectiveness of mitigation measures and predictions made in the assessment, implementing adaptive management (if/where applicable) to reduce effects during the lifetime of the Project, and will ensure that spatial boundaries are sufficiently extensive to measure EIS predictions.	
72	BNDN (February 28, 2023)	Section 6.0	Comment #72: The Project is predicted to produce exceedances for PM10 of 232% over the	a) A change in a measurable parameter is not a significant effect, per the EA methodology outlined in Section 5. This threshold approach is both transparent and reasonable	**Not Addressed.** BNDN disagrees with Denison's assessment and that particulate exceedances will not

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			regulatory limit. 24- hour PM10 concentrations exceed the criterion 17% of the time during Construction, 12% of the time during Operations. These exceedance conditions do not include PM10 emissions from Cameco's McArthur River Mine and Key Lake Mill which have now resumed operations. There is also the potential for wildfire smoke to further exacerbate dust emissions. PM10 exceedances represent a potential health risk for land users and workers near the Project site. Especially for at-risk groups such as elders, youth, and people with existing respiratory conditions. Request/recommendation: a) Denison must employ additional mitigation measures to reduce PM10 emissions on site including enhanced dust suppression efforts. b) Denison must remodel PM10 to include emissions from Cameco's McArthur River Mine and Key Lake Mill. c) Please provide information on how PM10 will be monitored during the Project and how Denison will know when exceedance conditions are occurring.	with the context of the assessment, though it is acknowledged that some level of change in the VC (or more precisely its measurable parameter) is deemed acceptable on condition that the change is not of a magnitude from which negative effects could accrue. Denison directs BNDN to Table 6.1-22 and 6.1-23 for the complete residual effect characterization for PM10 exceedances. This includes a consideration of the residual effect related to PM10 in the full context of direction, magnitude, geographic extent, duration, frequency, reversibility, context, and likelihood. In Section 10.1 of the draft EIS, the SMEs concluded that while there were predicted exceedances of air quality criteria for particulate matter, they were not identified for further assessment in the HHRA—these COPCs are unlikely to be associated with a human health or environmental risk, and any exposures to people at elevated concentrations would be infrequent, short-term, and highly localized. b) Please refer to Section 6.1.3.2. The regional SK MOE data presented in Table 6.1-12 were conservatively used to represent background concentrations of TSP, PM10, PM2.5, CO, SO2, and NO2 for the Wheeler River Project air quality assessment. While traffic associated with Cameco Operations was not modelled, conservative regional background concentrations from the Saskatchewan Air Quality Modelling Guideline (SK MOE 2012a) and the La Loche monitoring station were used for particulate matter, NO2, SO2, and CO (see Section 6.1.3.2.5 and Appendix 6-A). The La Loche monitoring station is located near anthropogenic sources, while the Project is in a remote area removed from anthropogenic sources. Accordingly, emissions to air from traffic associated with Cameco's operations are captured by the regional background concentrations used in the air dispersion model and are considered in the assessment of Project-related effects discussed in Section 6.1.4. Model predictions of COPC	have an impact on human health or the environment. Regulatory standards are in place for a reason (to protect human health and the environment) and if Denison cannot meet these standards they should not be constructing or operating. Denison mischaracterizes BNDN as not being part of "Indigenous Communities of Interest with reserves and residential communities most proximal to the Project". BNDN is located closer (232 km) to the Project than Kineepik Métis Local (235 km). Further, the Project is located on BNDN's Treaty Lands (Treaty 10), whereas Kineepik Métis Local has no Treaty lands or Treaty rights. As such, BNDN must be treated as a Indigenous Community of Interest with reserves and residential communities most proximal to the Project, not as some secondary community. Denison's position of BNDN requiring consultation and accommodation that is less meaningful than KML is unacceptable and wrong.

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			d) Please provide information on how adaptive management will be used when a PM10 exceedance is discovered. Including discussion on how the Project will be managed during poor air quality events caused by wildfire smoke. e) Please provide information on how exceedances conditions near the Project site will be communicated to the public. See Section 4.6 for additional information on this topic (p. 67-71).	concentrations and depositions were added to background levels and compared to the available standards summarized in Table 6.1-5 at receptors located outside the property boundary. c) and d) To confirm the residual effects of the Project on Air Quality and demonstrate compliance with provincial ambient air quality standards, an adaptive air quality management program will be implemented. The air quality management program will contain various plans which will be finalized during permitting and licensing. The plans within the air quality management program will incorporate monitoring requirements directed by provincial and federal regulators and by Indigenous groups and other Interested Parties as requested. In terms of worker health and safety while forest fire smoke is present, Denison will consider this through the Occupational Health and Safety Program. Information on how the Project will prepare for and addresses emergencies that may affect the health and safety of persons, the environment, and the protection of property related to forest fires will be included in the Emergency Preparedness and Response Program. e) As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. Denison does not anticipate any funding to BNDN at this time. BNDN will be informed throughout the monitoring program design and	

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				implementation process. Monitoring program design and implementation will be guided by the following principles: meet regulatory requirements, confirm the effectiveness of mitigation measures and predictions made in the assessment, implementing adaptive management (if/where applicable) to reduce effects during the lifetime of the Project, and will ensure that spatial boundaries are sufficiently extensive to measure EIS predictions.	
73	BNDN (February 28, 2023)	Section 6.0	Comment #73: The Project is predicted to produce exceedances for uranium of 148% over of the regulatory limit. These exceedance conditions do not include uranium emissions from Cameco's McArthur River Mine and Key Lake Mill which have now resumed operations. Uranium exceedances represent a potential health risk for land users and workers near the Project site. Additionally, uranium deposition in the aquatic and terrestrial environment can cause effect pathways to humans through the food chain through the consumption of edible/medicinal plants, berries, fish, and wildlife. Request/recommendation: a) Denison must employ additional mitigation measures to reduce uranium emissions on site including enhanced scrubber systems and containment measures.	a) A change in a measurable parameter is not a significant effect, per the EA methodology outlined in Section 5. This threshold approach is both transparent and reasonable with the context of the assessment, though it is acknowledged that some level of change in the VC (or more precisely its measurable parameter) is deemed acceptable on condition that the change is not of a magnitude from which negative effects could accrue. Denison directs BNDN to Table 6.1-27: Air Quality – Summary of the Characteristics Ratings for Residual Effect 9 (Operation, 24-hour Uranium Exceedances) for the complete residual effect characterization. This includes a consideration of the residual effect (24-hour U exceedance during operation) in the full context of direction, magnitude, geographic extent, duration, frequency, reversibility, context, and likelihood. Further, in Section 10.1 of the draft EIS, all relevant radionuclides were assessed in the HHRA in terms of their contribution to the total radiological dose to human and ecological receptors and COPCs identified for air were radionuclides (U-238, U-234 and radon); refer to Table 10.1-7 for a summary of human health exposure pathways. The HHRA estimated dose and risk during all Project phases to the following receptors: camp worker, seasonal resident, recreational fisher/hunter, fisher/trapper. The incremental radiation dose to all human receptors during all Project phases is predicted to be below the regulatory public dose limit of 1 mSv/yr and the dose constraint of 0.3 mSv/yr during all	**Not Addressed.** BNDN disagrees with Denison's assessment and that uranium exceedances will not have an impact on human health or the environment. Regulatory standards are in place for a reason (to protect human health and the environment) and if Denison cannot meet these standards they should not be constructing or operating. Denison mischaracterizes BNDN as not being part of "Indigenous Communities of Interest with reserves and residential communities most proximal to the Project". BNDN is located closer (232 km) to the Project than Kineepik Métis Local (235 km). Further, the Project is located on BNDN's Treaty Lands (Treaty 10), whereas Kineepik Métis Local has no Treaty lands or Treaty rights. As such, BNDN must be treated as a Indigenous Community of Interest with reserves and residential communities most proximal to the Project, not as some secondary community. Denison's position of BNDN requiring consultation and accommodation that is less meaningful than KML is unacceptable and wrong.

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			b) Denison must remodel uranium to include emissions from Cameco's McArthur River Mine and Key Lake Mill. c) Please provide information on how uranium emissions will be monitored during the Project and how Denison will know when exceedance conditions are occurring. d) Please provide information on how adaptive management will be used when a uranium exceedance is discovered. e) Please provide information on how exceedance conditions near the Project site will be communicated to the public. See Section 4.6 for additional information on this topic (p. 67-71).	Project phases. Overall, since the radiation dose estimates would be below the public dose limit, no discernable health effects are anticipated due to exposure of these receptors to radioactive releases from the Project. b) Please refer to Section 6.1.3.2. The Key Lake data from camp high volume air samplers from 2009 to 2018 (Table 6.1-13) were selected to represent background concentrations of uranium, arsenic, and nickel for the Wheeler River Project air quality assessment. Model predictions of COPC concentrations and depositions were added to background levels and compared to ambient air quality standards and criteria. c) and d) To confirm the residual effects of the Project on Air Quality and demonstrate compliance with provincial ambient air quality standards, an adaptive air quality management program will be implemented. The air quality management program will contain various plans which will be finalized during permitting and licensing. The plans within the air quality management program will incorporate monitoring requirements directed by provincial and federal regulators and by Indigenous groups and other Interested Parties as requested. e) As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. Denison does not anticipate any funding to BNDN at this time. BNDN will be informed throughout the monitoring program design and	

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				implementation process. Monitoring program design and implementation will be guided by the following principles: meet regulatory requirements, confirm the effectiveness of mitigation measures and predictions made in the assessment, implementing adaptive management (if/where applicable) to reduce effects during the lifetime of the Project, and will ensure that spatial boundaries are sufficiently extensive to measure EIS predictions.	
74	BNDN (February 28, 2023)	Section 6.0	Comment #74: The Saskatchewan MOE Air Quality Modelling Guidelines specifies that the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) should be used for assessments in Saskatchewan. Denison opted to use the CLAMET/CALPUFF dispersion model for the EIS. Request/recommendation: • Please provide additional rationale for the selection of the CALPUFF model over the provincially recommended AERMOD. See Section 4.6 for additional information on this topic (p. 67-71).	As described in Section B.1 of Appendix 6-A, staff at the Saskatchewan Ministry of Environment (Air Quality Branch) were consulted on the selection of CALPUFF and development of the CALMET meteorological data set, beginning in 2019. The CALMET consultation included an initial discussion about the general approach, and once the CALMET runs were completed, two technical memos were produced and reviewed by Ministry staff including: 1) a memo completed in March 2020 summarizing the general CALMET approach and results (e.g., wind roses, temperature data, precipitation data); and 2) a follow-up memo completed in May 2021, which answered specific questions posed by Ministry staff. Ministry staff also completed a review and provided feedback on the CALPUFF model setup in August 2021. The specific rationale for the use of CALPUFF in lieu of AEROMOD as documented in the March 2020 memo was as follows: the domain size needed to generate inputs for the human health and ecological risk assessment (HHERA) is estimated to be 60 km by 60 km. The Saskatchewan Air Modelling Guide recommends CALPUFF for long-range transport (i.e., > 50 km); CALPUFF includes wet and dry removal processes and chemical transformation algorithms that are needed to generate inputs for the HHERA and the terrestrial and aquatic assessments; and the approach is consistent with other uranium mines in the area.	**Addressed.**

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75	BNDN (February 28, 2023)	Appendix 6-C Climate Baseline and Greenhouse Gas Emissions Report	Comment #75: Carbon dioxide emissions related to air travel for Project personnel were not included in the GHG emissions calculations. Project related emissions from air travel would be significant source due to the remote nature of the site. The GHG emission estimate included in EIS Appendix 6-C does not provide a fulsome representation of Project related GHG emissions. Request/recommendation: • Denison must include emissions from air travel for project personnel in the GHG emissions calculations. This will provide a more accurate representation of project-related GHG emissions. See Section 4.6 for additional information on this topic (p. 67-71).	Assessment of upstream or Scope 3 GHGs under Environment and Climate Change Canada's Strategic Assessment of Climate Change guide are only required for projects that are likely to exceed the upstream threshold of 500 kt of CO_2e per year. The upstream GHG emissions for the Project are expected to be well below this threshold (draft EIS Section 2.5) and in the range of 25 to 31 kt of CO_2e.	**Addressed.**
76	BNDN (February 28, 2023)	Section 6.0	Comment #76: Denison acknowledges the Project's contribution to climate change through GHG emissions but does not outline a plan to offset GHG emissions. Other mines in Canada, including the Canadian Malartic Mine in Quebec have GHG offset plans in which carbon emissions are tracked and offsetting activities are developed in collaboration with	Denison anticipates being subject to ECCC's reporting requirements for emitters over 10,000 tonnes CO_2e and the information is collected under section 26 of the Canadian Environmental Protection Act. In order to meet these reporting requirement, Denison will be tracking Scope 1 and 2 GHG emissions. Options to offset the Project's GHG emissions will be considered as the Project advances. In draft EIS Section 2.5 Greenhouse Gas Emissions Denison has committed to looking for opportunities to optimize energy management and	**Addressed.**

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			local First Nations (Canadian Malartic, 2014). Request/recommendation: • Denison must develop a GHG/Carbon offsetting plan to mitigate potential impacts of the Project to climate change. Denison could work with BNDN and other local First Nations on initiatives that help to offset the Project's GHG emissions (e.g., tree planting, wetland restoration, carbon offsets). This would demonstrate a commitment to corporate social responsibility, climate stewardship and reconciliation on Denison's behalf. See Section 4.6 for additional information on this topic (p. 67-71).	improve the energy intensity of the Project where practical.	
77	BNDN (February 28, 2023)	Section 6.0	Comment #77: The Project is reliant on burning diesel for construction, supplementary power generation, mine processing activities, and mine equipment. The GHG intensive nature of the Project's construction and operation phases are a concern for BNDN and not consistent with federal or provincial directives to reduce GHGs. Cleaner technology and fuel sources are available to	Thank you for the comment. The EIS is a planning tool and the details of Project design including use of fuels will be evaluated by Denison as the Project advances. However, we note that in Section 2.5 Greenhouse Gas Emissions of the draft EIS that Denison will look for opportunities to optimize energy management and improve the energy intensity of the Project where practical. In terms of EIS scoping for the basis of effects assessments, Denison took a conservative approach to estimating combustion products use by assuming back-up diesel	**Addressed.**

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			reduce the Project's GHG emissions. For a project based around supplying fuel for the energy transition, a more progressive approach that utilizes Best Available Technology is required in order to reduce GHG emissions. Request/recommendation: • Where feasible Denison must implement the use of low carbon technology and fuels in the final Project design to reduce GHG emissions. Specifically, Denison should redesign the Project to: o Replace all diesel electricity generation with LNG/CNG generators (and add in renewables where feasible) for construction phase. o Replace all diesel powered mine equipment and vehicles with electric or LNG/CNG models. o Use renewable energy sources for electricity generation (e.g., wind, solar) as early	generators were running continually (worst-case scenario). This is expected to bound actual Project fuel use.	

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			in the project lifecycle as possible. See Section 4.6 for additional information on this topic (p. 67-71).		
78	BNDN (February 28, 2023)	Section 6.0	Comment #78: Denison does not specify how it will monitor air contaminant concentrations during all phases of the Project. Continuous on-site ambient air monitoring for all COPCs (including particulates, metals, and radon) is the only way to truly assess the Project's impact on air quality and compliance with government standards. Request/recommendation: • Denison must conduct continuous on-site monitoring for all contaminants of concern (including particulates, metals, and radon) in order to assure regulatory compliance and verify the accuracy of air dispersion models and EIS predictions. See Section 4.6 for additional information on this topic (p. 67-71).	To confirm the residual effects of the Project on Air Quality and demonstrate compliance with provincial ambient air quality standards, an adaptive air quality management program will be implemented. The air quality management program will contain various plans which will be finalized during permitting and licensing. The plans within the air quality management program will incorporate monitoring requirements directed by provincial and federal regulators and by Indigenous groups and other Interested Parties as requested.	**Not Addressed.**
79	BNDN (February 28, 2023)	Section 6.0	Comment #79: Denison does not specify how BNDN will be involved in air quality monitoring during	As the Indigenous Communities of Interest with reserves and residential communities most proximal to the Project, Denison has committed to collaborating with English River	**Not Addressed.** The response does not adequately address BNDN's concern around the lack of BNDN

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			construction, operations and decommissioning phases of the Project. Request/recommendation: a) BNDN requests the implementation of robust and long-term environmental monitoring to verify protection of the environment, including community-led monitoring during Construction and Operations of the Project. b) Denison must develop specific roles and responsibilities to BNDN members in relation to air quality monitoring and site wide environmental monitoring. This should include, at a minimum, one environmental monitor position for BNDN. This would provide increased transparency and confidence to Denison's environmental management practices and performance. See Section 4.6 for additional information on this topic (p. 67-71).	First Nation and Kineepik Métis Local on a monitoring regime, suited to each of their interests and needs. As part of these programs, Denison and the Indigenous community of ERFN and KML will be sharing information in an agreed-upon fashion. It is expected that the data collected through such monitoring regimes as described above would also be relevant to other Indigenous nations who may have interest in the Project. Denison does not anticipate any funding to BNDN at this time. BNDN will be informed throughout the monitoring program design and implementation process. Monitoring program design and implementation will be guided by the following principles: programs will meet regulatory requirements, programs will confirm the effectiveness of mitigation measures and predictions made in the assessment, programs will be implemented in an adaptive management framework (if/where applicable) to reduce effects during the lifetime of the Project, and programs will have spatial boundaries that are sufficiently extensive to measure EIS predictions. The details of monitoring and follow-up plans are being developed to support the separate process of Project licensing and permitting. The specific means by which provincial and federal authorities, and Indigenous Nations and communities will be engaged in developing the follow-up and monitoring program, including the information-sharing program, are currently under consideration with the Denison project team. It is noted that Section 4.2.1 of the draft EIS provides the variety of ways in which Denison has engaged with Interested Parties to date and it is assumed it would continue to use these means and others that may be identified to fulfil its key corporate principals for developing positive relationships (see draft EIS Section 4.2).	involvement in the design and implementation Denison's air quality monitoring program. Denison does not specify how BNDN will be involved in air quality monitoring during construction, operations and decommissioning phases of the Project. Nor does Denison make any commitments for BNDN involvement in Denison's environmental monitoring programs including air quality monitoring.

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80	BNDN (February 28, 2023)	Section 2.2.2.2.2 Uranium Bearing Solution Holding Area	Comment #80: The Proponent states that the UBS holding area will have leak detection (Figure 2.2-18). The system is shown as a pipe running under the pond. Request/recommendation: a) BNDN requests more details on the leak detection system used for all ponds shown in Figure 2.2-18. b) BNDN requests that Denison respond to all the following questions in writing: • Is the pipe connected to an automated sensing system? • If not, how frequently is the system monitored? • What chemical or physical indicator(s) are used to detect a leak? • What are the detection limits/thresholds for each indicator? • What is the precision of each indicator? • Who is notified, and how quickly would a response be mobilized? See Section 4.7 for additional information on this topic (p. 77).	It is important to note that Denison is completing a sequential EA and licensing process for the Project (see draft EIS Section 1).Denison considers the EA to be a planning and decision-making tool that assesses the potential effects of the Project in a careful and precautionary manner and integrates results of engagement with Indigenous nations and communities. The details requested by BNDN will be developed to support licensing and will be included in Management System programs / plans including for example the Groundwater Monitoring Plan and the Emergency Response and Preparedness Plan.	**Not Addressed.** If Denison intends to defer the answering of these important questions to the licensing phase of the Project, BNDN requires a commitment to negotiate a Project Agreement to formalize a process for engagement with BNDN and responding to BNDN concerns on these matters. BNDN requires this commitment for this concern to be addressed.
81	BNDN (February 28, 2023)	Section 2.2.2.2.2 Uranium Bearing	Comment #81: The Proponent states that the UBS holding area will have leak detection (Figure 2.2-	It is important to note that Denison is completing a sequential EA and licensing process for the Project (see draft EIS Section 1).Denison considers the EA to be a planning and decision-making tool that assesses the	**Not addressed.** BNDN sees it as a reasonable and necessary precaution to provide additional information on this matter. If Denison wishes to defer

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
		Solution Holding Area Section 2.2.4.5 Process Precipitate Pond	18). The system is shown as a pipe running under the pond. Request/recommendation: • BNDN requests to know what specific containment/restoration methods will be used in the event that a leak is detected, and how quickly they would be implemented. This applies to both the UBS holding area and process precipitate pond. See Section 4.7 for additional information on this topic (p. 77).	potential effects of the Project in a careful and precautionary manner and integrates results of engagement with Indigenous nations and communities. The details requested by BNDN will be developed to support licensing and will be included in the Project's future Management System documents including for example the Groundwater Monitoring Plan and the Emergency Response and Preparedness Plan.	this to the licensing phase our Nation requires a commitment to negotiate a Project Agreement with our Nation now to have certainty that this will be addressed in a manner that mitigates our Nations concerns.
82	BNDN (February 28, 2023)	Section 2.2.2.2.2 Uranium Bearing Solution Holding Area	Comment #82: The Proponent states that the UBS holding area will be designed as a pond contained by a double composite liner system (Figure 2.2- 18), and that options to use tanks instead of holding area will be evaluated as engineering advances. Request/recommendation: • BNDN requests that Denison undertake a risk assessment for the design of the UBS holding area. BNDN recommends the safer, less environmentally risky option be selected and that BNDN can review and provide input into the decision that Denison makes.	Please see Denison's response to BNDN comment #33.	**Not addressed.** BNDN sees it as a reasonable and necessary precaution to undertake a risk assessment for this particularly important and risky aspect of the overall operation. BNDN reiterates the request and reminds Denison that this concern would be best addressed through a formalized process for engagement defined in a project agreement between BNDN and Denison for the Wheeler River Project.

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			See Section 4.7 for additional information on this topic (p. 77).		
83	BNDN (February 28, 2023)	Section 2.2.1.4.5	Comment #83: The Proponent states that the wellfield pipelines will be designed to have secondary containment or catchment and have leak detection systems in place at key locations. BNDN requests more details on the leak detection system used for wellfield lines. Specifically, BNDN requests that Denison respond to the following questions: • Is an automated sensing system used? • Will automated controls shut off pressure in the event of a significant leak? • If no automation is used, how frequently is the system monitored? • What chemical or physical indicator(s) are used to detect a leak? • What are the detection limits/thresholds for each indicator? • What is the precision of each indicator? • Who is notified, and how quickly would a response be mobilized? See Section 4.7 for additional information on this topic (p. 77).	Wellfield piping system will transport the mining solution to and from the processing plant. The flow rates and pressures of the individual well lines will be monitored in the pumphouses. This data will be transmitted to the processing plant for remote monitoring through a master control system. Through the master control system, operators will be capable of controlling pumphouse production lines remotely. The specific details requested by BNDN in this comment are not available at this time and will be developed as part of detailed design to support Project licensing and permitting. Denison considers the EA to be a planning and decision-making tool that assesses the potential effects of the Project in a careful and precautionary manner and integrates results of engagement with Indigenous nations and communities. Denison views the EIS as an important planning tool that will be used to support future activities and represents one stage in the rigorous overall approvals process for a uranium mining facility in Canada. Denison completed feasibility designs for the Project in 2023. The engineering design of the wellfield pipelines including control measures to monitor and respond to leaks will be included in the detailed design information provided to the CNSC during Project licensing.	**Not Addressed.** If Denison intends to defer the answering of these important questions to the licensing phase of the Project, BNDN requires a commitment to negotiate a Project Agreement to formalize a process for engagement with BNDN and responding to BNDN concerns on these matters. BNDN requires this commitment for this concern to be addressed.

