Enclosure 1: Federal Authority Advice Record (FAAR) - Deep Geological Repository (DGR) for Canada's Used Nuclear Fuel Project
Registry File: 88774

Please submit the completed form by **February 4, 2026** via email to nuclearwaste-dechetsnucleaires@iaac-aeic.gc.ca[1]. In order to be posted on the Registry, and to align with the Official Languages Act, IAAC is requiring that you submit the FAAR form, or a summary of it, in French and English.

Department/Agency Contact Information

Submission Date	Feb. 6, 2026
Department/Agency	ECCC
Lead Contact, Title, Work Unit	Dan McDonell, Senior Environmental Assessment Officer
Email, Phone	Dan.mcdonell@ec.gc.ca,
Alternate Contact, Title, Work Unit	Ravi Patel, Environmental Assessment Officer
Email, Phone	Ravi.patel@ec.gc.ca

Review the draft Initial Project Description and answer the following questions:

1. Is your department or agency in possession of specialist or expert information or knowledge in its area of expertise that may be relevant to the conduct of an impact assessment of the project?

   Specify the specialist or expert information or knowledge.

   ECCC has specialist or expert information that may be relevant to the Project in the areas listed below. In each of these subject areas we have expertise related to establishing an adequate baseline, assessing potential effects to biophysical valued components, effectiveness of mitigation measures, methods for monitoring and follow-up, as well as information regarding federal policies, standards, and regulations that may be relevant to the Project.

   Air quality: ambient air quality; sources of emissions; emissions estimation and measurement; atmospheric transport, transformation and dispersion modelling; cumulative effects; effectiveness of mitigation measures; and follow-up monitoring.

   Greenhouse gas emissions and climate change: estimations of greenhouse gas (GHG) emissions (net and upstream); carbon sinks; GHG mitigation measures and determination of Best Available Technologies/Best Environmental practices (BAT/BEP); credible plans to achieve net-zero GHG emissions by 2050; climate change science to inform evaluation of potential changes to the environment and project resilience to effects of climate change; climate change policies; and national GHG projections.

   Water quality and quantity: surface water quality; contamination sources for surface water and groundwater, including effluent; wastewater; water quality predictions and modelling; seepage and runoff effects; management of contaminated soils or sediments; hydrology (streamflow rates data and modelling, flooding and extreme events management, drainage control, water levels, water balances); geochemistry; cumulative effects and follow-up and monitoring.

   Wildlife, species at risk, and habitat: priority species and places as outlined in the Pan-Canadian Approach to transforming species at risk conservation in Canada1; migratory birds, their nests, eggs, and habitat under authority of the Migratory Birds Convention Act 1994; species assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC); species at risk, individuals, their residences, habitat and critical habitat including recovery strategies, action plans and management plans under ECCC's mandate; ecological function of wetlands; and ecotoxicology.

Environmental emergencies: emergency management planning and guidance, including where the release of hazardous substances could affect species at risk and/or migratory birds; atmospheric transport and dispersion modelling of contaminants in air; fate and behaviour; and hydrologic trajectory modelling of contaminants in water.

Climate and meteorology: long-term climate patterns and norms; marine winds, waves, and weather; and sea ice and icebergs.

Open Science Data Platform (OSDP)

The Open Science Data Platform (OSDP) provides information relevant to cumulative effects and development activities across Canada and is publicly available at the following website: https://osdp-psdo.canada.ca/dp/en. More specifically, the platform provides a single window to access data and scientific knowledge relevant to understanding cumulative effects from existing federal, provincial, and territorial on-line databases and registries, including publications from the federal government and its scientists. It provides an interactive geospatial mapping tool to enable mapping of multiple datasets from multiple sources. It offers various features, including keyword-based searching, interactive data visualization on maps, and educational resources covering key topics such as cumulative effects, water, air, climate, biodiversity, land, economy and industry, health, and society and culture.

OSDP information may be of value to persons preparing and reviewing projects assessments, including cumulative effects assessments. The following are some examples of ECCC information available on the OSDP.

Water – quality and quantity

- National long-term water quality monitoring data
- Real-time hydrometric data
- Canadian Aquatic Biomonitoring Network (CABIN)
- National Pollutant Release Inventory (NPRI)
    - Facilities that reported releases to water
- Find additional water-related resources (including publications, datasets and monitoring stations) from ECCC on the OSDP here.

Biodiversity (e.g., birds, species at risk, wetlands)

- Critical habitat for species at risk (terrestrial)
- Range map extents – Species at risk
- Canadian wetlands
- Canadian Protected and Conserved Areas Database (CPCAD)
- Canadian Breeding Bird Census plots
- Priority places for species at risk
- Find additional biodiversity-related resources (including publications, datasets and monitoring stations) from ECCC on the OSDP here.

Air Quality

- National Pollutant Release Inventory (NPRI), including:
    - Facilities that reported release of criteria air contaminants
- Canadian Environmental Sustainability Indicators (CESI), including
    - Average ambient fine particulate matter concentrations
    - Peak ambient ozone concentrations
    - Ambient volatile organic compound concentrations
    - Average ambient sulphur dioxide concentrations
    - Peak ambient nitrogen dioxide concentrations
- Find additional air-related resources (including publications, datasets and monitoring stations) from ECCC on the OSDP here.

