



CNSC COMPLIANCE INSPECTION REPORT

Inspection No.: SRBT-2022-02

Inspection Title: Type II Packaging and Transport Inspection

Prepared by: Lester Posada, Project Officer
Nuclear Processing Facilities Division
Directorate of Nuclear Cycle and Facilities Regulation

Report Date: February 17, 2023



**CANADIAN NUCLEAR SAFETY COMMISSION
COMPLIANCE INSPECTION**

Inspection No.: SRBT-2022-02

Licensee: SRB Technologies (Canada) Inc.

Licence No.: NSPFL-13.00/2034

Facility / Site Inspected: SRBT Tritium Processing Facility

Inspection Date(s): November 29, 2022 – November 30, 2022

Inspector:

Lester Posada,
Lead Inspector, Nuclear Processing Facilities Division

Approved by:

Andrew McAllister
Director, Nuclear Processing Facilities Division

Safety and Control Area(s): Packaging and Transport

Inspector Accompanied by:

Carley Crann, Project Officer, NPDF
Alvira Mostafa, Project Officer, NPDF
François Dagenais, Transport Officer, TLSSD
Mathieu Frenette, Transport Officer, TLSSD

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. (SRBT) from November 29, 2022 to November 30, 2022. The purpose of this inspection was to provide an overall assessment to verify compliance with regulatory requirements.

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

- Packaging and Transport

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 November 30, 2022.

The inspection team found areas of non-compliance, and therefore 3 notices of non-compliance have been raised for SRBT to address. All inspection findings are of low safety significance and do not pose an immediate or unreasonable risk to the health and safety of persons or to the environment.

Table of Contents

1. INTRODUCTION	1
2. PURPOSE AND SCOPE	1
3. DESCRIPTION OF INSPECTION METHODS	1
4. INSPECTION RESULTS	2
4.1 SAFETY AND CONTROL AREA: PACKAGING AND TRANSPORT	3
4.2 SAFETY AND CONTROL AREA: RADIATION PROTECTION	5
4.3 SAFETY AND CONTROL AREA: RADIATION PROTECTION	6
5. SUMMARY OF ENFORCEMENT ACTIONS AND RECOMMENDATIONS ISSUED	8
5.1 ENFORCEMENT ACTIONS	8
6. CONCLUDING STATEMENTS	8
7. REFERENCES	9
APPENDIX A: ACRONYMS AND ABBREVIATIONS	10
APPENDIX B: ATTENDANCE RECORD(S)	11
APPENDIX C: COMPLIANCE MATRIX	13

1. INTRODUCTION

An inspection at SRB Technologies (Canada) Inc. (SRBT) was conducted from November 29, 2022 to November 30, 2022.

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

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

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

2. PURPOSE AND SCOPE

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

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

- Packaging and Transport

3. DESCRIPTION OF INSPECTION METHODS

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

Any number of the following method(s) of assessment were used during the inspection:

A. Documentation and record review

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

B. Visual assessment and verification

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

C. Interviews and discussions with licensee staff

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

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

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

4. INSPECTION RESULTS

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

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

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

The Compliance Matrix used for this inspection contains the compliance verification criteria (CVC) used to assess and evaluate compliance with regulatory and 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 identified non-compliance and respond with one of the following:

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

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

4.1 Safety and Control Area: Packaging and Transport

Criteria

- NSPFL-13.00/2034 [1], Licence Condition 13.1, which states:
The licensee shall implement and maintain a packaging and transport program.
- [Packaging and Transport of Nuclear Substances Regulations, 2015](#) Subsection 25(1), which states:
Every person who transports, or presents for transport, radioactive material must comply with the requirements of the Transportation of Dangerous Goods Regulations.
- [Transportation of Dangerous Goods Regulations](#), Paragraph 3.5 (1)(f), which states:
*The following information must be included on a shipping document:
(f) the words “24-Hour Number” or “Numéro 24 heures”, or an abbreviation of these words, followed by a telephone number, including the area code, at which the consignor can be reached immediately for technical information about the dangerous goods in transport, without breaking the telephone connection made by the caller.*
- [Transportation of Dangerous Goods Regulations](#), Subsection 3.6.1 (1), which states:
*Beginning on July 15, 2015, a shipping document must include, after the information required under section 3.5, one of the following certifications:
(a) “I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, are properly classified and packaged, have dangerous goods safety marks properly affixed or displayed on them, and are in all respects in proper condition for transport according to the Transportation of Dangerous Goods Regulations....”*
- [Packaging and Transport of Nuclear Substances Regulations, 2015](#), Subsection 29(1), which states:
Every consignor of radioactive material must include in the transport documents for the consignment the particulars of consignment that are required by the IAEA Regulations, which particulars must be clearly and indelibly printed.
- IAEA Safety Standards Series No. SSR-6, [Regulations for the Safe Transport of Radioactive Material](#), paragraph 546 (f), which states:

A description of the physical and chemical form of the material, or a notation that the material is special form radioactive material or low dispersible radioactive material. A generic chemical description is acceptable for chemical form.

- IAEA Safety Standards Series No. SSR-6, [Regulations for the Safe Transport of Radioactive Material](#), paragraph 546 (l), which states:

For consignments of packages in an overpack or freight container, a detailed statement of the contents of each package within the overpack or freight container and, where appropriate, of each overpack or freight container in the consignment. If packages are to be removed from the overpack or freight container at a point of intermediate unloading, appropriate transport documents shall be made available.

- IAEA Safety Standards Series No. SSR-6, [Regulations for the Safe Transport of Radioactive Material](#), paragraph 546, which states:

The consignor shall include in the transport documents with each consignment the identification of the consignor and consignee, including their names and addresses, and the following information, as applicable, in the order given....

Facts

- CNSC staff reviewed multiple transport documents (for excepted and type A packages) and found the words “24-Hour Number” or “Numéro 24 heures”, or an abbreviation of these words to be present on those transport documents. However, upon review of type B(U) transport documents, CNSC staff did not find the words “24-Hour Number” or “Numéro 24 heures”, or an abbreviation of these words before the telephone number on those shipping documents. One such shipment was dated September 29, 2022 and consisted of two type B(U) drums shipped from SRBT to Canadian Nuclear Laboratories (CNL).
- CNSC staff reviewed multiple transport documents (for excepted, and type A packages), and found the shipper’s declaration to be compliant with the regulations on those documents. However, upon review of type B(U) transport documents, CNSC staff did not find a compliant shipper’s declaration on those documents. One such shipment was dated September 29, 2022 and consisted of two type B(U) drums shipped from SRBT to CNL.
- CNSC staff reviewed multiple transport documents (for excepted and type B(U) packages) and found that the physical and chemical forms of the material were present and accurate on those documents. However, upon review of type A shipping records, CNSC staff found that the physical form of Tritium in expired light tubes was reported as a solid instead of a gas.
- CNSC staff reviewed multiple transport documents (for excepted, and type A packages) and found that required information was expressed adequately. Upon review of Type B(U) transport documents, CNSC staff found that the maximum activities reported were a sum of the individual package activities, with no clear mention of how the activities are distributed for each package.

