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Department of the Navy

Proposed Plan for Site 3 - Pistol Range Landfill No Further Action Former Naval Surface Warfare Center - White Oak Silver Spring, Maryland

NAVY ANNOUNCES PROPOSED PLAN

This **Proposed Plan** recommends that no further action be taken to address Site 3, the Pistol Range Landfill. Site 3 is located in the northeast portion of the former Naval Surface Warfare Center, Dahlgren Division Detachment, White Oak (NSWC-White Oak). The location of the former NSWC-White Oak is shown on Figure 1.

Site 3 operated as a landfill from the late 1940s until the mid-1970s, as fill materials were pushed toward the stream valley of Westfarm Branch from Perimeter Road. The site covers approximately 1.5 acres. Wastes reportedly disposed at the site included solid wastes, ordnance cases, solvents, oils possibly containing **polychlorinated biphenyls (PCBs)**, sodium nitrate, and miscellaneous metallic objects. A removal action was completed at Site 3 during 2000 when all identified waste and contaminated soil were excavated and disposed off-site in a permitted, municipal solid waste landfill.

This Proposed Plan recommends no further action for the site as the preferred alternative because the removal action has mitigated site risks and the potential for contaminant migration. Soil and **groundwater** investigation activities at Site 3 following completion of the removal action have concluded that no further action is needed. Groundwater contamination present beneath a portion of the former landfill site is associated with another waste management unit, Site 13 – Former Oil Sludge Disposal Area located adjacent to Site 3. Potential risks associated with exposure to contaminated groundwater are being addressed through a planned **remedial action** at Site 13.

The US Department of the Navy (Navy) has completed its investigation and removal action at Site 3 at the former NSWC-White Oak in Silver Spring, Maryland. The investigations and removal action were completed as part of the Navy's Installation Restoration Program (IRP) and in response to the requirements of the **Resource Conservation and Recovery Act (RCRA)** and the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**. The investigations completed for Site 3 (see Site Background for a detailed description) collectively meet the requirements of both a CERCLA **Remedial Investigation**

LEARN MORE ABOUT THE PROPOSED PLAN

The Navy solicits written comments from the community on the preferred alternative for Site 3, as identified in this Proposed Plan. The Navy has set a public comment period from July 1, 2004 through July 30, 2004 to encourage public participation in the remedy selection process for Site 3. A public meeting has been scheduled for July 13, 2004. During the public meeting, representatives of the Navy, EPA, and MDE will be available to answer questions and accept public comments on the Proposed Plan for Site 3. In addition, an overview of the site characterization will be presented.

IMPORTANT INFORMATION TO REMEMBER

Public comment period begins July 1, 2004

Public Meeting: July 13, 2004 at 6:30 PM

The Village Square
Riderwood Village
3110 Gracefield Road
Silver Spring, MD 20904
(301) 572-8420

Public comment period ends July 30, 2004

The relevant environmental documents for the former NSWC-White Oak Site 3 are available for review by the public at the following locations:

Montgomery County Public Library, White Oak Branch
11701 New Hampshire Avenue
Silver Spring, MD 20904
(301) 622-2492

Hours of Operation:

Mon. – Thurs.: 10:00 AM – 8:30 PM
Fri.: 10:00 AM – 5:00 PM
Sat.: 9:00 AM – 5:00 PM
Sun.: Closed

Engineering Field Activity Chesapeake
1314 Harwood Street, SE
Washington Navy Yard,
Washington D.C. 20374-5018
(202) 685-0061

Hours of Operation:

Mon. – Fri.: 8:00 AM – 4:00 PM
Sat.: Closed
Sun.: Closed

(RI) and a RCRA Facility Investigation (RFI). This Proposed Plan summarizes the findings of the investigations and removal action.

This Proposed Plan discusses the rationale for this proposal and explains how the public can participate in the decision-making process.

A glossary of key words used in this Proposed Plan is attached. Words included in the glossary are identified in bold print the first time they appear in the plan.

This document is issued by the Navy and the U.S. Environmental Protection Agency (EPA). The Navy and EPA, with regulatory support and guidance from the Maryland Department of the Environment (MDE), will select a remedy for Site 3 after reviewing and considering any comments on this proposal submitted during the public comment period. The Navy and EPA may modify the preferred alternative or select another alternative based on new information or public comments. Therefore, the public is encouraged to review and comment on the Proposed Plan.