Climate, including climate change

- Hourly and daily climate observations

- Monthly climate observation summaries
- Climate normals, averages and extremes 1981-2020
- Homogenized surface air temperature
- Canadian homogenized monthly precipitation
- Adjusted precipitation
- Find additional climate-related resources (including publications, datasets and monitoring stations) from ECCC on the OSDP here.

Beyond ECCC's mandate, the OSDP also contains resources on topics led by departments and other levels of government (e.g., human health, economy and industry). The OSDP also provides access to regulatory registries that list government authorizations of other developments (e.g., *Fisheries Act* Registry), which can be useful in understanding the cumulative pressures on an area.

Does your department or agency have additional information or knowledge on the project not specified above, including information on the geographic, environmental, economic or social context of the project? (e.g. location of protected or sensitive areas, previous history between local communities and proponent or similar projects, local or regional social or economic concerns)?

No

2. Will your department or agency exercise a **power, perform a duty or function**, or provide **financial assistance**, related to the project to enable it to be carried out in whole or in part?

As relevant,

a) Specify the power, duty or function, or financial assistance, and the likelihood that it will be required to construct the project, as either Required, Potential, Likely, Unlikely or Not Required

There is potential that ECCC will be required to exercise a power or perform a duty or function related to the Project to enable it to proceed.

Please note that the following requirements may apply to the Project:

- Species at Risk Act (SARA) permit(s)
- Migratory Bird Convention Act (MBCA) permit(s)

b) Describe any associated Indigenous or public consultation, including timelines, and elaborate on any potential opportunities for consultation coordination with the impact assessment process, if an impact assessment is required

Should a SARA permit be required, ECCC would evaluate and determine consultation requirements.

ECCC-led Indigenous consultations related to the issuance of SARA permits will be coordinated with consultation during the impact assessment where possible.

If applicable, ECCC encourages Proponents to submit clear and complete permit applications at least 6-8 months prior to the anticipated start of project activities that require a SARA permit. During the analysis and before the regulatory decision, ECCC may undertake additional Indigenous consultations, as required under s.73(4) and (5) of SARA.

c) Describe any associated information requirements (e.g., alternative means assessment, habitat offsetting), and specify those that may be coordinated with the impact assessment process, if an impact assessment is required

If the proponent has identified that a SARA permit is required, they can apply for the permit concurrent to the impact assessment process. Note, that a SARA permit cannot be issued prior to an impact assessment decision, under IAA.

See the following links for additional information:

- Guidelines for permitting under Section 73 of Species at Risk Act - Canada.ca
- Permits Authorizing an Activity Affecting Listed Wildlife Species Regulations

d) Identify any associated project-specific guidance or issues of which the proponent should be aware, or information the proponent should provide

To identify any associated project-specific guidance or issues of which the proponent should be aware, additional information is required related to how the project will affect migratory birds and SAR, their residences and/or critical habitat. Additionally, it will be important for the proponent to identify if any of the lands in the project footprint are expected to be transferred to federal ownership. The proponent should be aware of the following general information related to SARA permits and MBCA permits.

Species at Risk Act permits

For species listed on Schedule 1 of SARA as Extirpated, Endangered or Threatened, a permit may be required from ECCC (section 73 of SARA) for activities that affect a listed terrestrial wildlife species, any part of its critical habitat, or the residences of its individuals, where those prohibitions are in place.

Prohibitions are in place for individuals and residences on federal lands in a province, reserve or any other lands under the *Indian Act*, or lands under the authority of the Minister of the Environment, and for birds listed under the MBCA wherever they occur regardless of land tenure.

Species that are both a migratory bird protected under the MBCA and listed on Schedule 1 of SARA as endangered, threatened, or extirpated, receive protections under the MBCA and SARA. For some migratory bird species listed under SARA, the residence prohibition (section 33) will protect nest and/or roost sites that are not active, for example when a species re-uses these sites in subsequent years. Please note that the protection afforded may differ between the two pieces of legislation, though both pieces of legislation/protection apply.

Refer to the Species at Risk Registry for more information on migratory bird residence and protection requirements: https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/residence-descriptions.html

Furthermore, prohibitions may be in force on land other than federal land pursuant to other orders or regulations under SARA. It is possible that additional prohibitions may come into force in the future through orders made by the Governor in Council for individuals, residences and critical habitat on non-federal lands and/or for critical habitat on federal lands. It is also possible that, over the course of the assessment or after the assessment, additional species could be listed under SARA; permits may be required for project activities that affect these additional species. Proponents are advised to monitor for such developments on the SARA Registry https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html.

ECCC will require detailed information on the potential effects of the Project, including locations and/or occurrences of species at risk, their use of habitat and critical habitat within the project area, and specific effects on federal land, before ECCC can determine whether a SARA permit is required.

Links to publicly available documents:

- Guidelines for permitting under Section 73 of *Species at Risk Act* (https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/policies-guidelines/permitting-under-section-73.html)
- Species at Risk Permitting Policy (Species at Risk Act Permitting Policy - Document search - Species at risk registry)

If not fully described in the Initial Project Description, the Proponent should provide any anticipated need for species at risk permits during all phases of the Project, in responses to the Summary of Issues and/or in the Detailed Project Description, if possible. The Proponent is encouraged to collect and submit the information

necessary to determine if a SARA permit is required during the impact assessment process, and to submit their application well in advance of the proposed activities to avoid delays. For additional information see links above to publicly available documents as well as the following document available upon request: *Project Planning: Applying for a Species at Risk (SARA) permit administered by Environment and Canada Climate Change (ECCC).*

Further information regarding species at risk permits will be provided in the Permitting Plan.