- CNSC staff reviewed multiple transport documents (for excepted, and type B(U) packages) and found that the required information appeared in the proper sequence on those documents. However, upon review of Type A shipping records, CNSC staff found that the required information appeared out of the proper sequence required by section 546 of SSR-6.

Findings

During the records review, CNSC staff noted the above discrepancies with SRBT's transport documents against the requirements set out in the *Packaging and Transport of Nuclear Substances Regulations, 2015* (PTNSR), *Transport of Dangerous Goods Regulations* (TDGR), as well as the International Atomic Energy Agency (IAEA) Safety Standards Series No. SSR-6. 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.

Compliance Action

Notice of Non-Compliance SRBT-2022-02-NNC01: SRBT shall take corrective actions to ensure that the information provided in transport documents are in accordance with the *Transportation of Dangerous Goods Regulations* and the *Packaging and Transport of Nuclear Substances Regulations, 2015*.

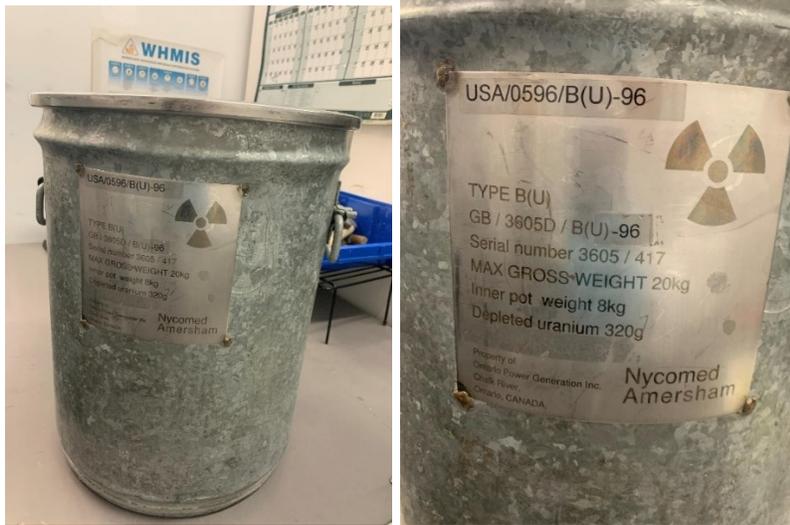
4.2 Safety and Control Area: Radiation Protection

Criteria

- NSPFL-13.00/2034 [1], Licence Condition 7.1, which states:
The licensee shall implement and maintain a radiation protection program, which includes a set of action levels.
- [Radiation Protection Regulations](#), Section 20, which states:
No person shall possess a container or device that contains a nuclear substance unless the container or device is labelled with
(a) the radiation warning symbol set out in Schedule 3 and the words "RAYONNEMENT — DANGER — RADIATION"; and
(b) the name, quantity, date of measurement and form of the nuclear substance in the container or device.

Facts

SRBT stores used tritium beds (depleted uranium) waiting for return to CNL in Type B(U) transport packages. On the Type B(U) package used to store depleted uranium tritium beds, the words “RAYONNEMENT — DANGER — RADIATION” were not present. The form of the nuclear substance was also not observed to be present.



Photos: Type B(U) Package (left) and close up on the label on the type B(U) package (right)

Findings

Since the Type B(U) packages are being used for storage in this instance, they are required to be labelled according to Section 20 of the *Radiation Protection Regulations*. This finding is of low safety significance and does not impact SRBT’s ability to operate the facility in a safe manner.

Compliance Action

Notice of Non-Compliance SRBT-2022-02-NNC02: SRBT shall ensure that containers used to store nuclear substances are labelled in accordance with Section 20 of the *Radiation Protection Regulations*.

4.3 Safety and Control Area: Radiation Protection

Criteria

- NSPFL-13.00/2034 [1], Licence Condition 7.1, which states:
The licensee shall implement and maintain a radiation protection program, which includes a set of action levels.

- [Radiation Protection Regulations](#), Section 21, which states:

Every licensee must post and keep posted, at the boundary of and at every point of access to an area, room, vehicle or enclosure, a durable and legible sign that bears the radiation warning symbol set out in Schedule 3 and the words “RAYONNEMENT — DANGER — RADIATION”

(a) there is a nuclear substance in a quantity greater than 100 times its exemption quantity in the area, room, vehicle or enclosure

Facts

The main entrance to Zone 3 at the SRBT facility was labelled correctly according to Section 21 of the *Radiation Protection Regulations*. Internally, within Zone 3, there was an access point (door) to a waste storage room that did not contain the words, “RAYONNEMENT — DANGER — RADIATION”.



Photo: Waste Room within Zone 3

Findings

Signs posted on some doors are not compliant with Section 21 of the *Radiation Protection Regulations* (e.g. waste storage room within Zone 3). This finding is of low safety significance and does not impact SRBT’s ability to operate the facility in a safe manner.

Compliance Action

Notice of Non-Compliance SRBT-2022-02-NNC03: SRBT shall ensure that, where necessary, all access points to rooms are labelled in accordance with Section 21 of the *Radiation Protection Regulations*.

5. SUMMARY OF ENFORCEMENT ACTIONS AND RECOMMENDATIONS ISSUED

5.1 Enforcement Actions

The following enforcement actions were raised as a result of this inspection.

Notices of non-compliance:

- **Notice of Non-Compliance SRBT-2022-02-NNC01:** SRBT shall take corrective actions to ensure that the information provided in transport documents are in accordance with the *Transportation of Dangerous Goods Regulations* and the *Packaging and Transport of Nuclear Substances Regulations*, 2015.
- **Notice of Non-Compliance SRBT-2022-02-NNC02:** SRBT shall ensure that containers used to store nuclear substances are labelled in accordance with Section 20 of the *Radiation Protection Regulations*.
- **Notice of Non-Compliance SRBT-2022-02-NNC03:** SRBT shall ensure that, where necessary, all access points to rooms are labelled in accordance with Section 21 of the *Radiation Protection Regulations*.

6. CONCLUDING STATEMENTS

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

As a result of this inspection, items of non-compliance with the criteria assessed from the Compliance Matrix have been identified. Therefore, **three** notices of non-compliance have been raised for SRBT to address. The identified non-compliances are of low safety significance and do not pose an immediate or unreasonable risk to the health and safety of persons or the environment.

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

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

7. REFERENCES

- [1] SRB Technologies (Canada) Inc. Nuclear Substance Processing Facility Operating Licence, NSPFOL-13.00/2034, (e-Doc 6668491).
- [2] SRB Technologies (Canada) Inc. Licence Conditions Handbook, (e-Doc 6668496).
- [3] Letter from L. Posada (CNSC) to S. Levesque (SRBT), *Notice of CNSC Type II Compliance Inspection of SRB Technologies (Canada) Inc. on November 29, 2022 to November 30, 2022*, October 14, 2022, (e-Doc 6852776).
- [4] Preliminary Inspection Facts and Findings Report, SRBT-2022-02. November 30, 2022. (e-Doc 6924433).

