CNSC COMPLIANCE INSPECTION REPORT

Inspection No.: SRBT-2021-01

Inspection Title: Type II Compliance Inspection-Management Systems

Prepared by: Lester Posada, Lead Inspector
Nuclear Processing Facilities Division
Directorate of Nuclear Cycle and Facilities Regulation

Report Date: November 3, 2021

.

Canadian Nuclear Safety Commission   Commission canadienne de sûreté nucléaire

Canada

CANADIAN NUCLEAR SAFETY COMMISSION
COMPLIANCE INSPECTION

Inspection No.: SRBT-2021-01

Licensee: SRB Technologies (Canada) Inc.

Licence No.:   NSPFOL-13.00/2022

Facility / Site Inspected: SRBT Tritium Processing Facility

Inspection Date(s):   August 9, 2021 – August 13, 2021

Inspector:
_____

Lester Posada,
Lead Inspector, NPFD

Approved by:
_____

Andrew McAllister
Director NPFD

Safety and Control Area(s): Management System

Inspector Accompanied by: Jessica Way- Project Officer, NPFD
Ananda Senathirajah- Management System Specialist
Kuen Sia- Management System Specialist

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 SRB Technologies (Canada) Inc. from August 9, 2021 to August 13, 2021. The purpose of this inspection was to provide an overall assessment to verify compliance with regulatory requirements.

The scope of the inspection was to focus on the management system safety and control area, to verify SRBT compliance of implementation of their management system to CSA N286-12, "Management system requirements for nuclear facilities".

CNSC inspectors' preliminary inspection facts and findings were discussed with licensee staff. A Preliminary Inspection Facts and Findings Report was tabled during the closing meeting held on August 13, 2021.

The inspection team found SRBT's management system meets CSA N286-12, "Management system requirements for nuclear facilities", and complies with the regulatory requirements. One (1) notice of non-compliance issued for SRBT to address, and five (5) recommendations identified for SRBT's consideration to improve the robustness of its management system. The enforcement action issued is of low safety significance and does not pose an immediate or unreasonable risk to the health and safety of persons or the environment.

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1.   INTRODUCTION

A remote inspection at the SRB Technologies (Canada) Inc. (SRBT) was conducted from August 9, 2021 to August 13, 2021.

The licensee was assessed against provisions of the *Nuclear Safety and Control Act* (NSCA) and its associated Regulations, the conditions of the licence NSPFOL-13.00/2022 [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 and compiled into a Compliance Matrix, which had been provided to SRBT staff prior to the inspection [3]. In light of the ongoing COVID-19 pandemic, this inspection was carried out remotely. A virtual facility tour was conducted and observations from the virtual tour, interviews and review of records 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 CNSC staff's evaluation of the licensee's performance.

2.   PURPOSE AND SCOPE

The purpose of the inspection is being conducted as part of the baseline compliance. The purpose of the inspection is to verify compliance with regulatory requirements.

The scope of the inspection was focused on the management system safety and control area. The inspection is focussed only on sampling a number of processes of the SRBT's management system. The following processes were assessed in the scope of this inspection:

- Organization
- Resources
- Communication
- Information management
- Work management
- Supply chain
- Problem Identification and Resolution
- Change Control
- Assessments

3.   DESCRIPTION OF INSPECTION METHODS

The NSCA, its regulations, licence NSPFOL-13.00/2022, 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 a virtual walkdown of the facility, review of records, photographs and information provided by licensee staff.

Three 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.   Virtual assessment and verification

   - A remote 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 inspection. These were reviewed to confirm that SRBT's management system meets CSA N286-12 requirements and complies with the regulatory requirements.

As per the CNSC process, at the conclusion of the remote 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 finding(s) and subsequent enforcement action and/or 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 enforcement 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 licencing 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 identifed 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 System

4.1.1 Resources

Criteria

Clause 4.5.2 states that workers shall be competent to do the work assigned to them, based on the following:

a) competence criteria shall be determined for positions based on the work to be performed and include education, experience, knowledge, ability, and performance requirements;

(b) workers shall be selected to positions on the basis of defined criteria and their capability to be competent in the position;

(c) training shall be systematically developed and implemented so that the required qualification is achieved and maintained;

(d) expectations for trainee performance shall be established and the trainee tested against them; (e) expected results and behaviour of workers shall be defined; and

(f) workers shall be provided feedback on their performance.

Fact(s)

- Competence criteria including responsibilities, accountabilities and qualifications for the positions are stated in the Organizational Structure and Responsibilities.

- Production staff receive on the job training and assessed annually for their proficiency levels.

- Supervisors assign work based on staff's proficiency level.

- Orientation, Radiation Protection, WHMIS, OSHA, etc. training are provided to all staff.

- Production staff directly involved in the licensing activities receive on the job training.

- Supervisors monitor the work performed by the staff at the production level.

- Supervisors decide on the training requirement for production staff based on the tasks to be completed.

- Supervisors and managers are selected based on the education and relevant experience defined and documented.

- No formal training plan or training assessments are available for supervisors and managers. These staff are hired based on their formal education and relevant experience in the industry.

- Performance reviews of supervisors and managers are managed informally through observing the day- to-day work performance by the president and vice-president.

- Quality policy is clearly documented and communicated to staff as part of the Quality manual (section 5), which explains the expected behaviours for staff at the SRBT.

- Interviewees explained that top management discuss and define their expectations and expected behaviour of staff at the annual all staff meetings, however this is not documented.

- Staff and supervisors explained during the interviews that feedback on their performance are provided during the year, on an on-going basis.

Analysis/Finding(s)

CNSC staff reviewed the following documentations to verify compliance:

a. Organizational Structure and Responsibilities (Revision D – June 11, 2021)

b. Training records of internal auditors training for Compliance manager and QA Manager.

c. Records of annual proficiency level assessment

d. Records of the training of the Assistant Manager- Health Physics in instrument calibration.

e. Example of Technicial proficiency assessment record

f. 2019 Annual Safety Training attendance record

g. Sample work packages ENG 008 and work orders: 452760964, 1000053527, 4505711451, KDP-0302-02, PO13811, SRBT 2019_438

h. Example of training after safety significant procedural change

In addition to reviewing records, CNSC staff interviewed managers/supervisors regarding the adequacy of resources, competency and skills requirement. Based on the virtual walk-down, discussions and records reviewed, CNSC staff observed that individuals performing the work are competent and provided with the appropriate training and skills required to perform their assigned tasks. SRBT staff are made aware of the relevance and importance of their activities and how their activities contribute to safety in the achievement of the organization's objectives. Staff and management also advised that feedback on their performance is provided back to them. Where there is a need for resources, the managers/supervisors raised them through their self-assessments to top management for discussion in the management review meeting.

The supervisors decide on the production staff training based on their relevant experience and plan. Accordingly, training is provided and the effectiveness of the training assessed based on the proficiency level. The managers/supervisors on the other hand do not have a formal training plan or training assessments conducted on them. CNSC staff was advised by top management that these staff are hired based on their formal education and relevant experience in the industry. Additionally, SRBT top management also advised that the managers/supervisors performance reviews are managed informally through day to day observation of their work performance.

CNSC staff conclude that the resource (training/competency) requirements for clause 4.5 as implemented by SRBT meets the requirements for N286-12; however, CNSC staff recommend that SRBT top management put in place training plans for their managers/supervisors and formally document their performance/training assessments.

Recommendation

SRBT-2021-01-R01: SRBT should conduct formal training assessments and have training plans for their supervisors and managers.

4.1.2   Problem Identification and Resolution

Criteria

CSA N286-12, SRBT is required to have a process in place for the identification and resolution of problems. When problems arise, they shall be:

  A. *Immediately controlled, if required;*

  B. *Documented;*

  C. *Evaluated for significance and for underlying cause if deemed by management to be systemic or having impact on meeting business objectives; and*

  D. *Accepted.*

Actions employed to resolve problems shall be reviewed for effectiveness.

Fact(s)

- SRBT has implemented a corrective action process to resolve any identified problems.

- Staff have demonstrated clear understanding of the process and provided examples of non-conformance reports (NCR) raised to bring forward and address problems.

- An NCR log is maintained and kept up to date.

- SRBT uses NCRs to raise, analyze, address, conduct efficiency review and close any problems identified. Records are maintained to demonstrate implementation of this process.

- CNSC inspectors noted that the depth of effectiveness review conducted by the SRBT confirms that the planned corrective action(s) are completed. However, the verification does not go further to assure that the corrective action implemented in fact improved the situation / prevented the problem from occurring in the future.

- Inspection records and interviews demonstrate SRBT's commitment to make resources available to address and complete any NCR raised.

- SRBT's NCR process includes a step to conduct a root cause analysis of the problem, and document the cause in the NCR report where safety and/or risk are impacted. Compliance manager is responsible for conducting these analyses.

- SRBT does conduct detailed root cause analysis for any safety significant events, and maintains relevant records. Root cause analysis of these events is conducted by the Manager, Health Physics and Regulatory Affairs.

- Corrective actions are verified to confirm that planned actions have been completed.

- SRBT's current corrective action process includes follow-up verification to confirm the completion of the corrective action. However, the current process does not require verification of the effectiveness of the implemented corrective action to prevent recurrence.

