

Final Proposed Plan

Soil at MRS 002 – Randle Cliffs, Zuni Launch Site and Gun Mounts
 Naval Research Laboratory – Chesapeake Bay Detachment
 Chesapeake Beach, Maryland
 March 2018

1. Introduction

The purpose of this **Proposed Plan** (PP) is to identify the preferred alternative and to facilitate community involvement in the selection of the Final Remedy. This PP addresses soil at MRS 002 – Randle Cliffs, Zuni Launch Site (RCZ) and Randle Cliffs Gun Mounts (RCG), which are located at the Naval Research Laboratory-Chesapeake Bay Detachment (NRL-CBD) in Chesapeake Beach, Maryland (**Figure 1**). The remedy for groundwater at MRS 002 will be addressed in a separate PP. The proposed plan is No Action for soil at MRS 002 (RCZ and RCG). This PP satisfies the public participation requirements under Section 117(a) of the **Comprehensive Environmental Response, Compensation, and Liability Act** (CERCLA) and the **National Oil and Hazardous Substances Pollution Contingency Plan** (NCP) Section 300.430(f)(3). This PP provides the rationale for the No Action recommendation based on the investigative activities performed at MRS 002 to date, and explains how the public can participate in the decision-making process.

The Navy, in consultation with the Maryland Department of the Environment (MDE), will make a final decision on the No Action for soil at MRS 002 (RCZ and RCG) after reviewing and considering all information submitted during the 30-day **public comment period**. The Navy may select another **response action** other than No Action based on public comments and/or new information. Community involvement is critical, and the public is encouraged to review and comment on this PP. Information on how to participate in this decision-making process is presented in Section 10, Community Participation.

After the public comment period has ended, and the information submitted has been reviewed and considered, the Navy, in consultation with MDE, will document the No Action alternative for soil at MRS 002 (RCZ and RCG) in a **Decision Document** (DD). The DD will explain the No Action selection process based on the information and technical analysis generated during the **Remedial Investigation** (RI) and will consider public comments and community concerns. Any comments or questions received during the comment period will be documented in the **Responsiveness Summary** section of the DD.

Mark Your Calendar for the Public Comment Period

April 6, 2018 to May 6, 2018



Submit Written Comments

The Navy and MDE will accept written comments on the PP during the public comment period. To submit comments or obtain more information, please refer to the comment insert in this PP.

Based on public interest, the public comment period may include a public meeting during which the Navy and MDE will provide an overview of the site, investigation findings, answer questions, and receive public comments. If anyone from the public desires a meeting, they should contact the Naval Facilities Engineering Command (NAVFAC) Washington representative listed on page 7.

Information Repository Location



This PP is based on site-related documents contained in the **Administrative Record**, which can provide you with important background and site investigation information about MRS 002. It can be found at the following **Information Repository** location:

Calvert Library – Twin Beaches Branch
 3819 Harbor Road
 Chesapeake Beach, MD 20732
 Phone: (410) 257-2411

2. Naval Research Laboratory – Chesapeake Bay Detachment Location and History

NRL-CBD is located approximately 40 miles southeast of Washington, D.C., near Chesapeake Beach, Maryland (**Figure 1**). NRL-CBD, a field station for NRL Washington, D.C. encompasses 161 acres along the western shore of the Chesapeake Bay and includes a 157.4-acre main facility at Randle Cliffs, a small-craft berthing in the town of Chesapeake Beach, and a 2-acre site at Tilghman Island (located 10 nautical miles east of the main facility).

The NRL-CBD provides facilities and support services to NRL for research in radar, electronic warfare, optical devices, materials, communications, and fire-suppression research. The main facility, located on a cliff approximately 100 feet above the Chesapeake Bay, is the site of many unique experiments, performed in conjunction with the Tilghman Island site across the bay. The experiments conducted at NRL-CBD include low clutter and low background radar measurements. Basic research is also conducted in radar antenna properties, radar remote-sensing concepts, use of radar monitoring of ocean waves, and laser propagation. NRL-CBD hosts facilities for the Navy Technology Center for Safety and Survivability, which conducts fire-suppression research on simulated carrier, surface, and submarine platforms. While most of the munitions-related research once conducted at this location is no longer conducted at the field station, the main facility does maintain a test control center for air and sea operations that is available to researchers using NRL-CBD's over-water test range. The test range is a restricted zone located directly east of the main facility that extends across the Chesapeake Bay toward Tilghman Island. In the past, NRL-CBD also maintained ranges used for munitions-related research and testing, as well as a small arms range—these were used for periodic qualification and training.