APPENDIX A: ACRONYMS AND ABBREVIATIONS

CNL	Canadian Nuclear Laboratories
CNSC	Canadian Nuclear Safety Commission
CVC	Compliance verification criteria
IAEA	International Atomic Energy Agency
LCH	Licence conditions handbook
NNC	Notice of non-compliance
NPDF	Nuclear Processing Facilities Division
NSCA	Nuclear Safety and Control Act
NSPFL	Nuclear substance processing facility licence
PTNSR	Packaging and Transport of Nuclear Substances Regulations, 2015
SRBT	SRB Technologies
TDG	<i>Transport of Dangerous Goods Regulations, 2015</i>
TLSSD	Transport licensing and strategic support division

APPENDIX B: ATTENDANCE RECORD(S)

[The Attendance Record e-Doc # can be referenced for the admin to insert the pages. This will save the Admin some formatting grief]



Canadian Nuclear Safety Commission
 Commission canadienne de sûreté nucléaire

Inspection Meeting Attendance Record
 Directorate of Nuclear Cycle and Facilities Regulation

Unclassified

6924436

e-Doc
 Number

Canadian Nuclear Safety Commission
 Commission canadienne de sûreté nucléaire

Inspection Meeting Attendance Record
 Directorate of Nuclear Cycle and Facilities Regulation

Unclassified

6853516

 e-Doc
 Number

Licensee Name: SRBT Technologies (Canada) Inc.
 Licence Number: NSPFL-13.00/2034
 Licensed Site: SRB Technologies Tritium Processing Facility (Pembroke, ON)
 Facility / Program / Site: SRB Technologies Tritium Processing Facility
 Title of Inspection: Type II Packaging and Transport
 Inspection Number: SRBT-2022-02
 Inspection Date(s): November 29, 2022 to November 30, 2022
 Lead Inspector: Lester Posada, NPFD

Meeting Type: Opening

Name (print)	Role or Job Title	Signature
JAMIE MACDONALD	MANAGER - HP+RA	<i>[Signature]</i>
Darci Gaudette	Logistics Manager	<i>[Signature]</i>
Mathieu Frenette	Transport officer	<i>[Signature]</i>
François Dagenais	" "	<i>[Signature]</i>
Lester Posada	Inspector	<i>[Signature]</i>
Alvina Martyna	Inspector-in-training	<i>[Signature]</i>
Carley Cranr	Inspector-in-training	<i>[Signature]</i>

e-Doc 6853516
 Template: e-Doc 5257117

Page 1 of 2

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Canadian Nuclear Safety Commission
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Inspection Meeting Attendance Record
Directorate of Nuclear Cycle and Facilities Regulation

Unclassified

6924437

e-Doc
Number

Licensee Name: SRB Technologies (Canada) Inc.
Licence Number: NSPFL-13.00/2034
Licensed Site: SRB Technologies Tritium Processing Facility (Pembroke, ON)
Facility / Program / Site: SRB Technologies Tritium Processing Facility
Title of Inspection: Type II Packaging and Transport
Inspection Number: SRBT-2022-02
Inspection Date(s): November 29, 2022 to November 30, 2022
Lead Inspector: Lester Posada, NPF

Meeting Type: Closing

Name (print)	Role or Job Title	Signature
Lester Posada	Lead Inspector, CNSC	Remote
Alvira Mostafa	Inspector-in-Training, CNSC	Remote
Carley Crann	Inspector-in-Training, CNSC	Remote
Francois Dagenais	Transport Officer, CNSC	Remote
Mathieu Frenette	Transport Officer, CNSC	Remote
Jamie MacDonald	Manager – Health Physics and Regulatory Affairs, SRBT	Remote
Darci Gaudette	Logistics Manager, SRBT	Remote
Stephane Levesque	President, SRBT	Remote
Ross Fitzpatrick	Vice President, SRBT	Remote

APPENDIX C: COMPLIANCE MATRIX



Canadian Nuclear Safety Commission
Commission canadienne de sûreté nucléaire

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

Unclassified
Lead Inspector: Lester Posada
Division: NPDF

Licensee Name: SRB Technologies (Canada) Inc.
Licence Number: NSPFOL-13.00/2022
Licensed Site: SRBT Facility
Facility / Program / Site: Tritium Processing Facility
Title of Inspection: Packaging and Transport Inspection

Inspection Number: SRBT-2022-02
Inspection Date(s): November 29, 2022 to November 30, 2022
Lead Inspector: Lester Posada, NPDF

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.

<input type="checkbox"/> Management System	<input type="checkbox"/> Environmental Protection	<input type="checkbox"/> Waste Management
<input type="checkbox"/> Fitness for Service	<input checked="" type="checkbox"/> Radiation Protection	<input type="checkbox"/> Security
<input type="checkbox"/> Operating Performance	<input checked="" type="checkbox"/> Conventional Health and Safety	<input type="checkbox"/> Safeguards and Non-Proliferation
<input type="checkbox"/> Safety Analysis	<input type="checkbox"/> Human Performance Management	<input checked="" type="checkbox"/> Packaging and Transport
<input type="checkbox"/> Physical Design	<input type="checkbox"/> Emergency Management & Fire Protection	<input type="checkbox"/> Other, specify below

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Canadian Nuclear Safety Commission
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Compliance Matrix
Directorate of Nuclear Cycle and Facilities Regulation

Ref. Procedure *How to Conduct DNCFR Inspections*

Unclassified
Lead Inspector: Lester Posada
Division: NPF/D

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
Safety and Control Area: Packaging and Transport (Packages)			
[1] Source: Regulation PTNSR 1 SSR-6 623, 636 (607-618) Package requirements	Verify that dangerous goods are transported in the appropriate type of package. Check package for damage, modifications or degradation that may compromise the design integrity of the package.	OBSERVATION / RECORDS REVIEW: CNSC staff observed one type B(U) certified package and two Type A packages (none were being prepared for transport during the inspection). CNSC staff observed multiple excepted packages ready for transport. CNSC staff review multiple shipping records, all of which reflected appropriate type of package usage. CNSC staff conclude that the radioactive substances are transported in appropriate packages, and that the packages showed no signs of damage, modification, or degradation.	Met
[2] Source: Regulation PTNSR 4, 5(1), 26(2), 27, 28(2) SSR-6 411, 414, 422-427, 429-433, 517-519, 522 Packages Content / Activity	Verify that the package activity is within the limits allowed for that package type.	RECORDS REVIEW / OBSERVATION: CNSC staff confirmed, via records review, that the following packages were reported to have been transported with activities within the allowed limits: <ul style="list-style-type: none"> • Type B (U) • Type A • Excepted package (UN 2910) CNSC staff confirmed, via observation, that excepted package (UN 2911) had activities within the allowed limits. CNSC staff conclude that package activity is within the limits allowed per package type.	Met
[3] Source: Regulation PTNSR 28(1) SSR-6 503 Consignor/carrier package checks	Verify that the consignor has ensured that packages have been properly prepared for transport.	OBSERVATION / INTERVIEW: During the walkdown of the facility, CNSC was taken to the shipping department and SRBT staff explained how each type of package (Type B(U), Type A and excepted) are prepared for transport. During the staff interview session, SRBT staff provided their shipping procedures (SHP-002, SHP-003, SHP-004, SHP-015 (Rev. C)). CNSC staff conclude that packages are properly prepared for transport.	Met



