February 3, 2026

Deep Geological Repository for Canada's Used Nuclear Fuel Project
Impact Assessment Agency of Canada
160 Elgin Street, 22nd Floor
Ottawa, Ontario K1A 0H3

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

To whom this may concern,

On behalf of the Mayor, Council and residents of the Township of Ignace, I am writing to formally express our community's strong and enduring support for the Nuclear Waste Management Organization's (NWMO) proposal to site a Deep Geological Repository (DGR) in the Revell Lake area, located just outside our municipality. This letter accompanies and reinforces the Township's submission of the Initial Project Description (IPD) for consideration by the Impact Assessment Agency of Canada.

The following report provides the Township of Ignace's submission on the Nuclear Waste Management Organization (NWMO)'s Deep Geological Repository (DGR) for Canada's Used Nuclear Fuel Project APM-REP-05000-0210-R000. Our comments centre on recommendations to the Impact Assessment Agency of Canada (IAAC) and Canadian Nuclear Safety Commission (CNSC) for the scoping of the Impact Assessment Process.

For more than a decade, (15 years) the Township of Ignace has been an active partner in the site selection process. Our community has been deeply engaged in learning, dialogue, and capacity-building to ensure that our decision is informed, responsible, and aligned with our long-term vision. Throughout this process, we have consistently affirmed the following:

- **The Township of Ignace overwhelmingly supports proceeding with the Revell Site as the preferred location for Canada's DGR**. In fact 77.3% of our voting population established a strong mandate through a very in debt deliberative democratic process and provided overwhelming support for Council to move forward with a strong resolution of advancing the DGR project.

- **We recognize the national importance of safely and permanently managing used nuclear fuel**, and we are committed to contributing to this generational infrastructure in a manner rooted in safety, science, and stewardship.
- **The project represents a transformative opportunity for Ignace**, supporting economic diversification, employment, infrastructure renewal, population stabilization, and strengthened municipal capacity. We are strongly supportive of ensuring that the Township is fully aligned with any and all economic activity and prosperity surrounding this multi billion-dollar project.
- **Our support is grounded in extensive community engagement**, including open houses, independent technical reviews, Shared future planning, Indigenous-municipal collaboration, and consistent opportunities for residents to engage with NWMO, IAAC, CNSC experts and Council.

The Township is confident that the Revell Site—combined with NWMO's scientific, technical, and safety commitments—represents a strong and responsible path forward for the project. We also recognize and respect the ongoing and essential role of Indigenous rights-holders, neighbouring communities, and regional partners in the broader consent-based process.

As the Impact Assessment Agency of Canada begins its review of the Initial Project Description, the Township of Ignace reiterates its full support for advancing the project into the federal impact assessment process. We remain committed to transparency, collaboration, and a rigorous review grounded in evidence-based decision-making.

We also want to ensure that we, as a Council and senior staff, alongside our peer review consultants, have indeed had an opportunity to consult with and review our observations with the Nuclear Waste Management Organization. We are extremely pleased to state that a mutually agreed to process has been established to ensure an "open door" policy of review, consultation and ongoing discussions take place through a variety of established channels, including committee work with the NWMO.

Thank you for your careful consideration of this submission. The Township looks forward to continued cooperation with the Agency as the project advances through subsequent phases of assessment and regulatory oversight.

Should there be any questions or concerns, please do not hesitate to reach out directly to our Township.

Sincerely,

Aaron Gullins, CAO
The Township of Ignace
cao@ignace.ca

Recommendations for Impact Assessment

Arising from The Township of Ignace`s

Review of APM-REP-05000-0210-R000
Initial Project Description – Deep Geological Repository (DGR) for Canada's Used Fuel Project

Submitted to the Impact Assessment Agency of Canada and Canadian Nuclear Safety Commission

February 3, 2026

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1.0 Purpose of Report

These are the comments and recommendations of the Township of Ignace on the Nuclear Waste Management Organization (NWMO's) Deep Geological Repository (DGR) (Project) for Canada's Used Nuclear Fuel Project. Based on this review, we present to the Impact Assessment Agency of Canada (IAAC) and the Canadian Nuclear Safety Commission the following comments and a list of issues that should be recommended for the impact assessment and review of the DGR.

While these comments specifically pertain to people and Corporation of the Township of Ignace, we note that the Initial Project Description (IPD) also addresses our Wabigoon Lake Ojibway Nation (WLON) neighbours and regional communities. We acknowledge and support WLON, however we do not comment on matters germane to WLON or to Indigenous identity populations.

The nuclear industry has earned the trust of the Canadian people. And, the trust that radioactive waste can be stored safely over the long term. On this basis, the Township of Ignace agreed to be a host community along with Wabigoon Lake Ojibway Nation.

As the Township of Ignace was also the first Canadian community expressing an interest in learning about the DGR project in 2010, we have had many opportunities to learn and comment on the DGR. The question now being considered by the residents and Corporation of the Township of Ignace is, how best can we share our advice on how to safely manage the radioactive waste material at the DGR, as the DGR has been described?

Accordingly, in this submission, the Township of Ignace has clearly stated the design and processes changes it is recommending for the impact assessment.

2.0 Overview of the DGR Project

In 2002, the Government of Canada enacted the Nuclear Fuel Waste Act (NFWA) to establish a long-term approach for managing used nuclear fuel. The Act required the creation of the Nuclear Waste Management Organization (NWMO) to work with Canadians and Indigenous Peoples to recommend and implement a safe, long-term management plan. Following a three-year national study with broad public input, the Government of Canada selected Adaptive Phased Management (APM) in 2007 as Canada's plan for the long-term management of used nuclear fuel. The approach includes the development of a Deep Geological Repository (DGR) to safely contain and isolate Canada's used nuclear fuel[1].

[1] NWMO, 2025. Initial Project Description Plain Language Summary – Deep Geological Repository (DGR) for Canada's Used Nuclear Fuel Project.

The Project will include:

- an underground repository, at a depth greater than 500 m below surface, where used fuel will be placed in engineered containers surrounded by a protective system involving clay and rock;
- surface facilities for receiving, handling, and packaging the used fuel;
- transportation activities along the primary and secondary access roads within the Project site; and
- supporting infrastructure, including access and haul roads, a rail spur, transmission line, a worker accommodation camp, and an excavated rock management area[2].

The Project is expected to last over 160 years, including site preparation, construction, operation, decommissioning and closure, and post-closure monitoring. The Project does not include:

- transportation of used fuel from reactor sites to the Project beyond primary and secondary access roads at the Project site, as this is regulated separately under CNSC certification and uses existing transportation infrastructure;
- NWMO's corporate offices or other off-site corporate infrastructure (e.g., Centre of Expertise); and
- any capacity beyond 5.9 million bundles of fuel; increases in the proposed inventory would require approval from host communities and be approved by applicable regulators, including the CNSC as the lifecycle regulator for the Project[3].

