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# Charter

<b>TITLE</b>
<b>DEEP GEOLOGIC REPOSITORY PROJECT, MANAGEMENT SYSTEM</b>

<b>PURPOSE</b>
The management system is applicable to the Low- and Intermediate-Level Waste (L&ILW) Deep Geologic Repository (DGR) Project from the design, procurement and construction of the project and turnover to Ontario Power Generation (OPG). It provides assurance that the DGR will be sited, designed, procured, constructed, commissioned, and turned over in accordance with the requirements of Canadian Standards Association (CSA) Standard N286-05 Management system requirements for nuclear power plants as it applies to the DGR Project. This CSA management system standard integrates the requirements from other management system standards for health, safety, environment, security, economics, and quality and to meet the principle that safety is the paramount consideration guiding all decisions and actions.

<b>EXCEPTIONS</b>
None

<b>AUTHORIZATION</b>	
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GOVERNING DOCUMENT OWNER:	A. Sweetnam Executive Vice-President, DNNP

<b>DOCUMENT RELATIONSHIP</b>	
Applicability:	Deep Geologic Repository Project
Receives Authority from:	OPG-POL-0023, Management Systems

<b>DATES</b>	
Document Author Approval Date:	March 9, 2011
Review By:	March 9, 2014
Compliance Date:	Immediate

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## 1.0 DIRECTION

The management system described in this charter is defined to meet the requirements of Canadian Standards Association (CSA) N286-05 Management System Requirements for Nuclear Power Plants as it applies to the Low- and Intermediate-Level Waste (L&ILW) Deep Geologic Repository (DGR). The CSA Standard integrates the requirements from other management system standards for health, safety, environment, security, economics, and quality. It is applicable to the DGR personnel (including OPG and suppliers).

OPG has contracted to an Engineering, Procurement, and Construction management (EPCM) company the activities of designing, procuring items and services, constructing, and commissioning of the facility. The contracted company is Nuclear Waste Management Organization (NWMO). OPG as the owner and the licensee remains accountable for all Canadian Nuclear Safety Commission (CNSC) approvals, project funding requirements, and oversight of the contracted company as it pertains to DGR. Oversight activities include surveillance, witnessing activities, monitoring, review, and acceptance of plans and deliverables for design, procurement, construction, commissioning, management system, and quality plans. Appendix A: Project Oversight Model provides a visual diagram of the OPG oversight. OPG is accountable for assuring that the waste facility will operate reliably for its expected life and meet all health, safety, environment, security, economic, and quality requirements after turnover from the EPCM.

The OPG management system governance to be used for the DGR Project is listed in Appendix B which also shows how the governance conforms to the requirements of CSA N286-05. The various roles of the OPG personnel on the DGR project are summarized in Appendix C. This charter (which draws from various OPG governance as appropriate) forms the top tier document for the DGR managed system and governance that OPG will use for defining requirements, accepting deliverables, conducting assessments, support, and improvements. This charter will be reviewed prior to the operations phase.

NWMO has established a NWMO management system for the design and construction phase (DGR-PD-EN-0001, Design and Construction Phase Management System). OPG has reviewed and accepted NWMO's managed system.

## 1.1 Project Description

The DGR Project was established by OPG Senior Management, and approved by the OPG Board of Directors, to perform the site selection, design, procurement, construction, and commissioning of an underground long-term management facility for the storage of Low- and Intermediate-Level Waste (L&ILW) from the Pickering, Darlington, and Bruce Nuclear power sites in Ontario.

The project is to be completed in the following phases of approved work.

### 1.1.1 Regulatory Approvals Phase

During the Regulatory Approval phase, the Preliminary Design and the Environmental Assessment for the project is conducted. Project documentation in support of licensing, consisting mainly of an Environmental Impact Statement and a Preliminary Safety Report are

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submitted to a Joint Review Panel. The panel submits a report to the Minister of Environment. A decision follows on the Site Preparation and Construction licence for the DGR project.

### 1.1.2 Design and Construction Phase

In the Design and Construction Phase, design of the DGR is finalized. After obtaining the Site Preparation and Construction licence, the site is prepared and the DGR is constructed, in accordance with the licence to carry out these activities. Subsequently, the facility is commissioned and declared in-service.

### 1.1.3 Operations Phase

Upon completion of the commissioning of the DGR, the facility will be turned over to OPG Nuclear Line of Business. This portion of the management system will be defined and be in place prior to undertaking any operations activities.

### 1.1.4 Decommissioning Phase

A preliminary decommissioning plan for the design and construction phase of the DGR has been developed by NWMO under their management system. This plan has been reviewed by OPG. This portion of the OPG management system will be defined prior to commencement of any decommissioning activities.

## 1.2 Statement of Commitment to Management System

As the Executive Vice-President (EVP) of DNNP and Project Sponsor of the DGR Project I am committed to, and accountable for, the effectiveness and continual improvement of the management system defined in this charter. I will assure that this management system meets the requirements of:

- (a) CSA N286-05;
- (b) OPG policies, values, and objectives; and
- (c) The Project contract between OPG and NWMO.

