



**CMD 26-H102.4**

Date: 2026-02-17

**Written Submission from the  
Radiation Safety Institute of  
Canada**

**Mémoire de  
l'Institut de radioprotection du  
Canada**

In the matter of

À l'égard du

**Saskatchewan Research Council**

---

Application to renew licence for the Gunnar  
Mine Remediation Project

**Saskatchewan Research Council**

---

Demande visant à renouveler son permis  
pour le projet de remise en état du site  
Gunnar

**Hearing in Writing**

**Audience par écrit**

May 2026

Mai 2026



# **Review of the Saskatchewan Research Council's Application to Renew its CNSC Licence for the Gunnar Historic Uranium Mine and Mill Site**

---

for

**Canadian Nuclear Safety Commission**  
(Reference: Form Number: *PFP 2025 GUN-01*)

by

**Radiation Safety Institute of Canada**

---



**Radiation Safety  
Institute of Canada**  
Institut de radioprotection du Canada

Report Date: 13 February 2026

*Submitted to:*

*Participant Funding Program Administrator  
Canadian Nuclear Safety Commission  
P.O Box 1046, Station B  
280 Slater Street  
Ottawa, ON K1P 5S9  
Tel: 1-800-668-5284*

---

## Contents

|     |   |   |
|-----|---|---|
| 1   | Introduction .....  | 3 |
| 1.1 | About the Radiation Safety Institute of Canada .....          | 3 |
| 1.2 | Project .....   | 3 |
| 1.3 | Background: .....   | 3 |
| 2   | Review of Documentation Related to Licence Application .....  | 4 |
| 2.1 | Overview of Application .....                                 | 4 |
| 2.2 | Status of SRC's Prime Contractor for Site Remediation .....   | 5 |
| 2.3 | Uncertainty with respect to remediation objectives used ..... | 6 |
| 2.4 | Lack of Contamination Objectives .....                        | 7 |
| 2.5 | CNSC Inspection Ratings .....                                 | 8 |
| 2.6 | Worker Doses and incidents .....                              | 8 |
| 2.7 | Follow-up Monitoring Program .....                            | 9 |
| 2.8 | Comment: Pad Calibration .....                                | 9 |
| 3   | Discussion .....  | 9 |

# 1 Introduction

## 1.1 About the Radiation Safety Institute of Canada

Founded in 1980, the Radiation Safety Institute of Canada (RSIC) is an independent, national organization dedicated to promoting and advancing radiation safety in the workplace, in the environment, and in the community. Our commitment to the principle of “good science in plain language”<sup>®</sup> underpins everything we do. The Radiation Safety Institute of Canada is incorporated under federal statute as a not-for-profit corporation and is also a registered charity (number: 106861511RR001).

The Radiation Safety Institute of Canada offers a broad range of educational, technical, and scientific services to businesses, government organizations, health care providers, communities, and individuals across Canada and around the world. The Institute is known for the high quality and scientific integrity of its work, and the practical and helpful assistance of its staff. The Institute’s independent information service receives hundreds of calls and e-mails every year, for information and assistance on workplace radiation questions.

## 1.2 Project

The *Radiation Safety Institute of Canada* (Institute) applied for and is to receive funding through CNSC’s Participant Funding Program (PFP). This funding is intended to assist in the review of Saskatchewan Research Council’s (SRC’s) application to renew its “*Nuclear Substances and Radiation Devices Licence NSL-W5-3151.00/2026 – Saskatchewan Research Council Gunnar Legacy Uranium Mine Site*”. The Institute agreed to a review SRC’s application and associated documents, including CNSC and SRC Commission Member Documents and comment on RSIC’s areas of interest.

*This document summarizes the findings and recommendations for the Commission.*

## 1.3 Background:

SRC provides information to the public about its Gunnar Mine and Mill Site related work at the following website:

The project CLEANS section of the SRC corporate website ([www.src.sk.ca/project-cleans](http://www.src.sk.ca/project-cleans)) provides information, including videos, that support the idea that significant progress in remediation has been accomplished at the Gunnar site and that SRC is communicating well with local stakeholders.

