

**Final**

**Record of Decision  
for  
Site 6/6A, Operable Unit 2**

**Naval Air Station Patuxent River  
St. Mary's County, Maryland**



**Naval Facilities Engineering Command  
Washington**

**September 2008**

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# Acronyms and Abbreviations

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CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
COPC	constituent of potential concern
CTE	central tendency exposure
DDT	Dichlorodiphenyltrichloroethane
EE/CA	Engineering Evaluation/Cost Analysis
ERA	ecological risk assessment
FFA	Federal Facility Agreement
GP/SP	Gardiner's Pond/Supply Pond
HHRA	human health risk assessment
IR Program	Installation Restoration Program
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
MDE	Maryland Department of the Environment
msl	mean sea level
NAS	Naval Air Station
Navy	United States Department of the Navy
OU	Operable Unit
PAHs	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PRAP	Proposed Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
RI	remedial investigation
ROD	Record of Decision
SVOCs	semi-volatile organic compounds
USEPA	United States Environmental Protection Agency
VOCs	volatile organic compounds

# Declaration

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## 1.1 Site Name and Location

This Record of Decision (ROD) was prepared for Installation Restoration Program (IR Program) Site 6/6A, Operable Unit 2 (OU-2), at Naval Air Station (NAS) Patuxent River in St. Mary's County, Maryland. NAS Patuxent River was placed on the National Priorities List on June 30, 1994 (USEPA ID: MD7170024536). This ROD addresses groundwater and surface water<sup>1</sup> throughout Site 6/6A, and surface soil/sediment in the drainage area and intermittent stream downgradient of Site 6.

## 1.2 Statement of Basis and Purpose

This ROD presents the selected remedy (No Further Remedial Action) for Site 6/6A OU-2 at NAS Patuxent River, which was chosen in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986, and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan. In accordance with Section 113(k) of CERCLA, this decision is based on information contained in the Administrative Record for Site 6/6A.

The United States Department of the Navy (Navy) and the United States Environmental Protection Agency (USEPA) Region III jointly issue this ROD, with the concurrence of the Maryland Department of the Environment (MDE) (Appendix A). The Navy provides funding for site remediation at NAS Patuxent River. The Federal Facility Agreement (FFA) for NAS Patuxent River documents how the Navy intends to meet and implement CERCLA in partnership with the USEPA and in consultation with the MDE.

Site 6/6A is one of the sites identified in the FFA. A list and description of all IR Program sites is presented in the September 2007 update of the NAS Patuxent River Site Management Plan (CH2M HILL, 2007b). During the past 12 years, a total of 12 RODs have been completed for IR Program sites at NAS Patuxent River, and additional investigations and remedial actions are ongoing. This ROD documents the final decision for Site 6/6A and does not include or affect any other sites at the NAS.

Public comments on the selected remedy for Site 6/6A OU-2 are discussed in Section 3, "Responsiveness Summary."

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<sup>1</sup> Although the Site 6/6A OU-1 ROD identified downstream surface water as part of OU-2, there is no surface water on Site 6/6A, and the only downstream surface water that occurs within the area of OU-2 is intermittent runoff associated with precipitation events.

### 1.3 Description of the Selected Remedy

The Navy has determined that no further remedial action is necessary for Site 6/6A OU-2 to protect public health, public welfare, or the environment because the site does not pose any unacceptable risks to human health or the environment for unrestricted land use. A removal action was performed to address potential ecological risks associated with polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) in soil/sediment.

### 1.4 Statutory Determinations

The selected remedy will not result in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure. Therefore, a 5-year review is not required for the selected remedy.

### 1.5 Data Certification Checklist

The following are among the factors considered in selecting the remedy for Site 6/6A OU-2:

- Constituents of potential concern (COPCs) (Section 2.5.4)
- Baseline risk represented by the COPCs (Section 2.7)
- Current and reasonably anticipated future site use assumptions (Section 2.6)
- Potential future site use that will be available at the site as a result of the selected remedy (Section 2.9)
- Key factors that led to selecting the remedy (Section 2.7)

If contamination posing an unacceptable risk to human health or the environment is discovered after execution of this ROD, the Navy will undertake all necessary actions to ensure continued protection of human health and the environment.

### 1.6 Authorizing Signatures

The Navy and the USEPA selected this remedy with the concurrence of the MDE.

Concur and recommend for immediate implementation:

Andrew T. Macyko  
 Captain Andrew Macyko,  
 United States Navy Commanding Officer  
 Naval Air Station Patuxent River

29 September 2008  
 Date

K. Hordstein  
 James J. Burke, Director  
 Hazardous Site Cleanup Division  
 United States Environmental Protection Agency, Region III

10/3/08  
 Date

# Decision Summary

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## 2.1 Site Name, Location, and Brief Description

NAS Patuxent River (USEPA ID: MD7170024536) is located at the confluence of the Patuxent River and the Chesapeake Bay in St. Mary's County, Maryland (Figure 1). The Navy serves as the lead agency for environmental restoration at the NAS, the USEPA is the lead regulatory agency, and the MDE is the support regulatory agency.

Site 6/6A (also known as the Bohneyard Site) is located in the northwestern part of the NAS, at the intersection of Bohne Road and Tate Road. To facilitate review and reporting of the investigation activities, nature and extent of constituents detected in environmental media, and the risk assessment, the site was divided into two areas referred to as Site 6 and Site 6A (Figure 1).

Site 6 occupies an area of approximately six acres, ranging in elevation from approximately 42.5 to 45 feet above mean sea level (msl), and gently slopes toward the west. The site is bounded on the west and northwest by Bohne Road, a taxiway to the south, and Site 6A to the east. Site 6A is bounded by Site 6 to the west, a wooded area to the north, and roads and buildings to the east and south. Site 6A encompasses approximately four acres and gently slopes to the north. Site 6 is now used as a parking area for aircraft-refueling trucks in accordance with the ROD for OU-1, which addressed potential risks associated with soil. Site 6A currently consists of storage facilities and open areas.

## 2.2 Site History and Enforcement Activities

Site 6/6A was identified as an IR Program site because of historical disposal and storage activities at the site. Between 1943 and 1949, fly ash and bottom ash generated by the coal-fired plant for the base were disposed at this site. An estimated 110,000 cubic feet, or 6,000 tons, of ash were deposited in a 6-inch blanket over approximately 5 acres of Site 6. From 1949 until about 1966, the area was used as a storage yard. Beginning in 1955, the site was used to store drums. The drums contained petroleum, oil, and lubricant wastes. In addition, a partially buried 10,000-gallon tank formerly located on Site 6 near Bohne Road was also used to store waste oil. Beginning in 1966, drums of waste solvents, paints, and possibly pesticides were also stored at the site. Other stored materials reportedly included oil/water separator sludge, solvents, thinners, and paints.

Table 1 summarizes previous investigations for Site 6/6A and a detailed description of the results for these investigations is presented in the Remedial Investigation (RI) report (CH2M HILL, 2008b) and summarized in the Proposed Remedial Action Plan (PRAP) (CH2M HILL, 2008d).

## 2.3 Community Participation

Community participation at NAS Patuxent River is facilitated by a Restoration Advisory Board, public meetings, public information repositories, and public notices. The Community Relations Plan (CH2M HILL, 2008c) for NAS Patuxent River provides detailed information on community participation for the IR Program.

The public information repositories for NAS Patuxent River documents, including the documents in the Administrative Record file used in the remedy selection process for Site 6/6A OU-2, are maintained at the following locations:

**St. Mary's County Public Library  
Lexington Park Branch**  
21677 FDR Boulevard  
Lexington Park, MD 20653

**Naval Air Station Patuxent River Library**  
22269 Cedar Point Road, Building 407  
Patuxent River, MD 20629

In accordance with Sections 113 and 117 of CERCLA, the Navy provided a 30 day public comment period from August 11 through September 9, 2008, for the Site 6/6A OU-2 PRAP (CH2M HILL, 2008d). A public meeting to present the PRAP to a broader community audience than those that had already been involved at the site was held on August 13, 2008, at the Frank Knox Employee Development Building, Building 2189, at NAS Patuxent River. Public notice of the meeting and availability of documents was published on August 7, 2008 in *The Enterprise* for St. Mary's County on August 6, 2007; *The Recorder* for Calvert County on August 6, 2008; and *The Tester*, which is the NAS Patuxent River newspaper. A copy of the public notice and the transcript of the public meeting are provided in Appendix B.

## 2.4 Scope and Role of Response Action for Site 6/6A OU-2

NAS Patuxent River was listed on the National Priorities List on June 30, 1994. As a result, 46 sites were identified at the NAS for inclusion in the IR Program. Site 6 is one of the sites identified in the FFA for NAS Patuxent River. A list and description of all IR Program sites is presented in the 2007 update of the NAS Patuxent River Site Management Plan (CH2M HILL, 2007b).

During the past 12 years, and as of the date of this ROD, a total of 12 RODs have been completed for IR Program sites at NAS Patuxent River in accordance with the priorities established in the Site Management Plan. The designation, media, and remedial action for each site are listed below.

- Sites 1/ 12 Groundwater and Soil (OU-1): soil cover, shoreline stabilization, land use restrictions, long-term monitoring and maintenance, vegetation cover, wetland mitigation, and erosion control structures (February 2000 ROD)
- Sites 1/12 Surface Water and Sediment (OU-2): removal of lead contaminated soil and sediment (September 2005 ROD)
- Sites 6/6A Soil (OU-1): asphalt and concrete cap, soil/gravel cover and land use restrictions (September 1999 ROD)

- Site 11 Soil (OU-1): Resource Conservation and Recovery Act (RCRA) Subtitle D landfill cap, landfill gas collection and flare system, groundwater and landfill gas monitoring, and land use restrictions (July 1996 ROD)
- Site 17 Soil (OU-1): excavation and off-site treatment and disposal of soil and land use restrictions (December 1998 ROD and June 2001 ROD Amendment)
- Site 17 Groundwater, Surface Water, and Sediment (OU-2): sediment removal from Holton Pond (September 2006 ROD)
- Site 24 Soil, Groundwater, Sediment, and Surface Water: No Further Remedial Action (October 2007 ROD)
- Site 27 Groundwater and Soil: No Remedial Action (September 2003 ROD)
- Site 29 Groundwater and Soil: No Remedial Action (October 2007 ROD)
- Site 39 Groundwater: in-situ bioremediation, monitoring, and institutional controls (October 2007 ROD)
- Site 41 Groundwater and Soil: No Further Remedial Action (September 2005 ROD)
- Site 46 Groundwater and Soil: No Remedial Action (September 2004 ROD)

This ROD is for Site 6/6A OU-2 only, and addresses groundwater throughout Site 6/6A, and surface soil/sediment in the drainage area and intermittent stream downgradient of Site 6. After evaluating results of the Site 6/6A OU-2 investigations, including the findings of the human health and ecological risk assessments, and the results of the removal action, the Navy, the USEPA, and the MDE concur that potential risks to ecological receptors were addressed by the soil/sediment removal and no further action is necessary to allow unrestricted use for Site 6/6A OU-2.

## 2.5 Site Characteristics

### 2.5.1 Site Overview

NAS Patuxent River contains buildings and runway areas supporting the NAS military mission. Office space and housing are also provided for Navy and civilian personnel. Several areas are used for recreational activities. Streams, ponds, forests, wetlands, and beaches provide fishing, swimming, camping, and hunting opportunities. Although construction and other activities have disturbed approximately 3,000 acres since establishment of the NAS in 1943, many such areas have since been left fallow and are now covered with trees, shrubs, or tall grasses. Site 6 is now used as a parking area for aircraft refueling trucks in accordance with the ROD for OU-1, which addressed potential risks associated with soil. Site 6A currently consists of storage facilities and open areas.

### 2.5.2 Physical Characteristics

Physical characteristics, including climate, topographic information, geology, hydrogeology and ecology for the NAS and Site 6/6A, are described in the RI report (CH2M HILL, 2008b). In general, the unconsolidated sediments that underlie the site predominantly consist of graded sand, with beds of silty clay, silty sand, and gravel. The surface soil and sediment for

Site 6/6A OU-2 are not distinguishable and are treated as one collective unit (i.e., *surface soil/sediment*) throughout this ROD. The surface soil and sediment are not distinguished from one another because the geologic material comprising sediment associated with OU-2 is not sufficiently saturated to sustain aquatic ecological communities. However, the term 'sediment' has been applied for completeness of the ecological risk assessment (ERA), which has different screening criteria for soil and sediment.