- SRBT management explained that formal trend analysis more frequently used in high risk or complex nuclear operations, is not deemed value added for the size and operation at SRBT, and thus they do not conduct formal trend analysis for any NCRs raised. However, any safety significant events would be trended as appropriate to prevent recurrence.

Analysis/Finding(s)

Staff reviewed the documentation provided by SRBT to ensure that a rigorous problem identification and resolution process was in place. Some of the documentation reviewed for compliance were:

a. MSP-012: Corrective action (Revision B, May 17, 2017)

b. NCR log (2018 to present)

c. NCR reports: NCR- 464, NCR-734, NCR-735, NCR-796, NCR-817, NCR-822, NCR-834, NCR-837, 842

d. OFI reports: OFI-408, OFI-479, OFI-512, OFI-524

CNSC staff reviewed the NCR log and the corrective action process. CNSC staff conclude that SRBT has a robust problem identification and resolution process in place. The Compliance Manager is dedicated to oversee, maintain the NCR log, co-ordinate all the paperwork, trending and conduct of effectiveness review of the corrective actions. The problem identification and resolution process is not only used to identify problems but also to raise all improvement initiatives. All staff interviewed are very cognizant of the process and will raise their concerns/improvement initiatives as the need arises.

CNSC staff reviewed the NCR log reviewed and note that it shows the number of NCRs raised, how many are open/closed, the source/individual that raised the NCR, who the NCR is assigned to, date assigned, target completion date, actual completion date, top management review, and effectiveness review. A formal, detailed root cause analysis reports are only completed for risk and safety significant issues, which are reviewed and approved by top management.

MSP-012 Rev B section 4 and 5.3 states that the effectiveness of the corrective action taken is reviewed by the Compliance Manager and signed off for closure. However, based on the samples of corrective action reports reviewed, CNSC staff noted that the depth of effectiveness review conducted by the SRBT was that the planned corrective action(s) are completed. The verification does not go further to assure that the corrective action implemented in fact resolves the cause of the problem and prevents the problem from recurring.

Recommendation

SRBT-2021-01-R02: SRBT should verify that actions taken to resolve the problems raised through NCRs are effective and that the actions address the cause of the problems.

4.1.3   Self-Assessments

Criteria

CSA N286-12, SRBT's managers and supervisors are required to conduct self-assessments to identify opportunities for continual improvement and to confirm that work meets the requirements of the management system

Fact(s)

- SRBT managers conduct annual self-assessments as scheduled for their area of responsibility and report to the top management.

- Self-assessment reports by managers are made available to the CNSC staff for all areas.

- Top management reviews any opportunities for improvements identified through self-assessments. Any approved actions are processed through Engineering Change Requests (ECR) or NCRs.

- No cancelled or deferred self-assessments were observed.

- Results of the self-assessments including concerns and improvement initiatives are reported at the management review meetings and addressed.

- CNSC inspectors observed inconsistencies in the approach and report structure, and suggested consistencies in these reports as an opportunity for improvement.

- As a small organization, SRBT managers and supervisors meet informally and discuss experience gained during the self-assessment process. Management committees are utilized to share experience gained.

- Actions resulting from self-assessments are managed through ECR or NCR processes and communicated to relevant staff as appropriate.

Analysis/Finding(s)

Inconsistency was observed in information presented in self-assessment reports provided by various managers. CNSC staff also observed that many performance indicators are tracked and reported in self-assessment reports. However, the results planned by the management, to assess the effectiveness of the management system were lacking in reports.

Some of the documentation reviewed to verify compliance were:

a. MSP-010: Self-Assessment (Revision B, May 8, 2020)

b. MSP-009: Benchmarking (Revision B, May 8, 2020)

c. Management review minutes with self-assessment reporting

d. Self-assessment reports 2019

e. Self-assessment reports 2020

According to SRBT procedure MSP-010 Rev B, section 6 provides specific elements for conducting self-assessment and section 7 provides instructions on reporting of the self-assessment results. The self-assessments did not appear to be conducted consistently across all departments, in accordance to the procedure based on the self-assessment reports provided for the review at the time of the inspection. CNSC staff also noted that some departments have defined performance indicators for the self-assessments to measure the effective performance against defined criteria while other departments do not have them.

CNSC staff conclude that the self-assessment requirements for clause 4.11.1 as implemented by SRBT meets N286-12 requirements; however, SRBT should ensure consistent information/data from all departments are provided to top management for their review and decision-making.

Recommendation

SRBT-2021-01-R03: SRBT should have a consistent structure for reporting self-assessment results that ensures consistent information/data from all departments are provided to top management for their review.

4.1.4   Supply Chain

Criteria

CSA N286-12, Clause 8.5.3.2, SRBT is required to plan and perform audits to confirm the initial and ongoing acceptability of the supplier's management system.

Fact(s)

- SRBT's vendor/contractor approval process is documented and implemented.

- SRBT conducts assessments of essential suppliers before adding them to approval vendor list. Vendor appraisal questionnaires are used to obtain information from the suppliers.

- CNSC staff review of the approved vendor list revealed that some suppliers were assessed only once, and some are not assessed for several years. SRBT staff explained that some suppliers do not return the vendor appraisal questionnaires even after several attempts.

- SRBT maintains an Essential Supplier Directory. This directory is reviewed annually to determine if a supplier needs to be re-approved. However, during interviews, it was noted that SRBT does not have set of criteria used for this determination as the decision is made at the Production Control Manager's discretion.

- SRBT does not use third party auditors to assess its suppliers.

- SRBT monitors the quality of products and services supplied by single source to ensure supplier acceptability.

- Contractors selected for services to SRBT generally have long-term association with SRBT based on their historical satisfactory service/performance.

- According to SRBT procedure MAT-001 section 12.3, a copy of purchase orders/contracts are reviewed and filed in production control manager's office which include supporting documentation such as drawings, quote, technical information, contractor information, statement of work, etc. SRBT staff confirmed that this is being done, however, CNSC staff did not review this during the remote inspection.

- SRBT staff mentioned they conduct annual review of its Essential Supplier Directory to determine the extent and the frequency of supplier assessments based on historical performance of the supplier or contractor as required by their own procedure (MAT-013, section 5.9). However, no records were available to CNSC staff for confirmation.

- SRBT receives and handles its purchased items according to Receiving & Inspection Summary Procedure (MAT-006) and Receiving Nuclear Substances procedure (SHP-014).

- Production control manager reviews and approves the procurement documents to confirm the approved vendor status.

- Responsible manager reviews and approves purchase orders for adequacy.

- Procurement documents such as purchase orders and contracts are accompanied with associated requirements and specifications, and traceable to related work or items.

- Procurement documents are stored and maintained by the production control manager in accordance with the procedure MAT-015.

Analysis/Finding(s)

CNSC staff reviewed documentations and records provided to demonstrate supply chain management process. The following documentations and records were reviewed:

    a. MAT-001 Purching Contract Procedure

    b. MAT-013 Vendor Contractor Approvals for Essentail and Non-Essential Suppliers

    c. Approved Vendor List

    d. Essential Supplier Directory

    e. Design and vendor selection report (fume hoods and vendor appraisal of MotLab (SRBT-2021-01)

    f. Vendor/Contractor Appraisal Questionnaire-Quote # 1403-1711, ISO Certification, Change Control Package Rig Room Fume Hood Replacement

    g. Contract- Black And McDonald 2021

    h. Contract-PerkinElmer 2020

    i. Supplier assessment for external calibration service provider–PerkinEkmer (Jan 25 2021)

    j. Contractor evaluation form completed for Perkin Elmer Health Sciences Canada Inc. (Completed Jan. 25th, 2021) (Contract # 11703-C)

    k. Purchase order#s:

        o 12909-C: 3 years maintenance contract with Black & McDonald Limited.

        o 12767-C: Service agreement with Perkin Elmer Las Canada Inc.

    l. Revised purchase order:

        o Phosphor Technology Ltd.

        o Valley Compressor services 12398-C

    m. Completed Vendor Appraisal Questionnaires

        o Black and McDonald 2019

        o OPG Contractor Questionnaire 2019

N286-12, Clause 8.5.3.2 requirement states that audits shall be planned and performed to confirm the initial and ongoing acceptability of the supplier's management system.

SRBT's procedure MAT-013, *Vendor Contractor approvals for essential and non-essential suppliers*, requires that SRBT review their essential supplier directory annually to determine if a supplier needs to be re-approved, or removed from the list if no longer an active supplier. However, there is no defined criteria used by the SRBT for this determination. As explained by SRBT staff, the decision is made on the Production Control Manager's discretion.

CNSC staff also observed some essential suppliers on the approved vendor list were last approved in 1999. Justification for not evaluating these suppliers over the years for ongoing acceptability as required by the standard is not provided on the approved vendor list.

CNSC staff conclude SRBT's management system does not fully meet the requirements outlined in clause 8.5.3 Supplier acceptability. CNSC staff request SRBT to review their procedures and implement actions to address all requirements outlined in clause 8.5.3 by:

- Establishing criteria for determining the on-going acceptability of suppliers, including planning and conducting supplier's management system as outlined in clause 8.5.3.2 of N286-12;

- Providing justification on the approved vendors list for suppliers's ongoing acceptability without re-evaluation;

- Updating procedures to demonstrate controls in effect for the oversight of supplier's supply chain (Clause 8.5.3.1 (e) of N286-12); and

- Maintaining records to demonstrate annual review of essential suppliers as stated in SRBT's procedure MAT-013.