3.0 Impact Assessment Review Process

The Project is, and will remain, subject to the Impact Assessment Act (IAA), the NFWA, the Nuclear Safety and Control Act (NSCA) and numerous other federal and provincial licensing and regulatory requirements throughout its life. For example, a facility for the long-term management of radioactive waste, such as a DGR for used nuclear fuel, must meet the licensing requirements of the Class I Nuclear Facilities Regulations. The NWMO's initial licence application to the CNSC will be submitted together with the Project's Impact Statement.

The DGR review process is currently transitioning to the Impact Statement Phase, at the beginning of the Impact Assessment Process. On January 5, 2026, the IAAC started the public comment period on NWMO's DGR Initial Project Description. After the comment period, the IAAC will prepare a summary of issues they will consider and identify the type of impact assessment process they will use. The IAAC has decided that there will be a joint integrated

[2] NWMO, 2025. Initial Project Description Plain Language Summary – Deep Geological Repository (DGR) for Canada's Used Nuclear Fuel Project.
[3] NWMO, 2025. Initial Project Description Plain Language Summary – Deep Geological Repository (DGR) for Canada's Used Nuclear Fuel Project.

review with the CNSC. This step is the start of the Planning Phase that ultimately lead to a Tailored Impact Statement and produce guidelines for the NWMO to follow.

The CNSC is entering the first Stage of its Graded Licensing Process. We note that the **Licensing Appendix Section 4** presents licences that NWMO will need. Table 18.1 of the IPD (P. 185) lists CNSC regulations and other approvals (P 186). The CNSC has issued REG Doc 1.2.3. to guide site preparation phase. As normal for Canadian Regulated projects, the project owner must satisfy many laws, regulations, guidelines. Ontario Provincial Acts, reviews and guidelines are also likely relevant. Table 18.3 lists provincial approvals, permits and authorizations. Canadian and International Standards, such as standards issued by the Canadian Standards Association, also apply. So, the design and operation of the DGR is well guided.

The Licencing Appendix (Table 2) notes that, while integrated, the IAAC is looking to review and provide their advice and direction at this early stage. Whereas the CNSC will renew their assessment and review before every Licence application.

4.0 Township of Ignace Review Process

As the nuclear host community for the DGR project, the Township of Ignace has a vital interest in ensuring the safe long-term management of used nuclear fuel in Canada. Both Wabigoon Lake Ojibway Nation and the Township of Ignace have entered into Hosting Agreements (HA) with the NWMO for the life of the Project. These agreements reflect Canada's commitment to working with informed and willing host communities. The Hosting Agreement's objective is to enable the community to support and facilitate the Project by building capacity in areas such as infrastructure, economic growth, social and cultural development, and governance. The agreement also provides a framework for the Township to fulfill its roles and responsibilities within the regulatory process.

Our comments on the IPD build on the opportunity the Township of Ignace has had to comment on early drafts of the Initial Project Description. We are pleased that NWMO provided this opportunity.

NWMO issued a draft Initial Project Description (IPD) in summer of 2025 and received comments from the Township of Ignace through: 1) the submission of a marked-up document; 2) preparation and review of a Comment and Disposition table. Our review at that time included the review of Acts: Nuclear Fuel Waste Act and Nuclear Safety and Control Act, some background technical documents and Regulatory Guidance Documents. The Township also participated in several presentations hosted by the NWMO and provided comments.

As an input to the IPD we prepared Section iv. Initial Project Description, Township of Ignace Story, (p. 8) We are pleased that Section 4.3.2 Area of Focus and Shared Commitments with the

Township of Ignace, (pgs. 29 – 31) fairly captures our comments. But not all. That said we are pleased that NWMO has committed to dialogue on the rest of the items. Yet, as the definition of the Initial Project solidifies, we are aware that the Township of Ignace will lose the opportunity to further influence the project.

For the comments presented in this report, we completed a review of Full DGR Initial Project Description including Appendices and associated documentation. We focused on: 1) Project Description; 2) Site Characterization; 3) Background and Baseline Data and 4) Potential Effects. Comments in this report are based on the review by our Mayor, Councillors and Senior Staff (add additional comments after their review).

The Township of Ignace is supported by a Municipal Peer Review Team, who also provided comments. Known as Ignace Municipal Peer Review Team (IMPRT). The IMPRT includes experts having the following disciplines: urban and environmental planning, social science and socioeconomics, civil engineering, mine engineering, nuclear physics, terrestrial ecology, aquatic ecology, atmospheric ecology. Given time constraints, most of the disciplines reviewed the Plain Language Summary document. The IMPRT along with township staff participated in the IAAC and CNSC review sessions.

5.0 Ignace's Overarching Perspective on the IDP Document

Our review is underpinned by the perspective that the Township of Ignace brings to our comments. While we have stated clearly our vision of where we want to be as a community, we also want to present how we want the design of the DGR and its review to unfold. Essentially, the following is our big picture thinking that serves as a lens through which our comments are situated. We ask the IAAC and CNSC to consider three asks:

1) We want the DGR to be designed and operate in a way that maximizes socio-economic benefits;
2) As a host, we want the DGR to be best in class in every respect;
3) We want a critical review of how mine practices seem to have been prioritized in the design of the DGR.

5.1 Maximize Socio-Economic Benefits

The Township of Ignace is on the path of evolving into a 'nuclear host community' similar to Pickering, Clarington and Kincardine as host communities for their respecting nuclear generating stations. These Ontario nuclear generating station communities and other communities currently host high-level nuclear used fuel.

That said, the Township of Ignace is smaller than the other Ontario nuclear host communities. Given this, we are pleased that support is already being provided by NWMO to strengthen

governance and provide early investments in infrastructure to prepare for housing, emergency services and local amenities. However, our comments in the following sections are grounded in our desire for investments, practices, procedures similar to those that have well served the current Ontario nuclear fuel waste host communities. As noted on (P 163), Ignace wants to return to a point where we will be a livable and vibrant small town. To achieve this, we will need socio-economic benefits.

The Nuclear Fuel Waste Act requires the review of the DGR to assess socio-economic effects.

And, the NWMO is off to a good start. The IPD has performed well in characterizing our socio-economic conditions. Ignace's baseline socio-economic conditions and challenges are fairly defined and potential socio-economic effects of the DGR have been identified. Of note, our health care is at capacity Section 15, (P. 57). These health care strains these can be improved by the project. As noted in the IPD (P. 148) there are non-medical ways that health outcomes can be improved. Some community members experience food insecurity, (P. 164). By changing the design of the DGR, we achieve more retail shops and can provide a greater variety of food at lower cost. Incomes and opportunities can rise by NWMO facilitating the presence of construction and skilled trades, administration, engineering and professional services (P. 173). Employment benefits can be achieved for Ignace residents. (P. 174)

In reviewing NWMO's technical socio-economic analysis we observe that NWMO's screening assessment assumes they will be a static observer of effects rather than an active participant in using the design, construction and operation of the DGR to facilitate socio-economic betterment. Thus, we are concerned that the analysis centres on mitigating socio-economic effects to the community as it is today, rather than, identifying opportunities to facilitate enhancements and achieve our vision.