As part of the implemented remedy for OU-1, a concrete and asphalt parking lot was constructed over approximately half of Site 6. An 8-inch cover of topsoil over 4 inches of compacted gravel was placed over the remaining area of Site 6 where concentrations of hazardous substances were greater than the site worker exposure performance standards set forth in the OU-1 ROD (Engineering Field Activity Chesapeake, Naval Facilities Engineering Command, 1999). The remaining portion of Site 6 is open habitat covered by mowed grasses and other herbaceous plants interspersed with patches of unmowed herbaceous plants. The site contains a few small structures and four larger buildings--Buildings 1132, 1498, 1497, and 1496. Most of the structures are constructed of sheet metal. Patches of gravel, pavement, and small areas of exposed soil are associated with past and current development of Site 6.

Site 6A consists of a subcontractor supply yard and other storage facilities to the east of Site 6. A chain-link fence surrounds a portion of Site 6A to the west. The center of Site 6A area consists of an asphalt parking lot used to store equipment. The parking lot was formerly covered with gravel, but was paved as part of the OU-1 remedy. Grassy areas occur on the fringe of Site 6A to the north and east.

Based on data obtained during the RI and previous investigations, the average depth to the water table for the unconfined surficial aquifer is between 10 and 14 feet below ground surface at Site 6/6A. Groundwater flow patterns in the shallow aquifer are generally controlled by the surface topography (CH2M HILL, 1985). Groundwater beneath the site flows to the north across the site then shifts predominantly north-northwest towards the Fuel Farm.

The hydraulic gradient across Site 6/6A is relatively flat. Based on site-specific data and assumptions, the average linear velocity of shallow groundwater downgradient of Site 6/6A is approximately 15 feet per year.

### 2.5.3 Ecology

The ecology of the NAS and Site 6/6A, including terrestrial habitats, wetlands, and plants, is described in the RI (CH2M HILL, 2008b). In general, Site 6 slopes towards the northwest and surface drainage and precipitation runoff flow into an intermittent stream that eventually empties into the Supply Pond. The intermittent stream channel originates near Building 637 as a natural stormwater conveyance. It remains a channelized ditch bordering the northern edge of Site 6. Within a transmission line corridor that crosses the site, the channel widens and supports some herbaceous wetland vegetation, including smartweeds. The southwestern corner of the site drains towards the west, although no defined channel is present. A storm drain along Bohne Road at the southwestern corner of Site 6 discharges under the road to a wooded upland area. The wooded area is near the headwaters of an intermittent stream that eventually discharges into a low area, referred to as Beaver Pond, located southwest of the Supply Pond.

As part of the implemented remedy for OU-1, a concrete and asphalt parking lot was constructed over approximately half of Site 6. An 8-inch cover of topsoil over 4 inches of compacted gravel was placed over the remaining area of Site 6 where concentrations of hazardous substances were greater than the site worker exposure performance standards set forth in the OU-1 ROD (Engineering Field Activity Chesapeake, Naval Facilities Engineering Command, 1999). The remaining portion of Site 6 is open habitat covered by mowed grasses and other herbaceous plants interspersed with patches of unmowed herbaceous plants. The site contains a few small structures and four larger buildings--Buildings 1132, 1498, 1497, and 1496. Most of the structures are constructed of sheet metal. Patches of gravel, pavement, and small areas of exposed soil are associated with past and current development of Site 6.

Site 6A consists of a subcontractor supply yard and other storage facilities to the east of Site 6. A chain-link fence surrounds a portion of Site 6A to the west. The center of Site 6A area consists of an asphalt parking lot used to store equipment. The parking lot was formerly covered with gravel, but was paved as part of the OU-1 remedy. Grassy areas occur on the fringe of Site 6A to the north and east. Thus, minimal habitat is present at Site 6A. Based on NAS documentation, no rare, threatened, or endangered species are known to occur on either site.

## 2.5.4 Description of Contamination

The nature and extent of chemicals and metals detected in groundwater and surface water throughout Site 6/6A, and surface soil/sediment in the drainage area and intermittent stream downgradient of Site 6 were characterized by samples collected during the RI, which was completed in November 2007. A conceptual site model is presented in Figure 2. Monitoring well locations are shown in Figure 3. Surface soil/sediment locations sampled between 2004 and 2007 are presented in Figure 4.

### Groundwater

Several groundwater sampling events have occurred at Site 6/6A since 1985. Historically, groundwater has been sampled for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and total and dissolved metals. During the RI activities conducted in June 2004, VOCs, SVOCs and total and dissolved metals were detected in the groundwater samples collected from Site 6/6A. The 2004 samples were analyzed for pesticides and PCBs, but none were detected. VOCs were detected at low concentrations in all of the wells sampled with the exception of well PX-S06-MW-04 (Figure 3), downgradient of Site 6, which did not have any VOC detections. Toluene was the most frequently detected VOC. SVOCs were detected in two of the 12 groundwater samples collected in June 2004, both of which were from wells within the Fuel Farm. The Fuel Farm is downgradient of Site 6/6A. The VOCs and SVOCs detected in wells downgradient of the Fuel Farm are related to historical petroleum releases at the Fuel Farm, which have been addressed under the Maryland Oil Control Program. SVOCs were not detected in groundwater samples from within the boundary of Site 6/6A.

Well PX-S06-MW-09R, located just outside the Site 6/6A area and adjacent to the Fuel Farm, had the greatest number of total metals detected by the June 2004 event. High turbidity from suspended particulates in the groundwater at the time of sampling contributed to the elevated metal concentrations in the sample from monitoring well PX-S06-MW-09R. In historic groundwater samples collected from the Site 6/6A wells, total and dissolved

arsenic, beryllium, chromium, lead, and thallium have also been detected at elevated concentrations. During the 1985 sampling event, the maximum concentrations of the following metals were: arsenic at 110 micrograms per liter ( $\mu\text{g/L}$ ), beryllium at 30  $\mu\text{g/L}$ , chromium at 120  $\mu\text{g/L}$ , and lead at 1,300  $\mu\text{g/L}$ . In the June 2004 sample from well PX-S06-MW-09R, concentrations of arsenic (52.7  $\mu\text{g/L}$ ), beryllium (0.24  $\mu\text{g/L}$ ), chromium (108  $\mu\text{g/L}$ ), and lead (23.8  $\mu\text{g/L}$ ) were similar to or less than the elevated historic concentrations. Thallium has been detected in the groundwater throughout the NAS at similar concentrations, and is not considered to be a site-related constituent.

### Surface Soil/Sediment

VOCs were not detected in any of the surface soil/sediment samples during the April 2004 and March 2005 events. Because these compounds were not detected previously, the surface soil/sediment samples collected in November 2007 were not analyzed for VOCs.

Twenty-five SVOCs, mainly polycyclic aromatic hydrocarbons (PAHs), were detected in surface soil/sediment samples collected between 2004 and 2007. Detected total PAH concentrations ranged from 151 micrograms per kilogram ( $\mu\text{g/kg}$ ) to a maximum of 63,480  $\mu\text{g/kg}$ . The lower concentrations were detected in samples collected along the bank of the intermittent stream channel of OU-2, and the maximum total PAH concentration was detected in a sample (PX-SO6-SO-16) collected from the low lying area just west of the Site 6 boundary (Figure 4).

Eleven pesticides and one PCB were detected in the 13 surface soil/sediment samples collected in April 2004 and March 2005. Pesticides were detected at concentrations ranging from 0.7  $\mu\text{g/kg}$  (PX-SO6-SO-19) to 3,170  $\mu\text{g/kg}$  (PX-SO6-SO-16 (Figure 4). Detections of pesticide constituents are likely related to the legal application of pesticides, which has occurred historically throughout the NAS for pest control. Sample location PX-SO6-SO-17 had the maximum detected concentration of Aroclor-1260 at 1,700  $\mu\text{g/kg}$ , with the PCB concentrations generally decreasing downstream in the drainage channel.

In November 2007, low concentrations of pesticides, including dichlorodiphenyldichloroethane (DDD), dichlorodiphenyltrichloroethane (DDT), and dichlorodiphenyldichloroethylene (DDE), were detected in all surface soil/sediment samples at concentrations ranging from 1.8  $\mu\text{g/kg}$  to 600  $\mu\text{g/kg}$ . Sample location PX-SO6-SO-33 had the maximum Aroclor-1260 concentration of 270  $\mu\text{g/kg}$ . The other four sample locations had Aroclor-1260 concentrations ranging from 20  $\mu\text{g/kg}$  to 240  $\mu\text{g/kg}$ .

Twenty-three metals were detected during the April 2004 and March 2005 sampling. All of the detected metals are naturally occurring and consistently detected throughout the sampling area. Additionally, since Site 6/6A is located within the Supply Pond Watershed, it was quantitatively evaluated as part of the Gardiner's Pond/Supply Pond (GP/SP) Ecological Risk Assessment (CH2M HILL, 2007a). Zinc was the only metal retained as a COPC in the GP/SP ERA (CH2M HILL, 2007a). Following consideration of multiple lines of evidence, including limited frequency of exceedence, infrequent detection, limited spatial distribution, and consideration of commonly used ecological benchmarks, it was concluded that all metals, including zinc, were not risk drivers with respect to ecological receptors.

## Result of Findings

As a result of the concentrations of PAHs and PCBs detected in the surface soil/sediment within the Site 6/6A drainage area, the Navy and USEPA, in consultation with the MDE, made a decision to conduct a removal action to remove soil and sediment posing a potential risk to ecological receptors. The removal action is summarized in Section 2.7.3.

## 2.6 Current and Potential Future Site and Resource Uses

NAS Patuxent River, a military base for over 60 years, has been one of the primary Navy centers for testing aircraft and equipment. NAS Patuxent River contains buildings and runway areas for supporting the NAS military mission. Office space and housing are also provided for Navy and civilian personnel. Site 6 is located in a restricted area of the NAS located adjacent to the Fuel Farm and is currently used as a parking area for aircraft refueling trucks. Site 6A is a parcel located east of Site 6 and is currently used as a storage area for equipment and materials. The projected future use of Site 6/6A and vicinity is for infrastructure to support aircraft operations, specifically the construction of a new aircraft apron, hangar, office building, and parking lot along the taxiway. Direct contact with soil, surface water, sediment, and groundwater in the vicinity of Site 6/6A is unlikely to occur under such future conditions. Although there is no current or planned future residential use of the site, potential future residential use was evaluated to support the Navy's goal of unrestricted land use for Site 6/6A.

## 2.7 Summary of Risks and Recommendations

### 2.7.1 Human Health Risk Assessment

A baseline HHRA was conducted as part of the RI and in accordance with current USEPA guidance to assess potential risks to human health from exposure to chemicals and metals detected in groundwater throughout Site 6/6A, and surface soil/sediment in the drainage area and intermittent stream downgradient of Site 6. A summary of the HHRA findings is presented in Table 2. The HHRA evaluated the risks for current and reasonably anticipated future land use scenarios. The HHRA findings were used for decision-making regarding the need for any remedial action at Site 6/6A to protect human health.

The following chemicals and metals were identified by the HHRA as COPCs for the environmental media at Site 6/6A OU-2:

- Surface soil - benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)Fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, DDT, Aroclor-1260, aluminum, arsenic, iron, manganese, and vanadium
- Sediment - arsenic and iron
- Groundwater - chloroform, PCE, trichloroethylene, iron, lead, manganese, and thallium.

For current land use, no calculated risks or hazards exceed the acceptable risk levels for an adult trespasser/visitor, adolescent trespasser/visitor, industrial/site worker, or construction worker exposed to surface soil/sediment. For reasonably anticipated future

site use, no calculated risks or hazards exceed acceptable risk levels for the adult trespasser/visitor, adolescent trespasser/visitor, industrial/site worker, or construction worker exposed to surface soil and sediment, or for a construction worker exposed to groundwater.