Canadian Nuclear Safety Commission
 Commission canadienne de sûreté nucléaire

Compliance Matrix
Directorate of Nuclear Cycle and Facilities Regulation

Ref. Procedure *How to Conduct DNCFR Inspections*

Unclassified
Lead Inspector: Lester Posada
Division: NPDFD

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
[4] Source: Regulation PTNSR 28(1) SSR-6 508, 509 Package Surface contamination	When a package is being shipped, verify records showing non- fixed contamination test results. If applicable/possible, verify by sampling. Verify method and observe contamination verification done on the packages.	RECORDS REVIEW / INTERVIEW: SRBT mainly ships Tritium, and as such onsite direct contamination checks were not possible for CNSC staff. SRBT procedures do not address this, but during the interview, SRBT confirmed they were testing 100% of the packages being sent. CNSC staff reviewed multiple shipping records and was able to confirm that SRBT staff do a loose contamination check for each package.	Met
[5] Source: Regulation PTNSR 28(1) SSR-6 526, 527, 528 Pkg dose rate < 2 mSv/h	Verify that the maximum dose rate on the surface of the package, overpack or conveyance does not exceed 2 mSv/h (dose rate may be as high as 10 mSv/h for shipments under exclusive use).	RECORDS REVIEW: CNSC staff confirmed, through reviewing of multiple shipping records, that dose rates on the surface of packages are within the regulatory limits.	Met
[6] Source: Regulation PTNSR 28(1) SSR-6 529, 538, 539 Labels (I-W, II-Y, III-Y) description and location	Verify that the name(s) of radionuclide(s) or symbol(s), activity (SI units) and transport index (where applicable) are correctly displayed on the primary class labels.	RECORDS REVIEW: CNSC staff did not observe any such labels, but SRBT's procedures cover this requirement adequately.	Met
[7] Source: Regulation PTNSR 28(1) SSR-6 523, 524, 526 Transport Index Measurements	Verify method used to determine the Transport index (T.I.) may be measured or calculated using formula set out in para. 523 (load size dependant).	RECORDS REVIEW / INTERVIEW: SRBT mainly ships Tritium, so the Transport Index will always be zero. During the interview with staff, SRBT confirmed and provided records that when SRBT ships depleted uranium, they verify the dose at 1 meter to confirm Transport Index is also at zero. CNSC staff conclude that SRBT is using adequate methods to determine the Transport index.	Met



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Compliance Matrix
Directorate of Nuclear Cycle and Facilities Regulation

Ref. Procedure *How to Conduct DNCFR Inspections*

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Lead Inspector: Lester Posada
Division: NPFD

<p>[8] Source: Regulation PTNSR 28(1) SSR-6 540 TDG 4.14</p> <p>Information on Labels</p>	<p>The name of the radionuclide(s) is followed by "LSA-I", "LSA-II", "LSA-III", "SCO-1" or "SCO-II". Verify the calculation of activity via mixture calculation (SI units) and transport index (where applicable) are correctly displayed on the primary class labels.</p> <p>Note: If the shipment is made in accordance with 28(2), the package category label is not required, and a Type IP-1 package can be used.</p>	<p>Not applicable</p>	<p>N/A</p>
<p>[9] Source: Regulation PTNSR 28(1) SSR-6 529, 538, 539 TDG 4.10(3)(c)</p> <p>Labels (I-W, II-Y, III-Y) description and location</p>	<p>Verify the presence of two correct and clearly visible labels on opposite sides of the package.</p> <p>Note: If the shipment is made in accordance with 28(2), the package category label is not required.</p>	<p>RECORDS REVIEW: CNSC staff did not observe any such labels, but SRBT's procedures cover this requirement adequately.</p>	<p>Met</p>
<p>[10] Source: Regulation PTNSR 28(1) SSR-6 532 TDG 4.12</p> <p>Shipping Name & UN number on the package</p>	<p>Verify that the shipping name and UN number are displayed on the package next to each label.</p>	<p>RECORDS REVIEW: CNSC staff did not observe any such markings, but SRBT's procedures cover this requirement adequately.</p>	<p>Met</p>
<p>[11] Source: Regulation PTNSR 28(1) SSR-6 531</p> <p>Consignor or consignee's identification package</p>	<p>Name of the consignor and/or consignee must be clearly displayed on the package. The mark Type IP-1</p>	<p>OBSERVATIONS / RECORDS REVIEW: CNSC staff observed that all the UN 2910 and UN 2911 packages observed had the consignor and consignee markings. SRBT's procedures cover this requirement adequately. There are no Type IP-1 packages.</p>	<p>Met</p>



Canadian Nuclear Safety Commission
Commission canadienne de sûreté nucléaire

Compliance Matrix
Directorate of Nuclear Cycle and Facilities Regulation

Ref. Procedure *How to Conduct DNCFR Inspections*

Unclassified
Lead Inspector: Lester Posada
Division: NPF/D

<p>[12] Source: Regulation PTNSR 28(1) SSR-6 533</p> <p>Gross mass of the package</p>	<p>Verify that the package is marked with its gross mass if >50kg.</p>	<p>RECORDS REVIEW: CNSC staff did not observe any such markings, but SRBT's procedures cover this requirement adequately.</p>	<p>Met</p>
<p>[13] Source: Regulation PTNSR 28(1) SSR-6 534 (a)</p> <p>Package markings</p>	<p>Verify that the package is specification mark and the Vehicle Registration Code (VRI) of the country of origin of package design (when applicable), is displayed in a legible and durable manner.</p>	<p>OBSERVATIONS: CNSC staff validated that the Type A package (drum) was marked with the VRI code.</p>	<p>Met</p>
<p>[14] Source: Regulation PTNSR 1(1) SSR-6 221</p> <p>Definition of exclusive use</p>	<p>Expectation: The term "exclusive use" should only be used where to required by the regulations.</p>	<p>Not applicable</p>	<p>N/A</p>
<p>[15] Source: Regulation PTNSR 25(1) TDG 4.6, 4.7(2)-(3)</p> <p>Safety Marks (visibility legibility and colour)</p>	<p>Verify that safety marks includes labels, UN numbers and shipping name. Verify that all safety marks are legible, durable, weather resistant and of proper colour. Minimum size for labels is 100mm per side and for placards is 250mm per side.</p>	<p>OBSERVATIONS: CNSC staff validated that the excepted packages were marked with legible, durable, and weather resistant markings.</p>	<p>Met</p>



