



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

June 10, 2015

Docket No.: 04006377
Mail Control: 581537

License No.: SUB-348

Richard W. Lamoreaux
Radiation Safety Officer, ARDEC
Department of the Army
Picatinny Arsenal, New Jersey 07806-5000

**SUBJECT: DEPARTEMENT OF THE ARMY, REQUEST FOR ADDITIONAL INFORMATION
CONCERNING NRC LICENSE APPLICATION, CONTROL NO. 581537**

Dear Mr. Lamoreaux:

This is in reference to your letter dated, July 23, 2013, (Agencywide Documents Access and Management System, Accession Number ML14078A564) requesting approval of your Final Status Survey and Sampling Work Plan (acknowledged as Decommissioning Plan (DP)). A technical review of your DP is being performed using the guidance in NUREG-1757 (NUREG-1757), Consolidated Decommissioning Guidance, Volume 1, Revision 2, Sections 16 through 18; NUREG-1757, Volume 2, Revision 1, Section 5; and NUREG-1757, Volume 3, Revision 1, Section 4. In addition, this letter documents our telephonic conversations held on May 26, 2015, June 2, 2015, and June 9, 2015, regarding the DP. In order to continue our technical review, we need the following additional information:

1. Regarding Section 2.0, Site Information, of your DP, please provide a statement regarding the following information listed in NUREG-1757, Section 16.2, Facility Operating History. You may find the "Information to be Submitted" in sections 16.2.1 through 16.2.5 helpful when preparing your response.
 - a. Previous Decommissioning Activities
 - b. Spills
 - c. Prior Onsite Burials
 - d. Prior Partial Site Releases

2. Regarding Section 2.0, Site Information, of your DP, please provide the following additional information listed NUREG-1757, Section 16.3, Facility Description. You may find the "Information to be Submitted" in sections 16.3.1 through 16.3.8 helpful when preparing your response.
 - a. Population Distribution
 - b. Current/Future Land Use
 - c. Meteorology and Climatology
 - d. Geology and Seismology
 - e. Surface Water Hydrology
 - f. Ground Water Hydrology
 - g. Natural Resources
3. Please include a statement regarding a Schedule using NUREG-1757, Volume 1, Revision 2, Section 17.1.5.
4. Regarding Section 3.0, Organization and Responsibilities, of your DP, please provide the following topics requested in NUREG-1757, Section 17.2, Project Management and Organization. You may find the "Information to be Submitted" in sections 17.2.3.1 and 17.2.5 helpful when preparing your response.
 - a. Radiation Safety Officer
 - b. Contractor Support
5. Regarding Section 4.0, Radiological Control Requirements, of your DP, please provide the following topics requested in NUREG-1757, Section 17.3, Radiation Safety and Health Program during Decommissioning. You may find the "Information to be Submitted" in sections 17.3.1.2 through 17.3.1.6 helpful when preparing your response.
 - a. Respiratory Protection Program
 - b. Internal Exposure Determination Program (include declared pregnant workers)
 - c. External Exposure Determination Program (include declared pregnant workers)
 - d. Summation of Internal and External Exposures
 - e. Contamination Control Program
6. Regarding Section 4.0, Radiological Control Requirements, of your DP, please also provide a statement regarding nuclear criticality safety as described in the "Information to be Submitted" in NUREG-1757, Section 17.3.2, Nuclear Criticality Safety.
7. Regarding Section 4.0, Radiological Control Requirements, of your DP, please also provide a statement regarding health physics audits and recordkeeping as described in the "Information to be Submitted" in NUREG-1757, Section 17.3.3, Health Physics Audits and Recordkeeping Program.

8. Please include a statement regarding the following topics using NUREG-1757, Section 17.4, Environmental Monitoring and Control Program, "Information to be Submitted":
- Environmental ALARA Evaluation Program
 - Effluent Monitoring Program
 - Effluent Control Program
9. Regarding Section 9.0, Quality Control and Quality Assurance, of your DP, please provide the following topics requested in NUREG-1757, Section 17.6, Quality Assurance Program. You may find the "Information to be Submitted" in sections 17.6.1 through 17.6.7 helpful when preparing your response.
- Organization
 - Quality Assurance Program
 - Document Control
 - Control of Measuring and Test Equipment
 - Corrective Action
 - Quality Assurance Records
 - Audits and Surveillance
10. In your letter, dated July 10, 2014, "Response to NRC Request for Additional Information", Response to Comment 3, you provided area factors for soil surfaces. Based on our independent review of your response, including Attachment 2 (RESRAD Version 6.5 Input/Output file), we noted that for the 10 meter squared (m²) area, the values in Tables 5 - 8 and in the text of your response disagree slightly with the values provided in Attachment 2 of your response and our independent evaluation. The table below illustrates the differences.

Contaminated Area m²	Ra-226	U-234	U-235	U-238
10 ^a	5.4	17	19	17.7
10 ^b	5.5	16.7	18.5	14.9

^a Reproduced from Tables 5-8, Response to NRC Request for Additional Information, dated 7/10/2014.

^b Derived based on Attachment 2, Response to NRC Request for Additional Information, dated 7/10/2014.

Please review the above table and provide the area factors based on your RESRAD file. You may find NUREG-1757, Volume 2, Revision 1, Section 5.2 and Appendix I, Section I.3.3.3.5, and NUREG-1575, Revision 1, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), Section 5.5.2.4, helpful when preparing your response.

11. Regarding Section 7.6, Definition of Study Boundaries, and Section 7.7.2.2, Depleted Uranium (U-238), of your DP, you provided the spatial boundary for the survey effort and the contaminated zone, respectively. However, it appears that the spatial boundary and contaminated zone information provided are not consistent. Please review these sections and update the section that is in error or explain the difference.

12. Regarding Section 8.0, Survey Design and Implementation, of your DP, please provide descriptions of the Facility Radiation Surveys that are described in Sections 4.3 through 4.5, "Information to be Submitted" of NUREG-1757, Volume 2, Revision 1.
13. Please include a statement regarding Financial Assurance using NUREG-1757, Volume 1, Revision 2, Section 17.7 and Volume 3, Revision 1, Sections 4.1 through 4.3.
14. Please include a statement regarding Restricted Use/Alternate Criteria using NUREG-1757, Volume 1, Revision 2, Sections 17.7.2 through 17.7.8.
15. Please include a statement regarding Modifications to Decommissioning Programs and Procedures using NUREG-1757, Section 18.

We will continue our review upon receipt of this information. Please reply to my attention at the Region I Office and refer to Mail Control No. 581537. If you have any technical questions regarding this deficiency letter, please call me at (610) 337-5323. You must reply in writing either by letter or facsimile (610-337-5269). You may submit a signed PDF via email. If we do not receive a reply from you within 30 calendar days from the date of this letter, we will assume that you do not wish to pursue your application.

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select **Nuclear Materials; Med, Ind, & Academic Uses**; then **Licensee Toolkits**, see our **toolkit index page**. You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

The NRC's Safety Culture Policy Statement became effective in June 2011. While a policy statement and not a regulation, it sets forth the agency's *expectations* for individuals and organizations to establish and maintain a positive safety culture. You can access the policy statement and supporting material that may benefit your organization on NRC's safety culture Web site at <http://www.nrc.gov/about-nrc/safety-culture.html>. We strongly encourage you to review this material and adapt it to your particular needs in order to develop and maintain a positive safety culture as you engage in NRC-regulated activities.

Sincerely,



Laurie A. Kauffman
Health Physicist
Decommissioning and Technical Support Branch
Division of Nuclear Materials Safety