



[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[Docket No. 030-04530; NRC-2012-0313]

**Notice of Availability of Environmental Assessment and Finding of No Significant Impact
for License Amendment for the United States Department of Agriculture,
Beltsville, Maryland**

AGENCY: Nuclear Regulatory Commission

ACTION: Notice of availability.

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SUPPLEMENTARY INFORMATION:

I. Introduction

The U.S. Nuclear Regulatory Commission (NRC) is considering the issuance of a license amendment to NRC License No. 19-00915-03, issued to the United States Department of Agriculture (USDA or the licensee), to authorize decommissioning of its Low-Level Radiation Burial Site at the Beltsville Agricultural Research Center (or the Site) in Beltsville, Maryland, so that the residual radioactivity at the site can be reduced to a level that meets the criteria for release for unrestricted use. The USDA license would not be terminated at the time of release for unrestricted use because the USDA would continue to conduct authorized activities under this license at other locations. The NRC has prepared an Environmental Assessment (EA) in support of this amendment in accordance with the requirements of Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," to Title 10 of

the *Code of Federal Regulations* (10 CFR), which implements the NRC's environmental protection program under the National Environmental Policy Act of 1969, as amended (NEPA). Based on the EA, the NRC has concluded that a Finding of No Significant Impact (FONSI) is appropriate. The amendment approving the Decommissioning Plan would be issued following completion of a Safety Evaluation Report.

II. Environmental Assessment

Background

In 1949, the USDA initiated disposal of low-level radioactive waste from research laboratory operations at the USDA's Low-Level Radiation Burial Site at the Beltsville Agricultural Research Center in Beltsville, Maryland under agreement with the USDA and the U.S. Atomic Energy Commission (AEC) (predecessor of the NRC). The authorization for onsite disposal by burial in soil was subsequently established in AEC and NRC regulations (10 CFR 20.304, "Disposal by Burial in Soil"). In January 1981, the NRC rescinded the regulations in 10 CFR 20.304 that authorized generic onsite disposals by burial in soil. However, the USDA continued authorized disposal of low-level radioactive wastes at the Site under the regulations in 10 CFR 20.302, "Method for Obtaining Approval of Proposed Disposal Procedures," with specific prior approval of the NRC. In 1987, the USDA initiated use of a commercial service to have radioactive waste transported and disposed at a licensed disposal facility and terminated radioactive waste disposal at the Site.

The low-level radioactive wastes generated by the USDA research laboratories included gloves, paper, liquid scintillation vials, small glass and plastic laboratory containers, metal and fiberboard drums, and decomposed small animal carcasses. The radioactive isotopes used at the USDA facilities and disposed as radioactive waste at the Site were primarily tritium and

carbon-14, with significantly lesser quantities of chlorine-36, nickel-63, strontium-90, cesium-137, lead-210, and radium-226. In addition to the radioactive materials disposed as waste, non-radiological chemicals were included in the waste buried at the Site. The burials consisted of 46 separate disposal pits in an area of approximately 0.7 acres. The pits are approximately 10 feet wide by 12 feet long by 10 feet deep and are separated approximately five feet horizontally from one another. The pits are located in gently sloping agricultural land with no wetlands or surface water features. After each pit was filled with waste, it was backfilled to surface grade with at least 5 feet of clean soil. The USDA estimates that as much as 33,000 cubic feet of waste may have been buried at the Site. Activities at the Site since termination of disposals have included monitoring groundwater contamination and performing characterization studies in four of the disposal pits. Measurements of groundwater samples in the immediate vicinity of the Site have identified migration of tritium and carbon-14 into the groundwater, but the current concentrations do not exceed the National Primary Drinking Water regulations of the United States Environmental Protection Agency (USEPA) (derived concentrations from 40 CFR 141.66, "Maximum Contaminant Levels for Radionuclides").

In accordance with 10 CFR 30.36, "Expiration and Termination of Licenses and Decommissioning of Sites and Separate Buildings or Outdoor Areas," the USDA is required to submit a Decommissioning Plan since principal licensed activities are no longer being performed at the Site. On August 20, 2009, the USDA requested that the NRC approve a Decommissioning Plan for the Site, which when completed, would allow the site to meet the radiological criteria for release for unrestricted use (Agencywide Document Access and Management System (ADAMS) Nos. ML092370149, ML092370159, and ML092370172). The NRC staff conducted reviews of the Decommissioning Plan and, in a September 14, 2010 letter (ADAMS No. ML102600244), requested additional information regarding the selection of input parameter values for the calculation of potential radiation dose from residual activity in the soil. The Revised Final Decommissioning Plan, Low Level Radioactive Burial Site, Beltsville

Agricultural Research Center, Beltsville, Maryland (including the Final Status Survey Plan), dated January 2012 (ADAMS No. ML120600551), and the Addendum Memorandum to the Decommissioning Plan, dated February 2012 (ADAMS No. ML120600526), reflect resolution of NRC staff questions. On July 11, 2012 (77 FR 40917), the NRC issued a *Federal Register* Notice (FRN), announcing the USDA license amendment request and providing an opportunity for the public to provide comments, request a hearing and petition for leave to intervene. The NRC did not receive any comments, hearing requests or petitions for leave to intervene on the Decommissioning Plan.