This Proposed Plan is issued pursuant to the public participation requirements under Section 300.430(f)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and Section 117(a) of CERCLA. This Proposed Plan summarizes information that can be found in greater detail in the Administrative Record file and the information repository for the former NSWC-White Oak. Documents relevant to the remedy selection for Site 3 (i.e., documents that comprise the Site 3 Administrative Record) and others regarding RCRA/CERCLA activities at the former NSWC-White Oak, can be found in both the Administrative Record file and the information repository. The Administrative Record for Site 3 is maintained by the Navy at the Engineering Field Activity Chesapeake office at the Washington Navy Yard in Washington, DC. The information repository, which contains key documents from

the Administrative Record on which this proposal is based, is located at the Montgomery County Public Library, White Oak Branch. The Navy, EPA, and MDE encourage the public to review this information and to comment on the Proposed Plan during the public comment period. All comments received will become part of the Administrative Record. Information regarding when and how to comment is provided later in this Proposed Plan.

A final remedy for Site 3 will be documented in a Record of Decision (ROD), which will be issued after all public comments on this Proposed Plan are considered.

SITE BACKGROUND

The former NSWC-White Oak was originally established in 1946 as the Naval Ordnance Laboratory, with a mission to carry out research on military guns and explosives. The former facility is located in Prince George's and Montgomery Counties, approximately five miles north of Washington, DC, off New Hampshire Avenue in Silver Spring, Maryland.

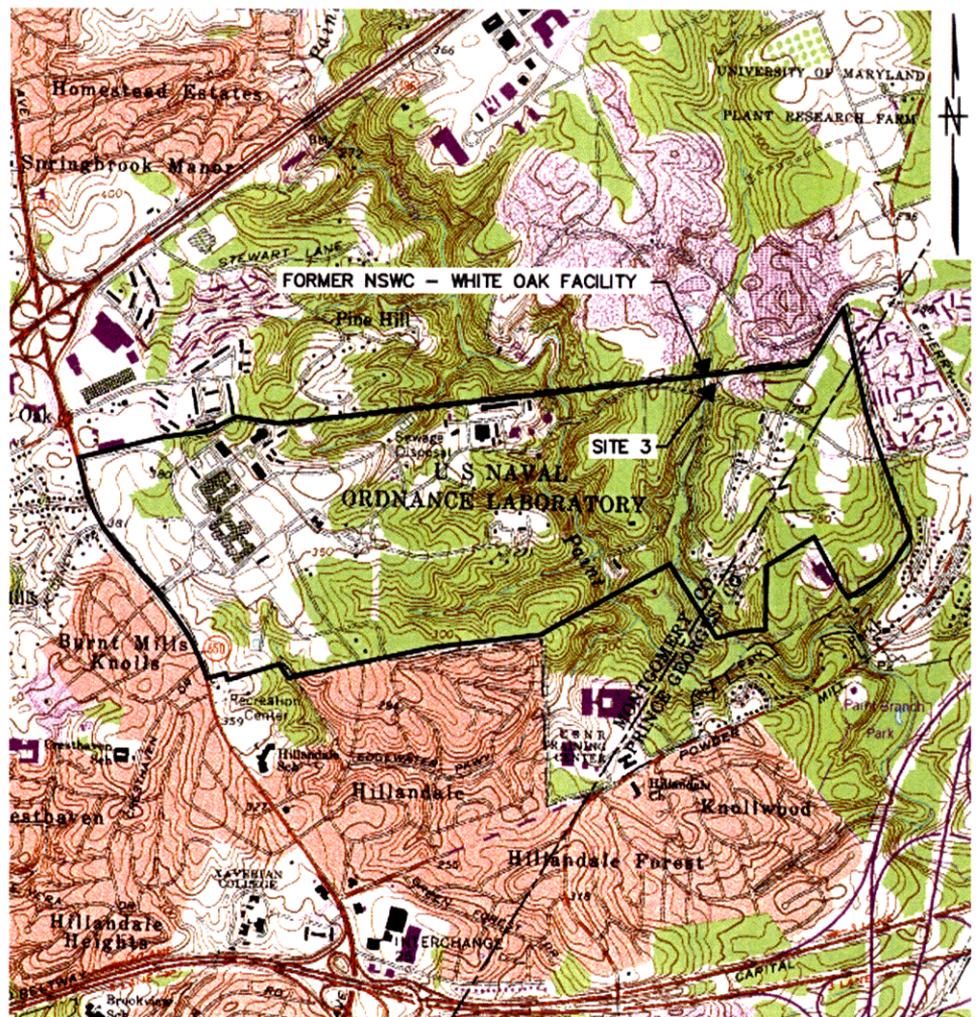


Figure 1

Through the years, NSWC-White Oak's mission was expanded to include research involving torpedoes, mines, and projectiles. In September 1974, the facility combined with the Naval Weapons Laboratory, Dahlgren, Virginia to become the Naval Surface Weapons Center, which was renamed the Naval Surface Warfare Center, Dahlgren Division, in 1988. After that time, the facility functioned as the principal Navy research, development, test, and evaluation center for surface warfare weapon systems, ordnance technology, strategic systems, and underwater weapons systems.

