



Canadian Nuclear  
Safety Commission

Commission canadienne  
de sûreté nucléaire

## Record of Proceedings, Including Reasons for Decision

In the Matter of

Person Named  
in or Subject to  
Order

Saskatchewan Research Council

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Subject

Review by the Commission of the Designated  
Officer Order Issued on June 18, 2010 with  
Respect to the Deterioration of the Gunnar Mine  
Site in Northern Saskatchewan

Date of  
Opportunity to  
be Heard

July 5, 2010

**RECORD OF PROCEEDINGS**

Person named in or subject to order: Saskatchewan Research Council

Address/Location: 125 – 15 Innovation Blvd., Saskatoon, Saskatchewan, S7N 2X8

Purpose: Review by the Commission of the Designated Officer Order issued on June 18, 2010 with respect to the deterioration of the Gunnar Mine site in northern Saskatchewan

Order Issued: June 18, 2010

Date of Opportunity to be Heard: July 5, 2010

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

Members present: M. Binder, Chair  
A.R. Graham M. J. McDill  
R. J. Barriault D.D. Tolgyesi

Secretary: M.A. Leblanc  
Recording Secretary: M. Young  
Senior General Counsel: L. Thiele

<b>Licensee Named in or Subject to Order Represented By</b>	<b>Document Number</b>
• J. Muldoon, Vice President, Environment and Forestry	
<b>CNSC staff</b>	<b>Document Number</b>
• D. Howard • C. David	CMD 10-H114

**Designated Officer Order:** Replaced by Commission Order

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## **Introduction**

1. On June 18, 2010, a Canadian Nuclear Safety Commission<sup>1</sup> (CNSC) Designated Officer issued an Order to Saskatchewan Research Council (SRC) with respect to the deterioration of the Gunnar Mine site, which is located south of Uranium City in northern Saskatchewan. The Designated Officer Order (Order) required SRC to immediately comply with specific actions and measures identified in the Order. SRC was ordered to:
  - conduct an assessment of the occupational health and safety risks of all buildings and structures at the Gunnar site;
  - take steps to secure the site; and
  - take down buildings and structures at the Gunnar site that pose a physical risk to the health and safety of the public.
2. Pursuant to subsection 37(6) of the *Nuclear Safety and Control Act*<sup>2</sup> (NSCA), the Designated Officer referred the Order to the Commission for review. Pursuant to paragraph 40(1)(d) of the NSCA, the Commission provided an opportunity to be heard to SRC, as person subject to and named in the Order.
3. This *Record of Proceedings* describes the Commission's consideration of SRC's submission on the Order, the review of the Order and the reasons for the decision.

## Issue

4. In its review of the Order, the Commission is required to confirm, amend, revoke or replace the Order, pursuant to subsection 37(6) of the NSCA.

## Public Hearing

5. Pursuant to section 22 of the NSCA, the President of the Commission established a Panel of the Commission to provide the opportunity to be heard. SRC availed itself of the opportunity to be heard from Saskatoon, Saskatchewan by teleconference. The Commission, in making its decision, considered information presented for a public hearing held on July 5, 2010 in Ottawa, Ontario. The public hearing was conducted in accordance with the *Canadian Nuclear Safety Commission Rules of Procedure*<sup>3</sup>. The Commission considered the Designated Officer Order, including information referred to in the Order, and received a written submission from CNSC staff (CMD 10-H114). The Commission also heard oral presentations from CNSC staff and SRC.

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

<sup>2</sup> Statutes of Canada (S.C.) 1997, chapter (c.) 9.

<sup>3</sup> Statutory Orders and Regulations (S.O.R./2000-211.

## Decision

6. Based on its consideration of the matter, as described in more detail in the following sections of this *Record of Proceedings*,

the Commission, pursuant to subsection 37(6) of the *Nuclear Safety and Control Act*, replaces the Designated Officer Order issued to Saskatchewan Research Council on June 18, 2010 with the Commission Order attached to this *Record of Proceedings*.

## Issues and Commission Findings

7. In reviewing the Order under subsection 37(6) of the NSCA, the Commission considered the reasonableness of the Order. In this regard, the Commission considered the actions and measures identified in the Order and the information on which the Order was based, as identified in the Order. In this regard, and as elaborated further below, the Commission is satisfied that the Designated Officer, based on the information available, had sufficient evidence and a reasonable basis for issuing an Order to protect the health and safety of persons and the environment until the matter could come before the Commission.

