

N00174.AR.000846
NSWC INDIAN HEAD
5090.3a

TECHNICAL MEMORANDUM REGARDING DECISION DOCUMENT SITE 37
CAUSEWAY/SWMU 24 ON STUMP NECK ANNEX NSWC INDIAN HEAD MD
11/01/2011
TETRA TECH, NUS



TECHNICAL MEMORANDUM

DATE: December 1, 2011
TO: Indian Head Installation Restoration Team (IHIRT)
FROM: Tetra Tech NUS, Inc.
SUBJECT: **Decision Document**
Site 37 – Causeway / SWMU 24 on the Stump Neck Annex
Naval Support Facility Indian Head
Indian Head, Maryland
CLEAN Contract No. N62470-08-D-1001, CTO JU11

1.0 INTRODUCTION

This technical memorandum is a Decision Document (DD) addressing Installation Restoration (IR) Program Site 37 – Causeway, also identified previously as Solid Waste Management Unit (SWMU) 24, located on the Stump Neck Annex at Naval Support Facility Indian Head (NSF-IH) in Indian Head, Maryland. This DD provides a brief history of Site 37, summarizes key findings from a review of available documents from the period of 1982 to 2011, presents the results of the Site Screening Process (SSP) at Site 37, and recommends a no-action site management decision.

Site 37 is listed as a Site Screening Area (SSA) in Section 9.3(A) and Appendix A of the *Federal Facility Agreement (FFA) for NSF-IH* (EPA and Navy, 2000) requiring a Site Screening Process (SSP). It was identified as an IR site by the Navy during the Initial Assessment Study (IAS) in 1982 and later as a SWMU by the EPA during the Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) in 1990. The multi-phase SSP was completed at Site 37 from 2002 through 2011. The SSP has provided sufficient information to determine that the site does not pose unacceptable risks to human health or the environment due to a CERCLA release. Therefore, this DD was prepared in accordance with Section 9.3(D)(3) of the FFA for an SSA that has been determined to not warrant a Remedial Investigation (RI) or status as an Accelerated Operable Unit (AOU) (FFA Section 2.1[A]).

2.0 SITE DESCRIPTION AND OPERATIONAL HISTORY

Site 37 is a causeway on the northern side of Stump Neck Annex along the Potomac River, adjacent to Mattawoman Creek. Archer Avenue runs along the top of the Causeway. The Causeway is relatively flat

with steep banks marking the southern boundary, giving way to the marshy headwaters of Chicamuxen Creek. Gabion baskets separate the graded road area on the northern boundary from the sandy beach shoreline of Mattawoman Creek and the outlying Potomac River. The Causeway was constructed of fill materials (date unknown). It is thought to have been reported that the fill also contained hazardous materials and torpedo ‘casings’ or ‘cases’ (source unknown). However, there has been no visual evidence of waste or hazardous materials during any investigation (NEESA, 1983; Tetra Tech, 2003 and 2011) and there are no records of potentially hazardous fill materials or torpedo materials used in the Causeway’s construction.

3.0 INVESTIGATION HISTORY

Site 37 was identified during the 1982 IAS due to anecdotal information that the Causeway may contain hazardous materials in addition to known rubble; however, after visual observation the IAS did not recommend additional study at Site 37 (NEESA, 1983). EPA identified the Causeway as SWMU 24 during the RFA in 1990 (EPA, 1990). The FFA for NSF-IH specified that SWMU 24 would be subsumed by IR Site 37, which would undergo an SSP (EPA and Navy, 2000). The multi-phase SSP began in 2002 and was completed in 2011 (Tetra Tech, 2003 and 2011). The SSP is the most recent investigation at the site.

