



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Record of Proceedings, Including Reasons for Decision

In the Matter of

Applicant Saskatchewan Research Council

Subject Application to extend the exemptions of the
Gunnar and Lorado sites from the
requirements of the *Nuclear Safety and
Control Act*

Public Hearing
Date December 10, 2009

Table of Contents

Introduction	1
Decision	2
Issues and Commission Findings	3
Status of the Sites	3
<i>Report on Site Conditions</i>	3
<i>Status Report on Licensing Including Environmental Assessment</i>	5
Risk to the Environment or the Health and Safety of Persons	6
Public Consultation	7
Security	10
Non-Proliferation and Safeguards	10
Application of the <i>Canadian Environmental Assessment Act</i>	11
Conclusion	11

Introduction

1. The Saskatchewan Research Council (SRC) has applied to the Canadian Nuclear Safety Commission¹ (CNSC) for the extension of temporary exemptions of the Gunnar and Lorado mine and mill sites from the requirements of the *Nuclear Safety and Control Act*² (NSCA). The current exemption expires on December 31, 2009. SRC sought an extension until December 31, 2014, to allow the necessary environmental assessment and licensing processes, which are currently underway, to be completed.
2. The Gunnar and Lorado sites are located in the Uranium City area in northern Saskatchewan. The Gunnar site includes the mine, the mill and the tailings area. The site was closed in 1964 with no decommissioning of the facility. The Lorado mill was closed in 1967 and decommissioned in 1990. The most significant feature remaining at the Lorado site is a tailings area that extends into Nero lake. The Gunnar site is accessible only by air and water, while the Lorado site is accessible from Uranium City by all-weather road.
3. In December 2001, the Commission granted a three-year exemption from licensing. In its decision, the Commission instructed CNSC staff to provide annual reports on site conditions and progress made with respect to licensing the Lorado and Gunnar sites. CNSC staff submitted reports at Commission meetings held in January 2003, February and November 2004 and December 2005.
4. In November 2004, the Commission granted an extension to exempt the Gunnar and Lorado sites from the requirements of the NSCA for a five-year period. Lorado was granted an exemption to allow time to complete the assessment of that site, to consider remedial options and to apply for a licence. Gunnar was exempted to allow the Province of Saskatchewan to complete its due diligence investigation to clarify the ownership of the site.
5. Following a cost sharing agreement between the governments of Canada and Saskatchewan (concluded with the September 2006 signing of the Canada-Saskatchewan Memorandum of Agreement on Funding) the Government of Saskatchewan signed an agreement with the SRC to manage and perform the remediation activities at the Gunnar site. In 2008, the Government of Saskatchewan signed a contract with the SRC to manage and perform the remediation activities at the Lorado site.
6. SRC submitted a project proposal to the CNSC to remediate the Gunnar site in April 2007 and a proposal to remediate the Lorado site in March 2009.

¹ 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 Statutes of Canada, S.C. 1997, c. 9.

Issue

7. In considering the application, pursuant to section 7 of the *Nuclear Safety and Control Act* and section 11 of the *General Nuclear Safety and Control Regulations*³, the Commission was required to decide if the exemption:
- a) might pose an unreasonable risk to the environment or the health and safety of persons;
 - b) might pose an unreasonable risk to national security; or
 - c) could result in a failure to achieve conformity with measures of control and international obligations to which Canada has agreed.

Public Hearing

8. The Commission, in making its decision, considered information presented for a public hearing held on December 10, 2009 in Ottawa, Ontario. The public hearing was conducted in accordance with the *Canadian Nuclear Safety Commission Rules of Procedure*.⁴ During the public hearing, the Commission received written submissions and heard oral presentations from CNSC staff (CMD 09-H15) and SRC (CMD 09-H15.1, CMD 09-H15.1A and CMD 09-H15.1B). The Commission also considered an oral intervention and written submission from Métis Nation-Saskatchewan (CMD 09-H15.2).

