



Government  
of Canada

Gouvernement  
du Canada



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## **GUIDELINES**

for both the

### **ENVIRONMENTAL PREVIEW REPORT**

(pursuant to Part X of the Environmental Protection Act)

and the

### **FEDERAL ENVIRONMENTAL ASSESSMENT REPORT**

(pursuant to the Canadian Environmental Assessment Act)

ST. LAWRENCE FLUORSPAR MINE REACTIVATION  
(BURIN PENINSULA, NEWFOUNDLAND AND LABRADOR)

As proposed by

CANADA FLUORSPAR (NL) INC.

September 10, 2009

**Issued by the Government of Canada and  
the Government of Newfoundland and Labrador**

## PREFACE

The following guidelines are intended to assist the proponent, Canada Fluorspar (NL) Inc., with the preparation of an Environmental Preview Report (EPR) and Federal Environmental Assessment Screening Report for the proposed St. Lawrence Fluorspar Mine Reactivation. The proponent was advised that an EPR is required for the project under the Newfoundland and Labrador *Environmental Protection Act (EPA)*. The project is also subject to a screening report in accordance with the *Canadian Environmental Assessment Act (CEAA)*. Both governments have agreed that a single set of guidelines is the most effective and efficient way to guide the proponent in preparing an environmental assessment and to produce one report to satisfy both processes.

The EPR presents the report of an investigation based upon readily available information which supplements that already provided by the proponent in the registration of the undertaking, however, minimal field work may be required. The purpose of the information provided in the EPR is to assist the Minister of Environment and Conservation in making a determination as to whether an Environmental Impact Statement (EIS) will be required for the undertaking. The EPR is expected to be as concise as possible, while presenting the information necessary to make an informed decision.

The EPR should include and update the information provided in the registration document and focus on information gaps identified during the government and public review of the registration. On July 3, 2009 the Minister of Environment and Conservation required an EPR to address project design alternatives with regard to tailings management and other water management information and additional workforce/employment details. The EPR should address the information gaps in sufficient detail to enable the Minister of Environment and Conservation to make an informed decision as to the potential for significant environmental effects from the undertaking.

This undertaking is also subject to an Environmental Assessment in accordance with the *CEAA* since this project requires a Formal Approval under Part 1, Section 5 of the *Navigable Waters Protection Act* and authorization under Section 35(2) of the *Fisheries Act*. Transport Canada (TC) and Fisheries and Oceans Canada (DFO) are Responsible Authorities (RA's) for this *CEAA* assessment and the Canadian Environmental Assessment Agency will act as the Federal Environmental Assessment Coordinator (FEAC). Environment Canada, Health Canada and Natural Resources Canada are Expert Federal Authorities (FA's) under *CEAA* and will provide expert advice to TC and DFO during the assessment process.

In every federal screening the factors to be considered are found in the *CEAA* Section 16(1). These factors include a consideration of the following: (1) the environmental effects of the project, including: malfunctions or accidents and cumulative environmental effects that are likely to result, (2) significance of those environmental effects, (3) comments from the public, (4) mitigation measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects, and (5) any other matter relevant to the screening such as the need for the project and alternatives to the project, may be considered.

Once the requirements under both Acts have been fulfilled by the proponent, both governments retain their respective decision-making responsibilities and authority.

The report should be organized according to the following outline:

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## **1. EXECUTIVE SUMMARY**

The Executive Summary shall include as a minimum the identification of the proponent, a brief project description and a summary of the fundamental conclusions of the EPR.

## **2. NAME OF THE UNDERTAKING**

The undertaking has been given the name “St. Lawrence Fluorspar Mine Reactivation”.

## **3. PROPONENT**

Name the proponent and the corporate body (if applicable), and state the mailing address.

Name the Chief Executive Officer (if a corporate body), give mailing address, telephone number, facsimile number and E-mail address.

Name the principal contact person for the purposes of environmental assessment and state the official title, and give mailing address, telephone number, facsimile number and E-mail address.

## **4. THE UNDERTAKING**

State the nature of the proposed project.

State the purpose, rationale and need for the undertaking.

## **5. DESCRIPTION OF THE UNDERTAKING**

Describe the technically and economically feasible alternatives that meet the project need and their biophysical and socio-economic selection criteria. Provide complete details regarding the preferred choice of location and additional information on alternative methods of carrying out the undertaking. Alternatives which may have been considered and rejected, but which may still be regarded as viable should be described. State the reason for the rejection of any alternative methods of carrying out the undertaking.

