



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

November 24, 2000

Docket No. 04006377
Control No. 127545

License No. SUB-348

Richard W. Fliszar
Health Physics Manager
Department of the Army
U. S. Army Tank-Automotive and
Armaments Command
Armament Research, Development
And Engineering Center
Picatinny Arsenal, NJ 07806-5000

SUBJECT: DEPARTMENT OF THE ARMY, AMENDMENT TO LICENSE, CONTROL NO.
127545

Dear Mr. Fliszar:

This is in reference to your letter dated November 29, 1999 requesting to amend Nuclear Regulatory Commission License No. SUB-348. We have completed our review of your proposed Derived Concentration Guideline Levels (DCGL) for soil and for building surfaces, and have determined that, for depleted uranium in soil at the Building 611B site, the proposed DCGL of 186 picocuries per gram of soil (pCi/g), and the action limit of 100 pCi/g, meet the 25 millirem per year license termination criteria. However, for depleted uranium contamination remaining on surfaces of facilities at the Building 611B site, the proposed DCGL of 9,404 disintegrations per minute per 100 square centimeters (dpm/100 cm²) is not acceptable, because it relies on building access being limited to not more than 24 hours per year, which is not unrestricted access.

Following are some alternate approaches for you to consider in re-calculation of the DCGL for building contamination. Your new proposed DCGL for building contamination will require review and approval prior to implementation:

1. Re-calculate the DCGL using a code such as RESRAD-BUILD. Preliminary estimates by NRC staff indicate that the dose to an occupant would be dominated by the inhalation pathway under the default assumptions made regarding the fraction of removable radioactivity, the removal rate, and the resuspension of dusts. The default values of 50% removable radioactivity and the removal time of 1 year should be reviewed to determine their applicability at this site. Use of RESRAD-BUILD in the Monte Carlo mode would allow use of the range of default parameters for determining more realistic DCGLs.

RESRAD-BUILD is available through the NRC web site www.nrc.gov, by choosing "Radioactive Waste" from the home screen, followed by choosing "Nuclear Facilities Decommissioning". Alternately, you can access RESRAD-BUILD directly at

<http://www.nrc.gov/NMSS/DWM/DECOM/resrad1.htm>

2. Re-calculate the DCGL using DandD version 2.0 (A Code for Screening Analyses for License Termination and Decommissioning). If values of the resuspension factor can be measured in Building 611B prior to decontamination, and after decontamination under likely conditions of use, such measurements could be used to justify alternate values of the re-suspension factor used in calculating the DCGL. Similarly, measurements could be made to justify more realistic values for the fraction of removable contamination.

Version 2 of the NRC's DandD software is available for downloading at:
<http://www.nrc.gov/RES/rescodes.htm>

3. In accordance with "Use of Screening Values to Demonstrate Compliance with the Final Rule on Radiological Criteria for License Termination" [65 FR 37186, June 13, 2000], the screening values listed in NUREG/CR-5512, Volume 3 "Residual Radioactive Contamination from Decommissioning, Parameter Analysis, Draft Report for Comment, October 1999," Tables 5.19 and 6.91 (enclosed), using $P_{crit} = 0.90$, may be used for building surface screening values instead of a DCGL. The value for uranium-238 (101 dpm/100 cm²) is acceptable for use in Building 611B and the other structures at this location. Justification is not needed to use this value.

NUREG/CR-5512 may be reviewed through the NRC's electronic Public Reading Room using ADAMS. ADAMS is accessible through the NRC web site by choosing "Reference Library" from the home screen, followed by choosing "ADAMS". The accession number for this document is ML003726967.

We will review your alternate proposed DCGL for building surfaces upon receipt of this additional information in a request to amend your license. If you have any technical questions regarding this issue, please call me at (610) 337-5040.

Enclosed with this letter is the amended license, which includes a condition authorizing the use of the DCGL of 186 pCi/g for soil contamination. Please review the enclosed document carefully and be sure that you understand and fully implement all the conditions incorporated into the amended license. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region I Office, Licensing Assistance Team, (610) 337-5093 or 5239, so that we can provide appropriate corrections and answers.

Sincerely,

Original signed by Elizabeth Ullrich

Betsy Ullrich
Senior Health Physicist
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety

Enclosures:

R. Fliszar
Department of the Army

3

1. Amendment No. 23
2. NUREG/CR-5512, Tables 5.19 and 6.91

cc w/ enclosures:
Joseph A. Fabiano, Health Physicist

R. Fliszar
Department of the Army

4

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