NSWC-White Oak was closed in 1997 in response to the Base Realignment and Closure (BRAC) Act. The approximately 712-acre property was transferred in two parcels to the General Services Administration (GSA) and to the U.S. Army. Approximately 662 acres were transferred to the GSA in the fall of 1997 and the remaining area in the southeastern portion of the facility was transferred to the U.S. Army in February 1998. The GSA has plans to reuse and develop the subject property, however the plans have not been finalized. The location of Site 3 was part of the property transferred to the GSA. Before and after its closure, areas of potential contamination at the former NSWC-White Oak have been investigated under the Navy's IRP.

On June 2, 1998, EPA issued an Administrative Order (the Order) to the Navy, pursuant to Section 7003 of the RCRA, requiring the Navy to:

- Undertake Interim Measures (IM) at the facility to prevent or mitigate threats to human health and/or the environment.
- Perform an RFI (or RI) to determine fully the nature and any release of hazardous wastes, solid wastes, and/or hazardous constituents at and/or from the facility.
- Perform a Corrective Measures Study (CMS) [or **Feasibility Study (FS)**] to identify and evaluate alternatives for corrective action necessary to prevent or mitigate migration or releases of hazardous wastes, solid wastes and/or hazardous constituents at and/or from the facility.

The Order provides the framework for completing the investigation and remediation of the former NSWC-White Oak facility. The Order also recognizes that "EPA and the Navy intend to integrate the Navy's CERCLA response obligations and RCRA corrective action obligations" at the facility. EPA and the Navy recognize that, if the preferred alternative is selected for Site 3, the Navy will have completed requirements related to Site 3 under the RCRA Section 7003 Administrative Order.

As part of closing the facility, the Navy assembled a BRAC Clean-Up Team (BCT) to expedite the work required to comply with this order. The BCT for NSWC-White Oak includes representatives of the Navy, EPA, and MDE. GSA, while not a formal member of the BCT, actively participates as an adjunct member.

SITE CHARACTERISTICS

The Pistol Range Landfill is located in the eastern half of the facility, north of Dahlgren Road (see Figure 2). The site is bordered to the east by Perimeter Road, to the north by the property boundary and to the west by a southward flowing tributary (Westfarm Branch) of Paint Branch. The ground surface slopes gently to the west. Westfarm Branch originates approximately 1 mile north of the property and joins Paint Branch just south of the facility.

The geology of the Site 3 area is silty sand and gravel (Coastal Plain sediments) to a depth of approximately 10 feet below ground surface (bgs). The Coastal Plain sediments are underlain by decayed rock (saprolite), which is significantly less conducive to groundwater flow than the Coastal Plain sediments. The saprolite extends to a depth of about 20 to 30 feet where it changes to unweathered rock consisting of gneiss and schist. Groundwater flow in the rock occurs in fractures.

Groundwater flow at Site 3 is to the west. The depth to groundwater varies across the site with shallower depths (5 feet bgs) to the west, in areas adjacent to Westfarm Branch. Groundwater flow in the eastern portion of the site is entirely in the saprolite and rock while groundwater flow in the downgradient reaches of the site is within the alluvial floodplain deposits as it enters the Westfarm Branch valley.

Site 13 is an adjacent site located east of Site 3 between Dahlgren Road and the northern perimeter road. The site occupies approximately 0.7 acre. Anecdotal accounts state that between 1970 and 1978, approximately 6,000 to 10,000 gallons of oily sludge from storage tanks containing No. 6 fuel oil were spread over the surface of Site 13, however the location and history of Site 13 is not well documented. Groundwater data collected at Site 13 indicate that concentrations of volatile **organic compounds** (VOCs) would present risks to receptors if groundwater were used as potable water.

