



Canadian Nuclear  
Safety Commission

Commission canadienne  
de sûreté nucléaire

# Record of Proceedings, Including Reasons for Decision

In the Matter of

Proponent Ontario Ministry of the Environment

Subject Environmental Assessment Screening Report  
Regarding the Proposed Deloro Mine Site  
Cleanup Project

Hearing Date August 10, 2009

## **RECORD OF PROCEEDINGS**

Proponent: Ontario Ministry of the Environment

Address/Location: 133 Dalton Avenue, P.O. Box 820, Kingston, Ontario K7L 4X6

Purpose: Environmental Assessment Screening Report regarding the proposed Deloro Mine Site Cleanup project

Date of hearing: August 10, 2009

Location: Canadian Nuclear Safety Commission (CNSC), 280 Slater St., Ottawa, Ontario

Members present: M. Binder, Chair

Secretary: K. McGee

Recording Secretary: M. Young

## Table of Contents

<b>Introduction</b> .....	2
Issues.....	3
Hearing.....	4
<b>Decision</b> .....	4
<b>Issue and Commission Findings</b> .....	4
<i>Completeness of the Screening Report</i> .....	5
<i>Likelihood and Significance of Environmental Effects</i> .....	5
<i>Public Concern</i> .....	6
<i>Follow-up Program</i> .....	7
<b>Conclusion</b> .....	7

## Introduction

1. The Ontario Ministry of the Environment (OMOE) has applied to the Canadian Nuclear Safety Commission<sup>1</sup> (CNSC) for a Waste Nuclear Substance Licence for the possession, management and storage of nuclear substances, including plans to complete remedial work, at the Deloro Mine Site (Deloro site), located in Deloro, Ontario.
2. The Deloro site began operation in the 1860s and closed in 1961. The OMOE assumed responsibility for the site in 1979 and has, to date, spent over \$26 million to address contamination and to rehabilitate the property. A temporary exemption from licensing for the possession, management and storage of nuclear substances at the Deloro site was granted in 2001 and expires in December 2009.
3. The OMOE is seeking a Waste Nuclear Substance Licence that would allow it to remediate the abandoned mining and industrial complex at the Deloro site and provide for the long-term on-site management of contaminated sediments and soils, tailings, demolition materials, and hazardous and low-level radioactive wastes currently at or in the vicinity of the Deloro site.
4. Before it can proceed with the consideration of a licence application under the provisions of the *Nuclear Safety and Control Act*<sup>2</sup> (NSCA), the Commission must, in accordance with the requirements of the *Canadian Environmental Assessment Act*<sup>3</sup> (CEAA), make a decision on an Environmental Assessment (EA) for the proposed project. Following a review of the project description, it was determined that a screening of the project was required. The proposal constitutes a ‘project’ as defined by the CEAA and the issuance of a Waste Nuclear Substance Licence under section 24(2) of the NSCA is a ‘trigger’ in the *Law List Regulations*<sup>4</sup> established under the CEAA. Therefore, pursuant to section 18(1) of the CEAA, the Commission is required to ensure the conduct of a screening EA of the project and the preparation of an EA Screening Report.
5. The Commission and Fisheries and Oceans Canada (DFO) are the responsible authorities for the EA<sup>5</sup> and there is no provincial EA requirement. Natural Resources Canada, Environment Canada and Health Canada identified themselves as federal authorities (FAs) for the purpose of providing expert assistance during the EA. Ontario’s Ministry of Natural Resources, the Ministry of Northern Development and Mines, and the Hastings and Prince Edward Counties Health Unit also provided input.

---

<sup>1</sup> The *Canadian Nuclear Safety Commission* is referred to as the “CNSC” when referring to the organization and its staff in general, and as the “Commission” when referring to the tribunal component.

<sup>2</sup> S.C. 1997, c. 9.

<sup>3</sup> S.C. 1992, c. 37.

<sup>4</sup> S.O.R./94-636.

<sup>5</sup> Responsible Authority in relation to an EA is determined in accordance with subsection 11(1) of the CEAA.

6. CNSC staff developed project-specific EA Guidelines, which were approved by the Commission following a hearing on September 26, 2003. The EA Guidelines were used in delegating the conduct of technical studies for the screening of this project to the OMOE, pursuant to section 17 of the CEEA. The OMOE provided the technical studies which underwent a review by experts at the CNSC and other relevant government departments. The resulting EA Study Report was then used by CNSC staff for the preparation of the draft EA Screening Report (Screening Report). Stakeholders, including the FAs, were provided an opportunity to review the draft Screening Report prior to its finalization and submission to the Commission for this hearing and decision.
7. Stakeholders were provided an opportunity to review the draft Screening Report prior to its finalization and submission to the Commission for its decision.
8. The draft Screening Report entitled "*Proposed Screening Report - Environmental Assessment of the Proposed Deloro Mine Site Cleanup Project, Deloro, Ontario*" is presented in the CNSC staff's document CMD 09-H110 and contains recommendations that the Commission proceed with the consideration of the licence application that includes elements of this project under the NSCA, consistent with paragraph 20(1)(a) of the CEEA.
9. In consultation with DFO, it was agreed that the Commission would assume the lead for the conduct of the EA. DFO will make its own decision under section 20 of the CEEA on their course of action with respect to the project.

