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Ontario Power Generation Program

TITLE
ENVIRONMENT HEALTH AND SAFETY MANAGED SYSTEMS

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PURPOSE AND SCOPE
This document governs the design and execution of Ontario Power Generation’s Environmental Management System (EMS) and Health and Safety Managed System (HSMS) in accordance with OPG-POL-0021, Environmental Policy and OPG-POL-0001, Employee Health and Safety Policy requirements. It also meets the expectations of OPG-POL-0032, Safe Operations Policy, N-POL-0001, Nuclear Safety and Security Policy, and N-CHAR-AS-0002, Nuclear Management System.

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EXCEPTIONS

The HSMS program does not:

- Address the management of health and safety risks associated with ionizing radiation already covered by N-PROG-RA-0013, Nuclear Radiation Protection Program.
- Identify the elements of a public safety management system, which is the responsibility of the businesses to develop.
- Address the management of public safety risks associated with dam safety. These risks are managed under DSPGM-01, Dam Safety Program Management document by the Director, Dam Safety and Emergency Preparedness.
- Address the management of Nuclear Safety risks associated with Nuclear Safety Analysis already covered by N-PROG-MP-0014, Reactor Safety Program.

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1.0 DIRECTION

Ontario Power Generation (OPG) Environment Health and Safety (EHS) has established two managed systems that are maintained and continually improved upon:

- The Environmental Management System (EMS), which implements the requirements of OPG-POL-0021, Environmental Policy, and
- The Health and Safety Managed System (HSMS), which implements the requirements of OPG-POL-0001, Employee Health and Safety Policy.

Each managed system provides specific direction on how the above policies are implemented, while also meeting the expectations of OPG-POL-0032, Safe Operations Policy, N-POL-0001, Nuclear Safety and Security Policy, and N-CHAR-AS-0002, Nuclear Management System. They are aligned with CSA N286-12, Management System Requirements for Nuclear Power Plants [B-1]. OPG’s EMS and HSMS interface with several other OPG programs to strengthen enterprise resiliency. These interfacing programs are described throughout this document and are listed in Appendix A – EMS Governance Framework and Appendix B – HSMS Governance Framework.

1.1 Standard Conformance

OPG’s Environmental Policy specifies that it shall maintain registration of an EMS to the International Organization for Standardization (ISO) 14001 Standard [R-1]. The HSMS is structured in accordance with the requirements of the ISO 45001 standard [R-2].

NOTE: For Nuclear applications, conformance to the generic requirements of CSA N286-12, Management System Requirements for Nuclear Facilities, is required in accordance with the programs and standards listed in N-CHAR-AS-0002, Nuclear Management System. A summary of Nuclear governing and controlled documents related to the EMS is provided in Appendix C – Nuclear Environment Management.

2.0 CONTEXT OF THE ORGANIZATION

OPG is the province of Ontario’s largest clean power generator and a climate change leader with one of the most diverse generating portfolios in North America. OPG was established under the Business Corporations Act (Ontario) and is wholly owned by the Province of Ontario. OPG owns, operates and/or leases nuclear, hydroelectric, thermal, and solar facilities across Ontario, the associated waste management facilities, and Real Estate-managed support buildings. OPG also operates combined-cycle natural gas-fired plants in Ontario through its wholly-owned subsidiary. Furthermore, through a US-based wholly-owned subsidiary, OPG wholly or jointly owns and operates hydroelectric generating stations and holds minority shareholdings in hydroelectric and solar facilities in the US. OPG’s mission is Power with Purpose, providing low-cost power in a safe, clean, reliable, and sustainable manner for the benefit of its customers and shareholder. The most up to date information on OPG’s generation portfolio can be found at www.opg.com.

The EMS and HSMS use a risk-based approach to identify areas of concern with respect to environmental and health and safety management, as discussed in Section 4.0 of this document. The EMS not only addresses the potential for OPG to impact the environment through its operations, but also the potential for the environment to affect OPG’s ability to achieve its purpose. Climate change is a key example of the latter. OPG commits to leadership in the area of climate change mitigation within OPG-POL-0021. OPG’s overall climate change strategy is documented

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within the company-wide Climate Change Plan available at www.opg.com, and supported by OPG-STD-0172, Management of Climate Change, and OPG-STD-0143, Climate Change Adaptation Plan.

OPG considers EHS at each life cycle stage of energy production. The ‘materials purchasing’ and ‘generation/operations’ stages of the life cycle, including effluents/emissions and waste management, fall within OPG’s control. The extraction of raw materials and the distribution and consumer use of electricity fall outside of OPG’s control, however, consideration is given to opportunities for EHS influence in these areas.

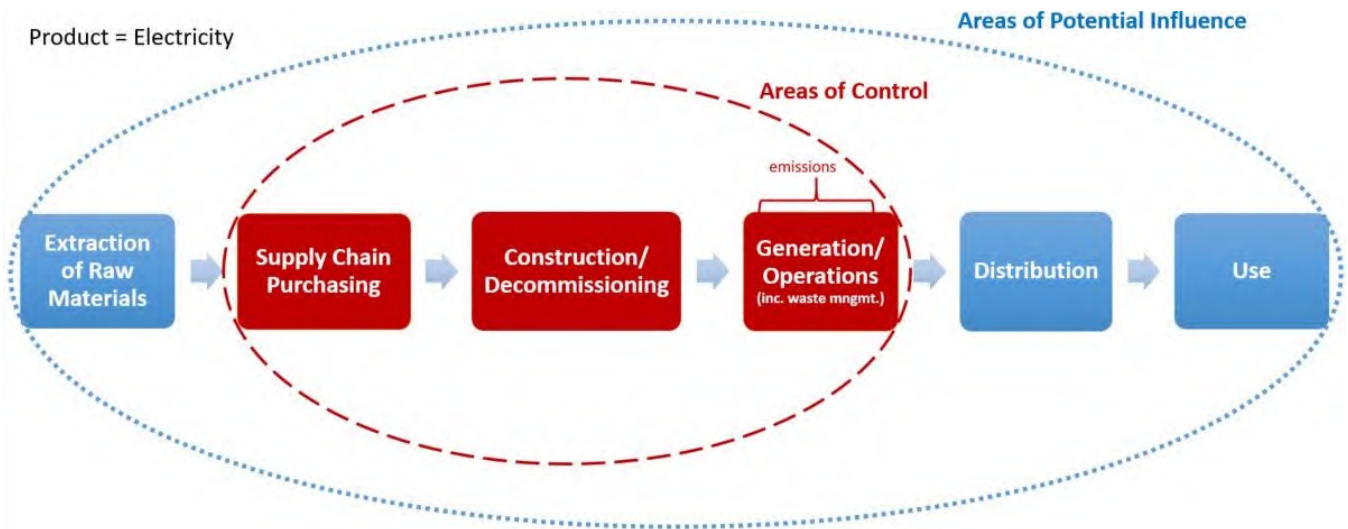


Figure 1: OPG Electricity Generation – Consideration of Life Cycle Perspective

2.1 Needs and Expectations of Interested Parties

OPG’s Corporate Affairs division oversees stakeholder relations and community outreach, and each Business Unit owns and is responsible for engagement with their own stakeholders. Needs and concerns of external interested parties (industry associations, regulators, host communities, interveners, and union driven work groups) and internal interested parties (OPG employees, Board of Directors, Joint Working Committee, Joint Health and Safety Committee, and Health and Safety subcommittees) are managed through OPG’s relationships/outreach initiatives as well as via internal documentation of meeting minutes and other employee communications.

OPG’s relationships and outreach initiatives are consistent with OPG’s strategic objectives and risks, and are based on the key value drivers of public trust, Indigenous relations (OPG-POL-0027, Indigenous Relations Policy), and an engaged workforce. Corporate EHS evaluates material stakeholder issues for inclusion in the Regulatory Review Database as compliance obligations, and to guide sustainability reporting. The compliance obligation designation is dependent on the nature and significance of the stakeholder concern. Refer to Section 4.2 for additional information.

Priority external and internal issues that are relevant to OPG’s purpose are defined through OPG’s online sustainability reporting, materiality assessment, and Management’s Discussion and Analysis (MD&A) Reports, which are re-assessed and updated periodically in order to address the dynamic nature of OPG’s organizational context. Between updates, new issues are monitored for and identified by regulatory review (Section 4.2), EHS reporting including Leadership Alignment

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and Board reports, and the Enterprise Risk Management process, which influences the Business Planning process. Figure 2 below summarizes the identification and documentation process for relevant EHS issues and stakeholder concerns, including compliance obligations.