I will hold the personnel of my project team accountable to the requirements of this management system and ensure that safety is the paramount consideration guiding all decisions and actions. I will ensure that my team fosters the desired safety culture by implementing practices that contribute to excellence in values and behaviour through the managed system. Further, I will ensure effective implementation of the management system through independent assessment of adherence to the management system documents.

## 1.3 Project Management

The DGR Project is planned and controlled to accomplish the DGR Project objectives using generally accepted project management methods, as specified in FIN-MAN-CM-001, Contractor Management Process Manual. This includes identifying requirements, establishing plans, risk management, monitoring the execution of the plan, monitoring performance, providing feedback and re-directing, reporting, and project closeout.

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A business plan has been approved for the DGR for the life of the project, and the plan is reviewed and updated annually. The DGR project plan is an input to the DNNP division business plan. In this way the DGR plan is submitted to the OPG President and Chief Executive Officer and as such it becomes part of the overall OPG business plan.

OPG has provided NWMO with the specific project requirements, reference DGR-PDR-00120-0001, OPG's Deep Geologic Repository for L&ILW – Project Requirements. OPG accepts the schedule and costs for the deliverables from NWMO annually. Project performance is routinely measured against project requirements and NWMO deliverables to ensure planned results will be achieved. The DGR Project performance status is routinely reported within the DGR oversight committee, to the OPG President and Chief Executive Officer, and to the OPG Board of Directors.

### 1.4 Licensing and Regulatory Interface

The DGR Project will require licences, approvals, and permits from regulatory agencies. OPG has contracted NWMO to support OPG in the preparation of licensing submission documents, all of which OPG reviews and accepts. This includes performing licensing activities related to CNSC approvals for the Site Preparation and Construction Licence, including Environmental Assessment and the Licence to Operate. OPG will follow licensing and communication with the CNSC as identified in W-PROC-WM-0038, Regulatory Interface. NWMO will perform monitoring for emerging requirements, interpretation of requirements and acts as OPG's technical interface with CNSC on DGR in accordance with an established OPG/NWMO protocol defined in the memorandum of understanding OPG CD# 00216-CORR-00150-0312633.

### 1.5 Human Resource Management

#### 1.5.1 Organizational Arrangements

The EVP DNNP is the project sponsor and reports directly to the OPG President and Chief Executive Officer. NWMO will be accountable to OPG through the OPG Project Manager, DGR Oversight for delivery of the project. OPG has established an oversight committee that has representation from all required OPG functional areas. The functional leads will exercise oversight of their specific areas in accordance with the EVP DNNP expectations as per this management system document. Refer to Figure 1 Organization Chart.

The primary responsibilities, accountabilities, and interfaces for OPG functional leads on the DGR project are project oversight of EPCM. The roles of OPG functional leads are summarized in Appendix C.

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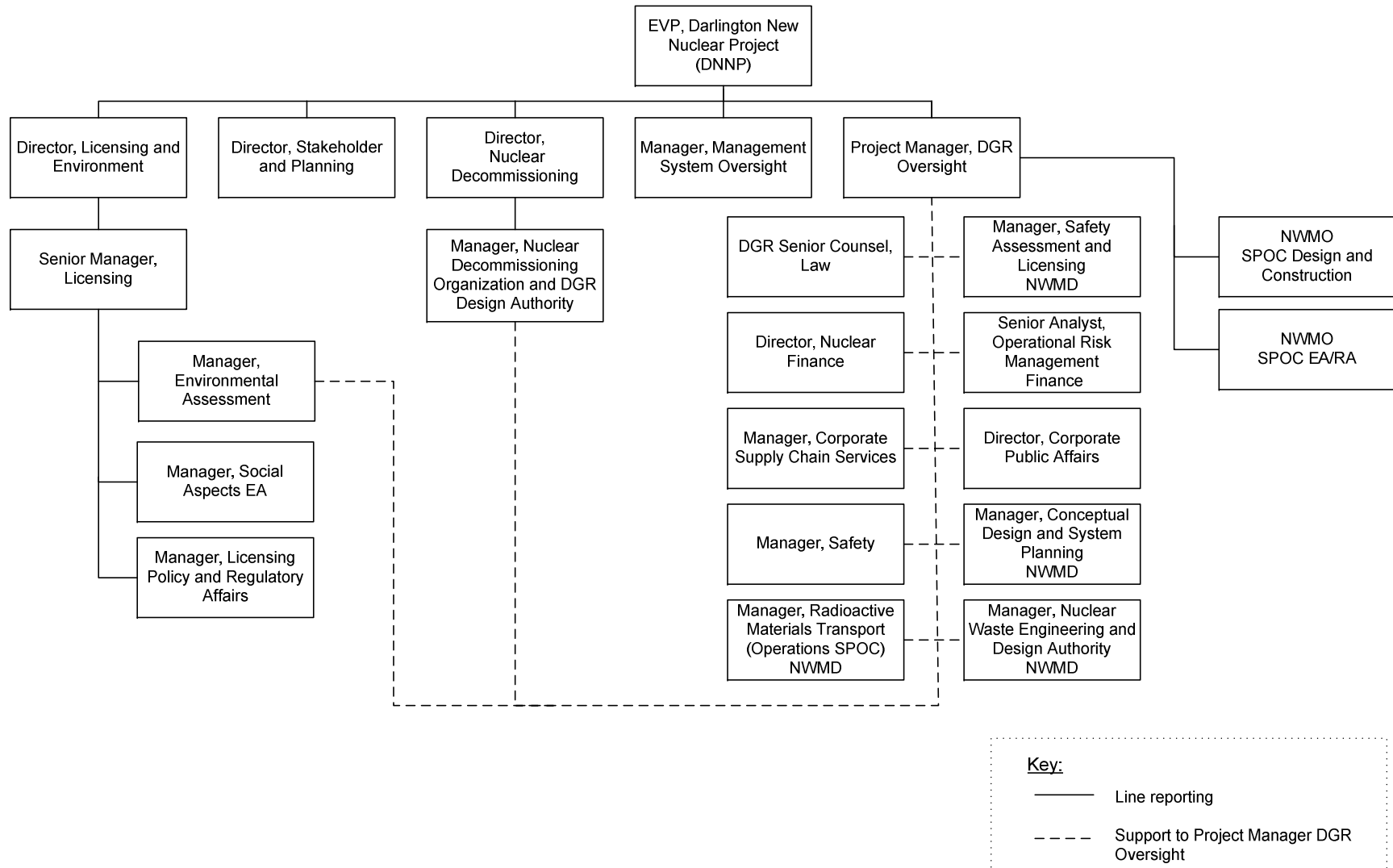


