

Record of Proceedings, Including Reasons for Decision

In the Matter of

Applicant COGEMA Resources Inc.

Subject Application by COGEMA Resources Inc. for a
Decommissioning Licence for the Cluff Lake
Uranium Mine Project

Date July 20, 2004

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1. Introduction

COGEMA Resources Inc. (COGEMA) has applied to the Canadian Nuclear Safety Commission (CNSC¹) for a licence to decommission its Cluff Lake uranium mine project located in the Athabasca Basin of northern Saskatchewan. The Cluff Lake mine, which is currently in a shutdown, care and maintenance mode, consists of two underground mines, four open-pit mines, a mill, waste management systems, and associated site facilities.

The proposed decommissioning licence, in addition to authorizing the decommissioning of the above-noted facilities, would also allow COGEMA to possess, manage and store nuclear substances and to possess and use prescribed equipment and prescribed information, which are required for, associated with, or arise from the decommissioning activities.

Issues:

In considering the application, the Commission was required to decide, pursuant to subsection 24(4) of the *Nuclear Safety and Control Act*, if:

- a) COGEMA is qualified to carry on the activity that the decommissioning licence would authorize; and
- b) if, in carrying on that activity, COGEMA would make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.

Public Hearing:

The Commission, in making its decision, considered information presented for a public hearing held on April 29, 2004 in Ottawa, Ontario, and on June 9, 2004 in La Ronge, Saskatchewan. 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 COGEMA (CMD 04-H9.1, CMD 04-H9.1A, CMD 04-H9.1B, CMD 04-H9.1C and CMD 04-H9.1D) and CNSC staff (CMD 04-H9, CMD 04-H9.A and CMD 04-H9.B). The Commission also considered oral and written submissions from 18 intervenors as listed in Appendix A of this *Record of Proceedings*.

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 concluded that COGEMA is qualified to carry on

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.

the activity that the licence will authorize. The Commission also determined that COGEMA, in carrying on that activity, will make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed. Therefore,

the Commission, pursuant to section 24 of the *Nuclear Safety and Control Act*, issues Uranium Mine Decommissioning Licence No. UMDL-MINEMILL-CLUFF.00/2009 to COGEMA Resources Inc. The licence is valid from the date signed to July 31, 2009, unless suspended, amended, revoked or replaced.

The Commission includes in the licence the conditions recommended by CNSC staff in CMD 04-H9.B.

The Commission delegates to the Director General, Directorate of Nuclear Cycle and Facilities Regulation, the authority to consider for approval the remaining details associated with the decommissioning work plans and associated quality assurance program, and the environmental assessment follow-up program in accordance with the requirements contained in conditions 1.5 and 1.6 of the licence respectively.

With this decision, the Commission also requests CNSC staff to present an interim status report on the project to the Commission at the mid-point of the licence term (i.e. in approximately January 2007). The status report will be presented at a public proceeding of the Commission.

3. Adequacy of the Public Hearing Process

Before turning to the licence application, the Commission considered the concerns expressed by intervenors about the adequacy of the Commission's public hearing process.

In this regard, B. Adamson, M. Penna and G. Simpson, in their interventions, expressed the view that the Commission does not take the intervenors' submissions into account when making its decisions. Furthermore, B. Adamson and J. Penna expressed the opinion that the public is not given adequate time to study the information submitted by the applicant and CNSC staff. The Northern Saskatchewan Environmental Quality Committee (EQC) - South Central Subcommittee also noted that intervenor funding from the CNSC would improve the effectiveness of the public hearing process.

In response to these concerns and comments, the Commission assures intervenors and all other stakeholders that it carefully considers all oral and written submissions when making its decisions. With respect to the time available for the intervenors' review of the hearing documents, the Commission notes that this hearing was conducted in accordance with the CNSC *Rules of Procedures* and, therefore, the Commission is satisfied that intervenors had adequate time to review the materials and prepare for this hearing. On the matter of intervenor funding, the Commission notes that there are currently no provisions available to the Commission for such funding. The Commission, however, encourages intervenors that may be unable to attend the public hearings in person to make their interventions to the Commission in writing, or where

an oral preference or tradition for expression exists, through available teleconferencing or videoconferencing arrangements.

Based on these considerations, the Commission is satisfied that intervenors were provided adequate opportunity to participate in the process and that the hearing was conducted in a fair manner.