Ontario Power Generation and Bruce Power provide exceptional support to their host communities. Through the DGR project, we want NWMO to help deliver socio-economic improvements for the Township of Ignace. The structure of the impact assessment can help.

5.2 Aspire to World Class Design and Operation

The Township of Ignace believes it is fair to set high expectations. We want the DGR Project to represent World Best in Class Design, Construction and Operation.

Today high-level radioactive waste is managed safely. Protocols, procedures and technologies have been developed and have functioned well to protect worker health and safety and the public. As a result, for over 50 years no radiation from high level radioactive waste has gone off site or resulted in public exposure. These procedures and practices will continue to serve Canadians well as nuclear energy provides electricity for generations to come. In parallel, the standard for the Port Hope Area Initiative (PHAI) clean-up of low-level radioactive waste and marginally contaminated soils is also, no radioactive material or contaminants from the clean-up going off-site.

Our concerns are reflected in the comments to follow.

Too often, the overall philosophy of the DGR IPD is that effects, particularly radiological effects, will be mitigated instead of avoided. We see environmental management is centred on meeting CNSC regulations whereas, the management should seek excellence supported by CNSC regulations. For example, in p. 260 and *Section 24* there are opportunities to design the DGR to avoid effects that don't appear to be taken. We add that the philosophy of *adaptive management* describing NWMO's approach to mitigating the effects of the DGR may be acceptable for non-radiological projects but should not be considered for a high-level radiological waste project.

The successful management of high-level nuclear fuel waste occurs in large part today due to the nuclear industry having Canada's strongest safety culture. Nuclear power plant safety measures have been developed over generations and wrap around the management of used nuclear fuel at those sites. These measures are peer reviewed and improve constantly, such as through reviews by the World Association of Nuclear Operators (WANO). Third party oversight is also provided by the Canadian Nuclear Safety Commission (CNSC) and the International Atomic Energy Agency (IAEA). The high-level radioactive waste is managed safely today, because in part, the nuclear generating station is managed safely. Workers have a nuclear worker safety culture.

5.3 Invert the Project Approach

We are concerned that the DGR is designed as a mine that will take radiological material rather than designed as a deep geological repository that will benefit from mining practices. We prefer the later approach.

As a point of reference, Section 19.2.3 states (emphasis added),

> *"The Project will be constructed using conventional mining techniques; therefore, mitigation measures suitable for comparable mining projects in the regional area and previously approved by the IAAC (including Hardrock, Goliath, and Hammond Reef Gold Projects) (CEAA 2018a, b, 2019) are appropriate mitigation for effects of carrying out the Project. Effects during decommissioning and closure are expected to be similar in nature and extent to those during site preparation, construction, and operations, with additional management of LLW. During operations and closure, the potential for radiation releases, malfunctions, or accidents will be rigorously managed under the CNSC's regulatory oversight and licensing regime. (P. 205)*

While we can accept that site clearing and some parts of the construction process can learn from the mining sector, we are concerned that mining practices have extended into the management of high-level nuclear waste. As a result, we feel that this design approach has resulted in gaps that need to be addressed – discussed in later sections.

The upset conditions envisioned and worker protection appear to be specific to mines rather than radiological upset conditions. If the design approach is inverted, we would expect more focus on worker and occupational health and safety.

We point to Page 64 – *worker refuge station* – that assumes that any accident will be a conventional mining accident. There is no reference to refuge protection against radiological accidents or the potential for radiological exposure. No reference to iodine pills or Geiger counters.

We acknowledge the significant design work already completed by NWMO over many years. Even so, we still feel that if the design approach is inverted, there would be greater emphasis on radiological risk and how the DGR design would avoid risk. For example, at each nuclear generating station, the movement of used fuel on-site is well recognized as an area of critical risk.

We note that for nuclear refurbishment, safety and efficiency are constantly enhanced through the use of mock-up facilities, such as Darlington Nuclear Generating Station's reactor mock-up facility. This is a full-scale nuclear reactor mock-up where refurbishment workers practice necessary tasks safely in a controlled and realistic non-radiation environment prior to performing them at the plant. The DGR has lessons to be learned.

Used fuel is going to be moved away from the safety envelop of the nuclear power stations and to a greenfield site. The waste will also shift to a new owner – the NWMO. With respect to radiological protection practices, we are concerned that: 1) there are no references in the IPD to the well understood concept of 'defence in depth'; 2) the IPD design overly accepts the 'mitigation' of effects vs the nuclear standard of 'avoiding' radiological effects - as stated in the IAAC Operational Policy Statement.

We understand the anticipation of low-level radioactive effects. But, in our opinion, low effects should be 'no effects' or 'negligible effects'.

In sum, the management of high-level radioactive waste on generating station sites needs to be a model for safety and the design of key components of the Revell Deep Geologic Repository. Where practices are applicable, nuclear power generating stations should be used as analogues. The Revell Deep Geologic Repository needs to become the new safety envelop as a first priority. As a result, the design of the DGR needs to take an inverted approach.

6.0 Recommendation for IAAC and CNSC to Address through Integrated Review

In Schedule 1, Part E of the IPD, NWMO offers information to IAAC to support the creation of Tailored Impact Statement Guidelines for the Project. NWMO (P. 192) refers to:

- *A description of any changes that, as a result of the carrying out of the project, may be caused to components of the environment that are within legislative authority of Parliament (Section 19).*
- *A description of any changes to the environment that, as a result of carrying out the project, may occur on federal lands or lands outside Ontario (Section 20).*
- *A description of any impact to Indigenous Peoples of Canada as a result of the carrying out of the project (Section 21).*
- *An estimate of any greenhouse gas emissions associated with the project (Section 22).*
- *A description of any waste and emissions that are likely to be generated during any phase of the Project and a description of the plan to manage them (Section 23 and 24).*
- *An overall summary of conclusions and path forward (Section 25).*

The following analysis is based on a full review of the IPD including the high-level description of the IPD and the characterization of baseline conditions.

As follows, our analysis provides a set of recommendations to IAAC and CNSC for assessing the IPD leading to the development of Tailored Impact Statement Guidelines.

CONDUCT AN IMPACT ASSESSMENT BASED ON A REVISED DESCRIPTION OF DGR

The Township of Ignace believes that revisions are required to the design of the DGR and revisions to the IPD to support a complete assessment.

