

NUCLEAR REGULATORY COMMISSION

NRC-2009-0504

DOCKET NO. 030-29462

**NOTICE OF AVAILABILITY OF ENVIRONMENTAL ASSESSMENT AND FINDING OF NO
SIGNIFICANT IMPACT RELATED TO THE APPROVAL FOR THE DEPARTMENT OF THE
NAVY TO ISSUE AN AMENDMENT TO A MATERIALS PERMIT FOR THE UNRESTRICTED
RELEASE OF BUILDING 150 AT THE NAVAL MEDICAL RESEARCH CENTER IN
BETHESDA, MARYLAND, UNDER BYPRODUCT MATERIALS LICENSE**

No. 45-23645-01NA

AGENCY: Nuclear Regulatory Commission.

ACTION: Issuance of Environmental Assessment and Finding of No Significant Impact for Permit Amendment.

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SUPPLEMENTARY INFORMATION:

I. Introduction

The U.S. Nuclear Regulatory Commission (NRC) is considering allowing the Department of the Navy (Navy) to issue an amendment to a materials permit in accordance with NRC Byproduct Materials License No. 45-23645-01NA. The NRC approval would authorize the Navy to release, for unrestricted use, Building 150 at the Naval Medical Research Center in Bethesda,

Maryland. The Navy requested this action by letter July 11, 2008. The NRC has prepared an Environmental Assessment (EA) in support of this proposed action in accordance with the requirements of Title 10, *Code of Federal Regulations* (CFR), Part 51 (10 CFR Part 51). Based on the EA, the NRC has concluded that a Finding of No Significant Impact (FONSI) is appropriate with respect to the proposed action. The proposed action will be taken following the publication of this FONSI and EA in the *Federal Register*.

II. Environmental Assessment

Identification of Proposed Action

The proposed action would approve the Navy's July 11, 2008, request to release Building 150 at the Naval Medical Research Center (NMRC) in Bethesda, Maryland (the Facility) for unrestricted release. The Navy completed initial decommissioning of the Facility (excluding Building 150) in Bethesda, Maryland, in 2000. The NMRC was authorized to use licensed materials under Naval Radioactive Materials Permit 19-32398-41NP in accordance with the Navy's Master Materials License No. 45-23645-01NA. In the conduct of that initial decommissioning action the Navy requested authorization to postpone decommissioning activities at Building 150. Additionally, two underground storage tanks (USTs) were discovered during the decommissioning of the NMRC, and remediation of the USTs were added to the Navy's decommissioning work plan for Building 150.

Building 150 was constructed in the early 1950s as a facility for the irradiation of animals to determine the effects of ionizing radiation on the organ and cellular systems. The radiation source used for these studies consisted of 2,500 curies of cobalt-60 in ceramic slugs arranged in circles. AEC License No. 19-02891-03 was issued on October 2, 1957, authorizing the use of cobalt-60 for this research. License No. 19-02891-03 expired on March 31, 1963.

Building 150 is located on the grounds of the NMRC. The Facility consists of a 1,100 square foot building, with approximately one foot thick reinforced concrete walls. The building was divided into two radiation exposure rooms and a control room. The building is covered with a 10 inch thick overhead reinforced concrete slab. The control room is separated from the two radiation rooms by a 3 feet 10 inch thick radiation shield, constructed of reinforced barite concrete which is 45 pounds heavier per cubic foot than regular reinforced concrete. Radiation room 1, where the sources were stored, was further shielded by a 3 foot thick barite concrete wall.

Several minor contamination incidents occurred during routine maintenance between 1951 and 1962, probably caused by cracks in the ceramic slugs. In April 1962, one of the NMRC employees was found to be internally contaminated with cobalt-60 during routine internal personnel monitoring. Investigation disclosed that widespread contamination was present on the ground surrounding the building. The cause of the contamination was determined to be a failure of the source capsule seals. Building 150 and surrounding grounds were originally decommissioned in 1963. The sources were transferred by Atlantic Research Corporation, under AEC License No. 45-02808-02, to Oak Ridge National Laboratory. Building 150 internals, roof, ventilation equipment, and four to six inches of soil adjacent to the building were removed by Navy personnel and disposed of as radioactive waste. In 2002, following the initial decommissioning of the NMRC, the Navy initiated additional decommissioning of Building 150 and the underground storage tanks (UST). Remediation activities included removal of the USTs, removal of contaminated soil adjacent to Building 150, scabbling of concrete surfaces within Building 150, and removal of rubble and drain lines within the Facility.

Need for the Proposed Action

The Navy is requesting approval of this permitting action because it has ceased conducting licensed activities at the Facility, and seeks the unrestricted use of its Facility and the termination of the permit. NRC is fulfilling its responsibilities under the Atomic Energy Act to make a timely decision on a proposed license amendment for decommissioning that ensures protection of the public health and safety.

Environmental Impacts of the Proposed Action

The historical review of licensed activities conducted at the Facility shows that such activities involved use of the following radionuclides with half-lives greater than 120 days in unsealed form: cobalt-60. The Navy conducted a final status survey in January 2004. This survey covered the areas of use at the Facility. The Navy elected to demonstrate compliance with the radiological criteria for unrestricted release as specified in 10 CFR 20.1402 by using the screening approach described in NUREG-1757, "Consolidated NMSS Decommissioning Guidance," Volume 2. The Licensee used the radionuclide-specific derived concentration guideline levels (DCGLs), developed there by the NRC, which comply with the dose criterion in 10 CFR 20.1402. These DCGLs define the maximum amount of residual radioactivity on building surfaces, equipment, and materials, and in soils, that will satisfy the NRC requirements in Subpart E of 10 CFR Part 20 for unrestricted release. The Navy's final status survey results were below these DCGLs and are in compliance with the As Low As Reasonably Achievable (ALARA) requirement of 10 CFR 20.1402. The NRC thus finds that the Navy's final status survey results are acceptable.

