

SCOPE OF WORK



**US Army Corps
of Engineers** ®
Baltimore District

**HISTORICAL SITE ASSESSMENT-ENVIRONMENTAL AUDIT
FOR FOREST GLEN ANNEX OF
WALTER REED ARMY MEDICAL CENTER,
WASHINGTON D.C.**

STATEMENT OF WORK

20 MAY, 2008

This page intentionally left blank.

HISTORICAL SITE ASSESSMENT-ENVIRONMENTAL AUDIT
FOR FOREST GLEN ANNEX OF
WALTER REED ARMY MEDICAL CENTER
STATEMENT OF WORK

1.0 INTRODUCTION

1.1 GENERAL BACKGROUND

This data review is designed for facilities and areas that had operations involving radioactive materials that were NRC licensed, fall under a Department of the Army Radiation Authorization (ARA), or other permitted use of radioactive materials. Release of these facilities and sites for unrestricted use will be requested from the NRC (as applicable), the State Regulators, and/or other Regulatory Agency following completion of a survey.

This statement of work will address the identification of radioactive materials previously or currently used within the Forest Glen Annex facilities, including the Diamond Ordnance Radiation Facility (DORF), and specific leased facilities located in Rockville MD.

The radioactive materials identified may include, as applicable, radioactive commodities used worldwide under the control of a specific NRC license, an ARA, an Army Reactor Permit, and those radioactive devices that do not require a specific license to possess and use these devices. A radioactive commodity, as defined by the Defense Logistics Agency Instruction (DLAI) 4145.8, is any item or device composed in whole or in part of radioactive material that a National Stock Number (NSN), trade or supply name, Commercial and Government Entity (CAGE) number or part number has been assigned. A radioactive item is any item in the Department of Defense (DoD) Supply System that contains radioactivity equal to or more than the quantities listed in Title 10, Code of Federal Regulations, Part 20 (10 CFR 20), Appendix C. These quantities were established so that control procedures could be published and implemented for the receipt, storage, use, maintenance, transportation and disposal of radioactive commodities in the DoD Supply System. A radioactive commodity should not be confused with a radioactive device; however, they are similar in appearance. The Army has further defined a radioactive device as a manufactured article, such as instruments, clocks, electron tubes, apparatus or similar devices having radioactive materials (other than liquids) in a nondispersable form as a component part.

1.2 OBJECTIVE

The Radiation Survey and Site Investigation process uses a graded approach that starts with the Historical Site Assessment (HSA), followed by Scoping Surveys, and other surveys that lead to the Final Status Survey (FSS). The HSA is an investigation to collect existing information describing a site's complete history from the start of site activities to the present time. The necessity for detailed information and amount of effort to conduct an HSA depends on the type of site, associated historical events, regulatory framework, and availability of documented information. The main purpose of the HSA is to determine the current status of the site or facility, but the data collected may also be used to differentiate sites that need further action from those that pose little or no threat to human health and the environment. This screening process can serve to provide a site disposition recommendation or to recommend additional surveys. Because much of the data collected during HSA activities is qualitative or is analytical data of unknown quality, many decisions regarding a site are the result of professional judgment.

The HSA will incorporate HSA guidance as presented in the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), NUREG-1575, Rev 1.

The primary objectives of the HSA include the following:

- Identify potential sources of residual radioactivity,
- Determine whether or not sites pose a threat to human health and the environment,
- Differentiate impacted from non-impacted areas,
- Provide input to scoping and characterization survey designs,

- Provide an assessment of the likelihood of residual radioactivity migration, and
- Identify additional potential radiation sites related to the site being investigated.

The HSA typically consists of three phases: (1) identification of a candidate site, (2) preliminary investigation of the facility or site, and (3) site visits or inspections. The HSA should identify special survey situations that may need to be addressed such as subsurface radioactivity; sewer systems, waste plumbing, and floor drains; ventilation ducts; and embedded piping containing residual radioactivity.

1.3 CONTRACT TASKS

The candidate areas to be included within this statement of work are the Forest Glen Annex of the Walter Reed Army Medical Center, DC, to include two offsite leased facilities in Rockville, MD, and the DORF (which is located within the Forest Glen Annex).