Migratory Birds Convention Act permits

The *Migratory Birds Regulations*, 2022 (MBR 2022) protect migratory birds, their eggs and their nests, by prohibiting activities that may harm them. Unless a person has a permit or the regulations authorize it, it is prohibited to engage in the following activities:

- Capturing, killing, taking, injuring or harassing a migratory bird or attempting to do so;
- Destroying, taking or disturbing an egg; and
- Damaging, destroying, removing or disturbing a nest, nest shelter, eider duck shelter or duck nesting box, unless the following exceptions apply:
    - The nest does not contain a live migratory bird or a viable egg; and,
    - The nest was not built by a species listed in Schedule 1.

Modernization of the MBCA in 2022 has additionally identified 18 species of birds whose nests are protected year-round (Schedule 1 of MBR 2022). The nests of species listed in Schedule 1 are protected at all times, unless the following conditions are met:

- Notification of the unoccupied nest has been submitted/received through the Registry for Abandoned Nests; and,
- The waiting time designated in the regulations has passed, during which time the nest has not been occupied by a migratory bird.

In some situations, it may be possible to obtain a permit to move or destroy an unoccupied nest of a Schedule 1 species. If it is not possible to wait the prescribed period before destroying or relocating the nest of a species listed in Schedule 1, or if there is a need to destroy or relocate the nest of another species of migratory bird where the nest contains a live bird or viable egg and appropriate mitigation measures have been taken, a permit may be available. The MBR 2022 authorizes the issuance of permits for damage or danger, as well as scientific permits, which may apply in certain limited situations. For more information, please visit: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds.html.

e) Indicate whether your department or agency has identified any power that it will not be exercising or may be unable to exercise to allow the project to be carried out, in whole or in part, with reasons; if unsure, explain what must be resolved to increase confidence.

ECCC is not aware of any power that it will be unable or may be unable to exercise to allow the project to proceed in whole or in part as currently planned.

3. **Using Table 1**, identify project- and context-specific **key issues** based on the expertise within your mandate[1] and the information in your possession. Available information may include your access to databases and corporate knowledge, the draft Initial Project Description, any exchanges with the proponent or others related to the project and known means to address the effects.

For each key issue:

a) Specify the key issue (e.g., specific species and location)
b) Specify the project component or activity linked to the key issue
c) Explain why it is a key issue based on:
    i. biophysical effect pathway(s) from the specific project component or activity
    ii. concerns unique to the project or a priority within your mandate

[1] Refer to the Memoranda of Understanding with IAAC.

iii. the issue being material[2] to decision-making under the *Impact Assessment Act*

d) Potential pathways from key issues that could lead to an impact on Indigenous Peoples and their rights
e) Identify how the issue could be resolved, including through other means than an impact assessment (e.g., other regulatory oversight)
f) Identify additional information the proponent could provide to build confidence about how the issue could be addressed through other means

DGRs are proposed in geology chosen for its technical suitability for containing radioactive waste. The proponent's proposed DGR would permanently contain 5.9 million bundles of used nuclear fuel, which will remain radioactive for thousands of years. It will be important to ensure the DGR's barriers designed to prevent releases are stable over the long-term. Adaptive management will be an important consideration to ensure adverse effects are avoided or minimized over the long term.

Key issues will vary depending on the phase of the project. According to the proponent's IPD, the site preparation and construction phases of the project are anticipated to take 13 years (planned over 2030-2042). Placement of nuclear waste into the repository will begin in the operations phase scheduled in 2043 and anticipated to occur over 50 to 60 years. Once operations are complete, there would be an approximate 100-year phase of extended monitoring, decommissioning and closure. The site would then be decommissioned and closed and the proponent would eventually apply to be released from CNSC licensing. The site would transition into the institutional control that would be established by the Government of Canada and the Province of Ontario.

During the operations phase and extending into the decommissioning and closure phase of the Project, the potential for radiological releases from the Project as well as malfunctions, accidents, and malevolent acts will be key considerations.

IAAC has prepared the following **preliminary list of potential effects that are likely to be key issues** for the integrated assessment.[4] While completing **Table 1**, IAAC requests that, as appropriate based on your department or agency's mandate and expertise, you validate this list, add precision or rationale where appropriate, and recommend any additional key issues for consideration. For a federal work or undertaking, such as nuclear energy works, a broader range of effects are within federal jurisdiction, including socio-economic effects.

- Effects to Biological Environment: vegetation (terrestrial, riparian and wetland environments), wildlife, reptiles and amphibians, fish and fish habitat, birds, species at risk
- Effects to Physical Environment: geology and geochemistry, soils and sediment, ambient radioactivity, air quality/emissions, surface water quality/quantity, groundwater quality/quantity, effects to Lake Ontario
- Accidents and malfunctions and effects of the environment on the project
- Impacts to Indigenous rights, current use of lands and resources for traditional purposes, physical and cultural heritage of Indigenous peoples and sites of archaeological importance, with a focus on potential archaeological resources on land or water, and species of cultural importance
- Effects to the health, social and economic conditions and the positive and negative consequences of these changes that are likely to be caused by the carrying out of the designated project

<Signature removed>

Name of Departmental / Agency Responder

Date

[2] An issue is material to decision making if its analysis is anticipated to affect the conclusions on (1) whether adverse effects within federal jurisdiction or direct and incidental adverse effects (collectively adverse federal effects) are likely not significant, or of low, medium or high significance; (2) appropriate mitigation measures for significant adverse federal effects; or (3) justification in the public interest.