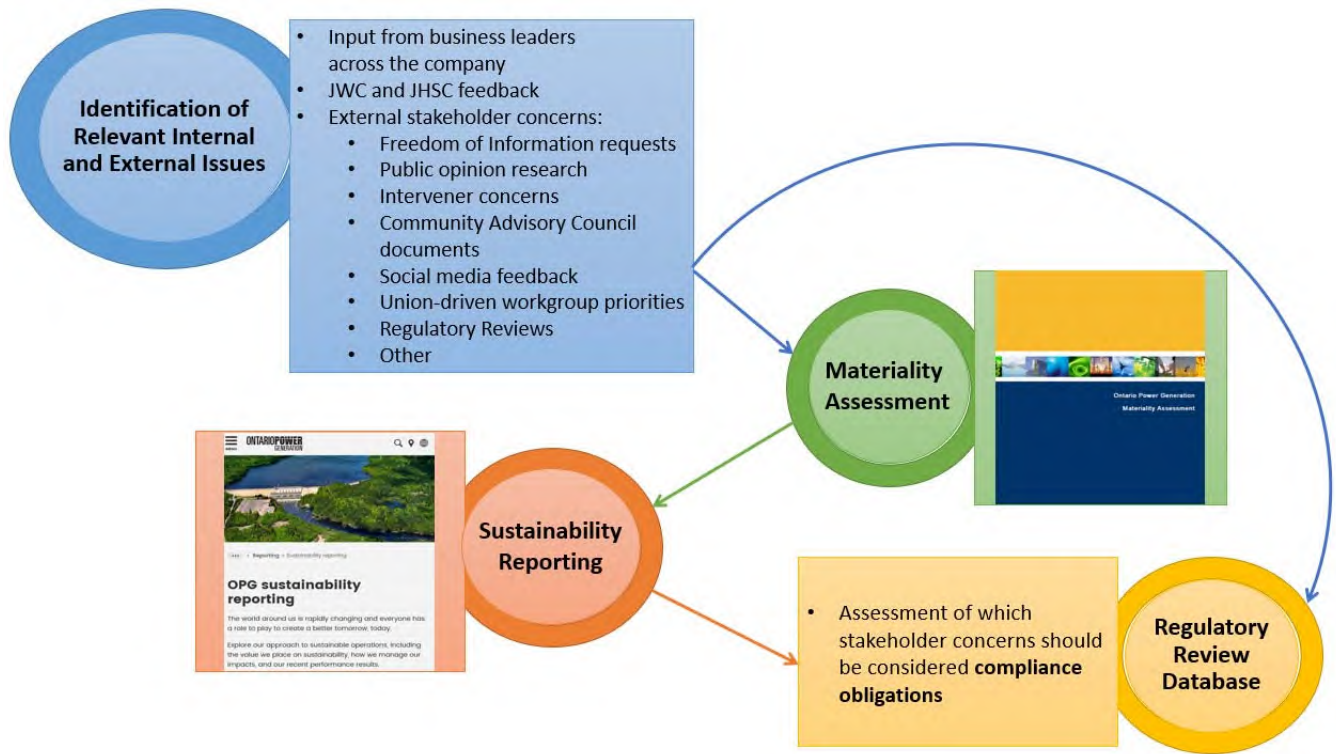


Figure 2 : Relationship between Issues, Stakeholder Concerns, and Compliance Obligations

2.2 Scope of the EHS Managed Systems

2.2.1 Environmental Management System Scope

The scope of OPG’s EMS includes the management of activities related to design, supply chain, construction, commissioning, operation (including emissions, effluent, waste management, and other support processes), and decommissioning of electricity generating stations, and associated properties, auxiliary buildings, and structures solely owned and/or operated by OPG, or sites operated by OPG on behalf of OPG’s partner owners. These locations establish the boundaries of the EMS.

OPG’s activities associated with the supply chain of its suppliers are not within the scope of the EMS, however, OPG may establish environmental criteria for selected goods or services to meet OPG’s needs or priorities. Also, excluded from the scope are activities associated with employee or contractor commuting and/or business travel.

The EMS scope is available to the public at www.opg.com.

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NOTE: OPG leases switchyard lands to Hydro One for the purposes of operating Hydro One switchyard stations for the transmission or distribution of electricity. As tenant, Hydro One is responsible for complying with all applicable environmental laws and is liable for environmental contamination resulting from its operations.

2.2.2 Health and Safety Managed System Scope

OPG’s HSMS establishes the process requirements that are implemented and maintained to ensure that health and safety hazards and risks to workers are being mitigated. The HSMS scope includes:

- Occupational conditions and factors that could affect the health and safety of workers, in all workplaces or from work-related activities under the control of OPG.
- Non-occupational health-related conditions and factors that could affect the health of OPG workers where it impacts achievement of OPG’s business objectives.
- Contractor health and safety.

3.0 LEADERSHIP

3.1 Leadership and Commitment

Top Management is the highest-ranking worker responsible for EHS management within OPG, which is the President and CEO, delegated to the Chief Administrative Officer (CAO). The CAO delegates this responsibility further to the Vice President Environment, Health and Safety. The Enterprise Leadership Team (ELT), is comprised of Top Management from each of the enterprise business units, including EHS, and is chaired by the President and Chief Executive Officer. EHS performance, objectives, and program updates are discussed at routinely scheduled ELT meetings. Members of the ELT also participate in the annual EHS Management Review meeting, discussed in Section 7.6 of this document.

3.2 EHS Managed System Policies

3.2.1 Environmental Policy

OPG-POL-0021, Environmental Policy, provides OPG with direction related to environmental performance and management. This policy is approved by the OPG Board of Directors. The Environmental Policy is reviewed by the President and Chief Executive Officer annually during the EHS Management Review. The Policy is also reviewed annually by a committee of the Board. Any revisions are submitted to the Board of Directors for approval.

The Environmental Policy is communicated to all persons doing work under OPG’s control, including OPG employees and contractors. Employees’ on-going knowledge of the Environmental Policy and the requirements therein is expected to be commensurate with their work. At a minimum, employees are expected to understand the potential environmental impact of the work they perform within the scope of the EMS.

The Environmental Policy is available to the public at www.opg.com.

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3.2.2 Employee Health and Safety Policy

OPG-POL-0001, Employee Health and Safety Policy [B-8] [B-9] provides OPG with direction on employee health and safety performance and the prevention of workplace injuries and ill health. The Occupational Health and Safety Act, Section 25(2)(j) requires an annual review of OPG’s Health and Safety Policy. This policy is reviewed by the Joint Working Committee and approved by the Board of Directors. The Employee Health and Safety Policy is reviewed by the President and Chief Executive Officer annually during the EHS Management Review. The Policy is also reviewed annually by a committee of the Board and submitted to the Board of Directors for approval.

Annual issuance of the policy is communicated by the President/Chief Executive Officer (CEO) to all employees to reinforce OPG’s commitments and individual health and safety obligations. Copies of the policy are posted visibly in the workplace as well as on the OPG Intranet web site.

The Employee Health and Safety Policy is available to the public at www.opg.com.

3.3 Responsibility and Authority

Roles, responsibilities and authority may be defined in Job Documents maintained by the Human Resources division, OPG-STD-0017, Organizational Authority Register (OAR), and/or the documentation supporting the EHS managed systems (e.g., procedures). Specific roles related to the EHS managed systems are outlined in Section 9.0, Roles and Accountabilities.

4.0 ACTIONS TO ADDRESS RISKS AND OPPORTUNITIES

The Enterprise Risk Management (ERM) program is an interfacing program with the EMS and HSMS. OPG’s risk tolerance is specified within OPG-POL-0004, Enterprise Risk Management Policy. Program requirements are defined in OPG-PROG-0004, Enterprise Risk Management, and the process for enterprise risk identification, assessment, treatment, and reporting is described in OPG-PROC-0094, Enterprise Risk Management Reporting.

4.1 Risk Management

The ERM results are a key input into the assessment of EHS risks and opportunities, and the development of associated objectives. Enterprise risks have a direct influence on business imperatives and strategic objectives, which form the basis of the Business Planning process. The Business Planning process identifies priority issues, projects, and focus areas for the various divisions within OPG, including Environment, Health and Safety. Risks are presented to the ELT and mitigation plans are identified, reported on, and challenged through this process. The Business Unit Risk Register is used to document risks associated with environmental aspects (Section 4.1.1), health and safety top hazards (Section 4.1.2) stakeholder concerns (Section 2.1), and compliance obligations (Section 4.3). Risk Mitigation Plans are used to document the actions taken in order to address the aforementioned risks and are updated on a quarterly basis. Business Unit Risk Self Assessments are used to evaluate the effectiveness of the Risk Mitigation Plans.

4.1.1 Environmental Aspects

Elements of OPG’s activities, products and services that interact or can interact with the environment are considered environmental aspects. OPG-PROC-0036, Environmental Aspects Identification and Significance Rating, describes OPG’s process for identifying environmental aspects within the scope of its EMS, assessing the risks and opportunities associated with each,

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determining significance, and communicating this information to the appropriate levels and functions of the organization, as well as to external interested parties.

The operational controls associated with the Significant Environmental Aspects (SEAs) are typically managed locally at relevant sites. Some operational controls may be established at the corporate level. There may also be corporate environmental objectives established to monitor or improve performance associated with SEAs. Aspects that are not determined to be significant at the corporate level reside under local operational control and management [B-2] [B-5].

A review of the environmental aspects database and SEA list is prompted by new risks/opportunities being identified, or existing ones being affected by the results of corrective actions, operational process changes, drills, performance trending, enterprise risk management, business unit risk management, project risk management, and/or leadership meetings. Refer to OPG-PROC-0036 for additional information.

4.1.2 Health and Safety Top Hazards

In addition to the strategic risk assessment process described in 4.1 above, EHS conducts an Operational Health and Safety Risk Assessment whereby the Business Units:

- Conduct hazard-based operational risk assessments in compliance with OPG-PROC-0135, Operational Health and Risk Assessment. This process considers enterprise-wide routine and non-routine activities carried out by workers and contractors, generation processes, workplace conditions, infrastructure, facilities, equipment or materials that could impact the health and safety of workers, contractors, or visitors.
- Use the output of this process to create a business-specific Operational Health and Safety Risk Register consisting of a ranked list of operational risks, and used to identify the organization’s Top Hazards. The risk assessment results are then used to set annual objectives and targets that will drive the development of health and safety plans to mitigate risks that are deemed unacceptable.
- Annually assess the need to review and update this risk assessment to address changes to activities, products, services or operating conditions.

