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ACTION MEMORANDUM FOR REMOVAL ACTION SITE 12 TOWN GUY LANDFILL NSWC
INDIAN HEAD MD
6/27/2002
EFA CHESAPEAKE



DEPARTMENT OF THE NAVY
ENGINEERING FIELD ACTIVITY CHESAPEAKE
1314 HARWOOD STREET SE
WASHINGTON NAVY YARD DC 20374-5018

IN REPLY REFER TO:

27 June 2002

ACTION MEMORANDUM

From: Manager, Installation Restoration Program, Engineering Field Activity Chesapeake,
Naval Facilities Engineering Command

To: Commanding Officer, NSWC Indian Head Division, Indian Head, Maryland

Subj: REMOVAL ACTION AT SITE 12, TOWN GUT LANDFILL

Encl: (1) Engineering Evaluation Cost Analysis (EE/CA), Site 12 – Town Gut Landfill

1. PURPOSE

This action memorandum describes a non-time critical removal action being undertaken at Site 12, NSWC Indian Head Division, Indian Head, Maryland, under the authority of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 40 CFR 300.415 and applicable provisions of the National Contingency Plan (NCP) and the Federal Facility Agreement. The removal action consists of a soil cover over the landfill with the installation of monitoring wells. A disagreement between the Department of Defense and the U. S. Environmental Protection Agency (EPA) over post-ROD (Record of Decision) requirements with respect to institutional controls has delayed the signing of the ROD. The Navy, EPA, and the Maryland Department of the Environment agree that the ROD dispute should not impede the protection of human health and the environment. The final remedy will be implemented upon reaching a mutually acceptable agreement on Land Use Controls between MDE, EPA and the Navy.

2. SITE DESCRIPTION

a. Facility Description

The Indian Head Division Naval Surface Warfare Center (IHDIV-NSWC) is located in northwestern Charles County, Maryland, approximately 25 miles southwest of Washington, DC. The IHDIV-NSWC is a military facility consisting of the main area on the Cornwallis Neck Peninsula and the Annex on Stump Neck. The main area is bounded by the Potomac River to the northwest, west, and south, Mattawoman Creek to the south and east, and the town of Indian Head to the northeast. Stump Neck Annex is located across Mattawoman Creek.

b. Background of Site 12

Between 1968 and June 1980, the site was used by IHDIV-NSWC to dispose of landscaping waste, fill material, and rubble. Reportedly, material from outside the facility was also disposed

at the site until 1972. Unauthorized dumping of trash may have occurred. Site 12 is estimated to contain approximately 70,000 cubic yards of mixed solid waste materials, primarily landscaping wastes, tree stumps, and demolition debris. Naval Energy and Environmental Support Activity (NEESA) team interviews indicated that paint, varnish, and chemical wastes might also have been disposed at the site.

Based on visual observations and examination of historical maps and aerial photographs, the landfill material appears to have been first dumped on the eastern side of the site in a topographically low area. Dumping then continued in a westward direction. It is estimated that the top of the waste is currently one foot to 15 feet above the original ground surface. The landfill was not closed in accordance with state solid waste management regulations.

c. Physical Setting

The Town Gut Landfill, Site 12, covers an area of approximately four acres. Ground surface elevations range from approximately sea level at the ponds to 25 feet above mean sea level at the highest portion of the site. The Atkins Road Extension bisects the site, which is oriented in a northwest-southeast direction. A pond is adjacent to the western and southern sides of the northern portion of the site. Another pond is adjacent to the western and northern sides of the southern portion of the site. The ponds are connected via a 78-inch-diameter metal pipe located under Atkins Road Extension. Runoff from the site flows into these two ponds. A weir at the discharge (southern) end of the southernmost pond controls water flow by a v-notch. This inhibits influences on the pond by tidal changes in Mattawoman Creek and helps prevent sediment from entering the creek. Wetlands are located adjacent to the ponds.

Subsurface soil conditions at the site were investigated during the installation of six monitoring wells. Subsurface materials generally consist of silt, sand, and gravel (fill) overlying refuse material (wood, plastic, cloth, concrete, and tar shingles) mixed with silt, sand, and gravel and interspersed with void spaces. Natural materials beneath the refuse consist of greenish-gray silt and gravel.