Decision

9. Based on its consideration of the matter, the Commission concludes that SRC is qualified to carry on the activities related to the ongoing environmental assessment and licensing processes. The Commission is also satisfied that SRC, 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 7 of the *Nuclear Safety and Control Act* and section 11 of the *General Nuclear Safety and Control Regulations*, extends the temporary exemption of the Gunnar and Lorado sites from the requirements of the *Nuclear Safety and Control Act* for a period of forty months. The exemption expires on April 30, 2013.

³ Statutory Orders and Regulations, S.O.R./2000-202

⁴ Statutory Orders and Regulations, S.O.R./2000-211.

10. With this decision, the Commission requests that CNSC staff prepare reports on the summary of remediation activities and safety performance at the Gunnar and Lorado sites. These reports shall be presented at a public proceeding of the Commission, approximately in January 2011 and in April 2012, respectively.

Issues and Commission Findings

11. In making its decision, the Commission considered a number of issues relating to SRC's qualification 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.

Status of the Sites

Report on Site Conditions

12. SRC, in its submission, provided background information on the Gunnar and Lorado sites, a description of the proposed project to develop and implement a remediation plan for the sites, and a report on the ongoing public consultation process.
13. SRC informed the Commission that environmental site inspections have been conducted in 1993 and 1996, and annually from 1998-2006; these inspections typically included physical inspections and gamma surveys of the buildings, facilities and grounds, as well as collecting water samples from locations on and around the sites. SRC added that the Gunnar Mine site had been subject to specific environmental site assessments in 2000, which had been conducted as part of Saskatchewan Environment's broader assessment of abandoned mines in northern Saskatchewan.
14. SRC also informed the Commission about the proposed project and associated interim schedule, and stated that the anticipated physical project at the Gunnar site would consist of the following activities:
 - Demolition of existing building, facilities and structures;
 - Appropriate disposal of materials resulting from demolition;
 - Assessment of installation of an appropriate cover on all or a portion of the exposed mill tailings;
 - Assessment of rehabilitation options of the existing waste rock piles;
 - Assessment of additional risk(s) as warranted;
 - General site clean-up;
 - Assessment of re-vegetation of areas of the rehabilitated site as required; and
 - Appropriate monitoring during and after rehabilitation.

15. With respect to the Lorado site, SRC presented the following list of anticipated activities:
 - Appropriate disposal of refuse from the site;
 - Relocation of the road access to bypass the former Lorado mill site;
 - Containment and stabilization of all or a portion of the exposed mill tailings;
 - Rehabilitation of affected aquatic environment as warranted;
 - Rehabilitation of additional risks as warranted;
 - General site clean-up; and
 - Appropriate monitoring during and after rehabilitation.
16. CNSC staff reported in its written submission on general conditions and licensing status of the sites. CNSC staff stated that it had accompanied provincial officials on inspections of the Gunnar and Lorado sites. CNSC staff added that, as part of the controls implemented by the province to limit exposure to hazards originating from the Gunnar and Lorado sites, fish and untreated water consumption advisory notices were issued to users of Beaverlodge and Martin lakes.
17. CNSC staff further reported that it had noted signs of human activity throughout the Gunnar site and that the airstrip and dock continue to be used by local outfitters to transport clients in and out of the surrounding area. CNSC staff added that the site attracts the attention of visitors to the area, and that they could be exposed to numerous and serious physical hazards since several of the wood frame buildings are in very poor structural condition. CNSC staff said that warning signs had been posted and measures had been taken to prevent entry into these buildings.
18. CNSC staff noted that the warehouse at the Gunnar site was being used by a local outfitter to maintain and store heavy equipment and boats. CNSC staff added that it had been informed that an occupational health officer from Saskatchewan Labour had issued a Notice of Contravention to the owner of the heavy equipment and vehicles. The notice ordered the outfitter to remove the equipment from the warehouse. It also advised that workers may have been exposed to friable asbestos present in the warehouse and required that the outfitter provide a report on the matter to Saskatchewan Labour officials.
19. With respect to the Lorado site, CNSC staff reported that there are no structures left standing at the former Lorado mill area, except for a few concrete pads. The main source of gamma radiation is the tailings area; since they are unconfined, the tailings become airborne and could reach nearby areas. The highway that separates the former mill site from the tailings area belongs to the Saskatchewan Ministry of Highways and Infrastructure and is used by local residents and occasionally by others travelling to other mining sites in the area. CNSC staff added that, other than usage of the road, there was little evidence of recent human activity at the site, and that signage and warning of the hazards at the Lorado site was in good condition.