The prime contractor also provides some relevant background about work on site:

[Gunnar Other Site Aspects Remediation | Projects | QM Environmental](#)

## 2 Review of Documentation Related to Licence Application

The Institute downloaded the following files from the related CNSC website (<https://www.cnsccsn.gc.ca/eng/the-commission/hearings/cmd/>) on 3 February 2026:

### May 2026 hearing in writing

Published on December 15, 2025

- [CMD 26-H102 – Submission from CNSC Staff \(PDF, 108 pages, 2.59 MB\)](#)
- [CMD 26-H102-Ref1 – Reference Package from CNSC Staff \(PDF, 47 pages, 1.73 MB\)](#)

Published on November 17, 2025

- [Revised Notice of Hearing in Writing – Saskatchewan Research Council’s application to renew licence for the Gunnar Mine Remediation Project \(PDF, 3 pages, 848 KB\)](#)

Published on September 11, 2025

- [Record of Decision – Commission Ruling on Request to Protect Confidential Information – Saskatchewan Research Council \(PDF, 3 pages, 154 KB\)](#)

Published on August 5, 2025

- [Notice of Hearing in Writing and Participant Funding – Saskatchewan Research Council’s application to renew licence for the Gunnar Mine Remediation Project \(PDF, 3 pages, 108 KB\)](#)

Published on July 31, 2025

- [Saskatchewan Research Council - Request for Confidentiality on the Application for Renewal of the Gunnar Legacy Mine Site Nuclear Substance Licence \(PDF, 5 pages, 1.54 MB\)](#)
- [Saskatchewan Research Council - Revised Request for Confidentiality on the Application for Renewal of the Gunnar Legacy Mine Site Nuclear Substance Licence \(PDF, 72 pages, 2.3 MB\)](#)
- [CNSC Staff - Comments on the Request for Confidentiality on the Application for Renewal of the Gunnar Legacy Mine Site Nuclear Substance Licence \(PDF, 3 pages, 243 KB\)](#)

Published on July 25, 2025

- [Application for Renewal of the Gunnar Legacy Mine Site Nuclear Substance Licence \(PDF, 57 pages, 9.04 MB\)](#)

### 2.1 Overview of Application

The application is complete, with responses to all section requirements. With the revised request for confidentiality (CMD 24-H108, 72 pages), some relevant documents have been provided by SRC in redacted or summarized form. The reasons provided by the SRC for the request for confidentiality are reasonable, although the summaries are of limited use with little reviewable detail. Redacted versions might have provided a better means of understanding if the full documents met expectations but would have required significantly more effort by SRC to fully redact “confidential information of a commercial nature” in these documents.

SRC is currently in Phase 2 of the remediation project (i.e., “Activities related to the remediation of the site (i.e., covering of tailings areas, waste rock management, and demolition debris management”). The 5-year licence renewal requested would encompass completion of Phase 2. Sometime during this period, SRC expects to apply for a licence amendment to begin Phase 3 (i.e., “Long-term monitoring and surveillance of the site”).

The remaining Phase 2 activities proposed for the new licensing period are described in section 4.2 of the application. All seem reasonable and within the capabilities shown by SRC and their contractors to perform safely. The description of Phase 3 activities, “long-term monitoring and surveillance” of the site, is a critical part of the application. It is noted that this program may need to be revised depending on the comments of stakeholders. *Should the licence renewal be issued, CNSC staff will still need to review and approve any changes to Phase 3 activities that are made based on comments from other stakeholders.*

Section 5.3 of the *CNSC Staff Submission* notes that “SRC has shared that once the performance of the site in Phase 3 is demonstrated over a number of years, they intend to apply for the site to be transferred into Saskatchewan’s Institutional Control Program”. One of the key questions

affecting the future of the site is the scope of the environmental monitoring program to be put in place during the term of the renewed licence and, after Phase 2 completion, the program in place for Phase 3. It is RSIC's position that transfer to institutional control, when shown to be appropriate, is highly desired. Once the already low radiation risks are appropriately managed and a suitable plan is in place for long-term site management, removing the site from CNSC licensing requirements would be reasonable, given the low radiation risks involved, which should determine the need for CNSC involvement.

It is stated that *"Upon completion of remediation activities, access to site will be open to the public. Signs will be installed to inform the public about fish advisory, drinking water advisory, areas where not to drive/dig, etc. ... The airstrip will be open for use by members of the public (e.g., fishing lodges in the area)."* It is crucial to remember that, while there will always be some level of radiation risk on site, if reduced to a level that is not significantly different from many other areas in Canada, it therefore may not require any CNSC oversight as it does not represent any significant risk to health.