Proposed Action

The proposed action is to amend NRC License No. 19-00915-03 to authorize the decommissioning of the Site so that the residual radioactivity at the Site can be reduced to a level that meets the criteria for release for unrestricted use found in 10 CFR 20.1402, "Radiological Criteria for Unrestricted Use." Section 20.1402 allow unrestricted use of a site if the maximum Total Effective Dose Equivalent to an average member of the critical group is 25 millirem per year and the residual radioactivity has been reduced to levels that are as low as reasonably achievable (ALARA). Because the USDA conducts authorized activities under this license at numerous other locations, the USDA is not requesting license termination.

The USDA desires to remove the buried waste and thus eliminate the source of radioactive contamination. The planned remediation actions for the Site should also be effective in addressing the non-radiological contaminants. The USDA explains that regulatory authority regarding the acceptability of any residual quantities of the non-radiological contaminants in soil (and potentially groundwater) lies with the USEPA under the authority of their ongoing evaluation of the Site under the Comprehensive Environmental Response, Compensation, and Liability Act.

The USDA proposes to exhume the waste from the burial pits and transport the waste and contaminated soil to authorized treatment or disposal facilities. Following completion of the removal and transportation activities, the USDA will conduct a final status survey of the remediated area. The area to be released under this decommissioning effort will be surveyed in accordance with the guidance contained in the “Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM),” NUREG–1575, Rev. 1 (ADAMS No. ML082470583). The final approval that the Site meets the radiological criteria for release for unrestricted use would be contingent upon the NRC staff’s approval of the licensee’s final status survey report.

Need for the Proposed Action

The current USDA license does not authorize decommissioning activities to be conducted. The NRC regulations in 10 CFR 30.36 (g)(1), in part, require a Decommissioning Plan to be submitted if the procedures and activities necessary to carry out decommissioning have not been approved by the Commission and these procedures could increase potential health and safety impacts to workers or the public.

Environmental Impacts of the Proposed Action

The NRC staff has reviewed the Decommissioning Plan for the USDA’s Low-Level Radiation Burial Site and examined the impacts of decommissioning. Based on its review, the staff has determined that the affected environment and the environmental impacts associated with this decommissioning action (including waste transportation impacts) are bounded by information contained in the “Generic Environmental Impact Statement (GEIS) in Support of Rulemaking on Radiological Criteria for License Termination of NRC-Licensed Nuclear Facilities,” NUREG-1496, Vols. 1, 2 and 3 (ADAMS Nos. ML042310492, ML042320379, and

ML042330385). The NRC staff determined that the contaminants, the potential dose scenarios or pathways, the physical size of the site, and the volumes of waste expected to be generated at USDA site are not sufficiently different from those in the GEIS reference facilities to change conclusions regarding environmental impacts. No additional non-radiological impacts were identified. A beneficial environmental impact of the proposed action is that there will no longer be migration of radioactive contamination to soil or groundwater because the source of the contamination will be removed.

In the Decommissioning Plan, the USDA indicates that they will implement controls and perform radiological sampling and analysis to limit the potential release of radioactive material. Contamination controls, such as the use of containment structures, covers for loaded containers, or water sprays for dust control, will be implemented during decommissioning activities to prevent airborne contamination from escaping the remediation work areas; therefore, no significant release of airborne contamination is anticipated. Air sampling and analysis will be conducted to ensure regulatory criteria are met for air effluents. No liquid effluents are expected to be generated during decommissioning. Controls, such as silt fences and water diversion berms will be put in place to control water inflow or runoff due to precipitation. Radioactive waste will be placed in suitable transport containers that will be covered to prevent access and staged within the fenced property pending shipment to a licensed radioactive waste treatment or disposal facility.

The USDA intends to use an NRC-licensed decommissioning contractor to perform remediation activities at the Site. The contractor will perform these activities under the authority of its NRC license. The USDA will oversee the activities and will maintain primary responsibility for the decommissioning project. The USDA indicates that the contractor will have developed adequate radiation protection procedures and capabilities and will implement an acceptable program to keep exposure to workers and the public from radioactive materials to levels that are ALARA. As noted, the USDA has prepared a Decommissioning Plan describing the work to be

performed, and, as explained by the licensee, work activities are not anticipated to result in a dose to workers or the public in excess of the limits in 10 CFR Part 20, "Standards for Protection Against Radiation." The NRC's past experience with decommissioning activities at sites similar to the USDA site indicates that public and worker exposure will be far below the limits in 10 CFR Part 20. The NRC staff will perform inspections at the site to confirm compliance with applicable regulations.