Canadian Nuclear Safety Commission
Commission canadienne de sûreté nucléaire

Compliance Matrix
Directorate of Nuclear Cycle and Facilities Regulation

Ref. Procedure *How to Conduct DNCFR Inspections*

Unclassified
Lead Inspector: Lester Posada
Division: NPF/D

[16] Source: Regulation PTNSR 25(1) TDG 4.2 Misleading Safety Marks	Expectation: Safety marks must not be displayed if they mislead as to the nature or presence of dangerous goods.	OBSERVATIONS: CNSC staff did not see any misleading safety marks.	Met
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Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
Safety and Control Area: Packaging and Transport (Transport Document)			
[17] Source: Regulation PTNSR 25(1) TDG 3.4 (1) Legibility and Language	The information must be easy to identify, legible, indelible print and in either English or French.	RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, type A and type B(U) packages) and found all the information on the transport documents was easy to identify and legible.	Met
[18] Source: Regulation PTNSR 25(1) TDG 3.4 (2) Mixed Load, Dangerous goods and non-dangerous goods	When there is a mixed load of non-dangerous goods and Class 7 together, the Class 7 information must be first on the document and under the heading "Dangerous Goods" or "Marchandises dangereuses"; or When there is a mixed load of non-dangerous goods and Class 7 together, the Class 7 information must be of a color or print that contrasts with the information of the non-dangerous goods; or When there is a mixed load of non-dangerous goods and Class 7 together, the letter "X" next to the shipping name under a column named "DG" or "MD" is required to identify the Class 7 dangerous goods.	Not applicable	N/A



Canadian Nuclear Safety Commission
 Commission canadienne de sûreté nucléaire

Compliance Matrix
Directorate of Nuclear Cycle and Facilities Regulation

Ref. Procedure *How to Conduct DNCFR Inspections*

Unclassified
Lead Inspector: Lester Posada
Division: NPF/D

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
[19] Source: Regulation PTNSR 29(1) SSR-6 546 TDG 3.5 (1)(a) Consignor's name and address	Consignor's name and address in Canada are required.	RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, type A and type B(U) packages) and found the consignor's name and address to be present on those documents.	Met
[20] Source: Regulation PTNSR 29(1) SSR-6 546 Consignee's name and address	Consignee's name and address are required.	RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, type A and type B(U) packages) and found the consignee's name and address to be present on those documents.	Met
[21] Source: Regulation PTNSR 25(1) TDG 3.5 (1)(b) Date on document	The date the document or electronic copy was prepared or was first given to a carrier.	RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, type A and type B(U) packages) and found the date to be present on those documents.	Met
[22] Source: Regulation PTNSR 25(1) TDG 3.5 (1)(e) Number of labeled small means of containment for each shipping name	The total number of packages with the same shipping name and UN number (e.g., multiple packages of unit doses for nuc med).	RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, type A and type B(U) packages) and found the total number of packages with the same shipping name and UN number to be present on those documents.	Met



Canadian Nuclear Safety Commission
 Commission canadienne de sûreté nucléaire

Compliance Matrix
 Directorate of Nuclear Cycle and Facilities Regulation

Ref. Procedure *How to Conduct DNCFR Inspections*

Unclassified
 Lead Inspector: Lester Posada
 Division: NPDFD

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
[23] Source: Regulation PTNSR 25(1) TDG 3.5 (1)(f) 24-Hour Number	The words "24-Hour Number" or "Numéro 24 heures", or an abbreviation of these words, followed by a telephone number, including the area code, at which the consignor can be reached immediately for technical information about the dangerous goods in transport, without breaking the telephone connection made by the caller. The terms "24-Hour Number" and "Numéro 24 heures" used in this paragraph refer to the telephone number that must be available when the dangerous goods are in transport.	<p>RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted and type A packages), and found the words "24-Hour Number" or "Numéro 24 heures", or an abbreviation of these words to be present on those transport documents.</p> <p>However, upon review of type B(U) transport documents, CNSC staff did not find the words "24-Hour Number" or "Numéro 24 heures", or an abbreviation of these words before the telephone number on those shipping documents. One such shipment was dated September 29, 2022 and consisted of two type B(U) drums shipped from SRBT to CNL.</p> <p>SRBT-2022-02-NNC-01: SRBT shall take corrective actions to ensure that the information provided in transport documents are in accordance with the <i>Transportation of Dangerous Goods Regulations</i> and the <i>Packaging and Transport of Nuclear Substances Regulations</i>, 2015.</p>	Not Met (SRBT-2022-01-NNC01)
[24] Source: Regulation PTNSR 25(1) TDG 3.5 (2) Other Emergency Number - CANUTEC	If the CANUTEC phone number is used, CANUTEC number is (613) 996-6666, cell *666, 1-888 CAN-UTEC (226-8832). If CANUTEC number is used, consignor must register with CANUTEC.	<p>RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, type A and type B(U) packages) and found the CANUTEC phone number to be accurate on those documents.</p> <p>SRBT staff provided proof that SRBT is registered, as of January 7th 2022, with CANUTEC.</p>	Met



Canadian Nuclear Safety Commission
 Commission canadienne de sûreté nucléaire

Compliance Matrix
Directorate of Nuclear Cycle and Facilities Regulation

Ref. Procedure *How to Conduct DNCFR Inspections*

Unclassified
Lead Inspector: Lester Posada
Division: NPDFD

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
[25] Source: Regulation PTNSR 25(1) TDG 3.5 (5) Quantity update on shipping document	When the quantity or number of packages changes in transport, the total number of packages has to be amended on the shipping document. How the carrier shows the change in quantity is the carrier's choice. The carrier can change the number used to express quantity or the carrier may mark on the shipping document, or on a document attached to the shipping document, the additions to or the subtractions from the number used to express quantity.	Not applicable	N/A
[26] Source: Regulation PTNSR 25(1) TDG 3.6.1(1) Consignor's Certification	The shipping document is required to have the following wording: "I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, are properly classified and packaged, have dangerous goods safety marks properly affixed or displayed on them, and are in all respects in proper condition for transport according to the Transportation of Dangerous Goods Regulations." As an alternative, the wording from section 172.204 of 49 CFR, section 5.4.1.6 of ICAO, IMDG or UN recommendations are acceptable.	RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, and type A packages), and found the shipper's declaration to be compliant with the regulations on those documents. However, upon review of type B(U) transport documents, CNSC staff did not find a compliant shipper's declaration on those documents. One such shipment was dated September 29, 2022 and consisted of two type B(U) drums shipped from SRBT to CNL. SRBT-2022-02-NNC-01: SRBT shall take corrective actions to ensure that the information provided in transport documents are in accordance with the <i>Transportation of Dangerous Goods Regulations</i> and the <i>Packaging and Transport of Nuclear Substances Regulations, 2015</i> .	Not Met (SRBT-2022-01-NNC01)
[27] Source: Regulation PTNSR 25(1) TDG 3.6.1(2) Certification made by the Consignor	Verify that the certification is made by an individual who is the consignor or a person acting on behalf of the consignor and that his name appears in the document. Name of individual must be legible.	RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, type A and type B(U) packages) and found the name of the consignor to be present and legible on those documents.	Met



