



# CNSC COMPLIANCE INSPECTION REPORT

**Inspection No.:** SRBT-2024-01

**Inspection Title:** Type II General Inspection

**Prepared by:** Carley Crann, Project Officer  
Nuclear Processing Facilities Division  
Directorate of Nuclear Cycle and Facilities Regulation

**Report Date:** September 5, 2024



**CANADIAN NUCLEAR SAFETY COMMISSION  
COMPLIANCE INSPECTION**

**Inspection No.: SRBT-2024-01**

**Licensee:** SRB Technologies (Canada) Inc.

**Licence No.:** NSPFL-13.00/2034

**Facility / Site Inspected:** SRBT Tritium Processing Facility

**Inspection Dates:** June 17-19, 2024

**Inspector:**

---

Lester Posada,  
Lead Inspector, Nuclear Processing Facilities Division

**Approved by:**

---

Andrew McAllister  
Director, Nuclear Processing Facilities Division

**Safety and Control Areas:** Management Systems (Safety Culture), Operating Performance, Environmental Protection, Conventional Health and Safety, Emergency Management and Fire Protection (Fire Protection). Other area of regulatory interest: Public Information and Disclosure Program.

**Inspector Accompanied by:**

Carley Crann, Project Officer, NPF  
Alison O'Connor, Project Officer, NPF  
Graham Smith, Sr. Project Officer, NPF

## **EXECUTIVE SUMMARY**

---

Pursuant to subsection 30(1) of the *Nuclear Safety and Control Act* (NSCA) Canadian Nuclear Safety Commission (CNSC) staff conducted an inspection at the SRB Technologies (Canada) Inc. facility from June 17 to 19, 2024. The purpose of this inspection was to provide an overall assessment of compliance with specific clauses of the NSCA and its Regulations, the operating licence NSPFL-13.00/2034 and its associated Licence Conditions Handbook (LCH), as well as SRBT's programs and procedures.

The scope of the inspection was focused on the following safety and control areas:

- Fitness for Service
- Management Systems (Safety Culture)
- Operating Performance
- Environmental Protection
- Conventional Health and Safety
- Emergency Management and Fire Protection (Fire Protection)

The scope of the inspection also included a focus another area of regulatory interest:

- Public Information and Disclosure Program

The inspection team found areas of non-compliance, and therefore two (2) notices of non-compliance have been raised for SRBT to address. The identified items of non-compliance are of low safety significance and do not pose an immediate or unreasonable risk to the health and safety of persons or to the environment, but improvements are nonetheless required to address the identified issues. Six (6) recommendations were also raised as an outcome of this inspection.

---

## Table of Contents

---

1. INTRODUCTION	1
2. PURPOSE AND SCOPE	1
3. DESCRIPTION OF INSPECTION METHODS	1
4. INSPECTION RESULTS	2
4.1 SAFETY AND CONTROL AREA: MANAGEMENT SYSTEMS (SAFETY CULTURE)	3
4.2 SAFETY AND CONTROL AREA: ENVIRONMENTAL PROTECTION	4
4.3 SAFETY AND CONTROL AREA: CONVENTIONAL HEALTH AND SAFETY	6
4.4 SAFETY AND CONTROL AREA: CONVENTIONAL HEALTH AND SAFETY	7
4.5 SAFETY AND CONTROL AREA: CONVENTIONAL HEALTH AND SAFETY	8
4.6 SAFETY AND CONTROL AREA: EMERGENCY MANAGEMENT AND FIRE PROTECTION (FIRE PROTECTION)	9
4.7 SAFETY AND CONTROL AREA: EMERGENCY MANAGEMENT AND FIRE PROTECTION (FIRE PROTECTION)	10
4.8 OTHER MATTER OF REGULATORY INTEREST: PUBLIC INFORMATION AND DISCLOSURE PROGRAM	11
5. SUMMARY OF ENFORCEMENT ACTIONS AND RECOMMENDATIONS ISSUED	12
5.1 ENFORCEMENT ACTIONS	12
5.2 RECOMMENDATIONS	12
6. CONCLUDING STATEMENTS	13
7. REFERENCES	14
APPENDIX A: ACRONYMS AND ABBREVIATIONS	15
APPENDIX B: ATTENDANCE RECORDS	16
APPENDIX C: COMPLIANCE MATRIX	18

## 1. INTRODUCTION

---

An inspection at the SRB Technologies (Canada) Inc. (SRBT) facility was conducted from June 17 to 19, 2024, both onsite (June 17) and virtually (June 18, 19).

The licensee was assessed against provisions of the *Nuclear Safety and Control Act* (NSCA) and its associated Regulations, the conditions of the licence NSPFL-13.00/2034 [1] and the Licence Conditions Handbook (LCH) for SRBT [2], as well as applicable facility-specific and programmatic governing documentation.

Criteria for this inspection were derived directly from the set of documents described in the notification letter [3] and compiled into a Compliance Matrix (See APPENDIX C:), which had been provided to SRBT staff prior to the inspection. Observations, interviews, and records review were undertaken to assess compliance with regulatory expectations.

This report documents the findings and conclusions of the inspection, along with any enforcement actions or recommendations arising from the inspection. The results of this inspection activity will form part of Canadian Nuclear Safety Commission (CNSC) staff's evaluation of the licensee's performance.

## 2. PURPOSE AND SCOPE

---

The purpose of this inspection was to provide an overall assessment of compliance with specific clauses of the NSCA and its Regulations, the operating licence NSPFL-13.00/2034 and its associated LCH, as well as SRBT's programs and procedures.

The scope of the inspection was focused on the following safety and control areas:

- Fitness for Service
- Management Systems (Safety Culture)
- Operating Performance
- Environmental Protection
- Conventional Health and Safety
- Emergency Management and Fire Protection (Fire Protection)

The scope of the inspection also included a focus on another matter of regulatory interest:

- Public Information and Disclosure Program

## 3. DESCRIPTION OF INSPECTION METHODS

---

The NSCA, CNSC Regulations, licence NSPFL-13.00/2034 licence conditions, and governing documents were reviewed as part of the preparation for the inspection. Various items were selected for verification and compiled into a Compliance Matrix. The inspection also included field observations and information provided by licensee staff.

Any number of the following methods of assessment were used during the inspection:

A. Documentation and record review

- Records were verified to be maintained as required by many of the outlined criteria, and a review of selected documents was performed to ensure their accuracy and completeness.

B. Visual assessment and verification

- A physical inspection of the facility with licensee staff was conducted. Observations based on identified compliance criteria were made for verification purposes.

C. Interviews and discussions with licensee staff

- Interviews and discussions with various licensee staff were conducted during the inspection. Questions were posed based on compliance criteria and responses documented for verification purposes.

Selected documentation and records were reviewed during the field verification component of the inspection. These were reviewed in order to determine whether the various records associated with the areas of the inspection are in compliance with associated regulatory and programmatic requirements.

As per the CNSC process, at the conclusion of the field verification portion of the inspection, a Preliminary Inspection Facts and Findings Report was provided to SRBT representatives [4]. This report was provided for purposes of outlining observations made by the inspection team at an overall level, based on a preliminary review of the criteria set identified in the Compliance Matrix and observations made.

#### **4. INSPECTION RESULTS**

---

The following findings and subsequent enforcement actions and recommendations are the result of CNSC staff's inspection. This section of the report has been structured to show the link from the initial inspection finding to the resulting enforcement action or recommendation as shown below:

- compliance verification criteria used to identify the deficiency
- a description of the observed deficiency
- an analysis linking the compliance verification criteria or regulatory requirement to the observed deficiency
- detailed compliance action requiring the licensee to address the deficiency

The order in which findings are presented in the report does not indicate a ranking of their safety significance.

The Compliance Matrix used for this inspection contains the compliance verification criteria (CVC) used to assess and evaluate compliance with regulatory and licensing requirements during

this inspection. The criteria in the Compliance Matrix have been identified to have either “Met” or “Not Met” the applicable requirement.

A notice of non-compliance (NNC) is issued when a non-compliance with the CVC is confirmed through objective evidence obtained from reliable sources and based on verifiable facts. An NNC requires the licensee to take the necessary action(s) to correct the identified non-compliance and respond with one of the following:

- confirmation that compliance has been restored
- a timeframe for restoring compliance
- a timeframe within which a corrective action plan will be submitted

CNSC staff may identify a recommendation as a written suggestion when there are opportunities for improvement based on CNSC experience and industry best practices. There is no obligation for the licensee to act on a recommendation.

#### **4.1 Safety and Control Area: Management Systems (Safety Culture)**

##### **Criteria**

- REGDOC-2.1.2, Safety Culture

##### Section 3.4 Data Collection

The primary methods used in safety culture assessments are well established social science tools being document review, surveys, focus groups, interviews and observations. One key area of this work is participant confidentiality. Participant confidentiality is crucial in gaining information from participants in safety culture assessments, and the assessment team should take precautions (e.g. restrict the number of team members who can access the identities and contributions of participants, de-identify the contributions of participants) to assure participants’ information is kept confidential.

##### **Facts**

- Annual safety culture surveys are completed during SRBT’s annual safety training.
- Safety culture surveys are filled in by hand and the hand writing can be traced to the attendance list.
- No comments or feedback from staff were provided on the 2022 or 2023 safety culture surveys.
- A number of safety culture surveys had the employee role checked off digitally.

##### **Analysis**

SRBT Document MSP-013, *Safety Culture Monitoring Process*, identifies Safety Culture surveys as one of the avenues to assess and monitor safety culture at the facility. CNSC staff reviewed Safety Culture surveys from 2022 and 2023. It was noted that the handwriting and pen colour on the date of each survey could be linked to the handwriting and pen colour on the

attendance list for the training day, and thus the safety culture survey could be linked to the participant. Further to this, in several instances, the role of the employee was not checked off by hand and was checked off digitally, and none of the staff provided comments or feedback at the end of the survey.

The guidance on data collection outlined in Section 3.4 of REGDOC-2.1.2 is a good practice to ensure participant confidentiality. Improved confidentiality or a digital system may encourage participant feedback or further comments from staff upon completion of the survey, and ensure the surveys are completed fully.

Based on this information, the following recommendation is being issued:

### **Compliance Recommendation**

**SRBT-2024-01-R01:** SRBT should review the template for Safety Culture Surveys to improve participant confidentiality.

## **4.2 Safety and Control Area: Environmental Protection**

### **Criteria**

- CSA N288.5-11, Effluent monitoring programs at Class I nuclear facilities and uranium mines and mills

Section 10 Quality assurance (QA) and quality control (QC)

10.1.1 All aspects of the effluent monitoring program shall have appropriate QA and QC. QA and QC programs provide confidence that monitoring can yield defensible results. QA/QC programs are needed to optimize data collection design so that environmental decisions are based on data of known quality. QA activities monitor, document, and control the quality of the process on a continual basis. QC activities comprise those activities that specifically monitor and control discrete laboratory and field tasks to produce the information that is required to verify and demonstrate that the predefined criteria are met. QA/QC activities aim to reduce the total error due to sampling design error and measurement error, allow for the identification of deficiencies requiring corrective action, and permit the independent verification of the accuracy of the data.

- SRBT Effluent Monitoring Program

Section 4.9 Acceptance Criteria

Annually, a third party will be engaged to provide independent assessment of the adequacy of our gaseous effluent monitoring methodology as part of interlaboratory testing. Results between the third-party assessment and SRBT shall be compared, and an investigation into any discrepancy greater than 30% shall be performed.