2.0 SCOPE OF WORK

The tasks requiring completion as part of this SOW include the following:

- Task 1 – Project Management: Work Plan, Meetings, Briefings
- Task 2 – Document/Historical Review
- Task 3 – Conduct Visual Site Inspection/Site Visits
- Task 4 – Document Preparation

Task 1 - Project Management: Work Plan, Meetings, Briefings

a. Kick-Off and Coordination Meetings

A kick-off meeting will be scheduled to share the initial information the Government has available, introduce the primary team members, answer questions, and discuss the approach to the overall project. After a review of the current information the Professional Services Contractor (PSC) will coordinate an initial site visit to the pertinent facilities. The coordination shall involve USACE and the installation. Project coordination meetings, review meeting and conference calls will be planned and conducted on an as-needed basis, with the subject to be determined.

b. Progress and Review Conferences

For cost estimating purposes, the Contractor shall assume two one-day progress and review meetings to be held at the WRAMC installation over the course of the project, one at the approximate mid-point of the process and another approximately one week before submission of the Draft HSA Reports. These meetings will be a mechanism outside of the normal day-to-day project coordination to provide a summary of work performed to date and the HSA findings, updated projections for deliverable dates, and any issues that have been identified that could impact schedule and/or project costs.

In addition, monthly progress meetings shall be scheduled by the Contractor to review progress and project issues with the Army. These meetings shall be held via conference call. Five conference call meetings are assumed.

c. Project Management

The PSC shall prepare and maintain a master project schedule, as well as complete project files for the HSA effort.

The PSC shall prepare and submit monthly progress reports by the 10th of the following month for the duration of the project. Progress reports shall include, as a minimum, a brief statement of the following:

- * Work accomplished during the reporting period;

- * Percentage of work completed by task;
- * Meetings attended with objectives and outcome;
- * Significant problems encountered and status of problem resolution; and
- * Task accomplishment goals for the next two-month period.

d. Prepare HSA Work Plan

Consistent with the general approach outlined in the MARSSIM manual, the extent of the project activities will be planned by the PSC and USACE. The HSA Work Plan shall include Data Quality Objectives (DQOs) for the HSA process.

When scoping the specific aspects of each facility, the PSC must meet with USACE to discuss project planning decisions and special concerns associated with the site. A work plan documenting the decisions and evaluations completed during scoping process and kickoff meeting will be submitted to the USACE for review and approval. The work plan will be general, covering planned activities for the subject facilities and will include a short and concise description of the work to be performed, including the methodologies to be utilized, as well as the rationale for performing the proposed activities. In addition, the work plan must include a schedule and a list of personnel with their qualifications involved in the HSA review process. The plan shall be prepared and submitted for comment. The plan shall be implemented upon approval from the USACE. Addendums to the plan should be developed to address any unique issues that are identified.

Schedule

The PSC shall attend a kickoff meeting within ten (10) working days following the notice to proceed to discuss project scope and access to facilities.

The PSC shall submit the Draft HSA Work Plan (electronic version) within ten (10) working days following the completion of document review.

The PSC shall submit the Draft Final HSA Work Plan (electronic and hard copy) within five (10) working days following receipt of all comments to the Draft HSA Work Plan.

Task 2 - Document/Historical Review:

The PSC shall conduct an initial review of documents provided by the Government and conduct site visits to the subject facilities (i.e., Forest Glen Annex, DORF, leased facilities), and other necessary document archives to complete the record search and obtain additional information for review. When information relevant to the radioactive materials use is referenced in the HSA, electronic copies of those documents shall be obtained and cataloged electronically. The USACE will provide the PSC with pertinent site data and studies in its possession at the beginning of the project. The PSC shall be responsible for identifying additional record sources and obtaining all available relevant records and data.

Appropriate records associated with the facility's operation, waste streams generated, disposal practices, locations of radioactive material use or storage, decontamination operations shall be reviewed and may include, but are not limited to correspondence, radiation safety committee meetings, waste manifests, and inventories of radioactive materials, technical data and reports, permits, licenses, complaints, records on violations of environmental regulations, and the site specific data developed from other investigations or studies.

The PSC shall request USACE assistance in gaining access to records as necessary (e.g., security clearance may become necessary and shall be discussed if the situation arises). The PSC will be required to protect the privileges or confidentiality of all information acquired for this Task Order according to the direction of the Government.