### **5.1 Geographic Location**

Describe the proposed site, planned layout and infrastructure, roads and associated stream crossings, settling ponds, transmission line, marine terminal, on site buildings, conveyor system, etc., including boundaries for each viable alternative. A site plan showing the layout of the proposed project and infrastructure should be drawn to scale. The appropriate 1:50,000 National Topographic Map should be used as a base map. Any temporary infrastructure required should also be detailed within the EPR.

### **5.2 Construction/Operation**

State the total estimated construction and operation period for the project and the proposed date of first physical start-up of construction related activity for each viable alternative (if any).

Describe the methodologies for the construction and/or placement of the proposed marine terminal and associated infrastructure, including all permanent and temporary ancillary works (e.g. dredging, infilling, shore bollards, etc.). The EPR should include scaled drawings of the proposed marine terminal including all dimensions.

### **5.3 Explosives, Storage, Handling and Use**

Provide detailed information on the use, handling and storage of explosives needed during the mine operation. NRCan can be contacted for regulatory information on the Explosives Act Section 7(1)(a).

### **5.4 Tailings Management**

The following comments are provided relative to Tailings Storage options (April 9, 2009 Project Registration/Description, Section 3.10.2).

- The report presents 5 basic storage options. No consideration is given to potential combinations of alternatives or to more modern techniques for tailings management. Government policies and engineering/science on tailings management has evolved since this project went through EA consideration in the mid-1990s.
- One option given no consideration in the report would be to dewater the tailings and apply dry stacking techniques. Once it has been scientifically proven that there are no concerns with regard to the acid generating potential of the tailings, such techniques have potential positive benefits in terms of ease of handling and reduced volumes of material to be placed. For example, disposal of tailings in mined out underground workings was rejected on the basis of limited capacity and logistical/safety concerns. The EPR should describe if this would be the case if handling a dewatered tailings material.

In general:

- The alternatives assessment should objectively consider all available options for tailings storage. In particular, options that do not involve the use of a natural, fish bearing water body as a Tailings Impoundment Area (TIA), including the on-land disposal of tailings, and the use of tailings as mine backfill as well as alternative options for use of the water body or other water bodies should be rigorously evaluated. This assessment should address environmental, technical and socio-economic aspects of each alternative, and provide a defensible explanation as to why alternatives were chosen or disqualified.
- The alternatives assessment should assess both the short term impacts of each alternative through the mine construction and operations phases of the mine life cycle, and the long term risks through the closure and post-closure phases. This assessment is particularly important with regard to engineered structures such as dams and stream diversions or other containment structures that would be required.
- The alternatives assessment needs to include all aspects of the project that may contribute to the predicted impacts associated with the TIA. These may include; the design of the mine and ore processing, to the extent that they would impact waste rock and tailings characterization and storage options, and water management and water treatment. The assessment will consider the predicted quality and quantity of effluent discharged from any TIA, for each alternative, taking into account the effluent quality requirements, and the predicted impacts associated with the proposed TIA, if any, on surface and groundwater water quality and flow.

- The economic assessment of the alternatives should consider the full costs of each alternative throughout the mine life cycle, from construction through post-closure, including long term maintenance and monitoring requirements. This economic assessment should also consider all costs associated with any compensation agreements that are to be developed, including the fish habitat compensation plan associated with using the water body as a TIA.

For additional clarity and transparency, the assessment of alternatives to a TIA can be separated into three categories:

- environmental considerations;
- technical considerations; and
- socio-economic considerations.

#### **5.4.1 Environmental Considerations**

The assessment of environmental considerations should include both the short term impacts of each alternative through the mine construction and operations phases of the mine life cycle, and the long term risks through the closure and post-closure phases. This assessment is particularly important with regard to engineered structures such as dams and stream diversions or other containment structures that would be required.

The assessment of environmental considerations should include:

- 1) physical and geochemical characterization of wastes (e.g., acid rock drainage and metal leaching);
- 2) topographical factors (e.g., relief and complexity of topography);
- 3) geotechnical and seismic stability (e.g., depth of permafrost, geology of bedrock);
- 4) hydrology issues;
- 5) hydrogeological issues (e.g., migration of contaminated groundwater, interference with surface water movement);
- 6) atmospheric issues (e.g., particulates, heavy metals);
- 7) overall affected land footprint size of impoundment (including secondary/polishing ponds), related infrastructure (e.g., dams, saddle dykes), and access road;
- 8) size of affected water body area (e.g., lake, stream) and watershed catchment boundaries;
- 9) water quality issues;
- 10) water quantity and storage issues;
- 11) considerations related to climate change adaptation (e.g., changes in water management);
- 12) impacts to fish and their habitats related to each alternative;
- 13) impacts to aquatic plant and animal species and their habitats related to each alternative;
- 14) impacts to terrestrial plant and animal species related to each alternative;
- 15) impacts to birds related to each alternative;
- 16) impacts to species at risk and their habitats related to each alternative;
- 17) impacts on humans (including air quality, noise, drinking water and contamination of country foods issues, as applicable);
- 18) potential for post closure/decommissioning recovery and rehabilitation related to these environmental vectors related to each alternative; and
- 19) other factors considered significant by the project proponent and reviewers.