### **Facts**



- The internal intercomparison results in February 2024 from the bulk line (HTO, HT) differs between the in-use bubbler and the spare bubbler by greater than the acceptance criteria of  $\pm 30\%$  (in-use bubbler is higher).
- An investigation into the February 2024 internal intercomparison results provided possible explanations for the discrepancy. The internal intercomparison was repeated in March 2024 and one of the two sets for the bulk line HTO failed to meet the acceptance criteria of  $\pm 30\%$  (in-use bubbler is higher).
- The external intercomparison (between SRBT and CNL) conducted February 20-27, 2024 for gaseous effluent from the Bulk stack for HT fell outside the acceptance criteria of  $\pm 30\%$  (CNL is higher). While an investigation provided possible explanations for the discrepancy, the intercomparison was not repeated.
- The intercomparison between SRBT and CNL for liquid effluent sampled from the Zone 3 barrel water in February 2023 fell outside the acceptance criteria of  $\pm 30\%$ . It was thought to be due to suspended matter in the water so the analysis was repeated in March 2023 and the results fell within  $\pm 30\%$ .
- The intercomparison between SRBT and CNL for liquid effluent sampled from the Zone 2 barrel water in March 2024 was within the acceptance criteria.

## Analysis

SRBT performs internal intercomparisons as well as external intercomparisons with CNL on their liquid and gaseous (HT, HTO) effluents. Section 4.9 of SRBT's Effluent Monitoring Program states that if the values of the intercomparison for gaseous effluents falls outside the acceptance criteria of  $\pm 30\%$ , then an investigation into the discrepancy shall be performed. In the case of liquid effluents, there was a discrepancy of greater than 30% in 2023 and, based on repeat samples and the 2024 sampling campaign, SRBT's investigation was successful in identifying and resolving the issue (related to suspended solids in the water).

However, for the intercomparison on gaseous samples in February 2024, an investigation has not resolved the discrepancy into either the internal intercomparison or the external intercomparison with CNL:

- For the internal intercomparison, both the Bulk HTO and Bulk HT values fell outside the acceptance criteria. The investigation triggered a supplemental round of intercomparison testing. Therefore, for two weeks in March 2024, Bulk HTO and Bulk HT were analysed in a supplemental internal intercomparison. While both weeks of Bulk HT samples met the acceptance criteria, one of the Bulk HTO sample sets did not and, according to SRBT's Effluent Monitoring Program, this would trigger an investigation (this value was not investigated).
- For the external intercomparison with CNL, the Bulk HT value fell outside the acceptance criteria. No intercomparison samples were sent to CNL.

The investigation into gaseous intercomparison results falling outside acceptance criteria suggests possible reasons for the discrepancies (technician error, systematic error, equipment issues), and triggered the action to perform the supplemental intercomparison in March 2024. However, the investigation has not satisfactorily resolved the issues, nor has it identified the deficiencies requiring corrective action, as per CSA N288.5-11, Section 10.1.1.

Based on this information, the following NNC is being raised:

### Compliance Action

**SRBT-2024-01-NNC01:** SRBT shall review their procedures and practices for conducting investigations into effluent intercomparison discrepancies, to ensure that deficiencies requiring corrective actions are identified and resolved.

## 4.3 Safety and Control Area: Conventional Health and Safety

### Criteria

- Canada Labour Code, Part II

Provisions Common to Policy Committees and Work Place Committees

135.1 (1) Subject to this section, a policy committee or a work place committee shall consist of at least two persons and at least half of the members shall be employees who (a) do not exercise managerial functions.

- SRBT Health and Safety Policy (Rev 1)

Section 5.6 Quorum

A quorum of a committee consists of the majority of members, at least half of which are representatives of employees and at least one of which is a representative of the employer.

### Facts

- SRBT's Workplace Health and Safety Committee (WPHSC) met 12 times in 2023 (once per month)
- WPHSC meeting minutes do not identify the roles of chairperson, or representation of management/non-management.
- SRBT verbally communicated that the composition of each WPHSC meeting included at least one other management level representative, at least two non-management committee members, and that non-management represented at least 50% of the membership.

### Analysis

CNSC staff reviewed WPHSC meeting minutes from January 2023 to April 2024. Overall, the meeting minutes reviewed were thorough, show that SRBT is identifying areas for improvement in health and safety, tracking issues through to completion, and fulfilling the requirements set out in their document *Committee Processes and Descriptions*. However, from the records provided, CNSC staff could not verify that the composition of each WPHSC meeting included at least one other management level representative, at least two non-management committee members, and that non-management represented at least 50% of the membership, as the roles are not defined in the meeting minutes. SRBT verbally communicated that the composition of each Workplace

Health and Safety Committee meeting included at least one other management level representative, at least two non-management committee members, and that non-management represented at least 50% of the membership.

Based on this information, the following recommendation is being issued:

### Compliance Recommendation

**SRBT-2024-01-R02:** SRBT should review how WPHSC meeting minutes demonstrate that quorum is met.

## 4.4 Safety and Control Area: Conventional Health and Safety

### Criteria

- Canada Labour Code, Part II

Work Place Health and Safety Committees

(7) A work place committee, in respect of the work place for which it is established,

(g) shall ensure that adequate records are maintained on work accidents, injuries and health hazards relating to the health and safety of employees and regularly monitor data relating to those accidents, injuries and hazards.

### Facts

The following observations are noted on meeting minutes for the WPHSC:

- In March 2023 and August 2023 first aids were presented (burn, slip, paint in the eye), but the records were not included as an attachment in the meeting minutes.
- June 2023 – first aid injury, burn to the finger (May 15, 2023). The record is provided in the minutes, but details are not provided on how the injury happened (chemical burn or heat/cold physical burn).
- December 2023 – A March 2023 first aid is included. SRBT staff explained during the interview that the first aid had been forgotten about. Further, the report is missing the answer to the question, “Did the worker return to work after the incident or the next day?” SRBT verbally confirmed the worker returned to work.

### Analysis

CNSC staff reviewed WPHSC meeting minutes from January 2023 to April 2024. Inconsistencies were noted in how injury/first aid/hazardous substance exposure records are being included in meeting minutes (sometimes appended, sometimes not), and in the records observed, there were minor issues with the completeness of the records (injury description, indication of return to work). Further, SRBT verbally communicated that the March 2023 injury report had been included in the December 2023 meeting minutes as it had been forgotten.

Based on this information, the following recommendation is being issued:

### Compliance Recommendation

**SRBT-2024-01-R03:** SRBT should review current practices for reviewing and recording injury/first aid/hazardous substance exposure records at WPHSC meetings.

## 4.5 Safety and Control Area: Conventional Health and Safety

### Criteria

- Canada Labour Code, Part II

Work Place Health and Safety Committees

(7) A work place committee, in respect of the work place for which it is established,

(k) shall inspect each month all or part of the work place, so that every part of the work place is inspected at least once each year.

### Facts

The following observations are noted on meeting minutes for the WPHSC:

- August 2023 inspection report checklist final page was not filled out when it was scanned into the September WPHSC meeting minutes, but the scanned version of the August 2023 inspection (stand alone) was all checked off.
- In the March 2024 WPHSC meeting minutes, it was noted that the February 2024 inspection identified that there was no pull station in the coating room, despite the checklist for the inspection including a pull station checkbox (and previously being checked off).
- The April 2024 inspection checklist does not list a pull station in the Coating Room, thus confirming that the template had been updated based on the February inspection.

### Analysis

CNSC staff reviewed workplace inspections from January 2023 to April 2024 and confirmed that SRBT is inspecting all areas of the workplace every month, which exceeds the expectations set out in Part II of the Canada Labour Code. In reviewing the documentation provided, two minor issues were noted. First, the workplace inspection taking place on August 3, 2023 was scanned and included in the appendix of the September WPHSC meeting minutes with one page of the checklist left blank, yet it was signed and dated at the bottom. Second, in the March 2024 WPHSC meeting minutes, it was noted that the February 2024 inspection identified that there was no pull station in the coating room, despite the checklist including a pull station and previous inspections had been checking this item off to indicate that the inspection team had confirmed that the pull station was not blocked.

Based on this information, the following recommendation is being issued:

### Compliance Recommendation

**SRBT-2024-01-R04:** SRBT should review their workplace inspection practices to ensure checklists accurately reflect the areas being inspected and inspection records are completed.

## 4.6 Safety and Control Area: Emergency Management and Fire Protection (Fire Protection)

### Criteria

- National Fire Code of Canada (NFCC) 2015

#### Section 2.4 Fire Hazards

2.4.1.3 (1) Materials subject to spontaneous ignition, such as oily rags, shall be deposited in a receptacle conforming to Sentence (4) or be removed from the premises.

- CSA N292.0:19 General principles for the management of radioactive waste and irradiated fuel

#### Section 4 General requirements

4.5.11 Procedures specific to waste management shall be implemented as part of the waste management program that are appropriate to the hazards of the waste streams being managed and which can include, but are not limited to, (b) handling, packaging, processing, and labelling.

### Facts

- A waste receptacle with the label “oily waste can” was observed in the coating room that contained empty plastic bottles.
- Waste receptacles in Zone 3 were divided into “low contamination” and “no contamination”, but no labels were observed that would identify them as such.

### Analysis

During the walk through, waste receptacles were observed to be of non-combustible construction and no overflowing waste receptacles were noted. Two issues related to labelling of waste receptacles were observed. In the Coating room, a waste receptacle with the label “oily waste can” was observed to contain empty plastic bottles, and, in Zone 3 waste receptacles were divided into “low contamination” and “no contamination”, but no labels were observed that

would identify them as such. In both cases, mislabelling or lack of labelling could result in the incorrect waste products being put in receptacles.

As a result of these observations, the following recommendation is being issued:

### Compliance Recommendation

**SRBT-2024-01-R05:** SRBT should review waste receptacle labelling practices to ensure clear identification of intended waste for each receptacle.

## 4.7 Safety and Control Area: Emergency Management and Fire Protection (Fire Protection)

### Criteria

- CSA N393:13 (R2018) Fire protection for facilities that process, handle, or store nuclear substances

Section 10.7.1 Control of hot work

A hot work procedure and permit system shall be developed and implemented in accordance with the requirements of the NFCC and good industry practice.

### Facts

- The procedure, FPP-020, *Hot Work*, has a section on PPE requirements, but the hot work permit does not include PPE in the list of precautions.
- SRBT procedure, FPP-020, *Hot Work*, lists 14 conditions that shall be verified by the Permit Authorizing Individual (PAI) prior to issuing a Hot Work permit, but the completion of this step is not documented
- The Hot Work permit template does not include the date of the work, the validity period (24 hours), the name of the PAI, the name of the staff or contractor who completed the work, information on whether the hot work equipment is in good working condition, or information on whether a fully charged and operable fire extinguisher is available in the immediate work area

### Analysis

The most recent three hot work permits were reviewed by CNSC staff and, while the permits show that SRBT has a procedure to identify the relevant fire hazards and ensure precautions are taken prior to commencing hot work, the permit itself would benefit from a revision in order to clearly document how the requirements set out in FPP-020 *Hot Work* are being met (see Facts section, above). SRBT's Hot Work procedure states that it was written to conform with the requirements of the NFCC and NFPA 51B, but SRBT's hot work permit is missing a number of items that are present in the work permit example provided in Annex A of NFPA 51B (e.g. name and signature of PAI, hot work equipment in good working order, availability of fire

extinguisher, etc.). Further, the next (current) revision of CSA N393:22 adds that the hot work permit shall also meet the requirements of CSA W117.2, which, in its Annex K, contains a list of specific items that shall be included in a hot work permit system.

As a result of these observations, the following recommendation is being issued:

**Compliance Recommendation:**

**SRBT-2024-01-R06:** SRBT should review and revise their hot work permit template and completion thereof to clearly document how the requirements set out in FPP-020 *Hot Work* and good industry practice are being met.

**4.8 Other Matter of Regulatory Interest: Public Information and Disclosure Program**

**Criteria**

- SRBT LCH (Rev 0), Licence Condition G.4: Public Information and Disclosure

The licensee shall implement and maintain a public information and disclosure program.