4. Issues and Commission Findings

In making its licensing decision under section 24 of the *Nuclear Safety and Control Act*, the Commission considered a number of issues relating to COGEMA's qualifications to carry out the proposed activities, and the adequacy of the proposed measures for protecting the environment, the health and safety of persons, national security and international obligations to which Canada has agreed. The Commission's findings on these issues are summarized in this section.

The Commission notes that, while its licensing mandate does not encompass the economic benefits related to proposed projects, the Commission heard from several intervenors about the significant socio-economic benefits that uranium mining has brought to northern Saskatchewan communities. These benefits include jobs, business opportunities, skills and safety training, and investments in community infrastructure such as hospitals and recreation facilities. The Commission, however, did not take these issues into account in rendering its decision.

4.1 Radiation Protection

As part of its evaluation of the adequacy of provisions for protecting the health and safety of persons, the Commission considered the past performance and future plans of COGEMA in the area of radiation protection at the Cluff Lake Project.

Protection of Workers:

COGEMA, in its submission, explained that over the last six years, substantial effort went into improving equipment and practices to further reduce radiation doses to workers. COGEMA noted that these reductions in radiation doses have been consistently achieved, even though the average grades of ore mined has increased between 1998 and 2002. According to data submitted by COGEMA, no workers exceeded radiation exposure regulatory limits during the current licence period.

CNSC staff explained that the decommissioning activities will involve a small level of exposure to radioactive materials (gamma-emitting radionuclides, radon progeny and long-lived radioactive dust). CNSC staff added that COGEMA has met, and is expected to continue to meet, the CNSC's regulatory expectations for protecting workers from those hazards. CNSC staff also reported that there has been an improving trend in COGEMA's performance in radiation protection due to what CNSC staff considers to be COGEMA's proactive approach to minimizing exposures to radiation sources before, during and after the cessation of the mine

operations. CNSC staff noted that no worker exceeded regulatory dose limits or action levels, and that no unplanned radiological events occurred during the years 2002 and 2003. CNSC staff considers that COGEMA is suitably managing planned radiation doses.

CNSC staff noted that the details of COGEMA's Radiation Protection Program for the decommissioning of the Cluff Lake Project are contained in the Detailed Decommissioning Plan (DDP). CNSC staff reported that, based on its review of that program, and the recently submitted detailed decommissioning work package plans, CNSC staff has concluded that sufficient controls would be in place to adequately manage the radiation risks associated with the proposed decommissioning activities. CNSC staff stated that COGEMA's Radiation Protection Program for decommissioning meets all applicable requirements.

Protection of the Public:

With respect to the protection of the public from radiation, COGEMA stated that its radiological end-state objective, as described in the Detailed Decommissioning Plan and assessed in the Comprehensive Study environmental assessment carried out under the *Canadian Environmental Assessment Act* (CEAA), is to achieve a site condition that is stable and that would allow for the safe utilization of the area for traditional purposes or occasional access.

In its examination of those objectives, the Commission sought further information on the radiological risk that the water in the flooding pits could pose to the public over the long term. With reference to the findings in the earlier Comprehensive Study environmental assessment, CNSC staff responded that occasional consumption of the water from the pits by people is not expected to cause significant adverse health effects.

The Athabasca Chipewyan First Nation (ACFN), in its intervention, indicated its concerns about the potential long-term impacts of the decommissioned mine on traditional land use. In particular, the ACFN expressed its view that the above-noted comprehensive study environmental assessment (EA) did not include estimates of the impact of the project on people residing full time on the site; the EA only examined the effects on people who may use the site periodically, i.e., up to an assumed total of 1,000 hours per year.

In response to this concern of the ACFN, the Commission asked for more information on the impact of the project on people continuously residing on the site. CNSC staff explained that two assessments of the impact of the project on residents of the site were performed. One assessment used the assumption that a person would remain on the site for 1,000 hours at the location where the radiation dose would be the highest. This assessment was performed to determine the level of cleanup needed on the site. Another assessment was performed based on the assumption that a trapper was living full time on the site, using it for traditional purposes, drinking water and eating wildlife and fish from the area. CNSC staff determined from that assessment that there was no additional health risk for someone living full time on the site following achievement of the required decommissioning end-state.

In response to related questions from the Commission on how COGEMA has mapped current surface radiation levels on the site, COGEMA stated that it initially surveyed all disturbed areas

to identify those locations where somewhat elevated radiation levels exist and then, using computer mapping software, interpolated the survey point data over the area surveyed. COGEMA added that, as one of the final steps in the decommissioning program, it will perform a wider and more thorough radiation survey of the site to verify achievement of the end-state surface clean-up objectives. CNSC staff added that it has performed limited radiation surveys and spot checks, which have confirmed COGEMA's survey results for current conditions. In response to a question from the Commission about possible mathematical models that could be used to predict radiation levels on the site, COGEMA stated that mathematical models would be imprecise in this application compared to using direct measurements with knowledge of the site operating history.