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84	BNDN (February 28, 2023)	Section 2.2.1.4.5 Primary Containment of Mining Solution – Wells	Comment #84: The Proponent states that the well designs and operational monitoring of the wellfield will mitigate accidental release of mining solution or UBS in the sandstone above the mining area. Request/recommendation: • BNDN requests to know how Denison will monitor the integrity of wells once in production. Will tests be conducted at regular intervals? See Section 4.7 for additional information on this topic (p. 77).	The well designs and operational monitoring of the wellfield will mitigate accidental release of mining solution or UBS in the sandstone above the mining area. Each well will have double containment: mining solution will travel inside an inner casing with the outer casing acting as secondary containment for the mining fluids. Wells will be continually monitored for operational parameters such as injection pressures, injection flow rates, and recovery flow rates. This data will be transmitted to the processing plant for remote monitoring through a master control system. Through the master control system, operators will be capable of controlling pumphouse production lines remotely. Wellfield monitoring will facilitate detection of any issues with the injection and recovery wells. A network of monitoring wells installed within the freeze wall area will be equipped with pressure instrumentation for the determination of the vertical strain/stresses placed on the formation to do mining zone space creation. This monitoring network is designed to detect if these strains may be approaching their acceptable levels prior to failure. The injection and recovery wells will also be equipped with devices for pressure and temperature that can detect a breach in the well casing if one were to occur. As a preventative measure, annual mechanical integrity testing is conducted on the wells to ensure their containment and compliancy. Active monitoring will allow for operational shutdown if a scenario is approaching a failure mode.	**Addressed.**
85	BNDN (February 28, 2023)	Section 2.2.1.4.5 Fuel Storage and Dispensing Facility	Comment #85: The Proponent states that fuels will be stored in approved, above-ground, 25,000 L double-walled storage tank(s) equipped with secondary containment in accordance with	Details on when Denison will construct the permanent fuel storage facility or precisely where temporary fuel storage tanks will be located are not available at this phase of the Project and these details are not required to support EIS review. However, at the EIS stage it is important to note that Denison is committed to construction and operating all fuel storage and distribution infrastructure in	**Addressed.**

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			provincial regulations and standards. Request/recommendation: • BNDN requests to confirm when the permanent fuel storage facility will be constructed. If temporary fuel storage for construction is required, indicate how much, how it will be stored and dispensed, and show on a sketch where it will be located. Construction fuel requirements for site development may be significant. See Section 4.7 for additional information on this topic (p. 77).	accordance with applicable legislative requirements. Fuels will be stored in approved, above-ground, double-walled storage tank(s) equipped with secondary containment in accordance with provincial regulations and standards. In Saskatchewan, the permitting process for hazardous substances including above ground storage tanks for diesel, propane, gas, and jet fuel are governed by The Hazardous Substances and Waste Dangerous Goods Regulations; Environmental Code Chapter E-10.2 Reg 3 (HSWDG). Denison will need to apply for an Approval to Construct, Install, Alter and Expand a Storage Facility and Store Hazardous Substances and/or Waste Dangerous Goods and secure an approval from the Ministry of Environment pursuant to The Environmental Management and Protection Act, 2010, and The Hazardous Substances and Waste Dangerous Goods Regulations. Denison will have to adhere to the Terms and Conditions of the approval, complete regular inspections of the facilities, and maintain an Emergency Response Contingency Plan. The Ministry of Environment staff also conduct regular inspections to ensure the conditions of the approval are being followed.	
86	BNDN (February 28, 2023)	Section 2.2.4.5 Process Precipitate Pond	Comment #86: The Proponent states that process precipitates may be stored in totes inside the process precipitate pond. Request/recommendation: • BNDN requests details on the procedures for placement and handling of precipitate totes within the pond. Care should be taken to ensure that equipment and totes do not compromise the pond lining. Totes should be sealed and	The precipitate pond is proposed as a lined area with berms (as shown in Section 2, Figure 2.2-18) and may be more clearly described as being a lined pad. As such, process precipitates can be placed into totes, which can be placed on the lined area ('pond') for containment during storage. Details on the plans for precipitate management, placement and handling will be developed to support Project licensing and permitting. Denison agrees the integrity of the liner and totes are important considerations which will be factors in the plans. We also refer BNDN to the following draft EIS sections and comments responses:	**Addressed.**

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
			transport of totes from the plant to the pond should be carefully planned to minimize the risk of a spill, and in the event of a spill ensure that runoff is captured on the site. See Section 4.7 for additional information on this topic (p. 77).	• Waste Management: Waste management is described in Section 2.2.4 of the draft EIS and includes discussion of all waste types that will be generated by Project-related activities. The following is noted in Section 2.2.4 for reference, "Conventional waste, radiologically contaminated waste, and hazardous waste will be managed at the Project. Denison is committed to conducting stringent waste characterization throughout the life of the Project. This includes physical, radiological, and chemical characterization to maintain accurate waste inventories and determine how wastes will be dispositioned through either re-use, recycling, temporary storage, or permanent disposal (on or off site). This includes clearance of material that meets unconditional release requirements and can be safely removed from site. A waste management program will be developed for the Project to support licensing and permitting. The waste management program and associated plans developed to support licensing will be based on the 4 R's: Reduce, Reuse, Recycle, and Recover, and will detail how each type of waste generated on site will be managed. Resources used to develop the waste management program will include, but are not limited to, the CNSC's REGDOC-2.11 series, related Canadian Standards Association (CSA) standards, and the Hazardous Substances and Waste Dangerous Goods Regulations (Government of Saskatchewan 2000)." • Water Management: Water management is described in Section 2.2.3 of the draft EIS and includes Denison's commitment to capturing any contact water. Clean, non-contact runoff will be diverted around Project components where possible. Contact water, including, for example, runoff from the wellfield and around the processing plant, will be	

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				collected in various ponds and eventually routed through the IWWTP for treatment prior to release to Whitefish Lake. Refer to Figure 2.2-17 for runoff collection assumptions. • Emergency Preparedness and Response Program: Please also see Denison's response to BNDN comments 87 and 88 below for information on the Emergency Preparedness and Response Program.	
87	BNDN (February 28, 2023)	Section 2.8 Project Design Features	Comments #87 and 88: Denison states that they will maintain an up-to-date record of the various hazardous substances on site and will maintain Safety Data Sheets and appropriate procedures for spill management, handling, and clean up in an accessible location. Request/recommendation: • BNDN requests a description of the safety and spill response training programs that employees will undergo. What is the duration of each training program and how often will retraining be conducted? • BNDN requests to know what resources will be kept on site for management and clean-up of spills, for example spill kits, absorbents, neutralization agents, vacuum trucks, PPE, hand tools, etc. See Section 4.7 for additional information on this topic (p. 77).	The details requested related to the Emergency Preparedness and Response Program are being developed to support licensing efforts. The EIS is a planning tool to provide an assessment of the potential Project effects on the human and biophysical environment; at the EIS stage a detailed Management System is not required. A brief description of the Emergency Preparedness and Response Plan is provided in the draft EIS, Section 2.9.1.3.5: and included below for reference. Please also refer to draft EIS, Section 14 Accidents and Malfunctions for an assessment of the potential accidents and malfunctions that could occur in association with the Project and a description of the potential effects on human health or the biophysical environment, considering environmental design features and mitigation measures that would be implemented to reduce such effects. 2.9.1.3.5 Emergency Preparedness and Response Program The Emergency Preparedness and Response Program would identify how the Project will prepare for and addresses emergencies that may affect the health and safety of persons, the environment, and the protection of property. The objectives of the program would include the following: • identification of accidents and emergencies and the actions and responsibilities in the event of an emergency;	**Addressed.**

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				• Project requirements for emergency response equipment and personnel; • internal incident command structure to effectively manage complex, lengthy, and large-scale emergencies; • required communications with external emergency services, statutory bodies, and public, Indigenous groups, and regulatory agencies; • development of appropriate emergency procedures; and • assurance of availability of vital information during an emergency. Emergency Preparedness and Response Program would be developed consistent with guidance provided by CNSC in REGDOC-2.10.1, Nuclear Emergency Preparedness and Response.	
88	BNDN (February 28, 2023)	Section 2.2.2.2.4 Yellowcake drying and packaging	Comment #89: The Proponent describes various measures used to mitigate yellowcake dust emissions: the yellowcake drying and packaging area will be outfitted with hygiene systems to capture dust generated during the material handling of the yellowcake product and sent to either the dryer or calciner venturi scrubbers. All equipment located after the dewatering of the yellowcake will be selected to provide minimal dust generation and outfitted with dust collection systems where required. The ventilation system in this area of the processing plant will also be adequately designed to provide safety of workers and control fugitive dust emissions.	Should dust collection systems in the yellowcake drying and packaging area fail and generate a hazard for the workers, the plant will be shut down until repairs are completed. A redundant hygiene system is not economical to implement. Hygiene scrubbers are typically very reliable and can be repaired in short time frames.	**Addressed.**

Ref. No.	Source	Reference to EIS, appendix, or supporting documentation	Comment Summary (all original submissions can be found on Canadian Impact Assessment Registry reference: 80171)	Denison Response	
			Request/recommendation: • BNDN recommends redundant hygiene systems be installed (n+1 units) to ensure continuity of air filtration in the event of equipment failure. See Section 4.7 for additional information on this topic (p. 77).		
89	BNDN (February 28, 2023)	Draft EIS 9.3.5.1 Project Design Measures	Comment #90: The Proponent states that all contaminated areas will be fenced to avoid contact with workers and wildlife. Fences will be monitored and maintained. Request/recommendation: • BNDN requests to know the size and type of fence considered for each project area. • Confirm if the wellfields will be fenced. Show all fences on a site layout drawing like Figure 2.2-1. See Section 4.7 for additional information on this topic (p. 77).	Access to the property will be controlled by both a north and south security gate. In the draft EIS, Denison has committed to fencing the domestic landfill (Section 2.2.4.3.1) and having a fenced storage area near the operations centre. Details on the size and type of fencing are not defined at this stage of the Project, but will meet the criteria outlined in the EIS. The wellfield is not proposed to be fenced. For the wildlife-specific mitigation measures, refer to Section 9.3.5.2.5 Wildlife Deterrence and Prevention of Wildlife Entrapment and Section 9.3.5.2.8 Waste and Hazardous Materials Management.	**Addressed.**

Denison Mines Corp.
Wheeler River Uranium Project
Draft Environmental Impact Statement

Technical Review

February 28, 2023

Submitted by:

Birch Narrows Dene Nation

Contents

1.0 Introduction

Denison Mines Ltd (Denison; the Proponent) has proposed a new uranium mining and processing operation called the Wheeler River Project (the Project). The Project is located next to Saskatchewan Highway 914 between the McArthur River and Key Lake operations, about 230 km as the crow flies east northeast of Turnor Lake (Figure 1). The Project is located within the Ancestral Lands of Birch Narrows Dene Nation (BNDN).

The Project is currently undergoing a joint Federal and Provincial environmental assessment under the *Canadian Environmental Assessment Act* 2012 (CEAA 2012) legislation. Through the CEAA 2012 process, Denison must prepare an Environmental Impact Statement (EIS) which documents the expected environmental, social and cultural impacts of the Project. BNDN has been provided funding by the Canadian Nuclear Safety Commission (CNSC) to review the draft EIS to assess the potential impacts of the Project on BNDN Treaty and Aboriginal rights and interests.

In this report, BNDN has prepared comments on the draft EIS. Each comment includes recommendations to the CNSC and Denison on how to avoid, mitigate, accommodate or compensate for potential adverse impacts to BNDN Treaty and Aboriginal rights and interests.

1.1 Acknowledgement

Birch Narrows Dene Nation would like to acknowledge that the Wheeler River Project is located in an area of extensive traditional land use by English River First Nation (ERFN) and other Indigenous groups. While the Wheeler River Project is located within BNDN's Ancestral and Treaty Lands and BNDN has historic and current land use and cultural sites near the Project site, BNDN recognizes the direct impacts of the Project upon ERFN. As such, BNDN would like to work collaboratively with Denison to develop an agreement that contains environmental protection and accommodation measures commensurate with the magnitude of impacts on our Treaty and Aboriginal rights to mitigate any potential impacts related to the Wheeler River Project.

1.2 Birch Narrows Dene Nation

Birch Narrows Dene Nation is a Denesųłiné First Nation band within the meaning of the Indian Act (Canada) and an Aboriginal people within the meaning of Section 35(1) of the Constitution Act, 1982 (Canada). BNDN members have occupied the lands of Dene Nene or "Land of the People" in northern Saskatchewan since time immemorial in accordance with our own laws and system of government. Today, BNDN is a diverse and vibrant community of Dene, Cree and Métis citizens with 812 registered members. BNDN has 3 reserves, one at Turnor Lake (IR 193B) adjoins the village of Turnor Lake Saskatchewan and is the main reserve for BNDN. Churchill Lake (IR 193A) is at the junction of Churchill Lake and Frobisher Lake, and Turnor Lake (IR 194) is on Peter Pond Lake east of Dillon, SK. BNDN's vision is a healthy, self-reliant, educated, and united community. BNDN's mission is to provide good governance and create opportunities for the wellbeing of all members.

As a signatory of Treaty 10, BNDN asserts that Treaty 10 was not an agreement to surrender lands and resources. As such BNDN laws, customs and jurisdiction still apply to our Ancestral Lands. There are cultural sites and artifacts left throughout the region that are significant for our members. Our community members continue to hunt, fish, gather and trap on the lands throughout our Ancestral Lands. Any direct or cumulative impacts from development could negatively affect our ability to exercise Aboriginal and Treaty rights, including the livelihoods of those who live off the land. The lands, waters and resources throughout our Ancestral Lands are essential to the well-being and survival of our First Nation.

The BNDN Traditional Use Study Specific to Nexgen's Proposed Rook 1 Project (Firelight Research Inc., 2019) reports the following BNDN historical context:

> *Chief Raphael Redshilldkze signed Treaty 10 on behalf of the Clear Lake Band on August 28, 1906. Treaty 10 was based on other numbered treaties, and included the following standard hunting, trapping, and fishing rights clause:*
>
> > *And His Majesty the King hereby agrees with the said Indians that they shall have the right to pursue their usual vocations of hunting, trapping and fishing throughout the territory surrendered as heretofore described, subject to such regulations as may from time to time be made by the government of the country acting under the authority of His Majesty and saving and excepting such tracts as may be required or as may be taken up from time to time for settlement, mining, lumbering, trading or other purposes.* (Indian Claims Commission 1995, p.56)
> >
> > *The Clear Lake Band later came to be known as the Peter Pond Band. This Band was separated in 1972 into the Buffalo River Band and Turnor Lake Band; today, they are known as the Buffalo River Dene Nation and the Birch Narrows Dene Nation* (Indian Claims Commission 1995).

BNDN members continue to exercise our Treaty and Aboriginal rights including hunting, trapping, fishing, plant gathering and cultural/spiritual practices in the immediate area of the Wheeler River Project and throughout our Ancestral Lands.

BNDN has constitutionally protected Treaty rights, inherent Aboriginal rights, Aboriginal title and interests in and to Dene Nene. BNDN must be consulted and accommodated by the Crown with respect to potential impacts on our rights.

2.0 Denison Mines Wheeler River Project

Denison Mines Ltd has proposed to construct, operate and decommission the Wheeler River uranium Project. Denison is the 95% owner of the Wheeler River Project and is advancing the Project through concurrent Federal and Provincial Environmental Assessments under the Canadian Environmental Assessment Act 2012 (CEAA 2012). The Canadian Nuclear Safety Commission (CNSC) is the Federal Agency responsible for the Federal approval of the environmental assessment of the Project. The

Saskatchewan Ministry of Environment is the Provincial Agency responsible for the Provincial environmental assessment approval.

Denison expects to produce approximately 70.2 million pounds of U_3O_8 over a 20 year mine life. The Wheeler River Project has 2 uranium deposits, the Phoenix and the Gryphon deposits. The Phoenix deposit is very high grade (19% U_3O_8) and contains about 70.2 million lbs of U_3O_8. The Gryphon deposit is lower grade (but still high grade by global standards) at 1.8% U_3O_8 and contains 49.9 million pounds of U_3O_8. While the Gryphon deposit is described on Denison's website, the Phoenix deposit is the only deposit considered in the environmental assessment. The Gryphon deposit is not suitable for in situ recovery mining (the mining method proposed for the Phoenix deposit) and would require conventional long hole mining similar to other mines in the Athabasca Basin. Denison has not stated publicly whether they intend to proceed with developing the Gryphon deposit.

The Project is located in the eastern Athabasca Basin next to Saskatchewan Highway 914 between the McArthur River and Key Lake operations, about 230 km as the crow flies east northeast of Turnor Lake (Figure 1). The Wheeler River Project is unique in that it will be the first uranium mining project in Canada to employ the in situ recovery (ISR) method of extracting uranium from the ore body. ISR mining is very different from conventional mining operations including other uranium mining operations in the Athabasca Basin. Instead of an open pit or underground mining operation where ore is blasted and hauled to the processing facility on site, the ISR method injects an acidic liquid (called a lixiviant) into the ore body through groundwater wells. The lixiviant dissolves the uranium in the ore body, and a different groundwater well pumps the lixiviant back up to the surface once it is impregnated with dissolved uranium (Figure 2). When the lixiviant is pumped back up to surface with the dissolved uranium in it, it is called a uranium bearing solution (UBS). The UBS is then sent to the processing facility on site where the uranium is removed from the UBS and converted into yellowcake (Figure 4). Yellowcake is a solid uranium concentrate that is the final product from the mine that will be sent for further processing off site.

Denison selected the ISR method of mining after considering 32 alternate mining methods in their preliminary economic assessment (PEA) the PEA found that the orebodies at the Wheeler River Project are well-suited for ISR mining because the ore body is very porous (the lixiviant can flow through the ore body very easily but the rock right below the ore body is not porous (water moves through it very slowly. To ensure that the lixiviant used to dissolve the uranium does not contaminate the surrounding groundwater, Denison proposes to construct a freeze wall around the mining area. The freeze wall will be built by drilling holes around the ore body that will be cased and then have a freeze brine pumped through the drill hole. The freeze brine will freeze the surrounding bedrock so that the ISR mining does not contaminate the surrounding groundwater. Freeze walls have been used extensively at other mines in Saskatchewan including at McArthur River and Cigar Lake to prevent groundwater from entering the mines. Denison is planning to install 300 freeze wells around the ore bodies to create a continuous freeze wall all the way around the deposits.

Once the UBS is brought to surface, radon will be purged from the UBS prior to storage in the UBS holding area. The UBS will then go through a multi-step precipitation circuit which will use chemicals to separate out the yellowcake. The leftover liquid from the processing circuit will be treated in a water treatment plant before being discharged into Whitefish Lake or recycled into the ore deposit as lixiviant. Solid wastes will be stored in a precipitate storage area, with the intention of processing the precipitates at the McArthur or Key Lake mills towards the end of mine life to remove the remaining uranium in the precipitates.

Because the Project will be mined using the ISR method, decommissioning and closure of the Wheeler River Project will be different from other mines. In particular, Denison plans to flush out the ore zone to remove any residual contamination from the ISR before they decommission the freeze wall.

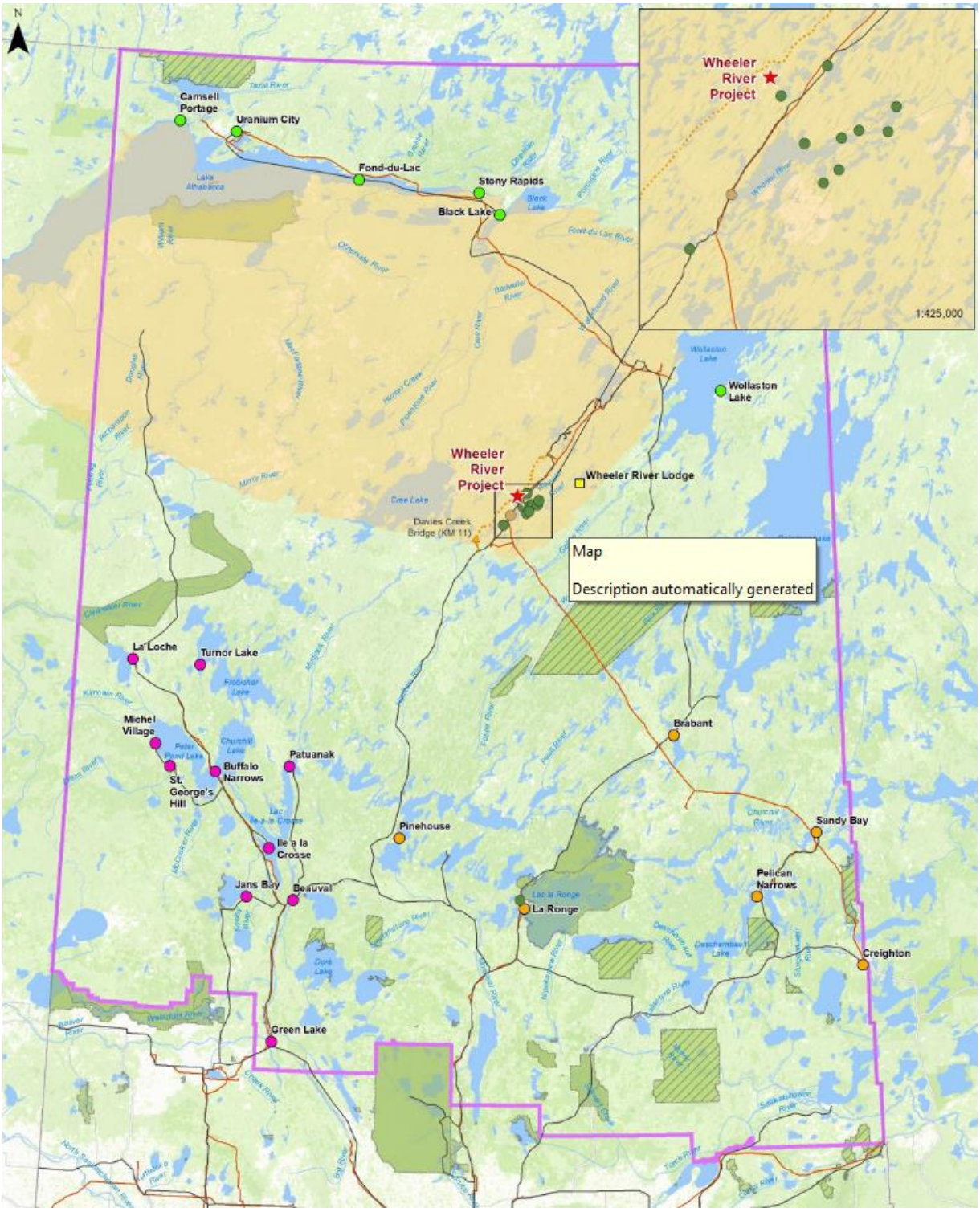

Figure 1: Location of Wheeler River Project (Red Star) (Wheeler River EIS Executive Summary page 34)