### *Background*

8. The Gunnar Mine site includes the mine, the mill and the tailings area. It was operated by Gunnar Mining Limited from 1955 to 1963. The mine officially closed in 1964 with no decommissioning. At this time, most of the buildings erected remain standing on the site.
9. In 2002, the Province of Saskatchewan informed the CNSC that it would apply for a licence for the Gunnar Mine site and that it was attempting to negotiate a cost-sharing agreement with Natural Resources Canada (NRCan) for the decommissioning of the site. The Province indicated that it did not anticipate submitting an application for a licence until it had secured an appropriate level of funding to allow for the remediation of the site. The Canada-Saskatchewan Memorandum of Agreement on funding was signed in September 2006.
10. In 2004, a five-year exemption from licensing was granted by the Commission to allow the Province to complete its licensing process, but, in its decision, the Commission instructed CNSC staff to maintain close oversight of the pre-licensing activities to ensure that a licence application would be received as expeditiously as possible.

11. In November 2006, the Government of Saskatchewan signed an agreement with SRC to manage and perform the remediation activities at the site. SRC submitted a project proposal to the CNSC in April 2007.
12. On December 10, 2009, the Commission considered SRC's application to the Commission to extend the exemption of the Gunnar Mine site from the requirements of the NSCA until December 31, 2014<sup>4</sup>. The Commission decided to extend the exemption until April 30, 2013 and expressed concerns regarding the condition of the site and the health and safety of the population in the area. The Commission instructed SRC to provide for continuous monitoring of the site and to take all measures necessary to reduce physical, chemical and radiological risks to the health and safety of persons. The Commission suggested that SRC have an occupational health and safety specialist assess the site immediately and that SRC establish a security perimeter.
13. The Commission also directed CNSC staff to continue to closely monitor the situation and act immediately if the risks to persons or the environment became unacceptable.

*Information on Which the Order was Based*

14. CNSC staff traveled to the Gunnar Mine site for an inspection on June 8, 2010. During the inspection, CNSC staff witnessed continued unauthorized human activity at the site and observed that barriers installed to prevent entry into the mill and acid plant buildings had been breached. As relayed to the Commission on July 5, 2010, CNSC staff observed:
  - continued unauthorized human activity at the site, including the transportation of people from the dock to, it is suspected, the airfield, and the storage of heavy equipment and watercraft on the former soccer field;
  - breached barriers at the mill and acid plant buildings; and
  - a drum labelled as containing carbon tetrachloride being stored in the maintenance building.
15. On June 10 and 11, 2010, CNSC staff attended a workshop for regulators hosted by SRC in Saskatoon, Saskatchewan. CNSC staff noted that, at the workshop, SRC revealed that little action had been taken to address the physical and chemical hazards at the Gunnar Mine site, and that SRC has devoted little effort towards addressing the high-risk physical and chemical hazards since the Commission hearing held in December 2009. SRC did not provide any indication as to when such work would be completed. CNSC staff noted that the majority of SRC's efforts have been directed towards tailings management and insufficient progress has been made regarding physical hazards.

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<sup>4</sup> Refer to the Record of Proceedings on *Application to extend the exemptions of the Gunnar and Lorado sites from the requirements of the Nuclear Safety and Control Act*, hearing date December 10, 2009.

*Actions and Measures of the Order*

16. The Order required that SRC take the following actions and measures:
  1. SRC shall immediately conduct an assessment of the occupational health and safety risks of all buildings and structures at the Gunnar Mine site;
  2. SRC shall immediately take all reasonable steps to secure the Gunnar Mine site;  
and
  3. SRC shall immediately take down all buildings and structures at the Gunnar Mine site that pose a physical risk to the health and safety of the public.
17. CNSC staff stated that it issued the Order to accelerate the removal of hazards at the Gunnar Mine site, including physical hazards (building structures and overhead hazards) and chemical hazards.
18. The representative for SRC requested that the Commission amend the actions and measures of the Order. The representative for SRC expressed the view that the terms “secure” and “immediately” in the Order should be better defined. The representative for SRC stated that SRC will comply with the Order and cooperate with CNSC staff in order to carry out the actions and measures referred to in the Order.
19. The representative for SRC presented information regarding the work SRC has performed at the Gunnar Mine site. The representative for SRC stated that SRC has erected signs, conducted inspections of the site as part of the environmental assessment process, welded and barricaded doors, and re-barricaded doors in the event of break-in. The representative for SRC explained that SRC does not have the authority to control access to the site as it is on public lands, and noted that SRC has requested that the Government of Saskatchewan assist in securing the site. The representative for SRC noted that since the Order was issued, SRC has increased surveillance at the site, hired a contractor to re-seal the doors to buildings and has increased signs and fencing at the site. The representative for SRC further noted that SRC is in the process of hiring a contractor to conduct an Occupational Health and Safety review and demolition strategy.
20. The representative for SRC further stated that the physical and chemical hazards have existed at the site since 1964. The representative for SRC noted that CNSC staff’s position during the December 2009 hearing was that “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.”<sup>5</sup>

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<sup>5</sup> Refer to the Record of Proceedings on *Application to extend the exemptions of the Gunnar and Lorado sites from the requirements of the Nuclear Safety and Control Act*, hearing date December 10, 2009, paragraph 30.