Conclusion on Radiation Protection:

Based on this information, the Commission is satisfied that COGEMA has made, and will continue to make, adequate provision for the protection of workers and the public from radiation in the decommissioning of the Cluff Lake Project.

4.2 Environmental Protection

To determine whether COGEMA will take adequate measures to protect the environment during the decommissioning of the Cluff Lake Project, the Commission considered the potential for the decommissioning activities to adversely affect the environment.

Environmental Management Systems and Monitoring:

COGEMA explained that it has a comprehensive program in place to ensure the ongoing protection of the environment. This program has several components, including environmental monitoring, waste management, and potable water and sewage treatment.

CNSC staff stated that it considers COGEMA's proposed system of environmental policies and programs to be acceptable for the project. In particular, CNSC staff noted its satisfaction with COGEMA's Environmental Management System (EMS), which forms an integral part of COGEMA's overall Integrated Quality Management System (IQMS).

CNSC staff noted that while COGEMA's recently submitted revision of its Environmental Monitoring Program remains under review, CNSC staff is satisfied that, based on its preliminary review and past performance of COGEMA's environmental monitoring programs, the final environmental monitoring program for the proposed decommissioning project would be satisfactory.

The Interchurch Uranium Committee Educational Cooperative and M. Penna, in their interventions, disagreed with this assessment and expressed concerns about what they consider to be an inadequate length of time devoted to environmental monitoring. In response to a request from the Commission for more information on the planned environmental monitoring, COGEMA stated that it will continue environmental monitoring as long as is necessary, and that

it will remain on the site until it receives permission from the CNSC to turn responsibility for the site over to another party. Saskatchewan Environment added that it plans to continue monitoring for radiation and other contaminants once COGEMA leaves the site. The Commission finds this clarification satisfactory.

Waste Management and Related Effects:

In response to questions from the Commission on whether the planned disposal of waste materials in the Claude Pit could adversely impact the environment, COGEMA stated that it will follow all applicable regulations for disposal of waste, including for the appropriate monitoring of the performance of the waste management sites over time. CNSC staff indicated that it has determined that the disposal of the waste in the Claude pit would be acceptable and that the use of the pit for this purpose has been approved by the Province of Saskatchewan. Furthermore, and similar to the above-noted information concerning the protection of people from radiation, CNSC staff stated that wildlife that may occasionally drink water from the flooded pit following decommissioning would also not be exposed to significant radiological health risks.

In response to a follow-up question from the Commission on the size of the reported plume of contaminated groundwater in the vicinity of the project site, COGEMA explained that the migration rate of the plume, which originates largely from the DJN waste pile, has been very slow, having traveled approximately 300 meters over the last twenty years, and does not pose a significant risk to the environment. While the Commission accepts this conclusion for the purpose of the current licensing decision, the Commission notes that the assessment and follow-up monitoring of groundwater contamination by COGEMA will be an important factor in the CNSC's future consideration of decommissioning work packages related to the long-term management of wastes on the site.

In his intervention, B. Adamson expressed the view that the contaminated sediments in Snake Lake are detrimental to the environment and that the sediments should be dredged from the lake as part of the decommissioning project. In response to follow-up questions from the Commission on the situation in Snake Lake, COGEMA stated, and CNSC staff confirmed, that while dredging was contemplated at one time, Fisheries and Oceans Canada has cautioned that dredging could have significantly greater impacts on biota in the lake. Therefore, monitoring will be performed on this lake to assess if it is recovering as predicted and, if not, the dredging option may be reconsidered in the future.

In their interventions, B. Adamson, M. Shiell, the Inter-Church Uranium Committee Educational Cooperative, M. Penna, G. Simpson and M. Pine expressed concerns about the long-term effects of alpha radiation on biota. In particular, these intervenors consider that the potential radiological effects have not been adequately studied and, therefore, it is premature to consider allowing the decommissioning project to proceed. These intervenors are generally of the view that the proponent and CNSC staff have relied too much on mathematical modelling in the prediction of the effects, rather than on actual field studies of the environmental effects. These intervenors are of the view, therefore, that the methods and values used in the earlier Comprehensive Study environmental assessment of the project underestimate the effects of alpha radiation on biota.