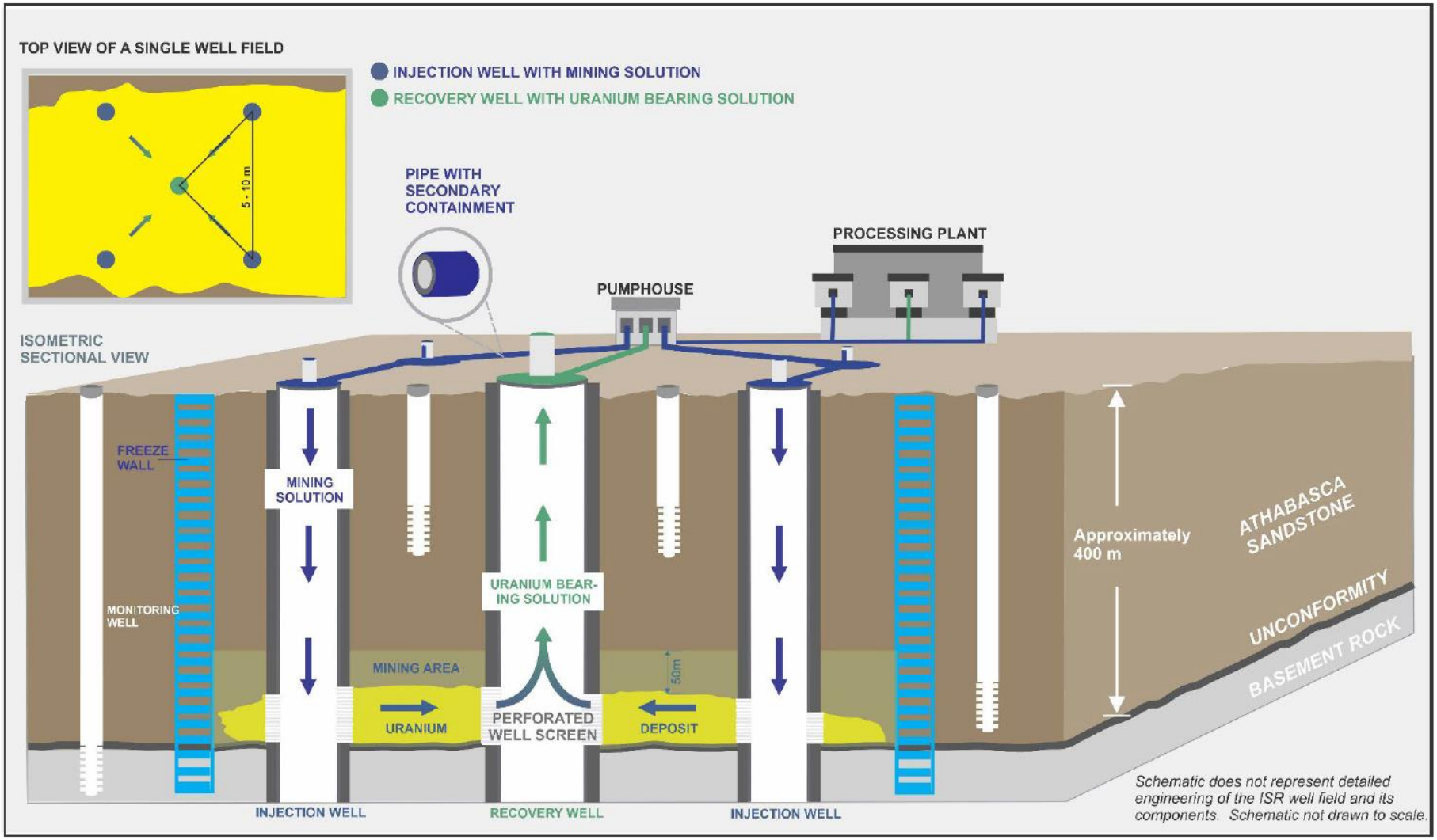

Figure 2: Overview of the In Situ Recovery Process (Wheeler River EIS Executive Summary page 14)

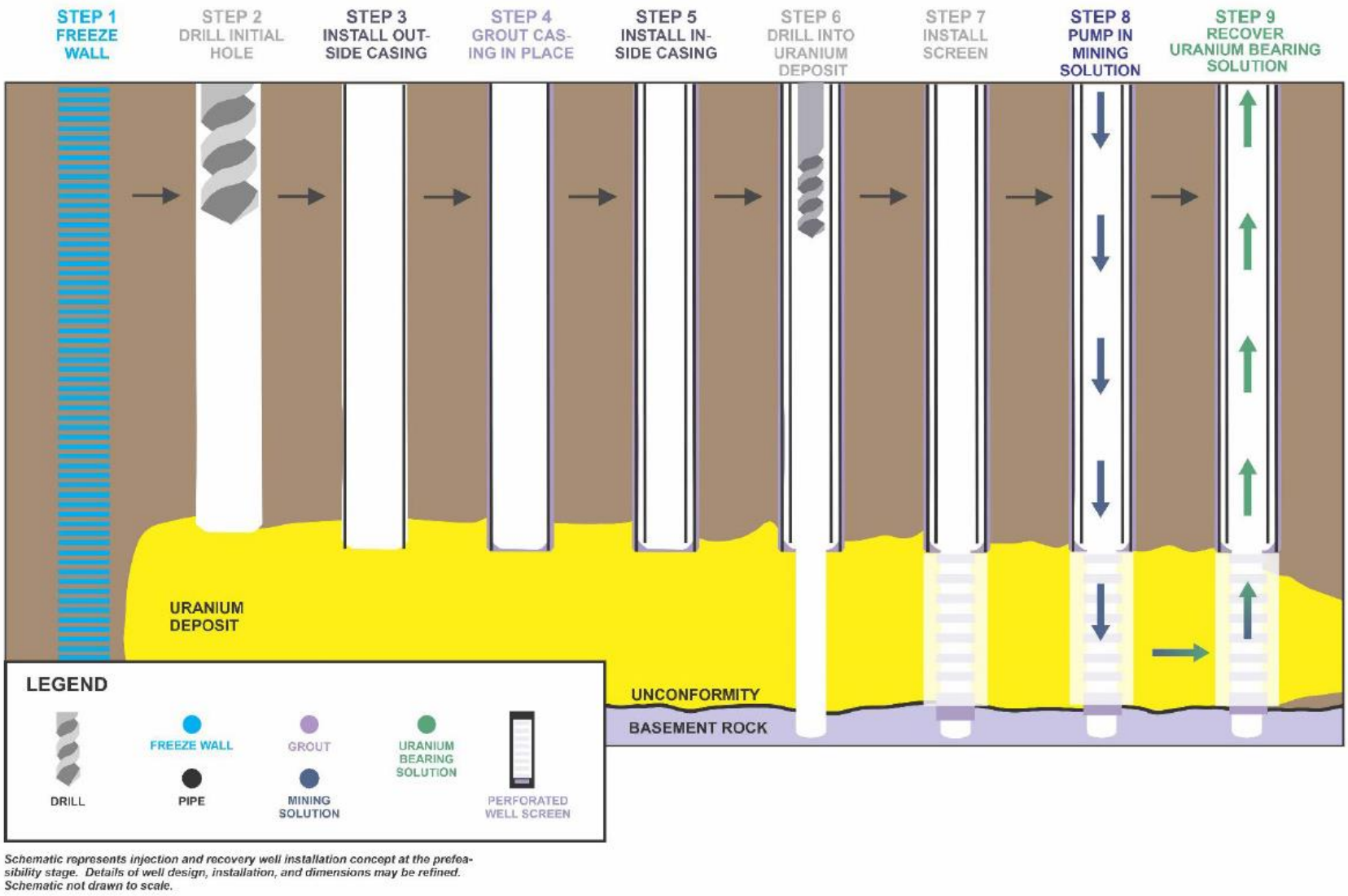

Figure 3: Proposed installation sequence (Denison, 2022)

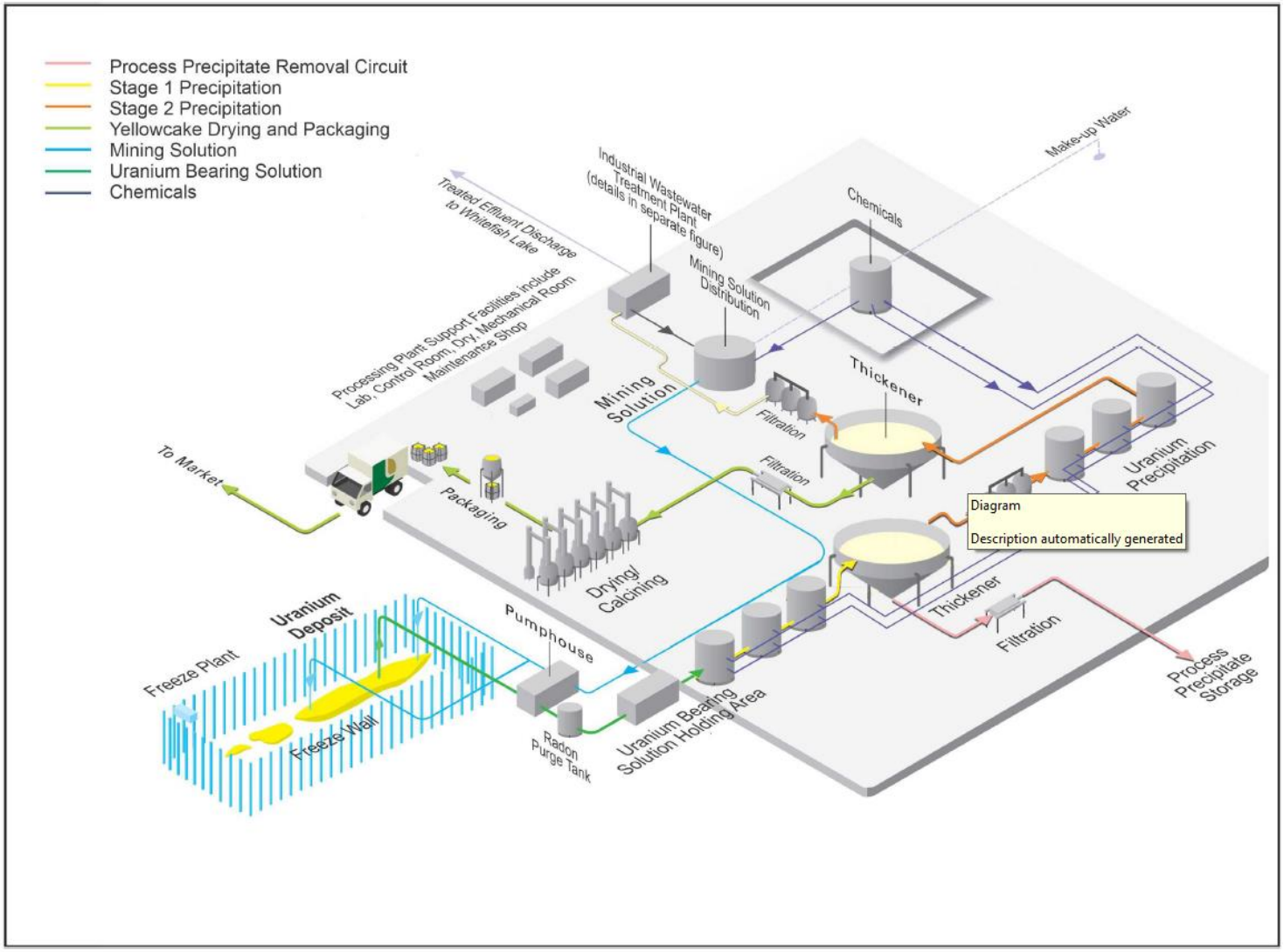

Figure 4: Overview of the Processing facilities at Wheeler River (Wheeler River EIS Executive Summary page 17)

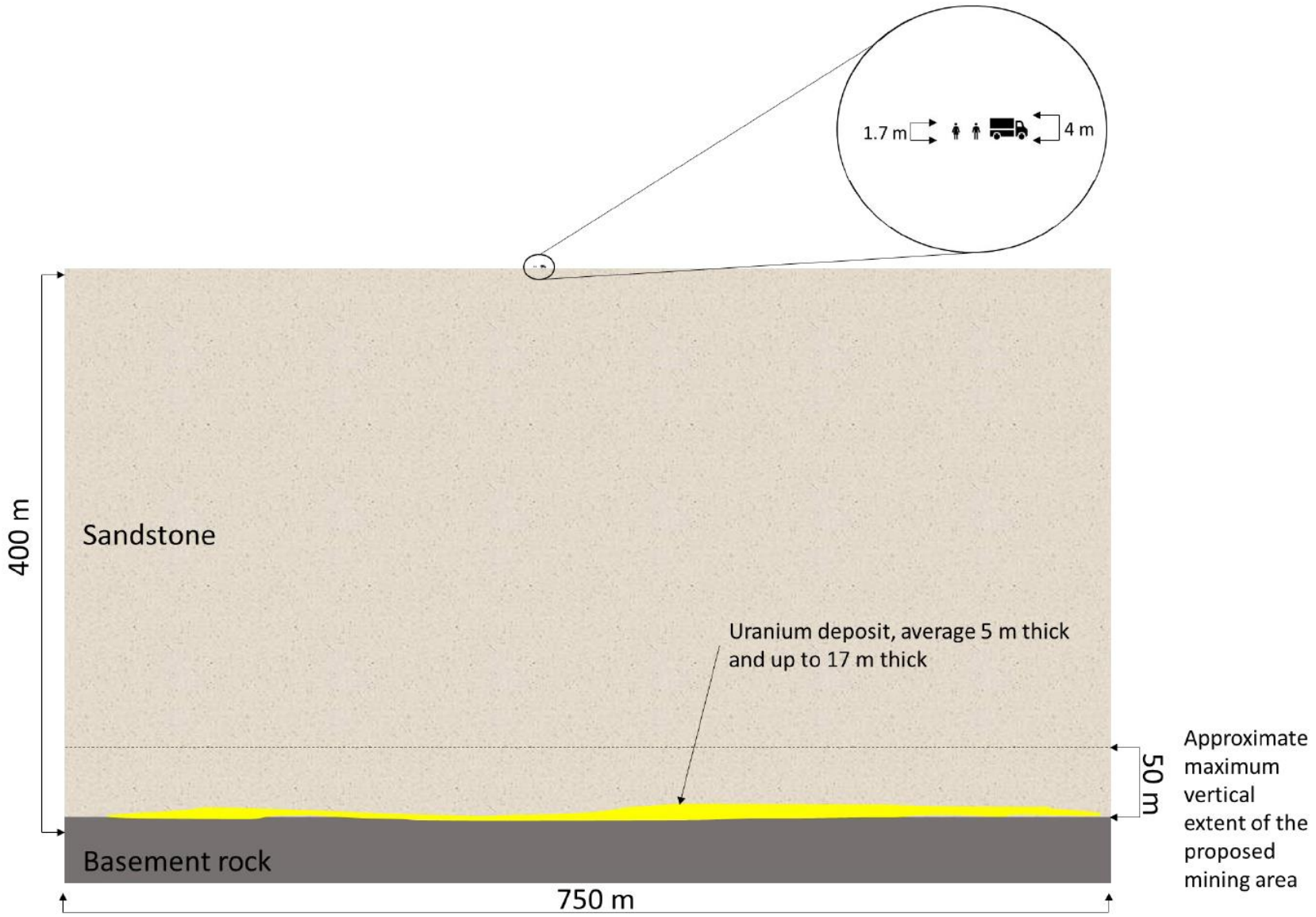

Figure 5: Figure showing scale of ore body and overlying sandstone in comparison to a person on surface (Denison, 2022)

3.0 Community Engagement on the Draft EIS

BNDN council members and lands department staff met with Denison on February 14, 2023 in Saskatoon for an introduction to the Wheeler River Project. As of the time of submission of this review, BNDN has not yet held a community meeting on the Wheeler River project. BNDN anticipates holding a community meeting on the Project in March or April 2023.

4.0 Technical Review of the Draft EIS

BNDN has undertaken a technical review of the license revocation application for the Project, including the baseline documents and technical appendices. This technical review is divided by discipline in Sections 4.1 through 4.7 and is focused on information gaps, deficiencies in data, underrepresentation of potential effects, inadequate monitoring, and lack of involvement of BNDN. All of these priorities for BNDN comments are discussed through the lens of potential impacts of the Project on BNDN Treaty and Aboriginal rights, interests and claims.

4.1 Indigenous Knowledge and Land Use and Cultural Heritage

Indigenous Knowledge and Land Use

Denison has included the consideration of Indigenous Knowledge and Land Use in its development of the EIS. Communities that have shared Indigenous Knowledge reports include English River First Nation, Kineepik Metis Local #9 and the Ya'thi Néné Lands and Resources Office for the Athabasca Denesųłiné First Nations.

In addition, Denison is in the process of supporting several activities to aid in community-led collection of additional Indigenous Knowledge and Land Use, which Denison intends to integrate into its EIS process.

Denison's assessment of Indigenous Knowledge and Land Use included the consideration of "Indigenous Land and Resource Use" (ILRU), "Other Land and Resource Use" (OLRU), and "Cultural Expression." ILRU considered traditional practices of land use including gathering materials for non-commercial purposes by Indigenous peoples, while OLRU considered recreational and commercial use of resources by both Indigenous and non-Indigenous peoples. Cultural expression considered activities Indigenous peoples take part in that support cultural continuity – specifically knowledge transmission and traditional diet.

For ILRU, the key indicators of resource availability, land and waters available for traditional practices and perceived suitability of land and resources for aesthetics were not carried forward to residual effects assessment as Denison perceives they can be managed through mitigation measures. With mitigation measures, Denison notes that residual effects of the Project and cumulative impacts may result in increased competition in the area, which could impact community perceptions of using the area. Denison proposes monitoring activities related to the biophysical environment to monitor these activities.

For OLRU, the Project is similarly anticipated to have an impact on the perceived suitability of the lands and resources close to the Project Area. Denison proposes to deal with residual issues through the development of management plans, emergency response programs, and by minimizing the amount of land disturbed. Denison also proposes to enter into a relationship with any commercial land users impacted by the Project. While the Project may result in increased competition for commercial

resources, Denison notes that resource use activities are regulated by the Province, which may mitigate this issue. Monitoring for biophysical elements is proposed for OLRU.

Finally, for cultural expression, Denison notes that the Project may change the location of cultural practices that support knowledge transmission. Denison notes that the anticipated lack of impact to cultural camps, a small Project footprint and likely persistence of ILRU activities may minimize this impact, however. Denison also intends to have a worker rotation system, which will ensure Project employees can participate in traditional land use activities. Impacts to traditional food are anticipated to be low in magnitude.

The current footprint of the Project is located within the treaty and ancestral lands of BNDN. The proposed location retains both current and historical significance to the community; however, BNDN Indigenous Knowledge and Land Use has not yet been included or considered in Denison's EIS. A fulsome consideration of BNDN's Indigenous Knowledge and Land Use is required to assess the impacts the Project may have on BNDN's rights and interests and contribute to a baseline of ecological knowledge and cultural use in the area. The negotiation of the Study should be part of a broader process agreement. The information BNDN provides should be considered within the EIS process and may result in a different effects assessment.

Cultural Heritage

The Project is situated within a region the Government of Saskatchewan's Heritage and Conservation Branch classified as being sensitive for heritage resources. Denison conducted two Heritage Resource Assessments during baseline studies and identified two archaeological sites within the Project Area. Both sites contained a single artifact. The Heritage and Conservation Branch assessed the sites as retaining low interpretive value and advised that the Project continue as planned.

Notwithstanding, Denison has also developed a Heritage Resource Management Plan to account for artifacts that may be unintentionally discovered during development activities. The Plan includes the requirement for any archaeological site to be assessed by a qualified archaeologist, local discussions with Indigenous leadership, and working with the Heritage Conservation Branch to identify appropriate mitigation measures.

Given the above findings and measures to address unidentified sites, the effects assessment determined any residual effects to heritage resources to be not significant.

The cultural heritage work does not currently include any Indigenous Knowledge, Land Use and Occupancy information from BNDN; this information should be considered to strengthen the assessment given the location of the Project in the traditional and treaty lands of BNDN. Some of the methodology used by the archaeologists to conduct the assessment may not have been the most rigorous; however, consideration of any potential additional sites by BNDN may alleviate this. The Heritage Resource Management Plan is likewise a positive addition to account for any unidentified sites;

however, this Plan would be strengthened with more robust language around commitments to the involvement of Indigenous communities.

Key Issues

- BNDN Indigenous Knowledge and Land Use has not yet been included or considered in Denison's EIS. A fulsome consideration of BNDN's Indigenous Knowledge and Land Use is required to assess the impacts the Project may have on BNDN's rights and interests and contribute to a baseline of ecological knowledge and cultural use in the area.
- The cultural heritage work does not currently include any Indigenous Knowledge, Land Use and Occupancy information from BNDN; this information should be considered to strengthen the assessment given the location of the Project in the traditional and treaty lands of BNDN.

Table 1. Comments and recommendations for the Wheeler River EIS related to cultural heritage, Indigenous knowledge and land use

#	Document Reference	Comment	Request/Recommendation
1.	Wheeler River Project Draft EIS – 5.7; 5.8.1	The Project is located within the treaty and ancestral lands of BNDN and maintains both current and historical significance to the community. BNDN Indigenous Knowledge, Land Use and Occupancy are not currently considered within the EIS. Should the Project proceed without the consideration of BNDN's Knowledge, Land Use and Occupancy, it may cause irreparable loss of culturally significant sites and access to resources that the community depends upon. It may also contribute to a loss in cultural transmission.	a) Denison should provide BNDN with funds to conduct a community-led Indigenous Knowledge, Land Use and Occupancy Study for consideration within the EIS process. At minimum, the Study should consider BNDN's Indigenous Ecological Knowledge, commercial and non-commercial harvesting practices, and cultural occupation of the region (including historical sites). The Study should also consider cultural transmission, information about the history of the area and BNDN community members' perspectives on the Project. b) The community-led Indigenous Knowledge, Land Use and Occupancy Study should be a component of a broader process agreement between BNDN and Denison that serves as a pathway for obtaining BNDN's consent for the Project.

			c) Denison should work with BNDN to consider the appropriate integration of the results into all aspects of the EIS and management/monitoring plans, as well as any additional appropriate mitigation and/or accommodation measures.
2.	Heritage Baseline Study 2017 (Golder); Heritage Resource Impact Assessment 2020 (Golder); Heritage Resources Management Plan 2022 (Canada North)	Archaeology as a profession has been dominated in North America by non-Indigenous researchers, despite most sites being Indigenous in origin. It is positive that Golder Associates made efforts to engage and involve Indigenous communities (by including an ERFN representative in fieldwork and by considering ERFN and Pinehouse Kineepik Metis land use maps) in their 2017 heritage baseline study and 2020 heritage resource impact assessment. Notwithstanding, the proposed Project area is within BNDN's treaty and ancestral lands and there may be heritage sites that the community is aware of. BNDN was not involved in either of these studies and BNDN may have Indigenous Knowledge of important heritage sites within the Study Area that should be considered.	a) Denison should provide BNDN with funds to conduct a community-led Indigenous Knowledge, Land Use and Occupancy Study for consideration within the EIS process. b) The Heritage Resources Management Plan should be updated following the consideration of Indigenous Knowledge, Land Use and Occupancy provided by BNDN. This may result in the requirement for further assessment and/or mitigation measures, which should be developed in consultation with BNDN. c) Denison should facilitate BNDN involvement in any additional archaeological fieldwork that takes place, including providing BNDN with capacity funding for members who participate. Terms to facilitate BNDN involvement in future archaeological work should be a component of a broader process agreement between BNDN and Denison.
3.	Heritage Baseline Study 2017 (Golder) – methods; Heritage Resource Impact Assessment 2020 (Golder) – methods	The methodology within both the 2017 and 2020 heritage studies included 'judgmental' shovel probing and initial troweling through soil to identify cultural heritage material. While the discretion of a professional archaeologist needs to be taken into account, relying subjectively on which areas to shovel test and not employing	a. BNDN recommends that Denison undertake further archaeological investigations based on the results of the BNDN TKLU study prior to construction of the project. b. Future archaeological assessment programs should be designed

		a systematic approach is not reproduceable and may result in sites being missed; this is of particular concern given that large sections of the areas retaining potential were not subject to shovel testing. Further, troweling through soil rather than subjecting all excavated soil to sifting through 6mm mesh means that artifacts/ecofacts may easily be overlooked. Given that the north of Saskatchewan has not been thoroughly investigated archaeologically, and given that 76 sites and nine find areas were recorded just 35 km south of the Project area as part of Dr. David Meyer's multi-year archaeological investigation, the results of these assessments do not seem rigorous.	collaboratively with BNDN and other Impacted Indigenous Nations.
4.	Heritage Baseline Study 2017 (Golder) – methods; Heritage Resource Impact Assessment 2020 (Golder) – methods	The presence of strandlines are noted as being an indicator of archaeological potential; however, it is unclear within the reports whether any strandlines are present within the Study Area. Most of the investigations and shovel probes that took place were around existing waterbodies.	Please indicate whether strandlines are present anywhere in the Study Area.
5.	Heritage Baseline Study 2017 (Golder) – methods; Heritage Resource Impact Assessment 2020 (Golder) – methods	It is unclear whether the locations identified by other Indigenous communities in their Land Use maps were investigated archaeologically and subject where appropriate to shovel testing. Knowing this will give confidence to BNDN that areas they may identify as retaining potential may undergo further assessment if necessary.	Please indicate whether the areas identified by other Indigenous communities in their Land Use maps were investigated archaeologically.