20. CNSC staff noted that there was evidence that the on-land portion of the Lorado tailings was being washed away by surface runoff and transported and deposited into Nero Lake. There was no evidence of erosion from wave action that could potentially lead to failure of the land bridge that separates Nero Lake from Hansen Bay (Beaverlodge Lake).

Status Report on Licensing Including Environmental Assessment

21. CNSC staff informed the Commission that the type of licence to be issued to the Gunnar site would depend primarily on the inventory of nuclear substances to be stored under the licence, and on further decommissioning work that would be required under the licence. Based on a preliminary assessment of the tailings content and on the estimation of decommissioning work to be completed at this site, the Gunnar site is expected to be licensed as a “Nuclear Facility” under the NSCA (Class IB licence), following a public hearing process.
22. CNSC staff noted that the proposal to remediate the Gunnar site is currently being assessed under a joint federal-provincial environmental assessment (EA) process and that it has actively participated in meetings with Aboriginals, the public and other federal, provincial and municipal officials. CNSC staff added that it has been involved in the development and implementation of the consultation process established for the EA of this proposal.
23. CNSC staff expressed its expectations that the EA, related decisions and licensing of the Gunnar site could be completed in 2012.
24. With respect to the Lorado site, CNSC staff is of the opinion that the appropriate class of licence for the remediation of the site is a Waste Nuclear Substances Licence (WNSL). Pursuant to paragraph 37(2)(c) of the NSCA, this is a class of licence that may be issued by a Designated Officer.
25. CNSC staff expressed its expectation that a licence for the remediation of the Lorado site could be issued by or before the end of April 2013. In addition, CNSC staff expressed its confidence that the applicant would be able to obtain the required NSCA licences on or before the expiration of the recommended exemption period.
26. The Commission pointed out the difference between the requested five year extension, until December 31, 2014, and the extension recommended by CNSC staff until April 30, 2013. The Commission asked if SRC has any concerns about the timeframe proposed by CNSC staff. SRC responded that it cooperates very well with CNSC staff and that its original request for a five-year extension was based on concerns about the potential influence of factors beyond its control, such as weather conditions or efficiency of other agencies involved in the project.

27. The Commission expressed its expectations that the requested exemption period would be followed by the issuance of a licence, without further extensions.
28. The Commission sought more information on funding for the cleanups, once the regulatory requirements are obtained. CNSC staff responded that there is an agreement on cost sharing between the Province of Saskatchewan and the federal government. NRCan stated that it has a Memorandum of Agreement with the Province of Saskatchewan in which the original estimate for the work was \$24.6 million. NRCan added that, in the case of an increase in the cost estimate, there is a commitment that the issue will be reopened for discussion.