In response to these concerns, the Commission questioned COGEMA and CNSC staff on the adequacy of the assessment that was carried out on the radiological risks to biota. COGEMA answered that the findings that are included in the Comprehensive Study Report are the results of a modelling exercise and pathway analysis, using information from water and sediment samples taken on and in the vicinity of the Cluff Lake Project site. These models predict the impacts of contaminants in both water and sediments as they are taken up by aquatic macrophytes and ingested by animals. COGEMA added that it is planning on taking additional water and sediment quality readings to ensure that the assumptions used in the modeling exercise are valid. CNSC staff stated that the analysis of the potential radiological effects of the project on the environment was conducted using all relevant information, recognized methods and conservative assumptions, including the application of a relative biological effectiveness (RBE) for alpha radiation of 40, as recommended by the intervenors. CNSC staff stated that it is confident in its conclusion that the effects are not likely to be significant. CNSC staff added that the purpose of the EA follow-up program would be to continue to verify the predictions from the EA and to ensure additional mitigation measures are implemented as necessary. CNSC staff further noted that it would inform the Commission of any significant environmental issues should any arise in the future.

Further, with respect to the management and minimization of non-hazardous waste to be generated during the project, the Commission questioned to what extent it would be possible to salvage buildings on the site for reuse. In response, COGEMA indicated that it was receptive to proposals from the local communities for the salvage and reuse of buildings where appropriate.

Effects of Revegetation:

The Commission asked whether the introduction of non-native species to revegetate disturbed areas of the site would have any lasting significant effects on the natural vegetation communities and terrestrial habitats in the area. COGEMA answered that all of the areas will be revegetated using native species, except for the tailings cover area and the waste rock pile. In those locations, non-native grasses and legumes known to survive well in the area will be seeded to limit erosion and enrich the soil. COGEMA added that, with time, native plants will invade the areas and displace the non-native species. In response to a follow-up question from the Commission on this revegetation plan, COGEMA noted that no woody species would be planted because they would not be able to compete with the initially dominant grasses and legumes. Natural invasion of woody species is expected to occur over time.

Effects of Climate Change:

In response to a question from the Commission on possible long-term impacts of climate change on the Cluff Lake Project, COGEMA stated that, during the planning phase of the project, worst-case climatic conditions were assumed, including conditions predicted by Environment Canada that could arise as a result of climate change. CNSC staff confirmed that the decommissioning site designs have been scaled to take into account the possible effects of climate change.

Past Environmental Performance:

The Commission examined COGEMA's past environmental performance at the Cluff Lake Project as a further indication of its likely future performance. In its submission, COGEMA stated that, during the current licence term, the environmental action levels relating to the Cluff Lake Project were not exceeded, and that COGEMA remained in compliance with regulatory limits on effluent water quality. CNSC staff stated that it considers the past management of effluent quality to be acceptable, and that it expects effluent quality to remain acceptable during decommissioning activities when occasional operation of the Secondary Treatment System will be required.

With respect to radiological contamination of the sediments in Island Lake, the Commission sought more information on the frequency with which those sediments would be sampled. G. Simpson, in his intervention, expressed concern about this contamination and the fact that the sediment sampling had not been done since 1998. In response, COGEMA noted that a further set of studies on the sediments in Island Lake is being performed this year in accordance with regulatory requirements of the Province of Saskatchewan.

Concerning past environmental incidents at the Cluff Lake Project, COGEMA reported that three spills of radioactive contaminants occurred during the current licence period. According to COGEMA, the spills were minor, immediately detected, involved limited quantities, and were immediately cleaned up with no significant residual environmental impact. CNSC staff concurred with COGEMA's assessment and response to the reported spills.

CNSC staff added that one winter fish kill incident was reported during the current licence term. This incident was caused by the reduction of effluent water when the mine ceased operation and resulted in a reduction in the amount of oxygen to the downstream environment. COGEMA stated that it pumped effluent consistently last winter, and, therefore, does not expect similar fish mortality to recur. CNSC staff stated that it considers COGEMA's response to this event to have been satisfactory.

Conclusion on Environmental Protection:

Based on the above information, the Commission concludes that COGEMA has made, and will continue to make, adequate provision for the protection of the environment during the decommissioning of the Cluff Lake Project.

4.3 Non-Radiological Health and Safety

As part of its evaluation of the adequacy of provisions for protecting the health and safety of persons, the Commission considered the past performance and future plans of COGEMA in the area of conventional health and safety at the Cluff Lake Project.