Corporate EHS:

- Collects the businesses’ operational risk assessment data and their Operational Health and Safety Risk Registers and rolls up the businesses’ risk assessment information using the process prescribed in OPG-PROC-0135 to develop the OPG Operational Health and Safety Risk Register and Top Hazards across the company.

4.2 Compliance Obligations

Compliance obligations constitute both legal and other requirements relevant to EHS management. Legal requirements include requirements from all levels of government: federal and provincial legislation and municipal bylaws, as well as applicable international laws. Non-legal requirements which may govern OPG’s activities include shareholder directives, agreements with stakeholders, memoranda of understanding, non-regulatory guidelines, voluntary codes of practice, or requirements of industry associations.

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The process for identifying and evaluating the applicability of compliance obligations is documented in OPG-PROC-0049, Identification of Environmental, Health and Safety Compliance Obligations.

A list of other requirements which may govern OPG at the corporate level is maintained and accessible on the OPG Environment and Health and Safety intranet sites via the Regulatory Review Database.

4.3 Objectives and Achievement Plans

The framework for the development, achievement, and communication of OPG’s EHS objectives is provided in Figure 3 below. The organization’s business imperatives and strategic objectives, derived in part from enterprise risk identification and management (Section 4.0), form one of several inputs in developing EHS objectives and achievement plans (OAP).

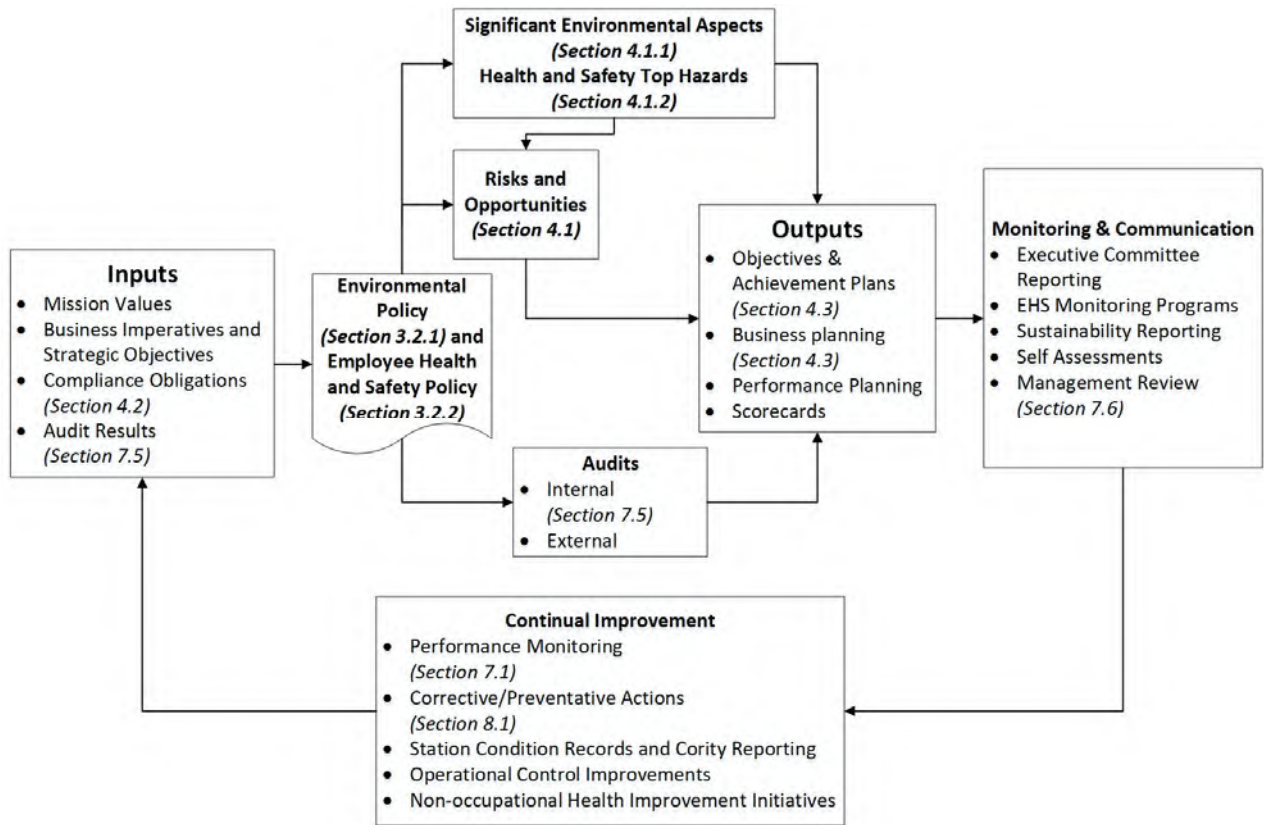


Figure 3: Framework for Establishment, Achievement, and Communication of OAP

OPG’s Business Planning process supports activity approval, resource allocation, and establishment of a corporate scorecard. The Business Planning process is central to the identification of changes to planned activities that may result in new or revised environmental aspects, top hazards, and EHS compliance obligations. It is also central to the EHS objective approval process. Additionally, Corporate EHS facilitates the development of strategic health and safety objectives every 5 years as part of the strategic risk assessment and planning process. Business unit leaders or local management may establish additional objectives to facilitate management of environmental aspects or top hazards under local operational control.

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Nuclear follows N-PROC-RA-0023, Fleetview Program Health and Performance Reporting for the establishment of performance indicators to monitor against, measure overall effectiveness, identify adverse trends, and initiate corrective actions [B-2] [B-5]. Health and safety assessment findings such as independent assessments and self-assessments are managed in accordance with OPG-PROC-0140, Health and Safety Management System Compliance and Assessment. For additional assessments conducted at nuclear facilities, refer to N-PROC-RA-0010 Independent Assessment, and N-PROC-RA-0097 Self-Assessment and Benchmarking.

EHS routinely monitors performance against objectives (the scorecard), and periodically reports performance to the Enterprise Leadership Team (ELT) and to a committee of the Board of Directors. EHS is responsible for preparing the reports to the ELT and Board committee. EHS is accountable for establishing, implementing and the overall management of performance monitoring programs. Individual program elements may be executed by groups across OPG and managed locally.

The Business Units develop annual EHS plans based on their business-specific objectives, measures and targets. For Environment, a summary of annual environmental objectives and the associated plans for achievement is maintained by Corporate EHS and communicated internally via the Environment intranet webpage.

5.0 SUPPORT

5.1 Resources

Resources required for EHS management are identified and allocated in the Business Planning process. The EHS division of the Chief Administrative Office provides resources to support implementation of the EMS and HSMS.

The head of the Business Unit is accountable to ensure adequate resources are allocated to enable effective implementation of EHS managed system requirements as applicable within their respective organizations.

In addition, OPG-POL-0032 requires strategies to be in place that allow OPG to prepare for, respond to, and recover from emergencies that impact its operations or the public. Recovery planning and continuity of critical functions is addressed through OPG-PROG-0033, Business Continuity Program; another example of a key interfacing program with the EHS managed systems.

5.2 Competency and Awareness

Line Management ensures employees and contractors performing work under their control are competent based on education, training, and/or experience. EHS ensures operational control procedures and practices associated with EHS aspects and priority hazard areas appropriately identify these requirements.

EHS, in consultation with the Business Units and in collaboration with Learning and Development, establishes training requirements based on work activities and exposure to hazards. Learning and Development shall deliver the identified training and retain training and personnel records as evidence of competence. Some EHS training may be defined and delivered locally by sites in accordance with site specific operational control needs.

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Line Management shall also ensure that persons doing work under their control are, to an extent appropriate to the work being performed, aware of the following:

- The Environmental Policy and Employee Health and Safety Policy;
- The significant environmental aspects and health and safety top hazards, and related actual or potential impacts associated with their work;
- Their contribution to the effectiveness of the EMS and HSMS, including the benefits of enhanced performance;
- The implications of not conforming with EMS or HSMS requirements, including not fulfilling OPG’s compliance obligations.

This awareness is generally accrued through training, knowledge of individual accountabilities and application of the Code of Business Conduct. EHS awareness is incorporated into general employee training during the onboarding process for employees and contractors. Specific knowledge for individual tasks is gained through training, experience, reference to procedures, and/or the job planning process.

Line Management shall apply OPG-PROG-0038, Contractor Management in accordance with the respective document compliance date, to ensure external providers, including contractors, working under their control have similar levels of awareness to an extent appropriate to the work being performed. In addition, EHS maintains a separate contractor safety management procedure for health and safety requirements specifically; OPG-PROC-0160, Contractor Safety Management.

NOTE: For Nuclear, environmental competence, training and awareness needs associated with environmental aspects and the EMS, including environmental training requirements specified by compliance obligations, are identified in N-TQD-419-00001, Environment Professional Training and Qualification Description.

5.3 Communication

Internal and external communication of EHS-related information is a shared responsibility in accordance with OPG’s business model. The scope of communications includes:

- a) Changes to procedures, policies, templates etc.;
- b) Significant Environmental Aspects and Health and Safety Top Hazards;
- c) Specific safety issues;
- d) Notice of upcoming reviews, events, audits, meetings;
- e) Receipt of and response to complaints or comments;
- f) Government communications - requests for information, reporting, applications, permits;
- g) Legislative information or notices of impending legislative changes; and
- h) Other reports (i.e., spill reports, etc.).