#### **5.4.2 Technical Considerations**

The assessment of technical considerations needs to include the predicted impacts or risks associated with each tailings disposal alternative considered.

The assessment of technical considerations should include:

- 1) containment structure designs (e.g., size, hydraulic capacity, construction materials, substrate, etc.);
- 2) availability of construction material and volume requirements (e.g., quarry material for containment structures, access road and closure construction);
- 3) possible use of impermeable or geo-textile liner for impoundments;
- 4) diversion and other water control structures that may be required;
- 5) potential for increased tailings deposition capacity (e.g., if likelihood of additional future development);
- 6) feasibility of alternatives to managing tailings as a slurry, particularly thickened tailings, paste tailings, or dry stacking of tailings;
- 7) transportation of tailings (e.g., from the mine site to the proposed TIA);
- 8) chemical and physical characterization of tailings;
- 9) design and construction of impermeable covers over wastes;
- 10) ability to recycle tailings supernatant water;
- 11) flexibility with regard to technical, operational and environmental uncertainties;
- 12) proposed technologies and the advantages and disadvantages of the technologies considered, (e.g., proven technology used elsewhere or new);
- 13) technical feasibility and risks (e.g., unforeseen geotechnical conditions may require design modifications);
- 14) unforeseen technical difficulties (e.g., in terms of foundation complexities for dams, etc.);
- 15) risks associated with requirements for perpetual treatment or maintenance;
- 16) post closure risks and uncertainties;
- 17) rehabilitation of aquatic and/or land ecosystems, including timeframes; and
- 18) other factors considered significant by the project proponent or the reviewers.

### **5.4.3 Socio-Economic Considerations**

The assessment of socio-economic considerations should include both the short term impacts of each alternative through the mine construction and operations phases of the mine life cycle, and the long term risks through the closure and post-closure phases.

The assessment of socio-economic considerations should include:

- 1) capital costs;
- 2) operational costs;
- 3) closure costs;
- 4) post-closure costs, including the costs of perpetual treatment/maintenance should it be required;
- 5) fish habitat compensation and monitoring costs;
- 6) economic risks and benefits;
- 7) closure, post-closure plan risks where some form of perpetual treatment or maintenance is required;
- 8) regulatory review and construction timeline costs;
- 9) preservation of archeological/cultural sites;
- 10) Aboriginal land rights;
- 11) maintenance of traditional lifestyle;
- 12) spiritual well being;
- 13) perceived community response;
- 14) ecological/cultural values (in the sense of natural capital value);
- 15) use of fisheries resources;

- 16) aesthetics;
- 17) other uses such as recreation/tourism, industrial, etc;
- 18) contracting opportunities, building community capacity;
- 19) safety considerations;
- 20) landowner opinion including governments’;
- 21) overall perceived socio-economic consequences, benefits and relative preferences; and other factors considered significant by the project proponent and reviewers.

## **5.5 Occupations**

Provide a breakdown of occupations anticipated for this undertaking, including:

- 1) National Occupation Classification (NOC) codes associated with each position for all phases of the project, including the number of positions associated with each NOC code.
- 2) The approximate time lines for each of the positions during the design, construction and operations phases of the project. This would include the number of positions for each NOC code throughout the project at specified time intervals (time intervals being weekly, monthly, or at least quarterly), which would show levels of employment throughout the project timeline.
- 3) An indication of whether the positions are full-time equivalent or if they are the actual number of positions; if they are indeed the actual number of positions, how many are full-time vs. part-time.
- 4) The breakdown of new hires versus existing employees.
- 5) The anticipated source of the workforce, including an estimate of local employment (local area, provincial).
- 6) Information on any employment equity agreements or policies to be followed, for hiring women and other groups if applicable.
- 7) An estimate of the ratio of apprentices to journeypersons, or the skill sets required for the various positions.
- 8) Describe where workers will be housed during each of the phases if they are not from the surrounding area.

