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Mr. Lester Posada
Project Officer, Nuclear Processing Facilities Division
Canadian Nuclear Safety Commission
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Subject: Response to CNSC Staff Comments on SRBT's 2022 ACPR

Dear Mr. Posada,

Thank you for providing CNSC staff's comments [1] regarding SRBT's 2022 Annual Compliance and Performance Report (ACPR) [2]. We acknowledge your conclusion that the report meets the applicable regulatory reporting requirements.

The four CNSC staff comments and recommendations for improvements are repeated below in the order given, with SRBT's response following.

Comment 1: Management System

SRBT's organization chart provides the current positions of the organization as well as the reporting lines. However, it does not provide information on whether those positions are currently occupied to ensure that SRBT's safety objectives are effectively being met.

The 2022 ACPR specifically notes that **only one** of the identified positions in the organization was unstaffed as of the end of the calendar year – please refer to page 33 where the following note is included within the report:

“NOTE: as of the end of 2022 this position was unstaffed; all responsibilities are being shared between the Assistant Manager – Health Physics and the Environmental Protection Technician, under the oversight of the Manager – Health Physics and Regulatory Affairs.”

A similar note was included in the 2020 ACPR [3] on pages 32-33, with respect to the positions of Design Engineer and Production Control Assistant.

In both cases, the report specifically notes that the associated responsibilities were being discharged by other members of the organization, implying that safety objectives were effectively being met.

SRBT acknowledges that a high-level statement on whether organizational positions are filled, and the measures being taken to ensure safety objectives are effectively being met would improve and clarify this information for a reader.

In accordance with CNSC staff's recommendation, future versions of the SRBT ACPR will include a statement confirming that all safety-significant positions in SRBT's organization are filled. For any positions were vacant at any time during the reporting year, the compensatory measures put in place to ensure safety objectives are effectively being met will be described.

We trust that this adjustment to our report structure will satisfy the intent of CNSC staff's recommendation and comment.

Comment 2: Radiation Protection

CNSC staff note that the Q1 Disassembly Table had a pass rate of 69% (Zone 1) and the Q2 Laser Room fume hood had a pass rate of 75% (Zone 3) with no discussion. Most other results were above 90%.

Although the overall pass rate is high, discussion on the outliers during various quarters and possible causes would improve the report.

CNSC staff request SRBT to perform the following:

- In trending of the contamination results, discuss more of the quarterly individual trending especially for abnormal results. For example, the Q1 results for the Zone 1 Disassembly Table and the Q2 results for the Zone 3 laser room fume hood were both far below typical pass results.*

These comments will be dispositioned first by specifically addressing the two quarterly outliers identified by CNSC staff, followed by identifying the high-level processes in place within SRBT's Management System and Radiation Safety Program that address such issues, and finally discussing the level of detail to be included in future ACPRs.

Contamination control outliers

In both of the identified cases where routine contamination assessment quarterly pass rates were abnormally low, the outliers were attributed to work that presented a marginal increase in surface contamination.

For the Q1 Disassembly Table pass rate of 69%, the surface contamination measurements of the four 'fails' ranged between 4.67 - 5.99 Bq/cm² (pass = 4.00 Bq/cm² or lower). The Health Physics Team determined that a modified cleaning routine for this area would likely address this issue. The results for this area for the rest of the calendar year (only a single 'fail' in Q4) demonstrated that these changes were effective.

For the Q2 Laser Fume Hood pass rate of 75%, the work activities being conducted routinely during that time period were understood to be the contributing factor to this issue. Certain types

of expired signs and devices can be challenging to disassemble, leading to infrequent tritium light breakage; as such, this work is always performed under a fume hood in Zone 3. During this quarter, a batch of these types of expired devices was being worked on.

As the cause of the issue was well understood, the Health Physics Team routinely followed up with staff working in the area to ensure continued attention to decontamination was applied. The pass rate for this area for the following two quarters exceeded 90%, primarily due to the completion of the work on the specific batch of expired devices, and in part due to routine decontamination efforts.