In addition to the current and reasonably anticipated future site use scenarios, an unrestricted (i.e., residential exposure) scenario was evaluated for future use. Evaluation of a hypothetical future resident scenario indicated potential risks exceeding the acceptable threshold for noncarcinogenic risks based on potable use of shallow groundwater. This calculated risk is driven by a single metal, thallium. The central tendency exposure (CTE) hazard for a future adult resident (1.6) exceeded the acceptable risk level (1.0), and the CTE hazard for the future child resident (5.6) also exceeded the acceptable risk level (1.0).

However, the thallium detections at this site do not pose an unacceptable risk for several reasons. Thallium was detected in only four of nine site monitoring wells (MW-07, MW-10, MW-11, and MW-09R) and two downgradient monitoring wells associated with the Fuel Farm (MW-04 and MW-13). Of the four site monitoring wells, three wells had only total (not dissolved concentrations that are transported by groundwater) concentrations of thallium due to particulates in the sample. Two downgradient monitoring wells (MW-04 and MW-13), located at the Fuel Farm, had detections of dissolved thallium. Finally, both total and dissolved thallium have been detected in the groundwater throughout NAS, and thallium is not considered to be a site-related constituent.

Site 6/6A is not currently residential, and the projected future use of the site, due to its proximity to the taxiway, Fuel Farm, and fuel truck parking area, is continued industrial use to support the NAS mission. As described in the RI report (CH2M HILL, 2008b) the current and future scenarios for use of Site 6/6A do not pose unacceptable risks to human health based on unrestricted site use for Site 6/6A. Therefore, no further remedial action is necessary to address potential risks to human health associated with exposure to surface soil/sediment or groundwater at Site 6/6A.

## 2.7.2 Ecological Risk Assessment

Site 6 was quantitatively evaluated for potential ecological risks as part of the Gardiner's Pond/Supply Pond Ecological Risk Assessment (GP/SP ERA) (CH2M HILL, 2007a) because of its location within the Supply Pond Watershed. Site 6A was excluded from the GP/SP ERA based on the findings reported in the document titled *Final Post-ROD Risk Assessment (Post-ROD ERA) to Address Change in Future Land Use at IR Site 6A* (CH2M HILL, 2004). The Post-ROD ERA for Site 6A concluded no further action was necessary for Site 6A.

The ecological risk evaluation presented in the GP/SP ERA report concluded that contaminants detected in surface soil at Site 6 occurred in localized hotspots that could be a source of PAHs and PCBs to downgradient habitats supporting receptor populations of the Supply Pond Watershed. As a result of the ERA findings, a removal action was recommended for surface soil/sediment in the drainage area and intermittent stream located downgradient of Site 6. Based on this finding, the Navy removed surface soil/sediment from portions of the drainage area between Site 6 and Beaver Pond to avoid the need to conduct costly ecological toxicology studies for a marginal habitat, and to eliminate a source area of COPCs to downgradient water bodies.

### 2.7.3 Removal Action Summary

As a result of the concentrations of PAHs and PCBs detected in the surface soil/sediment within the Site 6/6A drainage area, the Navy and USEPA, in consultation with the MDE, made a decision to conduct a removal action to remove soil and sediment posing a potential risk to ecological receptors. Prior to conducting the removal action, an Engineering Evaluation/Cost Analysis (EE/CA) was completed to evaluate remedial alternatives to address the potential risks to ecological receptors (CH2M HILL, 2008a). The objective of the removal action was to reduce the current potential risk to the environment posed by PCBs and PAHs in surface soil/sediment downgradient of Site 6/6A to levels acceptable for unrestricted site use. As part of the EE/CA (CH2M HILL, 2008a), ecological risk-based removal action levels were developed for total PCBs (1,000 micrograms per kilogram [ $\mu\text{g}/\text{kg}$ ]) and total PAHs (6,150  $\mu\text{g}/\text{kg}$ ) to address impacted surface soil/sediment in the drainage area. The removal action levels that were calculated established the concentrations at which site-related COPCs do not pose an unacceptable risk to the environment. As detailed in the EE/CA report (CH2M HILL, 2008a) Alternative 2 (Surface Soil/ Sediment Excavation with Off-site Disposal) was the recommended alternative since it would achieve the Remedial Action Objectives.

In April and May 2008, a removal action was completed to remove surface soil/sediment from portions of the Site 6/6A drainage area between Site 6 and Beaver Pond. Approximately 674 tons (449 cubic yards) of soil were excavated during the removal activity. Three separate localized areas of impacted soil/sediment were excavated (Figure 5) and the excavated material was disposed off-site as nonhazardous waste at a permitted landfill that accepts waste with PCB concentrations less than 50 parts per million. Analytical results for confirmatory samples showed PCB and PAH concentrations were less than the removal action levels at all sample locations after 1 foot of soil was removed in the two areas west of Bohne Road and downgradient of Site 6. Sample results for depths of 1-2 feet and 2-3 feet in the third area east of Bohne Road in Site 6 showed PCB concentrations exceeding the action level. Consequently, soil in this area was excavated below a depth of 2 feet to remove any possible risk to ecological receptors at this location. All three areas were backfilled with clean backfill material. Prior to backfilling, confirmation samples were collected to verify removal of the soil impacted by PAHs and PCBs that exceeded the removal action levels.

Based on the overall findings of the RI and the results of the removal action, it is concluded that potential ecological risks have been addressed and no further action is necessary to allow unrestricted use of Site 6/6A OU-2.

## 2.8 Selected Remedy

The selected remedy for Site 6/6A OU-2 is “No Further Remedial Action”. After evaluating the information presented in the RI report (CH2M HILL, 2008b), including the results of the human health and ecological risk assessments, “No Further Remedial Action” is selected because there are no risks to human health or ecological receptors that would warrant further remedial action beyond the 2008 removal activities. Based on this “No Further Remedial Action” determination, the Navy recommends that Site 6/6A OU-2 be permanently removed from the IR Program.

## 2.9 Statutory Determinations

The selected remedy will not result in hazardous substances, pollutants, or contaminants remaining at Site 6/6A OU-2 exceeding levels that allow for unlimited use and unrestricted exposure. Therefore, a 5-year review will not be required for the selected remedy.

## 2.10 Documentation of Significant Changes

The Site 6/6A OU-2 PRAP was released for public comment on August 11, 2008, and presented to the public at a public meeting on August 13, 2008. The PRAP identified “No Further Remedial Action” as the preferred alternative for the site. The Navy reviewed all written and oral comments submitted during the public comment period (see Section 3, Responsiveness Summary) and determined that no significant changes to the remedy, as originally identified in the PRAP, were necessary or appropriate.

# Responsiveness Summary

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The Responsiveness Summary presents stakeholder concerns about the site and the selected remedy, and explains how those concerns were addressed and factored into the remedy selection process. This Responsiveness Summary was prepared after the 30-day public comment period (August 11 to September 9, 2008) and public meeting (August 13, 2008), in accordance with USEPA guidance (USEPA, 2002).

## 3.1 Stakeholder Comments and Lead Agency Responses

The PRAP for Site 6/6A OU-2 was presented at a public meeting held on August 13, 2008 as described in Section 2.3. A transcript of the public meeting is provided in Appendix B.

None of the community members expressed dissatisfaction with the Navy's selection of "No Further Remedial Action" for Site 6/6A OU-2, and no significant comments were received during the 13 August 2008 public meeting. Questions received during the meeting were addressed at the meeting and are documented in the meeting transcript (Appendix B).

Only one question was posed by a community member during the public meeting. The individual asked for clarification of the cleanup levels used during the interim removal action at Site 6/6A. The Navy and the USEPA responded by describing the difference between federal Maximum Contaminant Levels, which are used for public health protection for public drinking water supplies, and the risk-based cleanup levels that were developed for the interim removal action for surface soil and sediment. It was explained to community members that the cleanup levels were specifically established for surface soil and sediment for ecological receptors because PCBs can bio-accumulate in lower trophic organisms and be carried up the food chain to higher-level organisms.

## 3.2 Technical and Legal Issues

No technical or legal issues have been identified for Site 6/6A OU-2 with respect to this ROD.

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## Tables

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**Table 1 - Summary of Previous Site 6/6A Investigations**

<b>Year/Activity</b>	<b>Key Findings</b>
1984 – Initial Assessment Study	Site 6/6A was identified as a potential IR site.
1985 – Confirmation Study	Soil, groundwater, surface water, and sediment samples were collected and analyzed for metals and oil and grease. Eight monitoring wells were installed. Verified presence of impacted site media based on the 1984 Initial Assessment Study.
1989 – RCRA Facility Assessment Phase II Report	Stated contamination at Site 6 may have resulted from past waste handling and disposal practices.
1992 - UST Removal	10,000-gallon waste oil tank was removed from the fuel farm.
1994 – Interim Remedial Investigation	Additional soil samples were collected from three depths at 10 locations and groundwater samples from eight monitoring wells.
1995 – EE/CA for OU-1	Additional surface soil and groundwater samples to address OU-1 surface soil.
1996 – Draft Preliminary Ecological Risk Assessment	Identified potential ecological receptors.
1999 - Design Development Submittal for Site 6 and 6A	Evaluated the presence of pesticides, characterized geotechnical properties of the surface soil, and determined whether hazardous constituents were present in the subsurface soil in the immediate vicinity of the former 10,000-gallon waste oil tank.
1999 – Focused Feasibility Study for OU-1	Provide the basis for selecting a remedial action for Site 6A OU-1.
1999 – Final ROD for OU-1	Completion of the removal action and ROD for OU-1 surface soil at Site 6A.
2004 – Record of Decision Amendment for OU-1	Additional soil sampling and risk assessment was performed in support of the ROD amendment and documenting there is no risk to human health for Site 6A OU-1.
2008 – EE/CA for OU-2	Recommended removal of surface soil and sediment posing a potential risk to ecological receptors within the Site 6/6A drainage area.
2008 – Removal Action for OU-2	Addressed PAH and PCB concentrations in surface soil and sediment posing a potential risk to ecological receptors. The removal action achieved the remedial action objectives.

**TABLE 2**  
 Human Health Risk Assessment Summary  
 Site 6/6A OU-2 (Surface Soil, Sediment, and Groundwater)  
 NAS Patuxent River, Maryland

Risk Scenario	Exposure Pathways						Pathway Totals	
	Surface Soil		Sediment		Groundwater		Risk	HI
	Risk	HI	Risk	HI	Risk	HI		
Current/Future Trespasser/Visitor (Adult)	RME = $6.0 \times 10^{-6}$	RME = 0.058	RME = $3.0 \times 10^{-6}$	RME = 0.065	NA	NA	RME = $9.0 \times 10^{-6}$	RME = 0.123
Current/Future Trespasser/Visitor (Adolescent)	RME = $2.8 \times 10^{-6}$	RME = 0.069	RME = $1.4 \times 10^{-6}$	RME = 0.085	NA	NA	RME = $4.2 \times 10^{-6}$	RME = 0.154
Current/Future Industrial Worker	RME = $1.8 \times 10^{-5}$	RME = 0.173	RME = $6.7 \times 10^{-6}$	RME = 0.146	NA	NA	RME = $2.5 \times 10^{-5}$	RME = 0.319
Future Resident (Adult)	(a)	RME = 0.194	(a)	RME = 0.218	(a)	RME = 3.199 CTE = 1.57	(a)	RME = 3.61 CTE = 1.57*
Future Resident (Child)	(a)	RME = 1.6 CTE = 0.338	(a)	RME = 1.81 CTE = 0.311	(a)	RME = 7.47 CTE = 4.96	(a)	RME = 10.9 CTE = 5.61*
Future Resident (Child/Adult)	RME = $6.3 \times 10^{-5}$	(b)	RME = $2.9 \times 10^{-5}$	(b)	RME = $4.0 \times 10^{-6}$	(b)	RME = $9.7 \times 10^{-5}$	(b)
Future Construction Worker	RME = $1.2 \times 10^{-6}$	RME = 0.174	RME = $5.6 \times 10^{-7}$	RME = 0.326	RME = $2.5 \times 10^{-8}$	RME = 0.032	RME = $1.8 \times 10^{-6}$	RME = 0.532

Risk - carcinogenic risk. The range of acceptable carcinogenic risk is  $1 \times 10^{-6}$  to  $1 \times 10^{-4}$ .