Figure 1: Organization Chart

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## 1.5.2 Safety Culture

Nuclear facilities and activities pose a unique risk to the safety of the public, the environment and to personnel. Therefore there must be a culture where safety is the paramount consideration in all decisions and actions. Behaviours of all personnel can have an impact on safety and achievement of the project objectives. Behaviours that contribute to excellence are reinforced to continuously strive for event free project execution. The focus is on early identification and prevention of events rather than the cause of events. The following are examples of behaviours that contribute to excellence in human performance:

- (a) Frequent and precise communication;
- (b) Questioning attitude and conservative decision making;
- (c) Verify assumptions before taking action;
- (d) Anticipate problems and take precautions and identify problems for correction when they do happen;
- (e) Search for and eliminate conditions that lead to human error;
- (f) Maintain focus on task at hand and use self checking and peer review;
- (g) Follow procedures and identify procedure deficiencies prior to continuing the task;
- (h) Plan and perform independent verification for critical tasks;
- (i) Review for opportunities for improvement at completion of task; and
- (j) When using your signature to sign off on a document, remember that your signature reflects your professionalism and integrity.

The management team will foster this safety culture by implementing practices that contribute to excellence in worker performance through their respective management system. All DGR Project personnel (OPG and NWMO) will demonstrate a commitment to safety culture through adherence to the requirements of the management system and by demonstrating the behaviours that contribute to excellence in human performance.

The working environment under which work is performed will promote the performance of work in a safe manner, with optimal productivity and good employee engagement.

## 1.6 Information Management

OPG manages its recorded information, regardless of media, through its entire life cycle, so as to ensure complete and accurate information is:

- (a) Available when required for those who need it; and
- (b) Can be used in OPG's information technology management system.

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OPG utilizes current Information Technology (IT) processes that support its business. OPG also established the framework of governing documents specific for the Project Manager, DGR Oversight as listed in Appendix B. The DGR Project Manager ensures optimal information flow between OPG and the NWMO while maintaining control and access protection and ensuring the OPG governance standards in N-PROG-AS-0006 Records and Document Control are met for information, community stakeholders, documents, and records. Upon completion of the DGR Project, the related project information from the NWMO will be turned over to OPG in a form compatible with OPG systems.

**1.7 Continual Improvement**

The management system for OPG’s DGR Project will be monitored and measured to confirm the ability of the processes to achieve the planned results and to identify opportunities for improvement. This includes collecting and using relevant industry experience to improve the effectiveness of the management system and prevent problems, critically assessing the effectiveness of the management system and correcting problems that do occur. OPG processes for independent assessment, self-assessments, corrective and preventative action, and management effectiveness assessment, in its role of oversight of the DGR project are listed in Appendix B.

The foundation of the approach for oversight of NWMO is to carryout routine and continuing assessments to evaluate the effectiveness of the performance of work in different areas of responsibility. This includes monitoring and measuring to confirm planned results will be achieved and to identify opportunities for improvement. Independent assessment is performed to evaluate the effectiveness of the self-assessment activities and to assure the management system is effectively defined and implemented. Senior management assess the effectiveness and adequacy of the management system to achieve the project objectives. Audits are performed to evaluate the initial and ongoing acceptability of the NWMO management system and the effectiveness of the OPG oversight activities. Audits of the acceptability of management systems of other suppliers to DGR are performed by the NWMO. The DGR Project is independently assessed by OPG through the performance of audits, ongoing monitoring, and measurement, periodic reviews by experts, and periodic reviews by OPG Executive Management.

**1.8 Engineering**

**1.8.1 Design**

The DGR engineering activities, including design and safety analysis, are planned and controlled by the NWMO on behalf of OPG. OPG oversees the engineering activities by establishing the overall design process as a series of design phases that include conceptual design, preliminary design, and final design-for-construction. At each phase OPG provides requirements, objectives, and additional information. OPG does this by establishing design inputs, reviewing and accepting the design criteria and participating in planned design reviews. OPG’s oversight activities with regard to design will provide assurance that the NWMO design process is consistent with the requirements set out in W-PROC-EN-0001, Design Management so as to ensure NWMO will deliver a design that is safe, reliable, robust, and meets codes and standards, regulatory requirements, and OPG’s requirements.



