



U.S. Army Corps of Engineers
Baltimore District
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**Formerly Used Defense Site
New Cumberland Army Depot
(Marsh Run Park)
New Cumberland, Pennsylvania**

Type of Project: Formerly Used Defense Site

Project Phase: Remedial Action Operations

Authorization: Defense Environmental Restoration Program

Congressional Interest: Congressman Perry (PA- 4), and Senators Casey and Toomey, State Senator Vance and State District Representative Regan (District 92)

Non Federal Sponsor: N/A

Background: Marsh Run Park is a 14-acre property in Fairview Township, New Cumberland, Pennsylvania. The Army used the site as a landfill to dispose of material generated by the New Cumberland Army Depot from the early 1900's until the 1950's. In 1976, Fairview Township obtained the site and by 1981 built soccer fields by importing material suitable for the playing field surface. After Congress created the Formerly Used Defense Sites (FUDS) program in the mid-1980's, the United States Army Corps of Engineers (USACE) undertook an inventory to identify eligible sites. In August 1986, USACE identified Marsh Run Park as an eligible FUDS. The property is contaminated by landfill material and it qualifies for remediation under the Defense Environmental Restoration Program for FUDS.

In April 1987, the USACE commenced testing of the site. The results showed low levels of volatile organic compounds (VOCs) and metals in subsurface soil and groundwater. Following receipt of the results, the USACE informed Fairview Township and the park was closed. The USACE recommended a follow-up study to determine the extent of the VOCs and metals. USACE started a Remedial Investigation under FUDS in 1988, and the investigation led to the design and construction of a remedial treatment system for the VOCs. A significant level of congressional and public interaction has occurred regarding the FUDS; for further reference this is outlined below.

Previous Studies/Findings: USACE performed a Remedial Investigation/Feasibility Study (RI/FS) between 1988 and 1990. The study led to a Record of Decision (ROD), dated June 1991. The ROD described the Department of Defense's responsibilities for site cleanup. Remediation of the Marsh Run Park site addressed two problem areas: (1) source area remediation (landfill vapors), and (2) groundwater contamination. As stipulated by the ROD, a Groundwater Treatment Facility (GWTF) was designed, and construction of the GWTF was completed on 30 July 1995. The GWTF operated for about 16 months when, on November 28, 1996, it was destroyed by fire.

Subsequent to the 1996 fire, the treatment system was re-assessed. The new design comprised an enhanced integrated vapor extraction and groundwater treatment system. Due to changes in the remedy, which incorporated improved technologies and natural attenuation, an “Explanation of Significant Differences” (ESD) was published on February 3, 2002. The new system became operational in April 2002. A “Notice of Intent to Remediate” (NIR) was published in July 2002 to meet Pennsylvania Department of Environmental Protection (PADEP) Act 2 administrative requirements.

Operation of the newly constructed integrated Soil Vapor Extraction /Groundwater Treatment System began in 2002. In September 2004, after more than two years of operation, the dual phase extraction system was removed from service since the volatile organics in the shallow groundwater aquifer were no longer present, or were below state standards. Contamination in the bedrock groundwater is still present but no risk is posed as long as no drinking water wells are constructed. USACE continued to monitor the ground water contamination in bedrock for natural attenuation and in the shallow ground water zone for any rebound of contamination. In 2005, five new groundwater wells were constructed to monitor any contamination that may be moving off site towards the Susquehanna River. Two residential properties are in this direction. One property has a groundwater well where low levels of VOC contamination were measured, however the water use from this well has been for showering only. After two years of monitoring the groundwater in the bedrock and off site, it was determined that the contamination in bedrock groundwater was decreasing and there were still low levels of VOCs in the residential well. As a result, USACE met with PADEP in the spring of 2006 to discuss meeting the PADEP Act 2 clean-up standards for the site and determined that additional characterization of the site was necessary.

