

Record of Proceedings, Including Reasons for Decision

In the Matter of

Proponent Rio Algom Limited

Subject Screening Environmental Assessment for the
Proposed Replacement of the Stanleigh Effluent
Treatment Plant

Date of
Hearing March 7, 2007

RECORD OF PROCEEDINGS

Proponent: Rio Algom Limited

Address/Location: PO Box 38, Elliot Lake, Ontario P5A 2J6

Purpose: Screening Environmental Assessment for the proposed replacement of the Stanleigh Effluent Treatment Plant

Application received: February 15, 2007

Date(s) of hearing: March 7, 2007

Location: Canadian Nuclear Safety Commission (CNSC), 280 Slater St., 14th. Floor, Ottawa, Ontario

Members present: L.J. Keen, Chair
A.R. Graham
A. Harvey

Secretary: M.A. Leblanc
Recording Secretary: M. Young
Legal Counsel: S. Maislin Dickson

Proponent Represented By	Document Number
<ul style="list-style-type: none">• M. Wiber, Vice-President of Closed Mines for Rio Algom• D. Berthelot, Reclamation Manager, Elliot Lake• A. Coggan, Project Manager, Elliot Lake	
CNSC staff	
<ul style="list-style-type: none">• C. Taylor• R. Barker	CMD 07-H107

Date of Decision: March 7, 2007

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Introduction

1. Rio Algom Limited (Rio Algom) has informed the Canadian Nuclear Safety Commission (CNSC¹) of its intention to seek authorization to replace the existing water treatment plant located at the Stanleigh Tailings Management Area (TMA) with a new Effluent Treatment Plant (ETP) and settling pond. The Stanleigh TMA is located approximately 5 km north-east of the City of Elliot Lake, Ontario.
2. Rio Algom's proposed ETP is designed to reduce energy consumption by 95% over the current system, reduce the risk of non-compliant discharge due to equipment failure, and provide additional control and response options for treatment system upset and extreme event conditions. The primary activities required for this proposal include:
 - demolition of the existing treatment plant;
 - construction of an access road;
 - creation of a settling pond;
 - construction of a settling pond dam and spillway; and
 - construction of the new treatment facility.
3. The authorization of these activities requires an amendment to Rio Algom's Waste Facility Operating Licence WFOL-W5-3101.02/indf, pursuant to subsection 24(2) of the *Nuclear Safety and Control Act*² (NSCA). Before the Commission can decide on the proposed licence amendment, the Commission must, in accordance with the requirements of the *Canadian Environmental Assessment Act*³ (CEAA), make a decision on an environmental assessment (EA) of the proposal. Pursuant to section 15 of the CEAA, the type of EA required for this project is a screening. The Commission is the sole responsible authority⁴ (RA) for the EA.
4. The guidelines for the EA (EA Guidelines) were approved by the Commission on March 30, 2006 and used in delegating the conduct of technical studies for the screening of this project to Rio Algom, pursuant to section 17 of the CEAA. 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 federal authorities, were provided an opportunity to review the draft Screening Report prior to its finalization and submission to the Commission for this hearing and decision.
5. This *Record of Proceedings* describes the Commission's consideration of the Screening Report and provides its reasons for decisions. The Screening Report of Rio Algom's proposal to replace the existing water treatment plant located at the Stanleigh TMA with a new ETP and settling pond is attached as an appendix to CMD 07-H107.

¹ In this *Record of Proceedings*, 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.

² S.C. 1997, c. 9.

³ S.C. 1992, c. 37.

⁴ Responsible Authority in relation to an EA is determined in accordance with subsection 11(1) of the CEAA.

Issues

6. 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 CEAA 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 must be referred to the federal Minister of the Environment for referral to a review panel or mediator, pursuant to paragraph 20(1)(c) of the CEAA; and
 - d) whether the Commission will proceed with its consideration of an application for a licence under the NSCA, consistent with paragraph 20(1)(a) of the CEAA.

Hearing

7. Pursuant to section 22 of the NSCA, the President of the Commission established a Panel of the Commission to hear this matter.
8. The Panel of the Commission (hereafter referred to as the Commission), in making its decision, considered information presented for a hearing held on March 7, 2007 in Ottawa, Ontario. During the hearing, the Commission received a written submission and an oral presentation from CNSC staff (CMD 07-H107). Representatives from Rio Algom were present and also available via teleconference.

Decision

9. Based on its consideration of the matter, as described in more detail in this *Record of Proceedings*, the Commission decides that:

- a) the Environmental Assessment Screening Report appended to CMD 07-H107 is complete; that is, the scope of the project and assessment were appropriately determined in accordance with section 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 Environment Assessment review panel or mediator;

- d) it will proceed to consider the application for licence amendment under the provisions of the *Nuclear Safety and Control Act*, consistent with paragraph 20(1)(a) of the *Canadian Environmental Assessment Act*.