HI - hazard index. A hazard index of less than 1.0 indicates acceptable noncarcinogenic risk.

(a) Carcinogenic risks were not calculated for an adult or child resident, but were calculated for a lifetime child/adult resident, following EPA guidance.

(b) Hazard Indices were not calculated for a lifetime adult/child resident, but were calculated individually for an adult and child resident, following EPA guidance.

NA = Not analyzed

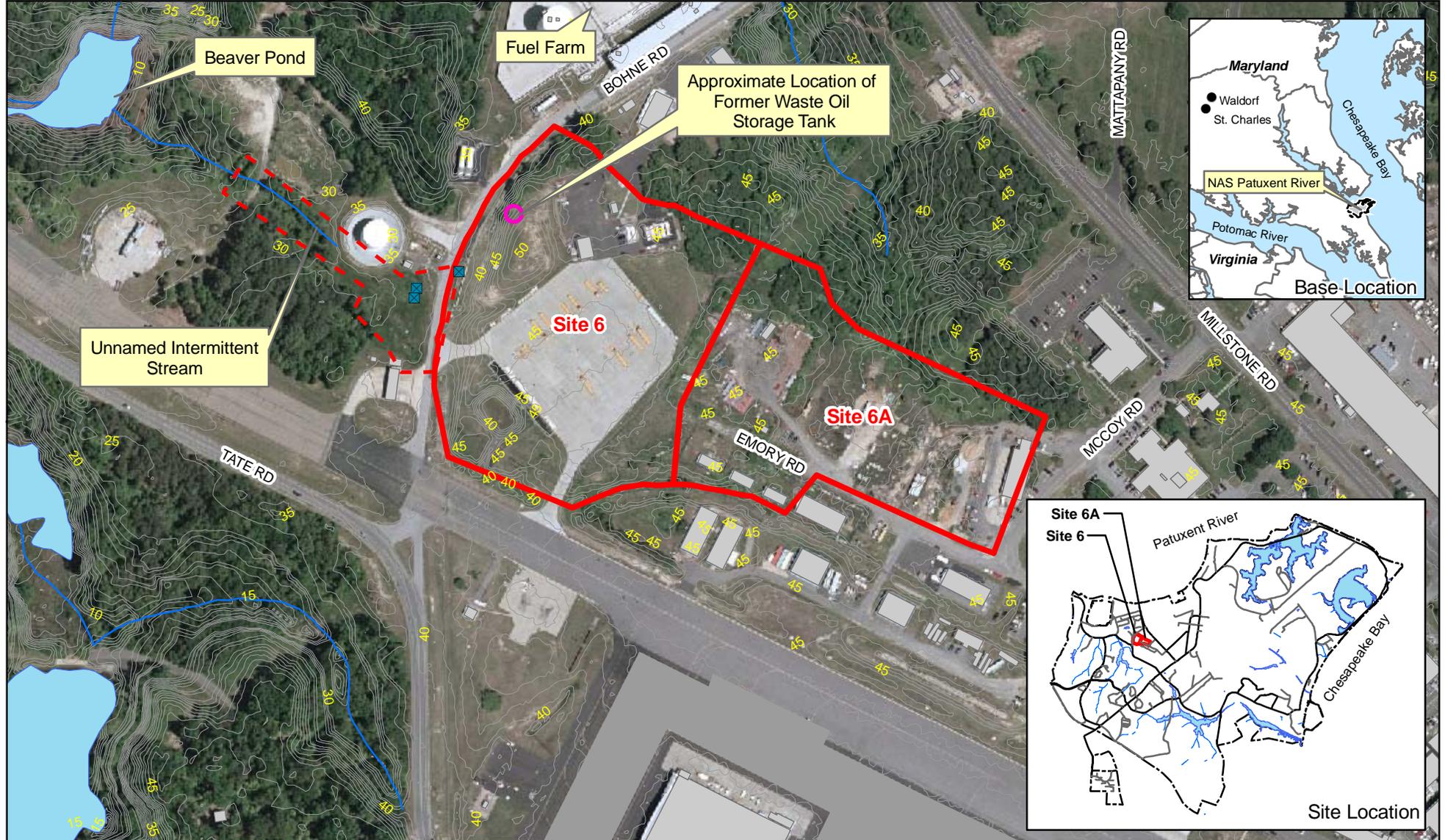
RME - Reasonable Maximum Exposure. This represents the maximum level of exposure to contaminants present at a site that is reasonably expected to occur.

CTE - Central Tendency Exposure. This represents the average, rather than upper limit, exposure that could reasonably be expected to occur at a site. The CTE scenario is probably more representative of the actual risk to a majority of potential receptors.

\* CTE HI is above 1 for Thallium in groundwater. Thallium concentrations were consistent with the sporadic detections and concentrations of thallium that have been observed at other NAS IR sites. Thallium detections in groundwater at this site do not pose an unacceptable risk.

## Figures

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**Legend**

-  Inlet/Outlet to Culvert Under Bohne Rd.
-  IR Site Boundary
-  Surface Waterbody
-  Unnamed Intermittent Stream
-  Site 6/6A OU 2 Surface Soil/Sediment Boundary
-  Elevation Contour - 1ft Interval

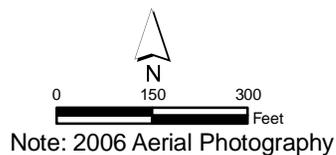
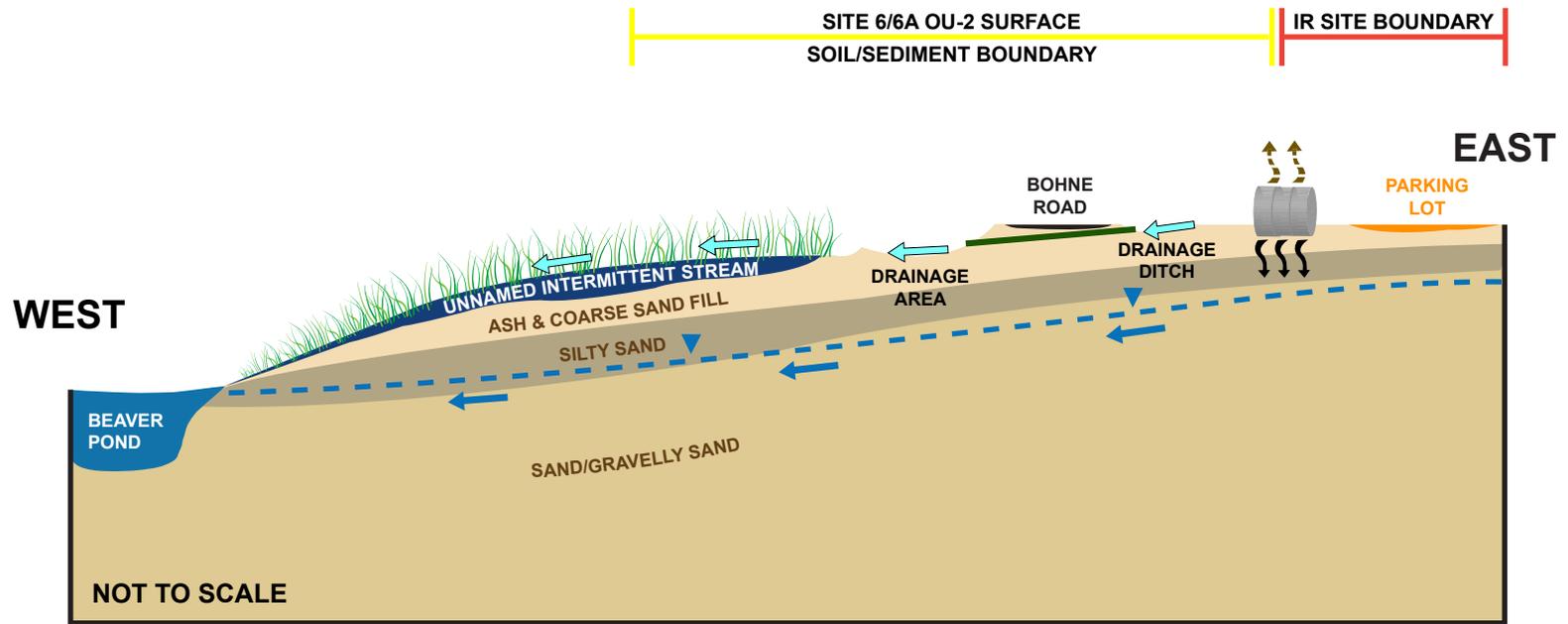


Figure 1  
 Location and Vicinity  
 Site 6/6A OU-2  
 NAS Patuxent River  
 St. Mary's County, Maryland



**LEGEND**

IR Site Boundary

Site 6/6A OU-2 Surface Soil/Sediment Boundary

Drainage Culvert

Former Waste Oil Storage Tank (Removed in 1992)

Volitization/Diffusion

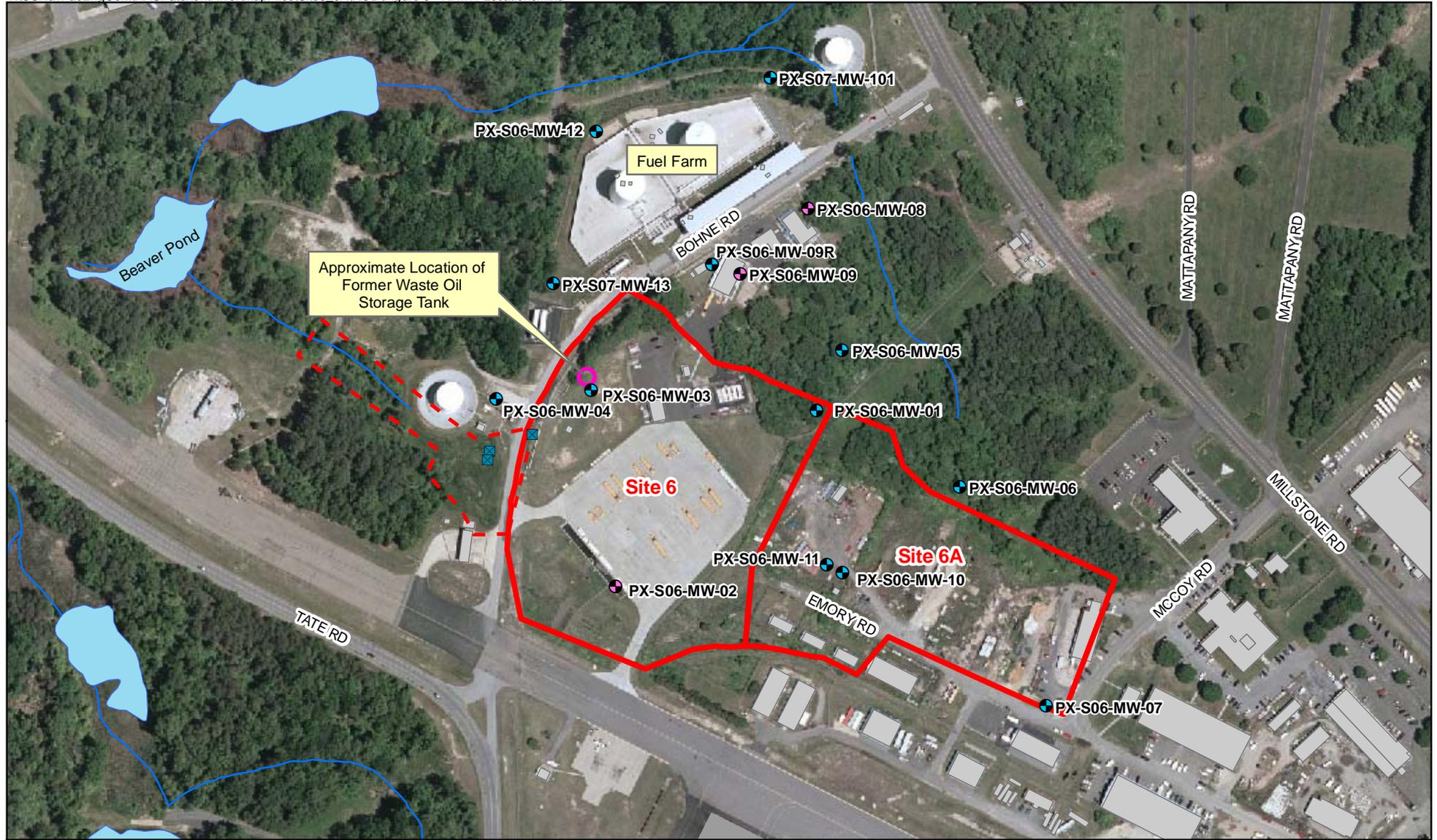
Surface Runoff/Erosion

Infiltration/Leaching

Direction of Groundwater Flow

Approximate Potentiometric Surface

**Figure 2**  
 Conceptual Site Model  
 Site 6/6A OU-2  
 NAS Patuxent River  
 St. Mary's County, Maryland



**Legend**

- Monitoring Well
- Abandoned or Destroyed Well
- Inlet/Outlet to Culvert Under Bohne Rd.
- IR Site Boundary
- Site 6/6A OU 2 Surface Soil/Sediment Boundary
- Surface Waterbody