#### Issues

10. In considering the Screening Report, the Commission was required to decide:
  - a) whether the Screening Report is complete; that is, whether all of the factors and instructions set out in the approved EA Guidelines and subsection 16(1) of the CEEA were adequately addressed;
  - b) whether the project, taking into account the mitigation measures identified in the Screening Report, is likely to cause significant adverse environmental effects;
  - c) whether the project will be referred to the federal Minister of the Environment for referral to a review panel or mediator (i.e., pursuant to paragraph 20(1)(c) of the CEEA); and
  - d) whether the Commission will proceed with its consideration of the licence application under the NSCA (i.e., consistent with paragraph 20(1)(a) of the CEEA).

### Hearing

11. Pursuant to section 22 of the NSCA, the President of the Commission established a Panel of the Commission (hereafter referred to as the Commission) to hear this matter.
12. In making its decision, the Commission considered information presented for a hearing held on August 10, 2009 in Ottawa, Ontario. The hearing was conducted in accordance with the Commission's process for determining matters under the CEAA. During the hearing, the Commission considered a written submission from CNSC staff (CMD 09-H110).

### **Decision**

13. Based on its consideration of the matter, as described in more details in the following sections of this *Record of Proceedings*, the Commission decides that:

- a) the Environmental Assessment Screening Report appended to CMD 09-H110 is complete. The scope of the project and assessment were appropriately determined in accordance with sections 15 and 16 of the *Canadian Environmental Assessment Act*, and all of the required assessment factors were addressed during the assessment.
- b) the project, taking into account the mitigation measures identified in the Environmental Assessment Screening Report, is not likely to cause significant adverse environmental effects;
- c) it will not refer the project to the federal Minister of the Environment for his referral to a federal Environmental Assessment review panel or mediator; and
- d) consistent with paragraph 20(1)(a) of the *Canadian Environmental Assessment Act*, the Commission will proceed to consider the application for a Waste Nuclear Substance Licence under the provisions of the *Nuclear Safety and Control Act*.

### **Issue and Commission Findings**

14. In making its decision, the Commission addressed the four issues identified above, under four main areas: the completeness of the Screening Report, the significance of the environmental effects and likelihood to cause adverse environmental effects, the nature and level of public concern, and the follow-up program. The Commission's findings are summarized below.

***Completeness of the Screening Report***

15. In its consideration of the completeness of the Screening Report, the Commission considered whether the assessment had adequately addressed the scope of the project and assessment factors to be considered.
16. In its submission, CNSC staff stated that all activities described within the proposed project had been assessed to identify those project-environment interactions that could result in measurable changes to the environment. The assessment of environmental effects and their mitigation included the potential effects of the project under normal operation and under postulated malfunctions and accidents, as well as anticipated effects of the environment on the project. The assessment also included an evaluation of the potential for cumulative environmental effects.
17. Based on the information presented, the Commission is of the opinion that the applied assessment method was adequate and that the Screening Report is complete and compliant with the requirements of the CEAA.

***Likelihood and Significance of Environmental Effects***

18. With respect to the effects of the project on the environment, CNSC staff stated that each of the project works and activities comprising the project were examined to identify those that could potentially interact with, or affect, each of the environmental components identified in the EA. CNSC staff reported that, with the exception of malfunctions and accidents, 199 potential interactions were identified: 16 during site preparation activities, 144 during remediation activities and 39 during operation, maintenance and decommissioning activities.
19. CNSC staff stated that each of the 199 potential interactions was assessed to determine which of the potential interactions were likely to result in a measurable change on the environment. CNSC staff stated that interactions expected to result in measurable effects were further analyzed to consider mitigation measures and assessment of the significance of the residual effects. CNSC staff stated that none of the identified interactions, under normal operation, were expected to result in significant adverse effects.
20. With respect to the effects of the project under postulated malfunctions and accidents, CNSC staff identified accident scenarios and available means to prevent or mitigate possible effects. The identified scenarios included deficiencies in design, damage to equipment, equipment failure, human error, the spill of a truckload of tailings-like materials and a breach of the containment structure with a release of radioactive material to the Moira River, which runs through the Deloro site. CNSC staff stated that accidents and malfunctions are not likely to cause significant adverse environmental effects, taking into consideration the limited

amounts and types of radioactive and non-radioactive materials involved, mitigation measures, and contingency plans.

