

GUIDELINES

for an

Environmental Preview Report

for the

Logy Bay Road NORM Temporary Storage Facility

Honourable Perry Trimper

Minister

Department of Environment and Conservation

February 24, 2016

ENVIRONMENTAL PREVIEW REPORT GUIDELINES

The following guidelines are intended to assist the proponent, Crosbie Industrial Services Inc., with the preparation of the Environmental Preview Report (EPR) for the proposed Logy Bay Road NORM Temporary Storage Facility project. The EPR is a report, based on readily available information, which supplements the information already provided by the proponent upon registration of the undertaking. The EPR should include and update the information provided in the original registration and focus on the information gaps identified during the government and public review of the registration. The EPR is expected to be as concise as possible while presenting the comprehensive information necessary to enable the minister to make an informed decision as to the potential for significant environmental effects from the undertaking.

The contents of the EPR should be organized according to the following format:

1. NAME OF UNDERTAKING

The undertaking has been assigned the Name “Logy Bay Road NORM Temporary Storage Facility Project.”

2. PROPONENT

The following information concerning the proponent will be provided:

- Name the proponent and the corporate body, if any, and state the mailing address.
- Name the chief executive officer if a corporate body, telephone number, and E-mail address
- Name the principal contact person for purposes of environmental assessment and state the official title, telephone number, and E-mail address.

3. THE UNDERTAKING:

- State the nature of the project.
- State the purpose/rationale/need for the project from the perspective of the proponent. If the proposal is in response to an established need, this should be clearly stated. Identify needs that are immediate as well as potential future needs.

- Identify any broader private or public sector policies, plans or programs to which the objectives of the Project contribute, i.e., job creation programs, equal opportunity employment plans, local employment and recruitment strategies, economic development plans, research opportunities, business innovation programs, etc. Identify any potential opportunities to partner with local business.

4. DESCRIPTION OF THE UNDERTAKING

Provide complete information concerning the preferred choice of location, transportation route, legislative and industry standards for the handling, transport and temporary storage of NORM, and methods that will be undertaken to measure and monitor radioactivity levels and radiation exposure levels to workers and the public in association with the Project. Details shall be organized under the subheadings below:

4.1 Geographical Location/Physical Components/Existing Environment:

- Explain why the location on Logy Bay Road was selected for temporary storage of NORM.
- Provide an accurate description of the proposed site, access road, facilities and equipment, including GPS location coordinates. Attach an original base map (1:25,000 scale) and/or recent air photos.
- Give a detailed physical description of the Logy Bay Road area in the vicinity of the proposed storage facility. Clearly indicate the proximity of the site relative to existing residential areas, transportation routes, adjacent properties, trails, water bodies, floodplains and wetlands. In order to determine the potential for health effects from the proposed project activities (e.g. NORM exposure if applicable), it is necessary to identify the locations and proximity of the nearest radiation receptors, particularly human receptors.
- Provide a detailed site plan of the proposed storage facility area, identifying all features, including:
 - buildings and structures;
 - segregated NORM storage area;
 - perimeter fencing.
- Identify the dockside location(s) where NORM will be received, the transportation route from dockside to the CIS Logy Bay Road storage facility, and the transportation route from the storage facility to the transfer location for out of province transport.

- Provide information regarding ownership and/or zoning of the land upon which the project is to be located and any restrictions imposed by that ownership or zoning, including municipal ownership/zoning, Crown, and private land.

4.2 Construction:

- State the time period in which site construction, preparation and modification is expected to begin to provide for the storage of NORM contaminated materials and equipment.
- Describe the size, construction and design of storage containment vessels, and any secondary containment structures or equipment for NORM contaminated materials and equipment, and explain how surface drainage (rainwater/snowmelt) from NORM contaminated materials and equipment will be contained, collected and disposed. Provide photos of containment vessels and structures.
- Describe how equipment containing NORM scale will be stored to prevent scale from becoming airborne.
- Define the design standards that will be met by the NORM storage containers (e.g. CSA standard). Include photos and/or design drawings for storage containment vessels. Indicate whether design drawings be approved/stamped by professional engineers within province?
- Describe how NORM will be stored in a segregated area away from other materials stored on site and provide details on appropriate signage to identify the NORM storage area.
- Describe how/where large NORM contaminated equipment will be stored, labeled, sealed, capped and/or wrapped (e.g. pipes, pumps, tubules, etc.).

4.3 Operation and Maintenance:

All aspects of the operation and maintenance of the proposed development should be presented in detail.