The PSC shall review, analyze and interpret the historical data.

The PSC shall perform a technical data analysis of the data sources and where appropriate, shall provide thorough critical evaluation of existing environmental investigation reports prepared by others for the site. The review of technical data from all sources shall be conducted with an emphasis on its use in developing the nature/extent of the radioactive contamination and identifying the requirements to release the site without restrictions due to residual radioactive material. The PSC shall identify significant problems in the data, missing data and/or recommend future investigations at the site in consultation with and/or by approval of the USACE.

The PSC shall compile a chronological (unless otherwise directed) list of all records/documents of significance to the project. As additional historical documents/records are identified that are not in the USACE or Army possession, the PSC shall reproduce (electronically) each document and provide a copy to the USACE to include in the USACE files.

The PSC shall consult the team on a regular basis via phone calls and/or meetings during the performance of this task.

Task 2A – Historical Review:

Attachment 1 of this Scope of Work references information previously gathered by the government in reference to the WRAMC installation and should provide site specific information as to the radioactive material uses at WRAMC Forest Glen Annex. The HSA should identify entities within or related to the Forest Glen Annex that utilized radioactive materials for reference in the HSA report. The following areas should be considered when searching for additional information on radioactive materials use at WRAMC:

- U.S. Army Center for Health Promotion and Preventative Medicine (USACHPPM) radiological surveys/audits. This information is to be provided by the Government. Appropriate point of contact should be David Alberth.
- U.S. Army Joint Munitions Command (JMC), Rock Island, acts as the Executive Agent for the Department of Defense Low Level Radioactive Waste. This department may have records that describe the isotopes and amounts of waste disposed at specific facilities. They also have a database that describes the types of commodities that are stored on specific Army installations. While this list is not all encompassing, it will act as a starting point for reviewing the commodities associated with pertinent WRAMC installation facilities.
- U.S. Army Research Laboratory (ARL), Adelphi, MD should have records pertaining to subject facilities. Appropriate point of contact should be Michael Borisky. Note that certain documents related to the DORF decommissioning were forwarded to JMC; verification that originals or copies of these documents are still available from ARL will be necessary. Point of contact at JMC for verification of document titles is Joe Hart.
- WRAMC Health Physics Office and/or the Environmental Office may have records that describe additional tenant activities that used radioactive material. Assume that 1000 pages of historical documents will be referenced and therefore require scanning into an electronic format. Appropriate point of contact should be David Burton.
- U.S. Nuclear Regulatory Commission (NRC) document repository located at NRC Headquarters to identify if any tenant activities operated under former U.S. Atomic Energy Commission (AEC) license or NRC Licenses. Assume one site visit to NRC Headquarters.
- Previous Investigation Documents – Efforts have been previously conducted in support of HSAs and decommissioning efforts which should reduce necessary investigation for the current HSA. These efforts include, but are not limited to the WRAMC Main Post HSA, the Walter Reed Army Institute of Research

(WRAIR) HSA, and the historical DORF decommissioning. Documents resulting as outputs from these efforts are available from USACE (WRAMC, WRAIR) and ARL (DORF).

- Additional locations that should be considered for the information search are: Army Reactor Office, Army Reactor Committee Files, Army Chief of Engineers Office (formerly permitted reactors), and AMC Headquarters (was HQ for Harry Diamond Labs/ARL)

Task 3 - Conduct Visual Site Inspection/Site Visits:

Task 3A – Site Visit:

A preliminary visual site inspection/site visit of radiologically impacted areas shall be conducted to:

- Determine the completeness and accuracy of the information obtained during Task 2 by comparing as-built drawings and materials lists with actual conditions that can be observed;
- Conduct interviews with installation staff and other identified individuals;
- Determine what effort/work (i.e. dismantling or opening of equipment) must be made to facilitate scoping surveys;
- Prepare digital photographic record of radiological impacted areas; and,
- Identifying other useful information/data gaps that may assist with the development of the conceptual site model and the DQO process.

Task 3B – Site Visit to the NRC

The PSC will visit the NRC Headquarters once to review the historical archives for the subject facilities identified with the SOW.