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Formal internal communication about OPG's EMS and HSMS is governed by procedures managed by the Office of the Corporate Secretary for Board of Directors meetings and ELT meetings. Furthermore, Corporate EHS develops an annual corporate EHS communications plan to support the achievement of environment, health and safety objectives, targets and plans

Business Units establish communication practices using tools such as meetings, email, and verbal instructions appropriate to their needs. Similarly, communication between businesses and functions occurs as required, including participation and presentation at meetings of the Nuclear Executive Committee (NEC), Enterprise Operations, Strategy, Projects, and EHS team meetings.

Significant and moderate environmental events are communicated in accordance with OPG-PROC-0041, Environmental Event Identification, Classification, and Reporting. Health and safety events are reported in accordance with OPG-PROC-0120, Safety Incident and Regulatory Event Response, and investigated in accordance with OPG-PROC-0121, Safety Incident Investigation and Corrective Actions.

Primary accountability for key examples of outreach, receiving, documenting and responding to relevant external communications is detailed in Table 1. Additional communication may occur directly between the agency and operations, depending on the circumstances.

NOTE: The external agencies documented in Table 1 are not an exhaustive list. Some RG locations in particular may also interact regularly with Quebec ministries and/or US agencies.

Table 1: External Communications

Agency	Lead
Federal	
Canadian Nuclear Safety Commission (CNSC)	EHS Nuclear Regulatory Affairs and Stakeholder Relations
Environment and Climate Change Canada, Fisheries and Oceans Canada, Canadian Environmental Assessment Agency, Natural Resources Canada (environmental matters)	EHS
Transport Canada	RES, RG Dam Safety and Water Resources, Nuclear EHS, Nuclear Waste Management
Other Federal Departments and Agencies	Corporate Affairs
Provincial	
Ministry of the Environment, Conservation and Parks Ministry of Natural Resources and Forestry, Technical Standards and Safety Authority, Electrical Safety Authority, Workplace Safety and Insurance Board, Ministry of Labour Training and Skills Development	EHS and Corporate Affairs
Ministry of Energy as Shareholder (Minister and Deputy Minister)	Office of the Corporate Secretary
Ministry of Energy (below Deputy Minister) and other Provincial Ministries or Agencies	Corporate Affairs
Ministry of Community Safety and Correctional Services	Security and Emergency Services
Other	
Other External Parties	Corporate Affairs and EHS
Indigenous Communities	Indigenous Relations and EHS
Local Government	Corporate Affairs and/or EHS and /or local sites
Public	Corporate Affairs

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The tools used for internal and external communication can vary depending on the situation and can change in light of continual improvement initiatives. Examples include:

- a) Verbal in-person, telephone, e-mail, voice-mail, text message and conference call;
- b) Board, ELT, Leadership Alignment, or other formal meetings;
- c) Seminars, workshops, training sessions;
- d) Sustainability Reporting;
- e) EHS documentation;
- f) PowerNews or other employee communication publications (newsletters, safety bulletins, flash reports etc.);
- g) OPG Intranet;
- h) Social media
- i) Community Advisory Council meetings and other community partnerships,
- j) www.opg.com.

While OPG does not actively communicate information pertaining to its significant environmental aspects or top health and safety hazards externally, general information may be included in public documents such as corporate reports, newsletters, community meetings, and on the external OPG website.

5.4 Environment, Health and Safety Recognition

OPG recognizes significant EHS achievements at both an organizational level and for individual worker efforts. This may include:

- “Power of You” Award program that recognizes exceptional contribution that could be in the area of environment, health and safety from an individual worker or a group of workers.
- “Honour Roll” of organizational safety milestone achievements on the Corporate Health and Safety website and in PowerNews.
- iCare Years of Service Hard Hat Sticker recognition. Annually, each member of our team are recognized for their part in embodying the core values of iCare - Safety first through compassion-based decision-making.
- Value in Action (ViA) employee recognition entries in support of the OneOPG culture shift.

Business-level recognition of achievements in environment, health and safety may also be made through appropriate correspondence with workers in e-mails and letters.

5.5 Documented Information

Documented information related to the EMS and HSMS is primarily the responsibility of EHS and is summarized in the Governance Framework and within Appendix A and B of this program document. Additional supporting documentation may be maintained locally at individual sites.

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EHS managed systems document the following:

- Information required by the ISO 14001:2015 standard or ISO 45001 standard.
- Information determined by OPG to be necessary for the effectiveness of the EHS managed systems.

The EHS managed systems and supporting governing documents are maintained in accordance with OPG-PROG-0001, Information Management and OPG-STD-0001, Requirements for Administrative Governance Documents.

EHS managed system documentation also includes informal local procedures used exclusively by EHS as guidance or reference material. This documentation is maintained and controlled as required by EHS and may not be subject to OPG-PROG-0001.

The records required to support the EHS managed systems, including confidential health records, are maintained in accordance with OPG-PROG-0001. The specific requirements for the control of records are outlined in the OPG-PROC-0019, Records and Document Management. EHS maintains critical records necessary to demonstrate conformity to the requirements of its managed systems through records control. These records include, but are not limited to: approved objectives and achievement plans arising from business planning; quarterly EHS reports, internal and compliance audit reports, training records; registration/surveillance audit reports, and Management Review input and decision output. Records and retention periods required for specific operational control risks are specified in all direct implementing procedures.

6.0 OPERATION [B-2] [B-5]

6.1 EHS Operational Planning and Control

Enterprise Operations and Projects, along with EHS, identify and plan those operations which fall within OPG's areas of control of the electricity generation life cycle (refer to Section 2.0, Context of the Organization). These operations are associated with OPG's significant environmental aspects, health and safety top hazards, and EHS objectives. Operating control measures may also be developed for aspects where the need is identified.

Local management system documentation is available on the OPG intranet or other approved data information management systems, providing access to local operational control. Operational control measures may include procedures, business instructions, work orders, operations or maintenance call-ups, inspection forms, checklists, etc. and are developed locally. Local operational control measures are not expected to conform to consistent formats. Where appropriate, operational control may also be exercised through corporate procedures.

Corporate EHS maintains ownership of OPG's climate change portfolio, however, initiatives and expertise related to climate change are not limited to a single department. Management of climate change and related disclosures requires cross-functional support as described in OPG-STD-0172, Management of Climate Change. Implementation of operational control measures, as defined in the paragraph above in relation to climate change, is the responsibility of the individual sites and may vary in both content and format between sites.

Under extenuating circumstances, such as a pandemic, adjustments to routine activities may be required due to reduced staffing and priority pandemic response work. In the event of a pandemic,

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as defined in OPG-GUID-08963.03-0001, Infectious Disease Response Guideline, reduced or deferred compliance sampling and/or reporting may be warranted using a risk based approach. Refer to OPG-PROC-0049 for additional information.

Line Management shall ensure that EHS requirements are identified and communicated to external providers working under their control. Contractors shall have similar levels of awareness about operational controls, to the extent appropriate for the work performed, through application of contractor management processes as specified in Section 5.2, Competency and Awareness.

Outsourced processes that fall within the boundaries of OPG’s EHS managed systems are managed in accordance with OPG-PROG-0009, Items and Services Management, as well as OPG’s Code of Business Conduct and Supplier Code of Conduct.

NOTE: Suppliers shall comply with applicable requirements of CSA N286 when conducting work for Nuclear facilities.

6.1.1 Health and Safety Operational Controls

Operational controls are established to eliminate or control the health and safety risks identified through the risk assessment processes or the safe work planning process.

Corporate EHS maintains the following tripartite (OPG, Power Workers’ Union [PWU] and The Society of United Professionals [Society]) governing documents:

- Corporate Safety Rules that provide direction to all workers and contractors (as specified in contract documents) on eliminating or controlling significant operational health and safety risks.
- OPG’s Corporate Work Protection Code that describes requirements for lockout/tag-out.

In addition, Corporate EHS also maintains:

- Procedures directed to managers and supervisors describing operational criteria to prevent worker injury or ill health. Refer to Appendix B - HSMS Governance Framework.
- OPG-PROC-0129, Safe Work Planning describes requirements for identifying hazards and eliminating or controlling the hazards for task-based activities. This procedure also addresses the identification of “fitness for duty” health issues that could impact a worker’s ability to conduct work safely.
- Non-occupational health programs directed to workers addressing conditions and factors that could affect the health of workers where it impacts achievement of business objectives, e.g., health promotion programs, Employee and Family Assistance Program (EFAP), fitness for work.

The Business Units are responsible for the following:

- Implementing the requirements of operational control governing documents and integrate them into the safe work planning processes.

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- Delivering applicable communications about workplace health and safety programs and non-occupational health programs.
- Implementing operational control requirements for contracted services.
- Managing public safety risks through operational control and safe work planning.

6.2 Emergency Preparedness and Response [B-3] [B-4] [B-6]

OPG has developed OPG-POL-0032, Safe Operations Policy, OPG-PROG-0030, OPG Emergency Management Program, and OPG-STD-0091 Ontario Power Generation Emergency Preparedness and Response Plan, to ensure timely and effective emergency response. OPG-STD-0091 addresses the health and safety of employees, contractors, the public, responders, and the environment.

Nuclear provides corporate leadership of OPG’s emergency preparedness and response, including procedural direction and coordinating emergency preparedness and planning with regional, provincial and national agencies and responders. Enterprise Operations and Projects shall establish and maintain local emergency response procedures appropriate for their accountabilities.