Recommendation 1: Add boundaries to Figures 9.1 and 9.2 and assess effects based on these boundaries

We request IAAC and the CNSC to request NWMO to add the following boundaries as a required start point for the assessment. Maps depicted through *Figures 9.1 Currently Proposed Conceptual Site Plan* (p. 45) and *9.2 Currently Proposed Conceptual Site Plan – Satellite* (P.46) don't indicate internal and external site boundaries. While the IPD refers to a: 1) protected area boundary and; 2) perimeter boundary, 3) exclusion area boundary, without mapped boundaries, the Township of Ignace is unable to assess the environmental and radiological extent of biological and social and environmental effects.

Recommendation 2: Add a *Figure 9.3 (new)* showing on-site `trigger` and `action level` boundaries and assess effects also using these boundaries

No radionuclides or contaminants should go off site.

We request IAAC and the CNSC to request NWMO to add `trigger` and `action level` boundaries as a required start point for the assessment. As occurs for generating station sites and the low-level radioactive waste management facilities, potential off-site contamination releases utilize

'trigger' boundaries and 'action' boundaries. Both boundaries are within the site perimeter boundary. The design, mitigation and risk avoidance measures for nuclear facilities, have as their objective, no radiological or chemical contaminants getting to the action boundary. And therefore, not getting to the site perimeter boundary.

Page 260 of the IPD discusses, *release limits* and *action levels*, but without these areas being mapped as a reference point, it is not possible to depict and assess potential biophysical and socio-economic effects.

Recommendation 3: Describe and assess the Rail Spur and what it will be used for

The IPD refers to the construction of a rail spur (p. vii). However, there's no discussion of what the rail spur will be used for. If it will be used for the shipment of used fuel, NWMO should assess whether there should be an analysis of other licenced areas?

Recommendation 4: Add a *Section on Occupational Health and Safety* and assess these effects

The nuclear industry has an exceptionally good record with respect to occupational health and safety. And, for the local host communities, currently serving as hosts for high-level nuclear waste: if the workers are safe, residents are safe.

We note that in the *Licensing Appendix, Section 6 Key Submissions and Section 7, Management System* a *Safety Case* will be prepared and a Safety Analysis Program will be developed. However, these submissions refer to Operations and Post-Closure, not Site Preparation. We also note the intent to comply with CSA Z45001, but mere compliance doesn`t reflect the strong safety culture and practices that exist at the nuclear generating stations and other parts of nuclear industry. And, should be in place for the DGR.

To achieve a nuclear industry occupational health and level safety, we request the IAAC and CNSC to ask NWMO to add a Section on *Occupational Health and Safety in Section B Project Information.* And, request an assessment of occupational health and safety risks to occur based on this information.

For example, we reference the one gap regarding underground worker safety stated in Section 5.3, but there are many other areas of potential health and safety risk that need to be addressed as part of the Impact Assessment and before the Licence to Prepare Site is granted. For example, safety issues related to the failure of procedures in the hot cell, battery fire, battery fire linked to bentonite container, failure of shaft, dynamite upset and more should be addressed as part of the definition of the DGR.

In sum, the Township of Ignace is concerned about the lack of a section in the IPD on Occupational Health and Safety and recommends that such a section be added to the IPD and that these safety issues be addressed as part of the Tailored Impact Statement Guidelines.

Recommendation 5: Add to Health and Safety Risks and Risk Avoidance Measures in Section E and expand the impact assessment

We note that Section E, Potential Effects of the Project, Section 19.2 addresses the identification of potential effects, pathways of change and risk screening. The Section responds to the *Operational Policy Statement (IAAC 2022),* approach to the development of the Guidelines (P. 194). Guidelines are informed by the anticipated level of risk inherent to a predicted effect.

To meet the requirements of Schedule 1, Part E of the Information and Management of Time Limits Regulations, and inform the development of Tailored Impact Statement Guidelines, as outlined in the Operational Policy Statement, we note that NWMO will undertake a systematic consideration of how Project components and activities may interact with the environment and result in changes (i.e., non-negligible effects) to the environment and health, social and economic conditions. We agree.

However, we also note that matters of Accidental Release are not addressed until the Licence to Operate stage (Table 23.1 – List of Potential Waste and Emissions) (P. 258). These issues need to be addressed now through the Impact Assessment and before the Licence to Prepare site is granted. The Township of Ignace believes that assessing issues leading to potential accidental release will affect how the site will be prepared.

In addition, the Township would welcome a Section that describes potential accident scenarios associated with the DGR particularly related to on-site risks. The shaft is discussed in the IPD on page 67. But what happens if the shaft fails while it is transporting used nuclear fuel? For a mine, workers would be tasked with fixing the shaft. For a DGR, the issue is a repair in a radiological environment. For the DGR, Nuclear Energy Workers (NEWs) would be required to do the repair. This raises the question of whether there would be additional buildings or processes on site to support the workers and repairs. What facilities need to be added on site before the Licence to Prepare site is granted?

Furthermore, *Section 9.6.2 List of Major Activities During Operations, (p. 68)* states that *'at this time, all underground emplacement related activities are expected to be performed with battery powered vehicles.'* What happens is a battery-operated trolly carrying a bentonite block catches fire? For a mine, conventional fire suppression would be used. For the DRG, the fire also becomes a radiological exposure issue with fire suppression materials having radioactive contaminants. What above ground facilities would be needed on site to avoid these events and minimize risk?

We also note that *in Section 5.6.1. Environmental Risk Assessments (Licensing Appendix)* the application for the CNSC License to Prepare Site requires the following and other information.

> *Licence to Prepare a Site: the effects on the environment and the health and safety of persons that may result from the activity to be licensed, and the measures that will be taken to prevent or mitigate those effects.* (No page number)

While the requirement to assess health and safety risk will be addressed, we feel that these and other health and Safety risks and their resolution should factor into the design of the DGR now and its assessment based on the design.

Recommendation 6: Add a Section on Nuclear Safety Culture in Section B Project Information

In earlier sections we discuss inverting the thinking on the design of the DGR. Accordingly, the Township of Ignace requests that a Section on Nuclear Safety Culture be added and for the impact assessment to be founded on this safety culture.

We note information presented in Section 24 of the DGR (and other sections) regarding risk management. But we are concerned that risk is overly defined as mining risk. We would expect the design of the DGR to more significantly incorporate radiological risk avoidance measures.

Specifically, high level radioactive waste has been safely stored for 50 years because of the safety culture of nuclear workers at the nuclear plants. NWMO will become a waste owner for the first time. We believe it is not too early for the safety culture to be in place so as to be a stronger influence the description of the DGR and how the DGR is assessed.

IMPACT ASSESSMENT TO HAVE A GOAL OF MAXIMIZING SOCIO-ECONOMIC EFFECTS

The following are the recommended changes in the design of the DGR and recommendations to the IAAC and CNSC on the design of the impact assessment to maximize socio-economic benefits.