Task 3C – Site Visit - To Be Determined

The PSC shall assume that there will be one additional site visit identified within Task 2. This trip should be assumed to include two staff members at the basic per diem rates for the Washington DC Area (2 days/one over night).

Task 4 – Document Preparation

Task 4A – HSA Report:

The PSC will review the historical records and prepare an individual report for the subject facilities. The report format will be consistent with MARSSIM guidance, to include a Conceptual Site Model, described in text and table formats and including specific points of information to be verified with USACE.

3.0 ADDITIONAL REQUIREMENTS

The following additional requirements shall apply while providing the services required by the tasks above:

Meetings. The Contractor shall attend all meetings called by the Contracting Officer's Representative (COR) for the purpose of discussing progress and issues related to this delivery order, examine the progress of the work, and provide support and guidance. The Contractor shall provide minutes of the meetings.

Open Items Tracking. The Contractor shall maintain and distribute an open items list that identifies action items resulting from meetings and other communications, the party responsible for completing the action item, and the date the action item is due to be completed.

Responsibility. The Contractor shall gather and verify all field data necessary for completing the project and furnish complete, competent, properly coordinated and thoroughly reviewed documents. The Contractor is responsible for protecting all facilities and structures from damage by field investigations.

Quality Control. The Contractor shall use a quality control program when preparing the submittals to assure that they are correct, complete and error free in all respects. The review period is not the time for identifying obvious errors that should have been found and corrected prior to submission.

Government Furnished Documentation. The Government will make available facility information. The drawings and descriptive documents are furnished for information only. The Contractor shall be responsible for obtaining necessary copies of material identified within the SOW. The Contractor shall assist with reproduction of blueprints.

Site Visits, General. Before making travel arrangements, the Contractor shall contact the USACE so access arrangements can be made. The Contractor shall notify the COR at least one week before any site visit. The Contractor shall prepare and submit a letter to the USACE within 10 days after each site visit has been completed.

Safety. The Contractor shall obtain and comply with the site and installation-specific Occupational Safety and Health Plans (OSHP) for protecting Contractor employees while performing work. The Contractor shall provide Personal Protective Equipment (PPE) commensurate with any potentially hazardous exposures.

Authorized Communication. The Contractor shall collect general or background information. This effort shall be limited to compiling information and from discussions with site personnel. Communicating with Federal, state, or local regulatory officials is authorized only for the purpose of collecting information regarding interpretation of regulatory requirements. Release of any information to the public or the media about the work being performed, or any conclusions, is the responsibility of the COR and the USACE.

Meeting Memoranda. The Contractor shall prepare a Memorandum for Record (MFR) of each meeting. All such memoranda shall be submitted within 10 calendar days following each conference. All applicable verbal conversations shall also be documented.

Draft and Final Reports. The Contractor shall prepare all comprehensive technical reports in draft form initially, and incorporate Government comments into the final reports. Non-compliance with any comment shall be justified in writing. Each report shall contain all data and results obtained from the work performed, summarizing evaluation findings and providing recommended actions.

Presentation Briefing. The Contractor shall provide a verbal management overview out briefing to key site and installation staff at the conclusion of the on-site visit. The briefing shall contain a summary of information gathered during the visit, results of the interviews conducted, conclusions reached, and an overview of recommendations to be made for operational improvements.

Public Affairs. The Contractor shall not publicly release any data generated or reviewed under this contract without prior approval of the COR. Dissemination or public disclosure includes, but is not limited to, permitting access to such information by foreign nationals or by any other person or entity, and publication of technical or scientific papers. If approached by the news media, the Contractor shall refer them to the Contracting Officer (CO). Reports and data generated under this contract become the property of the Government and unauthorized distribution is specifically prohibited.

Travel. The cost of Contractor travel to a location or locations not specifically covered in the lump sum price of the contract, will be paid by the US Government only when authorized in advance by the CO. Any such authorization will require a change to the contract with the amount of payment stated therein.