Investigation History

The contaminated media related to Site 3 have been characterized under numerous investigations and studies between 1985 and the present. A chronological listing of the major studies is provided here. The findings of the

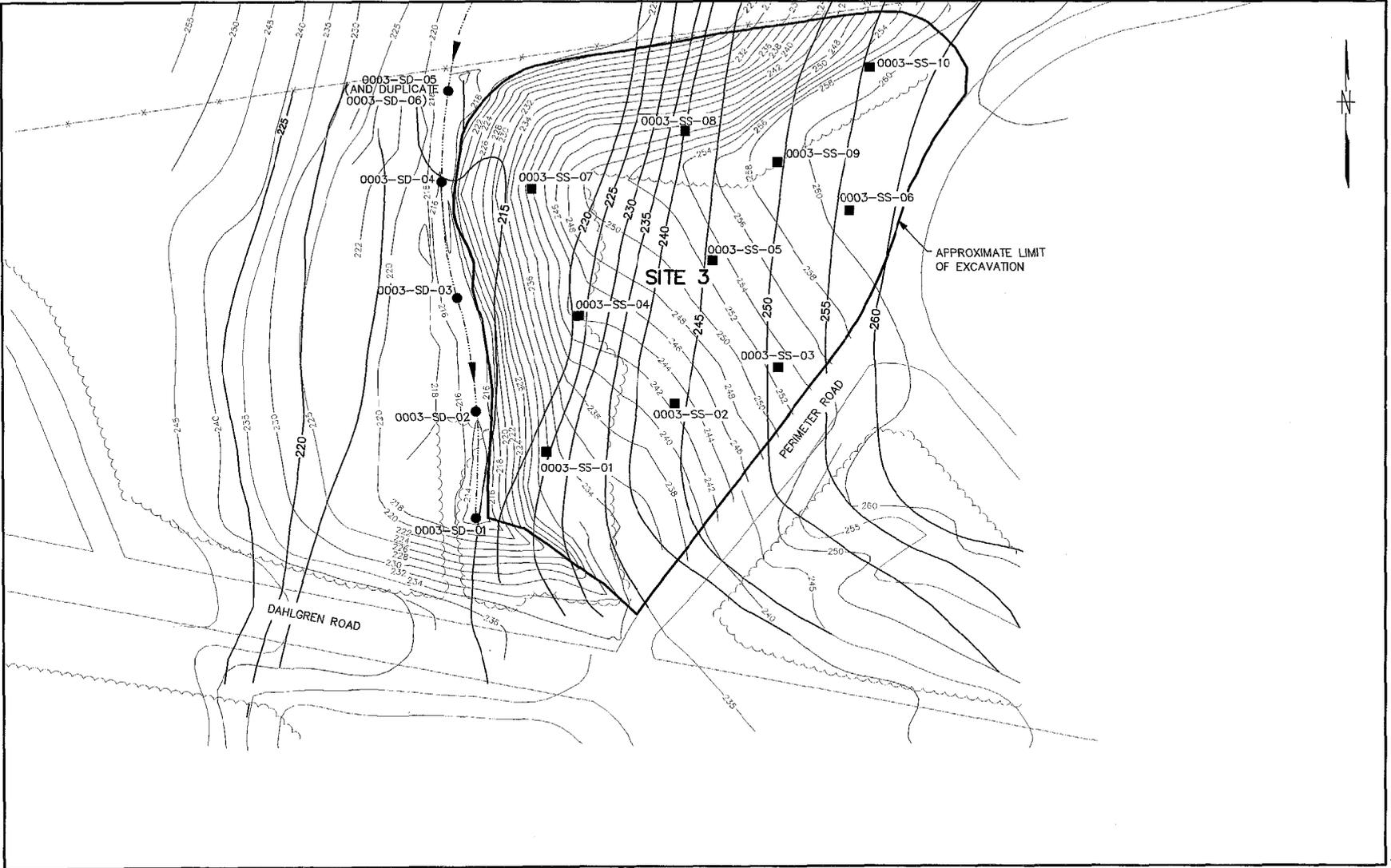


Figure 2

studies and the subsequent actions taken as they relate to each of the contaminated media are discussed below.

Confirmation Study (Verification Phase) – April 1987

Remedial Investigation – October 1992

Engineering Evaluation/Cost Analysis – February 2000

RCRA Facility Investigation for Sites 2, 3, 4, 7, 8 and 9 – October 2000

Post-Removal Action Report – March 2001

Operable Unit 1 Remedial Investigation (RI) – August 2002

Operable Unit 1 Feasibility Study (FS) – June 2003

Proposed Plan for Sites 5 and 13 – September 2003

Addendum Risk Evaluation for Post-Removal Conditions at Site 3 – June 2004

Removal Action

A removal action was completed at Site 3 during 2000. Approximately 40,000 tons of waste and contaminated soil were excavated and disposed off-site in a municipal solid waste landfill. Ten post-removal action soil samples were collected across the site while surface water and sediment samples were collected from Westfarm Branch. Following completion of excavation and confirmatory sampling, Site 3 was restored. The site was restored with clean backfill to promote surface drainage to Westfarm Branch. After final grading, the area was **revegetated**.