Risk to the Environment or the Health and Safety of Persons

29. Before making its decision, the Commission considered potential risks to the environment and the health and safety of persons related to extension of the temporary exemption of the Gunnar and Lorado sites from the requirements of the NSCA.
30. CNSC staff noted that the Gunnar and Lorado sites have been in their current condition for several decades and that the proposed exemption would allow the sites to remain in the same condition until licensing processes can be finalized. Based on current land uses, the awareness of local residents, the efforts of the Province of Saskatchewan to mitigate hazards and the remoteness of the sites, CNSC staff is of the opinion that the risk to the health and safety of humans or the environment will remain very low.
31. Explaining the existing physical, chemical and radiological hazards at the Gunnar and Lorado sites, CNSC staff reported that the major physical hazards at the Gunnar site are confined within the mine and mill area of the site and at the adjacent support facilities, where building material salvaged by intruders have rendered wood frame structures unstable. CNSC staff added that a significant amount of friable or loose asbestos in all buildings could easily become airborne.
32. CNSC staff added that most of the chemicals that were left behind at the Gunnar site were removed; however, there is still a large number of drums that remain in the mill and acid plant. CNSC staff stated that Gunnar tailings are unconfined and continue to contribute a contaminant load to the local environment. Two small intermittent streams continue to transport radionuclides from the waste rock disposal area to Lake Athabasca, while wind erosion and radon dissemination also contribute to the environmental contamination.
33. CNSC staff further reported that, at the Lorado site, the major contribution to the physical, chemical and radiological hazards come from the tailings area, where the presence of unconfined tailings pose a gamma radiation concern. A submerged portion of tailings extends into Nero Lake and radionuclides, heavy metals and acid drainage are eventually making their way into Beaverlodge Lake. CNSC staff added that the erosion of the tailings into Nero lake was still active. CNSC staff further added that it had noted elemental sulphur on the ground in the area where the former acid plant was located.

34. The Commission asked if in a case of an immediate health hazard, necessary action could be undertaken regardless of environmental concerns. CNSC staff responded that, in a case of an immediate health and safety concern, it has the powers to react appropriately.
35. The Commission inquired on options, other than an extended exemption, for a faster process for removing radiation and other physical hazards. CNSC staff responded that another option was an order that could be issued to SRC to continue with the works, and that it continually reviews whether to use that option or not. CNSC staff added that it considers, in consultation with legal counsel and with environmental assessment specialists, the possibility of a limited order to deal specifically with hazards related to buildings at the Gunnar site.
36. The Commission asked about hazards related to building material at the Gunnar site, specifically asbestos, and about the possibility of its immediate removal. SRC responded that it recognises hazards related to the asbestos and assured the Commission that it is acting diligently in terms of monitoring and efforts to block access to the remaining building structures. SRC added that it could not begin to remove this hazardous material from the site until it has all the necessary approvals in place, since the entire site falls under the environmental assessment and licensing.
37. The Commission expressed strong concerns regarding loose asbestos and PCP ballasts in fluorescent lights, and suggested that an occupational health and safety specialist assess the site immediately and establish a security perimeter. The Saskatchewan Ministry of Environment noted that it is prepared to address potential immediate issues related to safety or environmental protection. However, it would be logistically more plausible to do all the necessary work at once, when all preparations are completed, instead of applying a quick but temporary solution.
38. Based on the information presented above, the Commission is of the view that, while the measures taken to control risks are acceptable, the current conditions of the sites still pose concerns regarding the health and safety of the population in the area. The Commission directs CNSC staff to continue to closely monitor the situations and act immediately if the risks to the persons or the environment become unacceptable.

Public Consultation

39. Before making its decision, the Commission considered issues related to the process of public consultation associated with the ongoing environmental assessment of the Gunnar and Lorado sites.
40. SRC informed the Commission about stakeholder consultations and stated that its objective was to develop an effective engagement, consultation and communications program that will reflect the values, expectations and needs of the communities and stakeholders impacted by the projects. SRC added that traditional knowledge will be incorporated to accurately portray the knowledge and traditional land use of the indigenous people impacted by the projects. The traditional knowledge will be a key element in the preparation of the environmental impact statements.