- State the time period during which initial receipt, transport and temporary storage of NORM consignments is expected to begin.
- Estimate the annual volume, radioactivity level and frequency of shipments, and identify the types of NORM contaminated materials and equipment that

will be received, transported and temporarily stored at the Logy Bay Road facility in association with this project.

- Describe procedures that will be implemented, including radiological surveys, to measure and monitor radioactivity levels and radiation exposures to workers and the public from the time the NORM contaminated materials and equipment is received at dockside, throughout the temporary storage period, to the point of transfer out of the province. Include tables, diagrams, flow charts and photos where applicable to supplement descriptions.
- Describe NORM survey methods (e.g. screening, worker/contamination), the frequency of surveys and survey instruments. Provide a diagram outlining the process.
- Identify the employee position(s) responsible for inspection and maintenance of the NORM storage area and containment vessels, and include required employee credentials for this/these position(s).
- Describe a program to ensure worker monitoring and protection that includes mandatory use of a personal radiation dosimeter by workers having the potential for NORM exposure, throughout the first year of project operations., and longer if required.
- Indicate the frequency of inspections of the NORM storage area and provide a checklist of spreadsheet of items that will be identified/inspected (leaky or corroded containers, caps/seal on pipe ends, perforations or tears in wraps and seals, etc.). Indicate maintenance and inspection standards that will be followed.
- Describe practices and procedures that will be implemented, including baseline monitoring of the facility and operational monitoring of the radiation dose rate, to ensure that the estimated incremental annual effective dose to the public is less than 0.3 millisieverts per annum (mSv/a) and to the worker is less than 1.0 mSv/a.
- Describe monitoring measures that will be implemented to verify that only NORM in the Unrestricted classification is associated with this project, such as determining the NORM activity level (Bq), the type of radiation (alpha, beta, gamma), the type of NORM (Uranium238, Radon, Thorium etc.), the type of exposure, e.g. external vs. internal exposures, the type of protection used, time, distance, shielding, and the different radiation sensitivities on different organs. Information may be provided in a summary table.

- Describe confirmatory sampling methods and frequencies, including radiochemical analysis for wastewater, sludge and scale samples. Demonstrate in a table how results will be recorded, including concentration limits for the Unrestricted classification and measured concentrations for each radionuclide.
- Include calculation methods that will be used to determine the estimated incremental annual effective dose to the public and site workers.
- Verify that analysis of the incremental annual effective dose calculations includes the combined radioactive content and exposure levels created over the lifetime of the project.
- Indicate whether or not the project will be viable under a maximum 6-month storage duration that will be imposed on the contents of each NORM consignment.
- Describe measures that will be undertaken to ensure that activities associated with the operation of a storage facility are conducted in compliance with the *Occupational Health and Safety Act and its Regulations*. This includes the responsibility for ensuring that contractors hired to perform work also comply with this legislation.
- Describe NORM safety training that will be provided to employees who are incidentally and occupationally exposed to NORM during storage and transportation. Verify that training will include measures to prevent workers from being exposed.
- Maintain inventory management records for each NORM consignment including, but not limited to the following:
 - Date received
 - Identification of NORM by date
 - Source of NORM generation (e.g. company, organization, facility)
 - Description of NORM waste (scale, sludge, scrapings, etc.)
 - Dose level of material per unit/tubular (drum) when received
 - Volume/mass of waste material
 - NORM level (activity Bq/l/g per unit weight) of waste material
 - Date of Transport from CIS facility for out of province disposal
 - Method of disposal and disposal location
 - Any other relevant information
- Acknowledge that the CIS facility, NORM storage area, NORM Inventory Management Records, and all on-site inspection, radioactivity and radiological analysis records will be made available to government officials/inspectors as requested.

5. ALTERNATIVES

Provide alternative means of carrying out the project to meet the stated purpose and rationale. Identify and describe alternative means and locations of carrying out the Project that are technically and economically feasible. Include information from any previous project related studies describing alternate locations that were considered, reasons for rejection, and reasons supporting the proposed site as the preferred location.

Alternative locations should be clearly outlined on maps of a suitable scale (i.e. 1:50,000, 1:25,000).

6. POTENTIAL ENVIRONMENTAL EFFECTS and MITIGATION:

Provide detailed information regarding the potential effects of the project on the environment and the proposed mitigation to be used to avoid adverse environmental effects.