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OPG governance states that the design is to be documented in a suite of design documents so the design can be related to the design requirements and used during construction, commissioning, operation, and decommissioning. These documents include but are not limited to a description of the:

- (a) Design;
- (b) Inputs, assumptions, methods, modeling, test and development work, and results;
- (c) Jurisdictional requirements, applicable codes and standards, and other classification criteria;
- (d) Purchasing, installation and construction requirements;
- (e) Characteristics of the design that need to be confirmed during commissioning;
- (f) System or equipment operating and maintenance requirements; and
- (g) Decommissioning plans and arrangements.

The safety analysis of the DGR is being performed by the NWMO. The OPG governance in W-PROC-WM-0047, Conduct of Safety Assessment and Licensing establishes the requirements for the safety analysis process, including developing inputs, assumptions, models, and acceptance criteria. The governance also establishes the process requirements for control of safety analysis tools and analytical computer programs and software used during safety analysis. OPG accepts the analysis from NWMO ensuring it meets these requirements.

Design changes are approved by the Project Manager after appropriate reviews. Configuration management is maintained throughout the project by NWMO such that the required design and safety analysis outputs are incorporated into procurement, construction, commissioning, operating, and maintenance documentation so that there is alignment in the configuration of the waste facility with the design and safety analysis.

The NWMO management system will establish processes to meet OPG's requirements for the identification and labelling of structures, systems, and components for the designed facility so that the engineered plant can be related to the built plant and traceability maintained.

OPG, as the owner and operator of the facility is accountable for the acceptance of the facility from the NWMO, including all its final design and related documentation.

### 1.9 Procurement

OPG, as the owner and licensee of the waste facility, is accountable for ensuring that the new facility is specified and procured so as to meet all project requirements. OPG exercises its accountability through:

- (a) Confirmation that the NWMO has the ability to supply the DGR and acceptance of their management system;

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- (b) Review and acceptance of purchasing requirements to ensure that they meet all regulatory and business requirements;
- (c) Confirmation that the NWMO understands the requirements, including the applicable codes, standards, and specifications;
- (d) Review of the NWMO documentation against requirements; and
- (e) Review of the purchasing documentation, as needed.

The procurement related to the design, construction (including site preparation), and commissioning of the facility is being performed by the NWMO consistent with OPG requirements as outlined in NK054-PROG-0004, Supply Chain. Similarly, any OPG purchase of goods and services is controlled by establishing the requirements, sourcing and managing suppliers, and accepting items and services.

### 1.10 Construction

The construction of the DGR is being performed by the NWMO under their management system. OPG governance requires that such management system establishes the processes to control construction activities and construction tools, including measuring and testing devices and analytical computer programs and software used during construction in line with W-PROC-OM-0012, Calibration Control of System Instrumentation and Measuring and Test Equipment. NWMO's management system establishes all such processes as well as a process for control of documents and plans for Fire Protection, Emergency Preparedness, Conventional Safety, and Effluent Control which are reviewed and accepted by OPG.

OPG will turnover control of land for establishment of a construction island to the NWMO prior to Site Preparation. The requirements are outlined in W-PROC-EN-0001 and W-PROC-EN-0002, Engineering Change Control.

OPG's oversight of NWMO's construction activities ensures that NWMO has applied its construction management process requirements. This oversight is accomplished through a process of technical oversight and reviews of construction activities from site turnover until construction completion. This includes work progress monitoring, periodic inspections, hold point observation, witnessing, and audits.

### 1.11 Commissioning

#### 1.11.1 Commissioning and Turnover

The commissioning and turnover for the waste facility will be consistent with OPG governance listed in W-PROC-EN-0007, Turnover and Commissioning of New or Modified Facilities and W-PROC-EN-0002, Engineering Change Control. The commissioning activities include demonstrations, testing, and training. An OPG accepted commissioning plan will ensure the design requirements, construction requirements, and operating and maintenance strategies are met and support safe operation for the expected life of the facility.

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### 1.11.2 Conduct of Commissioning Team

Execution of the commissioning and testing activities will be performed by an integrated team of the NWMO and OPG personnel. The NWMO has overall management and responsibility for the commissioning. The commissioning is executed in accordance with an accepted commissioning plan that is consistent with the requirements in W-PROC-EN-0007 and W-PROC-EN-0002.

