

Record of Proceedings, Including Reasons for Decision

In the Matter of

Applicant COGEMA Resources Inc.

Subject Screening Environmental Assessment for the
McClellan Lake Operation Sue E Project

Date July 12, 2005

RECORD OF PROCEEDINGS

Applicant: COGEMA Resources Inc.

Address/Location: 817 - 45th Street West, Saskatoon, Saskatchewan, S7K 3X5

Purpose: Screening Environmental Assessment for the McClean Lake Operation Sue E Project

Application received: October 20, 2003

Date(s) of hearing: June 29, 2005

Location: Ottawa, Ontario

Members present: L.J. Keen, Chair A.R. Graham
C.R. Barnes M. J. McDill
J.A. Dosman

General Counsel: J. Lavoie
Secretary: M.A. Leblanc
Recording Secretary: P. Bourassa

| Applicant Represented By | Document Number |
|--|----------------------------|
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| Intervenors | Document Number |
| Greater Saskatoon Chamber of Commerce, represented by K. Smith-Windsor | CMD 05-H13.2 |
| Northern Saskatchewan Environmental Quality Committee | CMD 05-H13.3 |

Date of Decision: June 29, 2005

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1. Introduction

COGEMA Resources Inc. (COGEMA) has applied to the Canadian Nuclear Safety Commission (CNSC¹) for approval to extend mining activities at McClean Lake to mine and mill uranium ore from its Sue E site. The Sue E ore would be mined using an open-pit method and milled at the existing JEB mill. The mill tailings would be disposed at the existing JEB Tailings Management Facility (TMF). No changes would be required to the mill, the TMF or to the existing water treatment facilities. The Sue E Project is situated at the McClean Lake Operation in the Athabaska Basin area of northern Saskatchewan, approximately 700 km north of Saskatoon. The McClean Lake Operation consists of three main areas, namely the JEB area, the Sink/Vulture Treated Effluent Management System and the Sue mining area. In order to operate the Sue E Project, COGEMA would have to obtain from the CNSC an amendment to their existing licence at the McClean Lake Operation.

Before proceeding with its consideration of the licence application, the Commission considered a screening environmental assessment (EA) of the proposed project consistent with the requirements of the *Canadian Environmental Assessment Act* (CEAA). This *Record of Proceedings* describes the Commission's consideration of the EA Screening Report and its reasons for decision on the conclusions therein. For this EA under the CEAA, the CNSC is the responsible authority while the other federal authorities are Fisheries and Oceans Canada (DFO), Environment Canada (EC), Natural Resources Canada (NRCan), Indian and Northern Affairs Canada (INAC) and Health Canada (HC). The Environmental Assessment Branch of Saskatchewan Environment is the lead responsible agency for this assessment. Under the *Saskatchewan Environmental Assessment Act*, COGEMA is required to conduct an environmental impact assessment and prepare an environmental impact statement (EIS) for approval by the Minister of Environment for the Province of Saskatchewan. Because this environmental assessment is being conducted under both federal and provincial jurisdiction, the Canadian Environmental Assessment Agency is the Federal Environmental Assessment Coordinator. The decisions of the two federal and provincial responsible authorities are made separately².

On November 29, 2004, following public consultation on the matter, the CNSC Designated Officer approved the Project-Specific Guidelines³ (Environmental Assessment Guidelines or EA Guidelines) for the screening EA. The EA Guidelines defined the scope of the project and the scope of the factors to be considered in the EA. The EA Guidelines were used by CNSC staff in delegating to COGEMA, pursuant to section 17 of the CEAA, the preparation of technical

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 In May 2005, the Minister of Environment for the Province of Saskatchewan concluded that the mining of the Sue E ore body at McClean Lake is environmentally acceptable and will not pose a significant risk to the environment in the long term. The Saskatchewan Minister also concluded that further public review under the Provincial Environmental Assessment Act is not necessary.

