



Spring Valley Formerly Used Defense Site, Washington, D.C.

U.S. ARMY CORPS OF ENGINEERS
FACT SHEET as of February 1, 2015

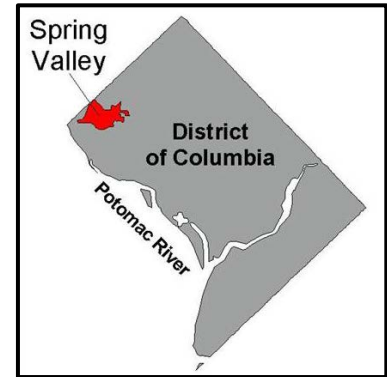
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AUTHORIZATION: Defense Environmental Restoration Program

TYPE OF PROJECT: Formerly Used Defense Site (FUDS)

PROJCT PHASE: Remedial Investigation/Remedial Design/Remedial Action

CONGRESSIONAL INTEREST: Representative **Norton** (DC-At Large)



Spring Valley Formerly Used Defense site in northwest Washington, D.C.

BACKGROUND: The Spring Valley Formerly Used Defense Site (FUDS) consists of approximately 661 acres in the northwest section of Washington, D.C. During the World War I-era, the site was known as the American University Experiment Station (AUES), and was used by the U.S. government for research and testing of chemical agents, equipment, and munitions. Today, the Spring Valley FUDS encompasses approximately 1,600 private homes, including several embassies and foreign properties, as well as the American University and Wesley Seminary. The U.S. Army Corps of Engineers, Baltimore District (USACE) has the lead responsibility for investigation and cleanup actions at the Spring Valley FUDS, and has entered into a formal partnering process with the U.S. Environmental Protection Agency (EPA) and the Washington, D.C. District Department of the Environment (DDOE). As a result of the agreement, all project decisions and priorities are determined by consensus. The 3 organizations, referred to as the partners, have agreed to prioritize the project work by risk, addressing the highest risks first.

INITIAL INVESTIGATION: In January 1993, a contractor digging a utility trench in the Spring Valley neighborhood discovered buried ordnance. The Army initiated an emergency response that was completed in February 1993 and resulted in the removal of 141 items, including 43 items suspected to contain traces of chemical agent. In February 1993, the USACE began to conduct a remedial investigation to characterize the nature and extent of the waste at the Spring Valley FUDS. The USACE investigation focused on specific sites that were determined to have the potential for American University Experiment Station-related contamination. After two years of investigation and 260 soil samples, USACE found four ordnance items and no chemical warfare materiel. In 1995, a No Further Action Record of Decision covering most of the site was signed, while acknowledging the Army's responsibility for follow-up action if needed.

STATUS: Current Investigation – USACE returned to the FUDS in 1998 to further investigate potential ordnance burial pits on the residence of the Ambassador of South Korea. During this investigation, USACE discovered two burial pits containing munitions items and laboratory glassware, some of which

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contained traces of chemical agent. USACE, in partnership with EPA and DDOE, then expanded the investigation to include all properties within the Spring Valley FUDS. This investigation includes the identification and removal of arsenic-contaminated soil, a groundwater investigation, and the search for additional munitions, both in burial pits and isolated items on residential properties. These efforts are summarized below.

Contaminated Soil – USACE has conducted an extensive soil investigation to determine the nature and extent of soil contamination within the FUDS. As part of this effort 1,632 residential, federal/District of Columbia, and commercial properties/lots were sampled for arsenic, the main contaminant of concern in Spring Valley. Of the properties that were sampled, USACE identified 177 properties/lots that required remediation. The primary method of remediation was through excavation of the arsenic-contaminated soil. The USACE has completed cleanup activities at all scheduled properties/lots as of August 2011, with the exception of 1 residential property where USACE access was delayed by the property owner. USACE has now received permission to remove the soil and is moving to set up a contract to accomplish the task; field work is expected in the first quarter of FY 2014.