4.0 DOCUMENT REVIEW

The following documents were reviewed as part of the preparation of this DD for Site 37:

- IAS Report (NEESA, 1983)
- RFA Report (EPA, 1990)
- Phase 1 SSP Report for Site 37 (Tetra Tech, 2003)
- Phase 2 SSP Report for Site 37 (Tetra Tech, 2011)

4.1 Initial Assessment Study (IAS)

The IAS report references anecdotal information that the Causeway may contain hazardous materials in addition to known rubble. Observation of the area in 1982 indicated the presence of a raised land area and use of concrete blocks and rock to protect the shoreline side of the roadway from erosion for a distance of 300 to 400 ft. The shoreline consisted of a small beach rimmed with rip-rap in wire mesh (similar to gabion baskets). The IAS did not recommend additional study at Site 37.

4.2 RCRA Facility Assessment (RFA)

EPA conducted the RFA at the Stump Neck Annex in 1989 to 1990, identifying the Causeway as SWMU 24. However, the subsequent 1990 RCRA Corrective Action Permit stated that no further action was necessary at the time for SWMU 24. In 2000, the FFA for NSF-IH specified that SWMU 24 would be subsumed by IR Site 37, which would undergo the SSP.

4.3 Phase 1 Site Screening Process (SSP) Report for Site 37

The 2002 SSP effort was conducted along with other sites at both the Main Area and the Stump Neck Annex of NSF-IH. Three groundwater, five subsurface soil, and three collocated sediment and surface water samples were collected at Site 37 during what now is referred to as the Phase 1 SSP. All samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semivolatile organic compounds (SVOCs), TCL pesticides and polychlorinated biphenyls (PCBs), Target Analyte List (TAL) metals, and explosives.

Preliminary human health and ecological risk evaluations identified chemicals of potential concern (COPCs). Subsequent risk calculations suggested potentially unacceptable risks associated with various receptor exposure to groundwater, surface water, and/or sediment (none for soil). Risk drivers in one or more media included several metals, SVOCs, one explosive, and one pesticide. The SSP report noted it was uncertain if the COPCs present were a result of any waste management activity at Site 37 or if some were ancillary and/or naturally occurring. No waste was identified in the Causeway during this phase. However, considering the potentially unacceptable human health and ecological risks determined from the limited number of environmental sample data, the report recommended an RI for the site.

4.4 Phase 2 Site Screening Process (SSP) Report for Site 37

Prior to proceeding to the RI, a second phase of the SSP was conducted in 2011 to further assess the presence of waste in the Causeway. If no waste was used in the construction of the Causeway, then COPCs identified during the Phase 1 SSP would not be associated with a CERCLA release. Seven exploratory soil borings and two test pit trenches were installed to further characterize subsurface fill material. No evidence of waste, torpedo casings, or contaminated material was encountered. Subsequently, no environmental samples were collected for analysis. The summary technical memorandum concluded a CERCLA response action is not warranted at Site 37.

5.0 SUMMARY OF KEY FINDINGS

Although several COPCs were identified in groundwater, surface water, and sediments during the 2002 Phase 1 SSP effort, no waste was identified. Therefore, it was uncertain if the identified COPCs were a result of any waste management activity or historical practice at Site 37 (CERCLA release), or if some were ancillary and/or naturally occurring (Tetra Tech, 2003).

Due to the potential presence of torpedo casings, the 2011 Phase 2 SSP effort included munitions and explosives of concern (MEC) avoidance procedures (magnetic and visual anomaly avoidance) during installation of the seven soil borings and two test pit trenches. No evidence of waste or contaminated material was encountered in the borings or test pit trenches (no visual evidence or photoionization detection [PID] responses). Subsequently, no environmental samples were collected for analysis. There was no refusal at any of the boring locations. Soil core and test pit trench soils showed a similar geology throughout the Causeway: silty-, fine-, and medium-sands down to 10 feet below grade, natural gray sands encountered below fill materials, and the basal olive-gray silty clay at approximately 8 to 10 feet below grade. Test pit trenches exposed the clean fill, concrete rubble, brick, gravel, and cobbles. Groundwater was encountered at 6 to 7 feet below grade throughout the Causeway.