- SRBT Public Information Program (Rev. A)

Section 9.1 Public information committee meetings

Meetings are held at least twice yearly. During these meetings the Committee discusses the public's perceived opinion of SRBT based on a review of public inquiries, public survey results and media coverage all against historical data. The Committee also continuously seeks input from other staff, contractors or other individuals who may have recommendations to improve the public relations program for the company.

The information gathered during these meetings is used to develop possible new Public Information initiatives to improve the Public Information Program and Public Disclosure Protocol.

**Facts**

- There were two meetings of the public information committee in 2022, one meeting in 2023, and as of June 2024 there have been no meetings in 2024.
- The February 1, 2022 meeting minutes do not include any old business or meeting minutes from the previous meeting
- Meeting minutes from February 1 2022, February 23, 2022, and February 15 2023, solely focused on the relationship with AOPFN. In addition, the following items were not included:
  - A review of public inquiries against historical data
  - A review of public survey results (none conducted 2022-2024) against historical data

- A review of media coverage against historical data.
- Activities showing that the Committee is seeking input from other staff, contractors or other individuals who may have recommendations to improve the public relations program for the company, for the exception of AOPFN.
- New public information initiatives

## Analysis

SRBT's PIDP is posted on their website, along with a variety of public information products such as press releases and public notifications, brochures, links to presentations and meetings, environmental data, etc. SRBT uses Public Information Committee reviews, yearly management self-assessments, surveys, and internal audits to evaluate its performance and for developing and implementing measures to improve effectiveness. Results of completed self-assessments, benchmarking exercises, and internal audits were found to be complete, but the Public Information Committee meeting minutes showed that the activities laid out in the PIDP were not covered in the meetings in 2022. SRBT staff verbally communicated that the items missing from the meeting minutes are discussed informally, outside of committee meetings and are therefore not captured in meeting minutes.

The PIDP states that the Public Information Committee holds meetings at least twice yearly, however, based on the records provided to CNSC staff, the Committee has not met since February 2023.

As a result of these observations, the following non-compliance is raised:

## Compliance Action

**SRBT-2024-01-NNC02:** SRBT shall ensure its public information committee meetings are conducted according to the frequency and commitments outlined in their PIDP.

## 5. SUMMARY OF ENFORCEMENT ACTIONS AND RECOMMENDATIONS ISSUED

---

### 5.1 Enforcement Actions

The following notices of non-compliance were raised as a result of this inspection.

- **SRBT-2024-01-NNC01:** SRBT shall review their procedures and practices for conducting investigations into effluent intercomparison discrepancies, to ensure that deficiencies requiring corrective actions are identified and resolved.
- **SRBT-2024-01-NNC02:** SRBT shall ensure its public information committee meetings are conducted according to the frequency and commitments outlined in their PIDP.

### 5.2 Recommendations

The following recommendations were raised as a result of this inspection:



- **SRBT-2024-01-R01:** SRBT should review the template for Safety Culture Surveys to improve participant confidentiality.
- **SRBT-2024-01-R02:** SRBT should review how WPHSC meeting minutes demonstrate that quorum is met.
- **SRBT-2024-01-R03:** SRBT should review current practices for reviewing and recording injury/first aid/hazardous substance exposure records at WPHSC meetings.
- **SRBT-2024-01-R04:** SRBT should review their workplace inspection practices to ensure checklists accurately reflect the areas being inspected and inspection records are completed.
- **SRBT-2024-01-R05:** SRBT should review waste receptacle labelling practices to ensure clear identification of intended waste for each receptacle.
- **SRBT-2024-01-R06:** SRBT should review and revise their hot work permit template and completion thereof to clearly document how the requirements set out in FPP-020 Hot Work and good industry practice are being met.

## **6. CONCLUDING STATEMENTS**

---

CNSC staff performed a General inspection at SRBT in order to verify compliance with the NSCA, its associated regulations, the conditions of the licence and the LCH.

As a result of this inspection, items of non-compliance with the criteria assessed from the Compliance Matrix have been identified. Therefore, two (2) notices of non-compliance have been raised for SRBT to address. The identified non-compliances are of low safety significance and do not pose an immediate or unreasonable risk to the health and safety of persons or the environment. Six (6) recommendations were also raised as an outcome of this inspection

SRBT is requested to submit its corrective action for each notice of non-compliance **60 days** from the date the report was issued. The response must include corrective measures and proposed completion dates, including the date by which the corrective measure will be documented (if required), implemented, and verified for adequacy and effectiveness.

CNSC staff extend their appreciation to SRBT for their assistance in conducting this inspection.

## 7. REFERENCES

---

- [1] SRB Technologies (Canada) Inc. Nuclear Substance Processing Facility Licence, NSPFL-13.00/2034, (e-Doc 6668491).
- [2] SRB Technologies (Canada) Inc. Licence Conditions Handbook, (e-Doc 6668496).
- [3] Letter from A. O'Connor (CNSC) to J. MacDonald (SRBT), *Notice of CNSC Type II Compliance Inspection of SRB Technologies (Canada) Inc. on June 17 to June 19, 2024* (e-Doc 7275980).
- [4] SRBT-2024-01 Preliminary Inspection Facts and Findings Report, June 19, 2024 (e-Doc 7304778).


---

**APPENDIX A: ACRONYMS AND ABBREVIATIONS**

---

CNL	Canadian Nuclear Laboratories
CNSC	Canadian Nuclear Safety Commission
CVC	Compliance Verification Criteria
LCH	Licence Conditions Handbook
NPDF	Nuclear Processing Facilities Division
NSCA	<i>Nuclear Safety and Control Act</i>
SRBT	SRB Technologies (Canada) Inc.

**APPENDIX B: ATTENDANCE RECORDS**



**Canadian Nuclear Safety Commission**  
**Commission canadienne de sûreté nucléaire**

**Unclassified**

7291378

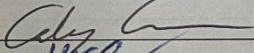
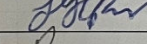
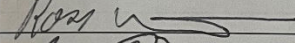
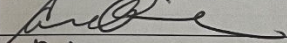

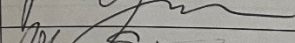
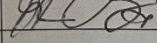
  
 e-Doc  
 Number

---

Licensee Name: SRB Technologies (Canada) Inc.  
 Licence Number: NSPFL-13.00/2034  
 Licensed Site: SRB Technologies Tritium Processing Facility (Pembroke, ON)  
 Facility / Program / Site: SRB Technologies Tritium Processing Facility  
 Title of Inspection: Type II General Inspection  
 Inspection Number: SRBT-2024-01  
 Inspection Date(s): June 17-19, 2024  
 Lead Inspector: Lester Posada, NPFD

Meeting Type: Opening

---

Name (print)	Role or Job Title	Signature
Carley Crann	CNSC Inspector	
Lester Posada	Project Officer, CNSC	
ROSS FITZPATRICK	Vice President	
Alison O'Connor	CNSC Inspector	
Joshua Bull	Assistant Manager - Health Physics	
JAMIE MACDONALD	MANAGER - HP+RA	
Graham Smith	CNSC Inspector	

e-Doc 7291378  
 Template: e-Doc 5257117

Page 1 of 2



Canadian Nuclear Safety Commission  
 Commission canadienne de sûreté nucléaire

**Inspection Meeting Attendance Record**  
 Directorate of Nuclear Cycle and Facilities Regulation

**Unclassified**

7291378

e-Doc  
 Number

Licensee Name: SRB Technologies (Canada) Inc.  
 Licence Number: NSPFL-13.00/2034  
 Licensed Site: SRB Technologies Tritium Processing Facility (Pembroke, ON)  
 Facility / Program / Site: SRB Technologies Tritium Processing Facility  
 Title of Inspection: Type II General Inspection  
 Inspection Number: SRBT-2024-01  
 Inspection Dates: June 17-19, 2024  
 Lead Inspector: Lester Posada, NPF

Meeting Type: Closing

Name (print)	Role or Job Title	Signature
Crann, Carley	CNSC Inspector-in-training	Remote Attendance via Teams
Posada, Lester	CNSC Inspector	Remote Attendance via Teams
Smith, Graham	CNSC Inspector	Remote Attendance via Teams
O'Connor, Alison	CNSC Inspector-in-training	Remote Attendance via Teams
Ross Fitzpatrick	SRBT Vice President	Remote Attendance via Teams
Joshua Bull	SRBT Assistant Manager, Health Physics	Remote Attendance via Teams
Jamie MacDonald	SRBT Manager, Health Physics and Regulatory Affairs	Remote Attendance via Teams
<del>Eric Gaudette</del>	SRBT Fire Protection Specialist	Remote Attendance via Teams
Phil Hoffman	SRBT Production Technician, Employee member of the Workplace Health and Safety Committee	Remote Attendance via Teams

APPENDIX C: **COMPLIANCE MATRIX**



Canadian Nuclear Safety Commission  
Commission canadienne de sûreté nucléaire

**Compliance Matrix**  
Directorate of Nuclear Cycle and Facilities Regulation  
*Ref. Procedure: How to Conduct DNCFR Inspections*

~~Unclassified~~  
Lead Inspector: Lester Posada  
Division: NPF0

Licensee Name: SRB Technologies (Canada) Inc.  
Licence Number: NSPFL-13.00/2034  
Licensed Site: SRB Tritium Processing Facility (Pembroke, ON)  
Facility / Program / Site: SRB Technologies Tritium Processing Facility  
Title of Inspection: Type II General  
Inspection Number: SRBT-2024-01  
Inspection Dates: June 17-19, 2024  
Lead Inspector: Lester Posada, NPF0

**Inspection Safety and Control Area(s) and/or Other Matters of Regulatory Interest**

- |   |   |   |
|---|---|---|
| <input checked="" type="checkbox"/> Management System     | <input checked="" type="checkbox"/> Environmental Protection                      | <input type="checkbox"/> Waste Management                 |
| <input type="checkbox"/> Fitness for Service              | <input type="checkbox"/> Radiation Protection                                     | <input type="checkbox"/> Security                         |
| <input checked="" type="checkbox"/> Operating Performance | <input checked="" type="checkbox"/> Conventional Health and Safety                | <input type="checkbox"/> Safeguards and Non-Proliferation |
| <input type="checkbox"/> Safety Analysis                  | <input type="checkbox"/> Human Performance Management                             | <input type="checkbox"/> Packaging and Transport          |
| <input type="checkbox"/> Physical Design                  | <input checked="" type="checkbox"/> Emergency Management & <u>Fire Protection</u> | <input checked="" type="checkbox"/> Other: PIDP           |
- Management Systems: focus is Safety Culture; Emergency Management and Fire Protection: focus on Fire Protection.