This finding is of low safety significance and does not impact SRBT's ability to operate the facility in a safe manner. This forms the basis for the following notice of non-compliance and recommendations.

Notice of Non-Compliance

SRBT-2021-01-NNC01: SRBT shall plan and perform audits to confirm the initial and ongoing acceptability of the supplier's management system (CSA N286-12, Clause 8.5.3).

Recommendation

SRBT-2021-01-R04: SRBT should establish criteria for determining supplier/contractors re-evaluation and frequency for maintaining the approved vendor list.

SRBT-2021-01-R05: SRBT should consider adding a column on the approved vendors list to provide reasons/justifications for maintaining essential suppliers on the approved vendors list without re-evaluation.

5.   SUMMARY OF ENFORCEMENT ACTIONS AND RECOMMENDATIONS ISSUED

5.1   Enforcement Actions

The following enforcement action was raised as a result of this inspection.

SRBT-2021-01-NNC01: SRBT shall plan and perform audits to confirm the initial and ongoing acceptability of the supplier's management system (CSA N286-12, Clause 8.5.3).

5.2   Recommendations

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

SRBT-2021-01-R01: SRBT should conduct formal training assessments and have training plans for their supervisors and managers.

SRBT-2021-01-R02: SRBT should verify that actions taken to resolve the problems raised through NCRs are effective and that the actions address the cause of the problems.

SRBT-2021-01-R03: SRBT should have a consistent structure for reporting self-assessment results that ensures consistent information/data from all departments are provided to top management for their review.

SRBT-2021-01-R04: SRBT should establish criteria for determining supplier/contractors re-evaluation and frequency for maintaining the approved vendor list.

SRBT-2021-01-R05: SRBT should consider adding a column on the approved vendors list to provide reasons/justifications for maintaining essential suppliers on the approved vendors list without re-evaluation.

6.   CONCLUDING STATEMENTS

CNSC staff performed an inspection of the SRBT's Management System in order to verify compliance with the NSCA, its associated Regulations, the conditions of the licence and the LCH.

The scope of the inspection focused on the management system safety and control area, to verify that SRBT's management system meets the requirements outlined in N286-12, "Management system requirements for nuclear facilities", and complies with regulatory requirements.

As a result of this inspection, one (1) notice of non-compliance with the criteria assessed from the Compliance Matrix has been identified. Five (5) recommendations also have been raised for SRBT to consider for continual improvement. The CNSC requires SRBT to submit an action plan for addressing the NNC issued.

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

7.   REFERENCES

[1]   SRB Technologies (Canada) Inc. Nuclear Substance Processing Facility Operating Licence, NSPFOL-13.00/2022, (e-Doc 4522207).

[2]   SRB Technologies (Canada) Inc. Licence Conditions Handbook, (e-Doc 5878205).

[3]   E-mail from L. Posada (CNSC) to J. MacDonald (SRBT), *Compliance Matrix - Type II Inspection of SRBT's Management System Implementation (August 9 - 13, 2021)*, July 23, 2021, (e-Doc 6644088).

[4]   SRBT-2021-01 Preliminary Inspection Facts and Findings Report, August 13, 2021, (e-Doc 6622493).

APPENDIX A: ACRONYMS AND ABBREVIATIONS

CNSC	Canadian Nuclear Safety Commission
CVC	Compliance Verification Criteria
ECR	Engineering Change Request
GNSCR	*General Nuclear Safety and Control Regulations*
LCH	Licence Conditions Handbook
NCR	Non-Conformance Report
NNC	Notice of Non-Compliance
NSCA	*Nuclear Safety and Control Act*
NSRDR	*Nuclear Substances and Radiation Devices Regulations*
OFI	Opportunity for Improvement
OHSA	Occupational Health and Safety Act
PTNSR	*Packaging and Transport of Nuclear Substances Regulations, 2015*
RPR	*Radiation Protection Regulations*
SRBT	SRB Technologies (Canada) Inc.
WHMIS	Workplace Hazardous Materials Information System
WO	Work Order

APPENDIX B: ATTENDANCE RECORD(S)

Canadian Nuclear Safety Commission
Commission canadienne de sûreté nucléaire

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

6613983
e-Doc
Number

Licensee Name:	SRBT Technologies (Canada) Inc.
Licence Number:	NSPFOL-13.00/2022
Licensed Site:	SRB Technologies Tritium Processing Facility (Pembroke, ON)
Facility / Program / Site:	SRB Technologies Tritium Processing Facility
Title of Inspection:	Type II Management System Inspection
Inspection Number:	SRBT-2021-01
Inspection Date(s):	August 9, 2021 to August 13, 2021
Lead Inspector:	Lester Posada, NPFD
Meeting Type:	Opening

Name (print)	Role or Job Title	Signature
Lester Posada	Project Officer, Lead Inspector	Virtual Meeting
Jessica Way	Project Officer	Virtual Meeting
Ananda Senathirajah	Management System Specialist	Virtual Meeting
Kuen Sia	Management System Specialist	Virtual Meeting
Jamie MacDonald	Manager – Health Physics and Regulatory Affairs, SRBT	Virtual Meeting
Stephane Levesque	President, SRBT	Virtual Meeting
Ross Fitzpatrick	Vice-President, SRBT	Virtual Meeting

Canadian Nuclear Safety Commission
Commission canadienne de sûreté nucléaire

Inspection Meeting Attendance Record

Unclassified

Directorate of Nuclear Cycle and Facilities Regulation

6613983

e-Doc
Number

Licensee Name:	SRBT Technologies (Canada) Inc.
Licence Number:	NSPFOL-13.00/2022
Licensed Site:	SRB Technologies Tritium Processing Facility (Pembroke, ON)
Facility / Program / Site:	SRB Technologies Tritium Processing Facility
Title of Inspection:	Type II Management System Inspection
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Inspection Date(s):	August 9, 2021 to August 13, 2021
Lead Inspector:	Lester Posada, NPFD
Meeting Type:	Closing

Name (print)	Role or Job Title	Signature
Lester Posada	Project Officer, Lead Inspector	Virtual Meeting
Jessica Way	Project Officer	Virtual Meeting
Ananda Senathirajah	Management System Specialist	Virtual Meeting
Kuen Sia	Management System Specialist	Virtual Meeting
Jamie MacDonald	Manager – Health Physics and Regulatory Affairs, SRBT	Virtual Meeting
Stephane Levesque	President, SRBT	Virtual Meeting
Ross Fitzpatrick	Vice-President, SRBT	Virtual Meeting

APPENDIX C: **COMPLIANCE MATRIX**

Compliance Matrix
Directorate of Nuclear Cycle and Facilities Regulation

Unclassified
Lead Inspector: Lester Posada

Licensee Name:	SRB Technologies (Canada) Inc.
Licence Number:	NSPFOL-13.00/2022
Licensed Site:	320-140 Boundary Road, Pembroke, Ontario, Canada, K8A 6W5
Facility / Program / Site:	SRBT Tritium Processing Facility
Title of Inspection:	Management System Inspection
Inspection Number:	SRBT-2021-01
Inspection Date(s):	August 9, 2021 to August 13, 2021
Lead Inspector:	Lester Posada, Nuclear Processing Facilities Division

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

Select all appropriate Safety and Control Area(s) for this Compliance Inspection here. If inspecting other matters of regulatory interest, select "Other," and specify.

☒ Management System	☐ Environmental Protection	☐ Waste Management
☐ Fitness for Service	☐ Radiation Protection	☐ Security
☐ Operating Performance	☐ Conventional Health and Safety	☐ Safeguards and Non-Proliferation
☐ Safety Analysis	☐ Human Performance Management	☐ Packaging and Transport
☐ Physical Design	☐ Emergency Management & Fire Protection	☐ Other, specify below

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Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
Safety and Control Area: Management System			
Source: LCH **N286-12** **4.4 Organization:** Management shall clearly define to workers the following: (a) organizational structure; (b) authorities, accountabilities, and responsibilities of positions; (c) internal and external interfaces; and (d) how and by whom decisions are made	Clear organizational structure -line of reporting -line of communication Clear authorities, accountabilities, roles and responsibilities defined and communicated to workers Changes in the organization are communicated and understood by the Workers Organization promotes a safe environment and implement practices that contribute to the excellence performance in workers (4.2)	Observations: 1. Organization structure is well defined and documented. 2. Staff demonstrate clear understanding of the line of reporting and communication requirements. 3. Staff demonstrate clear understanding of the requirements regards to communications within and with external stakeholders. 4. Staff demonstrate clear understanding of decision-making authorities at each relevant levels. 5. Changes made in the organization including processes, procedures etc. are communicated to the staff at the annual staff meetings and through the ECR process. Staff demonstrated clear understanding and awareness of the changes implemented. 6. Management conducts annual one day training for all staff to communicate safety objectives and management system requirements. 7. Staff are encouraged to bring forward any safety concerns and improvement initiatives to their respective supervisors and managers. Interviews with staff demonstrate the existence of this culture in the organization. Documents Reviewed: 1. Organizational Structure and Responsibilities (Revision D – June 11, 2021).	Met