³ The Project-Specific Guidelines were developed in a coordinated effort by Saskatchewan Environment and CNSC staff and issued in September 2004.

studies to satisfy the requirements of the EA Guidelines. COGEMA provided technical studies in the form of an EIS which underwent a review by experts at the CNSC and other relevant federal and provincial government departments. COGEMA responded to comments of the reviewers by issuing an addendum in February 2005. The combination of the EIS and addendum was then used by CNSC staff in the preparation of the required Screening Report. The public and other stakeholders, including the federal authorities, were provided an opportunity to review a draft Screening Report prior to its finalization and submission to the Commission for this hearing and decision. The federal authorities gave concurrence to the draft Screening Report. The CEEA Screening Report on the proposed McClean Lake Operation Sue E Project is attached as Appendix A to CMD 05-H13.

Issues:

In considering the Screening Report, the Commission was required to decide

1. whether the descriptions of the scope of the project and scope of the assessment contained in sections 4.0 and 5.0 of the Screening Report, pursuant to sections 15 and 16 of the CEEA, are acceptable;
2. 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;
3. whether the project, taking into account the mitigation measures identified in the Screening Report, is likely to cause significant adverse environmental effects;
4. 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 CEEA; and
5. whether the Commission will proceed with its consideration of an application for a licence under the *Nuclear Safety and Control Act*, consistent with paragraph 20(1)(a) of the CEEA.

Public Hearing:

The Commission, in making its decision, considered information presented at a public hearing held on June 29, 2005 in Ottawa, Ontario. The public hearing was conducted in accordance with the *Canadian Nuclear Safety Commission Rules of Procedure*. During the public hearing, the Commission received written submissions and heard oral presentations from CNSC staff (CMD 05-H13) and COGEMA (CMD 05-H13.1 and CMD 05-H13.1A). The Commission also considered oral and written submissions from 2 intervenors.

2. Decision

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

1. the descriptions of the scope of the project and scope of the assessment, contained in sections 4.0 and 5.0 of the Screening Report, are acceptable;
2. the Screening Report is complete and meets all of the requirements set out in the approved EA Guidelines and subsection 16(1) of the CEEA;
3. the project, taking into account the mitigation measures identified in the Screening Report, is not likely to cause significant adverse environmental effects;
4. the Commission is not referring the project to the federal Minister of the Environment for his referral to a panel review or mediator; and
5. consistent with paragraph 20(1)(a) of the CEEA, the Commission will consider a licence application from COGEMA for the mining and milling of uranium ore at the Sue E site.

3. Issues and Commission Findings

The Commission addressed the five issues identified in section 1 above under three main headings: (1) the completeness of the Screening Report, (2) the likelihood and significance of the environmental effects, and (3) the nature and level of public concern. The Commission's findings in each of these areas are summarized below.

3.1 Completeness of the Screening Report

In its consideration of the completeness of the Screening Report, the Commission considered the descriptions of the scope of the project and scope of the assessment. The Commission is satisfied with the descriptions of the scope of the project and scope of the assessment contained in sections 4.0 and 5.0 of the Screening Report⁴.

The Commission also considered whether the assessment had addressed the full scope of the project and assessment factors. In this regard, CNSC staff stated that, in its opinion, the Screening Report contains information on the full scope of the project and for all of the factors required for a screening EA under section 16 of the CEEA and as set out in the EA Guidelines. CNSC staff further noted that the EA was completed to the satisfaction of the CNSC staff and the other expert federal authorities, namely DFO, EC, NRCan, INAC and HC. COGEMA and CNSC staff also noted that Saskatchewan Environment considered the assessment to be complete

⁴ The scope of the project and scope of the assessment were previously accepted by the CNSC Designated Officer on November 29, 2004, as part of the EA Guidelines.

and, in May 2005, rendered its finding that the project is not likely to cause significant adverse environmental effects.

Based on the Commission's review of the Screening Report, and the above submissions of CNSC staff, the Commission concludes that the Screening Report is complete. The Commission concludes therefore that it is able to proceed to its consideration of the likelihood and significance of the environmental effects of the project, the adequacy of the proposed mitigation measures, and the public concerns about the project.

3.2 Likelihood and Significance of Adverse Environmental Effects

This section contains the Commission findings with respect to the conclusions in the Screening Report; that is, whether the project, taking into account the identified mitigation measures, is likely to cause significant adverse environmental effects. In examining this question, the Commission first considered the adequacy of the study methods used to identify and evaluate the potential environmental effects, followed by a consideration of the predicted effects on the relevant components of the environment.