Canadian Nuclear Safety Commission
 Commission canadienne de sûreté nucléaire

Compliance Matrix
Directorate of Nuclear Cycle and Facilities Regulation

Ref. Procedure *How to Conduct DNCFR Inspections*

Unclassified
Lead Inspector: Lester Posada
Division: NPDFD

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
[28] Source: Regulation PTNSR 25(1) TDG 3.6.1(1) Certification on Transport Document	The declaration shall be made on the same transport document which contains the particulars of consignment listed in SSR-6 para. 546 and TDG 3.5 and 3.6. Note that a document may contain multiple pages.	RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, type A and type B(U) packages) and found the declaration to be present those documents with the particulars of consignment listed in SSR-6 para. 546 and TDG 3.5 and 3.6.	Met
[29] Source: Regulation PTNSR 25 (2) SSR-6 554 Supplementary Requirements	The Supplementary Requirements will be part of the transport procedure that the consignor provides. The carrier can request the information in the language of their choice. Example of supplementary requirements: Stowage restrictions due to surface heat flux, modes of transport, routing, and any immediate emergency measures that can be taken to resolve an emergency situation.	Not applicable	N/A
[30] Source: Regulation PTNSR 29(1) SSR-6 546 (a) (TDG 3.5 (1)(c)(i)) UN number	UN number preceded by the letters "UN" as specified in table 1 (SSR-6).	RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, type A and type B(U) packages) and found that the UN numbers were present and preceded by the letters "UN" on those documents. Specifically, CNSC observed the following: <ul style="list-style-type: none">• UN 2916• UN 2915• UN 2910	Met



Canadian Nuclear Safety Commission
Commission canadienne de sûreté nucléaire

Compliance Matrix
Directorate of Nuclear Cycle and Facilities Regulation

Ref. Procedure *How to Conduct DNCFR Inspections*

Unclassified
Lead Inspector: Lester Posada
Division: NPF/D

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
[31] Source: Regulation PTNSR 29(1) SSR-6 546 (b) (TDG 3.5 (1)(c)(ii)) Proper Shipping Name	As specified in table 1 (SSR-6).	RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, type A and type B(U) packages) and found that the proper shipping names were present on those documents.	Met
[32] Source: Regulation PTNSR 29(1) SSR-6 546 (c) (TDG 3.5 (1)(c)(iii)) UN Class number (7)	The document must include the primary class "7". The class number may be preceded by the word "class" a description that specifies "Class" and the number "7".	RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, type A and type B(U) packages) and found that the primary class "7" was present on those documents.	Met
[33] Source: Regulation PTNSR 29(1) SSR-6 546(d) TDG 3.5(1)(c)(v) Subsidiary hazard class or division	The subsidiary class or classes, in parentheses, which may be shown as a number only or under the heading "subsidiary class" or "classe subsidiaire" or following the words "subsidiary class" or "classe subsidiaire", except that, for transport by aircraft or by ship, the subsidiary class or classes may be shown after the information required by this paragraph.	Not applicable	N/A
[34] Source: Regulation PTNSR 29(1) SSR-6 546(e) Radionuclide name or symbol	The name or symbol of each radionuclide or, for mixtures of radionuclides, an appropriate general description, or a list of the most restrictive nuclides.	RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, type A and type B(U) packages) and found that the names or symbols of radioisotopes were present on those documents.	Met



Canadian Nuclear Safety Commission
 Commission canadienne de sûreté nucléaire

Compliance Matrix
Directorate of Nuclear Cycle and Facilities Regulation

Ref. Procedure *How to Conduct DNCFR Inspections*

Unclassified
Lead Inspector: Lester Posada
Division: NPDFD

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
[35] Source: Regulation PTNSR 29(1) SSR-6 546(f) Physical or chemical form	A description of the physical and chemical form of the material, or a notation that the material is special form radioactive material or low dispersible radioactive material. A generic chemical description is acceptable for chemical form.	<p>RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted and type B(U) packages) and found that the physical and chemical forms of the material were present on those documents.</p> <p>However, upon review of type A shipping records, CNSC staff found that the physical form of Tritium in expired light tubes was reported a solid instead of a gas.</p> <p>SRBT-2022-02-NNC-01: SRBT shall take corrective actions to ensure that the information provided in transport documents are in accordance with the <i>Transportation of Dangerous Goods Regulations</i> and the <i>Packaging and Transport of Nuclear Substances Regulations</i>, 2015.</p>	Not Met (SRBT-2022-01-NNC01)
[36] Source: Regulation PTNSR 29(1) SSR-6 546 (g) (TDG 3.5 (1)(d)) Maximum Activity	<p>The maximum activity of the radioactive contents for each package during transport expressed in units of becquerels (Bq) with an appropriate SI prefix. Non-SI units (e.g. "Ci"), may accompany the units of Bq.</p> <p>For fissile material, the mass of fissile material in units of grams (g), or appropriate multiples thereof, may be used in place of activity.</p>	<p>RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, type A packages, and Type B(U) packages) and found that the maximum activities of the radioactive contents were expressed adequately.</p>	Met
[37] Source: Regulation PTNSR 29(1) SSR-6 546 (h) Package Category	<p>The category of the package must be indicated for each package.</p> <p>Spelling of the category must be as follows: "I-WHITE", "II-YELLOW" or "III-YELLOW".</p> <p>Exposure device: if the shipment is made in accordance with 28(2), the package category is not required as per 29(4).</p>	<p>RECORDS REVIEW: CNSC staff did not observe any such markings, but SRBT's procedures cover this requirement adequately.</p>	Met



Canadian Nuclear Safety Commission
 Commission canadienne de sûreté nucléaire

Compliance Matrix
Directorate of Nuclear Cycle and Facilities Regulation

Ref. Procedure *How to Conduct DNCFR Inspections*

Unclassified
Lead Inspector: Lester Posada
Division: NPDFD

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
[38] Source: Regulation PTNSR 29(1) SSR-6 546 (i) Transport Index (TI)	The Transport Index (TI). Must be indicated for each package. For overpacks and freight containers the TI can be the sum of the individual package TI's or it is directly measured on the consignment (applicable only to "II-YELLOW" and "III-YELLOW"). Exposure device: if the shipment is made in accordance with 28(2), the TI is not required as per 29(4).	RECORDS REVIEW: CNSC staff did not observe any such markings, but SRBT's procedures cover this requirement adequately.	Met
[39] Source: Regulation PTNSR 29(1) SSR-6 546 (j) Fissile Material	Verify that: <ul style="list-style-type: none"> • There is a reference to para 417(a)–(f), if shipment made under one of these exemptions; • The total mass of the fissile nuclides is included if the shipment is made under para 417 (c) to (e); • There is a reference to para 674(a) to (c) or 675 is included if the shipment is made in a package for which one of the exemptions from these paragraphs is applied; • The CSI is included where applicable; • The criticality safety index may be required for consignments including fissile material even if the material is fissile excepted. 	Not applicable	N/A