Table 1: Key Issues to inform the integrated assessment process

This table should outline key issues to inform the integrated assessment process, including whether an impact assessment is required and, if so, the scope of the assessment and tailoring of the Tailored Impact Statement Guidelines.
Key issues are the major concerns directly related to a project component or activity, the analysis of which is anticipated to be material to decision-making under the *Impact Assessment Act*.
Federal authorities' advice should be guided by the identification and resolution of key issues. If an impact assessment is required, it will be focused on key issues.

Comment ID	a) Key issue	b) Project component or activity	c)(i) Biophysical effect pathway(s)	c)(ii) Concern unique to the project or a priority within your mandate	c)(iii) Material to federal decision-making	d) Impacts on Indigenous Peoples and their rights	e) Means for issue resolution	f) Additional information from the proponent
Identify each comment by your organization's acronym and a sequential comment number. *e.g.: IAAC-01*	*Specify each key issue (e.g., specific species and location).*	*Identify the project component or activity linked to the key issue.* *Be specific about the nature, scale, novelty and complexity of the component or activity.*	*Identify the specific effect pathway between the project component or activity and the affected environmental or human receptor (including Indigenous Peoples).*	*Describe why it's a key issue within the mandate of your department or agency, including in terms of priorities of the federal government and in terms of anticipated likelihood, severity or uncertainty of effects.* *Identify if the key issue is common for project activities of this nature or in this sector, or whether it is unique to this project due to the project's complexity, size or novelty; a sensitive or rare receiving environment; and/or proximity of sensitive environmental or human receptors (including Indigenous Peoples).*	*Describe why the key issue is material to decision-making as either:* • *an adverse effect within federal jurisdiction, or a direct or incidental adverse effect, that may be significant based on available evidence including:* ○ *federal experts' knowledge and experience with past project assessments;* ○ *presence of sensitive species, habitats or human receptors (including Indigenous Peoples);* ○ *novel or complex project activities, components or technologies;* ○ *high uncertainties in effects or in the effectiveness of mitigation measures;* ○ *unknown or unproven mitigation; or* • *a factor for the justification in the public interest anticipated to be material to decision-making such as a likely positive effect contributing to sustainability, to Canada's environmental obligations or climate change commitments or in supporting governmental priorities, such as reconciliation with Indigenous Peoples.*	*Describe how key issues you have identified within your mandate and expertise may lead to impacts on Indigenous Peoples and their rights.* *This advice must be informed by knowledge and input from Indigenous Nations and communities during the comment period, or within the Initial Project Description to support a more accurate, respectful and collaborative assessment.*	*Describe how the key issue could be resolved or addressed by:* • *Any means, including powers, duties, functions, frameworks, policies or guidance for which your department or agency is responsible;* • *Any means, including powers, duties, functions, frameworks, policies or guidance from another jurisdiction, including the province;* • *Common, proven, well-understood or standard mitigation measures to mitigate the effect or effect pathway(s); or* • *Commitments made by the proponent (e.g., in the Initial Project Description).*	*Describe information the proponent could provide, or commitments the proponent could make, that would provide confidence that the issue can be resolved by existing means (to be considered for the final Initial Project Description, future Summary of Issues and response, or (potential) Tailored Impact Statement Guidelines.* *Consider whether information, studies, analyses or collaborative work with other authorities would be required to address the issue beyond existing means.*
ECCC-01	Confirmation of all terrestrial species at risk	The activities linked to the	The footprint of the project and	SAR and their habitat are within the mandate of ECCC under	Potential for adverse effects within federal jurisdiction could occur if	Currently unknown.	Common, proven, well understood or standard avoidance and	ECCC recommends that the Proponent provide:

	(SAR) and migratory birds present within the project study area. The IPD (Section 14 – Biophysical Environment) is limited in detail specific to migratory birds and terrestrial SAR. Most of the information provided was collected using desktop mapping and eDNA sampling. Baseline studies using species-specific protocols are necessary to understand abundance and distribution within the study area and potential impacts the project may have on these species. Under Section 19 – Potential Effects, species at risk and their habitat should be assessed as a separate valued component (VC) to general wildlife and their habitat	construction and operation of the Project and associated infrastructure could adversely affect SAR listed on the *Species at Risk Act* (SARA) and their habitat (e.g., residences or critical habitat) as well as migratory birds and their habitat.	impacts to adjacent natural habitats, specifically for migratory birds and terrestrial SAR is unclear.	SARA. Migratory birds and their habitat are also within the mandate of ECCC under the *Migratory Birds Convention Act* (MBCA) and *Migratory Bird Regulations* (MBR). Adequate knowledge of potential effects to species at risk and migratory birds and their habitat is needed to select appropriate valued components and understand project impacts.	species at risk or migratory bird individuals, nest, residences, or habitat are impacted.		mitigation measures to mitigate effects or effect pathways to SAR and/or migratory birds are likely available. However, the potential SAR, migratory birds and habitat affected by the project need to be confirmed to help better understand and describe any potential pathways of effects and ensure adequate mitigation can be applied.	• Further information on the surveys for SAR and migratory birds that have taken place (number, timing, methodologies, maps of survey locations and SAR occurrences and habitat in relation to the project footprint). • Survey information and results for SAR mammals and insects. • A full list that confirms what SAR and migratory bird species are observed/confirmed during surveys in the project and adjacent areas that may be impacted by project activities. • Further consideration of pathways of effects that may impact adjacent natural habitat for SAR and migratory birds including residences and/or critical habitat. • Further information on potential direct and indirect pathways of effects on species at risk individuals, residences and/or critical habitat and on migratory birds. • Further information on mitigation measures for potential effects to SAR and migratory birds. • Further information on potential residual effects on SAR individuals, residences and/or critical habitat and on migratory birds.
ECCC-02	Within the IPD "Table 18.2 Other Potential Federal Permits and Approvals for the Project" it states that "*For wildlife species listed on Schedule 1 of SARA, if any part of their critical habitat or the residences of their individuals is affected by the Project.*"	The activities linked to the construction and operation of the Project and associated infrastructure could adversely affect SAR listed on the SARA and their	The footprint of the project and impacts to adjacent natural habitats, specifically for migratory birds and terrestrial SAR is unclear.	The implementation of SARA for terrestrial species at risk is within the mandate of ECCC.	Potential for adverse effects within federal jurisdiction could occur if species at risk or migratory bird individuals, nest, residences, or habitat are impacted.	Currently unknown.	**Recommended text correction:** Table 18.2 Other Potential Federal Permits and Approvals for the Project, the description/facility of SARA Permits – SARA column should state that "For terrestrial species at risk species listed on Schedule 1 of SARA, it is prohibited to harm individuals or residences of:	ECCC recommends that the proponent revise the text in Table 18.2.

	This information is incorrect regarding the application of SARA on non-federal lands.	habitat (e.g., residences or critical habitat) as well as migratory birds and their habitat.					a) Migratory bird species at risk anywhere in Canada b) Any listed species at risk on federal land. Unless authorized under a permit."	
ECCC-03	Accidents and malfunctions Potential accidental releases of hazardous substances during construction, operation, closure and decommissioning of the DGR, resulting in adverse effects on water quality, fish and fish habitat, and migratory birds and changes to the environment impacting Indigenous peoples of Canada.	The DGR Project involves the site preparation, construction, operation, decommissioning, and long-term closure of a deep geologic repository (>500 m depth) designed to safely contain and isolate approximately 5.9 million used nuclear fuel bundles over the project lifespan. Major components and activities include: • Used Fuel Packaging Plant (UFPP) • Protected Area infrastructure • Balance of Site facilities • Underground Facilities • Storage and utilization of explosives • Grouting and groundwater control during shaft sinking. • Site grading, earthworks, and creation of an Excavated Rock Management Area (ERMA) and Organics	Accidents and malfunctions at the DGR could result in the accidental release of conventional hazardous substances to air, soil, groundwater, or surface water through: • Spills or leaks of fuel, chemicals, or wastewater during storage, transfer, on-site transportation or equipment operation. • Runoff or seepage from ERMA/OMA, laydown areas, or work areas, especially during storm events. • Failure of water management ponds, drainage systems, or treatment systems leading to uncontrolled discharge. • Loss of containment during UFPP operations (e.g., hot cell system failure, containment breach, fire).	Accidents and malfunctions associated with a deep geological repository for used nuclear fuel have the potential to result in unplanned releases of hazardous substances, including radioactive materials and conventional hazardous substances, which fall within ECCC's mandate for environmental emergency management under the *Canadian Environmental Protection Act* (CEPA). Potential effects of such releases include adverse impacts to air quality, surface water and groundwater quality, fish and fish habitat, migratory birds, species at risk, and changes to the environment that could result in non-negligible adverse effects on Indigenous Peoples of Canada. These considerations align with federal priorities related to pollution prevention, protection of water and wildlife, and the prevention of environmental emergencies. The risk associated with accidents and malfunctions at the proposed facility is characterized by low likelihood but potentially high severity and high uncertainty. Handling and processing of radioactive used fuel within the Used Fuel Packaging Plant (UFPP) present scenarios where a loss of containment could result in significant radiological and environmental consequences. The presence of extensive underground infrastructure at	Federal decision-makers must consider that accidents and malfunctions during all phases of the Project (site preparation, construction, operation, decommissioning) could result in: • Non negligible adverse effects from spills of fuels, chemicals, contaminated water, or radioactive materials. • Potential radiological releases during surface operations (UFPP) or underground emplacement. • Impacts to fish and fish habitat, migratory birds, species at risk, and ecosystems downstream or downgradient of discharge points. • Effects on Indigenous rights and land use, particularly for the Anishinaabe peoples of Wabigoon Lake Ojibway Nation.	See column c)(i) and c)(ii) for potential impacts on Indigenous Peoples and their rights.	Optimized spill prevention, preparedness, and response measures and systems will be important during all activities associated with the various stages of the project, given the risk of release of hazardous substances to the environment. This includes: Containment and storage controls: • Secondary containment for all hazardous material storage. • Spill/leak detection and automatic alert systems. Site controls and best practices • Designated, bermed, and lined refuelling and maintenance areas located 30m away, at minimum, from waterbodies. • Strict procedures for handling radioactive materials and contaminated equipment. • Regular preventive maintenance of water systems, ventilation, pumps, machinery and underground utilities. • On-site traffic management. Plans and programs: • Comprehensive Spill Contingency Plan covering both radiological and non radiological materials. This plan should clearly outline roles, notification procedures, and training requirements. • Emergency Response Plan that integrates DGR specific nuclear emergency requirements, fire protection systems, and communication protocols with local and Indigenous authorities. • Waste Management Plan for LLW, ILW, hazardous wastes, contaminated equipment, and wastewater.	The proponent should commit to the following items, which would provide confidence that potential accident and malfunction scenarios associated with the project have been adequately considered and prepared for, and that the risks of adverse impacts to components of the environment under federal jurisdiction are minimized: • Conducting a risk assessment of plausible accident and malfunction scenarios: o that could result from the activities proposed in the project; and, o that could result from the impact of natural hazards or environmental conditions at the proposed project site. • Adopting all relevant industry best-practices regarding prevention, mitigation, preparedness, response, and recovery in the context of spills resulting from accidents and malfunctions.