In its submission, COGEMA informed the Commission that there have been no lost time accidents for its staff and for contractors during the years 2001 and 2002, and that two accidents

involving contractor staff occurred in 2003. CNSC staff added that it did not consider those events to be significant.

CNSC staff explained that it had reviewed COGEMA's occupational health and safety program, in consultation with Saskatchewan Labour, and that it considers it to be satisfactory and to meet requirements. COGEMA has established an Occupational Health and Safety Committee, and its work is periodically reviewed by Saskatchewan Labour. Saskatchewan Labour, in its intervention, indicated that it will continue to perform safety inspections during the decommissioning project. If any concerns arise regarding non-radiological health and safety, CNSC staff would consult with Saskatchewan Labour.

In response to a question from the Commission, COGEMA indicated that it is confident that, for its staff and for staff of contractors, appropriate health and safety measures will be in place during decommissioning. CNSC staff also indicated its satisfaction with the health and safety measures taken by COGEMA.

Based on this information, the Commission concludes that COGEMA has made, and will continue to make, adequate provision for the protection of persons from conventional (non-radiological) hazards during the decommissioning of the Cluff Lake Project.

4.4 Emergency Preparedness

As part of its evaluation of the adequacy of provisions for protecting the health and safety of persons, the Commission considered the past performance and future plans of COGEMA in the area of emergency preparedness at the Cluff Lake Project.

In its submission, COGEMA stated that Transport Canada has approved COGEMA's Management Emergency Response Manual. COGEMA also explained that a fire emergency response capability, which is available on site at all times, will continue to be maintained. The emergency response requirements and capabilities will also be adjusted as the decommissioning work progresses.

CNSC staff, in its submission, stated that COGEMA, during the current licence term at the Cluff Lake Project, has maintained an acceptable Emergency Preparedness Program and an acceptable level of performance in this area. CNSC staff has reviewed the three submitted detailed decommissioning work packages, and concluded that COGEMA's Emergency Preparedness Program for decommissioning is acceptable.

The Commission accepts the findings of CNSC staff and concludes that COGEMA's program for emergency preparedness during decommissioning is acceptable.

4.5 Past Operating Performance

In addition to examining the past operating performance of COGEMA from an environmental protection perspective (as discussed in section 4.2 above), the Commission also considered other aspects of COGEMA's past performance as an indication of expected future performance during the decommissioning project.

In this regard, CNSC staff reported that it carried out twelve inspections during the years 2002 to 2004, and that it did not observe any serious non-compliance issues. CNSC staff also stated that, in its view, COGEMA's reporting program and procedures meet requirements.

Saskatchewan Environment, in its intervention, reported that COGEMA has operated the Cluff Lake Project in compliance with provincial regulatory requirements. Saskatchewan Environment assessed COGEMA's programs and procedures and concluded that COGEMA operated safely and can be expected to safely decommission the Cluff Lake Project.

Based on the above information and considerations, the Commission concludes that the past operating performance at the Cluff Lake Project provides a positive indication of COGEMA's ability to adequately carry out the proposed activities under the decommissioning licence.

4.6 Quality Assurance and Detailed Work Plan Approvals

In its assessment of COGEMA's ability to sustain compliance and acceptable performance, the Commission considered COGEMA's work planning and quality assurance programs for the decommissioning project.

In this regard, COGEMA explained that its quality assurance program for the Cluff Lake Project was developed in order to conform to the requirements of the ISO 14001:1996 Environmental Management System (EMS) standard, CNSC's draft regulatory document S-213, "*Quality Assurance Program Requirements for Nuclear Facilities*", and to internal corporate requirements. COGEMA added that it expects to receive ISO 14001 certification for the EMS at the Cluff Lake Project during the year 2004.

CNSC staff reported that it has reviewed COGEMA's recently submitted Integrated Quality Management System (IQMS), and that COGEMA has committed to addressing all of the CNSC staff's comments in a planned revision of the documentation.

CNSC staff informed the Commission that it is also continuing to review three of the six detailed decommissioning work packages referred to in COGEMA's current Detailed Decommissioning Plan. The remaining three work packages, once submitted, would be reviewed and assessed in accordance with the proposed licence condition 1.5. This proposed licence condition would require COGEMA to submit the remaining details associated with the decommissioning plans and associated quality assurance program in a form acceptable to the Commission, or a person authorized by the Commission, prior to the commencement of decommissioning activities.

In response to a question from the Commission about the proposed licence condition 1.5, COGEMA stated that it is confident that it will meet this requirement, possibly before the issuance of the Commission's decision on the proposed decommissioning licence. CNSC staff concurred that acceptable progress is being made by COGEMA in this regard.