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
<b>Safety and Control Area: Management systems (safety culture)</b>			
<p><b>1. Source:</b> LCH, Licence Condition 1.1  <b>Details:</b> REGDOC 2.1.2 Safety Culture, Section 2                      Licensee shall document their commitment to fostering safety culture in their governing documentation.</p>	<p><b>Governing documentation</b>  <u>Document review:</u>                      Verify that SRBT's commitment to fostering safety culture is documented in their governing documentation.</p> <ul style="list-style-type: none"> <li>▪ Quality Policy</li> <li>▪ Quality Manual</li> <li>▪ MSP-013, <i>Safety Culture Monitoring Process</i></li> </ul>	<p>SRBT documents their commitment to fostering safety culture in their governing documentation, <i>Quality Policy</i> and <i>Quality Manual</i>.                      MSP-013, <i>Safety Culture Monitoring Process</i>, describes the tools in place to monitor, assess and improve safety culture.</p>	<p>Met</p>
<p><b>2. Source:</b> SRBT Quality Manual  <b>Details:</b> Section 4.2, Safety Culture                      A healthy safety culture is promoted by monitoring the culture and making improvements based on the data generated by this monitoring.                      MSP-013, <i>Safety Culture Monitoring Process</i> describes the tools in place to monitor, assess and improve the safety culture of the facility.</p>	<p><b>Safety culture monitoring</b>  <u>Records review:</u>                      Verify that SRBT is monitoring, assessing, and improving the safety culture using the tools outlined in MSP-013:</p> <ul style="list-style-type: none"> <li>▪ Safety culture committee meeting minutes (annual)</li> <li>▪ Safety culture review (every 5 years)</li> <li>▪ Safety culture surveys (annual)</li> <li>▪ Safety culture benchmarking and self assessments</li> </ul> <p><u>Interview:</u>                      Discuss how actions arising from safety culture monitoring and assessment tools are tracked and implemented to improve safety culture.</p>	<p><u>Records Review</u>                      SRBT has a Safety Culture Committee that meets annually, and whose objectives are to ensure that the requirements of MSP-013, <i>Safety Culture Monitoring Process</i> are met, as well as to promote a strong safety culture within the organization.                      Safety Culture committee meetings were held annually in 2022 and 2023, thus meeting the annual frequency. Meeting minutes were reviewed for November 2, 2023 and December 1, 2022. Safety culture surveys are reviewed during safety culture committee meetings and no remarkable observations are noted.                      SRBT conducts a Safety Culture Review every 5 years to identify strengths and weaknesses of the facility safety culture and identify any improvements, latest was conducted in 2023.                      Safety culture survey results were reviewed for 2022 and 2023 and the following observations are noted:                      2023 surveys:</p> <ul style="list-style-type: none"> <li>• 36 employees participated in the annual safety training and 36 safety culture surveys were completed.</li> <li>• Survey #3 was not dated and the employee did not check off their role (production, administration, management), but they were the only one to provide a comment.</li> <li>• Surveys 11, 14 were not dated</li> </ul>	<p><b>Met with Recommendation</b>  <b>SRBT-2024-01-R01</b></p>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
		<ul style="list-style-type: none"> <li>• Surveys 14, 20 had “production” ticked off digitally</li> </ul> 2022 surveys: <ul style="list-style-type: none"> <li>• 37 surveys completed</li> <li>• Survey 34 had “production” ticked off digitally</li> <li>• Surveys 7, 10 had “management” ticked off digitally</li> <li>• No comments were provided</li> </ul> <p>The annual safety culture survey is completed by all staff that attend the annual safety training. The survey is completed by hand on paper, and the handwriting/pen colour can be connected to the attendance list for the annual training.</p> <p><b>SRBT-2024-01-R01:</b> SRBT should review the template for Safety Culture Surveys to improve participant confidentiality.</p> <p>Safety culture benchmarking and self assessments were last completed in 2022.</p>	
<p><b>3. Source:</b> SRBT Quality Manual</p> <p><b>Details:</b> Section 4.2, Safety Culture</p> <p>Safety metrics are trended to determine at an early stage the onset of potential issues with the organizational safety culture. Employee injuries, safety-related events, worker dose and environmental monitoring results are all continuously analyzed to determine if deficiencies are beginning to develop.</p>	<p><b>Safety metrics</b></p> <p><u>Interview:</u></p> <ul style="list-style-type: none"> <li>▪ Review metrics and discuss the roles of committees and management in how SRBT tracks and monitors safety metrics.</li> <li>▪ Discuss how SRBT addresses trends in safety metrics.</li> </ul>	<p>SRBT identifies safety metrics and targets for the year to ensure a high level of safety performance and ensure that appropriate measures are taken.</p> <p>Typical safety metrics include:</p> <ul style="list-style-type: none"> <li>• Workplace Health and Safety Committee Meetings held</li> <li>• Health and safety complaints (including hazard and near miss reports)</li> <li>• Complaints resolved</li> <li>• Complaints ongoing</li> <li>• Refusals to work</li> <li>• Safety violations</li> <li>• First aid injuries</li> <li>• Minor injuries</li> <li>• Disabling injuries</li> <li>• Lost time injuries</li> </ul>	<p>Met</p>



Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
		These are discussed and tracked during the Workplace Health and Safety Committee Meetings.  <u>Records Reviewed:</u> <ul style="list-style-type: none"> <li>SRBT Workplace Health and Safety Committee Meeting Minutes – June 2023 to April 2024</li> </ul>	
<b>Safety and Control Area: Operating performance</b>			
<p><b>4. Source:</b> SRBT Safety Analysis Report</p> <p><b>Details:</b> Section 10, Operational Limits and Conditions</p> <p>Tritium processing operations shall not occur unless the following differential pressures are achieved, as measured by the gauges on each of the active ventilation system stacks:</p> <ul style="list-style-type: none"> <li>Rig Stack: 0.27 in. water</li> <li>Bulk Stack: 0.38 in. water</li> </ul>	<p><b>Minimum Differential Pressure Measurements for Tritium Processing</b></p> <p><u>Records review:</u></p> <p>Records of daily rig stack and bulk stack gauge checks for the following dates:</p> <ul style="list-style-type: none"> <li>April 22-26, 2024</li> <li>January 15-19, 2023</li> <li>November 6-10, 2023</li> <li>August 14-18, 2023</li> </ul> <p><u>Field check:</u></p> <ul style="list-style-type: none"> <li>Check gauges on rig stack and bulk stack.</li> </ul> <p><u>Interview:</u></p> <ul style="list-style-type: none"> <li>Process for monitoring the stack gauges (frequency, roles of personnel, records)</li> <li>Response to a non-conformance.</li> <li>Trends and maintenance</li> </ul>	<p><u>Records review:</u></p> <p>A sample of daily differential pressure checks was reviewed covering the following time periods:</p> <ul style="list-style-type: none"> <li>2022/12/20 to 2023/01/31</li> <li>2023/07/23 to 2023/08/21</li> <li>2023/11/10 to 2023/12/15</li> <li>2024/04/22 to 2024/05/09</li> </ul> <p>Records demonstrated that the daily differential pressure checks are performed at the required frequency (daily). Over the time periods reviewed, all readings were above the minimum requirements as set in the SRBT OLCs.</p> <p><u>Field check:</u></p> <p>Differential pressures were checked during the walk through on June 17, 2024 and the following measurements were observed:</p> <ul style="list-style-type: none"> <li>Rig stack: 0.34 in. water</li> <li>Bulk stack: 0.4 in. water</li> </ul> <p>Calibration stickers on both stacks indicated the stacks were calibrated December 15, 2023 and due December 15, 2024.</p> <p><u>Interview:</u></p> <p>Tick marks on the records denote a 7-day window when the data is entered into the spreadsheet.</p> <p>If a worker were to find that the differential pressure was outside of the specified value (which is denoted on the check sheet), they bring the observation to management</p>	<p>Met</p>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
		<p>and no processing may occur. SRBT staff provided potential situations that may cause the differential pressure to be out of specified value such as ice buildup on the pito tube (heating wires have been added to prevent this) or could be blocked filters.</p> <p>An NCR would be triggered if processing proceeded while the differential pressure gauges did not meet the required value or possibly if there was an equipment failure. On average, once every 1-3 years. There are alarms if the flow is lost.</p>	
<p><b>5. Source:</b> SRBT Safety Analysis Report</p> <p><b>Details:</b> Section 10, Operational Limits and Conditions</p> <p>Bulk containers are limited as follows:</p> <ul style="list-style-type: none"> <li>• SRBT shall request no more than 925,000 GBq per bulk container when submitting a purchase order to an approved supplier of tritium gas.</li> <li>• No bulk container shall exceed 1,000,000 GBq of tritium loading at any time.</li> </ul> <p>PUTTs are limited to less than 111,000 GBq of tritium loading at any time.</p>	<p><b>PUTT / Bulk Container Tritium Loading Limit</b></p> <p><u>Records review:</u></p> <ul style="list-style-type: none"> <li>▪ Tritium purchase orders for last 12 months</li> <li>▪ Bulk container loading records (May 27-31, 2024; April 22-26, 2024; January 15-19, 2023)</li> <li>▪ PUTT loading records (May 27-31; April 22-26, 2024; January 15-19, 2023)</li> </ul> <p><u>Interview</u></p> <ul style="list-style-type: none"> <li>▪ Discuss notable observations from record review</li> </ul>	<p><u>Records review:</u></p> <p>SRBT orders tritium gas from OPG (Darlington) on average once per month. Purchase orders covering the time period April 2023 to April 2024 were reviewed. In all 13 cases, SRBT requested 925,000 GBq of tritium gas from OPG. The bulk tritium (on a uranium storage bed) is sent to Canadian Nuclear Laboratories (CNL) where it is quantified, analyzed for purity, and transferred to an Amersham bed for shipping to SRBT. The quantities measured by CNL are higher than 925,000 GBq but were observed not to exceed 1,000,000 GBq (950,000 GBq max).</p> <p><u>Interview/Records/Field check:</u></p> <p>The amount of tritium on a bulk container decreases as the tritium is transferred to the PUTTs. Rarely, if ever, is tritium loaded back on a bulk container so the max of 1,000,000 GBq is unlikely to be exceeded. A random sample of bulk container records were reviewed (April 22-26, 2024; January 15-19, 2023) and confirmed that no bulk container exceeded 1,000,000 GBq.</p> <p>During the walk through, SRBT staff demonstrated how PUTTs are filled from the bulk container, which included demonstrating how the amount of tritium in each PUTT is controlled. Two staff are required to observe each PUTT filling. CNSC staff selected a random sample of PUTT loading records (May 27-31; April 22-26, 2024; January</p>	<p>Met</p>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
		<p>15-19, 2023) and confirmed that no PUTTs were filled above 111,000 GBq of tritium.</p> <p>On both the bulk and PUTT records, it was noted that there was filling activities occurring on days where there was precipitation (Jan 16 2023, Jan 23, 2023, March 25, 2024, April 29, 2024, and May 27 2024). The May 27, 2024 precipitation/operation record was reviewed. SRBT staff demonstrated how operators processed tritium intermittently between the rainy periods and did not operate where there was a precipitation alarm.</p>	
<p><b>6. Source:</b> SRBT Safety Analysis Report</p> <p><b>Details:</b> Section 10, Operational Limits and Conditions</p> <p>Bulk tritium containers are limited to a heating temperature of approximately 550°C, as measured by the thermocouple placed between the heating band and the container surface. Brief and small exceedances of this value are tolerable so long as they are not sustained, and the temperature is returned below this value as soon as possible.</p>	<p><b>Bulk Container Heating Limit</b></p> <p><u>Field check:</u></p> <ul style="list-style-type: none"> <li>▪ Thermocouple on bulk tritium should not exceed 550°C</li> </ul> <p><u>Records Review:</u></p> <ul style="list-style-type: none"> <li>▪ Thermocouple on bulk tritium should not exceed 550°C (check records if available)</li> </ul> <p><u>Interview:</u></p> <ul style="list-style-type: none"> <li>▪ Discuss with staff (during the walk down) how temperature on the bulk tritium container is controlled and monitored.</li> </ul>	<p><u>Field check:</u></p> <p>During the walk through, SRB staff demonstrated how PUTTs are filled from the bulk container, which included demonstrating how the temperature is controlled on heating of the bulk container. In the example observed, the desired pressure (and thus amount of tritium) for the PUTTs was achieved at a temperature of 490°C. Two staff are required to observe each PUTT filling.</p> <p><u>Records review:</u></p> <p>Final temperatures are not recorded.</p>	<p>Met</p>
<p><b>7. Source:</b> SRBT Regulatory Reporting Program</p> <p><b>Details:</b> Section 5, Process for reporting</p>	<p><b>Event-driven reports</b></p> <p><u>Records review:</u></p> <ul style="list-style-type: none"> <li>▪ Non-conformance reports (NCRs) for May 2023 to April 2024</li> <li>▪ Training materials on non-conformance process</li> </ul>	<p><u>Records Review/Interview:</u></p> <p><b>Non-conformance reports (NCR)</b></p> <p>From January 2023 to April 2024, 54 NCRs were recorded. Most of the NCRs were related to customer feedback on products. The following NCRs were reviewed in more detail and discussed with SRB staff:</p>	<p>Met</p>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
<p>Where a report is event-driven, the critical aspect of the process is the identification that a report is required.</p>	<ul style="list-style-type: none"> <li>▪ List of staff who received training on non-conformance process in 2023</li> </ul> <p><u>Interview:</u></p> <ul style="list-style-type: none"> <li>▪ Discuss the process for determining whether a report is required.</li> </ul>	<ul style="list-style-type: none"> <li>• NCR#929 (2023/05/05), Administrative limit exceedance of bioassay result for Zone 2 worker                             <ul style="list-style-type: none"> <li>○ The cause was related to the type of light and this is unlikely to recur.</li> </ul> </li> <li>• NCR#931 (2023/06/1), RSO-042. Routine monitor checks were not carried out as prescribed.</li> <li>• NCR#942 (2023/10/13) Human Performance. PU connection was not tight and became loose during filling. Caused purges to be &gt;20,000 multiple times (Bulk Splitter)                             <ul style="list-style-type: none"> <li>○ This occurred overnight. The tritium is released from the bulk container and it takes time to adsorb onto the PUTTs so it was left overnight.</li> <li>○ Two operators at a time and now always make a point to communicate with each other when PU connection is wrench tight.</li> </ul> </li> <li>• NCR#943 (2023/10/17), September 2023 tritium inventory exceeded the discrepancy rate (+10.59%)</li> <li>• NCR#951 (2024/01/02), Audit schedule not completed as planned.</li> <li>• NCR#955 (2024/02/07) 3 Findings from PLC Inspection. PLC-SRBT-P1894-004-SCI-0</li> <li>• NCR#960 (2024/04/11) March 2024 tritium inventory out of acceptable discrepancy. +13.90% (limit is +10%)</li> </ul> <p><b>Non-conformance report training</b>                      SRBT staff receive annual management system training at their Annual Safety Training. A powerpoint presentation from this training was reviewed, and it contains key aspects of the Non-Conformance Report process such as the triggers for an NCR (a defect, failure, or inadequacy). A completed attendance sheet from the Annual Safety Training was reviewed and only one staff was observed as absent.</p>	
<p><b>Safety and Control Area: Environmental Protection</b></p>			