3. Site Location, History, and Background

The following subsections present the location, history, and background information for MRS 002.

3.1 MRS 002 – Randle Cliffs, Zuni Launch Site

The RCZ, designated as MRS 002, can also be identified as UXO 002 in this PP and in other relevant documents. The RCZ is located along the installation's eastern boundary, between the toe of Randle Cliffs and the bulkhead shoreline of the Chesapeake Bay (**Figure 1**). The RCZ varies from 20 to 75 feet in width and is approximately 500 feet long (approximately 0.5 acre). It is the land portion of the former over-water quality control (QC)/research test range. The RI focused only on the land portion (RCZ) of the former over-water QC/research test range, which includes the area around the former launcher, associated building and structures, and the tidal zone extending

eastward to the mean low water mark. Activities at the RCZ, which was first used in the 1960s, were limited to production lot QC testing and research associated with chaff rounds. The chaff round ejected chaff-filled dispensers/cassettes which were used as chaff decoys by creating a false radar target. The chaff rounds were attached to Zuni rocket motors, and the assemblies were referred to as CHAFFROC. It is estimated that only 150 CHAFFROC were fired over the 30 years during which the site was active (Malcolm Pirnie, 2006). The launch azimuth of the firing stand was fixed at 98 degrees, and the launch elevation angle was fixed at 15 degrees. The chaff round fuze setting was 10 seconds, placing the chaff burst at approximately 5,800 to 6,100 yards over the water (Malcolm Pirnie, 2010). Based on historical information obtained during the Preliminary Assessment (Malcolm Pirnie, 2006), all chaff rounds fired at the range detonated over the water, and all equipment and materials were removed from the site following each testing event. Based on this information, no MEC are expected at the site.

The RCZ was last used in 1992, prior to construction of a pier located directly east/northeast of the site. The pier is currently used in conjunction with research conducted at the active water range. Prior to 2011, a small building (Building 267, Control Blockhouse), launcher pad and stand, and blast plate remained at the Zuni Launch Site. The launcher stand was embedded in a concrete foundation located just east of the blast plate. The site is also used occasionally for vehicle parking when personnel access the area along the bulkhead shoreline. The road leading to the site was repaved in summer 2012 after RI field activities were completed.

3.2 MRS 002 - Randle Cliffs, Gun Mounts

The RCG is located in a relatively flat area at the top of Randle Cliffs (**Figure 1**) and includes a 5.2-acre land portion of a former land-to-water range. Structures located at the site included gun mounts, gun director platforms, and a blast apron, which were located along a 1,235-foot section of Randle Cliffs, approximately 200 feet west of the Chesapeake Bay. The gun mounts were used for a relatively short period from 1944 to 1948. Photographs dating back to 1946 showed Navy personnel firing guns mounted on concrete pads. These areas were likely utilized in conjunction with experiments conducted from 1944 to 1948 involving gun sighting, as the height and distance to the water of the gun mounts and platforms are similar to those on a large Naval vessel. Based on review of historical photographs, the following munitions types may have been used: 3-inch AA MK23, 3-inch illuminating MK24, and 3-inch AP MK29 projectiles; 4-inch common MK10, 4-inch HC MK15, and 4-inch illuminating MK14 projectiles; 5-inch AA common MK31 projectiles; and 76mm smoke projectiles. The areas where the gun mounts, gun director platforms, and blast apron were located are currently used to mount and test radar equipment. Although the gun mounts, concrete pads, and wood/concrete platforms remain at RCG, much of the land at the top of Randle

Cliffs that existed in the 1940s has been lost due to erosion.

4. Site Characteristics

The follow subsections describe the site characteristics of MRS 002.

4.1 MRS 002 - Randle Cliffs, Zuni Launch Site

The RCZ is located at the base of Randle Cliffs along a section of bulkhead shoreline. The elevation of the site varies from less than 2 feet to up to 10 feet above msl. The cliffs rise sharply above the Chesapeake Bay to approximately 100 feet above msl. The majority of the RCZ is flat and gently slopes east from the toe of the cliffs to the Chesapeake Bay shoreline. According to installation personnel, there are no plans for future development or use of the site.

Fill material was encountered from the ground surface to depths of about 5 feet in all of the RI well borings. The fill material was not differentiated in the SI borings. The fill material consisted primarily of variegated gravel, silty sand mixtures. Surface water runoff at the RCZ flows west to east from the toe of Randle Cliffs towards the Chesapeake Bay. There is a small pond/swampy area located just north of the site that catches runoff from the hillside.