6.	Heritage Resources Management Plan 2022 (Canada North) – 4.0	The archaeological context provided is very Western/Scientific. Denison must also include historical/pre-historical accounts of Indigenous communities to provide an appropriate and comprehensive assessment of the archaeological context of the region.	Denison must include a write-up of Indigenous historical and prehistorical accounts in consultation with relevant Indigenous communities. This write up must include historic context provided through oral history interviews as part of BNDN's community-led Indigenous Knowledge, Land Use and Occupancy Study for the Project.
7.	Heritage Resources Management Plan 2022 (Canada North) – 5.1 1e & 1f	BNDN notes that there has been limited engagement of our Nation as part of the archaeological baseline studies undertaken at the site. The Wheeler River Project is within our Treaty and Ancestral Lands where our members have deep ancestral ties and continue to exercise our rights to this day. As stewards of the land since time immemorial and holders of both Treaty and Aboriginal rights in the Project area, Denison must engage with us as partners on their activities on our lands. This includes their planning and decision-making related to archaeological materials to which our members have ancestral and spiritual ties.	Indigenous communities should be consulted and engaged in decision making rather than merely informed if the archaeological material is expected to be Indigenous in origin.
8.	Heritage Resources Management Plan 2022 (Canada North) – 5.1 7	Given the Ancestral and Treaty ties our members have to the project area, our members have valuable knowledge and context to inform the Heritage Resource Impact Assessment (HRIA) for the Project that must be considered prior to being reviewed or approved by any regulatory body.	The draft HRIA should be reviewed by BNDN and other impacted Indigenous Nations prior to being submitted for regulatory approval.
9.	Heritage Resources Management Plan 2022	Discerning archaeological artifacts/ecofacts is difficult at times even to the trained eye; consequently, it is important to undergo training to	a) Staff should undergo training regarding the cultural material they may encounter while on site

	(Canada North) – 5.1.1	understand what you could be looking for.	b) BNDN and other Indigenous communities should be invited to attend this training
10.	Heritage Resources Management Plan 2022 (Canada North) – 5.3	In numerous instances the Heritage Resources Management Plan (HRMP), Denison has used noncommittal language to describe future Indigenous engagement related to heritage resources. BNDN notes that engagement of impacted Nations is essential for proper heritage resource management and as such the language in the HRMP should reflect the necessity of this engagement.	Throughout the HRMP, Denison must change the language of "should" to "will" where appropriate. For example: management options *will* be presented to the applicable Indigenous communities for feedback and *will* include consultation.
11.	Heritage Resources Management Plan 2022 (Canada North) – 5.3.1	BNDN notes that Section 5.3.1 does not confirm that impacted Indigenous Nations will have the opportunity to participate in future archaeological fieldwork. While BNDN understands that many impacted Nations will have arrangements directly with Denison to facilitate member participation, this should additionally be made available to all impacted Indigenous Nations as part of best practices at the Project.	In addition to any provisions developed in a Project Agreement between BNDN and Denison for the Wheeler River Project, Denison should include a clause that confirms that all impacted Indigenous communities will be invited to have monitors participate in any additional fieldwork and that Denison will provide capacity funding for Nations that wish to participate.

4.2 Quality of Life & Economics

This section provides the outcome BNDN's review pertaining to Denison's assessment of the Project's impacts on Quality of Life (Section 12) and Economics (Section 13) in the EIS. A summary of EIS content and key issues follows, with comments and recommendations set out in the table below.

Despite these sections being separate in the EIS, it is appropriate that BNDN has considered them together in this review given the interconnectedness of their impacts and their interconnectedness in BNDN's objectives related to the Project. **Given the impacts and risks BNDN will experience during the life of the Project, it is necessary in the context of the Duty to Consult and Accommodate that BNDN experience corresponding economic benefits, including the provision of jobs for BNDN members, contracts for BNDN businesses, and training and capacity building to support BNDN's participation in all aspects of the Project. However, it is also essential that BNDN realizes these benefits in a culturally appropriate way, and in a way that holistically upholds community well-being, by protecting traditional land use and cultural practices and preventing potential negative impacts such as exacerbating mental health and substance abuse issues, or the issues associated with a transient workforce.** The area described as the "Local Study Area" and "Regional Study Area" in the EIS is BNDN's home, and BNDN will remain living here long after the Project's life cycle is complete. It is therefore of utmost importance that Denison considers the long-term well-being and way of life of BNDN in a holistic way with the Project's potential economic benefits.

Section 12 of the EIS assesses the impact of the Project on Quality of Life. Denison has split the section into three distinct subsections:

1. **Cultural Expression** – potential project impacts on land use, knowledge transfer and traditional diet
2. **Community Well-being** – potential project impacts on population, demographics, employment, education, and community cohesion
3. **Infrastructure and Services** – project impacts related to traffic, community infrastructure and services, and emergency services capacity.

Section 13.0 of the Wheeler River Project EIS discusses the economic impact of the Project. A review was completed in collaboration with BNDN to comment, identify potential concerns/deficiencies, and provide recommendations to reduce the impact of the Project on BNDN and enhance community benefits. Economy selected as a VC because the Project-will alter the local and regional economy positively and negatively. Denison uses the following key indicators to assess the economic impact of the Project.

1. **Employment & Training** – jobs (direct and indirect) and mine related training programs
2. **Increase Income** – Provide higher paying employment for local residents, priority hiring for local people
3. **Business Opportunities** – contract opportunities for local and regional businesses including Indigenous Businesses
4. **Government Revenues** – tax revenue and royalties for provincial and federal governments

5. **Traditional Economy** – Potential impacts on participants in the traditional economy (e.g., harvesting, arts & crafts, guiding)

Denison expects the Project to employ a workforce of three hundred during the Construction phase and 180 during the Operations phase. Denison has committed to provide residents and communities in the Local Study Area (LSA) priority for employment and training and business opportunities, followed by Indigenous and/or other communities in the RSA. Denison expects the total capital costs for the Project to be approximately $387 million. Denison expects the total annual operating costs for the Project to be approximately $39 million per year to cover administration, camp operations, labour, and maintenance costs (Denison, 2022).

Section 12 and 13 of the EIS present demographic and labour market statistics on each key indicator from Statistics Canada and provincial data. The EIS also include results of engagement with other local First Nation and Metis groups including Health and Socio-Economy Studies and Indigenous Knowledge Studies. There was extensive discussion on the perspectives and impacts of neighbouring First Nations and Metis groups, but no discussion on the Project's impact on BNDN from an economic or quality of life perspective. Denison did not conduct any primary research with BNDN to assess the Project's impact.

The EIS discusses the potential negative impacts of the Project on the Traditional Economy and Community well-being. Members of local Indigenous communities including BNDN rely on a subsistence-based economy where the harvesting of wild food and other materials from the lands and waters is an essential element of the economy and culture. Local community members depend on the water, land, and animals for their livelihood and income. The Project has the potential to disrupt the Traditional Economy through increased human industrial activity and alterations to how community members use the land in the LSA. The physical presence of the Project and its activities, including participation in the Project may limit some traditional land and resource activity for some members.

While Denison has considered some of the effects of population changes and increased income caused by the Project and its transient workforce, such as an increased demand for services and housing, the full range of impacts associated with these dynamics of a remote mining project on community well-being have not been considered and proposed mitigation measures are also not sufficient. BNDN has recommended that Denison revise the EIS to include an assessment of all potential effects of a transient workforce and changes to population dynamics, including those disproportionately experienced by Indigenous women and girls, and other segments of the population.

Denison concludes that the Project will have a net benefit to the economy and quality of life. Denison states that the negative effects of the Project can be mitigated and that residual impacts are not significant. Denison will implement mitigation and enhancement measures to ensure the positive effects of the Project on the economy and quality of life including:

- Human Resource Development Plan to prioritize Indigenous and non-Indigenous communities in the LSA in terms of employment and training opportunities. Denison will develop hiring practices, and providing supports to individual workers and, in some cases, their families.
    - Supports could include providing transportation for workers; establishing health and wellness programming; establishing life skills programming; implementing a no drug and alcohol policy on site; and offering culturally sensitive employment policies (e.g., providing a space for an on-site elder counsellor for culturally relevant programming).
- Establishment of a procurement approach through all phases of the Project, focusing on businesses based within the LSA communities, followed by Indigenous and / or businesses in the RSA.

(Denison, 2022)

Key Issues:

- Denison does not consider Birch Narrows a LSA Community and thus is not eligible for priority employment, training or contracting opportunities related to the Project.
- Denison did not gather or incorporate any BNDN specific Indigenous Knowledge or community wellbeing data in the EIS.
- Denison does not have a plan to monitor the socio-economic impacts of the Project.

Table 2. Comments and recommendations for the Wheeler River EIS related to socioeconomics, employment, and contracting

#	Document Reference	Comment	Request/Recommendation
12.	EIS Section 13.1.3	BNDN is not included as a Local Study Area (LSA) Community despite being closer to the Project than other LSA Communities. The Project is situated on BNDN's ancestral lands. BNDN members currently and historically use the LSA for harvesting (commercial and personal) and ceremonial purposes.	BNDN must be identified as a LSA Community. BNDN members and businesses must be eligible for LSA priority status for employment, training, and business opportunities. The EIS should be revised accordingly. A formal agreement between BNDN and Denison is required to outline socioeconomic offsetting measures and benefits should the Project move forward.
13.	EIS Section 12.0 & 13.0	There is no BNDN specific Indigenous Knowledge or socioeconomic data presented in the EIS.	Denison must conduct Indigenous Knowledge and Community well-being Study (or similar) to gather BNDN specific information.

			These studies will allow for a more fulsome assessment of the Project on BNDN rights and interests. Additionally, BNDN specific data will enhance Denison's baseline data and help to inform mitigation and monitoring measures.
14.	EIS Section 13.0	Denison does not classify BNDN as a LSA community. As such, members are not entitled to priority training and employment provisions from Denison on the Project. Without the LSA Community designation, BNDN members are less likely to be employed or trained through the Project. Denison references a Human Resource Development Plan (HRDP) as a mitigation measure to ensure local and regional community members are hired in priority. However, Denison does not provide sufficient details to allow Birch to assess the adequacy of the HRDP.	BNDN must be identified as a LSA Community. BNDN businesses and member owned businesses must be eligible for LSA priority status for business and contracting opportunities. The EIS should be revised accordingly. A formal agreement between BNDN and Denison is required to outline socioeconomic offsetting measures and benefits should the Project move forward. This must include ways for BNDN businesses and member owned businesses to participate in the Project. BNDN requests the ability to review and comment on Denison's Human Resource Development Plan to provide input and recommendations to encourage community participation and employment in the Project.
15.	EIS Section 13.3.2.4	Denison does not classify BNDN as a LSA community. As such, BNDN businesses and partnerships are not entitled to priority procurement provisions from Denison on the Project. Denison states that it will strive to "sustain similar participation targets for the Project as experienced across other mining industries in northern Saskatchewan." Denison states it has "established an internal procurement approach that requires the	BNDN must be identified as a LSA Community. BNDN businesses and member owned businesses must be eligible for LSA priority status for contracting opportunities. The EIS should be revised accordingly. A formal agreement between BNDN and Denison is required to outline socioeconomic offsetting measures and benefits should the Project move forward.

		procurement of all goods and services for the Project to first consider businesses based within the LSA communities prior to looking elsewhere." Without the LSA Community designation BNDN businesses are unlikely to benefit from the Project.	
16.	EIS Section 12.0	While EIS does consider the effects of population changes related to the Project on social adaptability, demand for services and housing, it does not address the full range of potential impacts associated with a transient workforce. Significant research has been conducted to demonstrate the negative impacts of remote workers and work camps on Indigenous women and girls. This must be considered in the EIS.	The EIS must include an assessment of all potential effects of a transient workforce and changes to population dynamics, including those disproportionately experienced by Indigenous women and girls, and other segments of the population. This must incorporate findings of research like the 2017 study completed by Lake Babine Nation and Nak'azdli Whut'en (Indigenous Communities and Industrial Camps), and/or related research in the context of the LSA.
17.	EIS Section 12.0 and 13.0	BNDN notes that no specific management or monitoring plan has been included in the EIS documentation related to the verification of residual socio-economic impacts, both positive and negative, for the local economy.	a) Denison must develop a Socio-Economic Monitoring Plan for the life of the Project to verify the effects assessment included in the EIS and to be included in the Project's approach to adaptive management. This Plan would include an approach, co-developed with Indigenous groups in the LSA (including BNDN), to monitoring the realization of the benefits and impacts of the Project (e.g., employment and procurement targets, training and capacity building, community investments, etc.) as mitigation and enhancement measures are implemented. Monitoring and subsequent regular evaluation would allow for the real-time adjustment of

			targets and/or an approach to adjusting enhancement measures or identifying offsetting benefits where targets are not met. b) The Crown must include the development of a Socio-Economic Monitoring Plan as a condition of approval for the Project.

4.3 Water Resources

In their EIS for the Wheeler River Project, Denison has undertaken a variety of baseline studies to understand the current surface water and groundwater conditions in the Project area. Denison has also modelled the impacts to surface water and groundwater quantity and quality from the project based on their planned activities at the Project. Because the project is using in situ recovery (ISR) to extract the uranium from the ore body, the project is quite different from other uranium mines in Saskatchewan and has some distinct potential impacts to the environment.

Denison expects the impacts to surface water (lakes and rivers) to be extremely minimal compared to other mining operations as there will be substantially less contact water and groundwater for them to manage through treatment and discharge compared to a conventional underground or open pit mine. In the EIS Denison has assumed that they will not recycle any water from their processing plant even though they expect to be able to recycle process water through the ISR process. Even with this relatively conservative assumption, Denison expects the impacts to Whitefish Lake (where treated effluent will be discharged) to be minimal, with a mixing zone of about 5 m. Denison expects to treat all site water through the industrial wastewater treatment plant (IWWTP) prior to discharge to the environment.

Because they do not need to dewater the groundwater for the mine or overprint any significant water bodies, Denison expects to have very little or no (undetectable to the naked eye) impact on surface water levels in lakes and streams around the project.

With their planned mitigation measures, Denison intends for the groundwater in the mining area to be completely isolated from the surrounding natural groundwater during mining. If their mitigation measures are as effective as they expect, there will be no impacts on the surrounding groundwater during operations when they are using ISR to extract the uranium.

After the mine is decommissioned, the freeze wall around the mining area will thaw and groundwater from the ore body (which will have high concentrations of many metals) will interact naturally with the surrounding natural groundwater. To understand how the groundwater impacted by mining will migrate and evolve over time, Denison has undertaken a detailed analysis of how groundwater will flow (using software called FEFLOW) and how the chemistry of the groundwater will change over time (using a software called PHREEQC). Denison ran several different models to predict how groundwater chemistry will flow and evolve over time. Based on their modelling, they expect mine-contaminated groundwater to flow towards Whitefish Lake. Denison's model indicates that selenium and cobalt will be the only contaminants that reach Whitefish Lake in concentrations above water quality guidelines. They expect the peak contamination of selenium to occur 500 years post-decommissioning of the mine, and peak cobalt contamination to occur 30,000 years post-decommissioning of the mine. Based on their model, they expect the changes to Whitefish Lake from the groundwater migration to be essentially undetectable in Whitefish Lake.

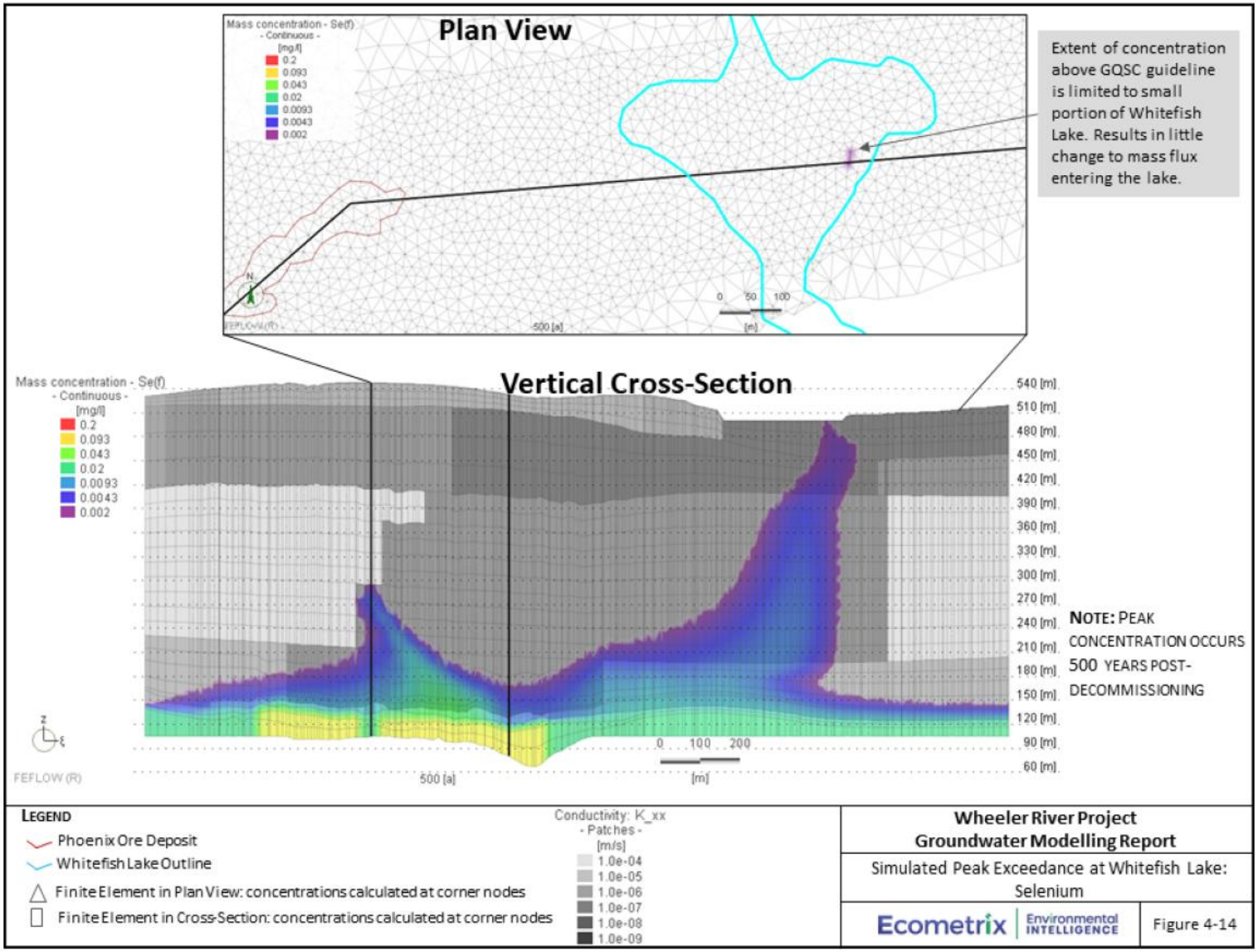

Figure 6: Modelled selenium migration from the ore body post-decommissioning (Ecometrix, 2022)

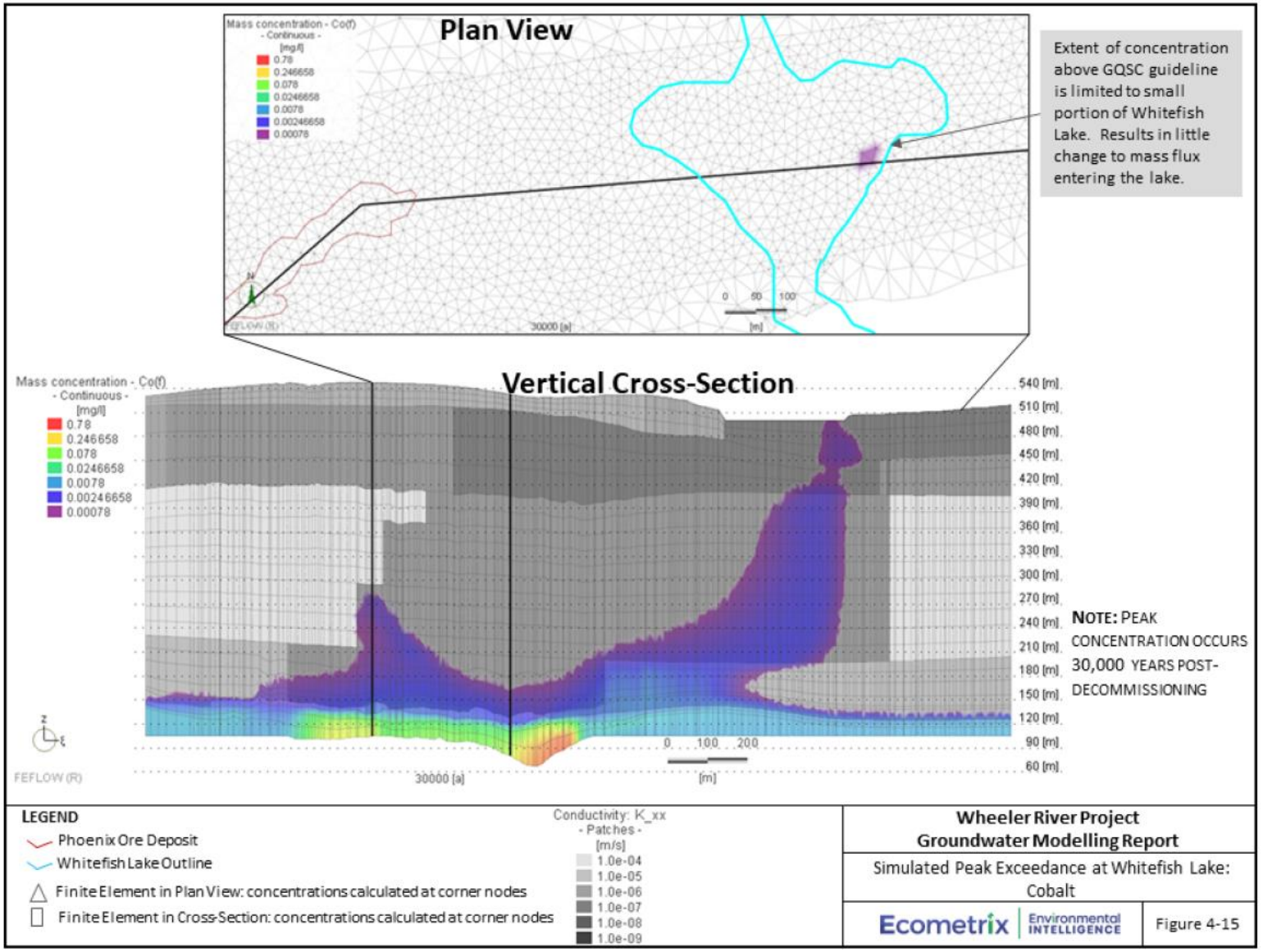

Figure 7: Modelled cobalt migration from the ore body post-decommissioning (Ecometrix, 2022)

Key Issues:

- Denison has not done baseline work on the background concentrations of mercury in soils and wetlands. Denison notes that increases in nutrient and sulphate concentrations can dramatically alter mercury biogeochemical cycling yet they have done no work to assess the presence of mercury in soils or the potential for increased mercury biogeochemical cycling (including mercury methylation) in the downstream environment
- The groundwater modelling indicates that there will be limited or no significant effects on groundwater quality in the long term. This finding is dependent on assumptions in the model which have very limited research to validate the findings. As such the findings in the groundwater model could potentially underestimate the mobility of many metals (and potential for contamination of the environment) in the post-decommissioning phase of the mine.