Canadian Nuclear Safety Commission
 Commission canadienne de sûreté nucléaire

Compliance Matrix
 Directorate of Nuclear Cycle and Facilities Regulation

Ref. Procedure *How to Conduct DNCFR Inspections*

Unclassified
 Lead Inspector: Lester Posada
 Division: NPDFD

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
[40] Source: Regulation PTNSR 29(1) SSR-6 546(k) Competent Authority ID mark	The identification mark for each competent authority approval certificate applicable to the consignment (e.g., special form radioactive material, low dispersible radioactive material, fissile material excepted under 417(f), package design, or shipment). In addition, the identification mark for each transport licence for large components and for those where the shipment cannot be made in compliance with the requirements of the regulations applicable to the consignment.	RECORDS REVIEW: CNSC staff reviewed Type B(U) shipping documents, the identification mark for the Type B(U) package was clearly indicated.	Met
[41] Source: Regulation PTNSR 29(1) SSR-6 546(l) Contents in an overpack or freight container	For consignments of packages in an overpack or freight container, a detailed statement of the contents of each package within the overpack or freight container and, where appropriate, of each overpack or freight container in the consignment. If packages are to be removed from the overpack or freight container at a point of intermediate unloading, appropriate transport documents shall be made available.	RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, and type A packages) and found that required information was expressed adequately. Upon review of Type B(U) transport documents, CNSC staff found that the maximum activities reported were a sum of the individual package activities, with no clear mention of how the activities are distributed for each package. SRBT-2022-02-NNC-01: SRBT shall take corrective actions to ensure that the information provided in transport documents are in accordance with the <i>Transportation of Dangerous Goods Regulations</i> and the <i>Packaging and Transport of Nuclear Substances Regulations</i> , 2015.	Not Met (SRBT-2022-01-NNC01)
[42] Source: Regulation PTNSR 29(1) SSR-6 546(m) "Exclusive Use" shipments	Where a consignment is <u>required</u> to be shipped under exclusive use, the statement "EXCLUSIVE USE SHIPMENT". Note: If shipment is not required by SSR-6 to be transported under exclusive use, then the statement "EXCLUSIVE USE SHIPMENT" must not be written on the transport document.	Not applicable	N/A



Canadian Nuclear Safety Commission
 Commission canadienne de sûreté nucléaire

Compliance Matrix
Directorate of Nuclear Cycle and Facilities Regulation

Ref. Procedure *How to Conduct DNCFR Inspections*

Unclassified
Lead Inspector: Lester Posada
Division: NPF/D

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
[43] Source: Regulation PTNSR 29(1) SSR-6 546(n) LSA & SCO activity in A ₂	For LSA-II, LSA-III, SCO-I and SCO-II, the total activity of the consignment as a multiple of A ₂ .	Not applicable	N/A
[44] Source: Regulation TDG 3.6 (1) (2) ERAP-Additional information on shipping document	The ERAP reference number has to be written on the shipping document with the letters "ERP" or "ERAP" or "PIU" and the ERAP activation telephone number. Note: ERAP telephone number and 24hr telephone number are 2 different numbers. If the same number is used for both functions, it must be noted on shipping document. ERAP may be required for LSA-I, LSA-II and LSA-III, UF ₆ and all fissile shipments (UN 2912, 2977, 2978, 3321, 3322, 3324 to 3331, 3333).	Not applicable	N/A
[45] Source: Regulation PTNSR 29(1) SSR-6 546 Consignment information order	The order in which the information appears on the transport document must follow the sequence of para. 546 (a) to (n) as applicable. The information can be displayed in columns and/or in sequential order.	RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, and type B(U) packages) and found that the required information appeared in the proper sequence on those documents. However, upon review of Type A shipping records, CNSC staff found that the required information appeared out of the proper sequence required by paragraph 546 of SSR-6. SRBT-2022-02-NNC-01: SRBT shall take corrective actions to ensure that the information provided in transport documents are in accordance with the <i>Transportation of Dangerous Goods Regulations</i> and the <i>Packaging and Transport of Nuclear Substances Regulations, 2015</i> .	Not Met (SRBT-2022-01-NNC01)

Compliance Matrix
 Directorate of Nuclear Cycle and Facilities Regulation

Security Designation: Unclassified

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
Safety and Control Area: Packaging and Transport (Training)			
[46] Source: Regulation PTNSR 25(1) TDG 6.1 Person Trained and possessing TDG training certificate or directly supervised	Verify that the employer has provided training to all workers who handle, offer for transport or transport dangerous goods and that they hold a TDG certificate of training or that they perform these duties under direct supervision of a trained worker who holds a TDG certificate of training.	RECORDS REVIEW: CNSC staff reviewed the current records of TDG training for the applicable employees. SRBT provides the following four training courses for TDG: <ul style="list-style-type: none"> • Air • Classes 2.1, 2.2 and 2.3 • Class 7 The training is run by a third party. CNSC staff conclude that SRBT provides training to all workers who perform packaging and transport duties.	Met
[47] Source: Regulation PTNSR 25(1) TDG 6.3, 6.5 TDG training certificate issuance & content	Verify that the employer has provided all TDG trained workers with a TDG certificate of training that includes: the name and business address of the employer, the employee's name, the expiry date of the certificate (road-36 months; air-24 months), aspects of handling, offering for transport and transporting. Certificate must be signed by the employee and the employer.	RECORDS REVIEW: CNSC staff reviewed the TDG certificates provided by SRBT for their employees and conclude that SRBT provides compliant TDG certificates to all workers who perform packaging and transport duties.	Met
[48] Source: Regulation PTNSR 25(1) TDG 6.8 Produce certificate on request	A worker engaged in handling, offering for transport, transporting or directly supervising another person engaged in such activities must produce a copy of their TDG training certificate to an inspector immediately upon request.	RECORDS REVIEW: CNSC staff requested one employee that was performing transportation activities to provide their TDG training certificate. The worker was able to produce a valid TDG training certificate immediately.	Met

Compliance Matrix
 Directorate of Nuclear Cycle and Facilities Regulation

Security Designation: Unclassified

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
Safety and Control Area: Packaging and Transport (Mode of Transport)			
[49] Source: Regulation PTNSR 25(4) SSR-6 564, 573(a) (ii) TDG 5.4 Package secured in vehicle	Verify that the dangerous goods are properly secured in the means of containment (package). Then, verify that the means of containment is properly secured in the vehicle.	OBSERVATION and RECORDS REVIEW: CNSC staff observed the loading process of excepted packages and Type B(U) packages. CNSC staff reviewed SRBT's procedure for the loading of Type A packages. Staff is satisfied that dangerous goods are securely loaded. SRBT employs a for hire carrier for transport of packages. It is the carrier's responsibility to ensure packages are properly secured in vehicle.	Met
[50] Source: Regulation TDG 4.15, 4.15.1(d) Vehicle Placarded	Verify that the placards are posted on the large means of containment (e.g., container, trailer, vehicle, etc.). Required only for III-Y packages and for II-Y and I-W if greater than 500kg. For exposure devices and LSA-I transported pursuant to exemptions in PTNSR 28(2) placards are required. For UF ₆ transported under UN2977, RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, FISSILE, or UN2978, RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, non-fissile or fissile excepted, a subsidiary class placard for dangerous goods must be displayed, next to the primary class placard for the dangerous goods, on each side and on each end of a large means of containment. Note; Placards may be displayed for any quantity of radioactive materials.	Not applicable	N/A

