



UNITED STATES
NUCLEAR REGULATORY COMMISSION
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October 26, 2017

Mr. Dana Stalcup, Director
Division of Assessment and Remediation
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Mail Code: 5204P
Washington, D.C. 20460

SUBJECT: COMPLETION OF SCHEDULED DECOMMISSIONING ACTIVITIES AT THE
U.S. DEPARTMENT OF AGRICULTURE, LOW-LEVEL RADIOACTIVE BURIAL
SITE, BELTSVILLE, MARYLAND (NRC LICENSE NO. 19-00915-03)

Dear Mr. Stalcup:

I am writing to inform you of the completion of the active onsite decommissioning activities at the U.S. Department of Agriculture (USDA), Low-Level Radioactive Burial Site (LLRBS) in Beltsville, Maryland, (License No. 19-00915-03). The U.S. Nuclear Regulatory Commission (NRC) staff has completed the review of the USDA's final status survey (FSS) reports for the remediated portions of the site. The data in the FSS reports demonstrate that the site meets the radiological criteria for unrestricted use in 10 CFR Part 20, Subpart E. Currently, we are completing the actions to amend the NRC license to remove specific license conditions related to the LLRBS and note that the area meets the NRC's unrestricted release criteria. We expect to complete these actions within the month. The NRC is not terminating the license because the USDA conducts other authorized activities at its Beltsville, Maryland, facility and other locations under this license.

In a letter dated March 22, 2012 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML120760350), the NRC notified the U.S. Environmental Protection Agency (EPA) that the decommissioning plan (DP) for the USDA LLRBS contained approved Derived Concentration Guideline Levels (DCGLs) (i.e., the cleanup levels) that exceeded the consultation trigger values for three radionuclides (chlorine-36, nickel-63, and cesium-137) from Table 1 of the Memorandum of Understanding (MOU) entitled "*Consultation and Finality on Decommissioning and Decontamination of Contaminated Sites*" dated October 9, 2002 (ADAMS Accession No. ML022830208). The consultation letter (termed a Level 1 consultation by NRC) also stated that we would review the USDA's FSS reports following completion of site remediation, and initiate a second consultation, as discussed in Section V.C.2 of the MOU (termed a Level 2 consultation), if the actual residual soil contamination levels exceeded the consultation trigger values in Table 1 of the MOU. As discussed below, we have concluded that a Level 2 consultation is not required.

Discussion

After completion of decommissioning activities, which included exhumation and offsite disposal of buried wastes and contaminated soil, the USDA conducted their FSS in accordance with the guidance in the Multi-Agency Radiological Survey and Site Investigation Manual (MARSSIM) and their FSS plan. The USDA partitioned the site into ten individual survey units and an

unaffected Background Reference Area that was located relatively near the site, but in an area that would not have been affected by site operations. Using the MARSSIM guidance, the USDA collected and analyzed a total of 235 soil samples in the 10 survey units and Background Reference Area. In accordance with the FSS plan, the USDA also performed radiological scanning measurements of the soil surfaces within each of the survey units using handheld equipment. In addition, the USDA also collected and analyzed a supplemental set of soil samples from the excavated area, groundwater samples from beneath and downgradient of the excavated area, and surface water samples far downgradient of the excavation to further demonstrate that the site had been sufficiently remediated. This supplemental sampling and analysis was in addition to what was needed to satisfy the MARSSIM guidance. Because non-radiological contaminants were also present in the waste in the burial area, these samples were also analyzed for non-radiological parameters. This supplemental sampling and analyses were coordinated with EPA Region 3 representatives. However, the NRC does not regulate non-radiological contaminants and is not evaluating the results of the soil and water samples for the non-radiological parameters.

The NRC staff reviewed the radiological data in the FSS report and compared the residual radioactivity levels to the trigger values for soil in Table 1 of the MOU. Table 1 states that, except for radium-226, thorium-232 or total uranium, concentrations should be aggregated using a sum of the fractions approach to determine site specific consultation trigger concentrations. Consistent with the MOU, the residual radioactive material concentrations for chlorine-36, nickel-63, and cesium-137 (as determined from the sample analyses), as well as the concentrations of the other radionuclides of concern were aggregated using the sum of fractions approach to determine the site specific consultation trigger values for each of the survey units.

The NRC determined that none of the systematic soil samples exceeded the sum of the fractions trigger values for soil in Table 1 of the MOU. The NRC staff also evaluated the FSS results for radium-226 individually and determined that the FSS results did not exceed the Table 1 residential soil concentration trigger value of 5 pCi/g. Based on the above discussion, we have concluded that a Level 2 consultation is not required.

Using the MARSSIM guidance, the USDA used the sample results to calculate the average sum of the fractions values for the ten survey units for comparison to the NRC-approved DCGLs. Based on the results of the soil sample analyses, the USDA identified a total of three individual systematic samples within two of the survey units where the sum of fractions DCGLs were exceeded, but the average sum of the fractions values for the ten survey units all passed the statistical testing (using the Wilcoxon Rank Sum test) for comparison to the Background Reference Area demonstrating that the site meets the NRC radiological criteria for release for unrestricted use.

During the site decommissioning process, the NRC conducted a number of onsite inspections of the USDA's actions to verify that the cleanup was being conducted as described in the DP. The NRC's contractor, Oak Ridge Associated Universities, also performed independent measurements and sample analysis to verify the USDA's FSS results and concluded they were consistent with USDA FSS data. Based on these actions and the NRC's review of the FSS data, the NRC has concluded that: (1) decommissioning activities were performed in accordance with the approved DP; (2) the FSS data were collected and evaluated consistent with the MARSSIM guidance; and, (3) the FSS data and the NRC's contractor's independent measurements demonstrate that the site meets the NRC radiological criteria for release for unrestricted use.

If you have any questions regarding this letter, or the completion of activities at the USDA site, please contact Raymond Powell at 610-337-6967 or via email at Raymond.Powell@nrc.gov, or Stephen Koenick at 301-415-6631 or via email at Stephen.Koenick@nrc.gov.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

/RA/

John Tappert, Director
Division of Decommissioning, Uranium
Recovery and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Docket No.: 0304530
License No.: 19-00915-03

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U.S. DEPARTMENT OF AGRICULTURE, LOW-LEVEL RADIOACTIVE BURIAL
SITE, BELTSVILLE, MARYLAND (NRC LICENSE NO. 19-00915-03)

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