Based on its review the staff has determined that the affected environment and any environmental impacts associated with the proposed action 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 Nuclear Facilities”

(NUREG-1496) Volumes 1-3 (ML042310492, ML042320379, and ML042330385). The staff finds there were no significant environmental impacts from the use of radioactive material at the Facility. The NRC staff reviewed the docket file records and the final status survey report to identify any non-radiological hazards that may have impacted the environment surrounding the Facility. No such hazards or impacts to the environment were identified. The NRC has identified no other radiological or non-radiological activities in the area that could result in cumulative environmental impacts.

The NRC staff finds that the proposed release of the Facility for unrestricted use and the termination of the Navy’s materials permit is in compliance with 10 CFR 20.1402. Based on its review, the staff considered the impact of the residual radioactivity at the Facility and concluded that the proposed action will not have a significant effect on the quality of the human environment.

Environmental Impacts of the Alternatives to the Proposed Action

Due to the largely administrative nature of the proposed action, its environmental impacts are small. Therefore, the only alternative the staff considered is the no-action alternative, under which the staff would leave things as they are by simply denying the amendment request. This no-action alternative is not feasible because it conflicts with 10 CFR 30.36(d), requiring that decommissioning of byproduct material facilities be completed and approved by the NRC after licensed activities cease. The NRC’s analysis of the Navy’s final status survey data confirmed that the Facility meets the requirements of 10 CFR 20.1402 for unrestricted release and for permit termination. Additionally, denying the Navy’s request to terminate its permit would result in no change in current environmental impacts. The environmental impacts of the proposed

action and the no-action alternative are therefore similar, and the no-action alternative is accordingly not further considered.

Conclusion

The NRC staff has concluded that the proposed action is consistent with the NRC's unrestricted release criteria specified in 10 CFR 20.1402. Because the proposed action will not significantly impact the quality of the human environment, the NRC staff concludes that the proposed action is the preferred alternative.

Agencies and Persons Consulted

NRC provided a draft of this Environmental Assessment to the Radiological Health Program in the Air and Radiation Management Administration of the Maryland Department of the Environment for review on August 13, 2009. On September 14, the State of Maryland responded by email. The State agreed with the conclusions of the EA, and otherwise had no comments.

The NRC staff has determined that the proposed action is of a procedural nature, and will not affect listed species or critical habitat. Therefore, no further consultation is required under Section 7 of the Endangered Species Act. The NRC staff has also determined that the proposed action is not the type of activity that has the potential to cause effects on historic properties. Therefore, no further consultation is required under Section 106 of the National Historic Preservation Act.

III. Finding of No Significant Impact

The NRC staff has prepared this EA in support of the proposed action. On the basis of this EA, the NRC finds that there are no significant environmental impacts from the proposed

action, and that preparation of an environmental impact statement is not warranted.

Accordingly, the NRC has determined that a Finding of No Significant Impact is appropriate.

IV. Further Information

Documents related to this action, including the application for license 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 (ADAMS), which provides text and image files of NRC's public documents. The documents related to this action are listed below, along with their ADAMS accession numbers.

1. NUREG-1757, "consolidated NMSS Decommissioning Guidance;"
2. Title 10, *Code of Federal Regulations*, Part 20, Subpart E, "Radiological Criteria for License Termination;"
3. Title 10, *Code of Federal Regulations*, Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions;"
4. NUREG-1496, "Generic Environmental Impact Statement in Support of Rulemaking on Radiological Criteria for License Termination of NRC-Licensed Nuclear Facilities;"
5. NRC License No. 45-23645-01NA inspection and licensing records;
6. NMRC Historical Site Assessment (HAS) Volume I of II, dated June 15, 1999 (ML082280739);
7. NMRC Historical Site Assessment (HAS) Volume II of II, dated June 15, 1999 (ML082280809);
8. NMRC Radiological Decontamination and Decommissioning (D&D) Plan, Revision 1, dated August 17, 1999 (ML082280784 and ML082280814);

9. Radiological Decontamination and Decommissioning (D&D) Final Status Survey Report, dated April 2000 (ML082280117 and ML082280147);
10. Radiological Decontamination and Decommissioning (D&D) Final Status Survey Report, dated June 16, 2000 (ML082280738 and ML082280755);
11. Radiological Decontamination and Decommissioning (D&D) Final Status Survey Report, dated August 2000 (ML082280309, ML082280317, ML082280334, and ML082280287);
12. NRC letter dated February 29, 2000, "Decommissioning Plans for Naval Medical Research Center (ML003687082);
13. Department of the Navy Letter dated July 6, 2005, "Decommissioning of the Former Naval Medical Research Center (NMRC), Bethesda, MD" (ML051940414);
14. Department of the Navy letter dated October 22, 2007, "Building 150 and Underground Storage Tank Decommissioning Project, National Naval Medical Center, Bethesda, MD (ML073060430); and
15. Department of the Navy Letter dated July 11, 2008, "Naval Medical Research Center (NMRC), Bethesda Decommissioning Documentation (ML082270292).

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 pdresource@nrc.gov. These documents may also be viewed electronically on the public computers located at the NRC's 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 Region I, 475 Allendale PA, King of Prussia, PA this 10th day of November 2009

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

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