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
<p><b>8. Source:</b> Environmental Management System</p> <p><b>Details:</b> Monitoring Operations that impact the environment</p> <p>The Mitigation Committee is responsible for monitoring facility operations and assessing the effectiveness of operational controls on minimizing pollution and reducing environmental impacts. This includes documented decisions and actions as part of frequent formal meetings. The functional requirements of committees are described in SRBT's <i>Committee Process and Descriptions</i> document.</p>	<p><b>Mitigation Committee</b></p> <p>Ensure that the Mitigation Committee is fulfilling the requirements set out in SRBT's <i>Committee Process and Descriptions</i>.</p> <p><u>Record Review:</u></p> <ul style="list-style-type: none"> <li>▪ Mitigation Committee meeting minutes (2023 and 2024)</li> </ul> <p><u>Interview:</u></p> <ul style="list-style-type: none"> <li>▪ Discuss notable observations from Mitigation Committee meeting minutes</li> </ul>	<p><u>Records Review:</u></p> <p>Mitigation Committee Meeting minutes were reviewed for January 2023, December 2023, and January 2024, and were found to meet the functional requirements as outlined in SRBT's <i>Committee Process and Descriptions</i> document, including the target minimum frequency of twice per year.</p> <p><u>Interview:</u></p> <p><b>Number of PUTT cycles</b></p> <p>An initiative to determine when a PUTT is no longer working properly was identified in the July 2023 meeting, in order to extend the life of the PUTT beyond 13 cycles, but remain below the limit of 30 based on the SAR. It was found that higher oxide levels in the gaseous effluent and lower tritium re-adsorption rate indicate that a PUTT is no longer working efficiently. SRBT is now using PUTTs more than 13 cycles but will not exceed 30. The number of PUTT cycles is tracked by the last two digits in the ID noted on a tracking sheet (22-102A-20).</p> <p><b>Volume reduction on rigs 1 and 7 and the bulk splitter</b></p> <p>Since the July 2023 meeting, there has been an initiative identified to reduce the volume of rigs 1 and 7 and the bulk splitter. During the walk down, the volume reduction initiatives were discussed (e.g. as decreasing the tube diameter of the static portions of the lines). The Mitigation Committee will continue to consider the volume reduction initiatives, but there are no upcoming plans to implement them as the emissions have been low.</p>	<p>Met</p>
<p><b>9. Source:</b> Environmental Management System</p> <p><b>Details:</b> 3.3 Routine Review of Environmental Aspects</p> <p>A full-scale management review exercise, including benchmarking and self-assessment activities, is performed</p>	<p><b>Routine review of environmental monitoring programs</b></p> <p><u>Records review:</u></p> <ul style="list-style-type: none"> <li>▪ 2023 Self-Assessments: Environmental Monitoring Program, Effluent Monitoring</li> </ul>	<p><u>Records review:</u></p> <p>Self-assessments and benchmarking exercises on the Environmental Monitoring Program, Effluent Monitoring Program, and Groundwater Monitoring Program were completed for 2023. These reports provide information on the overall performance of the programs, trends, results of comparisons, any issues reviewed, or NCRs that were opened.</p>	<p>Met</p>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
<p>by the responsible manager on an annual basis.</p>	<p>Program, Groundwater Monitoring Program</p> <ul style="list-style-type: none"> <li>▪ 2023 Benchmarking: Environmental Monitoring Program, Effluent Monitoring Program, Groundwater Monitoring Program</li> </ul> <p><u>Interview</u></p> <ul style="list-style-type: none"> <li>▪ Discuss notable observations from self-assessment and benchmarking exercises</li> </ul>	<p>In reviewing the 2023 self-assessment on the effluent monitoring program, it was noted that the intercomparison test for liquid effluent monitoring in February 2023 was repeated in March 2023 as the Zone 3 barrel water value fell outside the acceptance criteria of +/-30%. The issue related the non-conformance to suspended matter in the water (NCR-923).</p>	
<p><b>10. Source:</b> SAR</p> <p><b>Details:</b> Section 5, General Design Aspects</p> <p>Real time data on facility emissions is provided to staff processing tritium via remote display units.</p> <p><b>Source:</b> Effluent Monitoring Program</p> <p><b>Details:</b> Section 3.1, Key Responsibilities</p> <p>Ensure EffMP equipment is maintained in an acceptable state at all times.</p>	<p><b>Real-time stack monitoring equipment</b></p> <p><u>Field check:</u></p> <ul style="list-style-type: none"> <li>▪ Ensure that stack monitoring equipment is maintained in an acceptable state (in operation)</li> <li>▪ TAM flow rate 4-6 litres per minute (check remote display units (RDU) in Rig Room and Tritium Lab)</li> </ul> <p><u>Records/Interview:</u></p> <ul style="list-style-type: none"> <li>▪ RDU alarms from TAMs over past 12 months (high or low)</li> </ul>	<p><u>Field check:</u></p> <p>During the walk through, tritium in air monitors (TAMs), RDU in Rig Room and Tritium Lab, bubblers, and differential pressure gauges on the stacks were all operational and within acceptable ranges:</p> <ul style="list-style-type: none"> <li>• RDU in trit lab: 3 <math>\mu\text{Ci}/\text{m}^3</math></li> <li>• Trit lab TAM flow rate: 5 L/min.</li> <li>• Rig Stack differential pressure: 034 in water</li> <li>• Bulk Stack differential pressure: 0.4 in water</li> <li>• Calibration due next December 15, 2024 (stickers).</li> </ul> <p><u>Interview:</u></p> <p>RDU alarms were discussed with SRBT staff. Typically, alarms occur as a result of the Ar purge at the end of each cycle or a broken light source that gets brought to a fume hood. SRBT staff did not identify any recent alarms due to problematic situations.</p>	<p>Met</p>
<p><b>11. Source:</b> SRBT Effluent Monitoring Program</p> <p><b>Details:</b> 4.9 Acceptance Criteria</p> <p>All liquid scintillation counting (LSC) assays performed in support of the analysis of effluent require associated</p>	<p><b>Effluent monitoring quality assurance and quality control</b></p> <p><u>Field checks/interview:</u></p> <ul style="list-style-type: none"> <li>▪ Visit the LSC lab to discuss QA with a technician.</li> </ul>	<p><u>Field checks/interview:</u></p> <p>CNSC staff reviewed a batch of daily routine swipes in the liquid scintillation counting (LSC) lab. The reference standard used is diluted from a higher activity standard from Perkin Elmer. SRBT matches reference media to the sample being analyzed for the swipes. For example, when analyzing daily swipes, a clean/blank swipe is added to the</p>	<p><b>Not Met</b> <b>SRBT-2024-01-NNC01</b></p>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
<p>quality control (QC) checks, in line with the applicable LSC-procedure (LSC-003, Analysis of LSC Quality Control Data).</p> <p>Annually, a third party will be engaged to provide independent assessment of the adequacy of our gaseous effluent monitoring methodology as part of interlaboratory testing. Results between the third-party assessment and SRBT shall be compared, and an investigation into any discrepancy greater than 30% shall be performed.</p> <p>Annually, a third party will be provided with sample material obtained as part of the liquid effluent monitoring program and requested to measure tritium concentration as part of inter-laboratory testing.</p> <p><b>Source:</b> SRBT Effluent Monitoring Program</p> <p><b>Details:</b> 7.2, Sample Quality Control</p>	<ul style="list-style-type: none"> <li>▪ LSC - weekly normalization and calibration</li> <li>▪ Ensure routine gaseous effluent sample batches include one method blank, two reference standards, and four duplicates</li> <li>▪ Ensure routine liquid effluent sampling batches include one method blank, one reference standard, and a triplicate.</li> </ul> <p><u>Records Review:</u></p> <ul style="list-style-type: none"> <li>▪ Third party assessment of gaseous effluent monitoring methodology</li> <li>▪ Third party inter laboratory testing (liquid effluent)</li> <li>▪ Review recent LSC blind tests</li> </ul>	<p>vial containing the reference standard and for bioassay samples, the reference standard is added to urine. Results from the reference samples go into a spreadsheet and the acceptance +/- 10% of the standard value. Backgrounds are analyzed once per week.</p> <p>Bioassay (urine) samples from Health Canada are analyzed in a blind test as part of SRBT's dosimetry licence.</p> <p>The batch composition of gaseous and liquid effluent samples was not reviewed.</p> <p>The calibration stickers on the two LSCs were both showing the calibration was due in June 2024. A record of maintenance (June 12, 2024) was observed to be signed by SRBT and the technician from Perkin Elmer, and pictures of updated calibration stickers were provided to CNSC staff via email on June 20, 2024.</p> <p><u>Records review/field checks/interview:</u></p> <p><b>EffMP Inter-laboratory Performance Testing (gaseous) – 2024</b></p> <p>Results from the internal intercomparison (Feb 6-13, 2024) for the rig stack (HTO, HT) differs between the in-use bubbler and the spare bubbler by less than 2%, which is well below the acceptance criteria of 30%.</p> <p>Results from the bulk line (HTO, HT) differs between the in-use bubbler and the spare bubbler by greater than the acceptance criteria of 30% (in-use bubbler is higher). The report presumes that the difference is due to the low amounts of tritium in the samples due to little tritium processing during the sampling period, but the amount of tritium released is not provided in the memo. SRBT acknowledged that the samples were out of the acceptance criteria for the bulk stack and, in response, performed a second internal comparison March 5-12 and 12-19, 2024. In the second comparison exercise, the Bulk HTO for March 12-19 was outside the acceptance criteria of 30% in one case, but otherwise the values were within 30%.</p>	