## **6. ENVIRONMENT**

### **6.1 Fish and Fish Habitat**

Provide verification that the information provided on fish habitat, fish species, and any fisheries that occur in the freshwater bodies in the proposed location for the project, including any streams or rivers connected to these water bodies, which was submitted in the 1995 EPR, is still accurate. Details should be provided regarding the proposed water withdrawal from any ponds (e.g. Clarke’s Pond) for mill processing, including potential impacts on associated outlet streams. Identification of water withdrawal requirements throughout the year should also be presented, with consideration given to: 1) the hydrology of the affected water bodies/watershed before the commencement of the project and the anticipated hydrology if affected by groundwater alterations due to excavation, and 2) the ability of the watershed to support daily demand and recharge throughout the year, identifying the water level variation in the pond throughout the season as a result of water extraction. Details should also be provided on the 1995 fish habitat compensation plan including location map.

Describe the fish habitat, fish species, and any fisheries that occur in the area of the proposed wharf construction. Provide design and installation details for all components of the marine



terminal (e.g. approach causeway, wharf, and onshore facilities) and identify planned sources and supply of quarry materials to be used in the construction of the causeway and wharf. Present proposed mitigation measures to prevent adverse environmental impacts to fish and fish habitat in the marine environment, including any compensation measures proposed to offset the Harmful, Alteration, Disruption, or Destruction (HADD) of fish habitat. In particular, the potential effects on commercial and recreational fisheries in the area regarding the potential for dust fines, explosive chemicals, bilge water from tanker traffic, oil spills, and the impact of shock waves from blasting should be addressed. A contingency plan which will describe how these potential environmental effects may be mitigated should be included as part of the EPR.

## **6.2 Marine Traffic**

Provide a description of the current navigational use and patterns (e.g. vessel/boat traffic) in the Blue Beach Cove and the greater St. Lawrence Harbour area. Also, provide a description of the projected marine vessel traffic during construction and operation of the proposed marine terminal.

## **6.3 Migratory Birds**

This section should include a description of migratory birds including: species abundance and distribution during breeding, spring and fall migration and wintering periods in the project area, as well as habitat utilization.

As mentioned in the registration document for this project, there are three nearby Important Bird Areas which host important Leach's Storm-Petrel and Manx Shearwater populations. Although the construction of the marine terminal will not likely impact these breeding birds, additional ship traffic, particularly of large vessels, may attract these nocturnal birds to lit-up vessels traveling at night. Therefore, the guidelines should specify a requirement for mitigation measures for migratory birds to be included in the EA.

## **6.4 Species at Risk**

The section should include a requirement for a description of species at risk in the project area, including those species listed under the federal Species at Risk Act (SARA) and the provincial Endangered Species Act as well as COSEWIC listed species. For guidance on SARA and EA, the proponents may wish to make use of the *Environmental Assessment Best Practice Guide for Wildlife at Risk in Canada* available at:

[http://www.sararegistry.gc.ca/virtual\\_sara/files/policies/EA%20Best%20Practices%202004.pdf](http://www.sararegistry.gc.ca/virtual_sara/files/policies/EA%20Best%20Practices%202004.pdf)

Recent bird surveys in the area have reported Piping Plover from Shoal Cove Beach. The Piping Plover is listed as Endangered on SARA's Schedule 1. Mitigation measures and a monitoring program consistent with the recovery plan for this species should be included in the EA. Canadian Wildlife Service should be contacted for further advice on designing protocols for the monitoring program.

## **6.5 Human Receptors**

This section should include a description of the locations and proximity of the nearest human receptors to the site, including any seasonal camps, permanent residences, schools, daycares, seniors complexes, hospitals, and places of worship. There should be a description of local

drinking water supplies, including locations and proximity of the nearest residential or municipal wells/water supplies. This section should also include a discussion of the current use of the project area by people, including recreational uses such as hiking, fishing, hunting and berry picking.

## 7. PROJECT-RELATED DOCUMENTS

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

## 8. APPROVAL OF THE UNDERTAKING

List the main permits, licenses, approvals, and other forms of authorizations required for the undertaking, including the names of the authorities responsible for issuing them.

## 9. FUNDING

If this undertaking will require a grant or loan of capital funds from a government agency (provincial or federal), state the name and address of the department or agency from which the funding have (or will be) requested.

## 10. PUBLIC PARTICIPATION

A proposed program of public information must be outlined. A minimum of one public information session shall be held in the Town of St. Lawrence for the proponent to present its proposal to the public and to record public interests and concerns. These concerns shall be addressed in a separate section of the EPR.