Soil Characterization

Following the removal action, **polycyclic aromatic hydrocarbons (PAHs)**, including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, a PCB (Aroclor-1260), and inorganic contaminants (including antimony, copper, mercury, and silver) were identified in site soil in excess of applicable screening criteria.

Surface Water/Sediment Characterization

Following the removal action, five sediment samples were taken along the portion of Westfarm Branch that borders Site 3. Contaminants identified in the sediment at that time included PAHs [benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene], PCBs (Aroclor-1254 and -1260), 4,4'-DDT (a pesticide), aluminum, antimony, arsenic, cadmium, chromium, copper, iron, manganese, mercury, and vanadium. Sediment sampling and analyses performed within Westfarm Branch in the years following the removal action have identified lesser concentrations of the contaminants compared with concentrations identified immediately

following the removal action. Concentrations of total PCBs within Westfarm Branch have declined from 40 mg/kg to less than 5 mg/kg.

No impact from Site 3 was identified to surface water within Westfarm Branch.

Groundwater Characterization

Little groundwater contamination is present at Site 3, as evidence by data collected within the limits of the former landfill, however, groundwater contamination is present upgradient of and within the western edge of the site. Groundwater contamination at Site 13 consists primarily of VOCs [1,1,2,2-tetrachloroethane (PCA), trichloroethene (TCE), cis-1,2-dichloroethene (DCE), tetrachloroethene (PCE), trans-1,2-DCE and vinyl chloride], with the highest VOC concentrations located on the north side of Site 13. In addition, the explosive compound RDX was identified in groundwater at Site 13. Trace concentrations of cis-1,2-DCE, PCE and RDX were identified within Site 3, but at concentrations lower than detected upgradient, within Site 13.

Principal Threats

There are no principal threat wastes in the soil or groundwater at Site 3. Principal threats are explained in the box on this page.

WHAT IS A "PRINCIPAL THREAT?"

The National Contingency Plan establishes an expectation that EPA will use treatment to address "principal threats" posed by a site wherever practicable [National Contingency Plan Section 300.430 (a)(1)(iii)(A)]. The "principal threat" concept is applied to the characterization of "source materials" at a Superfund site. A source material is material that includes or contains hazardous substances, pollutants, or contaminants that act as a reservoir for migration of contamination to groundwater, surface water, or air or acts as a source for direct exposure. Contaminated groundwater generally is not considered to be a source material; however, non-aqueous-phase liquids (NAPLs) in groundwater may be viewed as a source material. Principal threat wastes are those source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained or would present a significant risk to human health or the environment should exposure occur. The decision to treat these wastes is made on a site-specific basis through a detailed analysis of the alternatives using the nine remedy selection criteria. This analysis provides a basis for making a statutory finding that the remedy uses treatment as a principal element.

Scope and Role of the Action

This Proposed Plan summarizes the preferred alternative for Site 3 at NSWC-White Oak. Given the lack of significant levels of contamination or risks to existing or theoretical site users, it is recommended that no further action be taken at Site 3. The purpose of this Proposed Plan is to present the preferred alternative that the Navy and EPA, with MDE concurrence and, based on public input, plan to select in a ROD for the site.

To date, six RODs have been signed and five others are pending for sites at the former NSWC-White Oak. Proposed Plans and RODs for other sites at the former NSWC-White Oak will be issued in the future.

SUMMARY OF THE RISKS

Soil

The human health risk assessment for Site 3 soil was performed using soil data collected following the completion of the removal action. The risk estimates were developed by the Navy for potential human health risks under current conditions and under potential future land-use scenarios. For an explanation of the human health risk assessment process, see the text box on Page 7. The receptors evaluated in this risk assessment included present and/or future industrial workers, maintenance/utility workers, construction workers, recreational users, trespassers, day-care center children, and child and adult residents under both the Reasonable Maximum Exposure (RME) and Central Tendency Exposure (CTE) scenarios. The RME represents the highest level of human exposure that could reasonably be expected to occur, while the CTE scenario portrays the average exposure. Risks for each receptor are summed across all applicable exposure routes. For this risk assessment, it was assumed that all receptors were exposed to surface soil and sediment. Land use at this site is currently commercial and industrial.