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
		2. Samples of signed Job Descriptions: Signed by Management and Employee – Compliance Manager, Rig Room Supervisor, Production Technician.	
		3. Management System Training materials and records- the slide deck presented to all staff in 2019, the agenda distributed for the annual training day, and the attendance record of those present for the training that day.	
		4. Committee process and description (Rev E- June 9, 2021).	
Source: LCH **N286-12** **4.5 Resources:** **4.5.2 Human resources:** Workers shall be competent to do the work assigned to them.	Process is in place: (a) to determine the competence criteria for positions based on the work to be performed and include education, experience, knowledge, ability, and performance requirements; (b) workers are selected to positions on the basis of defined criteria and their capability to be competent in the position (c) training are systematically developed and implemented so that the required qualification is achieved and maintained; (d) expectations for trainee performance are established and the trainee tested against them;	Observations: 1. Competence criteria including responsibilities, accountabilities and qualifications for the positions are stated in the Organizational Structure and Responsibilities (Revision D – June 11, 2021). 2. Production staff receive on the job training and assessed annually for their proficiency levels. 3. Performance reviews of Supervisors and managers managed informally through observing the day- to-day work performance by the president and vice-president. 4. Supervisors assign work based on staff's proficiency level. 5. Supervisors and managers selected based on the education and relevant experience defined and documented. 6. Orientation, Radiation Protection, WHMIS, OHSA etc. training provided to all staff. 7. Production staff directly involved in the licensing activities receive on the job training.	Met

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
	(e) expected results and behaviour of workers are defined;	8. Supervisors monitor the work performed by the staff at the production level.	
		9. Supervisors decide on the training requirement for production staff based on the tasks to be completed.	
	(f) workers are provided feedback on their performance	10. No formal training plan or training assessments are available for supervisors and managers. These staff hired based on their formal education and relevant experience in the industry.	
		11. Quality policy is clearly documented and communicated to staff as part of the Quality manual (section 5), which explains the expected behaviours for staff at the SRBT.	
		12. Interviewees explained that top management discuss and define their expectations and expected behaviour of staff at the annual all staff meetings, however this is not documented.	
		13. Staff and supervisors explained during the interviews that feedback on their performance provided during the year, on an on-going basis.	
		Documents Reviewed:	
		1. Organizational Structure and Responsibilities (Revision D – June 11, 2021).	
		2. Training records of internal auditors training for Compliance manager and QA Manager.	
		3. Records of annual proficiency level assessment	

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
		4. Records of the training of the Assistant Manager- Health Physics in instrument calibration. 5. Example of Technical proficiency assessment record 6. 2019 Annual Safety Training attendance record.	
Source: LCH **N286-12** **4.5 Resources:** **4.5.3 Financial resources:**	Financial resources are made available to ensure adequate manpower, material and equipment to conduct the licenced activity	Observations: 1. Resource requirements with regards to staffing, material and equipment are assessed by managers as part of their self-assessments and reported to top management 2. Management reviews conducted regularly to identify and address any resource requirements. 3. Management committees also utilized to bring forward and address resource requirements. Documents Reviewed: 1. Records of self-assessments 2019 and 2020 2. Records of management reviews 3. Records of management review input from various departmental managers from 2019, 2020:	Met

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
Source: LCH **N286-12** **4.5 Resources:** **4.8.1 Work Management-Training:**	Work identified and planned include: - resources requirement, assignment, and workers to perform the verification Workers are competent to do the work assigned to them. Expectations of the training performance are established and the trainees are tested against them. a) Training requirement and training plan/schedule available b) Training records available for task specific jobs, internal audits c) Training records are available for contractors	Observations: 1. Personnel doing the work are competent and trained by following the work instructions documented in the work packages. These packages contain sequence of work to be completed by responsible departments, instructions, reference to relevant procedures, tools, engineering drawings, Bill of Materials, etc. 2. Supervisors decide on the training requirement for production staff based on the tasks to be completed and the production staff assessed on their proficiency level. 3. Supervisors train the production staff directly involved in the tasks of licenced activities. 4. Supervisors assign tasks appropriate to the proficiency level of staff. 5. Supervisors stated that the goal is to train all staff to the level 5, which is the highest level of proficiency. 6. Supervisors monitor the work performed by staff and gradually add training, once staff have mastered the current level. 7. Records of proficiency level assessments for production staff are available from the production manager. No records are available for supervisors or managers.	Met with Recommendation (SRBT-2021-01-R01)

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
	Training not provided, cancelled or deferred are justified and the rationale provided. (4.9)	8. Production staff receive on the job training during day-to-day operation, and thus no formal planning is in effect. Due to this nature, records for any cancelled / deferred training was not deemed applicable at this juncture. 9. Supervisors and Managers are hired based on their academic qualification and industry experience. No formal training plan is established or executed. Documents Reviewed: 1. Records of annual proficiency level assessments 2. Sample work packages ENG 008 and work orders: 452760964, 1000053527, 4505711451, KDP-0302-02, PO13811, SRBT 2019_438 3. Example of training after safety significant procedural change 4. 2019 Annual safety training attendance record	

Source: LCH
 	
N286-12
 	
4.6 Communication:
 	
Processes shall be in place to ensure effective communication. Workers shall be made aware of the
	Defined means of communication in place for communicating or relating information to workers.	Observations:
		
		1. SRBT utilizes many different means to communicate work related objectives to staff. Examples observed such as:
		    a. Committee meetings
		    b. Regular staff meetings
			Met

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
relevance and importance of their work related to the objectives.	Methods of communication is reliable and effective.	c. Documented job descriptions and performance reviews d. Documented processes and procedures e. Management reviews / review meetings f. Annual all staff meeting / orientation	
	Workers are aware and understand the relevance and importance of their work and what is expected of them	2. Staff demonstrated clear understanding of the SRBT's work related objectives, which demonstrates the effectiveness of communications systems in effect at the SRBT. 3. Interviewees provided consistent messages about the management's expectations and objectives, also an indication of the effectiveness of the communications. 4. Staff demonstrated clear understanding of processes and procedures in place. 5. All interviewees consistently explained the understanding of work packages and its use. 6. Interviewees demonstrated understanding of regulatory requirements and the importance of complying to those requirements. Documents Reviewed: 1. MSP-005 – Communication Process (Revision B, June 7, 2021) 2. Management review meeting minutes 3. Job descriptions (Organizational Structure and Responsibilities (Revision D – June 11, 2021) 4. Committee meeting minutes 5. Memo notifying the changes	

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
		6. 2019 Annual Management System Training Slide Deck 7. Sample letter of communication from QA manager regarding status of calibration of equipment (dated February 19, 2020)	
Source: LCH **N286-12** **4.7.2 Information** Information shall be provided in a timely manner to those who need it, including the following: (a) the necessary information is identified (e.g., identification and labelling of systems and components, radiation dose identification, and worker identification); (b) those who need the information are identified; (c) the information is current, correct, and timely; and (d) Information systems provide adequate security and ease of use.	The required information is identified, current, correct and provided in a timely manner to the personnel requiring it. Personnel requiring the information are identified. Information systems provide adequate security and ease of use.	Observations: 1. Production work information is communicated utilizing work packages, which includes identification of target audience, required procedures, specifications and requirements. 2. Staff interviewed are aware where to obtain relevant information needed to perform required tasks. 3. Staff interviewed demonstrated consistent understanding on the approach to obtain any missing information / address any errors found in the work package information. 4. Departments responsible to complete the work clearly identified in work packages/routing sheet with relevant information. 5. IT specialist is responsible for maintaining the physical network infrastructure. 6. Top management determine and access permissions to information stored in the network. 7. Relevant managers maintain personal staff information. Example: Production control manager maintain proficiency level assessment records.	Met

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
		Documents Reviewed: 1. MSP-004: Information Management (Revision B, June 26, 2019) 2. Sample work packages ENG 008 and work orders: 452760964, 1000053527, 4505711451, KDP-0302-02, PO13811, SRBT 2019_438	
Source: LCH **N286-12** **4.7.3 Information Management: Control of documents and changes** Documents shall be controlled consistent with intended use. Control shall include (a) unique identification; (b) defined format and presentation; (c) identification of status; (d) review for adequacy, and approval; (e) availability for use at the location where the work is to be performed or where the document is required for reference; and (f) prompt removal of obsolete documents from use.	Documents are controlled: • uniquely identified • status of the document is current • presented in a defined format • approved for use by authorized personnel • accessible for use at the location where the information is required Obsolete documents are removed from use and if required for reference purposes, their access is controlled. Changes to documents are identified, reviewed and approved. Changes to documents that could impact the technical aspects and safety significance are reviewed by persons with knowledge of the original intent and requirement. (4.10)	Observations: 1. Documented observed during desktop reviews and inspection contained identification numbers, status, evidence of approvals by authorized personal. 2. Consistent formats used for documentation where appropriate. Examples are: routing sheets, engineering drawings, procedures, etc. 3. QA Manager maintains a log of all management system processes and procedures, and control the access to correct versions. 4. QA manager is responsible to remove all obsolete documents from the point of use. There was a non-conformance identified by the QA manager of an obsolete form in use, and corrected through applying the non-conformance process. 5. All changes to management system documents managed through engineering change control process.	Met