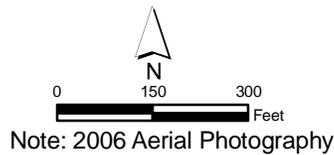
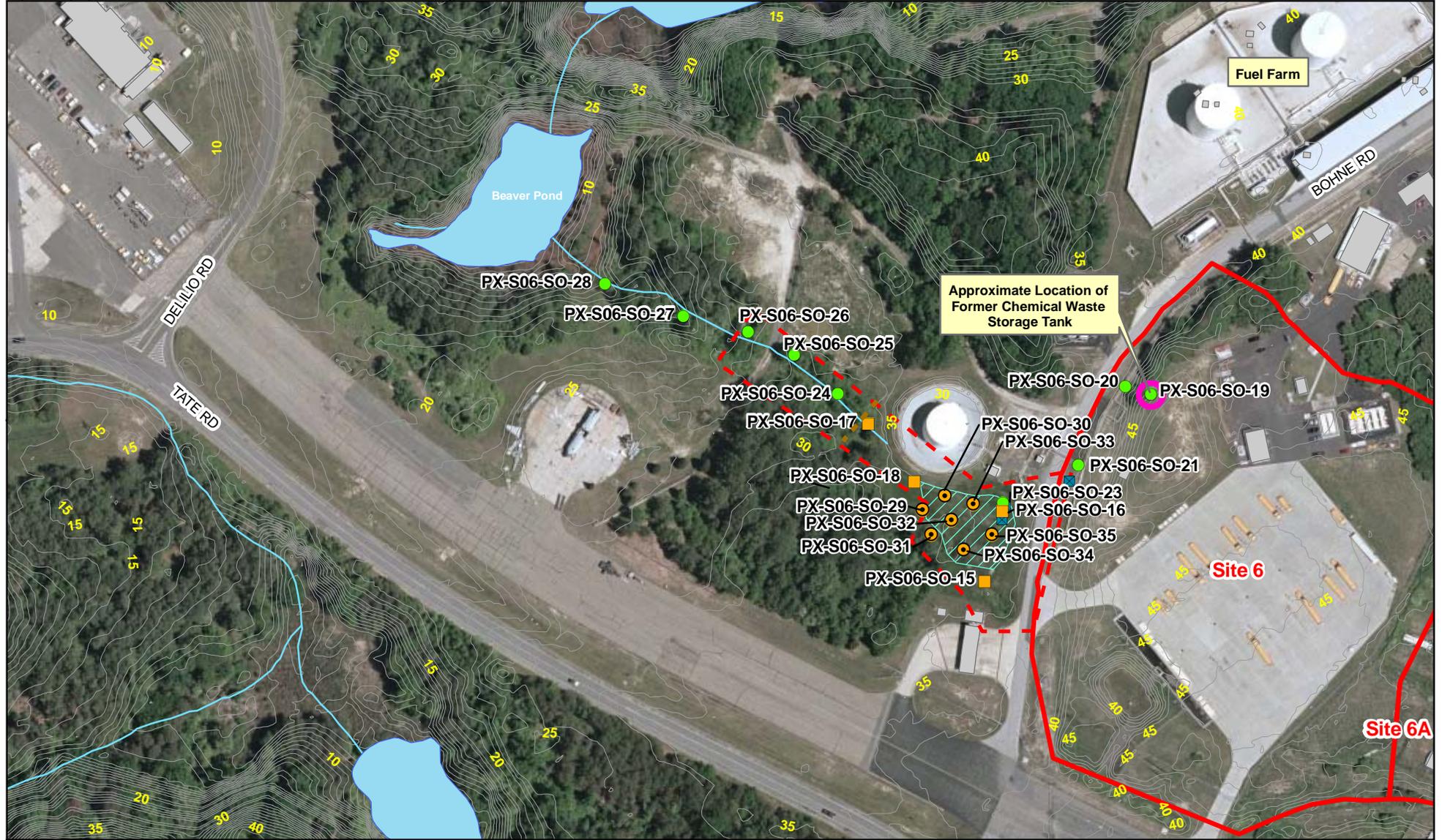


Figure 3  
Remedial Investigation Monitoring Well Locations  
Site 6/6A OU-2  
NAS Patuxent River  
St. Mary's County, Maryland



**Legend**

- April 2004 Sediment/Surface Soil Sample Locations
- March 2005 Sediment/Surface Soil Sample Locations
- November 2007 Sediment/Surface Soil Sample Locations
- Inlet/Outlet to Culvert Under Bohne Rd.
- IR Site Boundary
- Surface Water
- Area Prone to Flooding
- Site 6/6A OU 2 Surface Soil/Sediment Boundary
- Transition From Soil to Sediment
- Elevation Contours - 1ft Interval

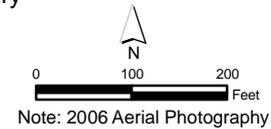
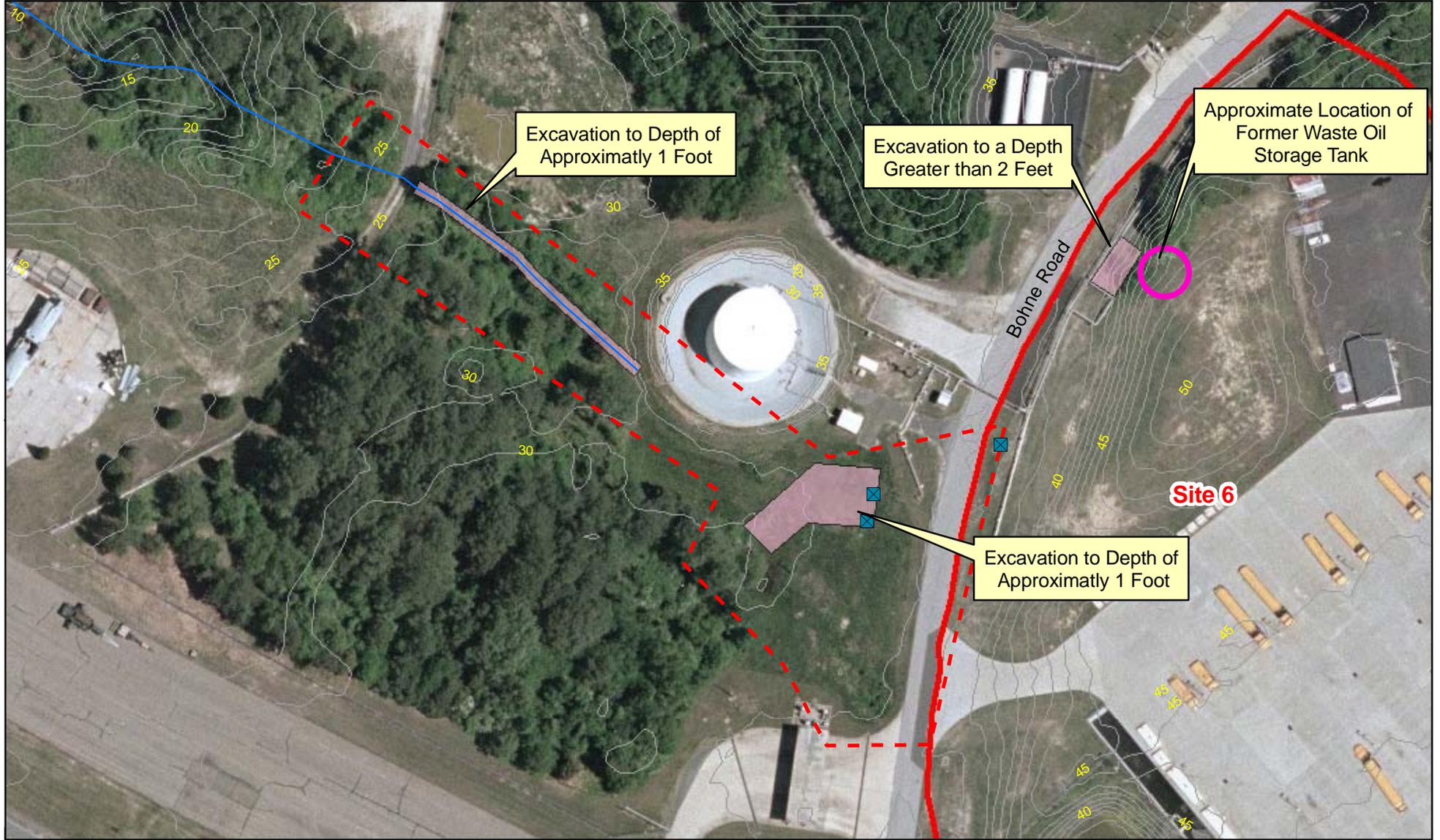


Figure 4  
Remedial Investigation Surface Soil/Sediment  
Sample Locations  
Site 6/6A OU-2  
NAS Patuxent River  
St. Mary's County, Maryland



**Legend**

- X Inlet/Outlet to Culver Under Bohne Rd.
- IR Site Boundary
- Excavated Areas
- Intermittent Drainage Swale
- Site 6/6A OU 2 Surface Soil/Sediment Boundary
- Elevation Contour - 1ft Interval

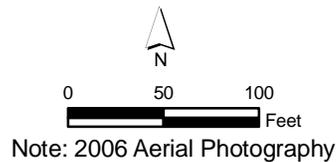


Figure 5  
Excavated Areas  
Site 6/6A OU-2  
NAS Patuxent River  
St. Mary's County, Maryland

**Appendix A**  
**State Letter of Concurrence**

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**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

1800 Washington Boulevard • Baltimore MD 21230

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Martin O'Malley  
Governor

Shari T. Wilson  
Secretary

Anthony G. Brown  
Lieutenant Governor

Robert M. Summers, Ph.D.  
Deputy Secretary

September 30, 2008

Mr. Stephen Hurff  
NAVFAC Washington  
Washington Navy Yard, Building 212  
1314 Harwood Street SE  
Washington, DC 20374-5018

RE: Record of Decision for Site 6/6A, Operable Unit 2 – Final – September 2008, Naval Air Station Patuxent River, St. Mary's County, Maryland

Dear Mr. Hurff:

The Federal Facilities Division (FFD) of the Maryland Department of the Environment's Hazardous Waste Program has completed its review of the referenced document. This Record of Decision (ROD) documents the Navy's final remedial action at Site 6/6A, Operable Unit 2. This final remedial action, "No Further Remedial Action," is based upon a Remedial Investigation, which indicated that there are no unacceptable risks to human health or ecological receptors from exposure to groundwater, surface water, or surface soil/sediment at the site. The remedy selected by the Navy is in compliance with the Comprehensive Environmental Response, Compensation and Liability Act.

A public meeting was held on August 13, 2008, to present the findings in the Proposed Plan. The FFD reviewed the response to comments within the ROD and found the Navy's responses satisfactory. Based upon the acceptable level of protection to human health and the environment provided by the remedy, the FFD concurs with the Navy's selected remedy, "No Further Remedial Action," for Site 6/6A, Operable Unit 2.

If you have any questions, please contact me at (410) 537-4238.

Sincerely,

Heather Njo  
Remedial Project Manager  
Federal Facilities Division

HN:hn

cc: Mr. S. Andrew Sochanski  
Mr. Horacio Tablada  
Mr. Harold L. Dye, Jr.