Issues and Commission Findings

10. The findings of the Commission are based on the Commission's consideration of all the information and submission available for reference on the record for the hearing.

Completeness of the Screening Report

11. In its consideration of the completeness of the Screening Report, the Commission considered whether the assessment had adequately addressed an appropriately defined scope of project and assessment factors.
12. CNSC staff stated that the Screening Report contained information on the full scope of the project and for all of the factors required for a screening EA under section 16 of the CEAA and as set out in the EA Guidelines.
13. CNSC staff further reported that the following expert federal authorities were notified of the project pursuant to the CEAA *Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements*⁵: Health Canada, Natural Resources Canada (NRCan), Environment Canada, and Fisheries and Oceans Canada (DFO). These federal authorities were provided with the opportunity to participate in the preparation of the draft EA Guidelines and the draft EA Screening Report. CNSC staff noted that comments of a technical nature were received from NRCan and Environment Canada and incorporated into the final Screening Report.
14. The Commission sought confirmation that all of the concerns and comments from the federal authorities had been addressed in the screening report. CNSC staff responded that they had.
15. CNSC staff stated that it also had an obligation to consult and coordinate with the provincial government of Ontario. The Ontario Ministry of Natural Resources (MNR) and Ontario Ministry of Environment (MOE) were provided with the opportunity to participate in the preparation of the draft EA Guidelines and the draft EA Screening Report, and it was determined that there are EA requirements for this project under the *Ontario Environmental Assessment Act*⁶.

⁵ S.O.R./97-181.

⁶ R.S.O. 1990, c. E.18.

16. CNSC staff stated that, in addition to the Federal EA requirements, a number of other permits and approvals are required to enable the project to proceed, including:
- Certificate of Approval (C of A) Industrial Sewage for the discharge of effluent to McCabe Lake, by the MOE;
 - C of A for the use of a 10-20 kW back-up diesel generator, issued by the MOE;
 - Approval under the *Lakes and Rivers Improvement Act*⁷ (LRIA) for construction of the settling pond dam, by the MNR;
 - MOE Environmental Assessment for the water turbine, as required by Regulation 116/01 Electricity Projects;
 - Land Use Permit for micro hydro electric power generation from the influent flow to the treatment plant, by the MNR;
 - Waterpower Direct Site Release required for approval of the turbine location, by the MNR;
 - A clearance letter from DFO confirming that the mitigation incorporated into the facility design will be sufficient to avoid a harmful disruption, alteration, or destruction of fish habitat; and
 - A Forest Resource Licence for the clearing of the basin area, or, if a local logging licensee is contracted out to conduct the clearing, a letter of authorization from MNR.
17. CNSC staff reported that with respect to the provincial EA process, it was clarified that there is no EA required for approval under the LRIA but there is a requirement for an EA for resource stewardship and facility development for Rio Algom's application for a water power direct site release application leading to a land use permit for the project. CNSC staff stated that there is also a provincial EA for the micro hydro facility as set out by Regulation 116/01 Electricity Projects, and together, these two requirements are proceeding in parallel under a coordinated federal-provincial EA.
18. CNSC staff stated that the Province of Ontario has indicated that there may be some remaining factors related to land tenure, information requirements, and use of power from the turbine. CNSC staff reported that it will continue to monitor the provincial process and will advise the Commission in the event that the province recommends any changes that would impact on the conclusions of the screening report.
19. The Commission sought clarification about the role of the Province of Ontario with respect to the Commission's review and decision on the federal EA Screening Report. Rio Algom responded that the Province has participated fully in the technical reviews and provided comments on the EA, and that there are no technical issues. Rio Algom noted that the issues of allocation and disposition of water rights from the Crown remain. Rio Algom explained that the Province has a prescriptive process to follow that applies to James Bay and to the turbine going into the site, and it has been delayed because it was originally believed that a special disposition was not needed for it.

⁷ R.S.O. 1990, c. L.3.

20. The Commission inquired about the need to obtain the necessary permits for clearing the land for the settling pond. Rio Algom stated that if it were to burn the brush, a permit would not be necessary, provided that the burning be carried out outside of burning season, i.e., before May 1, 2007. Rio Algom assured the Commission that any necessary permits or approvals would be obtained prior to any clearing activity. Rio Algom further noted that if burning is deemed inappropriate then the land will be cleared by other suitable means.
21. The Commission asked if there were any outstanding First Nations' land claims in the area and if the local First Nations had been provided with the opportunity to comment on the project. Rio Algom responded that there are no outstanding land claims and that the First Nations had been provided with the opportunity to comment. CNSC staff noted that copies of the draft screening report were mailed directly to the Serpent River First Nation and no comments were received.
22. Based on the Commission's review of the EA Guidelines and Screening Report, the Commission concludes that the scope of the project and the scope of the factors for the assessment are appropriate and that all of the required factors were addressed during the assessment.
23. The Commission also concludes that the Screening Report is complete and compliant with the requirements of the CEEA.
24. The Commission is concerned regarding the coordinated federal-provincial EA process. The Commission stresses that the federal and provincial authorities need to work together to ensure that the regulatory consideration and, if applicable, resulting approvals or authorizations are carried out in a timely manner.