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
	Document changes are reviewed and assessed for adequacy and clarity of content prior to approval. (4.11)	6. Interviewees explained that, due to the small organizational structure of the SRBT, generally all relevant managers and supervisors consulted on the changes as part of the change control process.	
	Documents are current and reflect current processes and practices.	7. Desktop review of all MS processes are current as per the revision control log maintained by the QA manager.	
		8. One discrepancy of process document noticed during the inspection (MSP-005 – Communication Process). However, it clarified that the process was updated to reflect the current practice after it was submitted to the CNSC with licence application. The practice observed during the inspection reflects the current version (version B). SRBT has submitted the latest version to the CNSC.	
		Documents Reviewed:	
		1. Document and Process Structure Rev D	
		2. MSP-001 Rev 1 Document Control	
		3. MSP-003 Rev B Control of Records	
		4. Document Matrix MSP-001-F-01 Rev A (August 6, 2021)	
		5. MS Document Log	
		6. ECR Log	
Source: LCH **N286-12** **4.7.4 Information Management: Records** Records shall be (a) readable;	Records are: • available as objective evidences for task conducted; • legible, readable and complete;	Observations: 1. SRBT staff were able to provide all requested records during the desktop review and inspection promptly.	Met

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
(b) complete; (c) identifiable; (d) traceable to the related items and work; (e) retrievable; (f) preserved; and (g) retained as specified.	• can be identifiable and traceable to the related items and work; • preserved, stored, retained as specified; and • easily retrievable when required.	2. Records provided are readable, complete with adequate information, traceable to the work completed. 3. SRBT however do not keep the records associated with the work package, except the routing sheet. Staff explained that routing sheet is sufficient to trace it back to the original work and contracts maintained in the network. However, SRBT staff have raised an OFI already to address this concern and work is under way to find a solution. Documents Reviewed: 1. MSP-003 Control of Records (Revision B) 2. Master Records List (January 12, 2021) 3. work orders routing sheets: 452760964, 1000053527, 4505711451, KDP-0302-02, PO13811, SRBT 2019_438	
Source: LCH **N286-12** **4.8.1 Work Management: Work Planning** Work shall be identified and planned with the following: (a) a clear description of the work, including requirements and verification; (b) worker requirements, including verification worker; (c) supply chain requirements, including lead times;	Work is managed that includes all requirements such as resources (type and qualified manpower, equipment and material availability); supply chain (supplier qualification, lead time, etc.), documentation (specifications, drawings, procedures, etc.), instructions, verification (methods and steps), and acceptance criteria are specified. Work request/order is initiated/completed prior to execution and contained clear description of the work, specific procedures, drawings,	Observations: 1. SRBT Engineering department manages work. Work created, controlled and issued using work package. The work package includes: a. a clear description of the work, including drawings, Bill of Material, special requirements by the customer, etc. b. work to be completed by specific department. c. Engineering drawings and specifications, which describe the acceptance criteria.	Met

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
(d) resources assignment, including the worker to perform the verification; (e) critical characteristics of the work to be verified, verification methods, extent, and acceptance criteria established; (f) the sequencing and scheduling of the work, including verification (e.g., inspection and testing requirements); and (g) the acceptance criteria for the finished product.	specifications, safety requirements, hazards, PPEs etc. Project Management/ management of controlled work	d. Sequencing of the work to be performed using a routing sheet. The routing sheet completed to confirm verification by the authorized supervisor. 2. SRBT manages its supply chain through contractor management program and vendor approval process. Supply chain requirements are not included in the work package. 3. Work package contains clear description of the work, specific instructions or reference to specific applicable procedures, drawings, specifications, safety requirements, hazards, PPEs etc. 4. Supervisors control the work by directly supervising the work performed by the production staff. 5. Production staff bring forward any issues to their supervisors, and supervisors work with relevant managers to address issues. 6. Work performed by the managers and supervisors are directly overseen by the top management on an on-going day-to-day operation and walkabout. 7. Management committees are also in effect to control work and make any necessary decisions. Documents Reviewed: 1. MSP-002 Rev A Process Planning and Control	

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
		2. PLA-001 Rev N Processing the sales orders, creating work orders and scheduling	
		3. Eng-008 Rev C Work Package	
		4. Contractor Management Program	
		5. MAT-001 Rev K Purchasing Contract Procedure	
		6. MAT-013 Rev E Vendor-Contractor Approvals for Essential and Non-Essential Suppliers	
		7. Design and Vendor selection report for fume hoods/vendor appraisal form	
		8. Records of work packages reviewed:	
		a. WO 452760964	
		b. WO 1000053527	
		c. WO 4505711451	
		d. WO KDP-0302-02	
		e. WO PO13811	
		f. WO SRBT 2019_438	
		g. Rig Room Fume Hood Replace change control package	
Source: LCH **N286-12** **4.8.2 Work Management: Work Control**	Work are conducted by authorized personnel using: • controlled processes, documents, software and practices	Observations: 1. Work packages contain instructions and/or referenced to approved procedures are provided by the engineering department.	Met

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
Conduct of work shall be authorized and carried out using controlled (a) documents; (b) software, including engineering tools and analytical software; (c) items; (d) tools, gauges, instruments, and other measuring and testing devices; (e) processes; and (f) practices.	• maintained tools and equipment appropriate to the work to be performed; • calibrated tools, measuring instruments and fixtures Risk and hazards analysis are being assessed Workers are following and adhering to the work packages issued Experience gained and lessons learned internally or externally are shared and made accessible to all staff. (example unplanned events, good practices, lessons learned from hazardous work conditions, environmental issues, maintenance and operation etc. (4.12)	2. QA manager verifies the work packages issued by the engineering department before issuing to production supervisors. 3. It is a standard requirement at the SRBT for the production staff to conduct 100% inspection. In addition, supervisors complete sample inspection prior to passing the work to the next stage. 4. Calibration stickers attached to equipment and tools that need calibration. 5. Staff have received risk and hazard awareness training and monitor any potential risks or hazards on their day-to-day work. 6. Signs posted to alert where potential risks and hazards are present. 7. Safety culture monitoring process is in effect to encourage staff to bring forward any risks and hazards to the management's attention. 8. Staff interviewed demonstrated consistent understanding of how to follow work packages to perform their work. 9. Work observed during the inspection demonstrated the use of work packages to control work. 10. Any information related to events, maintenance, operations and lessons learned from operations maintained in the corporate network, which is accessible to all staff. 11. Committee meetings used as a forum to share lessons learned. Minutes from these meetings posted in the bulletin board in the hallway to share the information to staff.	

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
		Documents Reviewed: 1. MSP-002 Rev A Process Planning and Control 2. Eng-008 Rev C Work Package 3. MSP-013 Safety Culture Monitoring Process 4. Records of work packages: WO 452760964, WO 1000053527, WO 4505711451, WO KDP-0302-02, WO PO13811, WO SRBT 2019_438, Rig Room Fume Hood Replace change control package 5. Photographs on the bulletin board	
Source: LCH **N286-12** **4.8.3 Work Management: Verification** Independent verification of work: Work activities throughout the life of the nuclear facility shall be independently verified by workers who did not perform the work to confirm that it meets requirements. The extent and timing of the verification shall be based on the potential of the work.	Work is verified by worker who did not perform the work to confirm that the work is completed correctly and meets requirements. Oversight and verification of work/services of contractors Problems identified are controlled through the Problem identification and resolution process (4.9)	Observations: 1. SRBT staff conduct 100% self check of their work. In addition, supervisors conduct sampling independent verification to confirm that the work completed correctly and meet the requirements. 2. Major projects such as facility modifications, equipment changes managed through formal projects and the independent verification methods and responsibilities for conducting the verification of work performed by the contractors defined in the project plan with assigned responsibilities. 3. SRBT utilizes Corrective Action process to resolve any problems identified. 4. An NCR report raised for problems identified and followed through the verification conducted by the Compliance Manager to ensure implementation of the correction is complete.	Met

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
		Documents Reviewed:	
		1. Project plan for the RIG removal	
		2. MSP-012: Corrective Action (Revision B, May 17, 2017)	
		3. Records of work packages: WO 452760964, WO 1000053527, WO 4505711451, WO KDP-0302-02, WO PO13811, WO SRBT 2019_438, Rig Room Fume Hood Replace change control package	