The Navy developed quantitative risk estimates for potential human receptors for those chemicals identified as potential contaminants of concern (PCOCs) in soil at Site 3, based on the results of all site investigations since 2000. The risk assessment is provided in Addendum – Risk Evaluation for Post Removal Conditions at Site 3 (June 2004). PCOCs are those chemicals that are identified as a potential threat to human health and are evaluated further in the **baseline risk assessment**. Chemicals of Concern (COCs) are a subset of the PCOCs; they are those chemicals identified in the baseline human health risk assessment as needing to be addressed by a response action. The following chemicals were retained as PCOCs for soil:

- PAHs - benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene
- PCBs - Aroclor-1260
- **Metals** – antimony, copper, mercury, silver

Potential carcinogenic and noncarcinogenic risks from soil contaminants were evaluated for all receptors. The assessments looked at the combined risk through ingestion of soil and skin contact. The result of the quantitative risk analysis indicated no unacceptable risks [i.e., the Incremental Lifetime Cancer Risk (ILCR) was less than 1×10^{-4} and **Hazard Index (HI)** was less than one] for all potential receptors for exposure to soil at Site 3. The greatest HI is 0.98 and is for a hypothetical future child resident.

Because the baseline risk assessment determined that the soil at Site 3 does not present an unacceptable risk for any receptors, no COCs have been identified for the soil.

The Navy has completed a Baseline Ecological Risk Assessment (BERA) at NSWC-White Oak. No risk was identified for ecological receptors from exposure to soil at Site 3.

Sediment

The list of PCOCs developed for sediment at Site 3 is based on the data collected in November 2000 and April 2002 following the removal action. PCOCs for sediment are those chemicals reported at maximum concentrations greater than screening for residential soil ingestion and basewide background levels.

The following chemicals were retained as PCOCs for sediment:

- PAHs - benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene
- PCBs - Aroclor-1254, Aroclor-1260
- Pesticides - 4,4'-DDT
- Metals - aluminum, antimony, arsenic, cadmium, chromium, copper, iron, manganese, mercury, vanadium

The cumulative HIs for construction workers (HI = 3.0), adult residents (HI = 1.4), and child residents (HI = 12) were greater than unity, with Aroclor-1254 accounting for the majority of the noncarcinogenic risks for exposure to site sediment. The cumulative HIs under the less conservative CTE scenario for construction workers (HI = 1.4) and child residents (HI = 3.5) were greater than

unity, with Aroclor-1254 accounting for the majority of the noncarcinogenic risk.

The ILCR for future residents (adult + child ILCR = 1.1×10^{-4}) slightly exceeds 1×10^{-4} . PCBs (Aroclor-1254 and Aroclor-1260) account for the majority of the ILCR associated with exposure to site sediment. The sediment risks for all PCOCs, except Aroclor-1254, Aroclor-1260, mercury, and silver, are based on exposure to maximum detected concentrations. In addition, the exposure factors for sediment (i.e., exposure frequency, duration, etc.) are assumed to be the same as those for soil. Therefore, the risks calculated for sediment are likely to be overestimated.

Given the current concentrations of PCBs within the sediment of Westfarm Branch, the estimated potential carcinogenic and noncarcinogenic health hazards associated with exposure to sediment are expected to be less than or within EPA target goals under both residential and industrial land use scenarios. The risks from sediment are overestimated because they are mainly based on exposure to maximum concentrations and conservative exposure assumptions.

The Navy has completed an Ecological Risk Assessment for Westfarm Branch; while a low level of risk is present to ecological receptors exposed to contaminated sediment within Westfarm Branch, the areas where contamination is present are spatially limited and contaminant concentrations have been decreasing since the completion of the Removal Action.

Groundwater

A human health risk assessment was not prepared for groundwater at Site 3, however, risk from exposure to groundwater at Site 13 was evaluated. As groundwater contamination originating at Site 13 that presents an unacceptable risk is migrating towards and under Site 3, it is the Navy's and EPA's current judgement that action is necessary to remediate groundwater. The selected alternative for Site 13 groundwater, identified in the Record of Decision for Site 13, is appropriate to protect public health and welfare from actual or threatened releases of **hazardous substances** into the environment. The COCs that have subsequently been identified at Site 13 include RDX, TCE, and PCE; these contaminants will be addressed as part of the remedial action being undertaken at that site.

As stated above, the Navy has completed an ERA for Site 3 and Westfarm Branch at NSWC-White Oak. As groundwater exposure is not associated with ecological receptors, no ecological risks are posed by Site 3 groundwater.

WHAT IS RISK AND HOW IS IT CALCULATED?