Table 3. Comments and recommendations for the Wheeler River EIS related to water resources

#	Document Reference	Comment	Request/Recommendation
18.	Draft EIS Appendix 9b Section 2.5.1 and Appendix 8e Table 4	In several instances in the draft EIS Denison has noted that Indigenous Nations are concerned with the possibility of mercury contamination from mining operations. BNDN shares these concerns with other Indigenous Nations. Due to the very low concentrations of mercury present in the Phoenix deposit, Denison has not meaningfully studied the potential impacts the Project may have on altering mercury biogeochemistry in the downstream environment. BNDN notes that background mercury concentrations can be elevated in many unexpected and remote locations due to atmospheric deposition (often due to coal plants) (Jackson, 1997). BNDN is very concerned that Denison has not analyzed for mercury as part of their baseline soil geochemistry assessments for the Project, especially in wetlands downstream of the	a) BNDN requests that Denison undertake baseline studies of mercury concentrations in soils, with a focus on baseline concentrations of mercury in organic wetland soils downstream of the project. Note that mercury sampling should sample total mercury and methylmercury in all analyses, as well as porewater total mercury and methylmercury. The study design and implementation should be undertaken collaboratively with BNDN. b) BNDN recommends that the CNSC requires Denison to undertake a baseline assessment of mercury in soils (with a focus on wetlands) prior to construction of the Project. This may be established as a condition of approval for the Project. c) Depending on the findings of the baseline mercury in soils and wetlands studies, the CNSC should include a condition of approval on the Project that

		Project. Mercury concentrations in wetland soils are sensitive to changes in water chemistry that can lead to increased mercury methylation. This is especially acute from increases in nutrients and sulphates which can active sulfate reducing microorganisms that methylate mercury (Liu, Li, & Cai, 2012). Table 4 of Appendix 8e shows that the effluent discharged to Whitefish Lake will have mercury concentrations almost 5,700 times background concentrations. This dramatic increase in sulfate loading to Whitefish Lake may not exceed water quality objectives unto itself but may be sufficient to meaningfully change mercury biogeochemistry in downstream wetlands. BNDN is very concerned with the complete lack of assessment and analysis of baseline mercury concentrations and the potential changes to mercury cycling that could be induced by the Project.	requires Denison to monitor mercury biogeochemistry in the receiving environment over the life of mine.
19.	Draft EIS Appendix 7c Section 3.5.6.2.1 and Draft EIS Figures 7.6-10 and 7.6-11	Figure 7.6-10 and 7.6-11 of the draft EIS show the results of Denison's modelling of uranium mobility and adsorption from the ore body following the decommissioning of the mine. The figures show that the model indicates that all dissolved uranium will be effectively removed from solution within a short distance of the orebody via adsorption to clays present in the bedrock. In Section 3.5.6.2.1 of Appendix 7c of the draft EIS Denison notes that there is very limited literature available on uranium	a) Denison must develop a process agreement with BNDN to work through our concerns related to long-term groundwater contamination from the Project. This process agreement would lay out the pathway to obtaining BNDN consent for the Project through providing our Nation with confidence that the groundwater and surface water near to the project will not be irreparably contaminated. The process agreement will include additional studies and consultation activities with BNDN

		fate and transport, especially in similar environments to the Wheeler River Project. Denison's uranium speciation model relies almost entirely on a single academic article studying the partitioning of uranium in the alteration halo surrounding the Cigar Lake uranium deposit. Of very important note is that this paper is focused on the pre-mining environment at Cigar Lake and does not examine how uranium partitioning may be dramatically altered by ISR mining. Health Canada published a document on uranium in drinking water in 2017 literature review of uranium mobility, complexation and chemistry in groundwater which documents the widely varying behaviour of uranium in groundwater depending on redox conditions, pH, pressure, and other ions available for complexation which may increase or decrease uranium mobility (Health Canada, 2017). Uranium will be present in extremely high concentrations (100 mg/l) in the restoration solution. Many other anions and cations which uranium is known to form complexes with will also be present in the solution at very high concentrations. The limited literature upon which Denison has developed their models to predict uranium mobility post-decommissioning is insufficient to confidently assert that the very concentrated restoration solution will behave as predicted.	that Denison must undertake. The satisfaction of all terms in the process agreement would be defined by the signing of a Project Agreement between Denison and BNDN. b) BNDN recommends that Denison commit to funding bench-scale studies to validate the outputs from their FEFLOW and PHREEQC modelling. The bench-scale studies should be undertaken by an independent academic.

		Uranium is a common groundwater contaminant around the world and is known to be stable in dissolved forms in groundwater in many locations. Furthermore, some studies have indicated that the effectiveness of adsorption as a mechanism for attenuation of uranium in solution is significantly overstated, especially in environments where there is competition from other ions, as there will be in the restoration solution (Gandhi, Sampath, & Maliyekkal, 2022). BNDN is very concerned that Denison has portrayed their groundwater contamination model in Appendix 7c with an inappropriate level of confidence given the level of uncertainty reasonably inferred from the lack of foundational literature relevant to the circumstances at Wheeler River and the well-understood complexity of uranium fate and transport in groundwater. It is not impossible to imagine that surface water contamination could eventually occur, especially given the exceptionally high concentrations of uranium in the restoration solution. By consenting to the Wheeler River Project, BNDN is supporting a process that will be irreversible once it commences and may be very difficult to manage should the underlying modeling assumption prove to be inaccurate by a significant margin. As a Nation whose members put a very high emphasis on the protection of groundwater resources, BNDN	

		requires substantially greater reassurance through dialogue with Denison and further studies to have confidence that the Project will not irreparably degrade the natural environment in our Ancestral Lands.	
20.	Draft EIS Section 7.6.2.1 and Appendix 7c Section 4.6	In Section 7.6.2.1 of the draft EIS, Denison mentions that they anticipate the outward migration of lixiviant as is observed at other ISR operations globally, and has incorporated their assumed concentrations of metals and the extent of area affected by flare from the ISR operations. Section 4.6 of Appendix 7c states that the flare zone is expected to extend 11 to 13 m but have modelled with a "conservative 50 m flare zone. It is not clear how Denison derived their assessment that the flare zone would extend 11 to 13 m and that a 50 m flare zone is considered conservative for the purposes of modelling. BNDN requires further information to have confidence that the design is as conservative as the Proponent has suggested.	BNDN requests that Denison provide further information on how the size of the area above the deposit affected by flare was calculated and how they determined that 50% restoration solution was determined as the appropriate concentration to base water quality modelling. This item would be best addressed and resolved with BNDN through the process agreement to address BNDN's concerns related to long term groundwater contamination from the Project.
21.	Draft EIS Appendix 7c Section 3.2.2.1	Section 3.2.2.1 of Appendix 7c of the draft EIS describes the natural redox conditions in the ore zone as naturally reducing. The operation of the wellfield will result in the groundwater in the ore zone becoming oxidizing. Post decommissioning, the groundwater in the ore zone can be reasonably anticipated to return to baseline (reducing) redox conditions.	BNDN requests further information on how increasingly reducing groundwater conditions post decommissioning may impact adsorption kinetics of contaminants expected to adsorb to clays. This item would be best addressed and resolved with BNDN through the process agreement to address BNDN's concerns related to long term groundwater contamination from the Project.

		BNDN notes that as redox conditions becoming increasingly reducing post closure, adsorption kinetics of contaminants adsorbed to clays could shift so that contaminants desorb from clays and are remobilized into solution. It is not clear to BNDN that the evolution of redox geochemistry and its implication on adsorption kinetics has been adequately considered by Denison.	
22.	Draft EIS Appendix 7c Section 3.4.	In Section 3.4 of Appendix 7c, Denison reports that they have excluded colloids from their post-decommissioning geochemical modelling. Denison has also noted that colloids would serve to enhance mobility of contaminants and they could precipitate out of solution. BNDN is concerned that by excluding the precipitation of colloids with adsorbed contaminants as a pathway for contaminant transport, Denison has significantly underestimated the mobility of contaminants and the consequent risks to the receiving environment.	BNDN requests that Denison prepare an additional geochemical model that considers the roles that colloids could potentially contribute to contaminant transport. The findings of this additional model (along with the other models) should be reviewed with BNDN. This item would be best addressed and resolved with BNDN through the process agreement to address BNDN's concerns related to long term groundwater contamination from the Project.
23.	Draft EIS Appendix 7c Section 4.0	In Section 4.0 of Appendix 7c of the draft EIS, Denison reports that the composition of restoration solution 1 and restoration solution 2 were derived from metallurgical testing. While this is likely the best BNDN notes that the initial solution used in the geochemical modelling is enormously consequential in the accuracy of the modelling and require further confirmation and confidence	BNDN requests that Denison provide further information on how the chemistry in restoration solution 1 and restoration solution 2 were derived and any evidence they can provide that gives them confidence that these solutions are an accurate reflection of what will be observed in the wellfield. This item would be best addressed and resolved with BNDN through the process agreement to address BNDN's concerns

		that the restoration solutions are accurate to within a reasonable margin of error for the geochemical modelling.	related to long term groundwater contamination from the Project.
24.	Draft EIS Appendix 7c	BNDN notes that Denison has not provided any discussion on the extent to which the lixiviant and the solution used to flush the wellfield at the end of operations will interact with the underlying paleoweathered bedrock. BNDN notes that is it possible that there are mineral phases within the paleoweathered bedrock that are also readily soluble when exposed to the lixiviant. While BNDN recognizes that the paleoweathered bedrock has a low permeability, it is unclear to BNDN as to whether the lixiviant will contribute to mobilization of contaminants from the paleoweathered bedrock that requires consideration in the post-decommissioning groundwater model.	BNDN requests that Denison provide any available information on how the bedrock may be altered (through dissolution of soluble mineral phases) by the lixiviant and the flushing of the wellfield during decommissioning, and whether this has been factored into their post-decommissioning groundwater model. This item would be best addressed and resolved with BNDN through the process agreement to address BNDN's concerns related to long term groundwater contamination from the Project.
25.	Draft EIS Appendix 7c Section 5.2.2	In section 5.2.2 of Appendix 7c of the draft EIS Denison reports the assumptions built into their post-decommissioning groundwater modelling. BNDN notes that Denison has assumed that adsorption reaction sites are assumed to be available uniformly throughout the subsurface parameter zones. The presence of sufficient adsorption sites is a primary variable which determines the outcomes of the groundwater modelling, as adsorption of ions out of solution is the primary means by which contaminant transport is attenuated in Denison's modelling.	BNDN requests that Denison provide justification for the assumption that adsorption sites will be uniformly available throughout the sub-surface parameter zones. BNDN requests that Denison provide information on how they estimated the extent to which adsorption sites are already saturated prior to mining. This item would be best addressed and resolved with BNDN through the process agreement to address BNDN's concerns related to long term groundwater contamination from the Project.

		BNDN is concerned that the presence of a variable that is so consequential to the findings of the model is based primarily on assumptions with limited information to base the assumptions upon.	
26.	Draft EIS Appendix 7c Table 3-10	Table 3-10 of Appendix 7c of the draft EIS shows the expected adsorbing mineral properties of the mineral phases to which contaminants are expected to adsorb out of solution. BNDN notes that the lixiviant and restoration solution could affect the ability of. In particular, the clays immediately surrounding the orebody are within the freeze wall and will be directly exposed to the lixiviant during operations, which may impact the clays ability to adsorb contaminants out of solution. BNDN notes that the clays immediately surrounding the orebody may be soluble in the presence of the lixiviant or may be altered to have a lower capacity to adsorb metals. BNDN requires further information from Denison to have confidence that the clay phases which play a crucial role in contaminant attenuation will not have their adsorptive capacity impacted by the operation of the wellfield.	BNDN requests that Denison provide available information on whether clay mineral phases are anticipated to dissolve through the ISR mining process, and whether the restoration solution will impact the ability of clays to effectively adsorb contaminants. This item would be best addressed and resolved with BNDN through the process agreement to address BNDN's concerns related to long term groundwater contamination from the Project.
27.	Draft EIS Section 1.1.1	In Section 1.1.1 of the Draft EIS, Denison notes that "the Gryphon deposit is not amenable to ISR mining and, accordingly, is not included in the EIS". Denison has previously reported that the Gryphon deposit has nearly as much uranium as the Phoenix deposit.	Given the potential longer term mining activities at the Wheeler River project beyond the Phoenix deposit, BNDN requests that any project agreement between BNDN and Denison include terms for ongoing dialogue related to future exploration and project development activities at the

		While the Gryphon deposit is not amenable to ISR, it is potentially still an economic resource which Denison may wish to mine. While the Gryphon deposit is not in scope for this environmental assessment, BNDN expects to be kept informed of future potential mining activities on the Wheeler River Project which Denison may be considering, including additional exploration on the Property, as future activities on the Property will also have impacts on our Treaty and aboriginal rights and interests.	Wheeler River Project and at all Denison Projects on BNDN Ancestral Lands.
28.	Draft EIS Section 2.3.3.1.3	In Section 2.3.3.1.3 of the draft EIS Denison describes the proposed decontamination, demolition and disposal activities at the Project. BNDN notes that Denison has described a detailed process for decommissioning the injection and recovery wells but has not described how the freeze wells will be decommissioned. BNDN notes that the freeze well holes may serve as preferential pathways for contaminated groundwater movement. Given the proximity of freeze wells to the orebody and the number of freeze wells proposed to be drilled, proper closure of freeze wells is also important for protection water quality long term.	a) BNDN request that Denison clarify the process by which they will decommission the freeze wells. b) BNDN requests that Denison decommission the freeze wells using the same process as is proposed for the decommissioning of the injection and recovery wells.
29.	Draft EIS Section 2.3.3.1.3	In Section 2.3.3.1.3 of the draft EIS Denison describes the thawing of the freeze wall as part of the decommissioning of the mine. BNDN notes that water expands when frozen	BNDN request that Denison provide evidence from academic literature or other mine sites employing freeze wall technology to determine the extent the freeze wall could expands joints and fractures within the

		and could potentially be capable of expanding pre-existing joints and fractures within the host rock. BNDN is concerned that the thawing of the freeze wall could lead to expanded joints and fractures which would allow for far more rapid contaminant transport away from the ore body and restoration solution than is modelled in the post-decommissioning groundwater model.	rock once thawed, including at unconformities or other pre-existing structural weaknesses within the host rock.
30.	Draft EIS Figure 2.2-15 and Section 2.2.3	In Section 2.2.3 of the draft EIS, Denison notes that they have made the conservative assumption that no water would be recycled as mining solution as part of their water balance calculations. BNDN agrees that this conservative assumption is appropriate for assessment of potential impacts of the Project. While this assumption is appropriate for the environmental assessment, BNDN wishes to understand the proportion of industrial wastewater that may be recycled on site and any commitments Denison is willing to make regarding continual refinement of the water treatment process to increase the proportion of water that is recycled.	a) BNDN requests that Denison commit to continual refinement of the Industrial Waste Water Treatment Plant (IWWTP) treatment process to maximize the amount of water that is recycled to the deposit. b) BNDN recommends that the Crown include a condition of approval for the project regarding continual improvement of water treatment to maximize recycling. c) BNDN requests that Denison share available information on the proportion of water that they currently anticipate being able to recycle.
31.	Draft EIS Figure 2.2-15 and Section 2.2.3.2	In Section 2.2.3.2 and Figure 2.2-15 of the draft EIS, Denison describes their water balance for the project and anticipated water needs to operate the ISR wellfield. BNDN notes that the EIS does not describe how Denison derived their estimate for the quantity of water required to operate the ISR wellfield. BNDN is concerned that the	a) To demonstrate that Denison has not significantly underestimated the volume of water required to operate the wellfield, BNDN requests that Denison provide evidence that the volume of water required to operate the wellfield is accurate. This should include an assessment of their level of confidence

		volume of water required to operate the wellfield may be substantially greater than is estimated in the draft EIS. Utilizing greater volumes of water in the wellfield would have cascading effects throughout the water balance, including greater demand on the IWWTP, greater storage volumes required in the process water storage pond, greater UBS holding pond capacity and greater volumes of effluent discharge to Whitefish Lake. BNDN is concerned with the potential cascading risks associated with an inaccurate assessment of the volume of water required to operate the ISR wellfield. BNDN also wishes to understand whether it is possible that Denison will be required to operate the wellfields at a higher pressure, even if only temporarily. BNDN notes that operating wells at higher pressure come with additional workplace and environmental hazards, especially when dealing with a strongly acidic lixiviant.	they have in their estimated water consumption. b) BNDN requests that Denison provide BNDN with information on potential contingency measures (such as constructing additional process water pond capacity) should their estimated water consumption c) Denison must commit to updating their mixing zone assessment should they find it necessary to discharge greater quantities of effluent to Whitefish Lake than is estimated in the draft EIS. d) Denison must document the implications of operating the wellfield at a substantially higher pressure than currently expected.
32.	Draft EIS Table 2.3-3	Table 2.3-3 of the draft EIS shows Denison's proposed mining area decommissioning objectives, which are the groundwater quality objectives for the residual water in the ore zone following the flushing of the system during mine decommissioning. BNDN is surprised to see that relatively high concentrations of metals are expected to remain in the restoration solution as a final objective, such as 100 mg/l uranium	a) BNDN requests that Denison provide documentation that estimates the time, efforts and costs associated with reducing concentrations of metals in the restoration solution by 1 order of magnitude and 2 orders of magnitude. Note that these calculations should include costs that could be recovered by processing subeconomic UBS. b) BNDN requests that Denison work with BNDN through terms defined in a BNDN project agreement to establish

		and 2 mg/l cobalt, amongst many other metals. BNDN notes that potential risks to groundwater and surface water could be dramatically reduced through more stringent mining area decommissioning objectives. It is also feasible that processing efficiencies and high uranium prices may allow for substantially lower concentrations of uranium to be mined economically. The long-term contamination of groundwater from the high concentration of metals in the restoration solution is one of BNDN's primary concerns with the Wheeler River Project, and BNDN would strongly prefer that Denison strive to minimize the residual contamination remaining in groundwater following decommissioning to the greatest extent possible.	achievable decommissioning objectives that would be satisfactory to BNDN. c) BNDN requests that the Crown place a condition of approval upon the Wheeler River Project that Denison is required to work with BNDN to establish mutually agreeable mining area decommissioning objectives. d) BNDN requests that Denison undertake a study of ISR operations elsewhere in the world to determine the lowest concentrations of UBS that could be processed economically utilizing industry best practices and commit to exceeding global standards.
33.	Draft EIS Section 2.2.2.2.2 and Figure 2.2-18	In Figure 2.2-18 of the draft EIS, Denison shows the proposed design of the double composite liner system for the ponds on site and the UBS holding area. BNDN notes that the risks associated with temporary storage of UBS is much greater than other contact water on site which is proposed to be stored in a similar means. As such, BNDN is concerned that the proposed UBS holding area does not have adequate leak detection given the additional risk associated with the UBS relative to contact water on site. BNDN also notes that open air storage of UBS presents the risk of incidental interactions with wildlife near to the	a) BNDN requests that Denison commit to storing UBS in appropriate tanks as opposed to open air storage. b) BNDN requests that Denison include a leak detection pipe in the prepared subgrade below the secondary containment as well as between the primary and secondary containment layers. BNDN also requests that the prepared subgrade be engineered to facilitate maximum utility of the leak detection below the secondary containment.

		project (such as birds), which would potentially be acutely toxic. BNDN is also concerned that there is no leak detection system below the secondary HDPE geomembrane and geosynthetic clay liner. Should the secondary containment layers also become compromised, Denison does not have a system planned to detect this.	
34.	Draft EIS Figure 2.3-1	In draft EIS Figure 2.3-1, Denison shows an additional ore body to the Southwest of Phase 5. Denison has not included this additional ore body in the mine plan in the draft EIS and has not discussed whether they have intentions to mine this ore body or undertaking a project change at a later date to include this additional ore body. It is unclear whether this additional ore body has any implications for the long term groundwater quality modelling either through the additional orebody altering anticipated groundwater chemistry, or the restoration solution dissolving metals in the additional orebody increasing overall metal loading. Given the probable difference in groundwater and mineral geochemistry in the additional orebody relative to the overlying sandstone and underlying basement rock, there is likely to be interaction between the restored solution and the additional orebody post-closure.	a) BNDN requests that Denison clarify whether they are considering adding the additional orebody to the southwest of Phase 5 into the mine plan, including clarifying whether the additional ore body is amenable to ISR mining. b) BNDN requests that Denison clarify what the anticipated permitting associated with the additional ore body would be. c) BNDN requests that the post-decommissioning groundwater modelling for the Project include interactions between the additional ore body and the restoration solution to understand if the ore body poses a risk of additional metal loading to groundwater.

35.	Draft EIS Section 2.2.1.3 and 7.6.2.1	Denison intends to use a freeze wall as tertiary containment for the operation of the wellfield during operations. In general BNDN is supportive of this containment measure but requires further information to have confidence that the freeze walls will operate as designed. In particular, BNDN notes that while the freeze wall will be continuous from the ground surface all the way into the basement rocks underlying the orebody, the freeze wall is by far the most consequential immediately around the ore body itself. The orebody is approximately 400 m below the ground surface (where the earth would be significantly warmer) and the lixiviant is expected to be at least 10 degrees warmer than the surrounding groundwater would be. Considering that the cold brine will need to be injected nearly half a kilometer into the earth where warm lixiviant will be injected into the wellfield, BNDN is concerned that the freeze wall may be ineffective in and around the ore body where it is required. Furthermore BNDN is concerned that the monitoring system for assessing the stability of the freeze wall may not adequately detect the continuity of the freeze wall at depth. As such, BNDN is concerned that the freeze wall may be ineffective and in fact obscure our ability to recognize contamination of the surrounding groundwater from the freeze wall operating ineffectively.	a) BNDN requests that Denison provide information to demonstrate that the freeze wall will in fact be frozen in and around the ore body. If there is any doubt that the freeze wall will indeed be frozen around the ore body, Denison should describe further measures they can undertake to ensure that the freeze wall is frozen as intended around the ore body. b) Denison must provide BNDN with further information on how they will monitor the performance and continuity of the freeze wall. c) BNDN requests further information on the proposed groundwater monitoring program around the wellfield. d) BNDN requests the opportunity to review the groundwater monitoring plan and to review groundwater monitoring data as part of a BNDN-Denison environmental committee developed through a BNDN-Denison project agreement.