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
Source: LCH **N286-12** **4.8.2 Work Control: Calibration of measuring equipment and maintenance of structures, systems and equipment:** Conduct of work shall be authorized and carried out using controlled (b) software, including engineering tools and analytical software; (d) tools, gauges, instruments, and other measuring and testing devices; 8.9.2 Operation activities shall be controlled through (b) authorizing of work and controlling status of equipment 8.9.3 Monitoring: The condition of structures, systems, and components shall be controlled through (a) performance monitoring; (b) periodic testing; and (c) periodic inspection. 8.9.4 Maintenance: Structures, systems, and components shall be maintained in accordance with a maintenance strategy that includes (a) a definition of the frequency and type of maintenance to be performed.	• Work are carried out using controlled tools, gauges, instruments, measuring and testing devices, software, structures, systems and components. • A list is available for all items requiring calibration with their calibration date, status and next due date. • Calibration are carried out per the schedule. • Calibration performed in-housed are conducted by qualified personnel Tools, equipment, systems and components used for licensed activities are calibrated and maintained through performance monitoring, periodic testing and inspection.(8.9) • A maintenance schedule is available and maintenance is carried out as per the schedule. • Maintenance is performed on a timely manner, considering the safety significance of the SSC.	Observations: 1. Equipment observed during the inspection had valid calibration stickers. (Gage # 4870 and #4294) 2. SRBT staff explained during the inspection that gauges are calibrated in rotation (Example 4 of 8 pieces of equipment) in order to ensure calibrated gauges are always available during the work. 3. The QA Manager maintains master list of all equipment requiring calibration. 4. Managers maintain their own list of equipment requiring calibration and follow their preferred method to ensure all equipment is calibrated as per the schedule. However, they have to follow the guideline stated in QAS-028, Control of Measuring and Test Equipment. 5. SRBT uses both in-house and out source experts to perform calibrations. 6. Maintenance frequency, due date and the status of calibration is included in the master list. 7. QA Manager is responsible to monitor the status of scheduled maintenance by following up with the responsible managers. 8. Equipment observed during the inspection had a valid calibration stickers attached. 9. Maintenance schedule is available and monitored by the responsible managers.	Met

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
	Maintenance records are reviewed, approved and retained (4.7.4)	10. QA manager is responsible for following up with responsible managers annually on the calibration status.	
		11. No out of calibration or equipment with overdue calibration were observed during the inspection.	
	Out of calibration tools and equipment are identified, tagged and segregated from use Problems identified during maintenance and calibration are controlled through the Problem identification and resolution process. (4.9)	12. No records of any identified problems with the calibration were observed during the inspection	
		13. No out of calibration or equipment with overdue calibration observed during the inspection.	
		14. No records of any identified problems with the calibration observed during the inspection.	
		Documents Reviewed:	
		1. QAS-028: Control of Measuring and Test Equipment (Revision B, March 29, 2021)	
		2. Master List – Calibrated Equipment. Includes calibration frequency, schedule and status (August 5, 2021).	
		3. Training record for calibration Technician (J. Bull)	
		4. Calibration record for serial no 4870 (May 10, 2021)	
		5. Calibration record for serial no 4294 (November 3, 2020)	
		6. Email correspondence sent out to managers by the QA manager to review and update the calibration status. (Sent on August 5, 2021)	
		7. Sample of email response received back from responsible manager indicating the status of equipment. (Received from Paul Lavigne, on February 19, 2020)	

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met

Source: LCH
 	
N286-12
 	
4.8.1c Work Management- Supply Chain:
 	
Work shall be identified and planned and includes:
 	
Supply chain requirements including lead time shall be part of the work planning. Products and services procured from suppliers and contractors are planned and controlled as set out in section 8.5.
 	
8.5.2 Purchasing requirements:
 	
Requirements shall be identified to potential suppliers, and the following shall be defined:
 	
(a) scope of work;
 	
(b) technical performance requirements;
 	
(c) applicable codes, standards, and specifications;
 	
(d) jurisdictional requirements;
 	
(e) management system standard and applicable requirements;
 	
(f) inspection, test, and acceptance requirements, including any special instructions;
 	
(g) delivery requirements;
 	
(h) documentation requirements and timing of submissions;
	Procurement documents identified and controlled. (4.7/4.7.3/4.8.2).
	
	Purchasing requirements to potential suppliers/ contractors are defined with:
	
	• scope of work;
	
	• technical performance requirements; applicable codes, standards, and specifications; jurisdictional requirements;
	
	• management system standard and applicable requirements;
	
	• inspection, test, and acceptance requirements, special instructions;
	
	• delivery requirements
	
	  - items
	
	  - documentations
	
	  - submission and timeline
	
	• reporting and approving the disposition of NC requirements
	
	• right access to work facilities and records
	
	• provisions for extending applicable requirements to sub-suppliers including
		Observations:
		
		1. SRBT conducts its procurement activities according to Purchasing / Contract procedure. This procedure identifies all controlled procurement documents.
		
		1. SRBT operations and the production is of a narrow scope in nature and maintain standing order type of contracts with its suppliers. It explained during the inspection that SRBT very seldom creates new contracts with new suppliers on an on-going basis.
		
		2. Delivery requirements, quality requirements and standards are included in the original agreement of purchase.
		
		3. SRBT's audit process includes supplier audits where required
		
		Documents Reviewed:
		
		1. MAT-001 Rev K Purchasing Contract Procedure
		
		2. MAT-013 Rev E Vendor-Contractor Approvals for Essential and Non-Essential Suppliers
		
		3. Purchase order# 12909-C: 3 years maintenance contract with Black & McDonald Limited.
		
		4. Purchase Order# 12767-C: Service agreement with Perkin Elmer Las Canada Inc.
		
		5. Vendor/Contractor Appraisal Questionnaure-Quote # 1403-1711, ISO Certification, Change Control Package Rig Room Fume Hood Replacement
			Met

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
(i) requirements for reporting and approving the disposition of problems; (j) the need for right of access to work facilities and records; (k) provisions for extending applicable requirements to sub-suppliers; and (l) provisions for controlled distribution, retention, maintenance, and disposition of records. 1.4 This Standard also applies to supplier(s) contracted to perform the life-cycle activities of design, supply chain, construction, commissioning, operation, and decommissioning of the nuclear facility; however, the top management of the nuclear facility remains accountable to ensure the requirements of this Standard are met.	management system requirements • provisions for controlled distributions, retention, maintenance and disposition of records.	6. Contract- Black And McDonald 2021 7. Contract-PerkinElmer 2020 8. Supplier assessment for external calibration service provider–PerkinEkmer (January 25, 2021)	
Source: LCH **N286-12** **8.5.3 Supplier acceptability** 8.5.3.1 Potential suppliers shall be assessed on the following: (a) ability to provide a technically adequate and economical product or service;	Potential suppliers and contractors are assessed and accepted based on their: • ability to provide and meet all technical, economic, and delivery requirements • management system • supply history • oversight of their supply chain	Observations: 1. SRBT's vendor/contractor approval process in place is in effect. 2. SRBT conducts assessments of essential suppliers before adding them to approval vendor list. Vendor appraisal questionnaire is used to obtain information from the suppliers. 3. Review of the approved vendor list revealed that some suppliers assessed only once, and some not assessed for several years. SRBT	Not Met (SRBT-2021-01-NNC01 SRBT-2021-01-R04 SRBT-2021-01-R05)

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
(b) ability to respect delivery dates; (c) management system; (d) supply history; and (e) oversight of supplier's supply chain. 8.5.3.2 Audits shall be planned and performed to confirm the initial and ongoing acceptability of the supplier's management system. 8.5.3.3 When supplier audits are delegated to another party, the delegating organization shall ensure that the results of the supplier's audits are acceptable. 8.5.3.4 Acceptable suppliers shall be included on an approved supplier list and access to the list shall be controlled. 8.5.4 Potential suppliers shall be provided with the purchasing requirements and it shall be confirmed that they understands these requirements 8.5.5 The selected supplier's technical documents that are required to be submitted shall be reviewed and accepted 8.5.6 Supplier-customer relationship: The performance of the supplier-customer relationship shall be monitored to ensure purchasing requirements will to be met. The	Control and oversight of contractors are in place Initial and ongoing assessment of the management system of the suppliers/contractors conducted to ensure acceptance and compliance to the standard requirements. (8.5.3.2) Audit results are reviewed and accepted by the licensee when audits of suppliers/contractors are delegated to another party. (8.5.3.3) Third party auditors used are qualified and certified to perform the audits and are on the approved vendors list (8.5.3.4) Approved and accepted suppliers and contractors are listed on the approved vendors list Access to the approved vendors list is controlled (8.5.3.4) Controls are put in place by the licensee for items and services subcontracted or procured from single source Selected supplier's technical documents that are required to be submitted are reviewed and accepted by the licensee (8.5.5)	staff explained that some suppliers do not return the vendor appraisal questionnaires even after several attempts to obtain the completed questionnaire. 4. SRBT maintains Essential Supplier Directory. This directory reviewed annually to determine if a supplier needs to be re-approved. However, during the interviews, inspectors noted that SRBT does not have set of defined criteria used for this determination. 5. SRBT does not use third party auditors to assess its suppliers. 6. SRBT monitors the quality of products and services supplied by single source. 7. Contractors selected and who provide services to SRBT generally have long-term association with SRBT based on their historical satisfactory service / performance. 8. According to SRBT procedure MAT-001, section 12.3, a copy of purchase orders/contracts are reviewed and filed in production control manager's office which include supporting documentation such as drawings, quote, technical information, contractor information, statement of work, etc. SRBT staff confirmed that this is being done, however, CNSC staff did not review this due during the remote inspection. 9. SRBT advised that they conduct annual review of its Essential Supplier Directory to determine extent and the frequency of supplier assessments, based on historical performance of the supplier or contractor as	