Likelihood and Significance of Environmental Effects

25. This section contains the Commission's findings with respect to whether the project is likely to cause significant adverse environmental effects, taking into account the identified mitigation measures.

Adequacy of the Assessment Methods

26. In its submission, CNSC staff outlined the methodology used in the assessment of the direct and indirect effects of the project on the environment. CNSC staff explained that the assessment of likely effects of the project on the environment was conducted in the following manner:
 - establish study boundaries and criteria for the assessment;
 - identify Valued Ecosystem Components (VECs);
 - identify potential interactions between the project activities and the existing environment during demolition, construction, operation, and during potential malfunctions and accidents, paying specific attention to interactions between the project and identified VECs;

- describe the resulting changes that likely would occur to the components of the environment as a result of the identified interactions;
 - identify and describe mitigation measures that are technically and economically feasible;
 - describe the significance of the environmental effects that likely will occur as a result of the project, taking into account the proposed mitigation measures; and
 - assess the significance of any residual adverse effects that cannot be mitigated.
27. CNSC staff outlined in its submission the extent of the consultations that were conducted during the EA process. CNSC staff stated that it initiated a public comment period on the draft Screening Report, and key stakeholders, including federal authorities, were sent the Screening Report for their review. CNSC staff noted that the draft Screening Report was made available for public review from December 22, 2006 to January 22, 2006, and a notice of solicitation for public comments was posted on the CNSC Web site. CNSC staff reported that there were no requests for the Screening Report itself, nor were any comments from the public or stakeholders received.
28. The Commission is satisfied that the methods used to consult with the public during the EA, including opportunities to comment and review the Screening Report, were acceptable and provided a suitable basis for the Commission to evaluate the public concerns about the project. The Commission is therefore satisfied that the public had adequate opportunity to become informed about the project and express any concerns.
29. Based on its review of the Screening Report and the above information, the Commission concludes that the EA methods were acceptable and appropriate.

Effects of the Project on the Environment

30. CNSC staff reported that each of the activities comprising the project was examined to identify those that could possibly interact with or affect each of the environmental sub-components. CNSC staff stated that the project activities most likely to result in significant measurable effects, requiring consideration of mitigation measures and assessment of the residual effects, are: site clearing and access road construction; dam construction; spillway construction; new ETP facility construction; demolition of the existing plant; and sludge management.
31. CNSC staff listed several proposed mitigation measures to reduce or eliminate adverse effects, including the following: silt control techniques; safe work procedures and employee training to protect the health and safety of workers; mechanized means of work completion; and ETP design features and monitoring activities.
32. CNSC staff stated that the potential for effects associated with the proposed project was assessed using criteria such as regulatory standards and guidelines to determine which of the potential interactions are likely to result in a measurable change. CNSC staff noted that the criteria that were considered in the determination of the significance of residual effects included: magnitude, duration, frequency, timing, probability of occurrence, ecological and social context, geographic extent, and degree of reversibility.

33. CNSC staff stated that the assessment revealed that no residual effects from the project are likely to be significant and adverse.
34. Based on its review of the Screening Report and the above information, the Commission concludes that the proposed project, taking into account the identified mitigation measures, is not likely to cause significant adverse environmental effects.

Effects of the Environment on the Project

35. CNSC staff stated that manners in which the environment could adversely affect the project were considered. CNSC staff explained that events such as earthquakes and heavy precipitation events during key times of construction were considered as part of the impact assessment.
36. CNSC staff explained that the probability of a significant seismic event during the short construction period is extremely remote and would have little or no effect on the environment. In the case of heavy precipitation, CNSC staff explained that mitigation measures, including the silt screen and sump pumps, are in place to withstand any significant events.
37. CNSC staff stated that the residual effects of the environment on the project have been assessed as not significant.
38. Based on the above information, the Commission concludes that the environment is not likely to cause adverse effects on the project.