36.	Draft EIS Section 2.9.1.3.1	In draft EIS Section 2.9.1.3.1 Denison documents their conceptual level environmental protection program, including several proposed management and monitoring plans which they will develop to manage operations on site. The environmental protection measures which Denison undertakes at the Project site are highly consequential to BNDN, and BNDN requires the opportunity to provide our knowledge and input into environmental protection measures developed for activities within our Ancestral Lands.	a) BNDN requests that Denison commit to involving BNDN in the development, review and approval of all environmental monitoring plans developed for the Project. Details of BNDN involvement in the development of environmental monitoring plans should be undertaken within an Environmental Committee, with specific terms defined within a BNDN-Denison Project Agreement for the Wheeler River Project b) BNDN requests that the CNSC impose a condition of approval on the project which states the requirement for Denison to consult with BNDN on all environmental management and monitoring plans for the project.
37.	Draft EIS Section 7.6.2.3	In Section 7.6.2.3 of the draft EIS and the geology and groundwater summary table in Appendix 16A, Denison states that they expect no residual effects to groundwater quality during the operations, decommissioning or future centuries period of the Project. Denison has also not placed a significance determination on the impacts to groundwater quality based on the findings of the draft EIS due to groundwater being considered an intermediate VC. BNDN disagrees with both the residual effects assessment and the fact that groundwater quality has been assessed solely as an intermediate VC. The protection of groundwater resources is highly important to BNDN. Our members place immense value on clean spring water and the	a) Denison must apply a significant determination to groundwater quality and quantity for all projects phases, <u>including the future centuries period.</u> The significance determination must be developed following consultation and engagement with BNDN. b) Denison must re-evaluate the residual effects of the project on groundwater quality <u>including the future centuries period</u>. This re-evaluation must be following consultation and engagement with BNDN. c) BNDN requests that the CNSC work with our Nation to understand the significant impacts that the permanent contamination of groundwater caused by the project will have on our Treaty and Aboriginal rights.

		protection of groundwater more generally. The advancement of the Wheeler River Project will permanently impair groundwater resources in and around the Wheeler River Project. The contamination of groundwater at the Project will have a significant impact on our members' connection to the land and ability to exercise our Treaty and Aboriginal rights. We see the limited interpretation of residual effects and the lack of inclusion of groundwater quality as a receptor VC as a significant oversight in the assessment of impacts of the Project on the environment and BNDN Treaty and Aboriginal rights. This must be corrected to properly assess the Project and thus ensure that project impacts are appropriately mitigated and accommodated.	
38.	Draft EIS Section 7.8.2	Section 7.8.2 of the draft EIS documents the groundwater monitoring proposed for the surface facilities and the ISR recovery area. It also describes a conceptual excursion contingency plan wherein Denison has proposed their plans to manage situations where groundwater contamination occurs beyond what is predicted in the EIS. BNDN notes that Section 7.8.2 lacks information on the involvement of Indigenous Nations related to groundwater monitoring. As stated previously, BNDN is highly concerned with the level of impact the Project will have on groundwater resources. As such BNDN requires Denison to communicate excursions of	a) BNDN requests that Denison revise Section 7.8.2 to include Indigenous engagement and input for groundwater monitoring results and the management of observed groundwater excursions. The manner in which Denison engages BNDN on groundwater monitoring and management will likely occur through an Environmental Committee, which should be defined in a BNDN-Denison Project Agreement. b) BNDN requests that the CNSC impose a condition of approval on the Project that clarifies that Denison is required to engage with impacted Indigenous Nations such as BNDN on groundwater monitoring and management.

		groundwater and the consequent management of excursions to our Nation.	
39.	Draft EIS Appendix 8d	In Appendix 8d, Denison documents their baseline aquatics studies undertaken for the Wheeler River EIS. Denison has included some lakes and rivers upstream of the Project as background sites for understanding project impacts to the aquatic environment. BNDN notes that there are many additional sites throughout our Ancestral Lands which would benefit from ongoing aquatic monitoring and would be potentially suitable for the Project as background sampling sites.	BNDN requests that Denison work with our Nation to identify potential additional background sampling sites within our Ancestral Lands for aquatic monitoring for the life of Project. The details of such should be defined in the BNDN-Denison project agreement.
40.	Draft EIS Section 2.2.1.4.2	In Section 2.2.1.4.2 of the Draft EIS Denison discusses the operation of the wellfield during the operations phase of the mine. BNDN notes that many of the details in this section are conceptual in nature and thus could require significant refinements in design to achieve the desired recovery consistently throughout the life of mine. Amongst other concerns related to operations of the ISR wellfield, BNDN is concerned that Denison may alter the chemical composition of the lixiviant used in the ISR wellfield which could cause inadequately understood changes in potential effects of the Project to the environment. These effects could include significant changes to the final restorative solution at the end of mine life or significant changes in the treatment	a) BNDN requests that Denison provide information on • The likelihood of the chemical composition of the lixiviant changing throughout the life of project • Potential changes to the lixiviant composition • The implications for long term groundwater quality and effluent treatment from changes in lixiviant chemistry b) BNDN requests that Denison commit to ongoing communications and engagement with BNDN regarding changes to the wellfield operation throughout the life of mine. The terms of engagement should be defined in a BNDN-Denison project Agreement.

		requirements for the IWWTP that impact the ability of Denison to achieve effluent quality criteria for significant periods of time.	
41.	Draft EIS Appendix 8e Table 4	Table 4 of Appendix 8e of the draft EIS shows the predicted site discharge concentrations of the contaminants of potential concern (COPCs). BNDN notes that the concentrations of a number of COPCs do not achieve water quality objectives that is the best available technology economically achievable (BATEA). Example COPCs include copper, molybdenum, selenium, uranium, vanadium, zinc and ammonia. BNDN requires proponents operating on our Ancestral Lands to, at a minimum, achieve BATEA standards for effluent treatment and discharge. This takes reasonable and appropriate precaution without imposing unreasonable costs on the operation.	a) BNDN requests that Denison commit to achieving BATEA criteria for all COPCs in their effluent. b) Denison must work with BNDN to identify mutually agreeable and appropriate effluent discharge criteria for their effluent. BNDN expects that identifying suitable effluent discharge criteria will be undertaken through an Environmental Committee with a terms of reference defined in a BNDN-Denison project agreement c) BNDN requests that the CNSC impose a condition of approval on the Project that BNDN
42.	Draft EIS Appendix 8e Table 7	Table 7 of draft EIS Appendix 8e shows the anticipated size of the mixing zone under 3 different flow conditions, including the calculated 7Q10 flow. While BNDN understands that Denison expects to discharge relatively small volumes of effluent to Whitefish Lake compared to a conventional open pit or underground mining operation, BNDN is concerned that the mixing zone assessment underestimates the magnitude of impact that the project will have on Whitefish Lake.	BNDN requests that Denison undertake a plume delineation study and provide BNDN the opportunity to review the findings of the study through the BNDN-Denison Environmental Committee for the Wheeler River Project.

43.	Draft EIS Appendix 10a	BNDN notes that the environmental risk assessment (draft EIS Appendix 10a) makes no mention of potential impacts the project may have on mercury biogeochemical cycling and the consequent risks to the environment and human health. This is unsurprising given the lack of baseline sampling of mercury in sediments and soils, especially wetland soils. The lack of baseline mercury sampling is a significant oversight given the significant impact that mining operations can have on mercury biogeochemistry, including mercury methylation, and mobility of mercury species within the environment. BNDN is very concerned with the complete lack of assessment of this important consideration for the project and the consequent inability for our members to adequately understand the potential risks to our Treaty and Aboriginal rights from these risks. Note that the absence of baseline information gathered can be reasonably considered an impact on our Treaty and Aboriginal rights as our members will avoid exercising our rights if we lack the information to have confidence that it is safe to do so.	Denison must revise Appendix 10a of the draft EIS to incorporate findings from the mercury baseline studies in wetland soils and sediments requested by BNDN.
44.	Draft EIS Table 2.2-4	In Table 2.2-4 of the Draft EIS, Denison documents their planned chemical used for the project. BNDN notes that Denison intends to use zero-valent iron (ZVI) in the IWWTP, but not as part of the remediation solution for	BNDN requests that Denison investigate the suitability of using zero-valent iron to remediate the groundwater within the wellfield as part of the decommissioning process.

		the mine. BNDN notes that ZVI is used to treat contaminants in groundwater around the world. Denison has not discussed whether they have investigated the possibility of utilizing ZVI to remediate the wellfield during decommissioning. Protection of groundwater is of exceptional importance to BNDN. BNDN is concerned that Denison has not made a complete or comprehensive effort to understand how to minimize negative impacts to groundwater from the project using proven technologies that may be suitable for remediating the restoration solution in the wellfield during the decommissioning phase of the mine.	

4.4 Aquatic Wildlife

BNDN has undertaken a review of the interactions between the Project and aquatic resources and the way that these resources may interact with BNDN's rights, values, and interests. This has included an investigation of how information has been collected, analyzed, and interpreted by the Proponent. Valued Components (VCs) considered as part of this section include:

- Surface water quantity
- Surface water quality
- Sediment quality
- Benthic invertebrates
- Fish and fish habitat
- Fish health

Information gaps, issues, and additional mitigation measures or accommodations related to aquatic resources are described in the comments in Table 4 below. A brief summary of relevant information is included below to support interpretation of these comments.

The proposed Wheeler River Mine occurs in the Icelander River watershed that drains into Russell Lake (Figure 8). Baseline water quality of lakes and streams within the RSA are generally below applicable guidelines for protection of aquatic life. However, concentrations of aluminum, lead, iron, and cadmium all showed some exceedances over guidelines. Sampling of benthic invertebrates in baseline studies of McGowan Lake, and Whitefish Lake found communities that are typical of depositional environments with species of chironomids, midges, water fleas, and worms. Sediments in these lakes are also typical of depositional environments, with primarily small particles such as clay dominating and lesser amounts of silt and sand in areas of higher water velocity. Background concentrations of metals and other contaminants in sediment are at or below applicable guidelines in most instances. Fish identified in the study area inhabit rivers, streams and lakes within the RSA. This includes lake trout, lake whitefish, northern pike, walleye, burbot, yellow perch, arctic grayling, and several suckers and small-bodied species (e.g. lake chub, spottail shiner, and ninespine stickleback).

Environmental management throughout the life of mine will occur to collect water that has been affected by the Project, minimize mobilization of sediment/soils, and reduce contaminants from effluent discharge or groundwater from entering surface water. Freshwater for all project requirements, including potable water, process water, wash water, fire suppression, drilling and batch plant will be sourced from Whitefish Lake or shallow groundwater.

Domestic wastewater, from sinks, showers, toilets, washing machines, and kitchens, will be treated on-site in the domestic wastewater treatment plant (DWWTP) and discharged to the process water pond. From there it will undergo additional treatment in the Industrial Wastewater Treatment Plant (IWWTP) before being recycled in the process plant or discharged to Whitefish Lake. Denison is planning to

maximize use of treated wastewater as make-up water for the processing plant, diminishing the volume of freshwater required and wastewater discharged.

Mine contact water and process water will be collected and treated. Denison proposes to direct treated wastewater from the IWWTP to three effluent monitoring and release ponds before being discharged to Whitefish Lake during operations (years 3-18) and decommissioning (years 18-23). Water will be held in these retention ponds until water quality meets regulatory discharge criteria.

Key Issues:

- Lack of storage capacity in Effluent Monitoring and Release Ponds may limit operational flexibility. In the event of poor water quality, the Proponent will have very limited ability to retain water for additional treatment prior to discharging to Whitefish Lake.
- The sampling effort for identifying the species diversity and relative abundance of the fish community is low. BNDN recommends that Denison undertake an additional round of spring and fall fish sampling.
- It is unclear how BNDN will be involved in ongoing environmental oversight for the Project and how results of environmental monitoring (e.g. surface water and fish tissue data) will be shared. BNDN requests that Denison discuss the development of an Environmental Committee (or similar mechanism) and communication strategies for sharing results with BNDN.

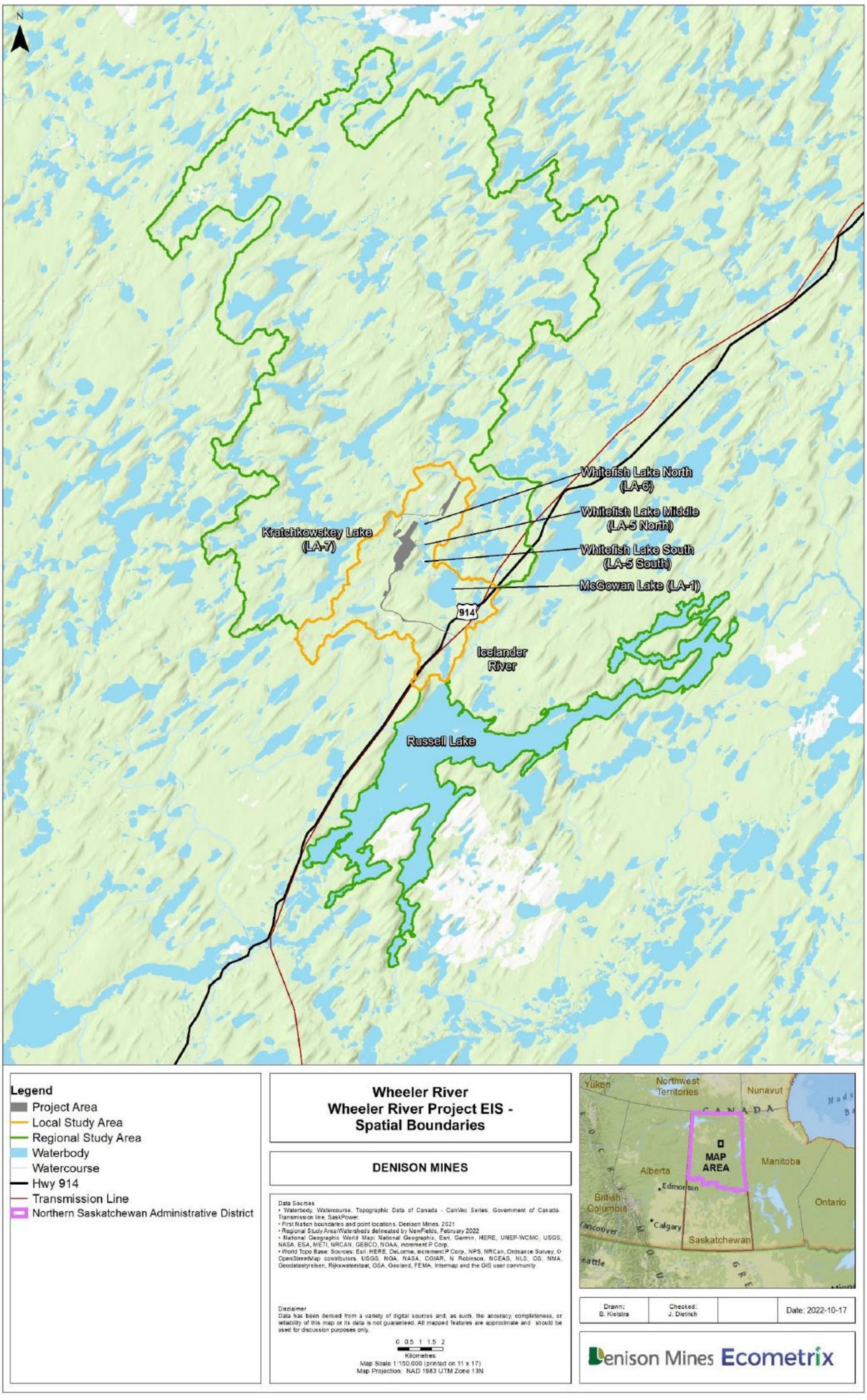

Figure 8. Study Area Boundaries for Fish and Fish Habitat of the Wheeler River Project (Denison, 2022)

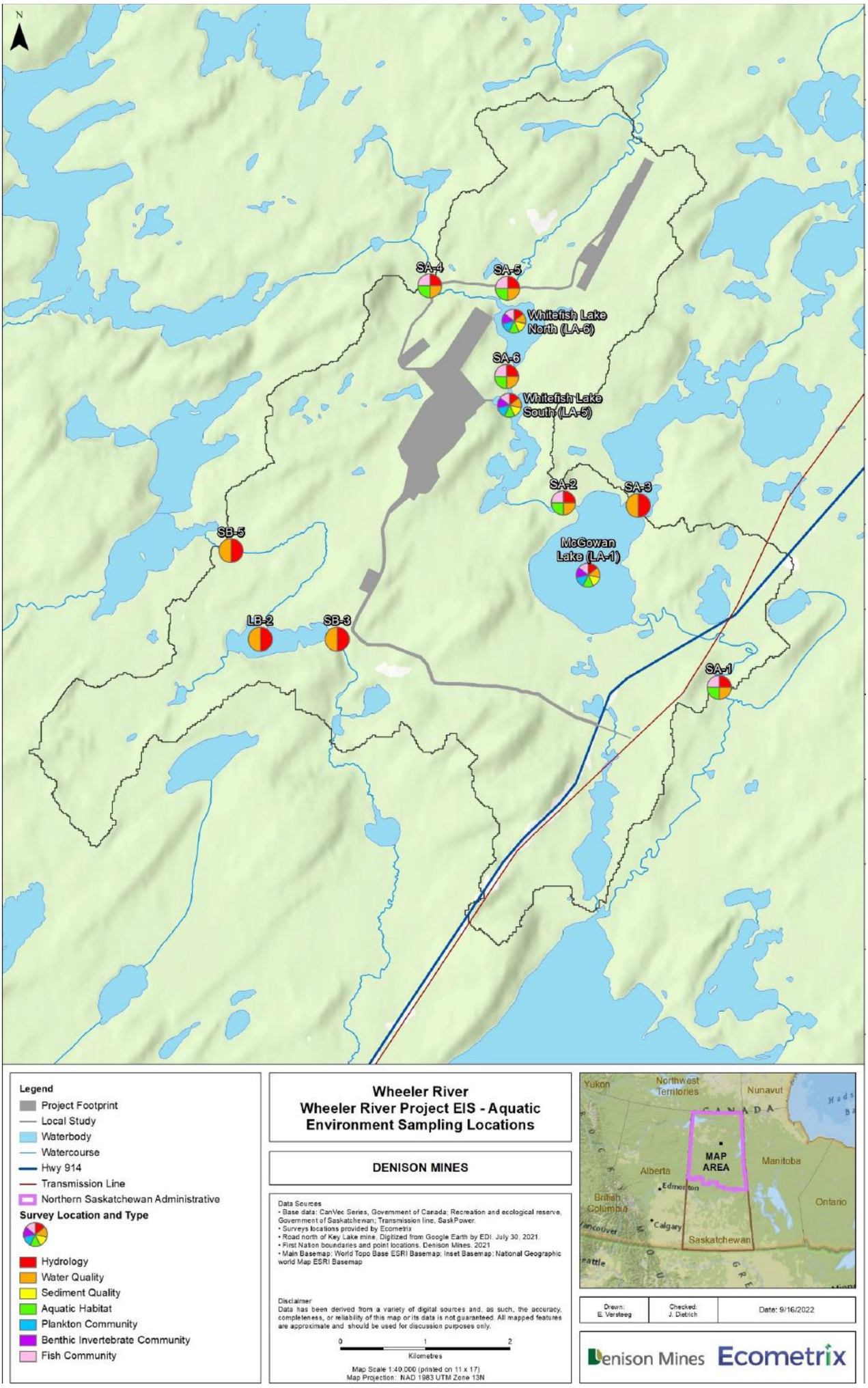

Figure 9. Aquatic Environment Sampling Locations for Wheeler River (Denison, 2022)

Table 4. Comments and recommendations for the Wheeler River EIS related to aquatic resources

#	Document Reference	Comment	Request/Recommendation
45.	8.2.4.1.1 Site Water Management	BNDN is concerned that the small volume of Effluent Monitoring and Release Ponds may create a lack of operational flexibility. For example, in the EIS, it is state that: "*Treated water from the IWWTP will be pumped to the three Effluent Monitoring and Release Ponds (each 3,300 m3). These ponds will be designed to hold effluent for 72 hours for testing before discharge to the environment*." – EIS, pp 723 If water quality in these ponds exceeds discharge criteria then there may be a need to store water so that additional treatment and monitoring can occur prior to discharge. However, only having capacity for three days of storage means it is unlikely the Proponent would be able to adequately treat water prior to reaching storage capacity, resulting in a need for emergency release of poor-quality water.	a) BNDN requests that additional storage capacity be included as part of the design for water management system. This must include adequate storage capacity to ensure Denison has the ability to retain water for sufficient time to allow treatment, in the event that exceedances of water quality discharge criteria occur. Alternatively, Denison can commit to halting discharge (and operations if required) should water quality exceed discharge criteria. Discharge into Whitefish Lake would resume once water quality in the Effluent Monitoring and Release Ponds has been returned to below discharge criteria. b) BNDN requests that the CNSC impose a condition of approval for the Project that requires Denison to must meet effluent discharge criteria prior to discharge and must halt operations if treated effluent in the monitoring and release ponds does not meet effluent discharge criteria.
46.	Appendix 8-D Aquatic Environment Baseline Study	Fish community sampling is an important component of baseline studies for many reasons, including identifying species present (including any species at risk) and evaluating relative abundance (e.g. CPUE). A robust program should include multi-season and multi-year approach. This allows improved characterization of	a) BNDN requests that the Proponent build on the existing data for fish community sampling by collecting an additional round of spring and fall sampling. b) BNDN requests that an assessment of total effort, total catch, and CPUE be provided for each capture

		seasonal habitat use and accounts for natural variability. In the baseline aquatic assessments, the Proponent has focused fish community sampling in fall 2016, with some limited additional sampling of in spring 2017. This low level of effort will make it difficult to draw meaningful comparisons with monitoring work that will occur during the life of mine. Furthermore, CPUE has only been reported for electrofishing effort. As a result, there is very limited information available for relative abundance of fish in important waterbodies, including Whitefish Lake, McGowan Lake, and Russell Lake. **BNDN notes that a raw representation of total effort is provided in table A-13 of Appendix 8D but requests that an assessment of total effort, total catch, and CPUE be presented in the EIS for each capture method/location**	method/location where fish sampling has occurred.
47.	8.2.5 Mitigation Measures	The Proponent has identified one mitigation measure that includes sharing of monitoring results to assess performance of water management system (EIS, pp 8-90, 8.2.5 Mitigation Measures). BNDN is supportive of this type of information sharing and believes that it can be an important component of transparency and trust-building between the Proponent and other parties. However, it is important that information sharing be done in a	BNDN requests involvement in discussions with Denison about sharing of information related to water quality monitoring (and environmental monitoring more broadly). Some methods of communication that may support accessibility of data include: • Public-facing summary reports on a regular schedule (e.g. quarterly or annually) • Real-time access to environmental monitoring data through online database portals.

		way that is accessible to community members.	• Semi-regular community meetings hosted in Turnor Lake (e.g. every 12-18 months, as decided in conjunction with BNDN leadership within a Project Agreement with BNDN). • Presentations to BNDN staff, leadership, and/or community members by BNDN Environmental Monitors. The specific methods used for information sharing and appropriate levels of support from Denison can be determined through consultation with BNDN.
48.	8.5 Fish Health	The Proponent has completed predictive modelling for concentrations of contaminants in fish tissue. For example, results of modeling for selenium indicate that concentrations will fluctuate throughout operations but remain below the recommended criterion of 2.83 mg/kg wet weight (from the US EPA). Should the Project proceed, information on contaminants in fish tissues will be highly relevant for BNDN and land users who eat fish from the area.	BNDN requests that results of fish tissue monitoring (e.g. EEM studies) be shared in a publicly available and accessible way. This must include comparisons with guidelines and information on other contaminants of importance (e.g. mercury). Discussions regarding how this information can be shared with BNDN should occur alongside the discussions related to water quality monitoring results (see comment above).
49.	8.3 Fish and Fish Habitat	Increased fishing pressure in Whitefish Lake from employees working at the Project site and increased ability for visitors due to improved access could negatively impact fish populations. Preferred species, large-bodied fish, and older individuals are most likely to be targeted. This may have negative consequences on the population structure of fish in the lake as well as the ability of BNDN members to exercise fishing rights.	BNDN recommends that the policies Denison sets related to staff and contractors fishing while on site are determined collaboratively with BNDN through the Environmental Committee defined in a BNDN-Denison project agreement.