## 2.0 DEFINITIONS AND ACRONYMS

### 2.1 Definitions

None

### 2.2 Abbreviations and Acronyms

<b>CNSC</b>	- Canadian Nuclear Safety Commission
<b>COMS</b>	- Constructability, Operability, Maintainability and Safety
<b>CSA</b>	- Canadian Standards Association
<b>D &amp; C</b>	- Design and Construction
<b>DGR</b>	- Deep Geologic Repository
<b>DNNP</b>	- Darlington New Nuclear Project
<b>EA</b>	- Environmental Assessment
<b>EPCM</b>	- Engineering, Procurement, and Construction Management Company
<b>EVP</b>	- Executive Vice-President
<b>HAZOP</b>	- Hazard and Operability
<b>HO</b>	- Head Office
<b>IT</b>	- Information Technology
<b>L&amp;ILW</b>	- Low- and Intermediate-Level Waste
<b>NWMO</b>	- Nuclear Waste Management Organization
<b>NWMD</b>	- Nuclear Waste Management Division - OPG
<b>OFA</b>	- Ontario Financing Authority
<b>ONFA</b>	- Ontario Nuclear Funds Agreement
<b>OPEX</b>	- Operating Experience
<b>OPG</b>	- Ontario Power Generation
<b>PSR</b>	- Preliminary Safety Report
<b>RA</b>	- Regulatory Affairs
<b>RFP</b>	- Request for Proposal
<b>SA</b>	- Safety Analysis
<b>SON</b>	- Saugeen Ojibway Nation
<b>SPOC</b>	- Single Point of Contact
<b>TRG</b>	- Technical Review Group
<b>WWMF</b>	- Western Waste Management Facility

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### 3.0 REFERENCES

- CSA N286-05 Management System Requirements for Nuclear Power Plants.
- CSA N292.3 Management of Low- and Intermediate-Level Radioactive Waste.
- DGR-PD-EN-0001, Design and Construction Phase Management System.
- DGR-PDR-00120-0001, OPG's Deep Geologic Repository for L&ILW - Project Requirements.

### 4.0 REVISION SUMMARY

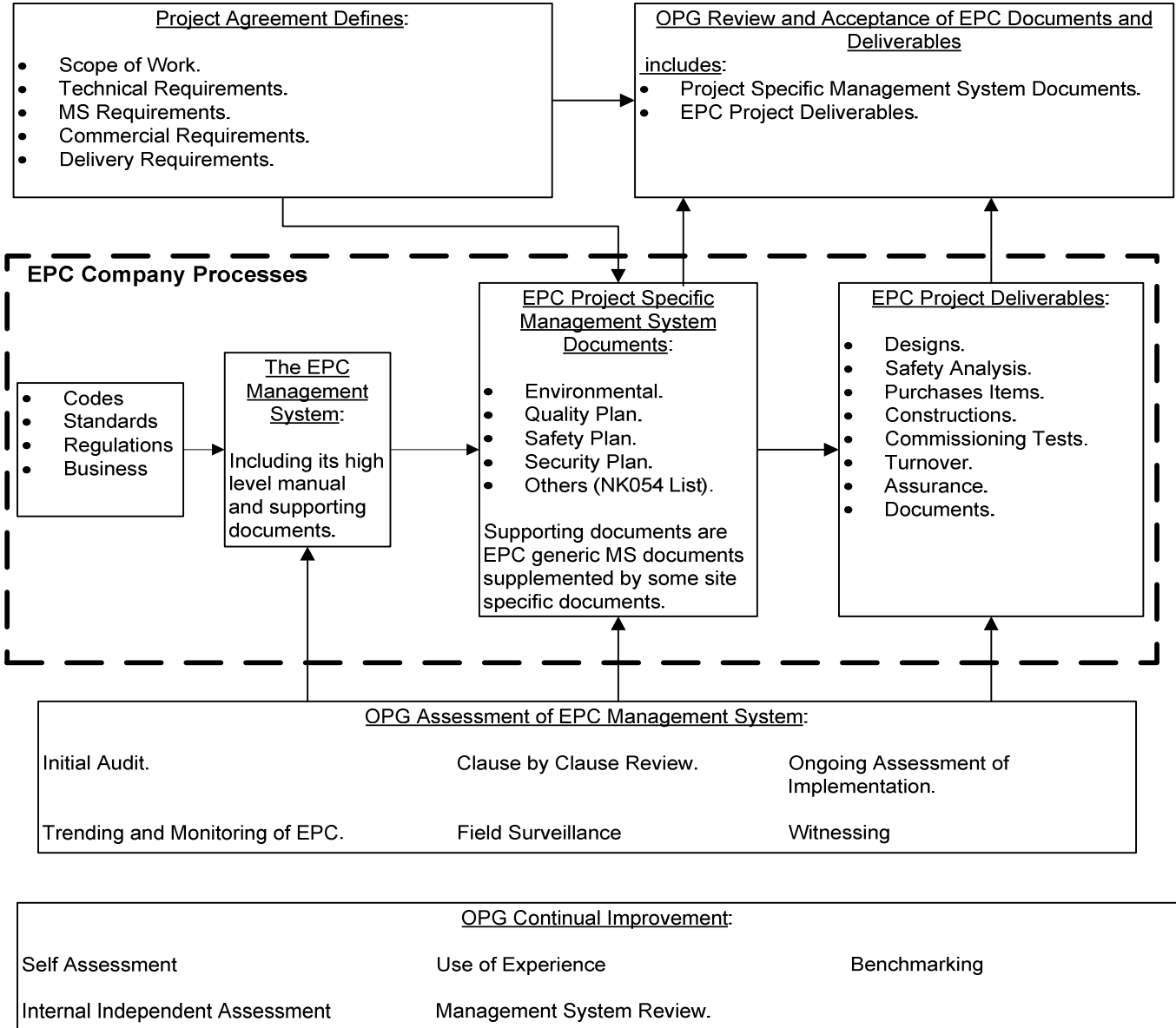
This is an Intent revision.