No torpedo casings were identified during the SSP efforts. If present, the material likely would have originated from the Torpedo Station near Blue Plains in Washington, D.C. (possibly the old Naval Torpedo Station in Alexandria, Virginia, which is across the Potomac River from the Blue Plains area of Washington, D.C.). The items would have been brought to Stump Neck and buried in the late 1940s and 1950s in unknown quantities. It's possible that over time since the 1982 IAS, Site 37 may have been confused with Site 35 – Buried Torpedoes.

6.0 RECOMMENDATIONS

No action is recommended for the Causeway (IR Site 37 / SWMU 24). A CERCLA response action is not warranted at the site, because there is no substantial evidence of a CERCLA release. It is recommended that the site be closed out from the FFA for NSF-IH.

7.0 REFERENCES

EPA (U.S. Environmental Protection Agency), 1990. *RCRA SWMU Investigation at NAVEDOTEHCEN, NSWC-Indian Head Division, Indian Head, Maryland*. EPA Office of RCRA Programs. Draft. July.

EPA and Navy, 2000. *Federal Facility Agreement for Naval Surface Warfare Center, Indian Head Division, Indian head, Maryland*, under CERCLA Section 120. Administrative Docket No. III-FCA-CERC-018. EPA Region 3 Regional Administrator and Deputy Assistant Secretary of the Navy (Environment and Safety) signatories. December 9.

NEESA (Naval Energy and Environmental Support Agency), 1983. *Initial Assessment Study of Naval Ordnance Station, Indian Head, Maryland*. Prepared by Fred C. Hart Associates, Inc. May.

Tetra Tech, 2003. *Site Screening Process Report for Site 32 – Suspected Tool Burial, Site 33 – Scrap Metal Pit, Site 34 – Tool Burial, Site 36 – Closed Landfill, Site 37 – Causeway, Site 51 – Building 101 Dry Well, and Site 52 – Building 102 Dry Well, Indian Head Division, Naval Surface Warfare Center, Indian Head, Maryland*. March.

Tetra Tech, 2011. *Phase 2 Site Screening Process Investigation Summary, Site 37 – Causeway on the Stump Neck Annex, Naval Support Facility Indian Head, Maryland*. Technical Memorandum. October 17.

ENCLOSURE

Concurrence for No Action Signature Page

CONCURRENCE FOR NO ACTION

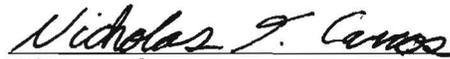
SIGNATURE PAGE

**Installation Restoration Site 37 – Causeway
(Solid Waste Management Unit 24)
Stump Neck Annex at Naval Support Facility Indian Head
Indian Head, Maryland**

In 2011, in partnership with the U.S. Environmental Protection Agency (EPA) Region 3 and the Maryland Department of the Environment (MDE), the Navy prepared this Decision Document for Site 37 – Causeway / Solid Waste Management Unit (SWMU) 24 on the Stump Neck Annex at Naval Support Facility Indian Head in Indian Head, Maryland. Based upon a review of available information and applying best professional judgment, it is the consensus of the Navy and EPA, with concurrence from MDE, and members of the Indian Head Installation Restoration Team (IHIRT), that Site 37 / SWMU 24 requires no action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended. Review of historical documents and investigation results show that no CERCLA release occurred at the Causeway. In the event that CERCLA contamination posing an unacceptable risk to human health or the environment is discovered after execution of this agreement, IHIRT agrees to reevaluate Site 37 / SWMU 24 as deemed necessary.


Dennis Orenshaw
Remedial Project Manager
U.S. EPA Region 3

12/01/2011
Date


Nicholas Carros
Installation Restoration Program Manager
Naval Support Facility Indian Head

12/01/2011
Date


Joseph Rail
Remedial Project Manager
NAVFAC Washington

12/01/11
Date


Nathan Delong
Remedial Project Manager
NAVFAC Washington

12/01/11
Date