These plans and procedures identify potential emergency situations and/or accidents that can have an impact on EHS and describes the appropriate response, and are regularly tested and evaluated to ensure their adequacy and ongoing effectiveness. The procedures are revised as necessary to capture lessons-learned and to address any identified gaps or opportunities for improvement. The businesses are required to meet all the emergency management requirements of applicable legislation as well as OPG emergency management governance.

Recovery planning and continuity of critical functions is addressed through OPG-PROG-0033, Business Continuity Program. Potential or actual emergencies or events of a significant environmental or health and safety nature are reported through OPG-PROC-0041, Environmental Event Identification, Classification, and Reporting and OPG-PROC-0120, Safety Incident and Regulatory Event Response, respectively.

6.3 Management of Change

Management of change at OPG is governed by OPG-STD-0140, Managing Change, and OPG-PROC-0166, Organization Design Change for changes which impact the workforce. Both documents derive authority from OPG-PROG-0040, People and Culture Management System.

7.0 PERFORMANCE EVALUATION

7.1 Monitoring, Measurement, Analysis, and Evaluation

Environment, Health and Safety monitors and measures performance against objectives established in business planning through regular monthly, quarterly, and annual reporting requirements.

Analysis of results and evaluation of performance is captured through EHS performance reporting. Relevant reporting requirements which support OPG’s EHS monitoring, measurement, analysis and evaluation include the following:

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- Environmental event reporting in accordance with OPG-PROC-0041, Environmental Event Identification, Classification and Reporting;
- Health and Safety reporting on contractor safety incidents, regulatory events and non-occupational worker sick leave in accordance with OPG-PROC-0120, Safety Incident and Regulatory Event Response Procedure and OPG-PROC-0083, Disability Management;
- EHS reports at Leadership Alignment meetings;
- EHS Performance Reporting to ELT and committees of the OPG Board of Directors including emissions, events, safety incidents, injuries and illness performance, regulatory compliance, and non-occupational health performance;
- Sustainability Reporting;
- Management’s Discussion and Analysis (MD&A) and Annual Information Form (AIF) (found at www.opg.com);
- Fleetview Report (Nuclear only, in accordance with N-PROC-RA-0023, Fleetview Program Health and Performance Reporting);
- Electronic Performance Reporting database (Nuclear only, in accordance with N-PROC-AS-0078, Nuclear Performance Monitoring and Reporting);
- Local Index Reports.

OPG’s EHS activities are also monitored, measured, analyzed, and evaluated through Nuclear Executive Committee (NEC) meetings, operational meetings, and project team meetings. Among other things, these meetings allow OPG’s Top Management to keep abreast of EHS performance.

Nuclear, RG and RES establish local procedures or operational controls to monitor and measure, on a regular basis, the key characteristics of its operations that can have a significant EHS impact.

Where appropriate, these procedures or controls should address the need for monitoring and measurement equipment to be calibrated or verified for proper functionality, and that records should be retained [B-4].

7.2 Health and Safety Worker Involvement

OPG management is committed to involving its worker representative groups in meeting its health and safety objectives. Worker representative involvement is built into most of the elements of the health and safety management system where the represented groups participate as appropriate in the various health and safety management activities.

Worker involvement occurs at the Corporate level in:

- Tripartite Advisory Committee (TAC) consisting of senior executives of OPG, the PWU and the Society who meet regularly to review health and safety issues of interest throughout OPG, including non-occupational health issues, and recommend strategies.
- Joint Health and Safety Working Committee (JWC) and its sub-committees, Corporate Safety Rule Advisory Group (CSRAG) and Corporate Code Advisory Group (CCAG),

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where senior staff from Corporate Environment, Health and Safety, the PWU, and the Society meet regularly to discuss health and safety issues, including non-occupational health issues, and recommend strategies to address these issues.

Worker involvement occurs at the business level at tripartite Joint Health and Safety Committees (JHSC) for each workplace as per requirements in the Occupational Health and Safety Act and agreements with the unions.

Locally, workers are involved in identifying hazards and safe work planning through, for example, safety meetings, pre-job briefs, and tailboard meetings.

7.3 Disability Management

Occupational and non-occupational injury and illness is managed according to OPG-PROC-0083, Disability Management, to minimize adverse impact to workers and operations and to identify trends and develop reactive and proactive mitigation strategies.

7.4 Evaluation of Compliance

OPG controlled sites shall evaluate compliance and report infractions related to EHS compliance obligations by:

- a) Assessing EHS infractions identified and reported internally through performance monitoring or management directed self-assessments.
- b) Assessing the results of inspections by regulators.
- c) Conducting compliance audits as described in OPG-PROC-0044, Environmental Internal Audit and Compliance Audit and OPG-PROC-0140, Health and Safety Managed System Compliance and Assessment.

The VP, Environment, Health and Safety may also commission additional compliance audits in consultation with Business Units and Assurance and Enterprise Risk Management.

7.5 Audit and Assessment

Assurance and Enterprise Risk Management (Internal Audit) establishes an audit program to ensure that all requirements of the Employee Health and Safety Policy [B-8][B-9], Environmental Policy, and the EHS managed systems are being properly implemented and maintained throughout the organization.

Corporate EHS implements a compliance monitoring and health and safety assessment procedure as described in OPG-PROC-0140, Health and Safety Managed System Compliance and Assessment. Environmental internal audits shall be conducted as described in OPG-PROC-0044, Environmental Internal Audit and Compliance Audit.

Nuclear Oversight establishes an audit program (N-PROG-RA-0010) to ensure the management system under N-CHAR-AS-0002 Nuclear Management System is reviewed with sufficient frequency to confirm its continuing effectiveness. This includes a review of the HSMS and EMS.

Self-Assessments and benchmarking are performed at OPG's nuclear facilities in accordance to N-PROC-RA-0097 Self-Assessment and Benchmarking.

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7.6 Management Review

OPG Top Management comprised of the President and Chief Executive Officer (CEO) and designated members of the ELT participate in the combined annual review of the EHS managed systems to ensure its ongoing suitability, adequacy and effectiveness. EHS shall prepare a Management Review (Input) Report, including recommendations, based on requirements of the ISO 14001 Standard, ISO 45001 Standard, and the judgement of the VP Environment Health and Safety. The VP Environment, Health and Safety shall review the Input Report in a meeting with the President and CEO and designated members of the ELT. The outputs of the Management Review include any decisions and actions related to possible changes to the EMS and HSMS, consistent with the commitment to continual improvement. These outputs are expected to be inputs to the Business Planning process where additional resources are warranted. The VP Environment, Health and Safety shall ensure these outputs are reflected in revisions to the EHS managed systems and communicated to those accountable for the action required.

8.0 IMPROVEMENT

8.1 Non-Conformity and Corrective Action

OPG ensures that there are appropriate processes in place to monitor and measure EHS performance and to ensure that effective corrective action is taking place.

The business units ensure that a process is established to:

- Develop corrective action plans to address incident causes, noncompliance or improvement opportunities.
- Track and follow-up all corrective actions, e.g., SAP, Asset Suite Action Request, etc., with regular review of their status.

For environment, the responsibilities and authorities for dealing with actual and potential nonconformities and recommended corrective actions are described in OPG-PROC-0042, Environmental Nonconformity, Corrective and Preventive Action, or more broadly for Nuclear within N-PROG-RA-0003, Performance Improvement. Non-conformity events are risk-ranked to ensure that actions taken, along with extent of verification and effectiveness review, are appropriate to the magnitude of the problems and the potential environmental and business risk presented by the nonconformity. The corrective action process may prompt revision of the Environment Aspects Database or SEA list as needed, to incorporate any associated impacts on environmental risks or opportunities as outlined in OPG-PROC-0036.

8.2 Continual Improvement

OPG shall strive to continually improve the suitability, adequacy and effectiveness of the EHS managed systems by enhancing EHS performance through periodic review and revision of the Environmental Policy and Employee Health and Safety Policy, periodic review and revision of training material and communications, implementation of corrective actions, and implementation of annual Management Review outputs. Persons working under OPG’s control may provide suggestions for continual improvement to the Corporate Environment, Health and Safety department throughout the year. The businesses units shall ensure that EHS issues or concerns are documented, assessed and corrected with efforts to prevent recurrence.

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9.0 ROLES AND ACCOUNTABILITIES

Unless otherwise expressly noted in this section, delegation to others within one’s authority is permissible.

9.1 President and Chief Executive Officer

9.1.1 Communicates the Employee Health and Safety Policy and Environmental Policy.

9.1.2 Endorses corporate level EHS objectives and achievement plans and approves the business-level scorecard.

9.2 Chief Operations Officer and CNO

9.2.1 Ensures adequate EHS management systems are in place, consistent with legislation and corporate policies, to manage potential environment, health and safety impacts arising from operations.

9.3 Chief Administrative Officer

9.3.1 Ensures that the EMS and HSMS are established, maintained and reviewed.

9.3.2 Recommends EHS objectives and achievement plans to the President/CEO and their Direct Reports.

9.3.3 Reports on OPG’s EHS performance to the President/CEO and OPG Board.

9.4 Senior Vice-President, Law and General Counsel, Chief Ethics Officer

9.4.1 Provides advice to the President/CEO and their Direct Reports on legislative compliance and due diligence issues.

9.4.2 Provides support to the Vice-President, Environment, Health and Safety relative to interpreting legislative requirements, monitoring and assessing EHS legislative changes and emerging trends, and advising on existing and emerging EHS legislation.

9.5 Vice President, Environment, Health and Safety

9.5.1 Develops and maintains the Environmental Policy and Employee Health and Safety Policy [B8][B-9].

9.5.2 Develops and recommends the EHS objectives and achievement plans for corporate and Business Unit balanced scorecards.