Effects of Accident and Malfunction Events

39. CNSC staff stated that it had assessed the potential effects of the following accident and malfunction events: reagent or fuel spill/leak, treatment plant failure, failure of the settling pond dam, outflow via the TMA spillway, and flooding or seismic event during construction.
40. CNSC staff explained that fuel and reagent tanks will have secondary containment for spill prevention, and the incorporation of a settling pond with a stoplog structure will stop discharge flow of treated water in the event of an upset in treatment. CNSC staff noted that the presence of a settling pond enables alternate treatment to be established quickly should there be a major plant failure.
41. CNSC staff further explained that the other events, i.e., the failure of the settling pond dam, outflow via the TMA spillway, and flooding or seismic event during construction, were considered extremely unlikely, and the significance of residual effects was based on the likelihood of occurrence. CNSC staff detailed the mitigation measures for these events in the Screening Report.

42. Based on the above information and considerations, the Commission concludes that accident and malfunction events are not likely to cause adverse effects on the project.

Cumulative Effects

43. With respect to the requirement to also examine cumulative effects, CNSC staff stated that the cumulative effects from the project in combination with other projects were predicted and assessed as part of the 1997 Comprehensive Study Report in support of the Mine Decommissioning. CNSC staff stated that as a result of the comprehensive study, the Serpent River Watershed Monitoring Program was developed. CNSC staff noted that no further cumulative effects were identified specific to the proposed project, and as such, no additional evaluation of cumulative effects was deemed necessary.
44. CNSC staff provided highlights of the Comprehensive Study Report in the Screening Report. CNSC staff noted that no other facilities or industry within the region surrounding the Elliot Lake facility is expected to significantly contribute to metals or radionuclide contamination within the watershed.
45. Based on the information received, the Commission concludes that, taking into account the identified mitigation measures, significant adverse cumulative effects are not expected to occur as a result of the project.

Follow-Up Program

46. CNSC staff noted that there were a few issues that would involve additional monitoring as part of a formal follow-up program. CNSC staff explained that the follow-up program is required to determine if the environmental and cumulative effects of the project are as predicted, to confirm whether identified mitigations measures are effective and if new mitigation strategies are required.
47. CNSC staff stated that several programs have already been established to ensure that the facilities at the Stanleigh site are operated and maintained in compliance with government and company requirements and to provide information to evaluate the performance and environmental impact of the facilities. CNSC staff noted that the following three programs have been established to address all of the closed mines: the Serpent River Watershed Monitoring Program, the Source Area Monitoring Program, and the Tailings Operational Monitoring Program. CNSC staff described these programs in the Screening Report.
48. In addition to the existing monitoring programs, CNSC staff identified many follow-up activities specific for this project. CNSC staff outlined these activities in the Screening Report and noted that they would be developed into a comprehensive follow-up program acceptable to the Commission.

49. The Commission is satisfied that the CNSC licensing and compliance program responsible for ensuring the final design and implementation of the follow-up program will be adequate to verify and, if necessary, identify where additional mitigation measures may be required.

Conclusion on the Likelihood and Significance of Adverse Environmental Effects

50. Based on the considerations and reasons noted above, the Commission concludes that the proposed project is not likely to cause significant adverse environmental effects, taking into account the identified mitigation measures.
51. The Commission is also satisfied that the likelihood and significance of the effects have been identified with reasonable certainty.

Nature and Level of Public Concern

52. With respect to public concern as a factor in its consideration of whether to refer the project to the federal Minister of the Environment for a review panel or mediator, the Commission first examined whether the public had sufficient opportunity to become informed about the project and the Environmental Assessment, and express its views on it.
53. As noted in paragraph 27, the Commission is satisfied that Rio Algom and CNSC staff consulted appropriately with the public and other interested stakeholders. The Commission is therefore satisfied that the public had adequate opportunity to become informed about the project and express any concerns.
54. CNSC staff reported that no comments were received from stakeholders or the public on the draft Screening Report. CNSC staff reported that no concerns were raised that would justify referring the project to the federal Minister of the Environment for a referral to a review panel or mediator.
55. The Commission therefore decides not to refer the project to the Minister of the Environment for referral to a review panel or mediator under paragraph 20(1)(c) of the CEAA.

Conclusion

56. The Commission concludes that the environmental assessment Screening Report attached to CMD 07-H107 is complete and meets all of the applicable requirements of the *Canadian Environmental Assessment Act*.
57. The Commission concludes that the project, taking into account the appropriate mitigation measures identified in the Screening Report, is not likely to cause significant adverse environmental effects.

58. Furthermore, the Commission also concludes that, at this time, it will not refer this project to the federal Minister of the Environment for a referral to a review panel or mediator in accordance with the provisions of the CEEA.
59. Therefore, the Commission, pursuant to paragraph 20(1)(a) of the CEEA, decides to proceed with the consideration of a licence amendment application under the *Nuclear Safety and Control Act* which, if approved, would allow the project to proceed.

Linda J. Keen,
President,
Canadian Nuclear Safety Commission

Date of decision: March 7, 2007

Date of release of Reasons for Decision: April 23, 2007