3.2.1 Adequacy of the Assessment Method

With respect to the assessment methods, CNSC staff reported that it found that the environmental assessment was properly conducted in accordance with the methods for technical study and stakeholder consultation specified in the approved EA Guidelines.

Screening Methodology:

In its submission, CNSC staff outlined the methodology used in the assessment of the direct effects of the project on the environment, noting that it was carried out in a step-wise manner.

As the Sue E Project is an extension of the activities already approved for McClean Lake Operation, COGEMA noted that, using an integrated approach, it has considered the overall impact of the project together with past, current and future activities when determining whether the Sue E Project is likely to cause significant adverse effects. CNSC staff noted that the incremental effects of the Sue E Project relative to the effects of all projects at the McClean Lake Operation were also considered, providing a quantitative and rigorous approach as the basis for this assessment.

COGEMA noted that the assessment of effects included an Operational Assessment Framework, covering emissions to air and surface water, and a Long-Term Assessment Framework, covering the potential groundwater transport of contaminants over the long term from the disposal of tailings and waste rock. COGEMA further noted that it was able to use site-specific information and actual operational performance data along with benchmarking current environmental effects against the predictions from previous environmental assessments. This provided both a robust methodology to identify and assess potential effects and confidence in future predictions of effects.

Method for Public Consultation:

COGEMA and CNSC staff outlined in their submissions and presentations the extent of the public consultations that were conducted throughout the EA process. The consultations were a complement to an ongoing and well established public information program for the operating uranium mines in the Athabaska Basin. The Commission also noted the intervention made by the Greater Saskatoon Chamber of Commerce which generally praised the efforts of COGEMA for its communication and consultation program and its interactions with local populations in Saskatchewan in general and northern Saskatchewan in particular. The Northern Saskatchewan Environmental Quality Committee (EQC), in its intervention, noted that it had had the opportunity to visit the proposed mining operation and engage in discussions with COGEMA on several occasions.

Based on this information, the Commission is satisfied that the methods used to consult with the public during the EA were acceptable and provided a suitable basis for the Commission to evaluate the public concerns about the project. The Commission's findings on the public concerns are discussed further in section 4.3 below.

Conclusions on Adequacy of the Assessment Method:

Based on its review of the Screening Report and the above information and considerations, the Commission concludes that the EA methods were acceptable and appropriate.

3.2.2 Effects of the Project on the Environment

CNSC staff stated that the Sue E Project, taking into consideration a range of potential malfunctions and accidents associated with the project, is not likely to cause significant adverse effects on the environment, taking the identified mitigation measures into account.

In support of its findings, CNSC staff noted that, from a total of 324 potential interactions between the project and the environment (269 biophysical and 55 socio-economic), 132 measurable changes that the project would likely cause were carried forward for more detailed evaluation. After taking the available mitigation measures for these effects into account, CNSC staff reported that potential environmental effects were predicted to result from land disturbance, emissions to air, and emissions to surface water. The majority of the effects were restricted to the Sink/Vulture Treated Effluent Management System area; however effects related to molybdenum were also predicted in the McClean Lake east basin. Following further evaluation, CNSC staff stated that the likely adverse residual effects in all cases were found to be not significant.

CNSC staff considered the effects resulting from coincidental water, vegetation, soil and sediment consumption. No residual effects were predicted or, in some cases, the predicted adverse affects were found to be not significant.

With respect to the effects of the project on the socio-economic aspects of the environment, the Commission heard from the Greater Saskatoon Chamber of Commerce that the project will have significant positive socio-economic effects in northern Saskatchewan as demonstrated by

COGEMA's commitment to improve awareness of the importance of environmental stewardship and its dedication towards training workers in all relevant aspects of health and safety.

With respect to the effects of operational activities and the control of liquid effluents, COGEMA noted that the water treatment plants operate at optimum performance to minimize the releases into the aquatic environment. COGEMA added that its comprehensive quality management system framework allows for consistency in the operations and in the defined processes.