50.	8.3.4 Assessment of Project-related Effects	The EIS provides very few details regarding how spills, leaks, and other accidents and malfunctions will be managed to mitigate the impacts on fish and fish habitat. Over the life of the mine there will inevitably be accidents and malfunctions. One of the most common environmental issues that will be encountered is leaks and spills. These can typically be managed through good monitoring and preparedness, though if they occur near water, the ability to clean them quickly is difficult and can result in harm to aquatic communities.	BNDN request additional information regarding the development of spill prevention programs, emergency management procedures, and monitoring and remediation programs for accidents and malfunctions. Representatives from BNDN need to be included in the planning and execution of monitoring and remediation activities to provide community perspectives in Project activities. One method through which BNDN can be involved in these discussions is through the development of an Environmental Committee (see comment below).
51.	8.3.8 Monitoring and Follow-up	There is no discussion on how Indigenous communities, such as BNDN, will be included in environmental management, emergency management, monitoring, and remediation. This includes issues related to ongoing permitting or specific remediation such as in the case of an accident or malfunction.	To support BNDN's ongoing participation in monitoring and oversight of the Project, we request the establishment of an Environmental Committee or similar oversight mechanism. The purpose of the committee will be to review monitoring data and monitoring reports produced during the life-of-mine to ensure that environmental protection is sufficient for all VCs. The committee can also participate in permitting throughout the life-of-mine for all relevant applications (e.g. Fisheries Act authorizations, water permits, Closure Plan updates etc.) and provide input to management plans (e.g. EPPs, Surface Water Management Plan, Environmental Monitoring Plans, etc.). The specific details of such a committee can be developed through consultation with BNDN and must be formalized through a BNDN-Denison project agreement.
52.	8.3.5 Mitigation Measures	Mitigation measures are an important component of Project management which are critical for environmental protection. Upon review of the	BNDN request that the following standard mitigation measures be included as part of the list described in Section 8.3.5:

		suggested mitigation measures, BNDN has identified some opportunities for additional mitigation.	• Maintain vegetated buffers of at least 100m with all waterbodies wherever practical; • All equipment must be inspected prior to use on-site to ensure that they are clean and free of soil or other contaminants; • Maintain spill kits on all vehicles used on-site; • All machinery will be kept in good working order and inspected regularly for drips, leaks, and spills; • In the event of a spill, Denison will take all necessary actions, where it is safe to do so, to immediately stop the spill, contain contaminants, clean up and dispose of contaminated materials; • Denison will maintain a record of all spills and report upon each spill within 48 hours, including information on spill response, cleanup, and remediation; • Vehicle refueling will occur at a distance of at least 100m; • Fuel tanks will be located in areas that are lined and contained; • Fuel tanks will be located at least 500m from known waterbodies.
53.	8.3 Fish and Fish Habitat	Unfortunately, due to the nature of planning and licensing for complex projects such as the Wheeler River mine, there are many documents, plans, licenses and approvals which may not be available for review during the environmental assessment process or which will take place subsequent to completion of the assessment. For example, Denison will be preparing important	BNDN requests that Denison consult with our staff members and advisors on important environmental documentation/plans/licenses that are not available as part of the EA process. This list includes, but is not limited to, • Surface Water Management Program • Erosion and Sediment Control Plan

		documentation governing environmental management of the Project following the Environmental Assessment. While these are not currently available, there is a need to engage with BNDN to obtain input on these documents as planning progresses.	• Fish Salvage Plan
			• Spill Response Plan
			• MDMER approvals and EEM plans
			• Saskatchewan Water Security Agency permits for
			  ○ Aquatic habitat protection
			  ○ Operating a waterworks
			  ○ Operating a sewage works
			• Effluent Monitoring Plan
			• Environmental Monitoring Plan(s)
			• Decommissioning and Reclamation Plan
			
			Engagement with BNDN on these plans should occur through an Environmental Committee or similar oversight mechanism (see above). The specific details of such a committee can be developed through consultation with BNDN and must be formalized through aa BNDN-Denison project agreement for the Wheeler River Project.

54.	8.4.3.1 Methodology and Metrics	The collection of sediment samples was completed using cores and grab petit Ponar in three upstream reference locations (LA-7A, LA-8, and LA-9), Whitefish Lake (LA-5 and LA-6), McGowan Lake (LA-1), and Russell Lake (LAB-1 and LAB-2). Sediment quality testing was conducted to characterize COPC including nutrients, metals, and radionuclides. Only the top 2 cm of cores of grab samples were analyzed in the lab. It is not clear in the methodology why	BNDN requests additional information on the rational for only analyzing COPC within the top 2 cm of sediment samples. This should include information on whether this limited data will negatively affect the ability to evaluate potential impacts of groundwater contamination entering Whitefish Lake from below during operations, decommissioning, and future centuries.

		laboratory analysis was limited to the top 2 cm.	
55.	8.4.3.2.3 Metals	Despite significant concerns regarding the presence of mercury in water and sediment, the Proponent has elected not to test sediments for it. BNDN acknowledges that the mining process does not use mercury and it is present in low levels in the background environment. However, for the purposes of good stewardship, communications, and trust, having an assessment of the background levels of mercury is important to BNDN.	BNDN requests that the proponent sample sediments for mercury to establish background levels. This is information that is culturally important given the potential harm and the psychological toll of mercury in aquatic ecosystems. Background levels can then be compared with ongoing monitoring throughout the life of mine.
56.	Table 8.5-2: Baseline Fish Tissue Chemistry Summary	In Section 8.5 Fish Health, the Proponent has included a summary table with information on contaminants in fish tissue and bone tissue. The information provided does not include total number of samples.	BNDN requests table 8.5-2 be updated with information on total number of fish (n) samples for each location.

4.5 Wildlife and Terrestrial Ecology

Section 9 of the EIS focuses on the Terrestrial Environment, and is divided into the following 4 subsections outlining 12 Valued Components:

1. **Section 9.1 - Terrain, Soil, and Organic Matter/Peat**
2. **Section 9.2 - Vegetation and ecosystems, Listed Plant Species and Wetlands**
3. **Section 9.3 - Ungulates, Furbearers, and Woodland Caribou**
4. **Section 9.4 - Raptors, Migratory Breeding Birds, and Bird Species at Risk**

Key activities with the potential for adverse effects on *Terrain, Soil, and Organic Matter/Peat* include surface land clearing, major earthworks, surface/grading preparations and associated use of equipment. Potential impacts of these key activities on *Terrain, Soil, and Organic Matter/Peat* include:

- altered topography and surface drainage patterns resulting in increased surface erosion and potentially destabilized landscape features,
- change in soil quantity and quality,
- degradation and/or loss of peat/organic matter,
- and alteration of wetland hydrologic functions that support the viability of peat/organic matter.

Key activities with the potential for adverse effects on *Vegetation and ecosystems, Listed Plant Species and Wetlands* include site preparation (e.g., clearing, grading and construction of roads, airstrip, and surface infrastructure), water management (e.g., withdrawal/use of surface and/or groundwater and release of effluent), and reclamation of disturbed areas. Potential impacts of these key activities on *Vegetation and ecosystems, Listed Plant Species and Wetlands* include:

- change in areal extent of habitat types,
- change in the level of constituent of potential concern (COPC) in plant tissue,
- change in the number of listed plants, and
- change in the areal extent of wetlands.

Key activities with the potential for adverse effects on *Ungulates, Furbearers, and Woodland Caribou* and *Raptors, Migratory Breeding Birds, and Bird Species at Risk* include site preparation (e.g., clearing, grading and construction of roads, airstrip, and surface infrastructure), operation (i.e., vehicle movement, material handling), water management (e.g., withdrawal/use of surface and/or groundwater and release of effluent), waste management (e.g., temporary storage, handling, and off-site transportation), and reclamation of disturbed areas.

Potential impacts of these key activities on *Ungulates, Furbearers, and Woodland Caribou* and *Raptors, Migratory Breeding Birds, and Bird Species at Risk* include:

- habitat loss (due to vegetation clearing),
- habitat alteration (due to sensory disturbances, habitat fragmentation, and edge effects),
- direct mortality (due to incidental take, collisions with equipment, buildings, aircraft and power lines), and

- indirect mortality (due to increased harvest and/or predation, nest failure or abandonment, changes in predator-prey dynamics, or increased public access).

The EIS provides mitigation measures designed to avoid or minimize all potential impacts of the Project. The Proponent predicted that the residual effects of the Project on the Terrestrial Environment would be low to moderate in magnitude, occur within a local to regional geographic extent, occur continuously over the life of the Project, and be reversible to some extent. Considering the mitigation and follow-up measures proposed, the Proponent has predicted with a high level of confidence that residual environmental effects from the Project on the Terrestrial environment are unlikely to be significant.

The following section describes issues identified in our scoped review of the EIS that pertain Section 9, Terrestrial Ecology. Table 5 provides a summary of comments identified using professional expertise and judgement, and recommendations for addressing them.

Key Issues:

- A 500 m buffer surrounding the Project Area is used to measure the areal extent of indirect habitat alteration for moose and woodland caribou. However, scientific research states that anthropogenic disturbance can affect ungulate habitat selection, resulting in habitat avoidance up to 1 km from the disturbance. Without considering a larger avoidance buffer around proposed anthropogenic disturbances, we believe that the EIS underestimates the areal extent of potential habitat alteration.
- Two bird species at risk (SAR), Barn Swallow and Horned Grebe, were observed during baseline studies. These species were not included as key indicators for SAR birds. Instead, the SAR were represented by other bird SAR that use different habitat and exhibit distinct breeding behaviours. This is problematic because these species will have unique levels of habitat alteration/loss and mortality levels than the representative species.
- Two bat species, Little Brown Bat (*Myotis lucifugus)* and Northern Myotis (*Myotis septentrionalis*) were detected during baseline studies. These species are listed as Endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and in the Species at Risk Act (SARA) schedule. Despite being present, bats were excluded from the EIS. Areas that will be cleared for mine development and operations could contain maternity roost trees. Based on Appendix 9-b, this habitat was not adequately evaluated through field surveys.

Table 5. Comments and recommendations for the Wheeler River EIS related to terrestrial environment

#	Document Reference	Comment	Request/Recommendation
57.	9.2.5.2 Additional Vegetation-specific	The Proponent has committed to using seed that is certified weed-free, with a valid "Certificate of Seed Analysis" for the revegetation process.	BNDN recommends that, in addition to using weed-free certified seeds, consultation occur with Indigenous communities, including BNDN, to select an appropriate

	Mitigation Measures		seed mix that closely mimics the pre-construction plant community and includes plants of medicinal and traditional importance. This could be done by either sourcing seed mix from a local seed distributor, or using wild seed propagated from plants collected from the Project Area. In addition, the seed mix should contain native plant species only.
58.	9.3.4.2.1 Alteration and/or Loss of Habitat Figure 9.3-9 Available Habitat for Moose	The EIS uses a 500 m buffer around the Project Area to define indirect habitat alteration for moose (Figure 9.3-9). This includes habitat alteration from sensory disturbance such as anthropogenic noises, vehicle traffic, aircraft traffic, and increased predator access. However, the EIS references scientific research that states that roads and vehicle traffic can affect moose habitat selection, resulting in habitat avoidance up to 1 km from roads (Shanley and Pyare 2011). Furthermore, the EIS acknowledges uncertainty concerning the available background and baseline information used to identify available moose habitat in this assessment. Without considering a larger avoidance buffer (as demonstrated in various research) around proposed anthropogenic disturbances, we believe that the EIS underestimates the potential extent of moose habitat alteration. To be more conservative, a 1000 m buffer should be used surrounding the Project area.	BNDN recommends using a 1000 m buffer surrounding the Project Area to measure the extent of moose habitat alteration. We believe this analysis will provide a more accurate and conservative outcome with respect to potential project impacts to moose.

59.	9.3.5.2.7 Mitigation Measures	One of the mitigation measures implemented to protect ungulates, furbearers, and Woodland Caribou includes de-icing the Project roads for winter traction, which will result in fewer wildlife collisions. Salt used for de-icing is likely to attract ungulates, including moose, to roadways to satisfy their mineral requirements (Rea et al 2021).	BNDN requests that the Proponent revise this mitigation measure to explicitly state that salt will not be used for de-icing Project roads to avoid attracting ungulates to the Project Area. This mitigation measure can be found in section 9.3.5.2.7 Road and Traffic Management.
60.	9.3.6.4.1 Alteration and/or Loss of Habitat Figure 9.3-14	The EIS uses a 500 m buffer around the Project Area to define Woodland Caribou habitat alteration from sensory disturbance. However, scientific research expects up to 5 km (or greater) of Caribou avoidance around mining Projects, and that related semi-permeable barriers, such as roads, likely exacerbate this effective habitat loss [(Smith et al. 2000; Dyer et al. 2001; Courtois et al. 2008; Vistnes and Nellemann 2008; Nagy 2011; Polfus et al. 2011; Leblond et al. 2011, 2013; CPAWS Wildlands League 2013; Johnson et al. 2015)]. Without considering a larger avoidance buffer (as demonstrated in various research) around proposed anthropogenic disturbances, we believe that the EIS underestimates the potential extent of Caribou habitat alteration.	BNDN requests that the Proponent present the extent of caribou habitat alteration/loss from the proposed Project within a range of uncertainty informed by scientific research. Specifically, the percent alteration of habitats must be presented using a 500 m (low end) up to a 5,000 m (high end) buffer. We believe this analysis will provide a more accurate range of outcomes with respect to potential project impacts to caribou.
61.	9.4.3.3 Bird Species at Risk	Incidental observations of Barn Swallow (*Hirundo rustica*) occurred during baseline studies (Appendix 9-B). This bird SAR was not included as a Key Indicator for this Valued	a. BNDN requests that the Barn Swallow is included as its own key indicator for the VC Bird SAR within the EIS.

	Appendix 9-B	Component. Instead, the EIS represents the Barn Swallow using two other SAR birds including the Olive-sided Flycatcher (*Contopus cooperi*), and Common Nighthawk (*Chordeiles minor*). This does not make ecological sense because Barn Swallows use distinct habitat and exhibit distinct breeding behaviour from these other SAR. Therefore, the barn swallow should be its own key indicator because it will have unique levels of habitat alteration/loss and levels of mortality than the other species. In addition, Barn Swallows have a higher likelihood of being impacted by project activities than the other representative SAR, because they nest directly on artificial structures. The EIS states that species that nest on buildings are more susceptible to entrapment in Project components. This species is listed as Threatened on SARA Schedule 1. In Canada, the Migratory Birds Convention Act, 1994 protects Barn Swallow, its nests, and eggs.	b. Additional surveys should be conducted to confirm the presence of any Barn Swallow nests on all buildings in the Project Area prior to commencement of construction. c. If Barn Swallow nests are located, contact the SK MOE for regulatory advice on the appropriate actions given the specific situation. d. The Proponent should monitor all barn swallow nests found within the Project Area to confirm their continued usage throughout the lifecycle of the mine. If avoidance of nests is observed near Project activities, the Proponent should adopt an adaptive management approach and provide additional nesting sites elsewhere. Specifically, the Proponent could consider installing nesting structures in suitable areas to provide alternative nesting options for Barn Swallows. e. Staff should be trained to identify and report barn swallows and their nests. f. Future monitoring programs during the life of the project must include the barn swallow.
62.	9.4.3.3 Bird Species at Risk Appendix 9-B	Incidental observations of Horned Grebe (*Podiceps auratus*) occurred during baseline studies (Appendix 9-B). This species is listed as Special Concern on SARA Schedule 1. The Horned Grebe was not included as a Key Indicator for this Valued Component. Instead, the EIS represents this species with two other bird SAR, Yellow Rail (*Coturnicops noveboracensis*), and Rusty Blackbird	a. BNDN requests that the Horned Grebe is included as its own Key Indicator for the VC Bird SAR within the EIS. b. Future monitoring programs during the life of the Project must include the Horned Grebe.

		(*Euphagus carolinus*). The Horned Grebe uses distinct habitat from these other species. Therefore, the Horned Grebe should be its own key indicator because it will have different levels of habitat alteration/loss and levels of mortality.	
63.	9.4.3.3 Bird Species at Risk	The Bank Swallow *(Riparia riparia*), a bird SAR may be present within the terrestrial RSA. This species was not included in the EIS as a key indicator for bird SAR. This species is listed as Threatened on SARA Schedule 1. The breeding range of the Bank Swallow *(Riparia riparia*) overlaps with the terrestrial RSA. Bank swallows breed in varying natural and artificial habitat with sand-silt substrates including vertical banks, riverbanks, bluffs, stockpiles, aggregate pits, and roadcuts (COSEWIC 2013). Suitable habitat may be present because soil surface textures across the RSA are predominantly sand textured (sand, loam sand/sandy loam and silty sand). The creation of soil stockpiles during construction may create suitable breeding habitat for this species.	a. BNDN requests a justification for excluding the Bank Swallow from the EIS. b. If a valid justification does not exist, BNDN requests this species be added as a Key Indicator for bird SAR unless it can be proven not present in the RSA. c. All soil stockpiles should be monitored for Bank Swallow nesting activity before the stockpiles are disturbed when needed for site reclamation. d. If Bank Swallow nests are located, contact the SK MOE for regulatory advice on the appropriate actions given the specific situation.
64.	9.4.3.3.2 Information from Indigenous Knowledge, Local Knowledge, and Engagement	The EIS states that knowledge providers reported that multiple Whooping Cranes (*Grus americana*) have been observed along the Wheeler River, Moore River, and along the Cree River (outside of the terrestrial RSA) (19-LK-ERFNTrap-134.169) (19-LK-ERFNTrap-134.170). Whooping Cranes are listed as Endangered on SARA Schedule 1.	a. BNDN requests an explanation for excluding this species despite being reported by a Trapper from English River First Nation. If a valid justification does not exist, the species Whooping Crane (*Grus americana*), should be included as a key indicator for SAR birds. b. Future monitoring programs during the life of the Project must include surveys for the Whooping Crane.

		The EIS does not include this species as a key indicator for SAR birds, nor does it include an explanation why this species was omitted despite being reported by a knowledge provider from English River First Nation.	
65.	9.4.3.3.3 Baseline Studies	Short-eared Owls (*Asio flammeus*) were not observed during the baseline surveys (Appendix 9-B). This is likely because targeted surveys for this species were not conducted. The detection probability of Short-eared Owls is very low at sunrise when the breeding songbird point count surveys were conducted. Short-eared Owls are most detectable from one hour before sunset to half an hour after sunset.	a. BNDN requests that short-eared Owls continue to be assumed present within suitable habitat, unless proven otherwise by a qualified biologist using the Short-Eared Owl Survey Protocol (Saskatchewan Ministry of Environment 2015). b. Future monitoring programs should utilize the protocol developed by the Saskatchewan Ministry of Environment to better (2015) understand whether this species is present.
66.	9.4.3.3.3 Baseline Studies	Yellow Rail (*Coturnicops noveboracensis*) were not observed during the baseline surveys (Appendix 9-B). This is likely because targeted surveys for this species were not conducted. The Yellow Rail is nocturnal; therefore, survey effort must take place between 23:00-3:00. Therefore, this species would not have been observed when the breeding songbird point count surveys were conducted.	a. BNDN requests that Yellow Rail should continue to be assumed present within suitable habitat, unless proven otherwise by a qualified biologist using the Yellow Rail Survey Protocol (Saskatchewan Ministry of Environment 2014). b. Future monitoring programs should utilize the protocol developed by the Saskatchewan Ministry of Environment (2014) to better understand whether this species is present.
67.	Appendix 9-b	Two bat species, Little Brown Bat (*Myotis lucifugus)* and Northern Myotis (*Myotis septentrionalis*) were detected during passive acoustic surveys in 2019 (Appendix 9-b). These species are listed as Endangered by COSEWIC and SARA schedule. Despite being present, bats were completely	a. BNDN requests justification for excluding bat species from the EIS despite two Endangered species confirmed present. b. BNDN also request the Proponent put protocols in place to identify and assess bat maternity roost trees prior to

		excluded from the EIS. Areas that will be cleared for mine development and operations could contain maternity roost trees. Based on Appendix 9-b, this habitat was not adequately evaluated through field surveys.	clearing and employ mitigation measures such as retaining maternity roost trees, modifying the timing of clearing, and offsetting for the destruction of habitat for endangered species.
68.	9 Terrestrial Ecology 9.1.8 Monitoring and Follow-up 9.2.8 Monitoring and Follow-up 9.3.8 Monitoring and Follow-up 9.4.8 Monitoring and Follow-up	Denison's proposed terrestrial ecology mitigations described are generalized and conceptual in the EIS. With the level of detail provided in the EIS, it is not possible for BNDN to comment on the adequacy or effectiveness of the proposed mitigation measures or whether proposed mitigations will meaningfully diminish Project impacts on BNDN rights and interests.	BNDN holds invaluable indigenous knowledge related to terrestrial ecology topics including traditional and medicinal plants, ungulates, furbearers, game birds etc. within the RSA. BNDN must be meaningfully involved in the development and implementation of the various management and monitoring plans mentioned throughout Chapter 9 of the EIS to ensure that proposed impacts are sufficiently reduced. These plans include but are not limited to the wildlife monitoring plan, avian monitoring, and Woodland Caribou Management Plan. The role that BNDN will have in developing management and monitoring plans should be defined within a project agreement between BNDN and Denison

4.6 Atmospheric Environment

Section 6.0 of the Wheeler River Project EIS discusses the impact of the Project on the atmospheric environment. The EIS provides a detailed description of baseline air quality conditions, predicted project-related impacts and proposed mitigation measures. A review was completed in collaboration with BNDN to comment, identify potential concerns/deficiencies, and provide recommendations to minimize the impact of the Project on BNDN rights and interests, and the atmospheric environment.

Air Quality was selected as a VC because the Project-will emit contaminants and change air quality. Air Quality was raised as a concern by BNDN during preliminary engagement with Denison as it connected to human and ecological health. The atmospheric environment acts as a pathway that can impact other ecosystem components which impacts BNDN rights, interests, and health, including:

- First Nation land and resource use including but not limited to hunting, fishing, trapping, gathering and cultural sites
- Human health
- Surface water quality and sediment quality
- Fish and fish habitat
- Terrain and soils
- Vegetation including medicinal, spiritual, edible, or culturally significant plants
- Wildlife and wildlife habitat

The Wheeler River Project will introduce new emissions sources and air contaminants into the region creating higher concentrations of pollutants and exceedance conditions. Denison assessed the following constituents of potential concern (COPC), also know as air contaminants or pollutants:

- total suspended particulate matter (TSP)
- inhalable particulate matter (PM10)
- respirable (fine) particulate matter (PM2.5)
- carbon monoxide (CO)
- sulphur dioxide (SO2)
- nitrogen dioxide (NO2)
- uranium
- arsenic
- cadmium
- chromium
- cobalt
- copper
- lead
- molybdenum
- nickel
- selenium
- vanadium
- zinc
- radon gas

The Project's predicted air emissions from various sources (e.g., generators, process plant emissions, vehicle emissions, etc.) were combined with exiting air quality data (baseline conditions) in a model to understand the change in air emissions caused by the Project. Emissions for each COPC were estimated and modeled to predict changes in COPC concentrations and deposition rates.

Denison anticipates that unpaved surfaces such as site roads will be the main source of dust emissions and trace metals from the Project, with contributions also coming from processing emissions during operations. Denison expects fuel combustion from mobile and stationary equipment to be the main source of combustion and greenhouse gases from the Project. The main sources of uranium and radon occur in operations and include the ISR processing plant and operation of the ISR wellfield.