Recommendation 7: Assess opportunities to maximize socio-economic benefits

We recommend that Section 15 of the Full IPD "Health, Social and Economic Context" and Section E. Potential Effects of the Project be changed to provide one more point of information and context and another layer of effects analysis for each socio-economic component. This will identify how the DGR can be changed to maximize benefits. Adding to Health Conditions is used as an example,

15.1 Currently Available Baseline Data for Health Conditions

15.1.1 Currently Available Baseline Data

15.1.2 Opportunities to Improve Health Outcomes (NEW)

15.1.3 Planned Work

15.2 Social Determinants of Health…*opportunities to improve social determinants of health*, and so on.

Recommendation 8: Move the Worker Camp to Ignace

Page 56 describes the camp and recreation facilities. Figures 9.1 Currently Proposed Conceptual Site Plan (p. 45) and 9.2 Currently Proposed Conceptual Site Plan – Satellite (P.46) also depict a camp.

The Township of Ignace recommends deleting the plan to build a camp at the DGR for two reasons: 1) to maximize worker health and safety; 2) to maximize benefits for the Township of Ignace.

With respect to worker safety, in the absence of an exclusion area boundary, we estimate that on Figures 9.1 and 9.2 the worker camp is located well within a 1-kilometer exclusion zone. We are unaware of its location relation to the secure part of the site. Neither can we identify where the camp will be in relation the storage areas for Low and Medium Level nuclear waste.

We request that the Integrated Assessment Team review the potential for worker radiological exposure should a camp be within the perimeter fence. Should the camp continue to be on site, we would expect the IAAC and CNSC to request more in-depth analysis of worker radiological safety and the viability of emergency evacuation plans should it be necessary to move 800 people off site during a radiological release.

We envision a worker camp in Ignace within an Olympic-style campus. Locating the camp in Ignace will elevate socio-economic benefits. For example: 1) workers health and safety benefit plans functioning to support local doctors, dentists, pharmacies and other health support workers for the benefit of all Ignace residents; 2) nuclear workers are community oriented and some of them can be expected to volunteer for leadership roles in local non-governmental organizations; 3) workers will use retail stores and other services as to improve their viability.

Locating the worker camp in Ignace will assist Ignace to achieve its vision for growth and social development.

Recommendation 9: Add to the Section E – Define and Assess the Role of Ignace as a Site Contributor

The Ontario communities currently hosting high level radioactive waste have a somewhat symbiotic relationship with the waste owners. Even though host communities play a non-regulatory role, they provide a social licence – an important consideration coming out of the *Seaborn Report*. In Ontario, they allow Ontario Power Generation and Bruce Energy, as used fuel owners, to attract well skilled employees by providing housing, health services, schools, recreation, retail services and infrastructure. The ability to attract employees is an important consideration related to NWMO`s future obligations pertaining to the Waste Nuclear Substance Licence and Licensing Handbook.

There are many ways to conduct an impact assessment. We recommend that the IAAC reference various approaches well documented by the International Association for Impact Assessment. One way, commonly used globally, is to assess Impacts against the achievement of goals. Section 19.2.2.2 describes Pathways for Change Screening as one approach. As stated in earlier sections, Ignace has the goal of maximizing socio-economic benefits. We recommend that the IAAC structure the Impact Assessment to, in part, achieve biophysical and socioeconomic goals. So, instead of the impact assessment methodology on Page 201 of:

a. Project Activity
b. Change in the Environment
c. Potential effect on immediate or valued components

The Township of Ignace is recommending the following methodology:

a. Project Activity
b. Change in the Environment
c. Potential effect on immediate or valued components
d. Potential to achieve socio-economic and biophysical goals (NEW)

Through the IPD, NWMO has done well in describing health, culture and socio-economic baseline conditions. The screening of potential effects is also well done. Based on this data several socio-economic conditions need work and can in part help the IAAC to establish impact assessment goals.

As one example, p. 150 describes the strains currently experienced by the Mary Berglund Community Health Centre Hub (BCHCH). There is a need in Ignace for a shelter for women, more childcare, after school programs. The IPD has documented many other areas where socio-economic conditions can be improved. The NWMO and the DRG can support this goal by changing the design of the DGR.

We request four changes to achieve Impact Assessment goals.

a. Define site medical support requirements and move to Ignace

We acknowledge the need for emergency response facilities and personnel on site. However, on the receipt of the Licence to Prepare Site, we anticipate that NWMO and their contractors will need at least three medical doctors to support workers should the need arise. There will also be the need to treat radiological injuries. Doctors will need support from local medical facilities such as a hospital, pharmacy, and specialists. These doctors should reside in Ignace.

To attract doctors, Ignace will need, with the support of NWMO, housing, jobs for spouses, consulting work arising from the DGR so as to enhance incomes, research support from universities and access to large health centres. An Ignace Hospital should be a consideration.

b. Move Contractor Engineering Offices to Ignace

For other nuclear facilities, major engineering, construction and environmental contractors have moved to the host communities. We recommend that Section 9 – Activities, Infrastructure and Physical Works, (p. 44) be amended to eliminate significant on-site engineering and professional staff otherwise locating on site and move them to Ignace. Thus, the IAAC should assess the project against the goal of having these offices in Ignace,

c. Accept Ignace as a Contractor and Supplier

The IPD describes the need for project supplies and services that can be well supplied by the Township of Ignace. For example: 1) gravel; 2) potable water and 3) waste water treatment services and 4) landfill. The IPD states that the site will need potable water. Ignace`s water treatment plant has a 50-year useful life and is in good condition (p. 165). The waste water treatment plant will need upgrading over the next few years. The Landfill has capacity of 175,000m^3 and its life can be extended through recycling.

We recommend that IAAC structure the Impact Assessment to add the goal of facilitating the use of these facilities by the DGR.

d. Enhance fire, police and ambulance services

Current nuclear fuel waste communities play an important role in supporting the nuclear generating stations, including the management of high-level nuclear waste. Fire, ambulance and policing requirements are discussed by the IPD (P. 166). The Township is concerned that the need for these services is seen through the lens of the DGR being a mine. Current Ontario used fuel host communities: participate in Provincial Nuclear Emergency Response Planning (PNERP) and Exercises; have fire departments trained and equipped for radiological response, and, have hospitals and medical facilities prepared for radiological accidents. As a goal, the impact assessment should define the extent to which the DGR project will be supported to play their role in providing, fire, police and ambulance services.

RECOMMENDED STRUCTURAL ELEMENTS OF THE IMPACT ASSESSMENT

Section 12.2 summarizes Potential Alternative Means. We agree with the listing of alternative means to be assessed as listed in *Table 12.5 - Potential Alternative Means for the Project*, as far as they go (p. 94). But, we prefer to see assessment of additional alternative means.

The following are the additional alternative means we feel should be assessed.

