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10 July 2007

Mr. Rurik Loder
Attn: AMSSB-GSH-ER
Environmental Conservation and Restoration Division
Directorate of Safety, Health and Environment
Aberdeen Proving Ground, MD 21010-5401

Reference: Contract Number: W91ZLK-04-D-0014, Delivery Order 0005
Non-Time Critical Removal Action for the Rad Yard, Southern Bush River Area
DCN: 11785.004.006.AAAZ
Subject: Final Removal Action Report (Revision to Address MDE Comments)

Dear Mr. Loder:

WESTON has revised the *Final Removal Action Report* for the Bush River Rad Yard Non-Time Critical Removal Action project. This revision addresses Maryland Department of the Environment (MDE) Comments #1 and #2 that were inadvertently overlooked during the document's initial revision phase. Please accept WESTON's sincere apologies for this minor oversight.

Enclosed are the replacement pages for the *Final Removal Action Report* that addresses MDE comments. This letter and enclosed replacement pages are being distributed to all original report recipients for their records.

Please do not hesitate to contact me with any questions or concerns at (410) 612-5933, or Joe Gross at (410) 612-5910.

Very truly yours,
WESTON SOLUTIONS, INC.

Corinne L. Murphy, P.E.
Project Manager

cc: Frank Vavra (EPA)
Curtis DeTore (MDE)
Eric Kujala (RDECOM)
Rich Isaac (AEC)
Jim Schmidt (NRC)
George Hollowell (USACE)
Dennis Druck (CHPPM)
Joe Gross (WESTON)
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Enclosures

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the removal action.” Therefore, the purpose of this report is to document a removal action, and it is not a Final Status Survey Report. A Final Status Survey Report may be developed later to document the final conditions at the site.

1.1 SITE DESCRIPTION AND BACKGROUND

The Rad Yard, which covers approximately 5 acres, is located in the Bush River Study Area BRSA at the Edgewood Area of APG in Harford County, MD (see Figure 1-1). The Rad Yard includes an open storage yard, four buildings (E2354, E2360, E2362, and E2364), three structures (E2356, E2363, and E2371), and two buildings that make up the Ton Container Steam-Out Facility (E2366 and E2368). Buildings E2354 and E2371 are still occupied and are not included in this scope of work (SOW).

The Rad Yard, originally called the Toxic Gas Yard (TGY), was used for the consolidation, repackaging, and shipment of waste from the 1930s until 2002 (General Physics Corporation [GP], 2003). The site was built in 1931 as a storage facility for chemical warfare agents and ordnance. The Ton Container Steam-Out Facility was used from the late 1930s to the 1950s or early 1960s for the decontamination of one-ton containers used for storing chemical agents such as mustard, chloropicrin, and Lewisite. The facility was used for the management of military radioactive waste from the early 1960s until October 2002. Before 1985, wastes were received from military installations along the eastern United States (U.S.) for processing. After 1985, only small quantities of radioactive waste produced at APG were stored at the site. Since October 2002, no wastes have been stored at the Rad Yard and the site is currently not in use.

1.2 PREVIOUS REMOVALS

In 1996, the U.S. Army Corps of Engineers investigated the sand, soil, concrete, and water in the former Adamsite Storage Vaults (Building E2370), which was located within the boundaries of the Rad Yard. All of the contaminated materials and surface debris were removed, and the subsurface vaults were filled with concrete (GP, 2003). Details on the Adamsite Storage Vaults removal can be found in the *Southern Bush River Remedial Investigation Report, Volume 1*, final dated December 2002.

1.5.2 License Authority

The NRC identified license number 19-10306-01 as having responsibility for past activities at the Rad Yard. That license referred to storage of radioactive material at the site and was held by RDECOM, formerly the Edgewood Chemical Biological Center, U.S. Army Soldier and Biological Chemical Command (SBCCOM). RDECOM was therefore the responsible party for actions associated with the site under the scope of the NRC license and for changes in the license status for this site. WESTON performed the Removal Action activities under a written agreement with the site licensee and used its Services License, which was granted by the New Mexico Environmental Department and granted reciprocity by Region IV of the NRC. The agreement between RDECOM and WESTON described their respective roles and responsibilities and was signed by representatives from both licenses. License responsibility for the site was returned to RDECOM on 10 June 2005 when the initial remedial activities were completed and WESTON staff demobilized from the site.

1.5.3 Regulatory Agencies

This Non-Critical Removal Action at the Rad Yard fell under dual regulatory agency oversight because both radioactive (Co^{60} and Cs^{137}) and hazardous (arsenic) contaminants were present. The NRC provided radiological oversight while EPA and MDE provided oversight of hazardous materials. The NRC assumed the primary leadership role because removal of the radioactive contaminants to the cleanup levels established in the HHRRA could be cost-effectively performed and verified, while ensuring that the arsenic contamination levels would be significantly reduced. The primary regulatory guidance for this project was taken from the Multi Agency Radiation Survey and Site Investigation Manual (MARSSIM), dated August 2000 with 2002 updates (NRC, 2002), which was jointly developed by the NRC and the EPA to address sites such as this.

1.6 DECONTAMINATION & DECOMMISSIONING GOALS

The objective of the Rad Yard project was to perform the CERCLA Non-Time Critical Removal Action of soils and debris contaminated with Co^{60} , Cs^{137} , and arsenic as described in prior reports such as the HHRRA and the EE/CA. Site activities were intended to (1) identify, remove, and properly dispose of debris, materials, and soils that were contaminated at levels