Appendix B  
Public Notice and Public Meeting Transcript



## Change

Continued from Page B-1

ent since a lot of people aren't aware of the date. It's been [Aug.] 15th forever," said Huntington head volleyball coach Shari Turner, whose program has been the Class 3A state runner-up the last three years. "We lose a whole day [of practice this year under the new bylaw versus the former schedule], and I don't like that too much. You start and you have to stop, because you're not allowed to practice on Sunday."

She added: "I'm sure the reason was pure [in passing the new bylaw], because the 15th can fall on whatever day of the week. But it just made sense to me to keep the same date [of Aug. 15]. I guess I'm just not a fan to start on a Saturday, then have nothing on Sunday, then restart on Monday. You lose some connectivity with starting practice. It seems like you have two starting dates to pre-season practices."

Other modifications to the Southern Maryland athletic landscape this fall are the brand new varsity life of St. Mary's Ryken football and Waldorf's Potomac Ridge Golf Course getting selected as the site for this year's state golf

"We don't know what to expect since we've never played varsity football before. Our whole community is very excited about this."

**Michael Vosburgh,**  
St. Mary's Ryken athletic director

tournament on Oct. 21-23. University of Maryland's greens in College Park, the usual location for the state gathering, is closed for a year beginning July 1 for course upgrades.

Ryken's first-year program, which began two seasons ago as a freshman unit, hits the practice fields beginning today to prepare for its inaugural gridiron varsity season.

"There is a lot of buildup, our kids are really excited," Ryken athletic director Mike Vosburgh said. "We don't know what to expect since we've never played varsity football before. Our whole community is very excited about this."

Last year, Ryken's junior varsity team went 6-3.

The varsity schedule includes four Washington Catholic Athletic Conference opponents and six outside Ryken's league.

The selection of Potomac Ridge for the state gathering could have positive ramifications locally, because it is the home course of Westlake. And many other SMAC teams — which perennially feature state contender La Plata — are also familiar with the course.

"I think any time a state championship is held at a home course, there are benefits [for the home team]," Zaccarelli said. "Just like the cross country [state meet at Hereford High School] is an advantage for Hereford, its works the same way for golf. But there are only two sports that have a home course for a state championship."

Westlake is not projected as a state contender this year.

Zaccarelli noted that football — especially at the junior varsity and freshman levels — will be impacted from the

change in the preseason start-up date to the fall. The first available regular season play date is 20 days from the first day of practice, falling on Sept. 5 this year.

Usually junior varsity and freshman games are played on Thursdays during the season, but the first Thursday in September will not be 20 days from the Aug. 16 first practice date. So the junior varsity and freshman games will be moved to Saturday in Week 1 and then resume their Thursday-heavy schedule from there.

Football teams are only allowed to play one game per week, unless approved for exceptional circumstances, but Zaccarelli said five days between games is satisfactory. There is another Saturday game for junior varsity and freshman teams scheduled during the season for schools within the SMAC.

"Teachers report on Aug. 18 this year, and usually they don't report until after two or three days of two-a-days [practices]," Zaccarelli said. "The [new preseason startup] could bump everything back — that's kind of the weakness of the whole thing. Other than that, it makes sense."

dcogle@somdnews.com

# Hut-1, hut-2 ..... Hike!

## Ryken snaps ball on new varsity football program

By DALLAS COGLE  
Staff writer

The entrance into a new arena of athletic competition for St. Mary's Ryken is now here.

The Leonardtown Catholic school launches its brand new varsity football program today with preseason practices unfolding, as the Knights build toward their groundbreaking opening game on Aug. 29 at Annapolis Area Christian School.

All 10 of Ryken's varsity games will be played on the road during this inaugural football season. The school does not break ground on a stadium until next spring and has plans for the structure to be completed by the beginning of next season.

Four of Ryken's opponents hail from the Washington Catholic Athletic Conference, while the six others are Christian and private schools at a similar level of competitiveness. Last year at the junior varsity level, Ryken went 6-3 to provide plenty of momentum heading into its first foray in the varsity ranks.

"Our JV team was very good, and the kids realized they can play football," Ryken athletic director Mike Vosburgh said. "We've scheduled four WCAC teams and six outside the conference, so we're hoping to be very competitive."

Vosburgh added that he believed Annapolis Area Christian was only in its second year as a varsity outfit.

Just two years ago when Ryken began its football existence at the freshman level, it captured just one win. So there was great improvement last year given the junior varsity's success.

"There were a lot of kids who had never played football until this year," Vosburgh said. "They were hungry to play football."

Ryken also fielded a freshman team last year, but will have one this season with varsity and junior varsity squads.

Vosburgh did state that it was a "very good possibility" of the freshman level backmixing down the road.

About 110 players are expected at today's preseason and Vosburgh expects that varsity and junior varsity teams will equally share the turnout, about 55 at each level.

"This is going to be a big year — it's Year 3 of our plan for us to be competitive," Vosburgh said about the varsity program being groomed along. "Anytime you start a program, it's going to take some time. That's why we have a five-year program building, of being very competitive in WCAC."

"This is our first year of real football at a high level. Realistically, we know that it's going to happen overnight. It's a big year for us."

Bob Harmon, who coached the freshman team two years ago and was at the helm of the junior varsity last season, is Ryken's head coach in the varsity world. Ray Terrell, who coached the varsity team for years, is the junior varsity coach at Ryken.

Ryken's junior varsity team will have six home games, among its nine-game schedule, hosting visitors at La Park.

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### THE DEPARTMENT OF THE NAVY INVITES PUBLIC COMMENT ON PROPOSED REMEDIAL ACTION PLANS FOR THREE SITES UNDER THE INSTALLATION RESTORATION PROGRAM NAVAL AIR STATION PATUXENT RIVER, MARYLAND

In accordance with the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Naval Air Station (NAS) Patuxent River invites public comment on the Proposed Remedial Action Plans (PRAPs) for the following three Installation Restoration (IR) Program sites:

#### Site 6/6A Operable Unit (OU) 2

The findings of the Remedial Investigation (RI) and the results of the removal action for Site 6/6A OU-2, which consists of the groundwater and surface water at Site 6/6A (Bohneyard adjacent to the Fuel Farm) and the surface soil and sediment in the drainage area downgradient of Site 6/6A, indicate that there are no unacceptable risks to human health or the environment from site media. Therefore, 'no further remedial action' is proposed for Site 6/6A OU-2.

#### Site 11 OU-2

The findings of the RI for Site 11 OU-2, which consists of the groundwater, surface water, and sediment associated with the Former and Current Sanitary Landfill, indicate that there are no unacceptable risks to human health or the environment from the site. However, three contaminants were detected in Site 11 OU-2 groundwater samples at concentrations exceeding federal standards. Therefore, the proposed remedy to address the groundwater is land use controls and long-term monitoring of the groundwater.

#### Sites 4 and 5 OU-6

The findings of the RI for Sites 4 and 5 OU-6, which consists of the site-wide groundwater associated with Site 4, Hermanville Disposal Site, and Site 5, Disposal Site near Pine Hill Run, indicate that there are no unacceptable risks to human health or the environment from groundwater. Therefore, 'no action' is proposed for Sites 4 and 5 OU-6.

Public comment begins on **August 11, 2008, and closes on September 9, 2008. A public meeting is scheduled for 6:00 p.m. on August 13, 2008, at the Frank Knox Employee Development Building, Building 2189, Room 100**, to present the PRAP for each site and answer questions.

PRAPs are issued as part of the Navy's IR Program. The purpose of a PRAP is to describe the background and rationale for the selection of the remedy proposed by the Navy and U.S. Environmental Protection Agency (EPA). The PRAP includes solicitation of public comments on the remedy.

The public is encouraged to comment on the PRAPs. The final remedies for each site will be selected only after the public comment period has ended. An alternative remedy may be selected for any site only after all comments have been received from the public. Relevant environmental documents for each site, including final technical reports and the PRAPs, are available for review at the following repositories:

**Naval Air Station Patuxent River Library**  
22269 Cedar Point Road, Building 407  
Patuxent River, MD 20629  
(301) 342-1927

**Hours:** Monday-Thursday: 8:30 a.m. – 6:00 p.m.  
Friday: 8:30 a.m. – 5:00 p.m.  
Closed Saturday and Sunday

**St. Mary's County Public Library  
Lexington Park Branch**  
21677 FDR Boulevard  
Lexington Park, MD 20653  
(301) 863-8188

**Hours:** Monday-Tuesday: 9:00 a.m. – 8:00 p.m.  
Wednesday: 12 noon – 8:00 p.m.  
Thursday and Saturday: 9:00 a.m. – 5:00 p.m.  
Friday: 11:00 a.m. – 5:00 p.m.  
Closed Sunday

Comments may be written and mailed (postmarked by September 9, 2008) to any of the following points of contact:

**Public Affairs Officer, NAS**  
Attn: Mr. John Romer  
22268 Cedar Point Road  
PAO Building 409, Room 204  
Patuxent River, MD 20670-1154

**U.S. EPA Region III**  
Attn: Mr. S. Andrew Sochanski  
Hazardous Site Cleanup Division 3HS11  
1650 Arch Street  
Philadelphia, PA 19103-2029

**Maryland Department of the Environment**  
Attn: Ms. Heather Njo  
Federal Facilities Division  
Hazardous Waste Program  
1800 Washington Boulevard, Suite 645  
Baltimore, MD 21230-1719

For further information, contact Mr. John Romer at (301) 757-6748 between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding federal holidays.

## Outdoors

Continued from Page B-1

helper on board) to cut up the fish you caught (they'll be now in your cooler where the sandwiches and drinks used to be) into boneless and skinless filets.

Those empty-zipped plastic bags you brought along are for these fish filets.

Tip the mate generously for this service ... it's well worth it.

Also, if you're a true novice at fishing, when you do go aboard, it will only take the mate about five seconds to realize this little fact. You likely won't even know the evaluation has happened, and you probably won't have to say a word to get this perception across.

Just smile nicely and maybe say, "I'll take any help you're willing to give me," and you'll probably make a quick friend for the honesty plus get some real assistance throughout the day on your trip.

For example, I'll bet when you catch that first fish, the mate will likely be at your side before you even get your little trophy out of the water, and will help you take it off the hook and throw it into the cooler. It really is going to be that easy.

Before you drop your line overboard, spend that first minute after the captain yells, "Lines in" watching everyone else. You'll quickly see how easy it is. Imitate, exactly, what everyone else is doing.

Then, when you finally get those fresh fish filets back home, get out a couple of bowls like you'd put cereal in. Crack a few eggs into one (no shells), seasoned flour goes in another and some crushed up bread crumbs are put in the third. Dunk the filets individually in the flour (get both sides good and white), then give

them an egg wash and the bread crumbs all over next.

Into the pan they the (spray in some Pam first then nicely, flip just on don't overdo the cooking you'll quickly have a meal for a king of the creek life.

You'll also, very likely to go out and do this all again real soon.

And, the big bonus, 1 time out you'll be a seas headboat pro.

I'm serious. That's all to it, and a headboat experience is absolutely and fully the very best way to fish and find out how you're going to like it.

I'm guessing, you're going to relish this experience.

Another headboat I'd recommend is the "Bay over in Ocean City. If you're there for a family holiday time soon, this is a great spend a few hours.

This particular vessel makes two trips every day (morning and afternoon) and the only \$28 for adults for a day out on the water. It's moored at the O.C. Fish Center, and that place is right along the ocean southern end of Maryland vacation capital.

Trust me. Taking a headboat the first time fishing is great and sound advice. Next Wednesday, I'll pass along some other pointers and you want to take this up notch as Emeril would say the next level.

Good luck.

If you do try it, don't forget to e-mail me afterward so I can know how it went. I would love to read your report about it. If I get any real ones, I might even pass along to everyone. Of course, I'll be sure to get your permission to do that first.

zbasser@aol.com

# Soper

Continued from Page B-1

Taylor, a rising senior. "I'm definitely excited."

"He's really good," said teammate Kelly Kady, also a rising senior. "I'm excited to play for him."

Former Calvert varsity girls coach Doug Jones, who had Soper as an assistant for a year, agreed.

