
From: Bob Irwin <email address removed>
Sent: Tuesday, February 3, 2026 8:48 PM
To: Nuclear Waste / Déchets Nucléaires (IAAC/AEIC)
Subject: THE REVELL SITE AS A CONTINENTAL HYDROLOGICAL THREAT

To: Impact Assessment Agency of Canada (IAAC)

ATTENTION: Review Panel for the NWMO Revell Site Project

RE: Formal Submission regarding the Initial Project Description – Deep Geological Repository (DGR) # 88774

DATE: February 2, 2026

SUBMISSION: No. 5. THE REVELL SITE AS A CONTINENTAL HYDROLOGICAL THREAT

I. THE GEOLOGICAL FALLACY: REVELL AS A "HIGH-PRESSURE LAUNCHPAD"

The Nuclear Waste Management Organization (NWMO) presents the Revell Batholith as an isolated geological "vault." This is a fundamental misrepresentation of the site's topography. The Revell site is located on the **Severn highlands**, the literal "Water Tower" of the region.

In any waste management scenario, the most dangerous place to store toxic material is at a high-elevation headwater. By placing 150,000 tonnes of high-level nuclear waste here, the NWMO is ignoring the physics of gravity. Any failure—be it a slow deep-rock seepage via "preferential pathways" created by excavation, or a surface-level spill during the "packaging" process—will result in a **radial distribution of radionuclides** across two major provincial watersheds.

II. MAPPING THE DEBRIS FIELD: FROM HEADWATERS TO HUDSON BAY

The "Project Area" defined by the NWMO is artificially small. The real impact zone is a **Western Canadian Debris Field** that follows two distinct paths:

1. **The Western Axis (The Turtle River Path):** This system flows west through the Turtle River, into Rainy Lake, and then into the Lake of the Woods. This is the direct intake for the **Winnipeg Aqueduct**.
2. **The Northwest Axis (The Wabigoon River Path):** This carries water through [Dryden and Grassy Narrows First Nation](#). This system is already reeling from mercury poisoning; adding 150,000 tonnes of nuclear waste at its source is an act of compounding environmental injustice.

Both systems eventually converge at **Lake Winnipeg** and drain through the **Nelson River** into the **Arctic ecosystem of Hudson Bay**. This turns a "local" project into a threat to the global "Lungs of the North."

III. THE PEATLAND CRISIS: CONTAMINATING THE "LUNGS OF THE NORTH"

Both northwestern Ontario and northern Manitoba are covered by vast peat bogs and muskeg. These are not stagnant waters; they are a vital, slow-moving "filtration sponge" for Western Canada.

- **Radioactive Accumulation:** Unlike fast-flowing rivers, peatlands absorb and hold contaminants. Radionuclides like **Cesium-137** and **Strontium-90** will be trapped in the "Lungs of the North," turning this carbon sink into a permanent, secondary source of radiation that will bleed into the [downstream water supply](#) for centuries.

IV. TOXIC MOBILITY AND BIOACCUMULATION

We must address the specific behavior of the waste:

- **Iodine-129:** With a **15.7-million-year half-life**, this isotope moves at nearly the speed of water. The [NWMO's safety case](#) cannot guarantee its containment in fractured granite over geological time.
- **The Food Chain:** As these contaminants move through the [Winnipeg River system](#), they will bioaccumulate. The fish, the wildlife, and eventually the marine mammals in **Hudson Bay** will become "biological receptors" for radionuclides released at the Revell headwaters.

V. JURISDICTIONAL CONFLICT: THE MANITOBA NON-CONSENT

The complete exclusion of the **Province of Manitoba** from the Revell proposal is a critical legal failure

- **The Manitoba High-Level Radioactive Waste Act:** Manitoba law explicitly forbids the storage of this waste. Because the Revell headwaters flow into Manitoba, this project forces an unwilling province to become a receptor site.
- **Winnipeg's Right to Exist:** The City of Winnipeg depends entirely on **Shoal Lake** for its survival. A project that threatens the sole water source of 800,000 people cannot be authorized based on the "willingness" of a single small town (Ignace) 400km away.
- **Riparian Rights:** Under [Canadian Common Law](#), downstream users have the right to water in its natural state. This project creates a permanent, interprovincial liability that the federal government must reject.

VI. CONCLUSION AND DEMANDS FOR THE PANEL

The "willingness" of the Revell site has been manufactured by ignoring the **Downstream Majority**. I request that the IAAC Panel:

1. **Grant Formal Intervener Standing** to the City of Winnipeg and the Province of Manitoba.
2. **Declare the Revell Site "Hydrologically Unfit"** due to its position at a continental headwater.
3. **Mandate a Transboundary Impact Study** that follows the water flow to the Arctic.

This is not an "Ontario project." It is a Western Canadian crisis. We cannot allow the headwaters of our nation to become the drain for its most toxic waste.

Sincerely

Robert Irwin

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