4.0 DELIVERABLES

The Contractor shall submit 8 1/2 by 11-inch bound copies of the reports listed below. Documents shall be delivered to all reviewers by overnight delivery or e-mail in accordance with the direction of USACE. Hardcopies, when required, will be delivered as defined by the USACE Project Manager. It should be assumed that all "Draft" deliverables shall be provided and distributed via electronic format. All "Draft Final" and "Final" deliverables shall be presented via hard copy and electronic format. Assume final reports will require 10 copies. All electronic versions will be in portable document file (pdf), and electronic working version in appropriate Microsoft Office software (e.g. Excel where spreadsheets are used, Word for text, etc). A summary of deliverables for the subject effort is as follows;

- Draft HSA (for USACE/JMC review)
- Copies of Electronic Records identified within the HSA
- Response to USACE/JMC comments on Draft documents
- Draft Final HSA (for Stakeholder Review)
- Response to Stakeholder comments on Draft documents
- Final HSA

5.0 PERIOD OF PERFORMANCE/SCHEDULE:

The period of performance to accomplish all the tasks outlined in the scope is not to exceed **9 months** from the date of the award of the Task Order. The Contractor shall strictly adhere to the following schedule:

Project Milestone	Required Date of Completion
Completion of Draft HSA	75 days after NTP
Response to USACE/JMC Comments on Draft HSA	95 days after NTP
Completion of Draft Final HSA	116 days after NTP
Conclusion of Stakeholder Review of Draft Final HSA	146 days after NTP
Response to Stakeholder Comments on Draft Final HSA	167 days after NTP
Completion of Final HSA	188 days after NTP

All intervals provided in calendar days after Contractor's receipt of notice to proceed (NTP).

6.0 CONDUCT OF WORK:

During the performance of this contract, the PSC will maintain close liaison with the USACE who will coordinate the work. The PSC will:

- a. Execute the work diligently and aggressively, and promptly advise the USACE of all significant developments.
- b. Promptly furnish to the USACE copies of all written communications pertaining to the work received from other Government agencies.
- c. Take appropriate measures to obtain clarification of any requirements, to acquire all pertinent information, and to incorporate such information in the work being performed. These actions will be accomplished through the USACE.
- d. Not react to any instructions from other agencies which will affect the scope, cost or schedule of the project, or deviate from Corps and/or industry standards without first advising the USACE. The PSC will not perform any additional services without prior written authorization of the Contracting Officer.

- e. Not release any information on this project to any person or organizations unless directed by the USACE.

7.0 QUALITY ASSURANCE:

The PSC is responsible for the professional quality, technical accuracy and the coordination of all documents and other services, including the work of any subcontractors PSCs. The PSC is required to have a logical and functional quality control program to assure that errors and deficiencies in all submittals are minimized. To meet this requirement, the PSC will perform technical and interdisciplinary reviews and correct all errors and deficiencies in the documents prior to submitting them for review. The Government's review in no way relieves the PSC of the contractual responsibilities.

8.0 ECONOMY OF INVESTIGATION:

The PSC will conduct their investigation in the most economical method appropriate. Unnecessary refinement and embellishments will be avoided. Throughout the project, the PSC shall analyze each of the various disciplines or work for the purposes of achieving the required mission or function at the lowest overall cost consistent with desired performance and quality requirements. In some cases, the PSC may determine significant savings are possible by changing standard criteria. The PSC will notify the USACE in writing of these possible variances and savings but shall continue the investigation employing standard criteria until directed to do otherwise.

9.0 GOVERNMENT PROPERTY:

All materials gathered and developed in the performance of this work shall be the property of USACE and shall not be used or distributed by the PSC without written permission from USACE-CO. The PSC shall not publicly disclose any information regarding the project. If the PSC is contacted for information, the PSC shall immediately contact and refer the inquiry to the USACE.

10.0 GOVERNMENT FURNISHED DATA:

- WRAIR HSA
- WRAIR Building list
- WRAMC Main Post HSA
- DORF Decommissioning information and permit
- ECP Workshop Summary (included as Attachment 1)
- WRAMC NRC Statement of Intent
- Others to be determined.

ATTACHMENT 1

ECP Workshop Reference
Walter Reed Army Medical Center (WRAMC), Washington, DC

[Alberth Edit]

Radioactive Materials and Radiological Decommissioning

WRAMC has a U.S. Nuclear Regulatory Commission (NRC) License and a Department of Army Radiation Authorization (ARA) that encompass not only WRAMC, but the Forest Glen Annex, as well as two leased buildings in Rockville, the Gillette Building and the Rickman Building.