"They're getting a fabulous coach," he said. "This is one very skilled person. He's very knowledgeable coach. Not only is he a very fine player but he has a lot of soccer smarts. He knows the game and he can teach the game. He's going to have a very formidable program."

Soper graduated from Thomas Stone High School in 1982 where he was a three-year starter on the varsity team. During his tenure, the Cougars won the SMAC championship twice and were crowned Class 3A South regional champions three times. After a year at Charles County Community College, now called College of Southern Maryland today, Soper transferred to Salisbury University where he played back/sweep for three years.

He graduated in 1987 with a

## Looking for a few good leaders

New Huntingtown girls soccer coach Rob Soper said the key to the 2008 season will be getting much-needed leadership from his senior-laden team

"There was a lot of talk last year, but I never really felt we walked the walk. When you go back and look at the four games we lost last year, once we got down by a goal we never came back and won a game. And to me, that's a sign of leadership and gutting it out and someone putting the team on their back and carrying them. We have a lot of strong players; they just don't necessarily fit the leadership role and that's OK because you need good followers as well. But we need some good leaders on the field. We need to do it with our actions versus just talking about how we're going to do it. That's the big theme I'm going to carry this year."

MICHAEL REID

degree in liberal studies and entered the Army. He stayed there for his four-year stint and saw action during Operation Desert Storm.

He currently works at the Census Bureau and has two children; Mitchell and Lauren, a rising sophomore at Huntingtown.

He was an assistant coach with the Thomas Stone boys soccer team for a year and was Jones' assistant at Calvert for another season. He's been an assistant at Huntingtown the previous two years.

"It was huge, because I had the opportunity to be very much involved but at the same time, I could sit back and do

some assessing," Soper said of his two-year stint with the Hurricanes. "I could determine where I think we can improve, where our weaknesses are and what areas we need to improve in and what things we can do different on the pitch tactically this year. I feel like I established a real good rapport."

Soper said he learned plenty from Hobson.

"Obviously Gina has a great track record and one of the great things about working with her is that I learned a lot," he said. "I feel comfortable going in and doing X's and O's and running [practice] sessions but [now I also] know how to deal with 18 or 20 high school

"They're getting a fabulous coach."

"This is one very skilled person. He's very knowledgeable coach. Not only is he a very fine player but he has a lot of soccer smarts. He knows the game and he can teach the game. He's going to have a very formidable program."

Doug Jones, former Calvert girls soccer coach, on new Huntingtown girls soccer coach Rob Soper

teenagers. She taught me tolerance and patience. Just that one season I learned a lot from her."

Kady and Taylor agree that adjusting to a new coach for their senior campaigns would have been more difficult had Soper not been with the team.

"I think it would have been more frustrating if it was somebody that didn't know the program as well," Kady said. "But the fact he was on the staff before makes it an easier transition."

"It is tough, but since he was there last year, we all got to know him pretty well," Taylor said. "We know what he expects of us so it won't be too much of a difference."

you need to be efficient what you have."

"Oh my gosh, ye said when asked if Sopers will work hard. "to have one very tight They will work, that's statement. They def work."

But Kady and Taylor with that.

"Yeah, I know [th work hard], but I think we need to w Taylor said. "If we wa states and hopefully what we're going to I so I'm ready."

"Our fitness level v ter and our team bo be a lot better than year," Kady said. "Th thing, we lacked a need. It's all about th

Soper said his ex on the eve of the sea slate full of marquee f as high as his practice

"My approach is to game," he said. "It so gant and I don't m sound arrogant, bu game-by-game situ play every game to game. My goal is to games in November, v it all, because if you games in November won states."

mreid@somdnews.com

### THE DEPARTMENT OF THE NAVY INVITES PUBLIC COMMENT ON PROPOSED REMEDIAL ACTION PLANS FOR THREE SITES UNDER THE INSTALLATION RESTORATION PROGRAM NAVAL AIR STATION PATUXENT RIVER, MARYLAND

In accordance with the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Naval Air Station (NAS) Patuxent River invites public comment on the Proposed Remedial Action Plans (PRAPs) for the following three Installation Restoration (IR) Program sites:

#### Site 6/6A Operable Unit (OU) 2

The findings of the Remedial Investigation (RI) and the results of the removal action for Site 6/6A OU-2, which consists of the groundwater and surface water at Site 6/6A (Bohneyard adjacent to the Fuel Farm) and the surface soil and sediment in the drainage area downgradient of Site 6/6A, indicate that there are no unacceptable risks to human health or the environment from site media. Therefore, 'no further remedial action' is proposed for Site 6/6A OU-2.

#### Site 11 OU-2

The findings of the RI for Site 11 OU-2, which consists of the groundwater, surface water, and sediment associated with the Former and Current Sanitary Landfill, indicate that there are no unacceptable risks to human health or the environment from the site. However, three contaminants were detected in Site 11 OU-2 groundwater samples at concentrations exceeding federal standards. Therefore, the proposed remedy to address the groundwater is land use controls and long-term monitoring of the groundwater.

#### Sites 4 and 5 OU-6

The findings of the RI for Sites 4 and 5 OU-6, which consists of the site-wide groundwater associated with Site 4, Hermanville Disposal Site, and Site 5, Disposal Site near Pine Hill Run, indicate that there are no unacceptable risks to human health or the environment from groundwater. Therefore, 'no action' is proposed for Sites 4 and 5 OU-6.

Public comment begins on **August 11, 2008, and closes on September 9, 2008. A public meeting is scheduled for 6:00 p.m. on August 13, 2008, at the Frank Knox Employee Development Building, Building 2189, Room 100**, to present the PRAP for each site and answer questions.

PRAPs are issued as part of the Navy's IR Program. The purpose of a PRAP is to describe the background and rationale for the selection of the remedy proposed by the Navy and U.S. Environmental Protection Agency (EPA). The PRAP includes solicitation of public comments on the remedy.

The public is encouraged to comment on the PRAPs. The final remedies for each site will be selected only after the public comment period has ended. An alternative remedy may be selected for any site only after all comments have been received from the public. Relevant environmental documents for each site, including final technical reports and the PRAPs, are available for review at the following repositories:

**Naval Air Station Patuxent River Library**  
22269 Cedar Point Road, Building 407  
Patuxent River, MD 20629  
(301) 342-1927

**Hours:** Monday-Thursday: 8:30 a.m. – 6:00 p.m.  
Friday: 8:30 a.m. – 5:00 p.m.  
Closed Saturday and Sunday

**St. Mary's County Public Library  
Lexington Park Branch**  
21677 FDR Boulevard  
Lexington Park, MD 20653  
(301) 863-8188

**Hours:** Monday-Tuesday: 9:00 a.m. – 8:00 p.m.  
Wednesday: 12 noon – 8:00 p.m.  
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Submit

## Riptide too strong for diamond 1

The Northern Calvert Riptide, a girls' 12-U fastpitch softball team, concluded the 2008 Calvert County Little League softball season with a win at the five-team Northern Calvert Shootout league championship tournament.

The Riptide, which finished 11-5 on the season, was also co-champions of the "Super Six" Calvert County Championship tournament, which was sponsored by 5 Star Athletics.

Northern Calvert, which was sponsored by J&R Business Co. also placed second in the season-ending Maryland District 1 peak Conference's "Battle by the Bay" championship game at Dunkirk District Park.

In the front row, from left, are Kaitlyn Hynes, Katie Kampson Peters, Erika Jaensch, Karly Klem and Diamond Rodger. Back row are Madison Marinaccio, left, Gillian Krautman, Juli Kayley Powell, Megan Howell and Coach Steve Marinaccio. Seated are assistant coaches Chris Kampson and Mike Klem.

## Tim O'Brien Senior Men's Golf League

The following are the second half standings for the Tim O'Brien Senior Men's Golf League, which plays Tuesday through Thursdays at the Chesapeake Hills Golf Club in Lusby.

Standings are as of Aug. 1

**Tuesday**

**Flight 1:** Rick Varley 44, Charles Knapper 40, Jack Van Wie 35, Tony Luvara 34, John Benish 33, Len Addiss 32, Rob Benson 27, Cary Gradle 25

**Flight 2:** Barney Hathaway 46, Kermit Dyke 42, Roland Smith 40, Bill Foley 37, Dave Underwood 36, Brian Stevens 36, William King 27, John Manessa 23, Larry Glaubitz 19, Charles Craft 18

**Flight 3:** Don Kirby 41, Allen Brown 40, Harold Aurand 36, Jesse Blake 35, Tom Schwartz 35, Dick Patterson 29, George Wilson 29, Steve Sadler 25

**Flight 4:** Willie Ouellette 26, Tim Hale 14, Jim D'Amico 13

**Flight 5:** Nick Vagianos 42, Ted Kolowski 41, Bob Rimmel 33, Emmett Early 26, Don Plastow 24, Jim Moore 9

**Wednesday**

**Flight 1:** Larry Smialek 41, nagle 40; Bob Litz 37, Gary 36, Jim Hutchison 35.5, John 31, Dave Laigle 23.5

**Flight 2:** Ron Swinger 40, Lawyer 37, Frank McCabe 3, Rodgers 32, Ron Fields 28, I 26.5

**Flight 3:** Bill Lambert 44, Jerry 44, Bob Bombard 37, Don Roger Snead 34, Herbert Sa Ben Bowie 23, Zane Mason Polak 16

**Flight 4:** Clark Bennett 46, ston 36, Ian Sommerville 36, ton 22, Riley Harrison 6

**Thursday**

**Flight 1:** Charles Knapper son 44, Tony Luvara 43, John Barney Hathaway 31

**Flight 2:** Bill Foley 43, Fran Larry Glaubitz 38, George W Dodson 33, Harold Aurand .

**Flight 3:** Jim D'Amico 46, I 42, Tim Hale 38, Jim Rank 3 Early 32

## Correction

The following athletes should have been added to the Patuxent all-a team, which appeared in the Aug. 1 edition of The Calvert Recorder:

**First team**

Nicholas Mosquera, freshman - tennis; Lauren Nicole Trollinger, freshman - tennis

**Second team**

Andrew Ragusa, junior - soccer, lacrosse; Chris Ly, senior - tennis

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NAVAL AIR STATION PATUXENT RIVER

PROPOSED REMEDIAL ACTION PLAN

SITE 6/6A, OPERABLE UNIT 2

WEDNESDAY, AUGUST 13, 2008

FRANK KNOX BUILDING

21866 CEDAR POINT ROAD

ROOM 100

PATUXENT RIVER, MARYLAND

P R O C E E D I N G S

- - - - -

1  
2  
3 MR. HURFF: Okay, this is going to  
4 start the public meeting for Site 6, Operable  
5 Unit 2, the Bohneyard, which deals with  
6 groundwater, surface water and sediment. Site 6  
7 is located over here on the Base, close to the  
8 West Patuxent basin. It was formerly used as a  
9 storage area for fuel operations, drum storage,  
10 equipment storage, raw material storage.

11 There's -- I didn't fix that slide. It  
12 was actually a 1999 Record of Decision for  
13 Operable Unit 1. That was to address soil at  
14 the site. It put a parking lot for a fuel  
15 tanker truck parking. There was supposed to be  
16 an asphalt cap for Site 6A, which is adjacent to  
17 the site. That asphalt cap was the subject of a  
18 2006 ROD amendment where they were going to  
19 change it from an asphalt, just an asphalt  
20 parking lot to a hanger, potentially.

21 We went back and re-assessed the data  
22 that we had from the Operable Unit 1

1 investigation, as well as conducted additional  
2 sampling, and found out that there wasn't really  
3 a risk posed by the items that were found during  
4 the original investigation. So, that had a no  
5 further action determination for soils in the  
6 area of 6A.

7           There was also an adjacent fuel farm up  
8 here that was -- had three underground storage  
9 tanks in it. There was a remediation that was  
10 conducted in this area as well, there are now  
11 two above-ground tanks present at the site.  
12 This is area 6A that was -- had a ROD amendment,  
13 found no further action here. This is the fuel  
14 tanker parking area.

15           This is the area that was cleaned up  
16 for Operable Unit 2 for surface soil and  
17 sediment. And this area here where it shows a  
18 former waste oil storage tank, keep that  
19 location in mind, it will become important later  
20 on in the presentation.