- Identify how the project will avoid interference with the rights of other legitimate land owners/users, including potential zoning conflicts with the City of St. John's.
- Verify the estimated maximum amount of NORM contaminated waste that will be stored at the site over the lifetime of the project, and what the associated radiological impacts will be to the environment and the people who will be incidentally exposed.
- Describe potential impacts of radiation release to adjacent properties (public) and other ecological receptors.
- Review the groundwater monitoring network currently in place at the Crosbie Industrial Services (CIS) facility on Logy Bay Road, and evaluate the long-term monitoring needs of this project.
- Any surface water runoff from the development should be directed away from wetlands.
- Describe a contingency plan that ensures a quick and effective response to a spill event. Spill response equipment should be readily available on-site, including absorbents and open-ended barrels for collection of cleanup debris. Personnel working on the project should be knowledgeable about response procedures. Indicate how response measures will be implemented to reflect site-specific conditions and sensitivities. In developing a contingency plan, it is recommended that the Canadian Standards Association publication Emergency Planning for Industry CAN/CSA-Z731-03, be consulted as a useful reference.

- Maintain a minimum vegetation buffer zone of 30 metres around existing adjacent wetland areas.
- Submit a NORM Waste Management Plan for this project to the Pollution Prevention Division of the Department of Environment and Conservation for approval, prior to commencing project activities.
- Provide an Emergency Response Plan that meets the requirements set forth in the Occupational Health and Safety Regulations, including Sections 12(1)(e), 12(j), 38, and 39.
- The Emergency Response Plan should identify personal protective equipment that is readily available on-site, including a personal radiation dosimeter(s), in the event that a worker may be incidentally, accidentally or otherwise exposed to radiation exceeding the estimated incremental annual effective dose to the worker of 1.0 mSv/a.
- Verify that the Emergency Response Plan referred to in the Registration document, includes considerations of potential accidents during transportation.

7. PROJECT- RELATED DOCUMENTS:

Provide a bibliography of all project-related documents already generated by or for the proponent (e.g., feasibility study, engineering reports, etc).

8. PUBLIC INFORMATION MEETING:

An Open House Public Information Session is required to be held in a centralized location near the proposed NORM storage facility to provide information about the undertaking to the people whose environment may be affected by it; and to record and respond to the concerns of the local community regarding the environmental effects of the undertaking. Public concerns should be addressed in a separate section of the EPR.

As per Section 10(2) of the Environmental Assessment Regulations, 2003, you are required to notify the Minister and the public of the scheduled meeting not fewer than 7 days before that meeting. The meeting will be announced in the Environmental Assessment Bulletin and posted on the Department's web page.

Public notification specifications are outlined in Appendix A.

9. APPROVAL OF THE UNDERTAKING:

List the main permits, licences, approvals, and other forms of authorization required for the undertaking, together with the names of the authorities responsible for issuing them (e.g., federal government department, provincial government department, municipal council, etc.)

The required 10 copies of the EPR, and an electronic version for posting to the Environmental Assessment website, should be sent together with a covering letter to:

EA Committee Chair
Logy Bay Road NORM Temporary Storage Facility Project
Environmental Assessment Division
Environment and Conservation
P.O. Box 8700
St. John's NL A1B 4J6

APPENDIX A

Public Notices

Under the provisions of the Environmental Assessment Regulations 2003, Section 10, and where the approved Guidelines require public information session(s), the following specified public notification requirements must be met by the proponent prior to each meeting:

<p style="text-align: center;">PUBLIC NOTICE</p> <p style="text-align: center;">Public Information Session on the Proposed</p> <p style="text-align: center;"><i>Name of undertaking</i> <i>Location of undertaking</i></p> <p style="text-align: center;">shall be held at <i>Date and Time</i> <i>Location</i></p> <p style="text-align: center;">This session shall be conducted by the Proponent, <i>Proponent name and contact phone number,</i> as part of the environmental assessment for this Project.</p> <p style="text-align: center;">The purpose of this session is to describe all aspects of the proposed Project, to describe the activities associated with it, and to provide an opportunity for all interested persons to request information or state their concerns.</p> <p style="text-align: center;">ALL ARE WELCOME</p>

Minimum information content of public advertisement - (Proponent to substitute appropriate information for italicized items):

Minimum newspaper ad size: 2 column widths. Minimum posted ad size: 7" x 5"

Minimum newspaper ad coverage: Weekend preceding meeting and 3 consecutive days prior to meeting date; to be run in newspaper locally distributed within meeting area or newspaper with closest local distribution area.

Minimum posted ad coverage: Local Town or City Hall or Office, and local Post Office, within town or city where meeting is held, to be posted continually for 1 full week prior to meeting date.