Processes that address these issues

The Health Physics Team works diligently to ensure that radiation safety objectives are met, and that worker doses and contamination is kept as low as reasonably achievable (ALARA). When a routine contamination assessment fails to meet the acceptance criteria for the zone, the Health Physics Team brings this to the attention of the appropriate staff member for remediation.

Typically, Zone 1 and 2 'fails' are decontaminated as soon as practicable, and if possible, re-assessed to determine if the decontamination was effective. 'Fails' in Zone 3 are decontaminated; however, in most cases re-assessment is performed the next day, as Zone 3 assessments are performed daily.

Quarterly team meetings are routinely conducted where a detailed review of the previous quarterly data on facility contamination assessments is a standing agenda item. During these meetings, the Health Physics Team identifies such outliers, assesses the magnitude of the 'fails' for that quarter, and makes a determination of a course of action if necessary.

In cases where warranted, formal actions will be recorded and tracked to completion via the meeting records, as per SRBT's *Committee Process and Descriptions* process. The Committee Chairperson (in this case the Manager – Health Physics and Regulatory Affairs) determined that neither of these two outliers warranted formal actions to ensure safe working conditions.

Finally, the information and data that is presented in the ACPR is primarily derived from the annual self-assessment of the Radiation Safety Program. This process requires the responsible organizational manager to review and assess the data from the previous reporting year in order to assess if the program is achieving its objectives, and to identify any potential areas of improvement.

These routine processes ensure that contamination levels remain ALARA throughout the facility.

Level of detail in this area for future ACPRs

The level of granularity in the details being requested for future ACPRs is challenging to incorporate as a standard going forward, especially at these small margins of deviation in the data points identified.

Unless a specific pass rate is established where quarterly results lower than that threshold require explanation in the associated ACPR (i.e. a defined 'fluctuation' value), there will remain an element of judgment required as to what constitutes a variance worth highlighting with a detailed treatment in the report.

Therefore, with respect to contamination control data, SRBT intends to include a specific discussion on any quarterly pass rate that falls below 70% for a given quarter of routine facility contamination assessments.

We trust that this adjustment to the content of the ACPR will satisfy the intent of CNSC staff's recommendation and comment.

Comment 3: Emergency Management and Fire Protection

CNSC staff recommend in future annual reports, that SRBT include information on the conduct of annual fire response drills as per CSA N393 section 11.2.4 Drills.

SRBT acknowledges this recommendation and will include this information in future ACPRs.

Comment 4: Other Facility-Specific Matters of Regulatory Interest:

CNSC staff recommend in future annual reports, that SRBT include an analysis/overview of any media coverage received for the year, as well as information on any public opinion analysis gathered through feedback (e.g., through public polling or surveys).

SRBT acknowledges this recommendation and will include this information in future ACPRs, noting that media coverage focused on our facility is typically very rare outside of licencing years.

In conclusion, it is our hope that this additional information and these acknowledging statements are sufficient to satisfactorily address CNSC staff comments on SRBT's ACPR for 2022.

As always, please don't hesitate to contact me should you have any questions or require clarification.

Best Regards,



Jamie MacDonald
Manager – Health Physics and Regulatory Affairs
SRB Technologies (Canada) Inc.

cc: R. Fitzpatrick, SRBT
K. Levesque, SRBT
J. MacDonald, SRBT

Reference:

- [1] Letter from L. Posada (CNSC) to J. MacDonald (SRBT), *CNSC Staff's Review of SRB Technologies (Canada) Inc.'s 2022 Annual Compliance Report*, dated June 26, 2023. (e-Doc 7061466)
- [2] Letter from J. MacDonald (SRBT) to L. Posada (CNSC), *Submission of SRBT Annual Compliance and Performance Report – 2022*, dated March 31, 2023. (e-Doc 7027431)
- [3] Letter from S. Levesque (SRBT) to L. Posada (CNSC), *Submission of SRBT Annual Compliance and Performance Report – 2020*, dated March 31, 2021. (e-Doc 6527659)