The shallow groundwater beneath the site occurs primarily under unconfined (water-table) conditions. The water-table aquifer consists primarily of refuse material mixed with silt, sand, and gravel (fill). Shallow groundwater flows toward and into the adjacent ponds. This shallow groundwater is primarily recharged by downward migration of precipitation through the unsaturated zone to the water table. In addition, recharge of shallow groundwater may occur along the edges of the ponds during high water conditions. While depth to the water table is generally one foot to four feet below ground surface over most of the site, it is greater than 10 to 12 feet deep in a small portion. Groundwater from the shallow aquifer is not used as a potable water supply.

d. Current Use

Site 12 is an unused parcel of land at this time. The shallow groundwater beneath the site and the ponds adjacent to the site are not used for any potable purpose. Drinking water is obtained

from a deeper aquifer (190 to 400 feet deep). There is no known hydrogeological connection or communication between the shallow groundwater and the deeper aquifer used for drinking water.

e. Status

This site is currently under the Navy Installation Restoration (IR) Program and a Federal Facility Agreement. Site 12 has been under investigation since 1982, when a leachate sample was collected by NEESA during the Initial Assessment Study (IAS) of the IHDIV-NSWC facility. During the 1985 Confirmation Study, surface water and sediment samples were collected from the edge of the landfill. IHDIV-NSWC was placed on the National Priorities List (NPL) in September 1995.

A remedial investigation (RI) was performed at Site 12 in 1997. The investigation included a geophysical investigation, installation of soil borings and shallow groundwater monitoring wells, and collection and analysis of surface soil, shallow groundwater, surface water, and sediment samples.

Additional activities were performed in 1999 to fill data gaps as part of the feasibility study (FS) preparation process. Field activities included test pit excavation and wetland delineation. The FS presented a description of the site history, identified remedial action objectives, screened remedial action alternative technologies, established remediation goals for shallow groundwater and soil, and recommended a course of action for the remedial action. The removal action consists of a soil cover over the landfill.

Due to the above-mentioned dispute pertaining to institutional controls, the Activity has decided to execute a removal action in lieu of a remedial action. The information gathered in the RI/FS has been incorporated by reference into an Engineering Evaluation/Cost Analysis (EE/CA), enclosure (1), as a technical basis for the removal. Therefore, the term RI/FS shall hereinafter mean and/or be referred to as EE/CA.

f. Release Description

Chemicals of concern (COCs) have been identified based on the analytical data, risk drivers from the human health and ecological risk assessments, and exceedances of regulatory standards and criteria. The COCs (risk drivers) for soil, based on protection of human health for the hypothetical future resident, are arsenic and iron. The concentrations of arsenic and iron were similar in all soil samples. Additional soil COCs based on protection of ecological receptors are Aroclor 1254 (a PCB), mercury, and silver. None of the soil concentrations exceeded EPA screening levels for migration of soil contaminants to groundwater (EPA, 1996).

The COCs (risk drivers) for the shallow groundwater based on protection of human health (hypothetical future resident) are cis-1,2-dichloroethene, vinyl chloride, arsenic, iron, and manganese. No groundwater COCs were identified for the other human receptors evaluated. Additional COCs for the shallow groundwater, based on exceedances of Federal and state Maximum Contaminant Levels (MCLs), are trichloroethene and lead. Cis-1,2-dichloroethene, iron, and manganese are classified as non-carcinogens. There is no discernable plume of the

organic COCs evident from the data. The organic COCs were only detected at one location. Additional chemicals that were infrequently detected in shallow groundwater but did not result in unacceptable risks include PAHs, pesticides, and other metals.

No COCs have been identified for surface water or sediment.

3. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

a. Threats to Public Health and Welfare

The potential exposure to contaminated soil and shallow groundwater under a hypothetical future residential exposure scenario constitutes the principal risk to human health. Although the shallow groundwater is contaminated, the contamination is not affecting public drinking water supplies or adjacent surface water. The purpose of the removal action is to prevent potential exposure to contaminated soil and shallow groundwater.

b. Threat to the Environment

Potential exposure to contaminated soil constitutes the principal risk to ecological receptors. Ecological receptors that could be affected are terrestrial animals and plants that contact contaminants in surface soil. These contaminants could also enter the food chain. The purpose of the removal action is to prevent current and future potential exposure to contaminated soil.

