

ECCC's Summary of its Review of
the Deep Geological Repository's Initial Project Description
for IAAC Registry

Project Name: Deep Geological Repository (DGR) for Canada's Used Nuclear Fuel Project

Document Type: Initial Project Description (IPD) Review

ECCC Review/Response Related to: *Species at Risk, migratory birds, water quality and quantity, emergency preparedness, climate change and climate resilience, wetlands and air quality.*

Date: Nov.5, 2025

Document Summary

Environment and Climate Change Canada (ECCC) reviewed the Proponent's (Nuclear Waste Management Organization) Deep Geological Repository's (DGR) Initial Project Description, provided to the Impact Assessment Agency of Canada (IAAC), in support of an IAAC-led impact assessment process. This summary reflects ECCC's federal expert review perspective, with a focus on matters within the department's federal jurisdiction, including species at risk, migratory birds, water quality and quantity, greenhouse gas emissions, climate change, and environmental emergencies. It highlights key issues, information gaps, and areas requiring clarification or follow-up to inform potential impact assessment scoping and decision-making.

Main Issues

1. **Species at Risk and Migratory Birds**

Information on the presence, distribution, and habitat use of terrestrial species at risk and migratory birds within and adjacent to the project footprint is limited, relying primarily on desktop analyses and non-species-specific methods. Additional field-based baseline studies and clearer identification of effect pathways are needed to understand potential adverse effects under federal legislation.

2. **Accidents, Malfunctions, and Environmental Emergencies**

The project involves complex, long-term handling of radioactive and hazardous materials, creating potential pathways for accidental releases to air, surface water, and groundwater. Further details are required on plausible accident and malfunction scenarios, contaminant fate and transport, and emergency

preparedness measures relevant to federal environmental receptors.

3. Water Quality and Quantity

Project activities, including dewatering, surface water management, and effluent discharge, may alter surface water and groundwater regimes, with potential downstream effects on fish and fish habitat. Additional hydrological characterization, continuous monitoring, and clarification of wastewater handling—including radioactive wastewater—are needed.

4. Climate Change Resilience

While climate change is acknowledged, it is unclear how projected future climate conditions have been integrated into project design, particularly for water management infrastructure. Clarification is required on how climate change may influence accident risk, system performance, and environmental effects over the project's long operational and post-closure phases.

5. Greenhouse Gas Emissions Characterization

The characterization of greenhouse gas emissions lacks clarity and does not fully reflect their cumulative nature. Additional information aligned with the Strategic Assessment of Climate Change is needed to support consideration of the project's contribution to Canada's climate change commitments.

Additional Information

This document provides a high-level summary of ECCC's response to the DGR's IPD and the main issues identified through expert review and is available in the official language in which it was originally written. Should you wish to receive the document in Canada's other official language, please contact the Impact Assessment Agency of Canada (IAAC). The original document was developed by ECCC; this summary was prepared and translated using AI-supported tools, with the original summary developed in English.