*Several issues were noted during RSIC's review of the application and associated documentation, described below.*

## **2.2 Status of SRC's Prime Contractor for Site Remediation**

CMD 26-H102-REF1-CNSC Staff Submission was downloaded and reviewed. This document includes a series of communications between CNSC staff and licensee (i.e., SRC) representatives. One communication of concern is a letter to Mr. Burton of the CNSC, dated August 21, 2025, from David Sanscartier of SRC. The letter relates that SRC's prime contractor performing remediation work on site had filed for protection under the *Companies' Creditor Arrangement Act* and had stopped work on site as of 14 July 2025. The company involved removed their crew from site, resulting in a delay in remediation work, presumably until financial issues can be resolved or a new contractor hired. This leaves a radiation safety related gap, as the company involved was responsible for the monitoring of radiation exposure to workers and implementing the radiation protection plan. It is not clear that all records related to performance of the Radiation Protection Plan, including records of worker doses, are currently accessible to SRC. This may suggest a lack of control of site radiation protection records for the 2025 season. If SRC cannot access such records, they will not be able to take action if either a regulatory limit or an action limit was exceeded.

SRC's application document itself, originally submitted on 23 May 2025 (i.e., before the issues with the prime contractor arose), *"assumes that remediation activities will be completed by the time of renewal of the licence NSL-W5-3151.00/2026. Contractors' work on Site is anticipated to be completed in fall 2025"*. Based on the information regarding the financial issues with the prime contractor reported above, this assumption does not appear to be correct.

In section 5.3 of the licence application, it is noted “A contractor will no longer be present at Gunnar at the time of the current licence renewal. Therefore, all activities on site will be managed under SRC’s management system.” This assumes that the delay caused by the financial problems of the current prime contractor will not lead to significant delay. Thus, a contractor management system may still be required for part of the term of the renewal. The current licence is to expire on 31 May 2026. It is not clear that a prime contractor will be in place in time to complete what was expected in that licence period. Thus, the scope of work for the licence renewal may be different that what is described in the licence renewal application. *This should be clarified as an update to the licence application if so.*

### 2.3 Uncertainty with respect to remediation objectives used

There appears to be a discordance in the text with respect to one of the remediation objectives. It is not clear whether 2 µSv/h above background or 2.5 µSv/h above background is intended. In section 4.2 of the application, the following text describes radiological objectives:

*Covering of elevated gamma areas. Elevated gamma areas are defined as areas with gamma radiation dose rates above the radiological objectives, which are as follows:*

- *Objective 1: The dose rates from gamma radiation exposure averaged over a hectare of the covered area not to exceed 1 µSv/h above local background (i.e., 1.14 µSv/h), and*
- *Objective 2: The dose rates from gamma radiation exposure at any point of the covered area shall not exceed 2 µSv/h above local background (i.e., 2.64 µSv/h).*

In the first objective, 1 µSv/h above local background averaged over large areas is noted as limited to 1.14 µSv/h (so local background would be 0.14 µSv/h, which seems reasonable).

In the second objective, *maximum* dose rate is not to exceed 2 µSv/h above local background, which would imply a 2.14 µSv/h limit, not 2.64 µSv/h as noted. It is this reviewer’s opinion that the actual objective 2 was intended to be written as

- SUGGESTED MODIFIED Objective 2: The dose rates from gamma radiation exposure at any point of the covered area shall not exceed **2.5** µSv/h above local background (i.e., 2.64 Sv/h).

***As remediation objectives are critical, this should be clarified by SRC.***

In addition to this confusion about one of the objectives, there is a statement in the application that “Upon completion of remediation activities, and in compliance with the RPP, warning signs may be mounted at key site locations to make the workers and public aware of potential radiological hazards at the Site, as needed. For example, areas of Catchment 3 that ***exceed radiation objectives*** (emphasis RSIC), are risk managed as part of project (as described in SRC [2022] and approved by CNSC [2022]) may receive signs.”

It was this reviewer’s initial understanding that **all** areas would be able to meet the radiation objectives at the completion of remediation activities. It would be useful to the public to indicate how much above the radiation objective dose rates would be permitted in such signed areas.

***Is there an absolute dose rate level that would have to be remediated? What is this (third) objective?***

## 2.4 Lack of Contamination Objectives

While dose rate remediation objectives area provided, no remediation objectives for contamination levels are provided. In section 6.1 of the application, it is stated “*If any equipment remains on site, or is brought to site for maintenance, it will be cleaned and scanned prior to leaving the site.*” No criteria for release are provided, however. No criteria for scanning of workers out of “contamination control areas” are provided. It would be useful to explicitly state the requirements in Bq/cm<sup>2</sup> units. This is relevant to understanding what level of potential contamination could exit the site to public areas or could be allowed on workers. Clearly, dose rate measurements are simpler to perform over large areas, but there have been “contamination control zones” used at the Gunnar site (see figure below from a SRC presentation by Alexey Klyashtorin and Shye Muirhead, October 2022), so radioactive contamination has been considered a site hazard. *It is natural for the public to be concerned both by the radiation dose rate level remaining and the potential for someone on site becoming contaminated with radioactive material.* Is the contention of SRC that, once dose rate remediation objectives are met within an area, that there is no concern for radioactive contamination on site? **If so, that should be explicitly stated and explained based on the expected radioactive material source term involved.**