- Initial issue.
- Implemented new governing document format in accordance with OPG-STD-0001, Requirements for Administrative Governing Documents.

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**Appendix A: Project Oversight Model**



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**Appendix B: Correlation of CSA N286-05 Requirements to OPG Management System for Oversight DGR Project**

<b>CSA N286-05 Requirements</b>	<b>DGR Management System Charter</b>	<b>Documents</b>
Clause 0.3 Operational safety focus	1.5 Human Resources Management	Defined in 00216-CHAR-0001. DGR Management System Document, Section 1.5.2, Safety Culture
Clause 2 Management System documents	1.6 Information Management	NK054-PROG-0016, Information Management
Clause 3 Management statement of commitment	1.2 Statement of Commitment to Management System	Defined in 00216-CHAR-0001, DGR Management System Document, Section 1.2, Statement of Commitment to Management System
Clause 4 Management assessment of effectiveness	1.7 Continual Improvement	NK054-PROC-0008, Management System Review
Clause 5.1 The business is defined, planned and controlled	1.3 Project Management	FIN-MAN-CM-001, Contract Management Process Manual
Clause 5.2 The Organization is defined and understood	1.5 Human Resources Management	Defined in 00216-CHAR-0001, DGR Management System Document, Section 1.5.1, Organizational Arrangements
Clause 5.3 Personnel are competent at the work they do	1.5 Human Resources Management	Defined in 00216-CHAR-0001, DGR Management System Document, Section 1.5.1, Organizational Arrangements
Clause 5.4 Personnel know what is expected of them	1.5 Human Resources Management	Defined in 00216-CHAR-0001, DGR Management System Document, Section 1.5.1, Organizational Arrangements
Clause 5.5 Work is planned	1.3 Project Management	FIN-MAN-CM-001, Contract Management Process Manual
Clause 5.6 Experience is sought, shared, and used	1.7 Continual Improvement	NK054-PROC-0027, Use of Experience
Clause 5.7 Information is provided in time to the people who need it	1.6 Information Management	N-PROG-AS-0006, Records and Document Control
Clause 5.8 The performance of work is controlled	1.3 Project Management	FIN-MAN-CM-001, Contract Management Process Manual
Clause 5.9 The preparation and distribution of documents are controlled	1.6 Information Management	N-PROG-AS-0006, Records and Document Control
Clause 5.10 Work is verified to confirm that it is correct	Intentionally left blank to align with N286-05	Intentionally left blank to align with N286-05
Clause 5.11 Problems are identified and resolved	1.7 Continual Improvement	W-PROC-WM-0055, Corrective Action Management – Processing Station Condition Records

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<b>CSA N286-05 Requirements</b>	<b>DGR Management System Charter</b>	<b>Documents</b>
Clause 5.12 Changes are controlled	1.8 Engineering	<ul style="list-style-type: none"> <li>W-PROG-EN-0001, Conduct of Engineering specifically for review and acceptance of NWMO submissions.</li> <li>FIN-MAN-CM-001, Contract Management Process Manual</li> </ul>
Clause 5.13 Records are maintained	1.6 Information Management	N-PROG-AS-0006, Records and Document Control
Clause 5.14 Assessments are performed	1.7 Continual Improvement	<ul style="list-style-type: none"> <li>NK054-PROC-0007, Independent Assessment</li> <li>NK054-PROC-0009, Self Assessment</li> <li>NK054-PROC-0008, Management System Review</li> <li>NK054-PROC-0059, Witnessing and Surveillance</li> </ul>
Clause 6.1 Design	1.8 Engineering	W-PROG-EN-0001, Conduct of Engineering specifically for review and acceptance of NWMO submissions.
Clause 6.2 Safety analysis	1.8 Engineering	W-PROC-WM-0047, Conduct of Safety Assessment and Licensing specifically for review and acceptance of NWMO submissions.
Clause 6.3 Safe Operating Envelope	1.8 Engineering	W-PROG-EN-0001, Conduct of Engineering
Clause 6.4 Purchasing and Material Management	1.9 Procurement	NK054-PROG-0004, Supply Chain specifically for review and acceptance of NWMO submissions.
Clause 6.5 Identification and labelling of systems and components	1.8 Engineering	W-PROC-OM-0020, Piping and Equipment Field Identification
Clause 6.6 Security	1.10 Construction	W-PROG-WM-0001, Nuclear Waste Management Program specifically for review and acceptance of NWMO submissions on Security
Clause 6.7 Construction and installation	1.10 Construction	W-PROC-EN-0002, Engineering Change Control specifically for review and acceptance of NWMO submissions.
Clause 6.8 Commissioning	1.11 Commissioning	W-PROC-EN-0007, Turnover and Commissioning of New or Modified Facilities
Clause 6.9 Turnover	1.11 Commissioning	W-PROC-EN-0007, Turnover and Commissioning of New or Modified Facilities
Clause 6.10 Completion assurance	1.11 Commissioning	W-PROC-EN-0007, Turnover and Commissioning of New or Modified Facilities
Clause 6.11 Operating the plant	1.12 Operation	Required for subsequent licensing phase
Clause 6.12 Oral communication	1.12 Operation	Required for subsequent licensing phase
Clause 6.13 Plant status control	1.12 Operation licensing phase	Required for subsequent licensing phase
Clause 6.14 Operator surveillance	1.12 Operation	Required for subsequent licensing phase
Clause 6.15 Surveillance testing	1.12 Operation	Required for subsequent licensing phase