21. With respect to the effects of the environment on the project, CNSC staff identified potential effects in the Screening Report, including heavy rainfall and flooding, cold weather, high winds, seismic events, and the effects of climate change. CNSC staff noted that the probabilities of occurrence of such events are low and measures to reduce potential effects have been implemented. CNSC staff stated that the environment is not likely to cause significant adverse effects on the project, taking into consideration the measures to prevent or reduce any potential effects.
22. For the cumulative effects assessment for the project, CNSC staff considered the likely effects of the Deloro Mine Site Cleanup project together with the effects of other projects and activities in the area. CNSC staff explained that cumulative effects can only occur for environmental components for which residual effects have been identified and stated that the only residual effects identified for the Deloro Mine Site Cleanup project were for the “cultural and built heritage resources” environmental component. CNSC staff stated that no past, existing or planned projects and activities are likely to interact with this environmental component, and as such, the cumulative effects of the Deloro Mine Site Cleanup project and other projects and activities in the area are not likely to cause significant adverse environmental effects.
23. Based on the presented information and on the review of the Screening Report, the Commission concluded that the proposed project, taking into account the identified mitigation measures, is not likely to cause significant adverse environmental effects.

### ***Public Concern***

24. As required by section 55 of the CEAA, the CNSC established a public registry for the assessment that includes identification in the Canadian Environmental Assessment Registry (CEAR). Information about this EA has been posted both on the CEAR website and on the CNSC website. The draft Screening Report was made available for review and comment from May 8, 2009 to June 8, 2009.
25. CNSC staff stated that the draft Screening Report and an invitation for comments were sent directly to members of the public who expressed interest in the project, the Mohawks of the Bay of Quinte, the CNSC and Marmora Lake public libraries, the municipalities of Centre Hastings and Marmora Lake, various OMOE offices and federal, provincial and municipal authorities. CNSC staff further stated that the Executive Summary of the draft Screening Report and an invitation to comment on the report were sent directly to 18 First Nation groups. CNSC staff stated that two comments were received during the public review period and were addressed in the proposed Screening Report.



26. CNSC staff reported that the OMOE has engaged stakeholders on three project liaison committees: the Public Liaison Committee, the Technical Liaison Committee and a Ministry Technical Committee. CNSC staff explained that these committees meet on a quarterly basis and keep members of the public, stakeholders and government departments informed on the progress of the EA.
27. Based on the information provided, the Commission is of the view that there was sufficient opportunity for the public to be informed and to express its views on the project. The Commission is of the opinion that public concern does not warrant referral of the project to the Minister of the Environment for his referral to a review panel or mediation.

### ***Follow-up Program***

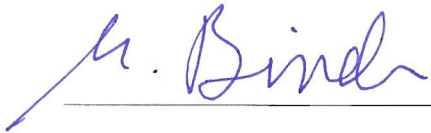
28. A follow-up program under CEAA verifies the effectiveness of mitigation measures and the accuracy of environmental predictions.
29. CNSC staff reported that the Deloro Mine Site Cleanup project includes a comprehensive long-term monitoring program to ensure the operation and maintenance requirements, as well as the site-wide objectives are achieved. CNSC staff stated that a detailed Operations, Maintenance and Monitoring program would be established for the site once all of the rehabilitation measures have been implemented to ensure the effectiveness of the site remediation measures and controls. CNSC staff noted that periodic monitoring will also be conducted throughout the life-cycle of the project at various intervals.
30. CNSC staff further stated that a component of the follow-up program, if required, will verify the predicted effect of the project on the common nighthawk, a species at risk that has been identified on-site. CNSC staff noted that Environment Canada will assist in determining the need for, and requirements of, such a component of the follow-up program.
31. CNSC staff recommended to the Commission that the proposed follow-up program be incorporated as a condition of the licence if the project is licensed.
32. Based on the above information, the Commission is satisfied that an appropriate follow-up program has been established for the proposed project.

### **Conclusion**

33. The Commission has considered the information and submissions as presented in the material available for reference on the record.
34. The Commission concludes that the *“Proposed Screening Report - Environmental*

*Assessment of the Proposed Deloro Mine Site Cleanup Project, Deloro, Ontario*" attached to CMD 09-H110 is complete and meets all of the applicable requirements of the *Canadian Environmental Assessment Act*.

35. The Commission concludes that the project, taking into account the appropriate mitigation measures identified in the EA Screening Report, is not likely to cause significant adverse environmental effects.
36. Furthermore, the Commission also concludes that, at this time, it will not request the federal Minister of the Environment to refer the project to a review panel or mediator in accordance with the provisions of the CEAA.
37. Therefore, the Commission, pursuant to paragraph 20(1)(a) of the CEAA, can proceed with the consideration of a licence application for a Waste Nuclear Substance Licence under the provisions of the *Nuclear Safety and Control Act*.



Michael Binder  
President,  
Canadian Nuclear Safety Commission

AUG 10 2009

Date