



**SRB TECHNOLOGIES (CANADA) INC.**

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Mr. M. Rinker  
Director, Nuclear Processing Facilities Division  
Canadian Nuclear Safety Commission  
P.O. Box 1046, Station B  
Ottawa, Ontario  
Canada  
K1P 5S9

**Subject: Action Level Exceedance**

Dear Mr. Rinker,

At approximately 1400h on November 4, 2014, after performing analysis of routine weekly samples from our stack monitoring systems ('bubblers'), SRBT became aware of an exceedance of an action level. A preliminary verbal notification was made to your attention by telephone conversation at approximately 1510h.

As per condition 2.3 of operating licence NSPFOL-13.00/2015, and section 3.2 (a) of Licence Conditions Handbook LCH-SRBT-R000, we hereby submit this preliminary notification of this occurrence. This notification is required to be submitted within 24 hours of our becoming aware of this condition.

Upon completion of processing and analyzing bubbler samples, and calculating weekly gaseous tritium emissions for the sampling period, it was noted that the action level for total tritium (HTO + HT) released to atmosphere had been exceeded.

Initial results show that 142.16 GBq of tritium oxide (HTO) and 16,428.31 GBq of elemental tritium (HT) was released during the course of the sampling period (October 28 – November 4, 2014). The action level for total tritium as tritium oxide and tritium gas is 7,753 GBq per week. Therefore, the releases for the sampling period stand at approximately **214%** of the action level.

The total tritium released during this period represents **less than 4%** of our annual licensed limit. The action level for weekly releases of tritium oxide (840 GBq per week) was not exceeded, remaining low at 17% of an action level. As of October 28, our gaseous emissions of total tritium had averaged approximately 13% of the action level for the year. With this latest week of data, the average increases to approximately 18% of the action level.

As a comparison, during operations in 2013 the average weekly total tritium release was 19.56% of the action level. Despite this recent exceedance, we remain on track to reduce our tritium emissions to atmosphere compared to the previous year.

Based on a release of this magnitude, and on our derived release limits, the highest expected public dose to a member of the critical group due to a release of this magnitude is calculated to be less than **0.3 microsievert**, which is less than 0.1% of the public dose limit.

As required by the LCH, a final written report will be filed within 21 working days of our becoming aware of this occurrence – no later than **December 3, 2014**. In addition, as part of our Public Information Program, both the preliminary notification and final written report will be posted to our public website within 5 business days of issuance to CNSC staff.

An investigation into this event has already begun, and our non-conformance process has been initiated (NCR-426). At this point, based on operations for the period in question as well as data from our real-time stack monitoring system, SRBT believes that more than one factor contributed to the action level being exceeded. Based on early information, we are confident that the cause of the exceedance is understood and we can effectively reduce the probability of recurrence.

SRBT is fully committed to ensuring that releases of tritium are minimized during our operations. Our staff is proud of our operating record, and of the fact that an action level exceedance has not occurred since 2008. We view this event as an opportunity to further assess our processes, and implement improvements. We will investigate the causes of this exceedance and implement appropriate corrective actions to prevent recurrence in the future.

Should you have any questions on this subject, please do not hesitate to contact Ross Fitzpatrick, Jamie MacDonald or myself at any time.

Best Regards,

A handwritten signature in black ink, appearing to read 'Stephane Levesque', written over a faint, large, stylized outline of a pair of glasses.

Stephane Levesque  
President  
SRB Technologies (Canada) Inc.

cc: R. Buhr, CNSC  
R. Fitzpatrick, SRBT  
K. Levesque, SRBT  
J. MacDonald, SRBT  
T. Sennett, SRBT  
B. St. Pierre, SRBT