21. The representative for SRC, noting that the environmental assessment for the site is currently underway, presented its expectations regarding timelines for demolishing and removing buildings from the site. The representative for SRC explained that, due to the site's remote location, it is not possible to effectively transport heavy demolition equipment to the site at any time of the year. The representative for SRC stated that SRC expects to perform demolition work in the summer of 2012. The representative for SRC noted that a demolition strategy for the Gunnar Mine site that was prepared by a third party in March 2006, before SRC had become involved with the project, is being used as part of the environmental assessment process. The representative for SRC stated that, as a result of the Order, SRC would endeavour to start work on removing immediate hazards in the spring of 2011.
22. The Commission asked if SRC has fulfilled its obligation to protect the public. The representative for SRC responded that SRC could not demolish structures at the Gunnar site until the appropriate regulatory permits had been obtained, following the completion of the environmental assessment. The Commission did not accept this reasoning from SRC. The Commission explained that the *Canadian Environmental Assessment Act*<sup>6</sup> (CEAA) allows immediate work to be carried out in the interest of public health or safety. Therefore, the Commission concludes that the CEAA does not prevent this order from being issued.
23. The Commission asked what immediate work could be carried out at the site to remove the hazards. CNSC staff responded that, although the site's remote location may cause issues regarding access for heavy demolition equipment, SRC can secure the site and improve the fencing around buildings until equipment can be brought in. CNSC staff noted that overhead hazards can likely be removed and SRC should conduct a structural assessment as soon as possible. In addition, CNSC staff stated that SRC needs to conduct a chemical inventory and have the drum containing carbon tetrachloride safely assessed. The representative for SRC agreed that it would be possible for SRC to take these actions without the need for heavy equipment.
24. The Commission noted that the December 2009 decision referred to an outfitter who had been ordered by Saskatchewan Labour to remove equipment and vehicles from the warehouse at the Gunnar Mine site due to the risk of exposure to asbestos. The Commission sought further information on this matter. CNSC staff responded that although the equipment and vehicles had been removed from the warehouse, they have remained at the site. The Commission asked whether the outfitter had provided the required report to Saskatchewan Labour officials. CNSC staff responded that it would obtain this information and provide it to the Commission at a later date.<sup>7</sup>

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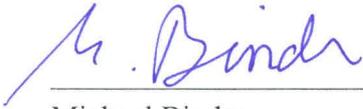
<sup>6</sup> Statutes of Canada (S.C.) 1992, chapter (c.) 37.

<sup>7</sup> Following the hearing, CNSC staff indicated to the Commission Secretary that they intend to provide the requested information to the Commission by the end of July 2010.

25. The Commission expressed concerns that there may be communication issues between SRC and regulatory officials. The Commission directed CNSC staff to work with SRC in order for SRC to develop an appropriate plan of action regarding the immediate hazards at the Gunnar Mine site. The representative for SRC responded that SRC would work with CNSC staff in this manner. CNSC staff agreed and noted that the purpose of the Order is to address immediate hazards and not remediate the entire site.
26. Following the proceeding, CNSC staff presented the Commission with a list of planned activities and timelines for their completion. The list was prepared by CNSC staff and SRC and contains activities to be completed by October 31, 2010 and October 31, 2011. The Commission considered this additional information in making its decision regarding the review of the Order.
27. The Commission decides to replace the Order in order to specify the work that needs to be done to address the immediate hazards. The Commission recognizes the timelines established by SRC and CNSC staff and replaces the Order by ordering SRC to perform the following actions and measures:
  - perform and submit an Occupational Health and Safety assessment by no later than August 31, 2010;
  - perform and submit a structural assessment of all buildings and structures by no later than September 30, 2010;
  - fence off buildings and structures that fail the structural assessment by no later than October 31, 2010;
  - secure all openings and post adequate signage by August 31, 2010;
  - remove all overhead hazards by no later than October 31, 2010;
  - perform and submit an inventory of hazardous substances and materials by no later than September 30, 2010;
  - collect all hazardous substances and secure them under lock and key by no later than October 31, 2010;
  - submit, by no later than October 15, 2010, a plan for demolishing, during the year 2011, buildings and structures that fail the structural assessment;
  - conduct monthly site visits, weather and lake-ice conditions permitting, until the site is placed in a safe state and quarterly thereafter;
  - submit a waste management plan for the temporary storage of all wastes, including demolition waste, by no later than January 31, 2011; and
  - take down buildings and structures that fail the structural assessment by no later than October 31, 2011.

