Kime, Traci

From: Sean Chapel <schapel@irsc-inc.com>
Sent: Wednesday, June 24, 2015 7:59 PM
To: Struckmeyer, Richard
Cc: Timothy Brandon; Forest A. Hatcher
Subject: [External_Sender] RE: Request for Additional Information
Attachments: FINAL Armson Dose Calc Report Rev 4 Jun-22-2015.pdf

Hi Mr. Struckmeyer,

We agree with your assessment of the inconsistencies in the previous dose calculations submitted. Enclosed is a revised report. We are also sending you the hard copies in the mail.

Sincerely,

Sean Chapel
IRSC, Inc.

From: Struckmeyer, Richard [Richard.Struckmeyer@nrc.gov]
Sent: Monday, June 15, 2015 10:20 AM
To: forest@armsonusa.com
Cc: Timothy Brandon (tbrandon@diligistics.com); Sean Chapel
Subject: Request for Additional Information

Mr. Hatcher:

This is a Request for Additional Information (RAI) concerning your application for an exempt distribution license dated January 20, 2015 (Agencywide Documents Access and Management System (ADAMS) No. ML15028A009), and your response dated May 6, 2015 (ADAMS No. ML15142A495) to our first RAI.

Attachment C (ADAMS No. ML15142A511), "Dose Calculations: Gaseous Tritium Light Sources for Gun Sights," dated April 14, 2015, appears to contain a few errors and/or inconsistencies that may need to be corrected.

In Section D, "Accident Scenarios Considered," the stated assumption for Scenario 1 is that all 1,200 sets are destroyed, releasing 2E+8 microcuries. However, in section E.1.a., the number of sets destroyed in Scenario 1 is stated as 800, and the released quantity is stated as 6.4E+6 microcuries. If the correct number of sets is 1,200, the resulting release should be 2E+8 (rounded up from 1.92E+8) microcuries. The value of 2E+8 is stated in the table in section E.1.

In section E.1.b., the released quantity is stated as 1.28E+8 microcuries.

Subsequent calculations for Scenario 1 appear to be based on the assumption of 800 destroyed sets, corresponding to a release of 1.28E+8 microcuries.

The table in section E.1.a. provides a value for the released quantity in Scenario 2 of 3.2E+6, but this appears to be a typographical error.

A clarification may be warranted, possibly as a footnote to Table 3, regarding the volume and dimensions of the warehouse in Scenarios 1 and 6. Your analysis uses a volume of 3,000 m^3 and dimensions (L x W x H) of 30.5 x 30.5 x 3.66. These are the same values used in NUREG-1717, "Systematic Radiological Assessment

of Exemptions for Source and Byproduct Materials." A reader might conclude, based on the stated dimensions, that the warehouse volume should be 3,400 m^3.

Please examine Attachment C to determine whether you agree with these observations, and if so, submit a revised version of this document.

Thank you,

Richard K. Struckmeyer
Materials Safety Licensing Branch
Division of Material Safety, State, Tribal, and Rulemaking Programs
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
301-415-5477