Compliance Matrix
 Directorate of Nuclear Cycle and Facilities Regulation

Security Designation: Unclassified

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
[51] Source: Regulation PTNSR 25(4) SSR-6 562, 563, 574 Segregation of radioactive material during transport/storage in transit	Radioactive material to be segregated from places occupied by persons and undeveloped photographic film (limits are 5 mSv/y for workers, 1 mSv/y for public). Category II-YELLOW or III-YELLOW <i>packages or overpacks</i> shall not be carried in compartments occupied by passengers, except those exclusively reserved for couriers specially authorized to accompany such <i>packages or overpacks</i> .	RECORDS REVIEW: CNSC staff reviewed multiple transport documents (for excepted, type A and type B(U) packages) and found that SRBT shipped category I-White and excepted packages only, mostly shipping Tritium. As such, CNSC staff conclude that SRBT is compliant in loading of packages.	Met
[52] Source: Regulation PTNSR 28(1) SSR-6 508, 509 Contamination limits for packages	Verify that the level of contamination on any surface of the package does not exceeds 4 Bq/cm ² for β, γ or 0.4 Bq/ cm ² for α averaged over 300 cm ² . Verification can be done by swiping the package and indirect measurement.	RECORDS REVIEW / INTERVIEW: SRBT mainly ships Tritium, and as such direct contamination checks were not possible for CNSC staff. SRBT procedures do not address this, but during the interview, SRBT confirmed they were testing 100% of the packages being sent. CNSC staff reviewed multiple shipping records and were able to confirm that SRBT staff do a loose contamination check for each package.	Met
[53] Source: Regulation PTNSR 40 Package check for damages	Check that persons receiving or opening packages have verified if they were damaged, tampered with or the content escaped from them.	OBSERVATIONS / INTERVIEW: CNSC observed a skid of incoming packages containing expired light sources. All packages had holes punctured into them. During the interview with staff, SRBT explained that they sample the air inside each package for tritium, to ensure there are no leaking lights. CNSC staff conclude that SRBT meets the receiving requirements.	Met

Compliance Matrix
 Directorate of Nuclear Cycle and Facilities Regulation

Security Designation: Unclassified

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
Safety and Control Area: Packaging and Transport (Consignor's obligations)			
[54] Source: Regulation PTNSR 25(1) TDG 3.1 Give Carrier shipping document	Verify that the consignor has complied with TDG regulations, and that a shipping document was given (paper or electronic) to the carrier.	RECORDS REVIEW / INTERVIEW: CNSC did not observe any actual shipping processes. During the interviews with SRBT staff, SRBT confirmed that they provide paper copies of the shipping documents to carriers. In supplement, SRBT's shipping procedures cover this requirement adequately.	Met
[55] Source: Regulation PTNSR 25(3) Consignor's notification intent to ship	The consignor has to notify the consignee of the occurrence of a shipment.	RECORDS REVIEW: While SRBT's procedures do not address this requirement, CNSC confirmed through shipping records that CNL as a consignor was notified of the occurrence of a shipment. CNSC has not seen records showing that other consignors are notified.	Met
[56] Source: Regulation PTNSR 42(1) IP-2, IP-3 and Type A technical specification	Applicable if consignor has used these types of packages. Verify that records are available for each type of package. Electronic records or paper records are acceptable.	RECORDS REVIEW: CNSC staff requested and were presented with SRBT's type A electronic records of technical specifications.	Met

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
Safety and Control Area: Conventional Health and Safety			
[57] Source: LCH SRBT Hazard Prevention Program Appendix A Instructions in Workplace Health and Safety and Hazard Identification	Safety glasses or regular prescription eyewear must be worn in each department (Glass Shop, Coating, Rig Room, Milling/Molding, Assembly) at all times.	During the walk down, workers were observed to be wearing the appropriate PPE.	Met

Compliance Matrix
 Directorate of Nuclear Cycle and Facilities Regulation

Security Designation: Unclassified

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
[58] Source: LCH SRBT Hazard Prevention Program Appendix A Instructions in Workplace Health and Safety and Hazard Identification	Work area must be kept tidy and free of clutter to prevent injury.	During the walk down, work areas were observed to be tidy and free of clutter.	Met
[59] Source: LCH SRBT Hazard Prevention Program Appendix A Instructions in Workplace Health and Safety and Hazard Identification	Exits must not be blocked in any way that in the event of an emergency, a person is prevented from making a safe and quick exit from area.	During the walk down, exits were not observed to be blocked.	Met

Additional criteria found after field portion of the inspection

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
Safety and Control Area: Radiation Protection			
[60] <i>Radiation Protection Regulations, Section 20</i> Labelling of Containers and Devices	No person shall possess a container or device that contains a nuclear substance unless the container or device is labelled with (a) the radiation warning symbol set out in Schedule 3 and the words "RAYONNEMENT — DANGER — RADIATION"; and (b) the name, quantity, date of measurement and form of the nuclear substance in the container or device.	SRBT stores used tritium beds (depleted uranium) waiting for return to CNL in Type B(U) transport packages. On the Type B(U) package used to store depleted uranium tritium beds, the words "RAYONNEMENT — DANGER — RADIATION" were not present. The form of the nuclear substance was also not observed to be present. SRBT-2022-02-NNC-02: SRBT shall ensure that containers used to store nuclear substances are labelled in accordance with the <i>Radiation Protection Regulations</i> .	Not Met (SRBT-2022-01-NNC02)
[61]	Every licensee must post and keep posted, at the boundary of and at every point of access to an area, room, vehicle or enclosure, a durable and legible sign that bears the radiation	The main entrance to Zone 3 at the SRBT facility was labelled correctly according to Section 21 of the <i>Radiation Protection Regulations</i> . Internally, within Zone 3, there was an access	Not Met (SRBT-2022-01-NNC03)

Compliance Matrix
 Directorate of Nuclear Cycle and Facilities Regulation

Security Designation: Unclassified

Criteria	Compliance Expectation / Inspection Methods	Comments	Met / Not Met
<i>Radiation Protection Regulations, Section 21</i> Posting of Signs at Boundaries and Points of Access	warning symbol set out in Schedule 3 and the words "RAYONNEMENT — DANGER — RADIATION",	point (door) to a waste storage room that did not contain the words, "RAYONNEMENT — DANGER — RADIATION". SRBT-2022-02-NNC-03: SRBT shall ensure that, where necessary, all access points to rooms are labelled in accordance with the <i>Radiation Protection Regulations</i> .	