COGEMA, while not opposed to licence condition 1.5, expressed concerns on the complexity of the process required to obtain permission to start decommissioning activities. In response, CNSC staff commented that decommissioning at the Cluff Lake Project is a new activity and that, in its view, the issues to be resolved before decommissioning work begins are important enough to warrant approval at least at the CNSC staff Director General level. The Commission considered this matter and decided to accept CNSC staff's proposed licence condition 1.5.

The Northern Hamlet of Patuanak, in its intervention, expressed its view that the decommissioning activities should not be permitted to proceed until the related aspects of the quality assurance program have been accepted by CNSC staff. The Commission acknowledges this intervenor's concern; however, the Commission is satisfied that licence condition 1.5 provides sufficient control over the quality assurance program relating to decommissioning activities.

Based on the above information, the Commission concludes that detailed work planning process and related quality assurance measures for the Cluff Lake decommissioning project are satisfactory. Furthermore, the Commission hereby delegates to the Director General, Directorate of Nuclear Cycle and Facilities Regulation, the authority to approve the plans and programs submitted pursuant to condition 1.5 upon satisfaction that all of the applicable requirements have been met.

4.7 Security

In its submission, COGEMA explained that the site security measures that are currently in place at the Cluff Lake Project will remain throughout decommissioning. CNSC staff added that it considers the current security measures at the site to be acceptable for decommissioning.

In its submission, CNSC staff indicated that COGEMA has made several improvements to the Vulnerability Analysis and Threat Risk Assessment, which was submitted by COGEMA in April 2002, and that CNSC staff now considers this assessment to be complete.

The Commission questioned whether fencing around the site would be necessary. COGEMA answered that it did not consider fencing to be necessary during the first few years of decommissioning, since staff would be present on the site. COGEMA is planning to assess the need for fencing once all of the decommissioning activities are performed. CNSC staff confirmed that it does not consider a fence to be necessary. CNSC staff is of the view that the hazards at the facility, after decommissioning is complete, will be sufficiently low as not to pose a significant risk to the public using the site.

Based on this information, the Commission concludes that appropriate security measures will be in place for the decommissioning project.

4.8 Canadian Environmental Assessment Act

Before making a licensing decision, the Commission must be satisfied that all applicable requirements of the *Canadian Environmental Assessment Act* (CEAA) have been fulfilled.

In its submission, CNSC staff explained that a decision on the results of a Comprehensive Study environmental assessment was required before the Commission could make a decision on the licence application. CNSC staff submitted the completed Comprehensive Study Report (CSR) to the Canadian Environmental Assessment Agency on March 11, 2004. The CSR included CNSC staff's conclusion that the project, taking into account the identified mitigation measures, was not likely to cause significant adverse environmental effects. On April 15, 2004, the federal Minister of the Environment concurred with that finding and announced his decision that no further assessment by a review panel or mediator was required.

COGEMA stated that it had submitted the related detailed EA follow-up program, including analyses on benthic invertebrates and sediments, to CNSC staff for acceptance. CNSC staff stated that it was reviewing the follow-up program, along with other agencies, including Saskatchewan Environment. Given the ongoing review, CNSC staff proposed licence condition 1.6 which stipulates that the licensee shall, prior to November 30, 2004, submit and implement a follow-up program acceptable to the Commission or a person authorized by the Commission.

Several intervenors expressed concerns about the completeness of the Comprehensive Study Report, requesting that more studies be done before decommissioning is allowed to proceed. In response to these concerns, however, the Commission notes that the environmental assessment process under the CEAA is complete and that the Minister has made his decision. The Commission does not have the mandate, nor is it the purpose of this hearing, to reopen the EA process. However, in its proceedings, the Commission has considered the provisions for protecting the environment during the decommissioning project (refer to section 4.2 above) and will ensure that the appropriate EA follow-up environmental monitoring is performed on the Cluff Lake site.

With the above information, the Commission concludes that all requirements under the CEAA have been fulfilled. The Commission also accepts CNSC staff's proposal to add condition 1.6 to the licence and hereby delegates to the Director General, Directorate of Nuclear Cycle and Facilities Regulation the authority to consider, pursuant to that condition, the adequacy of the EA follow-up program.

4.9 Decommissioning Plan and Financial Guarantees

In order to ensure that adequate resources will be available to meet the regulatory requirements for safety, environmental protection and security during decommissioning of the Cluff Lake

Project, the Commission requires that an acceptable decommissioning plan and financial guarantee be in place.

