



Maryland Department of the
Environment

FACTS ABOUT:

Waldorf Former Nike Site (Battery W-44)

Site Location

The site is located in the residential community of Mattawoman, Maryland. The 16.5-acre former launch area is transected by the boundary between Charles and Prince George's Counties. The 11.3-acre former control area is located within Charles County about one mile east of the launch site. Country Lane Road connects the two properties. The Mattawoman community receives potable water from the Waldorf municipal system, which draws water from wells in the Magothy and Patapsco formations in the vicinity of Mattawoman and Waldorf.

Site History

The U.S. Army began operation of Nike Battery W-44 in the 1950s. Nike batteries in Maryland were part of an air defense system protecting the Washington-Baltimore area. Property records indicate that the Army obtained the W-44 property in parcels from 1955 to 1960. The launch facility was developed to include two missile magazines, a missile assembly and maintenance structure, an acid and fuel storage building, three underground storage tanks (USTs) and support areas including a barracks, kennel, and generator buildings. The control area was developed to include administrative and missile control structures, barracks, sewage treatment facilities, radar, electronic communication and control equipment, and five USTs. Wastes generated by the Nike operations included chlorinated organic solvents, petroleum wastes, alcohols, unsymmetrical dimethylhydrazine, and acid mixtures.

The Nike battery ceased operation between 1965 and 1972. The Nike missiles, components, fuels and support materials were removed from the property by the Army. The majority of the property was transferred to Charles County and other portions were transferred to Prince George's County and private parties. The former launch area is currently leased from Charles County by the Maryland Indian Heritage Society. The Melwood Horticultural Training Center leases a portion of the former control area from Charles County to provide training for developmentally disabled adults.

Environmental Investigations

Several investigations have been conducted to evaluate the former launch and control areas of this facility. These investigations have been conducted by the U.S.



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Environmental Protection Agency (EPA), the Maryland Department of the Environment (MDE) and the U.S. Army Corps of Engineers (USACE). The USACE's efforts were conducted under the Formerly Used Defense Sites program.

The MDE issued a Preliminary Assessment of the former launch site in 1987. This report included the results of samples collected from domestic wells and monitoring wells in the site vicinity. Several samples indicated groundwater contamination by chlorinated solvents, including trichloroethene and carbon tetrachloride (CCl₄). The 1988 Confirmation Study, contracted by the USACE, confirmed trichloroethene and CCl₄ in monitoring wells above their respective Maximum Contaminant Levels. Additionally, three abandoned transformers were sampled with field kits and tentatively identified as containing polychlorinated biphenyl (PCB) oils. Laboratory analysis of the oils in these transformers was performed in 1995, and PCBs were not detected. The transformers were subsequently removed from the site.

The EPA contracted with the NUS Corporation to conduct the 1992 Site Inspection Report. This study confirmed the groundwater contamination at the former launch site, and revealed pesticides and polycyclic aromatic hydrocarbons (PAH) in sediments associated with drainage from the site. While lead was detected in soils and sediments, it was not significantly above the background concentrations. The USACE subsequently performed the 1995 Limited Remedial Investigation (RI) of the former launch area. The RI confirmed the presence of chlorinated solvents in groundwater and PAHs and pesticides in soils and sediments. Total petroleum hydrocarbons were also detected in soil samples from the site. Samples collected from water accumulated in the silos revealed lead at concentrations of 11 to 27 µg/L. This effort also included analyses for radiological parameters. The radiological study revealed that conditions at the site were within background conditions for Maryland.

Following the RI, the USACE contracted for the 1996 Limited Risk Assessment of the former launch area. The risk assessment identified a marginal potential risk for future residential users of the property. The USACE subsequently conducted the 1996 Feasibility Study and 1997 Revised Feasibility Study. This study recommended a natural attenuation remedial strategy. The USACE met with the MDE in 1997 to discuss this alternative. The MDE expressed concern over the migration of contaminated groundwater from the property to an adjoining residential development. Three undeveloped parcels in the development are immediately downgradient from the former launch site. In January of 1999 the USACE issued an Addendum to the Remedial Investigation plan and by April of 2000 published results of the Pre-Final Remedial Investigation Report. In October of 2002, the Final Groundwater Investigation was issued, with recommendations for either investigation of remedial technology to reduce the CCl₄ concentrations or, providing blower systems for each basement for homes to be built on adjoining lots.



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The MDE issued the Preliminary Assessment of the former control area in 1992. This report indicated that soil was contaminated with PCBs in 1991 when four transformers were damaged by vandals. Charles County cleaned up the spill using absorbent material. The MDE collected soil, surface water and sediment samples from the site in 1992 and summarized the results in the 1992 Level III Site Inspection Prioritization. These results revealed PAHs, pesticides, phthalate esters, phenol and inorganic constituents in soils and sediments above the background levels. The transformer spill area did not reveal PCBs, but did contain elevated inorganic constituents along with phenol, pesticides and phthalate esters.

In December of 2013 the adjacent property to the west of the launch site was investigated by MDE as part of an Expanded Site Inspection to confirm the presence and extent of CCl₄ off-site. Eleven temporary wells were installed and sampled for volatile organic compounds. A low level of CCl₄ was confirmed in one off-site sample from the well closest to the launch.

Current Status

In response to MDE's comments, the USACE is collecting additional data at the former launch area for an ongoing and updated Remedial Investigation/Feasibility Study.



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