Noting that effective management systems are important for ensuring that the environmental effects of projects remain acceptable, and that mitigation and monitoring programs remain effective over time, the Commission sought further information on COGEMA's integrated approach to environmental assessment, continual improvement and adaptive management. COGEMA noted that environmental assessment was linked to the environmental management system as the basis for evaluating ongoing performance and to also facilitate continuous improvement and, if necessary, adaptive management through additional mitigative measures. COGEMA also clarified that its quality management system identifies the management structure and the functional relationships, including the relationship between the Quality Engineer at the McClean Lake Operation and the Manager of Quality at the corporate office. It also includes a fully integrated change management process and provides for systematic review and integration of lessons learned from incidents and environmental mining information from the Follow-Up Program initiative.

Effects on Non-Renewable and Renewable Resources:

In its examination of this factor, the Commission asked COGEMA how sustainable development is defined in the uranium mining business. COGEMA responded that uranium mining in the Athabasca Basin is considered a temporary use of the land wherein site restoration and waste management are performed to allow the traditional uses of the land that have taken place in the past to resume after operations have ceased. COGEMA noted that, in carrying out its mining operations, it ensures that social, economic and environmental protection attributes are met.

With respect to the adverse effects of the Sue E Project on the sustainability of renewable resources, CNSC staff reported that it concluded in the Screening Report that no such effects are likely.

Effects of Project Malfunctions and Accidents:

In response to the Commission's question regarding the mitigation option proposed for the possible leakage from external ponds, COGEMA responded that all pond liners were inspected on a routine basis either when the ponds were emptied or at six month intervals if the ponds were not emptied.

CNSC staff noted that the assessment found that the design features of the project, combined with administrative controls such as audits, procedures, inspections and codes of practice, would address any potential adverse effect related to malfunctions and accidents. CNSC staff concluded

that the likely effects of all malfunctions and accidents would not be significant and, accordingly, none required further consideration.

Effects of Waste Rock Management:

The Commission requested further information on the waste rock management option proposed by COGEMA. In response, COGEMA noted that the overburden till and organics stripped during mining of the Sue E pit will be placed in and near the north end of Sils Lake to ensure pit wall stability. In response to the Commission questions regarding potential pit wall instability, COGEMA responded that, based on the experience gained for its other existing pits, the design of the Sue E pit and the size and operational timeline of the pit, it felt that this was not an issue.

In response to the Commission's questions regarding the possibility of contamination from the waste material eventually to be placed in the Sue C pit, COGEMA noted that, although there is some long-term transport of potential contaminants from the waste rock, the concentrations of arsenic and other contaminants would not represent any significant risk to the aquatic environment. CNSC staff further noted that concentrations would be well below standards and objectives. CNSC staff concluded that the preferred mitigation option for waste rock management would provide a balance between minimizing the potential for long-term contaminant flux to the environment and land disturbance related to surface stockpiles while preserving mined-out open pit volumes for disposal of potentially problematic materials.

Conclusion on the Effects of the Project:

Based on its review of the Screening Report, and the above-noted information and considerations, the Commission agrees with CNSC staff's conclusion that the proposed Sue E Project, taking into account the identified mitigation measures, is not likely to cause significant adverse environmental effects. The Commission understands that the projected emissions and effluents from the project will be within applicable federal and provincial regulatory limits and guidelines and maintained as low as reasonably achievable.

3.2.3 Effects of the Environment on the Project

In addition to a consideration of how the project could adversely impact on the environment, the EA Guidelines required that the scope of the assessment include an examination of how the environment itself could adversely impact on the project.

In this regard, CNSC staff reported that the EA examined how short-term climatic events and events related to global warming, forest fire and green house gas emissions could adversely affect the project. CNSC staff concluded that the planned design features of the project will adequately address any potential effects of the environment.

Based on the above information and considerations, the Commission concludes that the environment is not likely to cause adverse effects on the project.

3.2.4 Effects of Decommissioning

With respect to the long-term, post-decommissioning effects of the project, CNSC staff noted that the only potential effects of the McClean Lake Operation are those associated with land disturbance and management of tailings and waste rock. COGEMA noted that the Tailings Optimization and Validation Program, which allows for a better understanding of the basis of long-term tailings, both geochemistry and geotechnical, demonstrates that long-term objectives are being met. The issue of waste rock management was also discussed in section 3.2.2 of this *Record of Proceedings*.