Decommissioning Plan:

As discussed above in section 4.6, CNSC staff reported that while COGEMA's DDP describes decommissioning approaches that are in accordance with CNSC Regulatory Guide G-219, "*Decommissioning Planning for Licensed Activities*", only three of the six detailed work packages that define the project had been submitted to the CNSC by the close of this public hearing. CNSC staff reported that it has found the documentation of the three defined work packages to meet the applicable requirements. COGEMA informed the Commission that work is continuing in order to complete the remaining work packages plans. As also noted above in section 4.6 above, the Commission accepts CNSC staff's proposal to add condition 1.5 to the licence to ensure the work plans are completed to the satisfaction of the CNSC staff Designated Officer.

Financial Guarantee:

In its submission, COGEMA stated that the total amount of its financial guarantee for decommissioning is provided by letter of credit, payable to Saskatchewan Environment and Resource Management. COGEMA added that the letter of credit is automatically renewed each year, and that the Province of Saskatchewan requires that the amount of financial guarantee be revisited every five years. CNSC staff indicated that the letter of credit was in good standing, and that the value of the financial guarantee was acceptable. CNSC staff will reassess the value of the financial guarantee once the work to place the facility into its final configuration has been completed. The amount of the financial guarantee cannot be changed without the CNSC's approval.

In response to a question from the Commission about funding for the subsequent longer-term monitoring requirements, CNSC staff stated that it is satisfied with the level of planned financial resources for monitoring of the facility after decommissioning, and that this forms part of the financial guarantee currently in place.

Conclusions on Decommissioning Plan and Financial Guarantee:

Based on this information, the Commission considers the Detailed Decommissioning Plan (as completed to date) and related financial guarantee to be acceptable. The remaining details associated with the detailed decommissioning work plans will be completed to the satisfaction of the CNSC in accordance with licence condition 1.5.

The Commission is also satisfied that the current value of the financial guarantee reflects reasonable estimates of the work to be completed, and that measures are in place to ensure appropriate financial guarantees will remain in place until the final decommissioning end-state objectives have been met.

4.10 Public Information Program

With respect to the CNSC's requirement that licensees maintain acceptable public information programs, COGEMA explained that it has developed diverse ways of communicating with the public.

CNSC staff indicated that the public information program submitted by COGEMA meets the requirements outlined in regulatory document G-217, "*Licensee Public Information Program*" and that COGEMA's varied communication strategies demonstrate a sustained attempt to reach all of the targeted audiences.

On a related matter, the ACFN, in its intervention, requested that it be kept informed and involved in the monitoring activities. In response, COGEMA indicated that it had sent a letter to the ACFN, stating that it would be pleased to meet with the ACFN in order to discuss the project and provide more information. COGEMA added that it agreed with the idea to involve the ACFN in the environmental monitoring activities.

In response to a question from the Commission about communications with aboriginal communities in general, COGEMA stated that it has previously held information meetings with the First Nations in the vicinity of the facility. CNSC staff also confirmed its intention to keep the aboriginal communities informed of the project.

In addition, the Commission heard from several intervenors about the effectiveness of COGEMA's public information and communications program and, in particular, how this has been enhanced through COGEMA's efforts to directly engage local residents of northern Saskatchewan in independent monitoring of the environmental performance of its mine sites.

Based on the above information, the Commission concludes that COGEMA has an adequate public information program in place for the Cluff Lake Project.

4.11 Non-Proliferation and Safeguards

In its submission, COGEMA indicated that there is no remaining inventory of uranium concentrate at the Cluff Lake Project and that it is committed to continue meeting the remaining safeguards requirements.

CNSC staff explained that, during the current licence term, COGEMA provided CNSC staff with all reports and information necessary for the implementation of safeguards requirements. CNSC staff considers that COGEMA's procedures to facilitate prompt access to IAEA inspectors to meet requirements. CNSC staff added that, to date, the IAEA has not requested complementary access to the Cluff Lake site, which is a primary safeguard requirement for this project.

Based on this information, the Commission is satisfied that COGEMA has made, and will continue to make, adequate provisions in the areas of safeguards and non-proliferation at the

Cluff Lake Project that are necessary for maintaining national security and measures necessary for implementing international agreements to which Canada has agreed.

4.12 Licence Period

COGEMA, in its submissions, initially requested a 15-year decommissioning licence and, following Day One of the hearing, revised its request to a seven-year licence term. COGEMA considers that seven years would be an adequate licence term, taking into account two years of decommissioning work and five years of monitoring. COGEMA suggested that there could be interim reports, one approximately at the end of 2006 after completion of active decommissioning activities, and another one in late 2008 or early 2009 at approximately mid-point of the five year monitoring period.