A human health risk assessment estimates "baseline risk." This is an estimate of the likelihood of health problems occurring if no clean-up action were taken at a site. To estimate baseline risk at a site, the Navy undertakes a four-step process:

- Step 1: Analyze Contamination
- Step 2: Estimate Exposure
- Step 3: Assess Potential Health Dangers
- Step 4: Characterize Site Risk

In Step 1, the Navy looks at the concentrations of contaminants found at a site as well as past scientific studies on the effects these contaminants have had on people (or animals, when human studies are unavailable). Comparisons between site-specific concentrations and concentrations reported in past studies help the Navy to determine which contaminants are most likely to pose the greatest threat to human health.

In Step 2, the Navy considers the different ways that people might be exposed to the contaminants identified in Step 1, the concentrations that people might be exposed to, and the potential frequency and duration of exposure. Using this information, the Navy calculates a "reasonable maximum exposure" (RME) scenario, which portrays the highest level of human exposure that could reasonably be expected to occur.

In Step 3, the Navy uses the information from Step 2, combined with information on the toxicity of each chemical, to assess potential health risks. The Navy considers two types of risk: cancer risk and non-cancer risk. The likelihood of any kind of cancer resulting from a site is generally expressed as an upper-bound probability, for example, a "1 in 10,000 chance." In other words, for every 10,000 people that could be exposed, one extra cancer may occur as a result of exposure to site contaminants. An extra cancer case means that one more person could get cancer than would normally be expected to from all other causes. For non-cancer health effects, the Navy calculates a "hazard index (HI)." The key concept here is that a "threshold level" (measured usually as a hazard index of less than 1) exists below which non-cancer health effects are no longer predicted.

In Step 4, the Navy determines whether site risks are great enough to cause health problems for people at or near the site. The results of the three previous steps are combined, evaluated, and summarized. The Navy adds up the potential risks from the individual contaminants to determine the total risk resulting from the site.

Summary of Risks

Concentrations of contaminants present in Site 3 soil, sediment, and surface water do not present an unacceptable risk to human health or ecological receptors. Contaminants present in Site 3 groundwater present an unacceptable risk to human health under a future residential-use exposure scenario; however, these risks will be addressed with the remedial action planned at Site 13.

SUMMARY OF THE PREFERRED ALTERNATIVE

The preferred alternative for Site 3 is no further action because there are no unacceptable risks under current or future exposure scenarios. The Navy's removal actions successfully addressed historic site contamination and mitigated unacceptable risks. MDE and EPA concur with the preferred alternative.

COMMUNITY PARTICIPATION

The Navy and EPA provide information regarding the cleanup of the former NSWC-White Oak to the public through public meetings, the Administrative Record file for the site, the information repository, and announcements published in the *Washington Post (County Extras)*, *Silver Spring Gazette*, *College Park Gazette*, and *Burtonsville Gazette*. The Navy and EPA encourage the public to gain a more comprehensive understanding of the site and the BRAC activities that have been conducted at the site. The dates for the public comment period are July 1 through July 30, 2004. The public meeting will be held on July 13 at 6:30 p.m. at the Village Square at Riderwood Village in Silver Spring, Maryland. The location of the Administrative Record and Public Repository are provided on the front page of this Proposed Plan.

Minutes of the public meeting will be included in the Administrative Record file. All comments received during the public meeting and comment period will be summarized and responses will be provided in the **Responsiveness Summary** section of the ROD. The ROD is the document that will present the selected remedy and will be included in the Administrative Record file.

Written comments can be submitted via mail, e-mail, or fax and should be sent to the following addressee:

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GLOSSARY OF TERMS

This glossary defines the terms used in this Proposed Plan. The definitions apply specifically to this Proposed Plan and may have other meanings when used in different circumstances.

Administrative Record: A record made available to the public that includes all information considered and relied on in selecting a remedy for a site.

Baseline Risk Assessment: A study conducted as a supplement to an RI to determine the nature and extent of contamination at a **National Priorities List (NPL)** site and the risks posed to human health and/or the environment.

Comment Period: A time for the public to review and comment on various documents and actions taken, either by the Navy, EPA, or MDE. A minimum 30-day comment period is held to allow community members to review the Administrative Record file and review and comment on the Proposed Plan.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): A federal law passed in 1980 and modified in 1986 by the **Superfund Amendments and Reauthorization Act (SARA)**. The act created a special tax that goes into a trust fund to investigate and clean up abandoned or uncontrolled hazardous waste sites.

Contaminant: Any physical, biological, or radiological substance or matter that, at a high enough concentration, could have an adverse effect on human health or the environment.

Groundwater: Water beneath the ground surface that fills spaces between materials such as sand, soil, or gravel to the point of saturation. In aquifers, groundwater occurs in quantities sufficient for drinking water, irrigation, and other uses. Groundwater may transport substances that have percolated downward from the ground surface as it flows towards its point of discharge.