Recommendation 10: Assess alternative means of a Ramp vs a Shaft (s) vs a Combination of Ramp and Shaft(s)

Section 9.5.1 (p. 57) describes how the underground facilities will be accessed and other underground infrastructure. The Township of Ignace believes that the discussion and assessment of a ramp is missing. The Onkalo spent nuclear fuel repository Finland uses ramps and shafts and the Forsmark repository in Sweden uses a shaft. Thus, there are choices that can be considered and assessed as alternatives.

Recommendation 11: Assess alternative means of an On-Site vs Off Site Training Facility

We assume there will be training facilities particularly related to matters such as managing fuel in the hot cells, transportation of the fuel and the use of robotics. Based on this assumption, we also anticipate that there would be a facility for testing and training. We note the use of the Darlington Mock-Up facility, used for training on reactor refurbishment off site. If there is an option to have a training facility off site, we would request that the alternative be assessed of locating the facility in Ignace.

Recommendation 12: Assess alternative means of Dynamite vs. Tunnel Boring Machine

The IPD has extensive references to the use and storage of dynamite for blasting shafts, storage of blasting caps and using dynamite for the construction of placement arms. We are highly concerned with the intention to store and use dynamite underground at the same time that radioactive used fuel is also being stored underground and additional placement rooms are being excavated (p. 68). This may be an appropriate practice for a mine, but a nuclear facility should have defence in depth and keep risks as low as reasonably achievable. NWMO has the opportunity to use a tunnel boring machine after blasting has occurred but before the NWMO receives a Waste Nuclear Substance Licence. In other words, stop the use and storage of dynamite and revert to a tunnel boring machine before any used fuel is on site.

The assessment of this alternative means should be addressed now, because facilities used to store and maintain the tunnel boring machine would have to be considered as part of the Licence to Prepare Site.

Recommendation 13: Assess Appropriateness of IPD Elements Allocated to Detailed Design

The Township of Ignace recommends that the impact assessment start with the review of project components that may have prematurely been moved to the Detailed Design Stage. We refer to Section 5 of the Licensing Appendix that points to the objective and lists items that would be moved to Detailed Design. We also refer to Section E. This section limits effects anticipated and to be studied to the Licence to Prepare Site. Other effects are not studied because they have been moved to later licensing steps.

In earlier sections of this report, we cite many items that we feel should be part of the impact assessment now, that are shown in the IPD as being addressed under the Licence to Construct. We also refer to the assessment of matters related to the accidental release of radiation moved

to the License to Operate. But there is much within the design that can be implemented before the Licence to Prepare Site is granted to avoid the release radioactivity. For example, shafts vs a ramp, on or off-site emergency response facilities, location of Low Level and Intermediate Radioactive waste storage facilities, and more.

In sum, the impact assessment should assess the appropriateness of matters assessed now vs at later stages.

7.0 Summary

Overall, most of the information provided and analysis undertaken in the IPD is supported by the Township of Ignace. The baseline studies are well done and we can support the initial risk screening. For most conditions, NWMO concludes (Section 19) that residual effects are anticipate to be negligible low risk, given mitigation, the required environmental protection measures and regulatory controls in place. The result will be unlikely be significant residual adverse effects. Subject to our comments above, we agree. Our comments for the Impact Assessment and recommended to IAAC and the CNSC are scoped accordingly.

8.0 Conclusions

The Township of Ignace observes that while the IPD refers to a 15-year site selection process, we should not loose site of the fact that the long-term management of high-level radioactive waste today, is part of a 50-year technology selection and siting process. We expect that some issues that will be raised through the impact assessment and the review of the DGR were already raised and addressed by earlier generations. We are pleased that the IPD includes the *Choosing the Way Forward* as a seminal reference to decisions leading to today. That said, we have attached a list of additional references showing earlier policy decisions upon which our analysis occurs today.

For example, over this period, we observed that high level radioactive waste management issues of: What is acceptable risk? What is safety? What is our obligation to others? What obligations do we have to future generations? were discussed thoroughly. The exploration of these issues was based on pubic dialogue, and dialogue with ethicists, theologians, anti-nuclear groups, academics and industry stakeholders. All contributed to developing supportive policy that addressed these important questions. The answers have made their way into policy decisions defining the DGR today.

While we accept there is no closure in public debate, issues pertaining to long term storage at the generating stations vs storage at a DGR were addressed many times over this time period and involved stakeholder public dialogue. At the end of each period of dialogue, decision makers confirmed that long term storage at a DGR is the appropriate policy.

The dialogue also pointed to long term management of high-level radioactive waste in an Adaptive Phased Management facility in a geologic medium similar to what is being proposed for the Revell DGR.

Appendix A1: Specific Comments on Sections in the IPD Document

The following are our specific comments on sections in the IPD document (**Plain Language Report**) as well as from earlier drafts of the IPD. These comments are suggestions to improve and strengthen the IPD document from a technical and regulatory perspective.

A1.1 General Comments on Health and Radiological Risks

Add text to the appropriate section pointing to the Conceptual Design Report for detailed information on the design plus the safety programs (such as radiation protection, health and safety, environmental protection, explosives safety, and so on).

Page viii, section on Management of other Radioactive Wastes
Expand the title of this section and add text to cover other wastes, including hazardous and explosive waste. Alternately, add a new section on the management of hazardous waste, including explosives waste.

Page viii, section on Safety and Environmental Protection, 4th paragraph
Add text indicating the project is committed to complying with regulations on safety including radiation protection for workers and the public such as CNSC regulations and CNSC licences. Note, there is a parallel statement on page ix for environmental protection ("… the licence issued by the CNSC will include enforceable environmental protection requirements …").

Page ix, 1st paragraph and page xii, 4th bullet
Clarify that ALARA is from the regulations promulgated under the NSCA because the NSCA does not mention ALARA.

Page ix, 1st paragraph, last sentence
Clarify that this statement applies to other members of the public in addition to Indigenous Peoples.

Page ix, 6th paragraph
Add Radiation Protection Program to this statement about the Environmental Protection Program.

Page xii, 4th bullet
Add text to clarify this bullet applies to workers and the general public.

Page xiii – 1st full bullet on this page (Waste management alignment)
Add text indicating that this applies to other wastes, including hazardous wastes.

Pages 20 and 21, Figures 10.1 and 10.2
Add perimeter fence to these figures. For example, as currently shown, it cannot be determined if the Explosives Storage Facility is inside the perimeter fence. Note – these Figures do not show their page numbers.

Page 69, Section 25, Environmental Management System
Add a section like this for Radiation Protection Program (RPP) to document and summarize the role of the RPP in protecting workers, the public, and the environment. The RPP will be a major part of the CNSC licencing requirements and the RPP will undergo significant review and approval by CNSC.

Page 71, last reference
Separate this entry into two separate entries because these are used separately in the document.

A1.2 General Comments on Engineering and Design

Use of the Surface Ramp
For safety, long-term operations and decommissioning purposes, a surface ramp is highly recommended for this project. A surface ramp will provide safe walkable ingress route in case of emergency. A ramp will also provide access redundancies and versatilities during construction and operation. It will allow for wheeled vehicles to access directly underground as needed. A ramp would possibly allow to maximize the concept and decrease the number of shafts (eliminate the exhaust shaft?) and optimize ventilation.