CNSC staff, with reference to the criteria set out in CMD 02-M12, "*New Staff Approach to Recommending Licence Periods*", recommended that the Commission grant a five-year licence term. In CNSC staff's view, the five-year term would allow sufficient time for completion of CNSC staff's evaluations and for implementation of follow-up monitoring. If a five-year licence term is issued, CNSC staff suggested a status report at the mid-point of the licence term.

CNSC staff commented that a five-year licence term would allow for the time estimated for the decommissioning work and allow for a few years of follow-up monitoring. CNSC staff stated that, because this would be the first uranium mine decommissioning project in northern Saskatchewan, it would, in CNSC staff's view be appropriate to bring the matter of the licence renewal before the Commission for another formal public review in five years time. CNSC staff noted that a longer licence term could be considered at the next licence renewal process.

The Commission questioned COGEMA with respect to when responsibility for the Cluff Lake Project would likely be transferred to another party (e.g., to the provincial government). COGEMA responded that it expects to be responsible for the site for about another 17 years, at which time it would seek a licence for abandonment. COGEMA added that it will remain responsible for the site until arrangements are in place for another party to take on that role in a manner satisfactory to all parties involved, including the Commission. CNSC staff noted that even when a licence to abandon a facility is granted by the CNSC, appropriate institutional control of the site for health and safety would continue.

Based on the above information and considerations, the Commission agrees with CNSC staff and accepts the proposed five-year licence term. The Commission requests that CNSC staff provide a status report at mid-point of the licence, i.e., in approximately January 2007.

5. Conclusion

The Commission has considered the information and submissions of the applicant, CNSC staff and the intervenors, as presented in the material available for reference on the record.

The Commission concludes that COGEMA is qualified to carry on the activity that the licence will authorize. The Commission also concludes that COGEMA, in carrying on that activity, will make adequate provision for the protection of the environment, the health and safety of persons, and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.

The Commission therefore issues, pursuant to section 24 of the *Nuclear Safety and Control Act*, Uranium Mine Decommissioning Licence No. UMDL-MINEMILL-CLUFF.00/2009 to COGEMA Resources Inc. The licence is valid from the date signed to July 31, 2009, unless suspended, amended, revoked, or replaced.

The Commission includes in the licence the conditions recommended by staff in CMD 04-H9.B.

Further, as noted above, the Commission delegates to the CNSC Director General, Directorate of Nuclear Cycle and Facilities Regulation the authority to consider the matters set out in conditions 1.5 and 1.6 of the licence.

The Commission requests CNSC staff to present an interim status report to the Commission at mid-point of the licence (i.e. in approximately January 2007). The status report will be presented at a public proceeding of the Commission.

Marc A. Leblanc
Secretary,
Canadian Nuclear Safety Commission

Date of decision: June 9, 2004

Date of release of Reasons for Decision: July 20, 2004

Appendix A – Intervenors

Intervenors	Document Number
Rodney Gardiner, represented by Joe Whitehawk	CMD 04-H9.2
Saskatchewan Environment, represented by Robert Kidd	CMD 04-H9.3
Dr. Graham Simpson	CMD 04-H9.4
Canada North Environmental Services Limited Partnership, represented by Peter Vanriel	CMD 04-H9.5
Bill Adamson	CMD 04-H9.6
Athabasca Chipewyan First Nation, represented by Blair Whenham	CMD 04-H9.7
Marion Penna	CMD 04-H9.8
Dr. James Penna	CMD 04-H9.9 CMD 04-H9.9A
Maisie Shiell	CMD 04-H9.10
Northern Saskatchewan Environmental Quality Committee, Athabasca Subcommittee, represented by Felix McDonald	CMD 04-H9.11
Northern Saskatchewan Environmental Quality Committee, South Central Subcommittee, represented by Simpson Naytowhoh	CMD 04-H9.12
Northern Saskatchewan Environmental Quality Committee, West Side Subcommittee, represented by Bobby Woods	CMD 04-H9.13
Inter-Church Uranium Committee Educational Co-Operative, represented by Marion Penna	CMD 04-H9.14
Mary Pyne	CMD 04-H9.15
Mining Watch Canada	CMD 04-H9.16
Sakitawak Development Corporation	CMD 04-H9.17
Northern Village of La Loche, represented by Georgina Jolibois	CMD 04-H9.18
Northern Hamlet of Patuanak	CMD 04-H9.19