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<b>CSA N286-05 Requirements</b>	<b>DGR Management System Charter</b>	<b>Documents</b>
Clause 6.16 Operating procedures	1.12 Operation	Required for subsequent licensing phase
Clause 6.17 Emergency procedures	1.12 Operation	Required for subsequent licensing phase
Clause 6.18 Infrequently performed operations	1.12 Operation	Required for subsequent licensing phase
Clause 6.19 Maintenance	1.12 Operation	Required for subsequent licensing phase
Clause 6.20 Calibration of measuring and monitoring devices	1.10 Construction	W-PROC-OM-0012, Calibration Control of System Instrumentation and Measuring and Test Equipment specifically for review and acceptance of NWMO submissions
Clause 6.21 Periodic inspection	Required for subsequent licensing phase	Required for subsequent licensing phase
Clause 6.22 Systems health monitoring	Required for subsequent licensing phase	Required for subsequent licensing phase
Clause 6.23 Chemistry control	Required for subsequent licensing phase	Required for subsequent licensing phase
Clause 6.24 Radiation protection	Required for subsequent licensing phase	Required for subsequent licensing phase
Clause 6.25 Fire Protection (FP)	1.10 Construction and also required for subsequent licensing phase	<ul style="list-style-type: none"> <li>W-PROG-ES-0001, Environment, Health and Safety management specifically for review and acceptance of NWMO submissions.</li> <li>NK054-PROC-0059, Witnessing and Surveillance</li> </ul>
Clause 6.26 Emergency Preparedness (EP)	1.10 Construction and also required for subsequent licensing phase	<ul style="list-style-type: none"> <li>W-PROG-ES-0001, Environment, Health and Safety management specifically for review and acceptance of NWMO submissions.</li> <li>NK054-PROC-0059, Witnessing and Surveillance</li> </ul>
Clause 6.27 Workplace safety	1.10 Construction and also required for subsequent licensing phase	<ul style="list-style-type: none"> <li>W-PROG-ES-0001, Environment, Health and Safety management specifically for review and acceptance of NWMO submissions.</li> <li>NK054-PROC-0059, Witnessing and Surveillance</li> </ul>
Clause 6.28 Hazardous Waste Management	1.10 Construction and also required for subsequent licensing phase	<ul style="list-style-type: none"> <li>W-PROG-ES-0001, Environment, Health and Safety management specifically for review and acceptance of NWMO submissions.</li> <li>NK054-PROC-0059, Witnessing and Surveillance</li> </ul>
Clause 6.29 Effluent control	1.10 Construction and also required for subsequent licensing phase	<ul style="list-style-type: none"> <li>W-PROG-ES-0001, Environment, Health and Safety management specifically for review and acceptance of NWMO submissions.</li> <li>NK054-PROC-0059, Witnessing and Surveillance</li> </ul>
Clause 6.30 Decommissioning	1.13 Decommissioning	Required for subsequent licensing phase



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**Appendix C: OPG Roles and Responsibilities for DGR  
Project – Design and Construction Phase**

Title	Roles and Responsibilities
Project Manager, DGR Oversight	<ul style="list-style-type: none"> <li>• Project Manager for L&amp;ILW, DGR Phase II.</li> <li>• Monitor NWMO activities to ensure Ontario Financing Authority (OFA) /Ontario Nuclear Funds Agreement (ONFA) requirements are met and manage contingency.</li> <li>• Ensures the Project Agreement with NWMO covers the scope of work, the technical and owner requirements, and commercial and delivery requirements to same standard as within OPG.</li> <li>• Will ensure OPG maintains capabilities needed to accept documents and deliverables.</li> <li>• Single Point of Contact for communication with NWMO.</li> <li>• Is accountable for ensuring OPG Oversight in all fields of activities conducted by NWMO.</li> <li>• Ensure NWMO agreement requirements for OPG are addressed and support for NWMO provided.</li> <li>• Coordination with OPG NWMD at Head Office (HO) and Western Waste Management Facility (WWMF) at Bruce Nuclear Site.</li> <li>• Accept annual work program and change requests.</li> <li>• Review and monitor NWMO Procurement Program for compliance with OPG Supply Chain adopted guidelines (2009) from province.</li> <li>• Review and accept all NWMO proposed Request for Proposal Package (RFP) breakdown, Bidder Lists, Evaluation and Recommendation, and “Draft version” of Contract Documentation prior to release for issuance of Contract to successful bidder.</li> <li>• Review each NWMO proposed Sole Sourcing request.</li> <li>• Approves all change requests from OPG to NWMO and vice versa in consultation as required with OPG.</li> </ul>
Director, Strategic Planning and Stakeholder Relations	<ul style="list-style-type: none"> <li>• Oversee OPG Board Relations.</li> <li>• Responsible for NWMO finance and reporting for OPG.</li> <li>• Strategic planning and risk management.</li> <li>• Maintain relations with OFA/ONFA.</li> </ul>
Director, Finance, Nuclear Reporting	Oversee Financial Management and Reporting including yearly budgetary exercises for DGR activities.
DGR Senior Counsel, Law	Provide all required Legal expertise in advisory role.
Manager, Safety Assessment and Licensing, NWMD	<ul style="list-style-type: none"> <li>• Review CNSC regulatory correspondence, Preliminary Safety Report (PSR), and associated licensing documentation, (including Safety Analysis [SA]). Ensure regulatory commitments are effective and address need.</li> <li>• Review Licensing Plan and Hearing Plan for operating licence.</li> <li>• Review and accept all regulatory correspondence and documents prepared in support of the operating licence application including the Final Safety Report and Safety Assessment.</li> <li>• Compliance Reporting.</li> </ul>
Licensing Manager, DNNP	<ul style="list-style-type: none"> <li>• Provide strategic advice and share lessons learned on regulatory matters.</li> <li>• Review all NWMO submittals for regulatory requirements.</li> <li>• Review Licensing Plan and Hearing Plan for Construction licence.</li> </ul>
Manager, OPG, Nuclear Decommissioning Organization and DGR Design Authority	<ul style="list-style-type: none"> <li>• Obtain assurance the DGR meets requirements of all applicable regulations, codes and standards as well as OPG internal requirements.</li> <li>• Perform Owner’s design reviews and acceptance of the DGR engineering deliverables as required by governance for all phases of the DGR project.</li> </ul>