Protocol for the meeting shall comply with Section 10 of the *Environmental Assessment Regulations, 2003* and with the Department of Environment and Conservation's Environmental Assessment Division's policy (as amended) on advertisement requirements for public meetings/information sessions included in **Appendix A**.

The required 20 copies of the report and 10 electronic versions for posting on the Environmental Assessment Division's website and the Canadian Environmental Assessment Registry website should be forwarded with a covering letter to:

Department of Environment and Conservation  
P.O. Box 8700  
4<sup>th</sup> Floor, West Block, Confederation Complex  
St. John's, NL  
A1B 4J6

And

Canadian Environmental Assessment Agency  
1801 Hollis Street, Suite 200  
Halifax, NS  
B3J 3N4

## APPENDIX A

Department of Environment & Conservation  
Environmental Assessment Division**ADVERTISEMENT REQUIREMENTS FOR PUBLIC MEETINGS / INFORMATION SESSIONS**

- Purpose:** To clarify for staff, proponents, public interest groups, etc. the types, timing, number, notification requirements, etc. for public consultations in relation to undertakings required under the *Environmental Protection Act, SNL 2002 cE-14.2*, (Section 58) to prepare an Environmental Impact Statement (EIS) or required under the *Environmental Assessment Regulations, 2003* (Section 10) to prepare an Environmental Preview Report (EPR).
1. The proponent is not required to conduct public meeting(s) (information sessions) under an EPR process unless specifically required to do so in the project Guidelines. This requirement shall be at the Minister's discretion, based upon advice from the Assessment Committee (AC) as provided by the Chairperson, taking into account the level of expressed public interest.
  2. The proponent is always required to conduct public meeting(s) (information sessions) under an EIS process as specified in the Legislation. This requirement will be specified in the project Guidelines.
  3. When required, a public meeting will normally be held in the largest local population centre within the project area. This will be the minimum requirement. In addition, when demonstrated public interest or concern warrants, additional meetings may be required. This may take the form of additional meetings to be held in major regional or provincial population centres, or possibly additional meetings within the original community. Such requirements are at the discretion of the Minister based on consensus advice from the AC Chairperson, and based upon public interest as evidenced by public submissions received.
  4. The requirements for location of public meetings may be modified for projects proposed within areas subject to formal aboriginal land claims processes recognized by the provincial and federal governments, excluding projects located entirely within municipal boundaries. In such cases, a public meeting may specifically be required in an appropriate aboriginal community which has a direct interest in the land claim. Such a meeting may be required in addition to others required under #3 (above). The proponent may be required to provide appropriate translation services for such meetings. This provision is subject to alternate direction relating to dealings with aboriginal groups which may be imposed by government under special circumstances.
  5. The format of the public meeting may be flexible, and the proponent is free to propose a suitable format for approval by the AC. The format may range from formal public meetings chaired by the proponent or representative with presentations followed by questions and answers, to a less formal open house forum where the public may discuss the proposal with the proponent or representatives. Other formats may be considered by the AC. The purpose of the public information session is to 1) provide information concerning the proposed undertaking to those who may be affected, and 2) to record the concerns of the local community regarding the undertaking. Any format must meet these objectives.

6. The proponent must ensure that each public meeting is advertised in accordance with the following specified public notification requirements, which shall form part of the project Guidelines when appropriate:
- Minimum information content of public advertisement - (Proponent to substitute appropriate information for italicised items):

**PUBLIC NOTICE**

Public Information Session on the Proposed

*Name of undertaking*  
*Location of undertaking*

will be held at  
*Date and Time*  
*Location*

This session will be conducted by the proponent,  
*Proponent name and contact phone number,*  
as part of the environmental assessment for this project.

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.

**ALL ARE WELCOME**

- If translation services are to be provided as per #4 (above), then the ad should specify this fact and the languages to be used for the session.
- Minimum newspaper ad size: 2 columns wide.
- Minimum posted ad size: 10 cm x 12 cm.
- Minimum newspaper ad frequency (to be run in newspaper(s) locally distributed within each meeting area or newspaper(s) with the closest local distribution area):
  - For dailies, the weekend between 2 and 3 weeks prior to each session and the two consecutive days prior to each session, OR
  - For weeklies, in each of the two weeks prior to the week in which the session is to be held.
- Minimum posted ad coverage: In the local Town or City Hall or office, and the local post office, within the Town or City where the meeting is to be held, to be posted continually for not less than 15 days prior to each session.
- Any deviation from these requirements for any reason must receive the prior written approval of the Minister.
- The proponent must provide the Chairperson of the AC with copies of advertisements and public notices.