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
results shall be used as an input in determining the extent and frequency of inspection, verification, and audit activities. 8.5.8 Receipt and inspection of items: Purchased items shall be inspected or verified to establish that each item is in accordance with the purchasing documents. Inspection or verification may be performed at the supplier's facilities, upon delivery, or a combination of both. 8.5.9 Items that do not conform to specified requirements shall be identified as problems and segregated to prevent inadvertent installation or use 8.5.10 Storage and handling of times shall be controlled to prevent damage, deterioration or loss.	Performance of the suppliers/ contractors are monitored and used as an input in determining the extent and frequency of inspection, verification and audit activities (8.5.6) Purchased items and services are inspected and verified as planned against the specified requirements in the purchasing document. (8.5.7/8) Procurement documents are reviewed for adequacy and approved (4.7.3 Procurement records contained clear requirements, complete and traceable to the related items and work. (4.7.4) Procurement records are stored, maintained and preserved (4.7.4) Changes made to procurement documents are reviewed and approved by authorized personnel (4.10) Manager in charge of the procurement department: • assess the supply chain process to ensure that the work conducted in the department meets the management system	required by their own procedure. (MAT-013, section 5.9) 10. SRBT receives and handle its purchased items according to Receiving & Inspection Summary Procedure (MAT-006) and Receiving Nuclear Substances procedure (SHP-014). 11. Production control manager review and approve the Procurement documents to confirm the approved vendor status. 12. Responsible manager reviews the purchase order for adequacy and approves. 13. Procurement documents such as purchase orders and contracts are accompanied with associated requirements and specifications, and traceable to related work or items. 14. Procurement documents are stored and maintained by the production control manager in accordance to the procedure MAT-015. Documents Reviewed: 1. MAT-013: Vendor/contractor approvals for essential and non-essential suppliers (Revision E, May 30, 2016) 2. Contractor evaluation form completed for Perkin Elmer Health Sciences Canada Inc. (Completed January 25, 2021) (Contract # 11703-C) 3. Purchase order# 12909-C: 3 years maintenance contract with Black & McDonald Limited. 4. Purchase Order# 12767-C: Service agreement with Perkin Elmer Las Canada Inc.	

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met

	• identify problems and implement resolutions when process is not working effectively
	
	• applies OPEX to improve supply management process learned internally or externally
	
	• continually improve process to make it better. (4.9, 4.11, 4.13)
		5. Purchase order# 12909-C: 3 years maintenance contract with Black & McDonald Limited.
		
		6. Purchase Order# 12767-C: Service agreement with Perkin Elmer Las Canada Inc.
		
		7. Design and vendor selection report (fume hoods and vendor appraisal of MotLab (SRBT-2021-01))
		
		8. Approved Vendor List
		
		9. Essential Supplier Directory
		
		10. Revised purchase order (Phosphor Technology Ltd.) (12685)
		
		11. Revised purchase order-Valley Compressor services 12398-C
		
		12. Completed Vendor Appraisal Questionnaires:
		
		    a. Black and McDonald 2019
		
		    b. OPG Contractor Questionnaire 2019	

Source: LCH **N286-12** **4.9 Problem identification and resolution** When problems arise, they shall be: (a) immediately controlled, if required; (b) documented; (c) evaluated for significance and for underlying cause if deemed by management to be systemic or having impact on meeting business objectives; and	The problem identification and resolution database used for capturing non-conformances and addressing corrective actions is controlled, maintained, kept updated and is accessible to all workers. (4.7.1) Problems found documented on a non-conformance report. • NCR reports provide sufficient details • NCRs are reviewed and signed off by the appropriate personnel.	Observations: 1. SRBT has an implemented corrective action process to resolve any identified problems. 2. Staff have demonstrated clear understanding of the process and provided examples of non-conformance reports (NCR) raised to bring forward and address problems. 3. An NCR log maintained and kept up to date. 4. SRBT uses NCRs to raise, analyze, address, conduct efficiency review and close any problems identified. Records maintained to demonstrate implementation of this process.	Met with Recommendation (SRBT-2021-01-R02)

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
(d) accepted. Actions employed to resolve problems shall be reviewed for effectiveness. 4.13 Continual improvement: Management shall continually improve the management system by carrying out: (a) trend analysis of causes and problems; 4.12 Use of experience: Experience gained within the business and other businesses shall be: (a) identified and collected; (b) reviewed for relevance and significance; (c) implemented through actions to prevent the recurrence of significant industry problems; and (d) used to initiate improvement.	• Problems are evaluated for significance and root cause(s) • analyzed to resolve risk significant problems • Corrective actions are implemented to resolve the problems raised • Corrective actions implemented are tracked and followed-up to verify effectiveness of the actions implemented to prevent recurrence. Resources are made available for resolving the identified problems and implementing the corrective actions. Personnel conducting the root cause analysis and corrective actions are qualified and trained (4.5) Work arising from problems identified are planned, controlled and verified (4.8)	5. CNSC inspectors noted that the depth of effectiveness review conducted by the SRBT confirms that the planned corrective action(s) are completed. However, the verification does not go further to assure that the corrective action implemented in fact improved the situation / prevent the problem from occurring in the future. 6. Inspection records and interviews demonstrate SRBT's commitment to make resources available to address and complete any NCR raised. 7. SRBT, as small organization does not conduct formal systematic root cause analysis. However, SRBT's NCR process does include a step to conduct a root cause analysis of the problem, and document the cause in the NCR report where safety and/ or risk are impacted. Compliance manager is responsible for conducting analysis. 8. SRBT does conduct detail root cause analysis for any safety significant events, and maintain relevant records. Root cause analysis of these events are conducted by the Manager, health physics and Regulatory Affairs 9. Corrective actions are verified to confirm that planned actions have been completed. 10. SRBT's current corrective action process includes follow-up verification to confirm the completion of the corrective action. However,	

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
	Corrective actions implemented are assessed to verify the effectiveness of the implemented corrective actions at the set timeline. Corrective action deemed ineffective during the assessment are identified and processed through the problem identification and resolution process (4.7.4)	the current process does not require verification the effectiveness of the implemented corrective action to prevent the recurrence. 11. SRBT management explained that formal trend analysis similar to high risk or complex nuclear operations not deemed value added for the size and operation at SRBT, and thus they do not conduct formal trend analysis for any NCRs raised. However, any safety significant events would be trended as appropriate to prevent recurrence.	
	Corrective actions implemented are tracked and followed-up to verify effectiveness of the actions implemented to prevent recurrence. (4.11)	Documents Reviewed: 1. MSP-012: Corrective action (Revision B, May 17, 2017)	
	Ineffective corrective problems found are brought up to management during the management review meetings (4.11)	2. NCR log (2018 to present) 3. NCR reports: NCR- 464, 734, 735, 796, 817, 822, 834, 837, 842 4. OFI reports: OFI-408, 479, 512, 524	
	Experience gained from through effective implemented actions to prevent the recurrence of problems are shared.		
	Non-conformances are trended for identifying and tracking of repetitive problems for evaluations to implement improvements. (4.13)		

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
Source: LCH **N286-12** **4.10 Change control and effectiveness review of changes:** Required changes shall be: (a) identified, including reason for change; (b) justified; (c) subject to review by relevant stakeholders; (d) reviewed by persons with knowledge of original intent and requirements; (e) approved for implementation; (f) implemented in accordance with the plan; and (g) reviewed for effectiveness.	Changes required are processed through the change control process. Changes are identified by the initiator and clearly documented with the detailed descriptions and justifications for the changes. Changes are reviewed by all the applicable stakeholders affected by the change and the person that reviewed and approved the initiated change has previous knowledge of the original intent. Changes are approved prior to implementation. Changes are carried out as planned per the required timeframe. Changes arising from NCRs, ECOs made are traceable to the work order, ECOs and NCRs etc. (4.7) Changes not implemented as planned, deferred or cancelled are justified with reasons Changes implemented are verified for effectiveness and signed off. (4.11)	Observations: 1. All changes raised by initiating an Engineering Change Control Report (ECR). 2. Initiator clearly describe the details of any proposed changes with justification in the ECR. 3. ECR is shared with all applicable managers and supervisors effected by the proposed change for their input. 4. Because of the size and the nature of the organization, knowledge of the original intent communicated and discussed amongst all relevant managers and supervisors. 5. Top management approves any changes prior to implementation through ECR. 6. No overdue changes observed. 7. ECR log is maintained 8. Due to the size and structure of the SRBT, ECR used to capture all relevant details of the changes completed. However, if any work package generated to complete the work generated by the ECR, SRBT demonstrated the capability to retrieve the records associated with the work packages. 9. No records of any deferred changes observed. 10. Cancelled ECR 863 reviewed. Reason for cancellation justified, however, the ECR did not contained the approval signature. 11. All ECRs verified and signed off by the top management.	Met