		Management Area (OMA). • Water management facilities for contact water collection and treatment systems. • DGR dewatering system to pump groundwater inflows to surface for treatment and discharge. Given these activities, hazardous substances likely to be present include: • Fuels: diesel, gasoline, propane, LNG. • Explosives for excavation. • Industrial chemicals and reagents (water treatment chemicals, concrete additives). • Radioactive materials: used nuclear fuel, contaminated equipment, low and intermediate level radioactive waste. • Contaminated water streams: contact water, dewatering water, active liquid radioactive waste, sanitary wastewater. Given the reliance on	These pathways could create non-negligible adverse effects on components of the environment under federal jurisdiction, including fish and fish habitat, species at risk, migratory birds and changes to the environment impacting Indigenous peoples of Canada by: • Contamination of surface water or groundwater, affecting fish, benthic invertebrates, aquatic vegetation, and downstream water users. • Exposure of migratory birds or terrestrial wildlife to contaminants via water, or soil. • Effects on culturally important species or sites identified by Indigenous Nations.	depths exceeding 500 m introduces additional uncertainty related to groundwater inflow, geotechnical instability, ventilation failure, and the potential for contaminant migration pathways that are difficult to predict and remediate. The long operational timeframe and extended period of radioactive material management further increase uncertainty, as accidents or malfunctions could occur under changing technological, climatic, and environmental conditions. While mitigation measures such as engineered containment, ventilation systems, monitoring, and emergency response planning are standard for nuclear and large industrial projects, the proposed project exhibits characteristics that may exceed the scope of routine mitigation. Specifically, the scale, complexity, and novelty of a deep geological repository for used nuclear fuel, combined with its long-term risk profile, elevate the consequences of system failures beyond those typically addressed through standard measures alone. In addition, the project is situated within a sensitive receiving environment, where groundwater systems and surface waterbodies may serve as pathways to federal environmental receptors, including fish and fish habitat and migratory birds. The proximity of sensitive human and environmental receptors, including Indigenous Peoples with rights-based land use and culturally significant waterbodies, further increases the potential severity of effects should an accident or malfunction occur. In this context, uncertainty regarding contaminant fate and transport, particularly for groundwater and atmospheric			Monitoring and adaptive management: • Baseline and ongoing monitoring of groundwater, surface water, radiation. • Frequent inspection of shafts, sumps, stored hazardous materials, pumping systems, water management facilities, and structural stability. • Adaptive management triggers for seepage, geotechnical instability, ventilation issues, or contaminant detection. • Long term monitoring throughout extended monitoring and closure phases. Although the Proponent has proposed certain measures in the IPD that may be adequate, the response plans, mitigation strategies, project components, and systems are currently outlined only in broad terms. Given the risk of a significant accident or malfunction, a federal review would provide an opportunity for a comprehensive assessment of these plans, thereby enhancing the protection of federal valued components and better safeguarding the environment. Part 8 of the Canadian Environmental Protection Act, 1999 on environmental emergencies (sections 193 to 205) addresses the prevention of, preparedness for, response to, and recovery from environmental emergencies caused by uncontrolled, unplanned, or accidental releases. It also addresses the reduction of any foreseeable likelihood of releases of toxic or other hazardous substances listed in Schedule 1 of the Environmental Emergency Regulations, 2019. This act may apply if Schedule 1 substances onsite meet or exceed the threshold to be regulated under the Canadian Environmental Protection Act, 1999. Technical Guidelines for the Environmental Emergency Regulations, 2019	