**Figure 1 Sign for a contamination control zone at the Gunnar Mine site (Alexey Klyashtorin and Shye Muirhead, October 2022).**

## 2.5 CNSC Inspection Ratings

26-H102-CNSC Staff Submission was downloaded and reviewed. CNSC staff provided tables showing SCA inspection ratings for 9 different safety and control areas (SCAs) for each of the years 2016-2024 inclusive. Ratings for the following SCAs were tabulated: “Management System”, “Operating Performance”, “Physical Design”, “Fitness for Service”, “Radiation Protection”, “Conventional Health and Safety”, “Overall Compliance (Environmental Protection)”, “Emergency Management and Fire Protection”, and “Waste Management”. For all SCAs and all years, the rating attained was “satisfactory (SA)”, indicating no significant deficiencies in SRC’s program for Gunnar remediation have been identified.

It should be noted that the current CNSC rating system consists of

- Fully Satisfactory (FS): Compliance exceeds requirements and expectations.
- Satisfactory (SA): Licensee meets the requirements and expectations.
- Below Expectations (BE): One or more criteria are not met.
- Unacceptable (UA): Significant deficiencies exist.

It is our understanding that *Fully Satisfactory (FA)* category is rarely used. These inspection results are encouraging and strongly suggest that SRC can meet regulatory requirements in the licence renewal period.

## 2.6 Worker Doses and incidents

All indications noted in H102 support that there have been no significant radiation related incidents at Gunnar over the previous licencing period. In addition, doses to workers have been low, with the maximum recorded annual dose to a worker of 2.08 mSv, with 0.75 mSv being the maximum in the past 5 seasons. The average effective dose to workers in the 2024 season was exceptionally low, 0.06 mSv.

Note that there was no discussion of worker contamination incidents or issues. Assuming SRC still uses contamination control zones, it would have been useful to indicate how many workers were found to have contamination on their clothes or skin when surveyed on exit from such zones, and to indicate the maximum amount detected in Bq/cm<sup>2</sup> units. Low numbers of contamination and low absolute activity values would provide reassurance that workers had low risk of ingesting radioactive material, for example, which would not be captured by external dosimeters.

Non radiation related health and safety controls at Gunnar appear to have worked well. There was one serious incident in which a rock truck driver fractured an arm and cut his forehead, but there seem to have been no other serious incidents during the last licensing period.

## 2.7 Follow-up Monitoring Program

One of the key elements for review was the monitoring strategy following the imminent completion of the remediation phase. SRC provides a comprehensive description of the “Gunnar Mine and Mill Site Remediation Follow-up Monitoring Program”. This program seems both extensive and reasonable. The only criticism is that some parts of this program appear slanted toward a “research program” approach. It is crucial that SRC stay focused on determining when the program can reasonably be moved to institutional control. Some of the wording suggests that SRC expects many years to pass before that status can be attained. We suggest that if data shows radiation hazards are consistently low and manageable, the continuing involvement of the CNSC may not be required.

## 2.8 Comment: Pad Calibration

The SRC’s use of a radionuclide doped pad calibration method for deriving conversion factors from cps to  $\mu\text{Sv/h}$  units specific to the radiation expected to be emitted on site is commendable. However, it would be reasonable to ask whether the results of calibrations using this approach has agreed with others working with survey instruments measuring radiation at uranium mines or exploration sites. For example, a paper by R. Whicker and D. Chambers (*Normalization of Energy-Dependent Gamma Survey Data, Health Physics, Vol 108, Suppl 2, May 2015*) suggested that sodium iodide-based survey meters calibrated at Cesium-137 energies significantly “over read” when exposed to the gamma spectrum of natural uranium. Given that SRC has indicated they have used the pad calibration method, it would be valuable to state if that calibration indicated that using a standard Cs-137-based instrument calibration would have led to error in dose rate measurements.

## 3 Discussion

RSIC reviewers have noted a few issues described above with the information provided for review of the application. However, there is strong evidence that (1) the site involved is of low radiation risk at this point and (2) SRC has the capacity and expertise to oversee the proposed work for the licence renewal period safely. The main issue of significant concern is that the prime contractor involved in the final part of the Phase 2 work have an appropriate radiation protection program put in place prior to work. The CNSC is urged to ensure that this occurs should the license renewal be approved.