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
		12. SRBT does not document and perform formal effectiveness assessment of all engineering changes. However, managers and supervisors explained during the interviews that changes verified and an informal communication does occur to realize the effectiveness of the changes made. Documents Reviewed: 1. MSP-007: Change Control (Revision D, May 8, 2020) 2. ECR form (MSP-007-F-01) 3. ECR log (Jan 2019-May 2021) 4. Temporary change (WO: 4505769336) 5. Cancelled ECR 863 6. ECR 880, ECR 914, ECR 1002, ECR 1004, ECR 1025, ECR 1085, ECR 1108, ECR 1032, ECR 1124, ECR 1151, ECR 1182, 7. W/O 4505769336 (Temporary change) 8. SRBT approvals of drawing (Project# 014295)	
Source: LCH **N286-12** **4.11 Assessment: Self** 4.11.1 Self-assessment: Management shall conduct self-assessments to identify opportunities for continual improvement and to confirm that	Self-assessments are conducted by the functional unit managers of their own areas of responsibility to confirm that the performance objectives and the requirements of the management system are met, effective and to identify opportunities for continual improvement.	Observations: 1. SRBT managers conduct annual self-assessments as scheduled of their responsible area of responsibility and report to the top management. 2. Self-assessment reports made available to the CNSC staff from all managers. 3. Top management reviews any opportunities for improvements identified through self-	Met with Recommendation (SRBT-2021-01-R03)

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
work meets the requirements of the management system.	Self-assessments are planned and conducted at set frequencies (4.8.1)	assessments. Any approved actions processed through Engineering Change Request or NCR.	
	Self-assessments are documented, fed into the management review meeting and retained. (4.7.4)	4. Cancelled or deferred self-assessments observed.	
	Problems identified during self-assessment and effectiveness review are processed through the problem identification and resolution process (4.9)	5. Results of the self-assessments including concerns and improvement initiatives are reported at the management review meetings and addressed.	
	Changes made to the schedule (cancelled or deferred) are justified and rationale documented (4.10)	6. CNSC inspectors observed inconsistencies in the approach and report structure, and suggested to bring consistency as an opportunity for improvement.	
	Self-assessments are evaluated for effectiveness. (4.11)	7. SRBT as a small organization, managers and supervisors meet informally and discuss experience gained during the self-assessment process. Management committees utilized to share experience gained.	
	Experience gained are shared with other functional unit managers. (4.12)	8. Actions resulted from self-assessments are processes through ECR or NCR process and communicated to relevant staff as appropriate.	
	Self- assessment results and improvements identified are discussed with the team and implemented as applicable (4.13)	Documents Reviewed: 1. MSP-010: Self-Assessment (Revision B, May 8, 2020) 2. MSP-009: Benchmarking (Revision B, May 8, 2020) 3. Management review minutes with self-assessment reporting 4. Self-assessment reports 2019 5. Self-assessment reports 2020	

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
Source: LCH **N286-12** **4.11 Assessment: Independent** 4.11.2 Independent assessment: Independent assessments shall be conducted on behalf of top management to confirm that the documented management system meets requirements and the implementation of the management system is effective. Independent assessors shall (a) have access to the work site, workers, the work, documents, and records; and (b) neither have performed, verified, nor supervised the work being assessed. The results of independent assessments shall be reported to the level of management having sufficient authority to resolve any identified problems.	Independent assessments are conducted on behalf on top management to confirm that the documented management system meets requirements and the implementation of the management system is effective. An audit plan and schedule are in place and approved by top management. Frequency of the assessment is based on licensee's risk assessment and performance base. Independent assessments are conducted per the audit schedule to confirm that the documented management system meets requirements and the implementation of the management system is effective. Independent assessors are trained and qualified (4.5) Assessment reports are controlled and traceable to the activities assessed. Records are issued to those responsible for the processes for action. (4.7) Report is complete and detail, reviewed and approved	Observations: 1. SRBT has implemented an audit process for conducting independent assessments. 2. Compliance manager is responsible for the audit program and maintains relevant records. 3. Compliance manager who conducts audits is an ISO certified internal auditor. 4. Compliance manager maintains the approved audit plan and all records of completed audits. They were readily available from the compliance manager during the inspection. 5. Audit reports are complete and approved by the top management. 6. Compliance manager is authorized and appointed to conduct audits, and are independent from the areas audited. 7. Opportunities for improvements and corrective actions found through audits processed through corrective action process using the NCR, and ECR processes. 8. Actions initiated followed-up by the compliance manager to verify the effectiveness of the corrective action implementation, prior to closure. 9. CNSC staff observed a change to the audit schedule. However, this change was justified, accepted and approved by SRBT top management. 10. Audit results discussed with responsible managers and supervisors.	Met

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
	Records are retained and stored	11. Corrective actions, if any assigned to responsible managers and supervisors.	
	Independent assessments are performed by assessors who have not verified, nor supervised the work being assessed and; have access to the work site, workers, the work, documents, and records. (4.8.3)	12. Any corrective action raised through NCR. Managers and supervisors are involved in reviewing, agreeing and implementing corrective actions. 13. Audit results presented to the top management. 14. Results and any corrective actions discussed during management reviews.	
	Findings found during the assessments are processed through the problem identification and resolution process.	Documents Reviewed: 1. QAS-007: Audits (Revision J, March 17, 2021) 2. Audit schedule 2020-2022	
	Actions raised are followed up by the assessor or designate, to evaluate for completion, effectiveness and closure. (4.9)	3. Internal Audit Register 2018-present 4. External Independent assessment schedule 2020-2022 5. Training certificate for the compliance manager.	
	Changes to the audit plan and schedule is justified with rationale and approved (either cancelled or deferred) (4.10)	6. Audit reports: a. 01-21 Management System b. 02-20 Management System c. 03-20 Engineering d. 11-20 Production Departments	
	The results of independent assessments are discussed and provided to the process owner, functional unit manager or supervisor with authority to resolve the identified problems and implement the required	7. Management Review Meeting Minutes 2019, 2020	

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
	actions. Results of assessment are reviewed and agreed.		
	Independent assessment results are provided to top management for review and are discussed in the management review meetings. (4.11)		
Source: LCH **N286-12** **4.11 Assessment: Management Review** 4.11 Assessment: Management Review 4.3(f) Top management shall measure and monitor the established plans, objectives and targets to ensure the planned results are achieved. 4.7.1 Documentation of the management system: Management shall define, document, control, and maintain the processes that comprise the management system as well as maintain objective evidence to demonstrate effective implementation of the management system. 4.11.2 Independent assessment: Independent assessments shall be conducted on behalf of top management to confirm that the	Established objectives and targets are measured and monitored by top management to ensure that the planned results are achieved. (4.3f)	Observations: 1. SRBT has established key performance indicators. 2. Performance of each indicator monitored and reported to the top management. 3. Management review records include reporting and review of performance for each key indicators. 4. Management review minutes provides sufficient information to conclude that the top management is committed to ensure that SRBT management system aligns with CSA N286 requirements and continued to be monitored and improved. Information on the performance and effectiveness of the management system us reviewed. 5. Audit plan reviewed and approved by the SRBT's top management. 6. Status of management system implementation is part of the SRBT's management reviews.	Met
	Management ensures that the defined management system, comprises and meets all the elements defined in the CSA N286-12 requirement. Additionally, the management system is controlled and maintained. (4.7.1)		
	Top management input and approval of audit plan and schedule		
	Top Management is responsible and accountable for the licenced activities and the facility, are briefed on the results of the independent assessments at least at the management review meetings if not more often.		

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
documented management system meets requirements and the implementation of the management system is effective. 4.13 Continual improvement: Management shall (b) periodically critically assessing the effectiveness of the management system to achieve the planned Results; (c) benchmarking the performance and experience of others where practicable; (d) maintaining the awareness of changes in its business environment; and (e) seeking opportunities to improve processes.	Top management has sufficient data/information presented to them to assess the status and effectiveness of the management system Management reviews are conducted at set frequencies Outstanding actions from the assessments are addressed by top management where required. Action plans and time lines for completion of actions are in place and actions closed off accordingly. Management review meeting minutes are documented, retained and distributed to the applicable personnel for review and action. Records are maintained (4.7.4) Problems identified during the management review meetings are processed through the problem identification and resolution process. (4.9) Top management periodically and critically assess the effectiveness of the management system to achieve the planned results. (4.13)	7. Self-assessments and audit results reviewed as part of the management review meetings. 8. Top management of the SRBT is very hands on with daily operation of the organization and have sufficient knowledge to analyze and make decisions with the information presented. However, top management explained that they request additional information where needed to make the decisions. 9. Management reviews conducted annually as a minimum. 10. Observed records demonstrate good control of timelines in completing actions. NCRs and ECRs demonstrate verification prior to the closure. 11. Observed records did not highlight any information of outstanding actions. 12. Management review meeting minutes documented, maintained and are readily available when requested by CNSC staff. 13. Minutes posted on the bulletin board and made available to all staff. 14. Corrective actions and opportunity for improvements approved during the management review meetings processed through NCRs or ECRs. 15. Top management of SRBT is very involved in the daily operation and aware of any problems or opportunities for improvements.	

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
	Ineffective corrective problems brought up to management during the management review meetings are addressed by top management (4.11)	16. The top management created management committees to assess the effectiveness of the management system, and to help achieve planned results. Documents Reviewed: 1. MSP-008: Management Review (Revision D, October 24, 2019)' 2. Management Review minutes 2019 3. Management Review minutes 2020 4. 2020 Organizational Management Review 5. Management review input reports with results of key performance indicators (examples reviewed 10-MAD, 15-DG, 16-OE, 11-RF) 6. OFIs (486, 408, 479, 512, 524)	