Hazard Index (HI): The ratio of the daily intake of chemicals from on-site exposure divided by the reference dose for those chemicals. The reference dose represents the daily intake of a chemical that is not expected to cause adverse health effects.

Hazardous Substance: Any material that poses a threat to public health and/or the environment. Typical hazardous substances are materials that are toxic, corrosive, ignitable, explosive, or chemically reactive.

Information Repository: A file containing information, technical reports, and reference documents regarding an NPL site. This file is usually maintained in a place with easy public access, such as a public library.

Metals: Metals are naturally occurring elements in the earth. Arsenic, cadmium, iron, mercury, and silver are examples of metals. Exposure to some metals, such as arsenic and mercury, can have toxic effects. Other metals, such as iron, are essential to the metabolism of humans and animals.

National Oil and Hazardous Substances Pollution Contingency Plan (NCP): The purpose of the NCP is to provide the organizational structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances, pollutants, or contaminants.

National Priorities List (NPL): The EPA list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial response.

Organic Compounds: These are naturally occurring or man-made chemicals containing carbon. Volatile organics can evaporate more quickly than semivolatile organics. Other organics associated with RI/FS activities include polychlorinated biphenyls (PCBs). Some organic compounds may cause cancer; however, their strength as a cancer-causing agent can vary widely. Other organics may not cause cancer but may be toxic. The concentrations that can cause harmful effects can also vary widely.

Polychlorinated Biphenyls (PCBs): A family of man-made chemicals that contain 209 individual compounds. Because of their insulating and nonflammable properties, they have been used widely as coolants and lubricants in transformers, capacitors, and other electrical equipment. PCBs are considered to be very persistent organic chemicals.

Polycyclic Aromatic Hydrocarbons (PAH): A group of chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances. PAHs can be man-made or occur naturally.

Proposed Plan: A public participation requirement of SARA in which the lead agency summarizes for the public the preferred clean-up strategy and rationale for preference and reviews the alternatives presented in the detailed analysis of the FS. The Proposed Plan may be prepared either as a fact sheet or as a separate document. In either case, it must actively solicit public review and comment on all alternatives under consideration.

Resource Conservation and Recovery Act (RCRA): RCRA was enacted in 1976 to address the huge volumes of municipal and industrial hazardous waste generated nationwide. After several amendments, the Act as it stands today governs the management of solid and hazardous waste and underground storage tanks. RCRA focuses on active and future facilities and does not address abandoned or historical sites (see CERCLA).

RCRA Facility Investigation (RFI): An RFI is conducted at a site to evaluate thoroughly the nature and extent of the release of hazardous waste and hazardous constituents and to gather necessary data to support the Corrective Measures Study and/or interim/stabilization measures. This study is one of the four components of the Corrective Action Plan for a site under RCRA. The study is similar to a Remedial Investigation that is completed under CERCLA.

Record of Decision (ROD): An official public document that explains which clean-up alternative(s) will be used at NPL sites. The ROD is based on information and technical analysis generated during the RI/FS and consideration of public comments and community concerns. The ROD explains the remedy selection process and is issued by the Navy following the public comment period.

Remedial Investigation/Feasibility Study (RI/FS): Investigation and analytical studies usually performed at the same time in an interactive process and together referred to as the "RI/FS." They are intended to gather data needed to determine the type and extent of contamination, establish criteria for cleaning up the site, identify and screen clean-up alternatives for remedial action, and analyze in detail the technology and costs of the alternatives.

Response Action: As defined by Section 101(25) of CERCLA, means remove, removal, remedy, or remedial action, including related enforcement activities.

Responsiveness Summary: A summary of oral and written public comments received by the lead agency during a comment period and the responses to these comments prepared by the lead agency. The responsiveness summary is an important part of the ROD, highlighting community concerns for decision makers.

Revegetate: To replace topsoil, seed, and mulch on prepared soil to prevent wind and water erosion.

Risk Assessment: Evaluation and estimation of the current and future potential for adverse human health or environmental effects resulting from exposure to contaminants.

Superfund: An informal name for CERCLA.

Superfund Amendments and Reauthorization Act (SARA): The public law enacted to reauthorize the funding provisions and amend the authorities and requirements of CERCLA and associated laws. Section 120 of SARA requires that all federal facilities be subject to and comply with this act in the same manner and to the same extent as any non-federal entity.

MAILING LIST

If you are not on the mailing list and would like to receive future publications pertaining to Site 3, or other sites at the former NSWC-White Oak as they become available, please call or complete, detach, and mail a copy of this form to the point of contact listed below:

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