USACE continued to monitor the VOC plume on the property. No rebound of contamination was measured and the monitoring indicated a steady decrease in contamination. Active preparations ensued for release of liability through the PADEP Act 2 program and completion of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process for close-out to return the FUDS to the property owner, Fairview Township. As part of this preparation, in 2010 the USACE performed additional delineation of the plume on the FUDS and off-site, which included placement of two deep (> 200 ft) bedrock wells down-gradient of the landfill area and at a residential property off-site. Delineation of the plume was successfully completed and it was determined that contamination remains at depth in the bedrock aquifer on-site and off-site. However, USACE was able to identify a clean water zone within the bedrock delineation well located on the residential property, and was able to convert the use of the well to a drinking water source for the resident.

USACE completed the final round of ground water sampling in spring 2011, but has continued to monitor the concentrations in the ground water in off-site residential wells. The treatment plant was permanently shut down in 2011.

Current Status: In 2012, USACE prepared the PADEP Act 2 Remedial Investigation and Risk Assessment Report, which was submitted for review and received PADEP approval. Subsequent to approval, USACE submitted the Act 2 Final Report (inclusive of a post-remediation care plan) on 8 April 2013. The purpose of documentation for Act 2 is to demonstrate that the site remediation activities meet the Pennsylvania environmental cleanup standards, namely Act 2 Statewide Health and Site-Specific Standards, and to obtain a formal release of environmental cleanup liability from PADEP for the FUDS. The Act 2 process has been concurrent with adhering to the CERCLA process for close-out of the FUDS and meeting the remedial action

objectives in the ROD for the FUDS. USACE has recently prepared another ESD to the ROD that includes adding land use controls (in the form of environmental covenants) to the monitored natural attenuation remedy of bedrock aquifer. The environmental covenants restrict any excavation at Marsh Run Park and restrict groundwater use on site and at off-site properties.

The FUDS will be restored to former use as soccer fields by the end of 2013, and Marsh Run Park is anticipated to be returned back to Fairview Township in spring of 2014. There is a community meeting planned for 23 April 2013 to present a summary of the completed work at the New Cumberland Army Depot FUDS, information on the upcoming site closure, and the site restoration activities.

For more information regarding the Marsh Run Landfill DERP-FUDS project, contact Ms. Liza Finley, Project Manager, at 410-962-2683, or by e-mail at: Liza.Finley@USACE.army.mil.

Background: Historical Congressional and Public Communication

- In 1986, the Army lists the property as a Formerly Used Defense Site eligible for an environmental investigation. This action informs Township personnel and public site users that the site was a former landfill and causes some public concerns.
- In Aug 1987, USACE provides preliminary investigation results to the Township which confirmed that the contamination is present, and led to the closing of the soccer fields.
- In April 1988, the written investigation results are released to the Township following renewed requests from the Township, and possibly also from the Congressional delegation.
- In 1988 Senator Heinz and US Rep Goodling wrote to the Chief of Engineers to request conclusive results about the safety of the soccer field, and proof that contamination has not migrated offsite. Senator Specter wrote to the USEPA Administrator, the PADEP Secretary, and the Chief of Engineers asking for assistance with the environmental study. The USACE and USEPA conducted sampling of the surface of the soccer fields, and USACE reported that soccer use was safe.
- In 1988 the USACE began a full environmental investigation and Senator Heinz wrote to the Secretary of the Army requesting expeditious results.
- In 1990, the results of the investigation were provided to Senators Heinz and Specter, US Rep Goodling, State Reps Smith and Gekas, and the USEPA, and were presented to the public in two public meetings. The Army assisted Fairview Township with constructing new soccer fields at another location.
- In 1990 a class action lawsuit was filed against the Army on behalf of many of the children who played soccer at Marsh Run Park in the 1980s.
- In 2002 a CERCLA Explanation of Significant Differences was released to the public and a notice was placed in the newspaper. The ESD revised the remedy which was listed in the 1992 Record of Decision by specifying simultaneous shallow groundwater and vapor extraction plus monitored natural attenuation for the deep bedrock groundwater.