Drill and Blast versus TBM
The report presents the excavation method to be the drill and blast method. Alternative methods like TBM are not addressed. TBM excavation or possible mixed methods should be investigated for this project. The following present some advantage and drawbacks of the methods.

Drill and Blast:
- Versatile as it can provide several excavations fronts
- Produce induce fracturation to the adjacent rock mass
- Induce vibration from each blast
- Produce muck that need to be crushed
- Faster excavation method

TBM:
- One excavation front per machine, more favorable in case on longer runs
- Require space for assembly, smaller space at the end of the run where the machine is dismantle and set-up again for another run
- Produce no fracturations to the adjacent bedrock
- Induce no vibration into the surroundings

- Produce muck that is already crushed to small size particles.
- Slower excavation method

Induced fracturation by blasting in hard granite for the disposal of radioactive waste from the Swedish nuclear reactors. Their research has found that induced fracturation in good to very good rock mass was in the range of 1.0 m to 1.7 m inside the adjacent rock mass, beyond the tunnel. This fracturation increases the permeability around the rooms and this effect must be taken into account in the design of permanent placement rooms.

Moreover, blasting induced vibration occurs at each blast. The vibration can be limited to a certain extent but cannot be eliminated. If drill and blast is chosen as the excavation method for the project, an acceptable vibration limit as to be established around the placement rooms for monitoring purposes. This will involve numerous blast vibrations to be monitored as every blast will produce vibrations. There will always be the risk that the vibration limits would be exceeded.

On the other hand, TBM produce no fracturations to adjacent bedrock and no vibrations. However the TBM advance may be slower because of the good rock quality.

A1.3 General Comments on Natural Environment and Ecology

Section 15.7 – Vegetation, Riparian, and Wetland Environment
The text was descriptive and met the level of detail required for an IPD submission. Future mapping and quantitative assessments will be required to support the Detailed Project Description (DPD). The following statement should be further substantiated: Marshes naturally contain more open water than other wetland types; therefore, they may also naturally contain more aquatic species. A higher relative percent (by area) of marshes were present in the surrounding region relative to the Project site. This means it is likely that wetlands on site and surrounding the Project site have lower biodiversity relative to wetland marshes in the greater surrounding region.

Section 15.8 – Fish and Fish Habitat
The text was minimal but was fitting considering the relatively low risk of impacts to fish and fish habitat. Within the upcoming DPD, further justification will be required to support the below statement. At this time of study, no potentially important fish habitat (i.e., required to fulfill important life stages of fish species) has been documented within or surrounding the Project site.

Section 15.9 – Birds, Migratory Birds, and Their Habitat
The text was descriptive and met the level of detail required for an IPD submission. This section identified but the future studies required for confirmation and full characterization of the site.

Section 15.10 – Terrestrial Wildlife and Wildlife Habitat
This section listed out the identified wildlife and met the level of detail required for an IPD submission.

Section 15.11 – Species at Risk and Their Habitat

The list of federal and provincial SAR appears to have good breadth and scope including the usual categories of wildlife and vegetation. Future studies are committed to but lack specifics likely due to the complexity associated with the number of species and studies potentially required.

Appendix A2: Additional Resources

The following provides a list of additional resources that show how today`s Revell DGR has benefited from ongoing dialogue among Canadians.

AECB. (1985). *Regulatory Policy Statement - Deep Geological Disposal of Nuclear Fuel Waste: Background Information and Regulatory Requirements Regarding the Concept Assessment Phase.* Atomic Energy Control Board.

AECB. (1987). *Regulatory document R-104, Regulatory objectives, requirements and guidelines for the disposal of radioactive wastes - long-term aspects.* Atomic Energy Control Board. Retrieved from https://inis.iaea.org/search/search.aspx?orig_q=RN:25034938

AECL. (1991). *Moral and Ethical Issues Related to the Nuclear Fuel Waste Disposal Concept. Technical Record TR-549.* Atomic Energy of Canada Limited Research (AECL).

AECOM. (2024b). *The APM Project Community Well-Being Assessment: The Township of Ignace.*

Armour, A. (1990). *Facility Siting Processes: A State-of-the-Art Review.* Armour Environmental Consultants. Inc. for Atomic Energy of Canada Limited.

Arnstein, S. (1969). A Ladder of Citizen Participation. *Journal of the American Institute of Planners, 35 (4)*, 217.

Auditor General of Canada. (1995). *Report of the Auditor General of Canada to the House of Commons.* Retrieved from https://publications.gc.ca/collections/collection_2015/bvg-oag/FA1-1-1995-eng.pdf

Barnes, R. W. (1979). *Management of Irradiated Fuel Storage Siting Options.* Ontario Hydro.

Battelle Pacific Northwestern Labs. (1978). *Nontechnical Issues in Waste Management: Ethical, Institutional and Political Concerns.* Seattle, Washington: Prepared for the U.S. Department of Energy, PNL – 2400.

Brook, A. (1980). *Uranium Mine Tailings, and Obligations to Future Generations, a seminar on Moral and Ethical Issues Relating to Nuclear Energy Generation.* Toronto: Canadian Nuclear Association,.

Canadian Nuclear Association. (1980). *Moral and Ethical Issues Relating to Nuclear Energy Generation: Proceedings of a Seminar.* Toronto.

Canadian Nuclear Safety Commission. (2017). *Canada's nuclear history*. Retrieved from https://www.cnsc-ccsn.gc.ca/eng/resources/canadas-nuclear-history/

Canadian Nuclear Safety Commission. (2022). *History of the Canadian Nuclear Safety Commission*. Retrieved from https://www.cnsc-ccsn.gc.ca/eng/about-us/history/

CCI Research Inc. (2021). *Ignace community Survey Report.* NWMO.

Cipolla, J. M. (1983). *Conceptual Design of a Dry Storage Vault Facility for Storing Irradiated CANDU Fuel.* Ontario Hydro.

Cluff Lake Board of Inquiry. (1978). *Final Report, Chapter XI, Moral and Ethical Issues in the Development and Use of Nuclear Energy.*

CNFWMP Technical Advisory Committee. (1986). *Technical Advisory Committee on the Canadian Nuclear Fuel Waste Management Program, Seventh Annual Report.*

CNFWMP Technical Advisory Committee. (1987). *Technical Advisory Committee on the Canadian Nuclear Fuel Waste Management Program, Eighth Annual Report.*

Dowell, T. (1984). *Religious Organizations Debate; Nuclear Energy; Prepared for the Social and Community Studies Section.* Corporate Relations Branch, Ontario Hydro, Background Paper, Report No.: 84349,.