9.5.3 Maintains adequate resources to support the implementation of the EMS and HSMS and the achievement of EHS objectives and achievement plans.

9.5.4 Maintains a central database of the EHS incident/regulatory information provided by the business units.

9.5.5 Oversees monitoring and evaluation of EHS performance.

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- 9.5.6 Provides functional support for EHS programs.
- 9.5.7 Works in partnership with the Nuclear organization to ensure the integrity of the Nuclear Management System (N-CHAR-AS-0002) is maintained in accordance with the expectations of the President and Chief Nuclear Officer.
- 9.6 Director, Corporate Environment, Health and Safety**
- 9.6.1 Ensures EHS managed systems are consistent with program and legal requirements.
- 9.6.2 Develops and maintains corporate EHS governance related to the program document.
- 9.6.3 Develops and implements training necessary for implementation and execution of EHS management.
- 9.6.4 Drives alignment of programs to support Climate Change Plan.
- 9.7 Director, Nuclear Environment; Director, RG Environment Health and Safety; Director, Nuclear Environment, Health and Safety;**
- 9.7.1 Provides support in ensuring EHS events are reviewed and communicated, and that applicable information is incorporated into EHS documents.
- 9.7.2 Provides support in ensuring EHS standards and requirements meet, or exceed, regulatory requirements.
- 9.7.3 Monitors implementation of the EHS managed systems within Nuclear or RG as applicable.
- 9.7.4 Reports on performance of EHS managed systems to Top Management for review and as a basis for improvement of the EHS managed systems.
- 9.7.5 Provides support in ensuring EHS reporting is consistent with program and legal requirements.
- 9.8 Director, Corporate Communications and Director, Brand Management**
- 9.8.1 Ensures relevant information about the EHS managed systems is communicated to employee and community stakeholders.
- 9.9 Senior Manager, Nuclear Environment Operations Support; Senior Manager, RG Environment Operations Support North and South; Senior Manager, Nuclear Health and Safety Field Services; Senior Manager, Environment Corporate Programs**
- 9.9.1 Provides support in ensuring EHS managed system requirements are established, implemented, and maintained within area of responsibility.
- 9.9.2 Reports site performance of EHS managed systems.
- 9.9.3 Recommends areas for improvement of EHS managed systems and opportunities for improvement of EHS performance at sites.

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9.10 Tripartite Advisory Committee (Management, Power Workers’ Union and Society Membership) for the Health and Safety Managed System ONLY

- 9.10.1 Monitors ongoing health and safety activities to ensure focus is maintained and appropriate direction is provided.
- 9.10.2 Provides recommendations for the development and implementation of *health and safety* initiatives, policies, objectives and processes.
- 9.10.3 Develops and approves joint policies on health and safety, including Corporate Safety Rules and Work Protection Code.
- 9.10.4 Recommends and establish working committees and task groups, as required, to address priority health and safety issues.
- 9.10.5 Identifies opportunities for mutual benefit to health and safety.

10.0 DEFINITIONS AND ACRONYMS

10.1 Definitions

Business Unit: Refers to all the levels of the organization which report to the BLA

Business Level Authority (BLA): Executive Vice-President or Senior Vice-President of a Business Unit responsible to implement this procedure.

Business Planning Process: The process that OPG undertakes annually to define its future business priorities, and plans to achieve them in all its business areas. This includes defining the resources required.

Contractor: Any individual or firm engaged by OPG on a contract, sub-contract or consulting basis to do work on behalf of the corporation at OPG workplaces. .

Measures: A qualitative or quantitative method for determining the extent to which an objective has been achieved.

Objectives: Goals, in terms of EHS performance, that the organization sets itself to achieve in order to fulfill its policies.

Operational Controls: Specific control measures in place to ensure that OPG’s environmental and safety hazards are controlled and risks are mitigated as part of the operation of its business.

Performance: Measurable results of the EHS management system, related to the organization’s control of risks, based on its policies and objectives.

Risk Assessment: Process of evaluating the risk(s) arising from a hazard(s) taking into account the adequacy of any existing controls, and deciding whether or not the risk(s) is acceptable.

Risk: Combination of the likelihood of an occurrence of a hazardous event or exposure(s) and the severity of injury or ill health that can be caused by the event or exposure(s).

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Target: A specific level of performance that is required to be met in order to achieve an objective within a defined timeframe.

10.2 Abbreviations and Acronyms

AIF	Annual Information Form
BLA	Business Level Authority
CEO	Chief Executive Officer
CNSC	Canadian Nuclear Safety Commission
CSA	Canadian Standards Association
CSRAG	Corporate Safety Rule Advisory Group
CCAG	Corporate Code Advisory Group
EFAP	Employee and Family Assistance Program
ELT	Enterprise Leadership Team
EHS	Environment, Health and Safety
EMS	Environmental Management System
ISO	International Standards Association
JHSC	Joint Health and Safety Committee
JWC	Joint Health and Safety Working Committee
MD&A	Management's Discussion and Analysis (MD&A)
MECP	Ministry of the Environment, Conservation and Parks
NEC	Nuclear Executive Committee
OAP	Objectives and Achievement Plans
OAR	Organizational Authority Register
OPEX	Operating Experience
OPG	Ontario Power Generation
PWU	Power Workers Union
RES	Real Estate Services
RG	Renewable Generation
SEA	Significant Environmental Aspects
Society	Society of Energy Professionals
TAC	Tripartite Advisory Committee
VP	Vice President

11.0 BASES AND REFERENCES

11.1 Bases

[R-1] CAN/CSA-ISO 14001:16 Environmental management systems — Requirements with guidance for use (ISO 14001:2015)

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- [R-2] CSA Z45001:19 Occupational health and safety management systems — Requirements with guidance for use (ISO 45001:2018)
- [R-3] OPG-POL-0021, Environmental Policy
- [B-1] CSA N286-12 Management System Requirements for Nuclear Facilities
- [B-2] CSA N286-12 Clause 7.3.2 (e), Factors considered in determining design inputs include environment considerations.
- [B-3] CSA N286-12 Clause 7.9.7 (a), Procedures prepared for non-routine and emergency conditions that require immediate action, including unexpected hazards.
- [B-4] CSA N286-12 Clause 7.9.7 (b), Procedures prepared for non-routine and emergency conditions that require immediate action, including excessive emissions.
- [B-5] CSA N286-12 Clause 9.3.2 (e), Factors considered in determining design inputs environment considerations.
- [B-6] CSA N286-12 Clause 9.9.2 (d), Operations - Documents shall be prepared for non-routine and emergency conditions that required immediate action.
- [B-7] CSA N286-12, Clause 4.2(c), Understand and promote a safety culture by providing means to support workers in carrying out their tasks safety and successfully.
- [B-8] OPG-POL-0001, Employee Health and Safety Policy
- [B-9] Occupational Health and Safety Act of Ontario

11.2 References

11.2.1 Performance References

- N-PROC-AS-0078, Nuclear Performance Monitoring and Reporting
- N-PROC-RA-0023, Fleetview Program Health and Performance Reporting
- N-PROG-MP-0009, Design Management
- N-PROG-RA-0001, Consolidated Nuclear Emergency Plan
- N-PROG-RA-0003, Performance Improvement
- N-PROG-RA-0012, Fire Protection Program
- N-PROC-TR-0021, Training Qualification Description Development and Approval Process
- N-TQD-419-00001, Environment Professional Training and Qualification Description
- OPG-PROC-0019, Records and Document Management

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- OPG-PROC-0036, Environmental Aspects Identification and Significance Rating
- OPG-PROC-0041, Environmental Event Identification, Classification, and Reporting
- OPG-PROC-0042, Environmental Nonconformity And Corrective Action
- OPG-PROC-0044, Environmental Internal Audit and Compliance Audit
- OPG-PROC-0049, Identification of Environmental, Health and Safety Compliance Obligations
- OPG-PROC-0166, Organization Design Change
- OPG-PROG-0001, Information Management
- OPG-PROG-0004, Enterprise Risk Management
- OPG-PROG-0009, Items and Services Management
- OPG-PROG-0030, OPG Emergency Management Program
- OPG-PROG-0033, Business Continuity Program
- OPG-PROG-0038, Contractor Management
- OPG-PROG-0039, Project Management Program
- OPG-PROG-0040, People and Culture Management System
- OPG-STD-0140, Managing Change
- OPG-STD-0017, Organizational Authority Register
- OPG-STD-0119, OPG Biodiversity Management
- OPG-STD-0152, Spill Management
- OPG-STD-0156, Management of Waste and Other Environmentally Regulated Materials
- OPG-STD-0091, Ontario Power Generation Emergency Preparedness Response Plan
- OPG-STD-0172, Management of Climate Change
- OPG-STD-0143, Climate Change Adaptation Plan
- W-PROG-WM-0002, Radioactive Material Transportation
- N-POL-0001, Nuclear Safety and Security Policy
- N-PROG-AS-0001, Nuclear Management System Administration

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- N-PROG-RA-0013, Nuclear Radiation Protection Program
- N-PROG-RA-0010, Independent Assessment
- OPG-PROC-0083, Disability Management
- OPG-PROC-0120, Safety Incident and Regulatory Event Response Procedure
- OPG-PROC-0121, Safety Incident Investigation and Corrective Action
- OPG-PROC-0129, Safe Work Planning
- OPG-PROC-0135, Operational Health and Safety Risk Assessment
- OPG-PROC-0140, Health and Safety Management System Compliance and Assessment
- OPG-STD-0001, Requirements for Administrative Governance Documents