		heavy equipment, blasting, deep excavation, handling radioactive materials, and managing large scale water and waste systems, there is potential for non-negligible adverse effects to areas under federal jurisdiction due to an accident or malfunction.		pathways, underscores the need for rigorous federal oversight. A federal review is therefore warranted to ensure that the proposed mitigation measures are sufficient to address these potential adverse effects. ECCC provides environmental emergency management planning advice and guidance related to potential accidents and malfunctions involving unplanned or uncontrolled releases or spills of conventional hazardous substances into the environment, including scenarios where such releases could result in non-negligeable adverse environmental effects within ECCC's mandate. These effects include impacts to air quality, water quality, species at risk, fish and fish habitat, migratory birds, or changes to the environment resulting in non-negligible adverse impacts to Indigenous Peoples of Canada. Additionally, ECCC coordinates expert review of atmospheric transport and dispersion modelling of airborne contaminants, fate and behavior of contaminants, and hydrologic trajectory modelling of contaminants in water.			may be found at: https://www.canada.ca/en/environment-climate-change/services/environmental-emergencies-program/regulations/technical-guidelines.html	
ECCC-04	The IPD (Section 14.12 - Climate change. Pg. 139) identifies possible effects from climate change on water management but is unclear how climate change resilience has been considered.	Climate over the lifetime of the Project is projected to be different from past and current climate in the project area. For example, project components and activities for which climate change resilience could be important for this Project	There is potential for climate change to affect the Project which, in turn, may have impacts on the surrounding environment (e.g. through accidents or malfunctions). Climate changes in the project area, such as	Impacts to Water Quality and Quantity affecting fish and fish habitat.	There is potential for climate change to affect the Project which, in turn, may have impacts on the surrounding environment (e.g. through accidents or malfunctions).	Currently unknown	The Strategic Assessment of Climate Change (SACC) was published in 2020 and works in conjunction with the *Impact Assessment Act* to provide guidance on how to consider climate change throughout federal impact assessments. It is requested that the proponent provide clarification on how climate change may result in accidents and malfunctions to water management and how the project has considered factoring in climate change resilience.	Relevant information is provided in the "Draft technical guide related to the Strategic Assessment of Climate Change: Assessing climate change resilience" published in March 2022. Links: "Strategic Assessment of Climate Change" https://www.strategicassessmentclimatechange.ca "Draft technical guide related to the Strategic Assessment of Climate Change:

		include those related to water management.	possible changes in mean and extreme precipitation and temperature and related environmental conditions, may alter baseline conditions, with implications for climate sensitive aspects of project design and associated effects within federal jurisdiction.					Assessing climate change resilience" https://www.strategicassessmentclimatechange.ca/28896/widgets/117114/documents/77106
ECCC-05	Characterization of greenhouse gas (GHG) emissions assessment in the IPD.	The construction, operation, and decommissioning of the proposed Project may result in GHG emissions or impacts to carbon sinks.	N/A	The assessment of GHG emissions and carbon sinks from this project would be relevant in considering the extent to which the effects of the designated project hinder or contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change (IAA s.22(i) factor to be considered). ECCC recommends the Project follow the Strategic Assessment of Climate Change (SACC) in the estimation of GHG emissions, with an emphasis on the full consideration and evaluation of GHG mitigation measures.	Designated projects that require an Impact Assessment (IA) under the Impact Assessment Act (IAA), regardless of whether they are federally or provincially regulated, must consider the Project's GHG emissions in terms of the Projects' contribution to Canada's ability to meet its environmental obligations and its commitments in respect of climate change. Application of the SACC, as determined by IAAC, would generate the information to determine if the Project will contribute to Canada's climate change objectives and will inform the federal Minister's IA decision for the Project.	Currently unknown	The Strategic Assessment of Climate Change (SACC) was published in 2020 and works in conjunction with the Impact Assessment Act to provide guidance on how to consider climate change throughout federal impact assessments. Proponents may find the technical guidance of the SACC helpful in assessing the impacts to climate change and in ensuring consistent, predictable, efficient and transparent consideration of impacts to climate change. Information typically requested for the project description is outlined in the SACC (including section 4.1) and the draft Technical Guide (including sections 2.4, 3.3, and 4.2). Should IAAC determine an IA under the IAA is required for the Project, the SACC would apply, as circumstances warrant, to determine the extent to which the effects of the Project contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change.	The Proponent may find the technical guidance of the SACC helpful in assessing the impacts to climate change. Information typically requested for the Project Description is outlined in the SACC (including section 4.1) and the draft Technical Guide (including sections 2.4, 3.3, and 4.2). Technical guidance on the SACC can be found here. ECCC recommends the Proponent refrains from referring to GHG emissions as negligible.

							ECCC recommends the Proponent refrains from referring to GHG emissions as negligible, given that GHG emissions are by nature accumulative.	
ECCC-06	Executive Summary- Description of Project (pdf pg. 8): sources of used fuel missing information.	The operation of the proposed Project	Used fuel inventory is critical to DGR planning.	Table 12.2 does include Point Lepreau and other CNL managed reactor sites; however, these are not specifically mentioned in the Executive Summary. Exclusion of some of the sources of used fuel in the Executive Summary may lead to misunderstanding and is inaccurate.	Accuracy of documentation is important in this public report.	Currently unknown	Include in Executive Summary, Description of the Project, Point Lepreau and other CNL managed sites among the sources of used fuel.	N/A
ECCC-07	Within the IPD - Section 19.2.1 (pdf ag 222) the Valued Component (VC) assessment endpoints may not be accurate.	The construction, operation, and decommissionin g of the proposed Project	Effects of the project on physical environmental valued components.	Assessment endpoints are described as "qualitative expressions" in this section and all the physical environment VC's – Air Quality, Noise, Vibration and Light, Hydrogeology, Hydrology, Surface Water Quality, Topography, Sediment and Soils – have been characterized as Not applicable for Assessment Endpoint. The general characterization that Assessment endpoints are qualitative may not be accurate for some of the physical environment VC's. For example, the endpoint for surface water quality may be based on the *Fisheries Act* regulatory requirements.	Accurate assessment of the effects of the project on VC's that is quantitative where applicable, is essential for understanding the impact on the VC's during the federal decision-making process.	Currently unknown	ECCC recommends that the proponent re-consider identification of Assessment Endpoints for physical environment VC's that are assessed quantitatively where possible (e.g., water quality).	N/A
ECCC-08	Water Quality and Quantity	The activities linked to the construction, operation, and decommission-ing of the Project could have adverse effects on the quality of groundwater and surface water, as well as affect the	Any project with a large surface footprint may result in adverse effects to surface water quantity by altering the rate, volume, and timing of surface water flows into receiving water features.	Impacts to Water Quality and Quantity affecting fish and fish habitat.	Changes to Water Quality and Quantity can result in adverse impacts to fish and fish habitat, which are effects within federal jurisdiction.	The project is situated approximately 21 km southeast of Wabigoon Lake Ojibway Nation reserve lands, and also the project is engaging with Eagle Lake First Nation, Seine River First Nation, Lac des Mille Lacs First Nation, Lac Seul First Nation, the Métis Nation of Ontario, and the Ojibway Nation of Saugeen.	The Proponent states that the effluent will be subject to surface water quality guidelines (Section 19.2.3.5.2) before being released. The Proponent has committed to discharge treated effluent in a way to minimize effects from changes in velocity, and to monitor treated effluent and treated sewage flow and quality (Table 4-1 of Appendix E). ECCC recommends that additional measures are considered to ensure that all waters discharged from the	ECCC recommends that the Proponent provide: • Rationale on the selection of the design storm event (including peak discharge and runoff depth). • A description of all potential effects, including direct and indirect effects, of project components

