DEPARTMENT OF THE ARMY
WALTER REED ARMY MEDICAL CENTER
WALTER REED HEALTH CARE SYSTEM
WASHINGTON DC 20307-5001

REPLY TO
ATTENTION OF

Health Physics Office

August 25, 2011

Br. 1

Nuclear Regulatory Commission, Region I
ATTN: Mr. Dennis Lawyer, Mail Control No. 575317
Division of Nuclear Material Safety
475 Allendale Road
King of Prussia, PA 19406-1415

Dear Sir or Madam:

The purpose of this letter is to request the US Nuclear Regulatory Commission (NRC) to defer regulatory oversight of planned decommissioning actions at the Walter Reed Army Medical Center (WRAMC) Diamond Ordnance Radiation Facility (DORF) to the Army Reactor Office (ARO). WRAMC has discussed this request with ARO and the Army Reactor Council and established that they are willing and able to oversee the decommissioning. The ARO has regulatory authority over decommissioning activities related to the reactor that was formerly operated at the facility under the authorities of Section 91.b of the Atomic Energy Act of 1954. NRC's regulatory authority is related past operations with radioactive waste materials at the facility under NRC license 08-01738-02. 03001317

The objective of this request is to minimize regulatory overlap, while preserving the goal of an end state that is protective of human health and the environment and in compliance with NRC regulations and guidance. The technical basis for this request is the lack of dose-significant NRC-licensed radioactive materials present at the Facility. Information related to and supporting this request is provided in the enclosed summary.(See enclosure)

Please process this request on behalf of WRAMC. We humbly request a response as soon as possible as this decision will allow us to appropriately plan the decommissioning of WRAMC license 08-01738-02.

For additional information, please contact COL Casmere H. Taylor, Chief of Health Physics, WRAMC at (202) 290-4556 or email casmere.taylor@med.navy.mil.

Sincerely,

Norvell V. Coots
Colonel, Medical Corps
Commanding

Enclosure

575945
NMSS/RGN1 MATERIALS-002

Enclosure 1

Summary of DORF Radiological Conditions and Regulatory Status

Purpose

This Summary provides information regarding the radiological conditions and regulatory status of the Walter Reed Army Medical Center (WRAMC) and Diamond Ordnance Radiation Facility (DORF) located at WRAMC's Forest Glen Annex. The Army Research Laboratory is currently in the process of implementing decommissioning planning activities necessary to support termination of its Army Reactor Office (ARO) permit for the DORF. At the same time, WRAMC is in the process of closing the facilities under the Base Realignment and Closure Program, which will require the termination of their NRC License. Because NRC-licensed radioactive materials were managed at the DORF, activities to date have also addressed the possibility for residual NRC-licensed material at the Facility. Extensive radiological surveys were performed with this intent, identifying only trace amounts of potentially NRC-licensed material. The only residual radionuclides identified that pose a potential dose risk to current and future facility inhabitants are activation products from reactor operations (isotopes of europium), which are within structural concrete and are not potentially commingled with any NRC-licensed residual radioactivity. On this basis, WRAMC is requesting NRC to consider deferring regulatory oversight of the necessary decommissioning actions at the DORF to the ARO. It should be noted that the ARO is required to follow NRC regulations and guidance when conducting oversight of permitted operations and decommissioning.

Background

The DORF was operated by the Department of the Army's Harry Diamond Laboratories at WRAMC's Forest Glen Annex. Building 516 at the DORF housed a TRIGA Mark F Reactor, which was operational from September of 1961 through September of 1977. The reactor operated under the authorities of Sections 91.b. and 110.b. of the Atomic Energy Act (AEA) of 1954 and is permitted by the Army Reactor Office (Permit DORF-1-97) under Army Regulation 50-7, *Army Reactor Program*. The Director, U.S. Army Research Laboratory is the ARO permit holder.

In 1980, the reactor building at the DORF (Building 516) was decommissioned and released pursuant to the guidance in NRC Regulatory Guide 1.86. During a 1996 review by the ARO, the radiological status of the DORF was questioned in light of recently released decommissioning standards (10 CFR 20 Subpart E). As a result, a radiological survey was performed, which indicated low but detectable ambient exposure rates in excess of background within the DORF Exposure Room. In June of 1997, in response to that finding, the ARO issued Army Radiation Permit DORF-1-97, which established additional controls and monitoring procedures.