With regard to the intervention of the EQC and its request for information on the waste rock management options, the Commission sought further information on the appearance of the site once mining was completed. COGEMA responded that it has a decommissioning plan for the site that will restore it close to its original quality. Based on follow-up discussions with the EQC, CNSC staff stated that the original concerns had been addressed and that no further concerns had been expressed by the EQC.

3.2.5 Cumulative Effects of the Project

COGEMA, in its submission, indicated that the only project that could potentially have effects that overlap in time and space with effects from the Sue E Project is the Caribou Project, which is a potential future project that is separate from the Sue E Project and thus not the subject of this hearing.

CNSC staff stated its finding that there are no residual adverse effects of the Sue E project that overlap in time and space with other past, present or planned projects. CNSC staff concluded therefore that the project is not likely to cause significant adverse cumulative effects on the environment.

3.2.6 Follow-Up Program

As the responsible authority for the project, the CNSC has an obligation to ensure that COGEMA's Follow-Up Program is designed and implemented. The CNSC staff noted that the objectives of a Follow-Up Program are to verify if the environmental effects of the project are as predicted and to confirm that the mitigation measures are implemented and effective in reducing, controlling or eliminating environmental effects. CNSC staff further noted that the Follow-Up Program for the Sue E Project is associated with the hydrogeology of the Sue E area and source term assumptions specific to the Sue E waste rock and the potential short-term risk associated with the residual molybdenum wastewater releases. CNSC staff added that the CNSC'S licensing and compliance program would be used as the mechanism for ensuring the final design, implementation, monitoring and reporting of the program.

Further with respect to the development and implementation of the Follow-Up Program, the EQC noted its satisfaction with the incorporation of the Follow-Up Program schedule into the overall Screening Report. The Commission is satisfied that the proposed scope of the follow-up

program will be adequate for verifying and, if necessary, identifying where additional mitigation measures may be required during the project implementation.

3.2.7 Conclusions on the Adverse Environmental Effects

Based on the considerations and reasons noted above, the Commission agrees with the CNSC staff's conclusion that the proposed Sue E Project is not likely to cause significant adverse environmental effects, taking into account the identified mitigation measures.

The Commission is also satisfied that the likelihood and significance of the effects has been identified with reasonable certainty.

3.3 Public Concern

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 their views on it.

As described in section 3.2.1 above, the Commission is satisfied that COGEMA and CNSC staff consulted appropriately with the public, Northern Saskatchewan residents including First Nations and other interested stakeholders in accordance with the direction set out in the approved EA Guidelines. The Commission is therefore satisfied that the public had adequate opportunity to become informed about the project and express any concerns.

CNSC staff reported that, other than the two interventions submitted in the context of this hearing, no comments were received from the public on the documentation developed and distributed for this EA. The documentation includes the Project-Specific Guidelines, the EIS (representing the technical studies), the Addendum to the EIS (representing the technical review comments and COGEMA's disposition of these comments), the Draft EA Screening Report (representing the federal EA document), and the Executive Summary of the EA (representing COGEMA's summary of their environmental impact assessment).

The Commission therefore decides not to refer the project to the Minister of the Environment for referral to a review panel or mediator on the basis of public concern (i.e., pursuant to subparagraph 20(1)(c)(iii) of the CEAA).

4. Conclusion

The Commission has considered the information and submissions of the proponent, CNSC staff and the intervenors as presented for reference on the record for the hearing.

The Commission concludes that the environmental assessment Screening Report attached to CMD 05-H13 is complete and meets all of the applicable requirements of the *Canadian Environmental Assessment Act*.

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.

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.

Therefore, the Commission, pursuant to paragraph 20(1)(a) of the CEAA, decides to proceed with the consideration of a licence application under the *Nuclear Safety and Control Act* which, if approved, would allow the project to proceed.

Marc A. Leblanc
Secretary,
Canadian Nuclear Safety Commission

Date of decision: June 29, 2005

Date of release of Reasons for Decision: July 12, 2005