41. SRC stated that it intends to continue to engage the general public of Uranium City, Camsell Portage, Fond du Lac, Stony Rapids, Black Lake, the Athabasca Land Use Plan Panel and the Athabasca Sub-Committee of the Northern Saskatchewan Environmental Quality Committee (NSEQC). Communication will continue throughout the development of the rehabilitation plan through scheduled public meetings in relevant communities.
42. SRC added that it intends to employ a number of different approaches to appropriately involve the general public, which will include the following:
 - Provision of appropriate information through community meetings, open houses or other media so that the public can be informed and participate effectively;
 - Creation of activities designed to promote a broader understanding of both potential impacts of the rehabilitation, and proposed mitigation measures to reduce potential negative impacts associated with the rehabilitation activities;
 - Involvement of the local public in issues [e.g. contribution of traditional knowledge towards the determination of Valued Ecosystem Components (VECs)] and rehabilitation options;
 - Provide a forum for meaningful discussion of enhanced regional business, training and employment opportunities;
 - Receive information from and respond in a timely manner to issues raised by the public; and
 - Inform participants of results and decisions in a timely and meaningful manner.
43. SRC provided information on the formation of a “Project Review Committee” (PRC) with the purpose to provide a forum that ensures the involvement of local communities affected by the project. A set of PRC guidelines was collaboratively developed with the participation of elected officials from the following local communities:
 - Prince Albert Grand Council;
 - Fond du Lac First Nation;
 - Black Lake First Nation;
 - Hatchet Lake First Nation;
 - Settlement of Uranium City;
 - Settlement of Camsell Portage;
 - Hamlet of Stony Rapids; and
 - Métis Local Uranium City #50.
44. CNSC staff informed the Commission that the Gunnar and Lorado sites continue to have a relatively high public profile in the surrounding communities. First Nation peoples and Métis living in the area of Uranium City and surrounding areas are showing considerable interest in this project. CNSC staff added that the Mikisew Cree First Nation expressed concerns about the lack of progress towards cleaning-up the site and adverse impacts on the environment, human health and on lands used to carry out traditional activities.

45. CNSC staff noted that SRC disseminates in satisfactory way information on the Gunnar and Lorado projects to interested parties, and that the information is responsive to the interest expressed by Aboriginal peoples.
46. Métis Nation – Saskatchewan (MN-S), in their intervention, expressed expectations that the proposed project could have an important role in further development of the neighbouring communities. However, they also expressed a number of concerns regarding local employment and wages, compensation for transferring traditional knowledge and noted the lack of funding and capacity to participate in environmental assessment.
47. The Commission inquired about the SRC’s local employment policy and average wages in the area. SRC responded that they have about 360 employees in the area and that its human resources had reviewed standard market wages for the kind of services it asks for. Asked for a comment, CNSC staff stated that wages paid are a contractual issue between SRC and persons who agreed to work for them, and are not regulated by the CNSC.
48. MN-S questioned the quality of public consultations conducted by SRC and noted that their representatives have not participated in recent meetings of PRC and that the related information, with the exception of the “Power Point” presentations prepared for the PRC meetings, have not been disseminated.
49. The Commission asked for an explanation for a long gap between the meetings of the PRC. SRC responded that it has difficulties bringing all parties together and informed the Commission about its efforts to provide transportation of all parties and organize a meeting in Saskatoon. The Commission pointed out the example of Cameco organizing similar meetings and found it unacceptable that SRC is not able to organize such a meeting for 16 months.
50. The Commission also inquired about methods used by SRC to collect traditional knowledge and engagement of communities for this purpose. SRC responded that it had engaged experts in the field through AECOM, a company that provides technical and management support services, for this purpose. SRC stated that the formal collection of traditional knowledge has not started and that related protection of rights will be part of that process.
51. The Commission asked SRC for reasons to engage outside consultants to work on gathering traditional knowledge, instead of local indigenous people. SRC explained that AECOM is the consulting company that collects the information for the environmental assessment process. Part of that process is traditional knowledge and AECOM had granted a subcontract to Albert and Associates which had hired a standing member of Fond-du-Lac First Nations with extensive experience in gathering traditional knowledge. SRC noted that the knowledge will be gathered through interviews with local Elders and Chiefs of the region and added that a letter had been sent to MN-S on October 28, 2009, to determine how to proceed effectively with the traditional knowledge studies. Based on the information summarized, the Commission is of the view that public consultation activities are appropriate.

52. The Commission is of the view that SRC has to make sure that sufficient knowledge is obtained, that the length of this process does not cause further extensions of the exemption from the NSCA and that native and indigenous peoples communities are satisfied that the job is done properly. The Commission notes that it does not have the authority to provide funding for members of the public who wish to participate in environmental assessments.