11.2.2 Developmental References

- CHPG-PROG-EM-MANUAL, CHPG Environmental Management Manual
- CO-PROG-EM-Manual, CO (Central Operations) Environment Management Plan
- N-STD-MP-0027, Configuration Management
- NA27 – 07002.2-T5, Lambton GS Environmental Management System Framework
- NA27-MAN-08130-700, Southwest Operations Management System Manual
- NEPG-07810-0006, NEPG Management Systems Manual
- NPG-MAN-0003 R00, NPG Environmental Management System Manual
- NW-MAN-EMS-001, NWPG Environmental Management System Manual
- PP2-01, Lennox GS Environmental Management System

12.0 REVISION SUMMARY

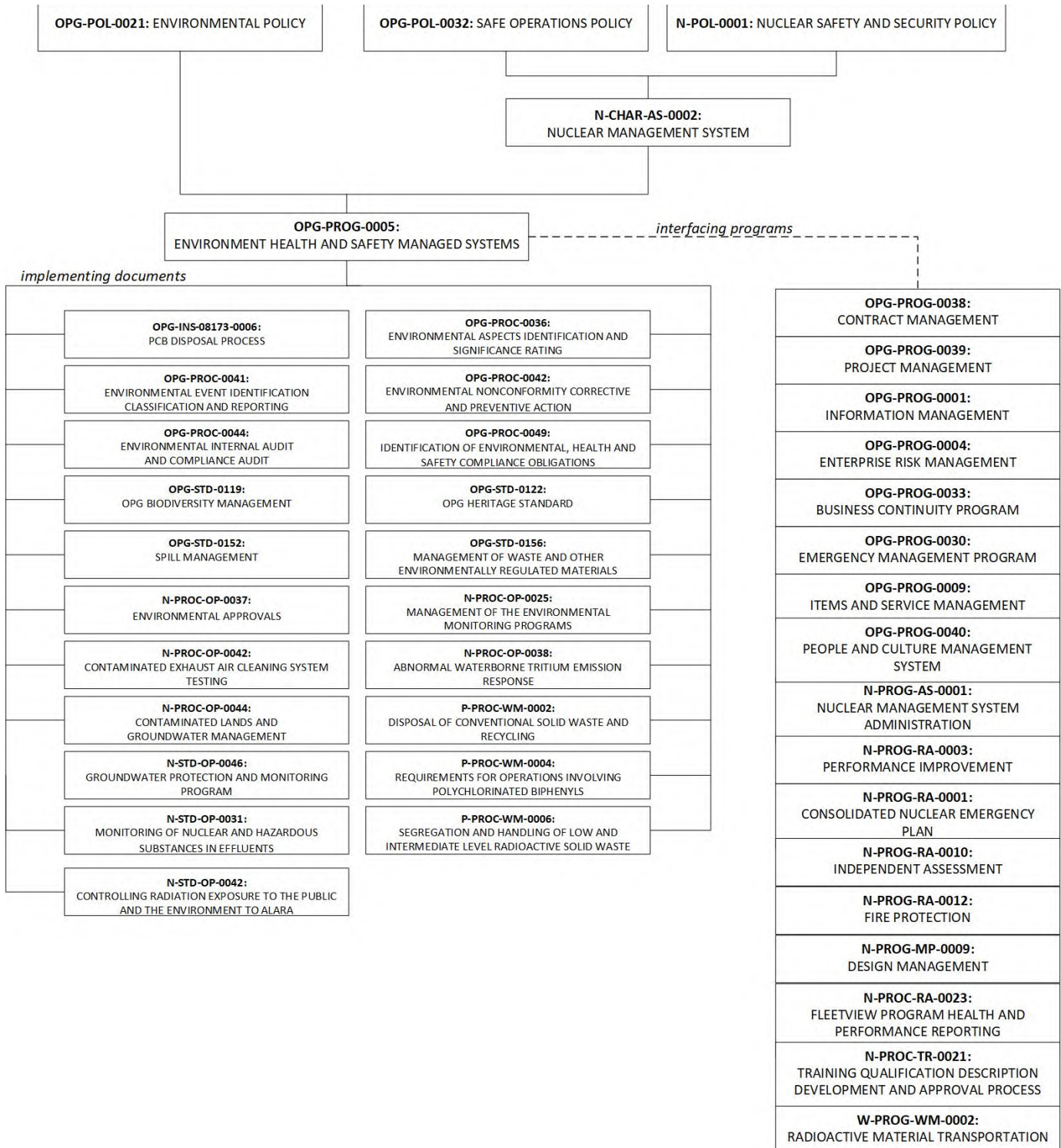
This is an **intent** revision to address the following:

- Merging of Environmental Management System program document (OPG-PROG-0005) with Health and Safety Managed System program document (OPG-PROG-0010) to reflect organizational restructuring.
- Incorporation of Climate Change Plan.
- Update Roles and Accountabilities and incorporate DCRs.

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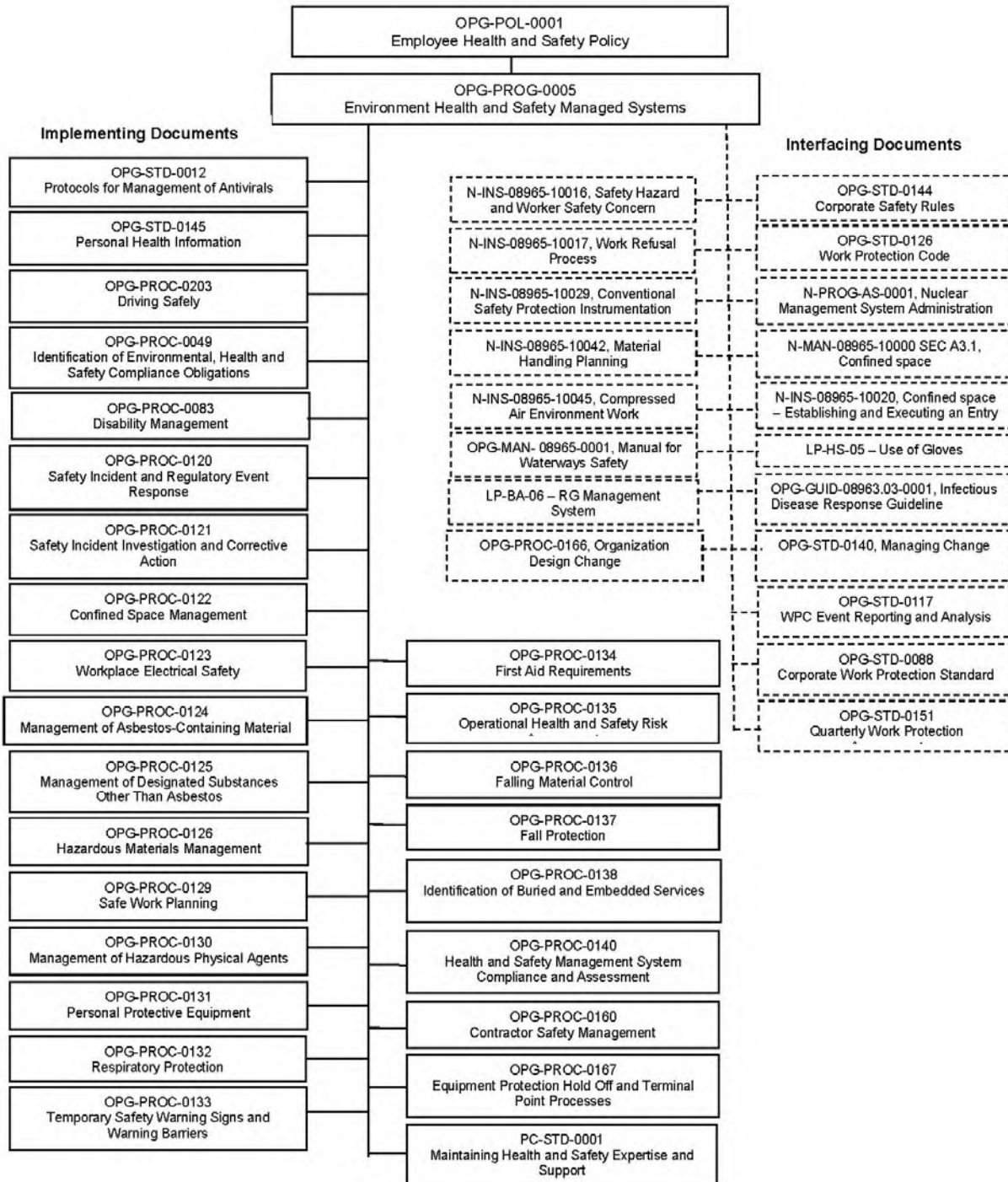
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Appendix A: EMS Governance Framework



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Appendix B: HSMS Governance Framework



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Appendix C: Nuclear Environment Management

The following appendix summarizes Nuclear governing and controlled documents related to the EMS. These documents apply to Nuclear employees, including external providers, as described in N-CHAR-AS-0002, Nuclear Management System.

N-PROC-RA-0006, Regulatory Action Management, describes the identification and tracking of Regulatory Commitments, Regulatory Obligations, and Regulatory Management Actions. This procedure does not apply to regulatory agencies other than the Canadian Nuclear Safety Commission (CNSC); however, it does identify protocols that could be used for managing actions associated with other regulatory agencies.

N-PROC-AS-0078, Nuclear Performance Monitoring and Reporting, defines requirements for the reporting of Nuclear and Nuclear Projects business plan performance results and establishes a process to enable the monitoring of performance, based on measures to promote and sustain improved performance.