The following table outlines the project activities that impact air quality during each phase of the Project:

Project Phase	Project Activity Resulting in Changes to Air Quality
Construction	Development of access roads and air strip
	Site preparation and earthworks; clearing, levelling, and grading of the Project Area
	Power generation – generators
	Installation of main substation and distribution of power around site
	Wellfield and freeze hole drilling; ground freezing
	Batch plant operation (concrete); crusher at borrow area
	Development of surface infrastructure (camp, operations centre, plants, ponds, pads, and support facilities)
	Waste management (composting, domestic and industrial landfill operation, recycling)
	On-site and off-site operation of vehicles and transport of materials
	Air transportation for workers
Operations	Operation of the ISR wellfield
	Wellfield and freeze wall drilling
	Batch plant operation (grout and cement); crusher in borrow area

	Expansion of pond and pads
	Operation of the processing plant and production of uranium concentrate
	Waste management (composting, domestic and industrial landfill operation, recycling)
	Hazardous waste management (temporary storage, handling, and off-site transportation)
	Storage and disposal of drill waste rock, process precipitates, and industrial wastewater treatment plant precipitates
	On-site and off-site operation of vehicles and transport of materials
	Power supply – generators and backup generators
	Package and transport of nuclear substances
	Fuel management (e.g., propane for comfort heating; vehicle and aircraft fuel)
	Air transportation for workers
	Progressive decommissioning and reclamation
Decommissioning	Reclamation of disturbed areas
	Closure of ISR and freeze wells and related infrastructure
	Decontamination of surface facilities and injection, recovery, and monitoring wells
	Asset removal (including site power transmission lines and electrical infrastructure)
	Demolition and disposal of non-salvageable surface infrastructure and materials
	Remediation of contaminated areas
	Generators
	Waste management (composting and landfill operation)
	Decommissioning of landfills; hazardous materials management

	On-site and off-site operation of vehicles and transport of materials
	Mining horizon remediation and thawing of freeze wall

Air quality is regulated by the Saskatchewan Ministry of Environment (MOE) through the Saskatchewan Ambient Air Quality Standards (SAAQS). For certain contaminants which do not have provincial regulatory standards, the Canadian Council of Ministers of the Environment (CCME) have agreed to implement a national Air Quality Management System. The framework resulted in the development of the Canadian Ambient Air Quality Standards (CAAQS) for particulate matter less than 2.5 microns (PM2.5), ozone, nitrogen dioxide, and sulphur dioxide. For COPCs without a SAAQS or CAAQS, Denison used standard from other jurisdictions including Ontario.

For the majority of COPCs, Denison's modeling results predicted that the Project would be in compliance with provincial and federal air quality standards. However, Denison modeling results showed that the Project will cause exceedance conditions (pollutant concentrations above the regulatory limit) for the following air contaminants:

- **24-hour Total Suspended Particulate Exceedances**
    - Concentrations of 24-hour TSP were predicted to exceed the criterion of 100 µg/m³ during Construction, Operation, and Decommissioning, up to a maximum of 313% of the criterion during Construction.
    - 24-hour TSP concentrations exceed the criterion 28% of the time during Construction, 21% of the time during Operation, and 0.5% of the time during Decommissioning
- **24-hour Particulate Matter (PM10) Exceedances**
    - Concentrations of 24-hour PM10 were predicted to exceed the criterion of 50 µg/m³ at off-property receptors during Construction and Operation, up to a maximum of 232% of the criterion during Construction.
    - 24-hour PM10 concentrations exceed the criterion 17% of the time during Construction and 12% of the time during Operations.
- **1-hour Nitrogen Dioxide Exceedances**
    - Concentrations of 1-hour NO2 were predicted to exceed the criterion of 79 µg/m³ at off-property receptors during Construction, Operation, and Decommissioning, up to a maximum of 225% of the criterion during Operation and Decommissioning.
    - Exceedances showed that 1-hour NO2 concentrations exceed the criterion less than 1% of the time during any of the modelled Project phases at the maximum off-property receptor, which occurs on the Property Boundary.
- **24-hour Uranium Exceedances**

- Concentrations of 24-hour uranium were predicted to exceed the criterion of 0.15 µg/m³ at off-property receptors during Operation only, up to a maximum of 148% of the criterion.
- 24-hour uranium concentrations exceed the criterion less than 0.5% of the time at the maximum off-property receptor, which occurs on the Property Boundary.

(Denison, 2022)

Key Issues:

- The Project will produce exceedance conditions for TSP, PM 10 and Uranium, this may be exacerbated during wildfire events or cumulative effects from other local uranium mining operations (e.g., Key Lake, McArthur River, etc.)
- The EIS air dispersion model does not include air contaminant emissions from the Cameco McArthur River Mine and Key Lake Mill. Those two projects were in care and maintenance while the EIS was drafted but have recently resumed operations. As such, the EIS does not adequately capture the cumulative effects on the atmospheric environment. Fugitive dust and uranium emissions (and potentially other contaminants) have increased potential for exceedances with the resumption of Cameco's operations.

Table 6. Comments and recommendations for the Wheeler River Project related to air quality and emissions

#	Document Reference	Comment	Request/Recommendation
69	EIS Section 6.0	Denison's air dispersion model does not include any receptor locations related to BNDN traditional land and resources use (TLRU) and Indigenous Knowledge (IK) sites. BNDN members use the lands and waters in the Project area for TLRU and ceremonial purposes.	BNDN TLRU and IK sites should be considered in Denison's air quality assessment. The geographic locations for TLRU and IK should be inputted into the air dispersion model as special receptors. This will provide site specific data for BNDN land users who use the LSA so they can effectively assess the Project's impact on land use and rights.
70	EIS Section 6.0	Denison states in the EIS "the Cameco McArthur River Operation and Key Lake sites are currently in Care and Maintenance mode; therefore, there is	Denison must redo air dispersion modeling to account for the Cameco McArthur River Uranium

		currently no truck traffic between the sites on Highway 914. When these sites are to become operational again, there is potential for a cumulative effect at sensitive locations near the highway." On November 28th, 2022, operations resumed at Cameco's McArthur River Uranium Mine and Key Lake Mill. Denison did not model Cameco related air emissions in their air dispersion model. The EIS model does not account for any of Cameco's air emissions from the mill, mine, and associated truck traffic between sites. Without this data included in the model, the EIS does not adequately account for the cumulative effects of Cameco's McArthur River Mine and Key Lake Mill on the atmospheric environment.	Mine and Key Lake Mill which have resumed operations since the EIS was released. Without this data included in the model the EIS does not accurately capture baseline conditions or cumulative effects on the atmospheric environment. Fugitive dust and uranium emissions (and potentially other contaminants) have increased potential for exceedances with the resumption of Cameco's operations, as exceedances are already predicted with the Wheeler River Project alone.
71	EIS Section 6.0	The Project is predicted to produce exceedances for TSP of 313% over the regulatory limit. 24-hour TSP concentrations exceed the criterion 28% of the time during Construction, 21% of the time during Operations. These exceedance conditions do not include TSP emissions from Cameco's McArthur River Mine and Key Lake Mill which have now resumed operations. There is also the potential for wildfire smoke to further exacerbate dust emissions. TSP exceedances represent a potential health risk for land users and workers near the Project site. Especially for at-risk groups such as elders, youth, and people with existing respiratory conditions.	a. Denison must employ additional mitigation measures to reduce TSP emissions on site including enhanced dust suppression efforts. b. Denison must remodel TSP to include emissions from Cameco's McArthur River Mine and Key Lake Mill. c. Please provide information on how TSP will be monitored during the Project and how Denison will know when exceedance conditions are occurring. d. Please provide information on how adaptive management will be used when a TSP exceedance is discovered. Including

			discussion on how the Project will be managed during poor air quality events caused by wildfire smoke. e. Please provide information on how exceedances conditions near the Project site will be communicated to the public.
72	EIS Section 6.0	The Project is predicted to produce exceedances for PM10 of 232% over the regulatory limit. 24-hour PM10 concentrations exceed the criterion 17% of the time during Construction, 12% of the time during Operations. These exceedance conditions do not include PM10 emissions from Cameco's McArthur River Mine and Key Lake Mill which have now resumed operations. There is also the potential for wildfire smoke to further exacerbate dust emissions. PM10 exceedances represent a potential health risk for land users and workers near the Project site. Especially for at-risk groups such as elders, youth, and people with existing respiratory conditions.	a. Denison must employ additional mitigation measures to reduce PM10 emissions on site including enhanced dust suppression efforts. b. Denison must remodel PM10 to include emissions from Cameco's McArthur River Mine and Key Lake Mill. c. Please provide information on how PM10 will be monitored during the Project and how Denison will know when exceedance conditions are occurring. d. Please provide information on how adaptive management will be used when a PM10 exceedance is discovered. Including discussion on how the Project will be managed during poor air quality events caused by wildfire smoke. e. Please provide information on how exceedances conditions near the Project

			site will be communicated to the public.
73	EIS Section 6.0	The Project is predicted to produce exceedances for uranium of 148% over of the regulatory limit. These exceedance conditions do not include uranium emissions from Cameco's McArthur River Mine and Key Lake Mill which have now resumed operations. Uranium exceedances represent a potential health risk for land users and workers near the Project site. Additionally, uranium deposition in the aquatic and terrestrial environment can cause effect pathways to humans through the food chain through the consumption of edible/medicinal plants, berries, fish, and wildlife.	a. Denison must employ additional mitigation measures to reduce uranium emissions on site including enhanced scrubber systems and containment measures. b. Denison must remodel uranium to include emissions from Cameco's McArthur River Mine and Key Lake Mill. c. Please provide information on how uranium emissions will be monitored during the Project and how Denison will know when exceedance conditions are occurring. d. Please provide information on how adaptive management will be used when a uranium exceedance is discovered. e. Please provide information on how exceedance conditions near the Project site will be communicated to the public.
74	EIS Section 6.0	The Saskatchewan MOE Air Quality Modelling Guidelines specifies that the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) should be used for assessments in Saskatchewan. Denison opted to use the CLAMET/CALPUFF dispersion model for the EIS.	Please provide additional rationale for the selection of the CALPUFF model over the provincially recommended AERMOD.
75	Appendix 6-C	Carbon dioxide emissions related to air travel for Project personnel were not included in the GHG emissions calculations. Project related emissions	Denison must include emissions from air travel for project personnel in the GHG emissions

	Climate Baseline and Greenhouse Gas Emissions Report	from air travel would be significant source due to the remote nature of the site. The GHG emission estimate included in EIS Appendix 6-C does not provide a fulsome representation of Project related GHG emissions.	calculations. This will provide a more accurate representation of project-related GHG emissions.
76	EIS Section 6.0	Denison acknowledges the Project's contribution to climate change through GHG emissions but does not outline a plan to offset GHG emissions. Other mines in Canada, including the Canadian Malartic Mine in Quebec have GHG offset plans in which carbon emissions are tracked and offsetting activities are developed in collaboration with local First Nations (Canadian Malartic, 2014).	Denison must develop a GHG/Carbon offsetting plan to mitigate potential impacts of the Project to climate change. Denison could work with BNDN and other local First Nations on initiatives that help to offset the Project's GHG emissions (e.g. tree planting, wetland restoration, carbon offsets). This would demonstrate a commitment to corporate social responsibility, climate stewardship and reconciliation on Denison's behalf.
77	EIS Section 6.0	The Project is reliant on burning diesel for construction, supplementary power generation, mine processing activities, and mine equipment. The GHG intensive nature of the Project's construction and operation phases are a concern for BNDN and not consistent with federal or provincial directives to reduce GHGs. Cleaner technology and fuel sources are available to reduce the Project's GHG emissions. For a project based around supplying fuel for the energy transition, a more progressive approach that utilizes Best Available Technology is required in order to reduce GHG emissions.	Where feasible Denison must implement the use of low carbon technology and fuels in the final Project design to reduce GHG emissions. Specifically, Denison should redesign the Project to: • Replace all diesel electricity generation with LNG/CNG generators (and add in renewables where feasible) for construction phase • Replace all diesel powered mine equipment and vehicles with electric or LNG/CNG models • Use renewable energy sources for electricity

			generation (e.g. wind, solar) as early in the project lifecycle as possible
78	EIS Section 6.0	Denison does not specify how it will monitor air contaminant concentrations during all phases of the Project. Continuous on-site ambient air monitoring for all COPCs (including particulates, metals, and radon) is the only way to truly assess the Project's impact on air quality and compliance with government standards.	Denison must conduct continuous on-site monitoring for all contaminants of concern (including particulates, metals, and radon) in order to assure regulatory compliance and verify the accuracy of air dispersion models and EIS predictions.
79	EIS Section 6.0	Denison does not specify how BNDN will be involved in air quality monitoring during construction, operations and decommissioning phases of the Project.	a. BNDN requests the implementation of robust and long-term environmental monitoring to verify protection of the environment, including community-led monitoring during Construction and Operations of the Project. b. Denison must develop specific roles and responsibilities to BNDN members in relation to air quality monitoring and site wide environmental monitoring. This should include, at a minimum, one environmental monitor position for BNDN. This would provide increased transparency and confidence to Denison's environmental management practices and performance.

4.7 Mine Infrastructure and Engineering

The EIS includes a technical section (2.0) describing the components and activities of the project and their relevance to environmental and community concerns.

BNDN recognizes the relative advantages of the ISR method compared to other mining methods in terms of land footprint, noise, mobile equipment emissions, and surface disturbance.

The preparation, mixing, transportation via surface-run pipe, injection/recovery, and storage of acidic mining solution and uranium-bearing solution represent the most significant unique risks associated with the project.

The planned process plant and ancillary site facilities are similar to those constructed on other remote mine site projects in Northern Saskatchewan. Construction must follow best practices and lessons learned from other sites for implementing and adhering to environmental protections and respecting local communities interests.

Operation of the ISR wellfield, freeze walls, process plant, ponds, and site facilities should incorporate practices that minimize the risks of spills and other environmental impacts, and in addition have the necessary procedures in place to contain and clean up incidents in a timely manner should they happen.

Key Issues:

- The Proponent must implement protocols and technologies to minimize the likelihood and magnitude of contamination of the local environment. The project should use automated control systems where possible to reduce the chances of minor incidents causing significant emissions or spills.
- The Proponent is responsible to protect the health and safety of employees, contractors, and visitors to the site. The frequency and depth of training programs for operations, maintenance, repairs, emergency response, spill clean-up, and risk mitigation measures must be appropriate.

Table 7. Comments and recommendations for the Wheeler River mine infrastructure and engineering

#	Document Reference	Comment	Request/Recommendation
80.	Draft EIS 2.2.2.2.2 Uranium Bearing Solution Holding Area	The Proponent states that the UBS holding area will have leak detection (Figure 2.2-18). The system is shown as a pipe running under the pond.	a. BNDN requests more details on the leak detection system used for all ponds shown in Figure 2.2-18. b. BNDN requests that Denison respond to all the following questions in writing:

	Page 2-28		• Is the pipe connected to an automated sensing system? • If not, how frequently is the system monitored? • What chemical or physical indicator(s) are used to detect a leak? • What are the detection limits/thresholds for each indicator? • What is the precision of each indicator? • Who is notified, and how quickly would a response be mobilized?
81.	Draft EIS 2.2.2.2.2 Uranium Bearing Solution Holding Area Page 2-28 & 2.2.4.5 Process Precipitate Pond Page 2-57	The Proponent states that the UBS holding area will have leak detection (Figure 2.2-18). The system is shown as a pipe running under the pond.	BNDN requests to know what specific containment/restoration methods will be used in the event that a leak is detected, and how quickly they would be implemented. This applies to both the UBS holding area and process precipitate pond.
82.	Draft EIS 2.2.2.2.2 Uranium Bearing Solution Holding Area Page 2-28	The Proponent states that the UBS holding area will be designed as a pond contained by a double composite liner system (Figure 2.2-18), and that options to use tanks instead of holding area will be evaluated as engineering advances.	BNDN requests that Denison undertake a risk assessment for the design of the UBS holding area. BNDN recommends the safer, less environmentally risky option be selected and that BNDN can review and provide input into the decision that Denison makes.
83.	Draft EIS 2.2.1.4.5 Page 2-24	The Proponent states that the wellfield pipelines will be designed to have secondary containment or	BNDN requests more details on the leak detection system used for wellfield lines. Specifically, BNDN requests that Denison respond to the following questions:

		catchment and have leak detection systems in place at key locations.	• Is an automated sensing system used? • Will automated controls shut off pressure in the event of a significant leak? • If no automation is used, how frequently is the system monitored? • What chemical or physical indicator(s) are used to detect a leak? • What are the detection limits/thresholds for each indicator? • What is the precision of each indicator? • Who is notified, and how quickly would a response be mobilized?
84.	Draft EIS 2.2.1.4.5 Primary Containment of Mining Solution – Wells Page 2-19	The Proponent states that the well designs and operational monitoring of the wellfield will mitigate accidental release of mining solution or UBS in the sandstone above the mining area	BNDN requests to know how Denison will monitor the integrity of wells once in production. Will tests be conducted at regular intervals?
85.	Draft EIS 2.2.1.4.5 Fuel Storage and Dispensing Facility Page 2-66	The Proponent states that fuels will be stored in approved, above-ground, 25,000 L double-walled storage tank(s) equipped with secondary containment in accordance with provincial regulations and standards.	BNDN requests to confirm when the permanent fuel storage facility will be constructed. If temporary fuel storage for construction is required, indicate how much, how it will be stored and dispensed, and show on a sketch where it will be located. Construction fuel requirements for site development may be significant.
86.	Draft EIS 2.2.4.5 Process Precipitate Pond	The Proponent states that process precipitates may be stored in totes inside the process precipitate pond.	BNDN requests details on the procedures for placement and handling of precipitate totes within the pond. Care should be taken to ensure that equipment and totes do not compromise the pond lining. Totes should be

	Page 2-57		sealed and transport of totes from the plant to the pond should be carefully planned to minimize the risk of a spill, and in the event of a spill ensure that runoff is captured on the site.
87.	Draft EIS 2.8 Project Design Features Page 2-95	Denison states that they will maintain an up-to-date record of the various hazardous substances on site and will maintain Safety Data Sheets and appropriate procedures for spill management, handling, and clean up in an accessible location	BNDN requests a description of the safety and spill response training programs that employees will undergo. What is the duration of each training program and how often will retraining be conducted?
88.	Draft EIS 2.8 Project Design Features Page 2-95	Denison states that they will maintain an up-to-date record of the various hazardous substances on site and will maintain Safety Data Sheets and appropriate procedures for spill management, handling, and clean up in an accessible location	BNDN requests to know what resources will be kept on site for management and clean-up of spills, for example spill kits, absorbents, neutralization agents, vacuum trucks, PPE, hand tools, etc.
89.	Draft EIS 2.2.2.2.4 Yellowcake drying and packaging Page 2-29	The Proponent describes various measures used to mitigate yellowcake dust emissions: the yellowcake drying and packaging area will be outfitted with hygiene systems to capture dust generated during the material handling of the yellowcake product and sent to either the dryer or calciner venturi scrubbers. All equipment located after the dewatering of the yellowcake will be selected to provide minimal dust generation and outfitted with dust collection systems where required. The ventilation system in this area of the processing plant will also be adequately designed to provide safety of workers and control fugitive dust emissions.	BNDN recommends redundant hygiene systems be installed (n+1 units) to ensure continuity of air filtration in the event of equipment failure.

90.	Draft EIS 9.3.5.1 Project Design Measures Page 9-219	The Proponent states that all contaminated areas will be fenced to avoid contact with workers and wildlife. Fences will be monitored and maintained.	BNDN requests to know the size and type of fence considered for each project area. Confirm if the wellfields will be fenced. Show all fences on a site layout drawing like Figure 2.2-1.

5.0 Conclusion

Birch Narrows Dene Nation looks forward to responses from Denison on all the comments above. We expect that identified issues will be resolved through ongoing engagement with the CNSC, SMOE and Denison throughout the Environmental Assessment and permitting for the Project.

6.0 References

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Birch Narrows Dene Nation
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May 5, 2021

Marcelle Phaneuf
Environmental Assessment Officer, Environmental Assessment Division
Canadian Nuclear Safety Commission
marcelle.phaneuf@canada.ca

Re: Denison Mines Wheeler River Project

Dear Ms. Phaneuf,

I am writing on behalf of Birch Narrows Dene Nation (BNDN) regarding the proposed Wheeler River Project (the Project) by Denison Mines (Denison). Since the Project falls within our Traditional Territory, BNDN must be meaningfully consulted and accommodated by the Crown and Denison. BNDN has concerns related to environmental, cultural, and socioeconomic impacts associated with the Project. BNDN is interested in engaging with the Crown in the Environmental Assessment (EA) and licensing process under the Nuclear Safety and Control Act (NSCA) for the Wheeler River Project. This will help us to understand the potential impacts of the Project and work to mitigate those impacts with Denison and the Crown.

Our ancestors have lived on our Traditional Territory since time immemorial; there are cultural sites and artifacts left throughout the region that are significant for our members. Our community continues to hunt, fish, gather and trap on the lands throughout our Traditional Territory where the impacts of this Project will occur. Any direct or cumulative impacts from this Project could negatively affect our ability to exercise Aboriginal and Treaty rights, including the livelihoods of those who live off the land. We wish to participate in the regulatory process to gain an understanding of how we can be involved in the process so that meaningful consultation and accommodation can occur.

Our first priority is to make sure that this Project will not adversely impact the environment or our rights. BNDN has recently developed a Consultation Protocol which outlines the steps required for the Crown and proponents to engage with BNDN. This document will be shared with CNSC and Denison in the coming months. CNSC and Denison will need to work with BNDN to develop a Consultation Process Agreement so the terms for consultation are clear for all parties. In order to facilitate our meaningful participation in the regulatory process it is critical that BNDN be provided resources to support BNDN's ability to participate, gather traditional knowledge and land use data, and review technical documents. This work should occur as early as possible so that mitigation and accommodation strategies can be considered during the EA process to protect culturally or ecologically sensitive sites.

Based on the level of detail included in the Project Description it is not possible to fully evaluate BNDN's concerns or the degree of potential impacts associated with the Project. Based on a preliminary review of Denison's Project, we would like to highlight the following area of interest to BNDN:

- Impacts to surface water quality/quantity from effluent release and water taking
- Impacts to groundwater quality
- Hazardous waste storage on-site
- Impacts to wildlife and wildlife habitat from construction and operations, caribou in particular are at risk from loss of habitat and disturbance
- Impacts to fish and fish habitat
- Impacts to vegetation and wetlands, including overprinting
- Increased air contaminant emissions including greenhouse gases from Project-related infrastructure (e.g., mill, power generating equipment and vehicles)
- Impacts to Aboriginal and Treaty rights
    - Exclusion of BNDN members from the Project site
    - Avoidance of the Project site from BNDN members due to disturbance and fears
    - Impacts on hunting, trapping and gathering and the availability of traditionally important species
    - Impacts to Aboriginal fisheries associated with changes to the existing aquatic ecosystem including potential disruption of spawning sites
- Cumulative effects associated with the construction of a processing facility and the potential to accept material from other deposits or companies
- Ensure adequate consideration of BNDN Indigenous Knowledge and Traditional Ecological Knowledge
- Ensure that Denison provides business and procurement opportunities to BNDN members and businesses
- Ensure that training and employment opportunities for BNDN members are available and accessible
- Ensure adequate consideration of socioeconomic effects related to the Project that may impact BNDN (e.g. work camp, temporary workers, increased traffic, etc.)

We will be submitting a participant funding program application to support our involvement in the EA and NSCA licensing processes. Thank you for your time and the opportunity to participate, we look forward to your response. Please include Eric Sylvestre and Vern Bachiu on all communications related to this file.

Respectfully,

Chief Jonathon Sylvestre

cc:
Eric Sylvestre, eric.sylvestre@birchnarrows.ca
Vern Bachiu vern.bachiu@triallconsulting.com