Freudenburg, W. R. (1988). *Perceived Risk, Real Risk: Social Science and the Art of Probabilistic Risk Assessment, Science.*

Gaber, J. (2019). Building “A Ladder of Citizen Participation”: Sherry Arnstein, Citizen Participation, and Model Cities. *Journal of American Planning Association*, 188-201. Retrieved from https://doi.org/10.1080/01944363.2019.1612267

Godden, M. S. (1992). Ethics and Energy Supplement. *Journal of Business Ethics*, 609.

Gough et. al, .. (1998). *Integrated Assessment: an emerging methodology for complex issues. Environmental Modelling and Assessment. Vol. 9, pgs 19-29. .*

Government of Canada. (2002). *Nuclear Fuel Waste Act* . Retrieved from Justice Laws Website: https://laws-lois.justice.gc.ca/eng/acts/N-27.7/

Government of Ontario. (1996). *Municipal Elections Act*. Retrieved from https://www.ontario.ca/laws/statute/96m32

Hardy, D. (1984). *The nuclear energy debate: Can there ever be constructive dialogue?, Address given to the Canadian Nuclear Society, Officers' Seminar, Constellation Hotel, September 13, 1984 .*

Hare Commission. (1977). *The Management of Canada’s Nuclear Wastes, Report EP77-6.* Department of Energy Mines ad Resources.

HSAL. (2021a). *Potential for Partnership – Municipal Assessment - The Township of Ignace and Area.*

HSAL. (2021b). *Township of Ignace Willingness Decision.* Retrieved from https://www.ignace.ca/media/k2/attachments/2021-12-13_Ignace_Willingness_Decision_Report.pdf

HSAL. (2024). *Municipal Social Research 2023 Annual Engagement Report for Ignace and Area.*

Human Resources and Skills Development Canada. (2010). *2009 - 2010 Estimates; Report on Plans and Priorities.* Retrieved from https://publications.gc.ca/collections/collection_2009/sct-tbs/BT31-2-2010-III-11E.pdf

IAEA. (2024). *Guidebook on Spent Fuel Storage Options and Systems.* Retrieved from https://www.iaea.org/publications/15169/guidebook-on-spent-fuel-storage-options-and-systems

IAP2. (n.d.). *Core Values, Ethics, Spectrum – The 3 Pillars of Public Participation*. Retrieved from https://www.iap2.org/page/pillars

IPPANI. (1983). *Interfaith Hearing on Nuclear Issues.* Interfaith Program for Public Awareness of Nuclear Issues. Retrieved from https://inis.iaea.org/collection/NCLCollectionStore/_Public/22/061/22061295.pdf

Leduc, D.-P. a. (2020). *Nuclear Energy and Radioactive Waste Management in Canada Publication No. 2019-41-E,.*

Minister of Energy Mines and Resources Canada and Ontario Energy Minister. (1978). *Joint Statement by the Minister of Energy Mines and Resources Canada and Ontario Energy Minister.* Ottawa, Canada.: June 5 Printing and Publishing, Supply and Services Canada.

Minister of Public Works and Government Services Canada. (1998). *Report of the Nuclear Fuel Waste Management and Disposal Concept Environmental Assessment Panel.* Retrieved from https://iaac-aeic.gc.ca/archives/evaluations/431C8844-1/default_lang=En_n=0B83BD43-1_printfullpage=true.html#TOClink

Morgan, M. a. (1990). *Opting for Cooperation. Report of the Low-Level Radioactive Waste Facility Siting Force.* Ottawa.

Natural Resources Canada. (2023). *Canada's Policy for Radioactive Waste Management and Decommissioning.* Retrieved from https://natural-resources.canada.ca/sites/nrcan/files/energy/pdf/RadWasteDecomPolicy_2023.pdf

Noble, B. F. (2011). Environmental Impact Assessment. *The Canadian Encyclopedia*. Retrieved from The Canadian Encyclopedia: https://www.thecanadianencyclopedia.ca/en/article/environmental-impact-

assessment#:~:text=EIA%20was%20formally%20introduced%20in,came%20into%20force%20in%201995.

Otway, H. (1992). *Expert Falibility, Public Wisdom: Toward a Conceptual Theory of Risk, in Social Theories of Risk, ed. S Krimsky and D. Goulding. 215-228, New York, Praeger.*

Richards, D. (1992). *Siting Industrial Facilities: Lessons from the Social Science Literature.* Washington: U.S. Council for Energy Awareness.

Royal Commission of Electric Power Planning. (1980). *Report: Concepts, Conclusions and Recommendations, Vol. 1 1975-1980.*

Rummery, T. a. (1981). *Nuclear Fuel Waste Management: The Canadian Approach,.*

Scott, M. (1982). South Cayuga II: The Role of the Ontario Waste Management Corporation, Alternatives: Perspectives on Society. *Technology and Environment, Vol. 10, No. 2/3 (Fall - Winter 1982)*, 9-11.

Select Committee on Ontario Hydro Affairs. (1980). *The Management of Nuclear Fuel Waste.* Retrieved from https://inis.iaea.org/collection/NCLCollectionStore/_Public/13/662/13662236.pdf

Slovic, P. (1987). *Perceptions of Risk, Science 236, 4799:280-285.*

Standing Committee on Energy Mines and Resources. (1988). *Nuclear Energy: Unmasking the Mystery, Tenth Report Standing Committee on Energy Mines and Resources.* House of Commons. Retrieved from https://inis.iaea.org/collection/NCLCollectionStore/_Public/23/076/23076431.pdf

Standing Committtee on Environment and Forestry. (1988). *High-Level Radioactive Waste in Canada: The Eleventh Hour.* Library of Parliament . Retrieved from https://parl.canadiana.ca/view/oop.com_HOC_3302_40_3/1

Statistics Canada. (2023b). *Census Profile 2021- Ignace*. Retrieved from Statistics Canada Catalogue no. 98-316-X2021001: https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Ignace&DGUIDlist=2021A00053560001&GENDERlist=1,2,3&STATISTIClist=1,4&HEADERlist=0

Thompson, M. (1980). *Political Culture: An Introduction. IIASA Working Paper. IIASA, Laxenburg, Austria: WP-80-175.*

Uffen, R. J. (1978). *The Disposal of Ontario's Nuclear Fuel: A Status Report on Alternative Proposals for the Storage, Reprocessing and Ultimate Disposal of Used Fuel from CANDU Nuclear Reactors.*

US Army Corps of Engineers. (n.d.). Retrieved from Helping Communities: https://www.usace.army.mil/Missions/Environmental/Brownfields-Urban-Waters/Helping-Communities/

Vanclay, F. e. (2015). *Social Impact Assessment: Guidance for assessing and managing the social impacts of projects, Prepared for the International Association of Impact Assessment.*

WCI. (2024). *Ignace Willingness Study Final Report.* With Chela Inc. Retrieved from https://www.ignace.ca/images/willingnes/IgnaceReport.pdf