21           Just to step through the aerial  
22 photographs of the site. 1938, farm land.

1 1943, the Base is being built, there's no  
2 storage out in the area, it's just adjacent to  
3 runways, taxiways. 1952, you can see some  
4 material storage out on the site. There are  
5 Quonset huts, rail lines running along the site  
6 as well.

7 1957, more of the same. Some material  
8 storage. 1964, 1965, at some point, it was  
9 reported that they placed a layer of ash from  
10 the boiler plant out here as well. We believe  
11 that's what you're seeing from that dark kind of  
12 material that will be present in some of the  
13 photos as we step through here.

14 As you can see, there are some changes  
15 where tanks are being built, additional  
16 infrastructure being constructed over time.

17 '77, this is now a fenced in area, where they  
18 had vehicles parked. Drum storage, material  
19 storage. Those are what we believe to be drums.

20 1981. '84. And there is the fuel  
21 parking area constructed. And how it looks in  
22 the current day. The area that we did the work

1 for the former waste oil tank, the interim  
2 action is right here at the corner of that  
3 expansion.

4 These are just some of the photos of  
5 historical operations that happened at the site.  
6 This is part of the reason why we came up with  
7 the Operable Unit one remedy, as well as the  
8 investigation for Operable Unit 2.

9 Let me know if you want to pause on any  
10 of these. This is one of our favorites. Okay,  
11 this guy that's standing out in the middle of  
12 the field, the former waste oil UST location,  
13 when they were doing the investigation was right  
14 where he's standing. They did sampling in this  
15 area. What we found out, during our most recent  
16 interim action, was that he really should have  
17 been standing over there somewhere.

18 That is a shot of the waste oil tank  
19 when it was there. We have been able to locate  
20 the site, both the folks that were here when  
21 that was here, as well as the other structures  
22 are visible in the photograph, so we know

1 exactly where that is now.

2 This is a shot of the site from the air  
3 before the Operable Unit one remedy was put into  
4 place. And that's it as it's going in. This is  
5 where those -- the fuel farm remediation was  
6 ongoing at this time as well. The remedial  
7 investigation. We were looking at groundwater,  
8 surface water, sediment, looking at human health  
9 and ecological receptors. We had 12 monitoring  
10 wells, and 13 surface soil and sediment samples  
11 that were taken at the site.

12 The conceptual model, we had drum  
13 storage, potential run-off through drainage  
14 ditch, the waste oil tank, on down to the beaver  
15 pond, the different drainage, groundwater could  
16 potentially flow, things could come down to hit  
17 groundwater, flow down towards the beaver pond.

18 All this material is in the remedial  
19 investigation, it's in the repositories, if  
20 anyone chose to view it.

21 These are historic sampling locations.  
22 We have this data to be considered when we were

1 doing the remedial investigation. So, we had  
2 pretty wide coverage across the area.

3 And these are the groundwater  
4 monitoring points that were used during the  
5 investigation. All the light blue dots. Which  
6 gives us this groundwater contour map.

7 Groundwater is coming around and heading this  
8 way to the ponds that are up that way. So, with  
9 our network of wells, pretty much anything that  
10 was coming from the site, we've got wells that  
11 are seeing it.

12 MR. CALVANO: Looks pretty flat.

13 MR. HURFF: Pardon?

14 MR. CALVANO: I mean, the groundwater  
15 looks pretty flat there, it's very gradual.

16 MR. HURFF: Yep, that it is.

17 This is the area that was investigated  
18 for Operable Unit 2 for surface soil and  
19 sediment. There is a drainage ditch that runs  
20 down along this side of the road that connects  
21 to the other side of the unnamed road here, that  
22 then goes into an open ditch that heads down to

1 the beaver pond. And from the beaver pond, it  
2 goes down to --

3 MR. COLLINS: Supply Pond.

4 MR. HURFF: To the Supply Pond. So, we  
5 had a number of samples that were taken in this  
6 area. We started off with a couple of these  
7 samples, these were over time as well, these  
8 weren't all done at one time. One or two of the  
9 samples came up with hits for PCBs, that  
10 triggered additional investigations, additional  
11 samples.

12 This is a list of COPCs for the human  
13 health risk assessment. You're going to notice  
14 over here that this orange color, that's PCBs.  
15 All these benzos, dibenzo, indino pyrene, these  
16 are PAHs. These, and the PCBs, were addressed  
17 in surface soil during the interim remedial  
18 action that we took. They -- they're gone.

19 They were kept in the risk assessment,  
20 as you see later in the numbers, for human  
21 health, they weren't a risk for human health, it  
22 was ecological risk that they posed a risk for.

1           In sediment, there were just two  
2   issues, in groundwater, just a couple there.  
3   Including the usual, iron, manganese, thallium.

4           Here's a summary of the risk  
5   assessment. Under the industrial trespasser,  
6   both adult/adolescent, there was no unacceptable  
7   risk. For the resident child/adult or  
8   construction worker for carcinogenic, you're  
9   within the acceptable risk range, so you're okay  
10   there. For the HIs, you are above, again,  
11   thallium, iron, were the risk drivers.

12           Under the central tendency risk  
13   exposure scenario, the HIs were still above one,  
14   and the only thing that was driving risk was  
15   thallium. That was the primary driver.

16   Comprising almost all of that 1.57 and 5.61.

17           For the ecological risk, we had this  
18   site was included in a watershed level risk  
19   assessment. BTAG, Biological --

20           MR. SOCHANSKI: Technical Assistance  
21   Group. EPA, U.S. Fish & Wildfire Service and  
22   National Oceanographic Atmospheric

1 Administration, NOAA.

2 MR. HURFF: These are folks who are  
3 specialists in ecological risk, ecological  
4 health. They had some concerns over the PCBs  
5 and PAH concentrations that we found during the  
6 watershed assessment. They wanted -- they  
7 recommended that we do additional tox studies,  
8 basically you would take soil from the site and  
9 expose it to organisms and see if they stay  
10 healthy or whether they have issues.

11 As an alternative, since the cost for  
12 the study can get fairly large, fairly quickly,  
13 we had looked at the area that was potentially  
14 impacted and said, well, how about we clean it  
15 up under Site 6, Operable Unit 2, and everyone  
16 nodded their head and was, hey, that's great.

17 So, we went with a clean-up option  
18 versus a further study option and we addressed  
19 the area that was causing ecological risk.  
20 Potential ecological risk.

21 So, from the EE/CA, we had a maximum PCB  
22 concentration, 1.7 parts per million, PAHs, 63,

1 divided into three areas. The cubic feet that  
2 are shown up on this slide is what we thought  
3 the sites would be when we were going in. At  
4 the end of the day, area A was the area that was  
5 definitely not 100 cubic feet, we're way above  
6 that.

7 We had clean-up goals of one part per  
8 million for PCBs and 6.15 for PAHs. And those  
9 clean-up goals were selected to protect lower  
10 trophic levels, worms, insects, that other  
11 things would be eating going up the food chain.

12 MR. CALVANO: So, they really weren't  
13 just MCLs, you were doing better than hitting  
14 the MCL on those?

15 MR. HURFF: Well, an MCL is a maximum  
16 contaminant level is a level -- it's not a  
17 risk-based threshold. That's a level that's  
18 used for public drinking water supplies for  
19 protection of public health. It's -- MCLs are a  
20 little squirrely that way.

21 MR. SOCHANSKI: This is for soil or  
22 sediment, specifically, and for, again,

1 ecological receptors. Because the levels of  
2 particularly PCBs can bio-accumulate in lower  
3 trophic organisms, worms, birds, moles, eat the  
4 worms, that bio-accumulates and goes up the food  
5 chain.

6 MR. HURFF: That's part of the reason  
7 that we have to pay attention to the low  
8 concentration, because as they go up the food  
9 chain, they bio-magnify. PCBs tend to be  
10 persistent, they stick in fatty tissues, they  
11 don't go away. They're not metabolically  
12 reduced.

13 MR. SOCHANSKI: Released.

14 MR. CALVANO: Like seafood poisoning in  
15 fish.

16 MR. HURFF: They stay with you. So,  
17 this figure here shows you the three excavation  
18 areas, area A, B, C. This is what the plan was  
19 from the EE/CA. The successes, areas B and C, we  
20 met the remedial goal, we dug down a foot, it  
21 was all good. Area A, we took care of the issue  
22 on the surface soil. We did find out that there

1 was a bigger area of subsurface contamination  
2 from that waste oil tank. We went down to about  
3 eight feet below grade, we maxed out at 80 parts  
4 per million of PCBs.

5 At that point, we were at the limit of  
6 how far we could dig. There's a pipeline that's  
7 immediately adjacent to the site. We couldn't  
8 go any further because of the foundation of the  
9 piping, as well as the contractual limits of  
10 what we had established under the EE/CA. We're  
11 going to have to come back at a later time to  
12 take care of that problem.

13 The former waste oil UST, it was there  
14 until 1992. It was waste oil, if there was  
15 anything else in it, we don't really know. They  
16 did not do additional soil excavation when they  
17 removed the UST, and there was no visible  
18 contamination observed when they pulled the UST,  
19 which is why they didn't do any additional work  
20 at the time.

21 We had all thought it was addressed  
22 under the Operable Unit 1 remedy, the line that

1 you see, it's not actually up on that figure.  
2 The lines that have been drawn, sometimes the  
3 area where that tank is in it, sometimes it's  
4 outside of it. It's one of those things that  
5 almost fell through the cracks.

6 So, we do know where the UST is  
7 located, we do know that it's just PCBs, we did  
8 additional full-scan sampling to look for all  
9 contaminants, not just PCBs. It's just PCBs.  
10 We're going to create a new site to address  
11 this, per the Federal Facility Agreement, that's  
12 what FFA stands for up there, there's an  
13 agreement between the EPA and ourselves that the  
14 State is a -- they didn't sign it, but  
15 they're -- let's not worry about the details.

16 MS. NJO: They consult with us. We  
17 have --

18 MR. HURFF: The State would be happy to  
19 see us create a site to address this problem.

20 MS. NJO: Thank you.

21 MR. HURFF: Speaking for Heather.

22 We've already entered this into the NAS

1 dig permit system. If anyone digs anywhere on  
2 Base, they have to get a dig permit. That will  
3 be flagged in the system that if anybody goes  
4 out there to dig, they have to compare it,  
5 whatever, they go to get that permit, it says  
6 you can't be here, don't.

7 The site is inside of a fence line,  
8 which means it has no exposure, no one is going  
9 there, there's no trespassers, people picnicking  
10 on the site. And there's very limited PCBs at  
11 the surface, we've taken care of that problem  
12 for the most part. They don't go downgradient,  
13 they don't move through soil very well.  
14 Basically wherever they're carried in oil once  
15 they -- once that's absorbed, it's not going  
16 anywhere.

17 So, the site has been there for some  
18 time, it's stable. We've done a ring of  
19 sampling around it, we know where it's at, and  
20 we'll come back and get it.

21 And that was important to finish up the  
22 remedial investigation, because it's awful darn

1 difficult to say you really don't need to do  
2 further action if you've got this one big  
3 massive PCB sticking around. From the human  
4 health assessment that we did, we didn't find  
5 that there was an up acceptable risk. Iron and  
6 arsenic, manganese, drivers, things we've seen  
7 elsewhere on the site.

8 Ecological risk, we addressed that  
9 through the interim action. We didn't have any  
10 MCL exceedences at the site. And we didn't need  
11 to do a feasibility study, since there wasn't  
12 anything left to clean up as far as surface  
13 soil, sediment and surface water.

14 That's it. Any questions on that one?

15 (No response.)

16 MR. HURFF: If there's none, that wraps  
17 up the meeting for Site 6.

18 (Whereupon, at 7:11 p.m., the meeting  
19 was concluded.)

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## 1 CERTIFICATE OF REPORTER

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I, Sally Jo Bowling, do hereby certify

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that the foregoing proceedings were recorded by

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me via stenotype and reduced to typewriting

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under my supervision; that I am neither counsel

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for, related to, nor employed by any of the

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parties to the action in which these proceedings

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were transcribed; and further, that I am not a

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relative or employee of any attorney or counsel

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employed by the parties hereto, nor financially

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or otherwise interested in the outcome of the

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action.

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SALLY JO BOWLING

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