Property owners at 20 residential properties identified for remediation requested that USACE clean up their properties using phytoremediation (a process where ferns remove the arsenic from the soil). A benefit of selecting phytoremediation as the cleanup alternative was that it achieved a reduction in arsenic soil levels in a less intrusive manner, avoiding the removal of mature trees, and potential damages to other landscaped areas at the properties.

Groundwater Investigation – USACE is conducting an investigation to determine to what extent American University Experiment Station-related activities may have impacted the groundwater within the FUDS. The investigation involves the installation of monitoring wells and the collection of samples from the wells and surface water locations. To date, USACE has installed 53 groundwater monitoring wells and sampled surface water at 25 locations. Perchlorate has been detected at levels above the EPA interim drinking water health advisory level of 15 parts per billion (ppb) at 2 locations in the project area. Arsenic has been detected in groundwater above the maximum contaminant level (MCL) for drinking water in one area. There are no known users of groundwater in the FUDS. USACE is planning to install two additional groundwater monitoring wells to delineate the extent of perchlorate and arsenic contamination. Continued monitoring of some of the existing wells is also planned. This investigation is a phased process and is expected to continue through FY2014.

Residential Ordnance Investigations – USACE, in conjunction with EPA and DDOE, has identified 101 residential properties with an increased likelihood of containing buried ordnance items. The USACE mission is to identify and remove these items. The process involves surveying the properties with state-of-the-art metal detection systems, evaluating the data generated from the surveys, and removing (through excavation) any World War I-era related items. USACE has safely completed this process at all identified residential properties as of December 2011, with the exception of 1 property where USACE access was delayed by the property owner. USACE has now received permission to investigate the property and is working with the homeowner to hopefully complete work in FY 2014. Also, in addition to residential properties, the Partners identified, for ordnance investigation, a 62-acre area in the Dalecarlia Woods that was a former down range impact area. This approximately two and a half year effort was safely completed in December 2011.

Burial Pit Ordnance Investigations – USACE successfully identified and removed munitions and debris from 4 burial pits and several debris fields containing over 1,000 ordnance items including rounds filled with chemical agent. Two of the burial pits were located on the residence of the South Korean

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Ambassador and were investigated and cleaned up successfully between March 1999 and March 2000. A third burial pit straddles the Ambassador's property and a private residence now owned by American University (4825 Glenbrook Road NW). USACE removed the ordnance and debris from the Korean Ambassador's side of the pit, called Pit 3, in late 2001 and into 2002. In 2007 the USACE resumed investigating and removing additional munitions from the 4825 Glenbrook Road NW property and also investigated via test pitting a second American University owned property (4835 Glenbrook Road NW) for burial pits (none were found). These activities require extensive safety measures and are thus very costly in relation to typical operations at the Spring Valley FUDS. Investigations at 4825 Glenbrook Road NW were temporarily stopped in 2010 to analyze the existing site safety control measures to adequately contain and filter an unexpected chemical recovered in a bottle at the site. The final cleanup measure for the property has been selected by the USACE and the regulatory partners to remove the American University Experiment Station-related waste remaining at the 4825 Glenbrook Road NW property. The house was demolished in the fall of 2012, and digging at the property resumed in September of 2013. The effort is expected to take until early in calendar year 2015 to complete.

USACE removed an extensive debris field, called Lot 18, located on American University property and investigated six suspected burial pits located adjacent to Lot 18, also on American University property. In late 2006, the USACE identified a new debris field on American University property adjacent to the Lot 18 debris field. The area has been identified as the Public Safety Building Debris Field and included approximately 4,000 square feet of debris, and may extend under the Public Safety Building. Investigation and cleanup was completed in 2009. Several hundred pounds of American University Experiment Station-related debris and over 20 pieces of munitions debris were recovered.

BUDGET (\$): Investment in the Spring Valley FUDS through 2013 amounted to approximately \$230 million. Currently approximately \$19 million has been budgeted to complete the site-wide remedial investigation/feasibility study and the remaining ordnance cleanup at the site. The total lifecycle cost to complete for the FUDS is approximately \$250 million.