The NRC staff has also extensively reviewed and requested revisions to the USDA's dose analysis from residual contamination that may remain following decommissioning. Based on its review, the NRC staff concludes that the proposed Derived Concentration Guideline Levels developed for this project meet the relevant NRC requirements in 10 CFR 20.1402, "Radiological Criteria for Unrestricted Use." Using the guidance in NUREG-1757, Vol.1, Rev. 2, "Consolidated Decommissioning Guidance, Decommissioning Process for Materials Licensees" (ADAMS No. ML063000243), the staff documented their review of the health and safety and environmental aspects of the Decommissioning Plan, including the evaluation of the proposed Derived Concentration Guideline Levels, in a Safety Evaluation Report (ADAMS No. ML12314A076).

Alternatives to the Proposed Action

The alternative the NRC staff considered is the no-action alternative, under which the staff would deny the amendment request to initiate remediation activities at the Site. This approach is not acceptable because the burial pits contain residual radioactive material exceeding NRC's criteria for release for unrestricted use and the no action alternative is inconsistent with the requirements in 10 CFR 30.36, "Expiration and Termination of Licenses and Decommissioning of Sites and Separate Buildings or Outdoor Areas," for the decommissioning of sites where principal licensed activities are no longer being performed.

Agencies and Persons Contacted

In accordance with Section 106 of the National Historic Preservation Act, NRC staff provided a location map and a description of the decommissioning project to the Maryland Historical Trust requesting information on historic properties in the vicinity of the proposed decommissioning project. (The Trust serves as Maryland's State Historic Preservation Office pursuant to the National Historic Preservation Act). The Maryland Historical Trust provided a response identifying one nearby property and indicating there would be "No Adverse Effect" to this property as a result of the decommissioning project (ADAMS No. ML12237A250). Therefore, the NRC staff has determined that the proposed action would have no adverse effects on historic properties.

In accordance with Section 7 of the Endangered Species Act, the NRC staff contacted relevant wildlife agencies for information on rare, threatened or endangered species that could be present in the vicinity of the Site. The United States Department of the Interior, U.S. Fish & Wildlife Service and the Wildlife and Heritage Service of the Maryland Department of Natural Resources provided responses indicating that there is no State or Federal records for rare, threatened or endangered species within the delineated boundaries of the project site (ADAMS Nos. ML12237A229 and ML12275A103, respectively). Therefore, the NRC staff has determined that the proposed action would not affect listed species or critical habitat.

In accordance with the Memorandum of Understanding between the USEPA and the NRC on "Consultation and Finality on Decommissioning and Decontamination of Contaminated Sites," on March 22, 2012, the NRC provided a consultation letter to the USEPA regarding the planned level of residual radioactive soil concentrations in the proposed plan (ADAMS No. ML120760350).

On October 23, 2012, the NRC staff provided a draft of the EA to the Maryland Department of the Environment (MDE) for comment. MDE requested information confirming that the area to be remediated was under “Exclusive Federal Jurisdiction.” The NRC forwarded information provided by the USDA (ADAMS Nos. ML12325A201 and ML12325A228) to the MDE that confirmed that the area to be remediated was under “Exclusive Federal Jurisdiction.” On November 8, 2012, an MDE representative responded that the MDE had no additional comments on the EA (ADAMS No. ML12325A256).

III. Finding of No Significant Impact

The NRC staff has prepared an EA in support of the proposed license amendment for decommissioning the USDA’s Low-Level Radiation Burial Site at the Beltsville Agricultural Research Center in Beltsville, Maryland to reduce residual radioactivity to levels consistent with the release for unrestricted use. The staff has found that the radiological environmental impacts from the proposed amendment are bounded by the impacts evaluated by the “Generic Environmental Impact Statement in Support of Rulemaking on Radiological Criteria for License termination of NRC-Licensed Facilities” (NUREG-1496) and that the relevant NRC requirements in 10 CFR 20.1402, “Radiological Criteria for Unrestricted Use,” will be met. The staff has also found that the non-radiological impacts are not significant. On the basis of the EA, NRC has concluded that there are no significant environmental impacts from the proposed amendment and has determined not to prepare an environmental impact statement.

IV. Further Information

Documents related to this action, including the application for amendment and supporting documentation, are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. From this site, you can access the NRC's

Agencywide Document Access and Management System, which provides text and image files of NRC's public documents. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) Reference staff at 1-800-397-4209, 301-415-4737 or by email to *pdr.resource@nrc.gov*.

These documents may also be viewed electronically on the public computers located at the NRC's Public Document Room (PDR), O 1 F21, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852. The PDR reproduction contractor will copy documents for a fee.

Dated at King of Prussia, Pennsylvania this 19th day of December 2012.

For the Nuclear Regulatory Commission.

/RA/

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