The DORF reactor building, Building 516, was historically used for storage and packaging of radioactive waste from research and hospital operations. These operations were authorized under the provisions of NRC License 08-01738-02 and Department of the Army Radiation Authorization (ARA) ARA 08-01-97. Since 2010, all radioactive waste associated with the NRC license, the ARA, and all radioactive waste

associated with the reactor have been removed. No further routine work with radioactive materials is being conducted or planned within the DORF facility.

Recent Activities to Support Decommissioning

WRAMC and Army Research Laboratory have recently performed and documented a Historical Site Assessment and radiological surveys to support the process of terminating NRC license 08-01738-02 and ARO permit DORF-1-97. These activities have been conducted in accordance with NRC guidance, particularly NUREG-1757 and NUREG-1575. Extensive radiological surveys were performed of buildings, grounds, and systems associated with the DORF. These surveys were designed to fully characterize the facility and were developed in accordance with MARSSIM guidance for final status surveys. Surveys included performance of stationary direct radiation measurements, scanning radiation measurements, smear sample collection and analysis, and volumetric sample collection and analysis. Table 1 identifies the type and number of measurements/analyses performed.

Table 1: Summary of DORF Investigation Analytical Scope

Measurement/Analysis Type	Measurement/Analysis Media Type	Number of Measurements/Analyses
H-3	volumetric	116
C-14	volumetric	102
Gamma Spectroscopy	volumetric	1099
Fe-55	volumetric	48
Ni-63	volumetric	18
Isotopic Uranium	volumetric	174
H-3	smear	1306
C-14	smear	1306
alpha	smear	394
beta	smear	394
direct alpha	direct surface	383
direct gamma	direct surface	343
shielded direct gamma	direct surface	83
direct H-3	direct surface	343

The results of the measurements, sampling and analyses did not indicate the presence of NRC-licensed material in excess of background, with the exception of trace quantities of tritium on indoor smear samples. The vast majority of tritium smear analyses were less than the analytical detection sensitivity. The highest tritium result was 0.03% of the NRC Screening Level for building surfaces (assuming 10% removable activity). The only other residual radioactivity identified was activation products from past operations of the DORF reactor (primarily Eu-152).

Regulatory Overview

Radioactive materials associated with former operations of the reactor at the DORF are permitted by the ARO. This permit is analogous to an NRC license, but is issued under AR 50-7 because utilization facilities possessed by Department of Defense (DoD) under the authority of Section 91.b. of the Atomic Energy Act of 1954 are excluded from NRC jurisdiction by Section 110.b. It is recognized that some operations following shutdown of the DORF reactor involved NRC-licensed materials and that NRC has regulatory jurisdiction over such materials. WRAMC is requesting NRC to consider deferring regulatory oversight of the DORF decommissioning to ARO with the objective of minimizing regulatory overlap, while preserving the goal of an end state that is protective of human health and the environment and in compliance with NRC regulations and guidance. The technical basis for this request is the lack of dose-significant NRC-licensed radioactive materials present at the Facility.

List of Regulatory Actions Related to ARO Oversight of Reactors

This section provides some background information on regulatory actions related to AROs jurisdiction over Army reactors for reference purposes.

The Atomic Energy Act (AEA) of 1954 provides the DoD specific authorities:

- Section 91.b. – Authority – states the President may direct the commission to:
    - deliver quantities of SNM or atomic weapons to the DoD for such use as he deems necessary in the interest of national defense
    - to authorize DoD to manufacture, produce, or acquire any atomic weapon or utilization facility for military purposes
- Section 110.b. – Exclusions – states:
    - Nothing in this Chapter shall be deemed - to require a license for the manufacture, production, or acquisition by the DoD of any utilization facility authorized pursuant to Section 91, or for the use of such facility by the DoD or a contractor thereof.

A Presidential Directive dated 23 September 1961 states:

- DoD is responsible for identifying health and safety problems related to operation of utilization facilities
- Advice and assistance will be obtained from AEC
- Any disagreement which cannot be resolved by the agencies will be referred to the President

A Memorandum of Understanding (MOU) between AEC and DoD signed February 1967:

- Identifies Agreements regarding:
    - New reactor projects
    - Modification of reactor facilities and procedures
    - Qualifications of operators
    - Safety documentation
- Operations and Maintenance of DoD Reactors
- Reports
- Visits

This is to acknowledge the receipt of your letter/application dated

8/25/11, and to inform you that the initial processing which includes an administrative review has been performed.

Environmental Assessment (08-01738-02)

☒ There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card

_____.

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 575945.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

NRC FORM 532 (RI)
(6-96)

Sincerely,
Licensing Assistance Team Leader