In addition, WRAMC utilizes Building 516, Forest Glen Annex, as a radioactive waste storage, processing, and packaging facility under the WRAMC NRC License and ARA. However, Building 516 originally was the Diamond Ordnance Radiation Facility (DORF), formerly housing a research nuclear reactor. As a result, the U.S. Army Reactor Office has issued an Army Reactor Permit to the Director, Army Research Laboratory (ARL), to ensure that the building's residual radioactivity remains fixed in place and does not become loose or airborne.

Decommissioning the inter-twined WRAMC NRC License and ARA and addressing the Army Reactor Permit issue will require significant research and labor, as required by the NRC, MEDCOM, ARL, Army Reactor Office (U.S. Army Nuclear and Chemical Agency), and other appropriate regulators (e.g., District of Columbia and State of Maryland).

Sufficient records relating to radioactive materials use appear to exist at WRAMC. A Radiological Historical Site Assessment (HSA) will be needed to begin the formal NRC decommissioning process and to assess the level of sampling and other activities that will be required to achieve closeout (termination) of the NRC License and the ARA.

Mr. David Alberth of USACHPPM has taken the lead on interviewing additional installation staff and will make a recommendation with respect on how to document the license decommissioning requirements for the purposes of the ECP.

An initial assessment of radioactive sources and materials formerly used or in use at WRAMC was made during the ECP Team visit to WRAMC. The following information is provided:

WRAMC Regulation 40-10, Health Physics, supplements applicable Federal, State, and Army regulations governing the methods for control of potential health hazards resulting from the procurement, possession, storage, transportation, use and disposal of radioactive materials and equipment capable of producing potentially hazardous radiation. This regulation applies to all activities assigned or attached to WRAMC for health physics support.

Radioactive Materials Use. WRAMC operations involving radioactive materials or machine-produced radiation are performed under the following licenses and authorizations:

- NRC License No. 08-01738-02, Expiration Date 30 April 2015 (original Atomic Energy Commission License dates to 1957). Operations are conducted at the Main Post in the District of Columbia, the Forest Glen Annex in Maryland, and at leased facilities (laboratories) in Rockville, Maryland.
- [Terminated NRC License No. 08-01738-03, terminated on 17 August 2004 (possession and use of gamma cell irradiators transferred to NRC License No. 08-01738-02).]
- U.S. Army Radiation Authorization (ARA) No. 08-01-97, Expiration Date 30 June 2004 (under timely renewal dated 1 June 2004). [Use of radium in medical treatment and research predates the 1957 AEC License and multiple ARAs through the years.]
- U.S. Army Reactor Office Reactor Permit No. DORF-1-97, issued to Director, Army Research Laboratory (ARL), for the Diamond Ordnance Radiation Facility (DORF), Building 516, Forest Glen Annex, WRAMC. The permit retains control of the building to ensure that

the building's residual radioactivity remains fixed in place and does not become loose or airborne. The reactor facility was never fully decommissioned in 1978, when WRAMC continued to use this building under its NRC License No. 08-01738-02 for its radioactive waste operations from medical procedures and research [USACE Note 19May08: At the time, the decommissioning was considered complete, and the building was released for unrestricted use; fifteen years later, as decommissioning standards tightened, it was reassessed and determined to exhibit gamma levels exceeding the then 5 microrem/hr standard]. There are unknown materials under the 20 feet of concrete in the reactor pool area, as well as neutron activation of the concrete walls of the exposure cells and other areas in the former reactor building.

- [USACE Note 19May08: ARL had NRC by-product material licenses for multiple locations, to include DORF. Some sealed sources and neutron sources that were used at DORF were covered under those licenses. Mike Borisky has the files on those licenses, which have since been terminated.]

Correspondence from the NRC was provided to document that certain buildings formerly used for radioactive materials use under NRC License No. 08-01738-02, are now "released for unrestricted use." These include:

- Decommissioned Building 40, Main Post (NRC Letter dated 26 May 2004)
- Decommissioned Building T-2, Main Post (NRC Letter dated 10 March 2005)
- Decommissioned U.S. Army Medical Laboratory Building, Fort Meade, MD (NRC Letter dated 24 April 2005)

Historically, prior to obtaining its own NRC License during the 1990s, the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID), Fort Detrick, Maryland, was also listed as a facility user on the WRAMC NRC License.