FUNDING:

Investment thru 2013	\$230 million
2014 Funding	\$4 million
Cost to Complete (2014+)	\$19 million
Total Lifecycle Cost	\$250 million

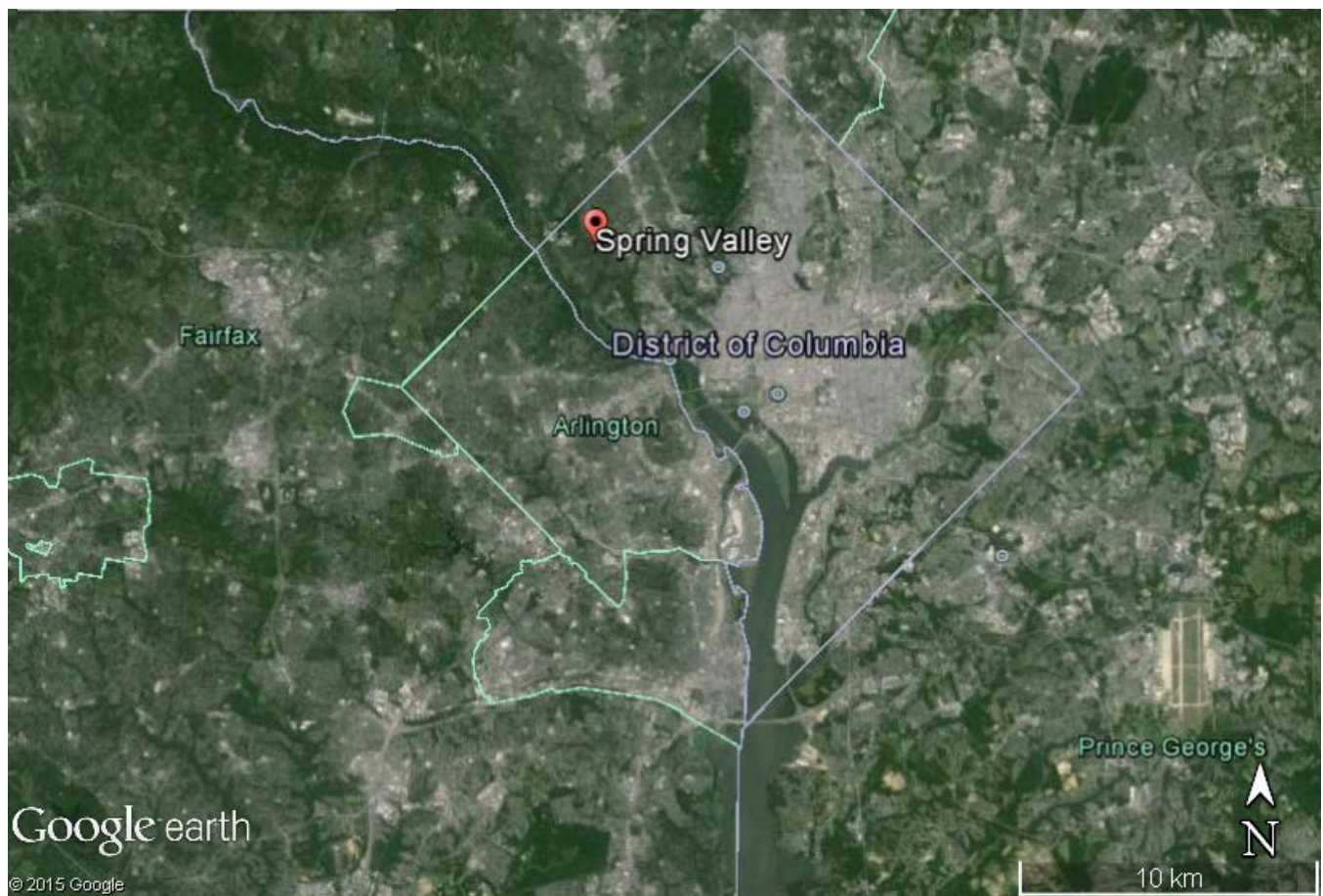
For more information regarding the Spring Valley FUDS project, please contact Dan Noble, CENAB-EN-H, (410) 962-6782, e-mail dan.g.noble.@usace.army.mil.

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