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
		<p>While in Zone 2, the bubblers and flowmeters were observed with no issues noted (eg flowmeter calibration up to date).</p> <p>For comparison between SRBT and CNL, duplicate samples of gaseous effluent from the stacks were collected between February 6-27, 2024. Results from CNL were consistently higher and while only one value fell outside the 30% acceptance criteria, many of the values were borderline and the average result was 25.3%.</p> <p><b>SRBT-2024-01-NNC01:</b> SRBT shall review their procedures and practices for conducting investigations into effluent intercomparison discrepancies, to ensure that deficiencies requiring corrective actions are identified and resolved.</p> <p><b>EffMP Inter-laboratory Performance Testing (liquid) – 2024</b></p> <p>A barrel of effluent water from Zone 2 was sampled March 19, 2024 for the intercomparison exercise between SRBT and CNL. Results fall within the acceptance criteria of +/- 30%.</p> <p>Notable observations on the memo include:</p> <ul style="list-style-type: none"> <li>• A typo on the table on page 1 incorrectly states that the sampling was done on March 10.</li> <li>• Results on page 2 do not indicate which lab the results are from. In addition, the “verified by” box is empty and the signature is missing. The signature was shown afterwards on the hard copy version.</li> </ul> <p>These observations are minor in nature and do not impact the conclusions of the intercomparison exercise.</p> <p><b>2023 self-assessment on the effluent monitoring program</b></p> <p>In reviewing the 2023 self-assessment on the effluent monitoring program, it was noted that the intercomparison test for liquid effluent monitoring in February 2023 was repeated in March 2023 as the Zone 3 barrel water value fell outside the acceptance criteria of +/-30%. The issue</p>	



Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
<p><b>13. Source:</b> Environmental Monitoring Program</p> <p><b>Details:</b> Section 8.2, Sample Quality Control</p> <p>Quality control of sample collection and analysis is assured using several traditional methods:</p> <ul style="list-style-type: none"> <li>• Assessment of background samples / reference area samples</li> <li>• Method blanks, trip blanks</li> <li>• Duplicate samples at selected sampling areas</li> <li>• NIST-traceable reference standards used during sample assays</li> <li>• Spiked blank analysis</li> <li>• Spiked sample analysis</li> <li>• Triplicated measurements with outlier assessments</li> </ul> <p><b>Details:</b> Section 8.6, Inter-laboratory Testing</p> <p>On an annual basis, the program manager is responsible for arranging an inter-laboratory exercise for the assessment of samples from the EMP. If a contracted third party is performing EMP activities on behalf of SRBT, the inter-laboratory exercise can either be</p>	<p><b>Environmental Monitoring Program QA/QC</b></p> <p>Passive air samples                      Precipitation                      River water                      Milk                      Residential wells                      Sewage sludge cake                      Produce</p> <p><u>Interview/ records review:</u></p> <ul style="list-style-type: none"> <li>▪ Ensure that QA/QC is being performed as outlined in the Environmental Monitoring Program.</li> </ul> <p><u>Record review:</u></p> <ul style="list-style-type: none"> <li>▪ Memo documenting inter-laboratory testing of EMP samples (most recent)</li> </ul> <p><u>Field checks/interview:</u></p> <ul style="list-style-type: none"> <li>▪ Visit the LSC lab to discuss QA with a technician.</li> </ul>	<p>related the non-conformance to suspended matter in the water (NCR-923).</p> <p><b>EMP Inter-laboratory Performance Testing – 2023</b></p> <p><u>Interview</u></p> <p>The QC methods outlined in Section 8.2 of SRBT’s Environmental Monitoring Program document do not apply to all media. The quality controls for each type of media are described in separate analytical procedures. In order to review SRBT’s quality control on the EMP data, CNSC staff reviewed the spreadsheet “EMP Monthly Data Acceptance, EMP-013-F-01”. SRBT staff use the spreadsheet to review the background samples, references, blanks, duplicates, etc, and flag out of range data points that may require further review.</p> <p>A memo documenting EMP inter-laboratory performance testing (2023) between SRBT and CNL was reviewed. The sample analyzed was a precipitation sample and the results met the acceptance criteria of +/- 30%.</p> <p>In addition, a memo was reviewed of the Groundwater and Environmental Monitoring Programs (March 2024) from CNL. It contained milk and well values, as well as the accompanying standards that were run as part of the batch.</p> <p>SRBT sends results of the vegetable sampling campaign to local participating residents. Four letters sent February 23, 2024 were reviewed. The letters indicate the highest concentration of tritium in produce from the sampling campaign and relates the activity to the CNSC annual public dose limit as well as the relatable benchmarks of taking a flight and natural exposure.</p> <p><u>Field checks/interview:</u></p> <p>The LSC lab QA/QC is covered in criteria 11. It was reviewed in a general sense and not specific to the EMP sample media.</p>	<p>Met</p>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
the collection and analysis of a sample between the normal third party and another independent and qualified third party, or the SRBT LSC laboratory.			
<b>Safety and Control Area: Conventional Health and Safety</b>			
<p><b>14. Source:</b> SRBT Health and Safety Policy</p> <p><b>Details:</b> Section 5, Workplace Health and Safety Committee</p> <p>At least half of the members of a committee shall be workers employed at the work place that do not exercise managerial functions, and shall have a chairperson for both employee and employer. SRBT has four (4) members in its Work Place Health and Safety Committee.</p>	<p><b>Workplace Health and Safety Committee meetings</b></p> <p>Verify that the WPHSC met at least 9 times in 2023 and meetings met quorum. Review how actions are tracked to completion.</p> <p>Verify that the WPHSC is fulfilling the requirements set out in SRBT's <i>Committee Process and Descriptions</i>.</p> <p><u>Records review:</u></p> <ul style="list-style-type: none"> <li>▪ Workplace Health and Safety Committee meeting minutes: January 2023 to April 2024</li> </ul>	<p><u>Document Review:</u></p> <p>SRBT's <i>Committee Process and Descriptions</i> document identifies that the WPHSC Committee shall meet at least 9 times per year, the Chairperson must alternate between a manager and employee representative, and that composition shall include the Manager of Safety and Security, at least one other management level representative, at least two non-management committee members, and that non-management shall represent at least 50% of the membership.</p> <p><u>Records Review:</u></p> <p>Overall, the meeting minutes reviewed were thorough, show that SRBT is identifying areas for improvement in health and safety, tracking issues through to completion, and fulfilling the requirements set out in their document <i>Committee Processes and Descriptions</i>.</p> <p>Each meeting has four members, but only their name is listed and not the role, therefore quorum could not be verified based on the records provided. SRBT staff verbally communicated that quorum had been met.</p> <p>The following recommendation is raised:  <b>SRBT-2024-01-R02:</b> SRBT should review how WPHSC meeting minutes demonstrate that quorum is met</p> <p>Workplace Health &amp; Safety Committee meeting minutes were reviewed for all 12 months of 2023 as well as January to April 2024. Upon review, the following general observations were noted:</p> <ul style="list-style-type: none"> <li>• Jan 2023 – New procedure for spill kits, Sound Survey (5 areas &gt;87dBA)</li> </ul>	<p><b>Met with recommendations                      SRBT-2024-01-R02                      SRBT-2024-01-R03</b></p>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
		<ul style="list-style-type: none"> <li>November 2023 – A health and safety stand down occurred on the importance of reading the SDS prior to using chemicals.</li> <li>March 2024 – A worker noted minor issue with not following up on actions/issues found during health and safety inspections.</li> <li>July 2023 and January 2024 meetings had 3 members (1 absent)</li> </ul> <p>With respect to first aids, the following observations are noted:</p> <ul style="list-style-type: none"> <li>In March 2023 and August 2023 first aids were presented (burn, slip, paint in the eye), but the records were not included as an attachment in the meeting minutes.</li> <li>June 2023 – first aid injury, burn to the finger (May 15, 2023). The record is provided in the minutes, but does not include details are not provided on how the injury happened (chemical burn or heat/cold physical burn).</li> <li>December 2023 – A March 2023 first aid is included. SRBT staff explained during the interview that the first aid had been forgotten about. The report is missing the answer to the question, “Did the worker return to work after the incident or the next day?” SRBT verbally confirmed the worker returned to work.</li> </ul> <p><b>SRBT-2024-01-R03:</b> SRBT should review current practices for reviewing and recording injury/first aid/hazardous substance exposure records at WPHSC meetings.</p>	
<p><b>15. Source:</b> SRBT Health and Safety Policy</p> <p><b>Details:</b> 6.4 Work Place Health and Safety Committee Duties and Responsibilities:</p> <p>shall inspect each month all or part of the work place, so that every part of the</p>	<p><b>Workplace Health and Safety Committee inspections</b></p> <p>Verify that the WPHSC inspected each area of the facility at least once in 2023. Review how actions are tracked to completion.</p>	<p><u>Records Review:</u></p> <p>Workplace Health &amp; Safety inspections were reviewed for all 12 months of 2023 as well as January to April 2024. Upon review, the following observations were noted:</p> <ul style="list-style-type: none"> <li>August 2023 inspection report checklist final page was not filled out when it was scanned into the September WPHSC meeting minutes, but the scanned version of</li> </ul>	<p><b>Met with recommendation SRBT-2024-01-R04</b></p>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
<p>work place is inspected at least once each year;</p>	<p><u>Records review:</u></p> <ul style="list-style-type: none"> <li>▪ Health and Safety Committee inspections from January 2023 to April 2024</li> </ul> <p><u>Field check:</u></p> <ul style="list-style-type: none"> <li>▪ Check areas identified with issues in the WPHSC inspections</li> </ul>	<p>the August 2023 inspection (stand alone) was all checked off.</p> <ul style="list-style-type: none"> <li>• In the March 2024 WPHSC meeting minutes, it was noted that the February 2024 inspection identified that there was no pull station in the coating room, despite the checklist for the inspection including a pull station checkbox (and previously being checked off).</li> <li>• The April 2024 inspection checklist does not list a pull station in the Coating Room, thus confirming that the template had been updated based on the February inspection.</li> </ul> <p><b>SRBT-2024-01-R04:</b> SRBT should review their workplace inspection practices to ensure checklists accurately reflect the areas being inspected and inspection records are completed.</p>	
<p><b>16. Source:</b> SRBT Hazard Prevention Program</p> <p><b>Details:</b> APPENDIX A: Instructions in workplace health and safety and hazard identification</p> <p><b>Source:</b> NFCC 2020</p> <p><b>Details:</b> APPENDIX A: Instructions in workplace health and safety and hazard identification</p>	<p><b>Hazard Prevention and Mitigation</b></p> <p>Ensure that SRBT staff are following the instructions outlined in APPENDIX A:of the Hazard Prevention Program, the NFCC 2020, and other relevant sources.</p> <p><u>Field checks:</u></p> <p>Field checks include:</p> <ul style="list-style-type: none"> <li>▪ Appropriate PPE for the job</li> <li>▪ Proper storage of hazardous and flammable chemicals</li> <li>▪ Work area kept tidy and free of clutter</li> <li>▪ Eye wash stations (flushed/inspected/not blocked)</li> <li>▪ Torches not left unattended</li> <li>▪ Hair tied back</li> <li>▪ No loose clothing</li> <li>▪ Following protocols for acid handling</li> </ul>	<p><u>Field checks:</u></p> <p>Overall, the facility was observed to be in excellent condition in terms of housekeeping, organization, cleanliness, lighting, quantity of PPE in stock, and signage. Other notable observations include:</p> <ul style="list-style-type: none"> <li>• A spill kit for HF was present and it was confirmed that calcium gluconate gel was present and within the expiry date. A worker provided how they would respond in the case of HF exposure/burn to skin.</li> <li>• Workers in the coating room were observed wearing shorts. A photo was provided to show a worker wearing the PPE required for handling HF (heavy apron, long gloves, face shield). The apron worn for handling HF is open in the back and the worker was wearing shorts.</li> <li>• SRBT's Hazard Prevention Program states that, "safety glasses or prescription eyewear must be worn in each department (Glass Shop, Coating, Rig Room, Milling/Moulding, Assembly) at all times".                         <ul style="list-style-type: none"> <li>○ SRBT provided the rationale for the eye protection strategy in a memo sent by email on June 20, 2024 (e-Doc 7308871). In the memo, protective eyewear was introduced in</li> </ul> </li> </ul>	<p>Met</p>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
	<ul style="list-style-type: none"> <li>▪ Hearing protection (where required)</li> <li>▪ Spill kit for HF and calcium gluconate (not expired)</li> <li>▪ Dangerous good stored at least 100mm off the floor</li> <li>▪ Spill kits (present, inspected, stocked, not blocked)</li> <li>▪ Proper storage and labelling of hazardous chemicals (eg HF, H<sub>3</sub>PO<sub>4</sub>, HNO<sub>3</sub>)</li> </ul>	<p>2013 as a preventative measure against nuisance foreign matter (dried paint, broken glass, plastic particles and not for the purpose of impact protection. SRBT's Hazard Prevention Program identifies the tasks where safety glasses or face shields are required. For example, "When working with acids, proper protective clothing such as safety glasses, chemical gloves and a rubber apron must be worn at all times. All work with acid must be done inside a fume hood. A face shield must be worn when transporting acid from the fume hood to the acid storage cabinet."</p> <ul style="list-style-type: none"> <li>• Eye wash bottles had tamper evident seals. It was discussed whether or not the seals should be removed and it was clarified that the manufacturer's instructions include that the seal must be broken prior to use.</li> </ul>	
<p><b>17. Source:</b> SRBT Hazard Prevention Program</p> <p><b>Details:</b> APPENDIX B: Employee Duties under Part II of the Canada Labour Code</p> <p>Employees have a responsibility to take all reasonable and necessary precautions to ensure their health and safety and that of anyone else who may be affected by their work or activities. Specifically, the Code requires employees to:</p> <ul style="list-style-type: none"> <li>• report to the employer any thing or circumstance that is likely to be hazardous to the employees or any other person in the work place</li> <li>• report to the employer, all work-related accidents, occupational diseases, or other hazardous</li> </ul>	<p><b>Employee reporting</b></p> <p><u>Records review:</u></p> <ul style="list-style-type: none"> <li>▪ Employee reports on hazardous or potentially hazardous circumstances, work related accidents, near misses, or any contravention to Part II of the CLC from January 2023 to April 2024</li> </ul> <p><u>Field check:</u></p> <ul style="list-style-type: none"> <li>▪ Check on any field related items brought up in employee reports (if applicable)</li> </ul> <p><u>Interview:</u></p> <p>Discuss how employees are made aware of their responsibility to report on hazardous or potentially hazardous</p>	<p><u>Records review:</u></p> <p>WPHSC meeting minutes from January 2023 to April 2024 were reviewed and included records of hazardous or potentially hazardous circumstances and work-related accidents, demonstrating that employees are reporting hazardous occurrences and injuries to the employer. Observations are noted under criteria 14.</p> <p><u>Field check:</u></p> <p>There were no field checks performed in follow up to observations from the records review.</p> <p><u>Interview</u></p> <p>SRBT staff described the various avenues used to bring awareness to employee reporting on hazardous or potentially hazardous circumstances, near misses, or contravention to part II of the CLC:</p> <ul style="list-style-type: none"> <li>• Two elected employee representatives on the WPHSC</li> <li>• Approachability of staff on WPHSC</li> <li>• Owners do walk throughs to foster communication.</li> </ul>	<p>Met</p>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
occurrences that have caused injury to the employee or any other person  • report to the employer, any situation the employee believes to be a contravention of Part II of the Code, by the employer, another employee, or any other person;	circumstances, work related accidents, near misses, or any contravention to Part II of the CLC.	<ul style="list-style-type: none"> <li>• Management open door policy</li> <li>• Hazard work form and near miss form are in the lunch room</li> <li>• Annual training</li> </ul>	
<b>Safety and Control Area: Emergency management and fire protection (fire protection focus)</b>			
<b>18. Source:</b> NFCC 2020  <b>Details:</b> 2.7.1 2.7.2 2.7.3	<b>Exits and means of egress</b>  <u>Field Check:</u> <ul style="list-style-type: none"> <li>▪ Verify that means of egress including aisles, corridors, stairwells and exit doors are maintained in good repair and free of obstructions.</li> <li>▪ Verify that doors forming part of a means of access or egress are operable.</li> <li>▪ Verify that exit lighting and exit signs are visible and illuminated.</li> </ul> <u>Records review:</u> <ul style="list-style-type: none"> <li>▪ Verify that exits and means of egress are being checked during workplace inspections</li> </ul>	<u>Field Check</u>  Overall, means of egress were observed in good repair and free of obstructions. One concern was observed in the Zone 3 Waste room. <ul style="list-style-type: none"> <li>• During the walk down, a drum on a wheely base and a barrier to contain sprinkler water were observed blocking the exit door in Waste Room. However, since the facility is sprinklered and the Main Entrance is within 45 m of Zone 3, it is only critical to maintain means of egress to the Main Entrance for emergency response.</li> </ul> <u>Records Review/Interview</u> <ul style="list-style-type: none"> <li>• Means of egress are the first item listed for each zone of the workplace inspections and no issues were observed for the inspections observed from January 2023 to April 2024.</li> <li>• The template for Workplace Health and Safety Inspections identifies the various areas of the facility to be inspected. For Zone 3, it lists, “Rig Room, Antechamber, Laser Room, Tritium Lab”, but it does not specify the Waste Room. SRBT staff indicated that it is included in the Rig Room.</li> <li>• The Fire Safety Plan identifies an emergency exit in the Waste Room and also states, “If you detect a FIRE or other EMERGENCY... Leave by way of the nearest, safest exit.”</li> </ul>	<b>Met</b>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
		<ul style="list-style-type: none"> <li>SRBT staff verbally communicated that staff are trained to exit through the Main Entrance in the case of an emergency and the door in the Waste Room is considered a last resort as there are implications for security and environment.</li> </ul>	
<p><b>19. Source:</b> NFCC 2020</p> <p><b>Details:</b> 2.4.1.1</p> <p><b>Source:</b> Fire Hazard Assessment</p> <p><b>Details:</b> Conclusions and Recommendations</p> <p><b>Source:</b> SRBT Fire Protection Program</p> <p><b>Details:</b> Part D, Section 6, General Housekeeping Practices</p> <p>Part L, Section 5, Combustible Metals</p>	<p><b>Combustibles</b></p> <p><u>Field check:</u></p> <ul style="list-style-type: none"> <li>Verify that combustible waste materials in and around buildings are not permitted to accumulate in quantities or locations that will constitute an undue fire hazard.</li> <li>Verify that combustible materials, other than those for which the location, room or space is designed, are not permitted to accumulate in any part of an elevator shaft, ventilation shaft, means of egress, service room or service space.</li> <li>OFI from FHA: Metal covers on raw plastic pellet storage bins</li> <li>No storage of combustible material in the Electrical Room or Furnace Room</li> <li>No storage of combustible material in areas where radioactive material is stored, other than a small amount of depleted uranium (in a fire resistant safe in Zone 3)</li> <li>Small amount of combustible metal in rig room (class D fire extinguisher provided for this reason)</li> </ul> <p><u>Records review:</u></p>	<p><u>Field Check</u></p> <ul style="list-style-type: none"> <li>No issues pertaining to combustible materials were observed</li> </ul> <p><u>Records Review</u></p> <ul style="list-style-type: none"> <li>The template for Workplace Health and Safety Inspections does not include an item on the presence of combustibles in Zone 2. SRBT staff verbally communicated that combustibles are identified during daily walk downs.</li> </ul>	<p>Met</p>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
	<ul style="list-style-type: none"> <li>Verify that workplace inspections identify accumulation of combustible materials</li> </ul>		
<p><b>20. Source:</b> NFCC 2020  <b>Details:</b>                  2.4.1.3</p>	<p><b>Waste receptacles</b></p> <p><u>Field check:</u></p> <ul style="list-style-type: none"> <li>Verify that waste receptacles are of non-combustible construction</li> <li>Verify that trash cans are not overflowing</li> </ul>	<p><u>Field Check</u></p> <ul style="list-style-type: none"> <li>Waste receptacles observed were of non-combustible construction</li> <li>Waste receptacles observed were not over flowing</li> <li>Waste receptacles in Zone 3 were divided into “low contamination” and “no contamination”, but no labels were observed that would identify them as such.</li> <li>A waste receptacle with the label “oily waste can” was observed in the coating room that contained empty plastic bottles.</li> </ul> <p><b>SRBT-2024-01-R05:</b> SRBT should review waste receptacle labelling practices to ensure clear identification of intended waste for each receptacle.</p>	<p><b>Met with recommendation SRBT-2024-01-R05</b></p>
<p><b>21. Source:</b> NFCC 2020  <b>Details:</b>                  3.1.2.5, Table 3.2.7.6, 4.2.10.2, 4.2.3.2  <b>Source:</b> SRBT Fire Protection Program  <b>Details:</b>                  Part D, Section 6, General Housekeeping Practices                  Part D, Section 7, Control of Flammable and Combustible Liquids                  Part J, Section 25, <i>Storage</i>  <b>Source:</b> SAR  <b>Details:</b>                  The Rig Room includes a flammable gas detection unit on the north interior wall, centrally located in order to detect any acetylene or natural gas leakage and to alert staff of the leak. A natural</p>	<p><b>Flammable and combustible liquids/gases</b></p> <p><u>Records review:</u></p> <ul style="list-style-type: none"> <li>FPP-015, <i>Flammable Cabinet Inspection</i> (most recent 2)</li> </ul> <p><u>Field check:</u></p> <ul style="list-style-type: none"> <li>Chemicals with capability of releasing flammable gases of vapours under normal ambient conditions shall be provided with a ventilation system</li> <li>No more than 500 L of flammable and combustible liquids in a cabinet</li> <li>Containers for flammable or combustible liquids shall be legibly labelled (material in container is flammable, keep away from heat,</li> </ul>	<p><u>Records</u></p> <ul style="list-style-type: none"> <li>The two most recent flammable cabinet inspection checklists were reviewed (April 30, 2024 and May 21, 2024) and no significant observations arose. These inspections are noted as a good practice.</li> </ul> <p><u>Field Check</u></p> <ul style="list-style-type: none"> <li>No issues were observed with the items listed in the field check.</li> <li>Flammable gas detectors were observed in the glass shop (2) and in the Rig Room and were in an operational state.</li> </ul> <p><u>Interview</u></p> <ul style="list-style-type: none"> <li>The rig room flammable gas leak detection unit provides automatic notification to the Pembroke fire department.</li> </ul>	<p>Met</p>



Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
<p>gas leak detector is located in the Glass Shop as well, with a portable unit also available for precise determination of leak location if needed.</p>	<p>sparks, open flames, close when not in use)</p> <ul style="list-style-type: none"> <li>▪ No incompatibilities stored with flammables (oxidizers, toxic gases, organic peroxides, 1m from corrosives)</li> <li>▪ Piping shall not be materials subject to failure or combustible/low melting point</li> <li>▪ Rig Room flammable gas detection unit (N wall)</li> <li>▪ Glass Shop natural gas leak detector</li> </ul> <p><u>Interview:</u></p> <ul style="list-style-type: none"> <li>▪ Discuss leak detection methods for flammable gases</li> </ul>		
<p><b>22. Source:</b> NFCC 2020</p> <p><b>Details:</b> 3.1.2.5</p>	<p><b>Compressed gases</b></p> <p><u>Document review:</u></p> <ul style="list-style-type: none"> <li>▪ HAS-021, <i>Compressed Gas Cylinders</i></li> </ul> <p><u>Field checks:</u></p> <ul style="list-style-type: none"> <li>▪ Cylinders (in use or not in use) should be chained</li> <li>▪ Cylinders in storage should be capped</li> <li>▪ Cylinders should not be stored in any exit or corridor providing access to exits, within 1m of an exit, or under any fire escape</li> </ul>	<p><u>Document Review</u></p> <p>HAS-021, <i>Compressed Gas Cylinders</i> does not include instructions for storage conditions of cylinders.</p> <p><u>Field checks/Interview:</u></p> <ul style="list-style-type: none"> <li>• Cylinders were observed to be adequately chained and capped when not in use.</li> <li>• The cylinder storage area is a dedicated closer and therefore does not obstruct any means of egress.</li> <li>• In the compressed gas storage room, cylinders of oxygen and acetylene were present, which are incompatible according to Table 3.2.7.6 in the NFCC. It was discussed with SRBT staff that the small quantity of acetylene observed is below 25 kg and therefore is exempt from the requirements in subsection 3.2.7. SRBT staff verbally committed to implementing measures ensure the quantity of acetylene stored in the compressed gas storage room does not exceed 25 kg at any time.</li> </ul>	<p>Met</p>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
<p><b>23. Source:</b> NFCC 2020</p> <p><b>Details:</b> 5.2</p>	<p><b>Hot Work</b></p> <p>Ensure hot work is being performed according to Section 5.2 of the NFCC.</p> <p><u>Records review:</u></p> <ul style="list-style-type: none"> <li>▪ Hot work permits (most recent 3), FPP-020-F-01</li> <li>▪ FPP-020, <i>Hot work</i></li> </ul> <p><u>Interview:</u></p> <ul style="list-style-type: none"> <li>▪ Training</li> </ul>	<p>PAI – permit authorizing individual (fire protection specialist)</p> <p><u>Document Review</u></p> <ul style="list-style-type: none"> <li>• The procedure, FPP-020, <i>Hot Work</i>, has a section on PPE requirements, but the hot work procedure does not include PPE in the list of precautions.</li> <li>• SRBT procedure, FPP-020, <i>Hot Work</i>, lists 14 conditions that shall be verified by the Permit Authorizing Individual (PAI) prior to issuing a Hot Work permit, but the completion of this step is not documented.</li> </ul> <p><u>Records Review</u></p> <p>The most recent three hot work permits were reviewed and in an interview with SRBT staff it was discussed that all three permits were for small jobs. The following observations are noted:</p> <ul style="list-style-type: none"> <li>• The Hot Work permit template does not include the date of the work or the name of the staff or contractor who completed the work.</li> <li>• The location of Area Supervisor signature is above a box of precaution/Approval items.</li> <li>• September 18, 2019 – combustibles within 15 m, but the precautions were not taken.                         <ul style="list-style-type: none"> <li>○ The work was very minimal and in SRBT staff expert opinion it was not required.</li> </ul> </li> <li>• The Hot Work permit from August 28, 2020 is missing an Area Supervisor Signature.</li> </ul> <p>SRBT staff verbally committed to review the Hot Work Permit template.</p> <p><b>SRBT-2024-01-R06:</b> SRBT should review and revise their hot work permit template and completion thereof to clearly document how the requirements set out in FPP-020 Hot Work and good industry practice are being met.</p>	<p style="text-align: center;"><b>Met with                      recommendation                      SRBT-2024-01-R06</b></p>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
<p><b>24. Source:</b> SRBT Fire Protection Program</p> <p><b>Details:</b> Section 2, Inspections / Audits</p>	<p><b>Inspections and audits</b></p> <p><u>Records review:</u></p> <ul style="list-style-type: none"> <li>▪ Fire Protection Committee meeting minutes: Jan 2023 to April 2024</li> <li>▪ Third-party (PLC Fire Safety Solutions) Site Condition Inspection report: 2023</li> <li>▪ Pembroke Fire Department Inspection report: 2023</li> </ul> <p><u>Interview:</u></p> <ul style="list-style-type: none"> <li>▪ Oversight of the Fire Protection Maintenance Schedule</li> </ul> <p><u>Field checks:</u></p> <p>Check on areas identified with opportunities for improvement or non-conformances.</p>	<p><u>Records review</u></p> <p>A third-party (PLC Fire Safety Solutions) Site Condition Inspection report from 2023 was reviewed as well as the Pembroke Fire Department Inspection report from 2023. No notable observations were noted.</p> <p>Fire Protection Committee meeting minutes were reviewed for Aug, Sept and December 2023. A Fire Protection Committee meeting was held on December 13, 2023 to review an incident in the coating room on December 8, 2023, where a plastic container placed too close to a Bunsen burner caught fire. Workers decided to use a fire blanket to smother the fire. The blanket is meant to be pulled straight out of the case while hanging on the wall, but a worker removed the blanket from the wall in its case so this caused a delay in stopping the fire. In addition to the lessons learned as noted in the report, such as on the use of a Bunsen burner, in an interview with SRBT staff, it was communicated that the fire blanket will be added to the Fire Safety Plan (next revision scheduled for 2025), and the use of the fire blanket will be added to fire extinguisher training. The fire blanket cases throughout the facility have been mounted more firmly so the case will be more secure when removing the blanket.</p> <p><u>Walk Through/Interview</u></p> <ul style="list-style-type: none"> <li>• During the walk through, all fire extinguisher inspection tags were observed to be complete and up to date, except for one instance in the assembly area where the May 2024 inspection was missed. In response, SRBT issued NCR-967, the fire extinguisher was inspected, and all other extinguishers were checked to ensure no others were missed. NCR-967 will be discussed at the next committee meeting.</li> <li>• A section of ceiling tiles above the washing hood in the coating room was observed to be damaged. SRBT verbally committed to repairing the tiles.</li> </ul>	<p style="text-align: center;">Met</p>
<p><b>Other matters of regulatory interest: Public Information and Disclosure Program (PIDP)</b></p>			

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
<p><b>25. Source:</b> REGDOC-3.2.1, <i>Public Information and Disclosure</i></p> <p><b>Details:</b> Section 2.2.4, Public information strategy and products</p> <p><b>Source:</b> SRBT Public Information Program</p> <p><b>Details:</b> Section 9.0, Public information strategy and products</p>	<p><b>Public information strategy and products</b></p> <p><u>Records review:</u></p> <ul style="list-style-type: none"> <li>• Press releases or public notifications</li> <li>• Pamphlet and general brochure</li> <li>• Groundwater brochure</li> <li>• Presentations and meetings</li> <li>• Meetings</li> <li>• Reports of environmental monitoring results to residents</li> <li>• Social media</li> <li>• Website</li> <li>• Plant tours</li> <li>• Fundraising and sponsorships</li> <li>• Active presence in community</li> </ul> <p><u>Interview</u></p> <ul style="list-style-type: none"> <li>▪ Discuss any observations from records review</li> </ul>	<p><u>Records review:</u></p> <p>SRB's PIDP is posted on their website <a href="http://www.srbt.com">www.srbt.com</a>, along with a variety of public information products such as press releases and public notifications, brochures, links to presentations and meetings, environmental data, etc.</p> <p>Letters to residents communicating the 2023 produce sampling results were reviewed and found to be written at an appropriate level for the general public. The letters indicate the highest concentration of tritium in produce from the sampling campaign and relates the activity to the CNSC annual public dose limit as well as the relatable benchmarks of taking a flight and natural exposure.</p> <p><u>Interview</u></p> <ul style="list-style-type: none"> <li>• No inquiries have been received since 2022, including any follow up from the relicensing hearing</li> <li>• Technical documents (e.g. reports of environmental monitoring results to residents) are written at the level that a person without specialized training can understand.</li> <li>• Efforts are made to build positive relationships with farmers that provide produce for the environmental monitoring program</li> </ul>	<p>Met</p>
<p><b>26. Source:</b> REGDOC-3.2.1, <i>Public Information and Disclosure</i></p> <p><b>Details:</b> Section 2.2.6, Program evaluation and improvement process.</p> <p>The public information program shall include a process for evaluating its performance and for developing and implementing measures to improve effectiveness.</p> <p><b>Source:</b> SRBT Public Information Program</p> <p><b>Details:</b> Section 10.0, Program evaluation and improvement process</p>	<p><b>Program evaluation and improvement process</b></p> <p><u>Records review:</u></p> <ul style="list-style-type: none"> <li>▪ 2022 Benchmarking and Self-Assessment Public information program</li> <li>▪ Internal Audit Report (07-22) Public Information Program &amp; Financial Guarantee, November 2022</li> </ul> <p><u>Interview:</u></p> <ul style="list-style-type: none"> <li>▪ Discuss any notable observations from records review.</li> </ul>	<p><u>Records review/Interview:</u></p> <p>SRB uses benchmarking, self-assessments, and an internal audit to evaluate the performance of the PIDP. The following observations were noted:</p> <ul style="list-style-type: none"> <li>• The 2022 benchmarking exercise reviews statistics related to social media platforms compared to other Class IB facilities and the CNSC</li> <li>• The 2022 Self-Assessment is a review on the notable items related to the various public information products.</li> <li>• The 2022 Internal Audit report was on two unrelated topics.</li> </ul>	<p>Met</p>

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
<p><b>27. Source:</b> SRBT Public Information Program</p> <p>Section 9.1, <i>Public information committee meetings</i></p> <p>Meetings are held at least twice yearly. During these meetings the Committee discusses the public's perceived opinion of SRBT based on a review of public inquiries, public survey results and media coverage all against historical data. The Committee also continuously seeks input from other staff, contractors or other individuals who may have recommendations to improve the public relations program for the company.</p> <p>The information gathered during these meetings is used to develop possible new Public Information initiatives to improve the Public Information Program and Public Disclosure Protocol.</p>	<p><b>Public information committee</b></p> <p><u>Records review:</u></p> <ul style="list-style-type: none"> <li>▪ Public information committee minutes (2022-2024)</li> </ul> <p><u>Interview:</u></p> <ul style="list-style-type: none"> <li>▪ Discuss how the information gathered during meetings is used to develop possible new Public Information initiatives</li> </ul>	<p><u>Records review and Interview:</u></p> <p>Minutes from public information committee meetings were reviewed for February 1, 2022, February 23, 2022, and February 15, 2023. No meetings have been conducted since February 2023.</p> <p>Meeting minutes solely focused on the relationship with AOPFN and did not contain information on the public's perceived opinion of SRBT.</p> <p>In response to a records request, SRBT staff confirmed that no public surveys were conducted from 2022 to 2024.</p> <p>The following items were not included in the minutes for the meeting minutes reviewed during the inspection:</p> <ul style="list-style-type: none"> <li>• A review of public inquiries against historical data</li> <li>• A review of public survey results (none conducted 2022-2024) against historical data</li> <li>• A review of media coverage against historical data.</li> <li>• No mention that the Committee seeks input from other staff, contractors or other individuals who may have recommendations to improve the public relations program for the company, for the exception of AOPFN.</li> <li>• No new public information initiatives are identified in the meeting minutes</li> </ul> <p><u>Interview</u></p> <ul style="list-style-type: none"> <li>• The items missing from the meeting minutes are discussed informally, outside of committee meetings and are therefore not captured in meeting minutes.</li> </ul> <p><b>SRBT-2024-01-NNC02:</b> SRBT shall ensure its public information committee meetings are conducted according to the frequency and commitments outlined in their PIDP.</p>	<p style="text-align: center;"><b>Not Met</b></p> <p style="text-align: center;"><b>SRBT-2024-01-NNC02</b></p>