N-INS-07292-00001, OPG Nuclear Spill Prevention and Contingency Plan provides direction for spill prevention, preparedness, response, clean-up, and remediation.

W-PROC-ES-0003, Western Spill Management, provides direction for spill prevention, preparedness, response, clean-up, and remediation for the Western Waste Management Facility.

N-PROG-RA-0012, Fire Protection, outlines the scope and objectives of documentation that comprises the fire protection program and interfacing programs for Ontario Power Generation Nuclear.

N-PROC-OP-0044, Contaminated Lands and Groundwater Management, outlines directions and accountabilities for identifying, assessing, and managing contaminated lands within Nuclear. This procedure also includes direction for establishing and managing a Nuclear groundwater monitoring program.

N-STD-OP-0046, Groundwater Protection and Monitoring Program, provides direction for establishing and managing a Nuclear groundwater monitoring program.

P-PROC-WM-0004, Requirements for Operations Involving Polychlorinated Biphenyls, ensures the safety of all employees and protection of the environment

D-INS-79000-10000, Completion and Processing of MOE Waste Manifests at Darlington, and **P-INS-79000-00010, Completion of Ministry of the Environment and Climate Change Waste Manifests**, provide direction to correctly complete and process Ministry of the Environment and Climate Change (MOECC) waste manifests.

W-PROG-WM-0001, Nuclear Waste Management Program, describes the organizational responsibilities, interfaces, and key program elements for the management of nuclear waste.

W-PROG-WM-0002, Radioactive Material Transportation, describes the managed system for Radioactive Material Transportation at Nuclear.

P-PROC-WM-0006, Segregation and Handling of Low And Intermediate Level Radioactive Solid Waste, defines the proper planning, segregation, handling and disposal of Low and Intermediate radioactive solid waste at Pickering Nuclear

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N-STD-OP-0031, Monitoring Nuclear and Hazardous Substances in Effluents, establishes minimum standards for the monitoring of radioactivity in airborne and waterborne effluents from Nuclear facilities operating under normal and abnormal operating conditions.

N-PROC-OP-0038, Abnormal Waterborne Tritium Emission Response, provides direction for response to an abnormal waterborne tritium emission from Nuclear.

N-PROC-OP-0025, Management of the Environmental Monitoring Programs, provides direction and accountabilities for design, implementation, and operation of Environmental Monitoring Programs at OPG's Nuclear facilities.

N-STD-OP-0042, Controlling Radiation Exposure of the Public and the Environment to As Low As Reasonably Achievable, establishes the minimum requirements for a Nuclear facility to keep radiological exposures and doses to the public and the environment As Low As Reasonably Achievable (ALARA) taking social and economic factors into account.

N-PROC-OP-0042, Contaminated Exhaust Ventilation Control Filters, identifies the testing and performance acceptance requirements for the contaminated exhaust ventilation control filters for Nuclear facilities.

N-PROC-OP-0037, Environmental Approvals, outlines Nuclear's process to obtain and amend its environmental approvals for emissions released to the atmosphere and for discharges to ground or surface water. Site-specific controlled documents (i.e., environmental emissions manuals, chemistry laboratory procedures) provide instruction on the activities required to comply with the terms and conditions in environmental approvals. These environmental approvals contain enforceable requirements to ensure the protection of the environment and compliance with environmental legislation. Publications available on the MOECC website provide guidance relating to current environmental approval policies, acts, regulations and requirements.

N-STD-AS-0020, Nuclear Management Systems Organizations, provides a high-level abstract of the Nuclear organization structure, responsibilities, and authorities. More detailed organizational information and role specification documents are governing documents accessed through Asset Suite.

N-PROG-AS-0005, Nuclear Business Planning, establishes the business planning framework for the development and implementation of business plans. Business planning is a tool that directs the organization's resources to meet strategic goals aligned with the company's objectives.

N-PROC-RA-0020, Preliminary Event Notification, identifies the requirements and process for verbally notifying facility and off-site organizations, management, and external officials and agencies after a reportable event has occurred resulting from the operation or activities of a Nuclear Station or function.

W-PROC-WM-0036, Preliminary Event Notification, identifies the requirements for notifying facility and off-site organizations, management and external officials and agencies, after a reportable event has occurred resulting from the operation or activities of a Nuclear Waste Management facility or function.

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N-PROC-RA-0005, Written Reporting to Regulatory Agencies, defines roles, accountabilities, and processes for complying with regulatory requirements for written event reports to regulatory agencies, including the CNSC, MOECC, Environment Canada, Transport Canada, and for scheduled reports to the CNSC.

N-PROC-RA-0047, Communications with the Canadian Nuclear Safety Commission, specifies the planning, review, approval, and records required for communications with the CNSC.

N-LIST-00500-10000, Routine Environment Regulatory Reports/Correspondence, documents the routine regulatory reports and correspondence generated and submitted to regulators.

N-STD-AS-0013, Nuclear Public Information and Disclosure, documents the process for Nuclear’s provision of information to stakeholders and the public regarding activities and operations, including environmental management, as well as the receipt, documentation and response to concerns, complaints, and inquiries received from stakeholders and the public.

N-PROC-MA-0069, Control and Calibration of Measuring and Test Equipment establishes the process for control and calibration of Measuring and Test Equipment.

N-PROG-OP-0001, Nuclear Operations, implements a series of standards and procedures to ensure safety of the public, *environment*, plant personnel, and plant equipment. This program establishes safe, uniform, and efficient operating practices and processes within Nuclear facilities that provide Nuclear professionals the ability to ensure Nuclear facilities are operated in such a manner as to ensure compliance with Power Reactor Operating Licence, Operating Policies and Principles, and other applicable regulations and standards.

N-PROG-MA-0004, Conduct of Maintenance, establishes a program to ensure safety of the public, site personnel, protection of the *environment*, and the availability of plant equipment for safe and reliable operation. Effective implementation and control of maintenance activities are primarily achieved by instituting effective maintenance programs, high standards, sufficient resources, monitoring and assessing performance, and holding personnel accountable for their performance

W-PROC-WM-0008, Nuclear Waste Management Division - Work Management Process, describes how field work is initiated, approved, scheduled, executed and completed in Nuclear Waste Management.

OPG-PROG-0032, Facilities and Projects Management Systems, implements a series of governing documents, and references interfacing governance documents to perform safe and consistent work across OPG under Facilities and Projects jurisdiction in accordance with the Province of Ontario Building Code, Ontario Fire Codes, Electrical Safety Code, Ontario regulations and Municipal By-laws. The program ensures safety of the public, site personnel, facilities and protection of the environment.

N-PROG-MP-0001, Engineering Change Control, ensures all modifications to Nuclear systems, structures, and components, including software and engineered tooling, are planned, designed, installed, commissioned, placed into service, or removed from service within the Safe Operating Envelope or Safety and Design Envelope, design basis, and licensing conditions.

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N-INS-00120-10008, Contractor Management Process, identifies the process requirements for monitoring a contractor during the field execution of contracted work at Nuclear facilities.

NK38-NR-PLAN-09701-10001, Sheet 4, Darlington Refurbishment Environmental Management Plan, describes how environmental issues for the Nuclear Refurbishment Program shall be managed.

N-PROC-AS-0078, Nuclear Performance Monitoring and Reporting, defines requirements for the reporting of Nuclear and Nuclear Projects business plan performance results and establishes a process to enable the monitoring of performance, based on measures to promote and sustain improved performance.

N-PROC-RA-0023, Fleetview Program Health and Performance Reporting, describes the process for performing a program health and performance review. The process involves reporting on program oversight and leadership, program execution performance indicators, and program initiative status.

N-PROC-MA-0024, System Performance Monitoring, establishes a consistent and comprehensive process for the effective monitoring, maintenance, and enhancement of system performance and reliability.

W-PROC-OM-0012, Calibration Control of System Instrumentation and Measuring and Test Equipment, ensure Field and Measuring and Test Equipment used for activities affecting quality are controlled, calibrated at specified periods, and adjusted to maintain accuracy within necessary limits.

N-PROC-RA-0048, Conducting Audits and Performance Assessments, establishes the methodology and requirements for audits performed by Nuclear Oversight.

N-PROC-RA-0097, Self-Assessment and Benchmarking, defines the elements required to plan, execute, report, and monitor formal self-assessments and benchmarking activities. Self-assessment and benchmarking provide a structured method to compare performance with management expectations, industry standards of excellence, and regulatory requirements to identify areas needing improvement.

N-PROG-RA-0003, Performance Improvement, establishes the processes to ensure deficiencies, non-conformances, and weaknesses with a process, document, or service, or conditions that adversely impact, or may adversely impact, plant operations, personnel, nuclear safety, the environment, or equipment and component reliability, are promptly identified and corrected or dispositioned. This program also provides the processes to ensure in-house and external Operating Experience is evaluated, distributed and applied.

N-PROC-RA-0022, Processing Station Condition Records, provides a consistent reporting and evaluation process for actual and potential adverse conditions at Nuclear facilities. This process ensures that adverse conditions are adequately documented, causes are determined, and that corrective and preventive action is implemented, and lessons learned are communicated.

N-STD-RA-0008, Incident Investigation, provides a systematic and consistent approach for evaluating adverse conditions at Nuclear.

N-PROC-RA-0035, Operating Experience Process, establishes a consistent process for evaluating and integrating Operating Experience information in Nuclear.

N-INS-09030-10004, Observation and Coaching, provides expectations for conducting management workplace observation and coaching in Nuclear.