4. NO ACTION ALTERNATIVE

Taking no action at this site could result in a negative impact on human and ecological receptors.

5. COMMUNITY PARTICIPATION

A Restoration Advisory Board (RAB) made up of community members and Navy, Federal, and state officials meets several times a year. The RAB is designed to act as a focal point for the exchange of information between IHDIV-NSWC and the local community regarding restoration activities.

EE/CA information and the Proposed Plan for Site 12 – Town Gut Landfill at IHDIV-NSWC in Indian Head, Maryland, were made available to the public. The RI Report, which constitutes part of the EE/CA, was made available in July 1999. The FS Report, which also constitutes part of the EE/CA, and the Proposed Plan were made available in January 2001. These documents can be found in the Administrative Record file and the information repository maintained at the IHDIV-NSWC General Library. The notice of the availability of these documents was published in the *Maryland Independent* on January 12, 2001 and the *La Plata – Indian Head Independent* on January 13, 2001. A public comment period was held from January 16, 2001 to March 2, 2001. In addition, a public meeting was held on January 23, 2001 to present the Proposed Plan to a broader community audience than those that had already been involved at the site. At this meeting, representatives of the Navy, EPA, and MDE answered questions about problems at the site and the remedial alternatives. The Navy's responses to the comments received during this

period are included in the Responsiveness Summary, which is a part of the draft final Record of Decision (ROD).

Based on comments expressed at the public meeting and receipt of written comments during the public comment period, it appears that the community generally agreed with the soil cover and monitoring wells, which have now been converted to a removal action. A notice of availability and a brief description of this EE/CA document and the removal action will be published in the *Maryland Independent* and the public will be given thirty days to provide any comments.

6. COMPLIANCE WITH ARARS AND TBCS

The removal action will comply with applicable regulations addressing Protection of Wetlands (40 CFR 6, Appendix A); Maryland Nontidal Wetlands (COMAR 26.23); Construction on Nontidal Wetlands and Floodplains (COMAR 26.17.04); Ambient Air Quality Standards (COMAR 26.11.04); General Emissions Standards, Prohibitions, and Restrictions (COMAR 26.11.06); and Erosion and Sediment Control (COMAR 26.17.01).

This removal action would not comply with the state closure (i.e., capping) standards for rubble landfills. However, the state solid waste management regulations at COMAR 26.04.07 contain provisions for a variance to design requirements, if the proposed changes conserve and protect the public health, the natural resources, and the environment of the state and control air, water, and land pollution to the same extent as would be obtained by compliance with the regulation. This action meets the requirements stated in COMAR 26.04.07. This action would not control exposure to the contaminated groundwater nor comply with post-closure maintenance and monitoring requirements for solid waste landfills; these will be addressed with the final remedy.

7. ACTIONS AND COSTS

a. Actions

The removal action for Site 12 involves a soil cover over the landfill. The purpose of the soil cover is to eliminate or reduce the possibility of exposure to human and ecological receptors, eliminate physical hazards, reduce erosion, comply with regulatory requirements, and improve aesthetics. The removal action includes the following major components:

- Large items of exposed waste and debris found along the shores of the ponds will be excavated and removed for off-site disposal. Soil, sediment, and small objects will be excavated and consolidated on site. Wetland soil and vegetation disturbed during removal activities will be replaced.
- An area of approximately 4.3 acres will be covered with soil. Additional soil will be placed as needed over the landfill so that all waste is covered with a minimum 2-foot layer of soil. A type of vegetation that would discourage animals from burrowing into the landfill will be planted on the soil cover. Sufficient wells will be installed to permit future groundwater monitoring.

- Signs, notices, and/or fences will be put in place temporarily to prevent use of the shallow groundwater and to protect the soil cover from damage by future site activities until the land-use control issue is resolved and the permanent institutional controls are in place.

b. Cost

A Contract Task Order for \$938,600 has been awarded under the Atlantic Division, Naval Facilities Engineering Command Remedial Action Contract.

c. Project Schedule

The removal action is scheduled for completion during calendar year 2002.



Paula A. Gilbertson
Installation Restoration Program Manager
EFA Chesapeake

6/27/02
Date



Marc A. Siedband
Captain, U. S. Navy
Commander, Indian Head Division
Naval Surface Warfare Center

7/16/02
Date