**Conclusion**

28. The Commission has considered the information and submissions from SRC and CNSC staff as presented in the material available for reference on the record for the proceeding.
29. Based on the above information, the Commission agrees with CNSC staff's conclusions that SRC has failed to address high risk physical and chemical hazards at the Gunnar Mine site.
30. Thus, the Commission, pursuant to subsection 37(6) of the NSCA, replaces the Designated Officer Order issued to SRC on June 18, 2010 with the Commission Order attached to this *Record of Proceedings*.



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Michael Binder  
President,  
Canadian Nuclear Safety Commission

JUL 23 2010

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Date



**IN THE MATTER OF AN ORDER ISSUED BY A DESIGNATED OFFICER  
PURSUANT TO THE *NUCLEAR SAFETY AND CONTROL ACT* ON JUNE 18,  
2010 REGARDING THE DETERIORATION OF THE GUNNAR MINE SITE  
IN NORTHERN SASKATCHEWAN**

**ORDER BY CANADIAN NUCLEAR SAFETY COMMISSION REPLACING  
DESIGNATED OFFICER ORDER PURSUANT TO SUBSECTION 37(6) OF  
THE *NUCLEAR SAFETY AND CONTROL ACT***

ORDER NO. 10-1

**Date of Commission Order:** July 23, 2010

**TO:** Mr. Joe Muldoon  
Vice President, Environment and Forestry  
Saskatchewan Research Council  
125-15 Innovation Blvd  
Saskatoon, SK S7N 2X8  
Canada  
(306) 933-5400

**PURSUANT** to an opportunity to be heard conducted in Ottawa on July 5, 2010, and following representations made by Saskatchewan Research Council and staff of the Canadian Nuclear Safety Commission, the Canadian Nuclear Safety Commission has replaced, pursuant to subsection 37(6) of the *Nuclear Safety and Control Act* (NSCA), the Order issued on June 18, 2010 by the Designated Officer under paragraph 37(2)(f) and subsection 35(3) of the NSCA.

**THE ORDER** of the Commission orders the following actions and measures:

1. Saskatchewan Research Council shall perform and submit an occupational health and safety assessment of the Gunnar Mine site to Mr. Don Howard, the Director, Wastes and Decommissioning Division, of the Canadian Nuclear Safety Commission, by no later than August 31, 2010.
2. Saskatchewan Research Council shall perform and submit a structural safety assessment of all buildings and structures of the Gunnar Mine site to Mr. Don Howard, the Director, Wastes and Decommissioning Division, of the Canadian Nuclear Safety Commission, by no later than September 30, 2010.
3. Saskatchewan Research Council shall fence off buildings and structures of the Gunnar Mine site that fail the structural safety assessment by no later than October 31, 2010.

4. Saskatchewan Research Council shall immediately secure all openings to the buildings at the Gunnar Mine site and post adequate signage to protect the safety of the public. CNSC staff inspected the Gunnar Mine site on July 20, 2010 to verify that all openings to buildings were fenced off. Any inadequacies identified during the July 20, 2010 inspection shall be corrected by no later than August 31, 2010.
5. Saskatchewan Research Council shall remove all overhead hazards at the Gunnar Mine site by no later than October 31, 2010.
6. Saskatchewan Research Council shall perform and submit an inventory of hazardous substances and materials found throughout the Gunnar Mine site to Mr. Don Howard, the Director, Wastes and Decommissioning Division, of the Canadian Nuclear Safety Commission, by no later than September 30, 2010.
7. Saskatchewan Research Council shall collect all hazardous substances and secure them under lock and key by no later than October 31, 2010.
8. Saskatchewan Research Council shall submit to Mr. Don Howard, the Director, Wastes and Decommissioning Division, of the Canadian Nuclear Safety Commission, by no later than October 15, 2010, a plan for demolishing, during the year 2011, buildings and structures that fail the structural safety assessment.
9. Saskatchewan Research Council shall conduct monthly site visits to the Gunnar Mine site, weather and lake-ice conditions permitting, until the site is placed in a safe state and quarterly thereafter.
10. Saskatchewan Research Council shall submit a waste management plan for the temporary storage of all wastes, including demolition waste, which will be generated by the activity described in Item 11 below, to Mr. Don Howard, the Director, Wastes and Decommissioning Division, of the Canadian Nuclear Safety Commission, by no later than January 31, 2011.
11. Saskatchewan Research Council shall take down buildings and structures at the Gunnar Mine site that fail the structural safety assessment by no later than October 31, 2011.



Michael Binder  
President,  
Canadian Nuclear Safety Commission

JUL 23 2010

Date