		hydrological regime within nearby wetlands, watercourses and channel morphology through site recontouring, changes in land cover, dewatering, and stormwater and surface water management structures (i.e. ponds, ditches, and water treatment facilities).	Surface flows can be altered through site re-contouring, surface water management (e.g., diversions of non-contact water around project areas, dewatering), changes in land cover, removal of existing water features within the affected footprint, water demand to support operations, filling of reservoirs or tailings management structures, watercourse crossing structures (culverts, bridges, or causeways), surface water diversion, discharge of wastewater or other means. These adverse effects may alter the hydraulic conditions downstream of the project, which can subsequently alter the channel morphology because of erosion and changes in sediment transport patterns and affect fish and fish habitat by			The Overarching Themes of key issues raised in this engagement (Table 3.2) is for the project to protect water with attention to species of cultural importance, to involve indigenous peoples in environmental data collection and consider habitat disturbance. Non-negligible adverse effects to water quantity have the potential to directly affect these key issues.	Project do not cause impacts to aquatic life. The Proponent can apply best practices to mitigate erosion and manage stormwater, such as: • selecting a design storm that provides adequate erosion protection and accommodation of extreme runoff events; • protecting easily erodible surfaces until local vegetation re-establishes; • retaining surface water runoff generated from the proposed works in stormwater ponds, which are designed in such a way so as to maintain the flow characteristics of the pre-disturbance watershed to the receiving water environment; • grading the ground surface so that runoff quickly drains to channels, through culverts, and into stormwater ponds, rather than pooling; and • regularly inspecting the project area, repairing and protecting surfaces that have begun to erode. The Proponent is collecting measurements on a quarterly basis for its hydrology baseline program. ECCC recommends that the Proponent establish continuous monitoring (e.g. level logger and regular flow measurements) to best understand and characterize local hydrology. The Proponent should consider effects to the groundwater-surface water interaction regime and consider such interaction in the assessment of potential effects.	or activities, including changes to surface water and groundwater quality and quantity at a suitable spatial and temporal scale. • A detailed characterization of the hydrology and of the receiving environment, both under baseline conditions as well as project-affected conditions through each phase of the Project for all watercourses, wetlands, and groundwater adjacent to the project site and potentially affected by the Project. • Characterization of project effects to surface water quantity using a calibrated and validated hydrological model which has quantified the magnitude of project effects on a monthly basis and performance metrics to establish the credibility of the baseline model. • Consideration of the hydrological impacts caused by climate change. • A stormwater management plan including designs for hydraulic structures (drainage ditches, effluent channels, stormwater ponds, etc.). • Detailed erosion and sediment control measures proposed during construction and operation.

			altering water depths and velocities. Water features normally filled with water may run dry as a result of the project or conversely, normally dry channels and depressions may become inundated with water. The quantity of water also affects the concentration of and therefore influences the potential effects of contaminants of potential concern that may be added to water features as a result of the project. This drawdown of the water table could reduce the quantity of surface and groundwater available to recharge surface water bodies and could potentially increase the concentration of contaminants and natural elements in those watercourses and waterbodies and alter the temperature					• Describe mitigation strategies and assess applicability and functionality of these strategies to the Project and propose a contingency plan to mitigate potential effects that may result from the overflow of stormwater and surface water management structures during extreme flood events. • Additional information on the details of the handling of radioactive wastewater mentioned in Table 23.1 and how it will be processed and ultimately whether it will be released to the environment.

			regime at all phases. If the pre-disturbance water table is near the surface, this same groundwater depression cone could increase soil infiltration during storm events, which could further decrease surface runoff to rivers both upstream and downstream of the project area. Undersized water conveyance structures such as stormwater ponds, stormwater ditches and effluent channels may overflow during extreme flood events resulting in the potential release of contaminants to the receiving environment through runoff, erosion, infiltration into groundwater, and sedimentation processes.					

Please insert additional rows as necessary