Decommissioning Funding Plan. Since WRAMC holds an NRC License for the receipt, use, storage, and disposal of radioactive materials, the Command has filed a Decommissioning Funding Plan (reference 10 CFR 30.35) with the NRC, assigning a monetary value to the decommissioning of WRAMC's NRC License operations. This document addresses all WRAMC facilities and the use of NRC-regulated byproduct materials as described in WRAMC's Broad Scope Byproduct Material License. The most current document (dated 16 January 2004) provided to the NRC states the total estimated costs for decommissioning all WRAMC NRC licensed facilities is ~\$12.3 million (stated as \$12,266,471). The various costs are broken down into sub-categories and the methods used for estimating these costs are provided in the Decommissioning Funding Plan.

An additional cost estimate for surveying of the buildings at WRAMC, to include AFIP buildings, was done by USACHPPM for the U.S. Army Medical Command (8 June 2005) and was estimated at ~\$19.6 million (approximately \$19,600,000), which can be related to the costs for decommissioning of the NRC License for WRAMC (both have same order of magnitude). With additional information from the NRC-mandated Historical Site Assessment for radioactive material use, and addressing what buildings are to be classified as "Impacted Areas," both these cost estimates will be adjusted.

Radioactive Materials Historical Site Assessment (HSA). As part of the HSA it will be necessary to identify all buildings on WRAMC Main Post that had laboratories with radioactive materials used by the WRAMC Department of Clinical Investigations, the Institute of Dental Research, and the Veterinarian Service. These activities were located in many different buildings on Main Post and the Forest Glen Annex through out the years.

Radionuclide Inventory. The WRAMC Health Physics Office maintains a current inventory of all radionuclides possessed, used, and disposed of under the WRAMC NRC License and ARA. Documents are available to track radioisotope use at WRAMC through the years.

Meeting Minutes of the WRAMC Radiation Safety Committee. Current and historical minutes of meeting of the WRAMC Radiation Safety Committee were reviewed. These documents are maintained by the WRAMC Health Physics Office and contain valuable information of past radiological operations at WRAMC.

Recordkeeping for Decommissioning. The WRAMC Health Physics Office maintains a Decommissioning Records file [reference 10 CFR 30.35(g)] necessary for the records search for the Historical Site Assessment (HSA).

USACHPPM Radiation Protection Surveys of WRAMC. Under the requirements of AR 40-5, *Preventive Medicine*, USACHPPM, and its predecessors, the Army Environmental Hygiene Agency and the Army Industrial Hygiene Laboratory, has performed audits of the WRAMC Radiation Protection Program for over 40 years for the Office of The Surgeon General (OTSG). USACHPPM audit reports from 2001 and 2004 were used as the basis for formulating questions during the BRAC 2005 ECP Team visit to WRAMC.

All WRAMC Buildings. According to the WRAMC Health Physics Office, there are no currently installed Emergency Exit Signs containing tritium (hydrogen-3), a form of radioactive material, or no smoke detectors containing radioactive material in WRAMC buildings.

Army Radon Reduction Program. As a requirement of the Army Radon Reduction Program, WRAMC conducted monitoring of the indoor air for radon in multiple buildings during the 1980s. The records need to be located, either at WRAMC or at the Army Environmental Center, Aberdeen Proving Ground, MD.

Radionuclides in Drinking Water and the Sanitary Sewage System. Drinking water quality records are available at WRAMC to document that laboratory results for water samples analyzed for naturally occurring radioactive contaminants were within the maximum contaminant levels (MCLs) for all tested radionuclides. WRAMC is part of a municipal drinking water and sanitary sewage system (Washington, DC). Radionuclides used under WRAMC's NRC License may only be put into the sanitary sewage system under NRC License Conditions and requirements of WRAMC Reg 40-10.

- END -

Section F - Deliveries or Performance

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0001	POP 02-JUL-2008 TO 12-JAN-2009	N/A	HTRW MILITARY TIM PECK 10 S. HOWARD ST BALTIMORE MD 21201 410-962-3416 FOB: Destination	E1L0130