Security

53. CNSC staff informed the Commission that nuclear substances located at the sites for which an exemption is being requested are limited to natural uranium and those substances that are naturally found in conjunction with uranium (uranium decay products); therefore, there is no nuclear material as defined in the *Nuclear Security Regulations*, or any prescribed equipment or prescribed information at any of these sites. CNSC staff concluded that the exemptions would not pose any risk to national security.
54. The Commission inquired on security of the sites and prevention of salvage of the materials remaining on the sites. CNSC staff responded that most of the salvageable materials have already been removed. With respect to other unauthorized activities at the sites, CNSC staff noted that they had been terminated after the Saskatchewan Ministry of Labour had issued notices of contravention.
55. Based on the information presented, the Commission acknowledges the efforts made by SRC to control access to the site and considers them to be acceptable. The Commission, however, considers that there are still risks to members of the public who might enter the site, and requests CNSC staff and SRC to continue to closely monitor the site and take further action if necessary.

Non-Proliferation and Safeguards

56. The CNSC's regulatory mandate includes ensuring conformity with measures required to implement Canada's international obligations under the Treaty on the Non-Proliferation of Nuclear Weapons. Pursuant to the Treaty, Canada has entered into safeguards agreements with the IAEA.
57. CNSC staff stated that it had examined the proposed exemptions and concluded that the exemptions would not impair Canada's continuing ability to conform with international obligations to which Canada has agreed.
58. Based on the above information the Commission is satisfied that SRC has made adequate provisions in the areas of safeguards and non-proliferation that are necessary for maintaining national security and measures necessary for implementing international agreements to which Canada has agreed.

Application of the *Canadian Environmental Assessment Act*

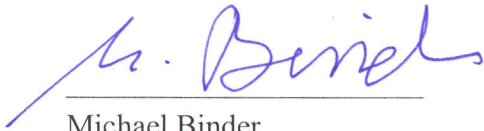
59. Before making a decision, the Commission must be satisfied that all applicable requirements of the *Canadian Environmental Assessment Act*⁵ (CEAA) have been fulfilled.
60. CNSC staff reported that the requested exemptions, pursuant to section 7 of the NSCA, do not require an authorization of the type prescribed in paragraph 5(1)(d) of CEAA. Therefore, there is no CEAA "trigger" associated with the requested exemptions and there is no requirement for a federal environmental assessment.
61. The Commission determined that there was no requirement for an Environmental Assessment pursuant to subsection 5(1) of the CEAA. Therefore, the Commission is satisfied that all applicable requirements of the CEAA have been fulfilled.

Conclusion

62. The Commission has considered the information and submissions of CNSC staff, the applicant and all participants as set out in the material available for reference on the record, as well as the oral and written submissions provided or made by the participants at the hearing.
63. The Commission concludes that an environmental assessment of the proposed continued operation of the facility, pursuant to the *Canadian Environmental Assessment Act* is not required.
64. The Commission concludes that the extended exemption of the Gunnar and Lorado sites from the requirements of the *Nuclear Safety and Control Act* meets the requirements of section 11 of the *General Nuclear Safety and Control Regulations*.
65. Therefore, the Commission, pursuant to section 7 of the *Nuclear Safety and Control Act*, extends the temporary exemption of the Gunnar and Lorado sites from the requirements of the *Nuclear Safety and Control Act* for a period of forty months. The exemption expires on April 30, 2013.
66. The Commission directs SRC to provide for continuous monitoring of the sites and all measures necessary to reduce physical, radiological and chemical risks to health and safety of persons and environmental protection. SRC should, by the time of completion of the environmental assessment, prepare and present to the CNSC a list of activities with a timeline for cleanup and decommissioning.

⁵ Statutes of Canada, S.C. 1992, c. 37.

67. With this decision, the Commission requests that CNSC staff prepare reports on the summary of remediation activities and safety performance at the Gunnar and Lorado sites. These reports shall be presented at a public proceeding of the Commission, approximately in January 2011 and in April 2012, respectively.



Michael Binder
President,
Canadian Nuclear Safety Commission

MAR 17 2010

Date