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<b>Title</b>	<b>Roles and Responsibilities</b>
Manager, Social Aspects Environmental	<ul style="list-style-type: none"> <li>Review and monitor NWMO Aboriginal Community Engagement programs for consistency with OPG.</li> <li>Coordinate Saugeen Ojibway Nation (SON) discussion with NWMO.</li> <li>Oversee NWMO Aboriginal Community Engagement programs for consistency with OPG's policies and programs.</li> <li>Invited to all meetings between NWMO and Aboriginal peoples and/or NWMO and government authorities related to Aboriginal matters.</li> <li>Direct NWMO regarding any Aboriginal agreements identified as necessary for success.</li> <li>Develop framework for ongoing relationships to transition to operations.</li> <li>Lead OPG team with respect to implementation of SON-OPG Protocol Agreement.</li> <li>Ensure OPG meets its commitments as per negotiated agreements.</li> <li>Lead Negotiations with SON re: Bruce Historic Legacy Issues resolution.</li> </ul>
Manager, Nuclear Commissioning Planning and Execution	<ul style="list-style-type: none"> <li>Review NWMO work activities related to planning and implementation of DGR design engineering, and preparation for construction phase as necessary to provide the required level of assurance to all Engineering activities.</li> <li>Attend as observer NWMO Technical Review Group (TRG) reviews.</li> <li>Provide all required OPG design parameters in order for NWMO to complete their design activities.</li> <li>Attend and accept from NWMO the Design for OPG.</li> <li>Approve the NWMO quality plan and identifies key managed system requirements.</li> </ul>
Manager, Conceptual Design and System Planning	<ul style="list-style-type: none"> <li>Provide and update reference waste inventory.</li> <li>Compile technical data regarding waste inventories, packaging to NWMO.</li> </ul>
Manager, NWMD Engineering and NWMD Design Authority	Design accountability for containers and all other aspects of NWMD facilities excluding DGR.
Manager, Radioactive Materials Transport (Operations Single Point of Contact)	<ul style="list-style-type: none"> <li>Provide DGR recommendations, studies, options, strategies, plans and schedules to OPG management as required.</li> <li>Participate in design reviews including COMS/HAZOP reviews.</li> <li>Provide operational inputs, standards and Operating Experience (OPEX) during detailed design.</li> <li>Revise and issue the existing OPG Waste Acceptance Criteria for the DGR.</li> <li>Plan and execute Operational Readiness, including commissioning per the applicable NWMD governance.</li> <li>Provide support to application for Operating Licence.</li> <li>Execute operational commitments made during the Regulatory phase.</li> </ul>
Director, Corporate Public Affairs	<ul style="list-style-type: none"> <li>Review all NWMO communications program for OPG Standards compliance.</li> <li>Ensure protection of OPG Corporate Image with the public at large.</li> <li>Participate in community communications events as necessary to provide adequate assurance of acceptability.</li> </ul>
Manager, Management System Oversight	<ul style="list-style-type: none"> <li>Audit with the help of Nuclear Supply Chain Audit Group all NWMO Quality Program oversight for corporate compliance, including sub contractors and manufacturers.</li> <li>Review assessments will include initial audits, clause by clause review of agreements, ongoing assessments of implementation, trending and monitoring EPCM, field surveillance and witnessing.</li> <li>OPG will maintain continued improvement through OPEX and benchmarking.</li> </ul>
Manager, Corporate Safety	Compile NWMO Monthly Safety reporting and audit when required NWMO Quality Program oversight for corporate compliance.
Senior Analyst Operational Risk Management	Periodic Review of NWMO Project Risk Register to ensure full coverage.