After the monitoring wells were installed and developed, the stable water levels were measured in the wells at about 4 to 6 feet below ground surface. The surficial groundwater was encountered within the grey-green, very fine grain sandy silt unit and the overlying fill material. This material has low permeability based on the purge data collected during sampling and is characteristic of an aquitard. The groundwater flow pattern and direction were not determined for the site. The surficial groundwater at the site is most likely tidally influenced due to the proximity to the Chesapeake Bay; it is not known how much influence the Chesapeake Bay has on the groundwater flow pattern at this site.

4.2 MRS 002 - Randle Cliffs, Gun Mounts

The area where the RCG is located is characterized by sharp changes in elevation. Topographic features include tall cliffs (Randle Cliffs) that rise sharply to 100 feet above the Chesapeake Bay on the installation's eastern boundary. The gradient of the cliff slope combined with the instability of the soils created slope erosion problems. The RCG is located in a relatively flat area along the top of Randle Cliffs that slopes gently eastward toward the cliff edge. At the cliff edge, the ground slopes steeply to the bulkhead shoreline of the Chesapeake Bay.

Generally, the regional geology in which the RCG is located developed from marine sediment deposits. These sediments are composed of gently seaward-dipping beds of unconsolidated sand and clay, with smaller amounts of underlying gravel and

marl deposits.

The Chesapeake Bay lies approximately 200 feet east of the site, along the installation's eastern boundary. Besides the Chesapeake Bay, there are no streams or surface water features at this site. Surface water runoff flows east over land toward the edge of Randle Cliffs, where it flows down the cliff slope and into the Chesapeake Bay. There was no site specific groundwater information collected during either the SI or RI. Depth to groundwater and direction of flow at the RCG has not been determined. However, based on the elevation of this site (top of cliff that slopes sharply to the Chesapeake Bay), it is presumed that groundwater at this site would be relatively deep below the ground surface.

5. Investigation History

This section summarizes previous environmental investigations associated with MRS 002.

2010 Site Investigation

The SI was conducted in 2010 to identify, assess, and confirm and characterize the extent of soil and groundwater **contamination** at MRS 002. The SI included surface and subsurface soil sampling, installation of temporary monitoring wells, and collection of groundwater samples at MRS 002 except for the RCG which only included **surface soil** sampling. Soil and groundwater samples were analyzed for metals. No MEC were observed at any of the sites. Sampling results revealed that remedial investigations were warranted for MRS 002 due to the presence of contaminants in soil and groundwater.

2016 Remedial Investigation

The objective of the RI was to collect and evaluate sufficient data to characterize the MRS sites at NRL-CBD, including characterization of the nature and extent of contamination, and to quantify the potential risks posed to human health and the environment as a result of exposure to site-related contaminants. During the RI, environmental media such as surface soil and groundwater were sampled at RCZ and surface soil was sampled at RCG. For soil, inorganics (i.e., metals) were analyzed at the RCG and explosives and inorganics were analyzed at the RCZ.

Inorganics in soil exceeded **background concentrations** and/or human health and ecological screening criteria at RCZ and RCG. **A human Health Risk Assessment (HHRA) and an ecological risk assessment (ERA)**, conducted as part of the Final RI Report, evaluated potential **human health and ecological risks** associated with MRS 002 for soil. The 2010 SI data were incorporated with the RI data as one data set for the risk evaluation. **Constituents of potential concern (COPCs)** were evaluated in the HHRA for surface soil and subsurface

soil and COPCs were evaluated in the ERA for surface soil. No COPCs were retained as **constituents of concern (COCs)** for soil at MRS 002 (RCZ and RCG) and no action is recommended.

6. Principal Threat Wastes

“Principal threat wastes,” defined by the NCP in 40 Code of Federal Regulations Section 300.430(a)(1)(iii)(A), are source materials that are considered to be highly toxic, or highly mobile, and that generally cannot be reliably contained or would present a significant risk to human health or the environment should they be exposed. There are no principal threat wastes present in the soil at MRS 002 (RCZ and RCG).

7. Scope and Role of the Action

This PP addresses No Action for soil at MRS 002 (RCZ and RCG). The purpose of this PP is to summarize investigative activities performed to date and to provide a rationale for No Action for soil at MRS 002 (RCZ and RCG). Any action proposed to address potential risks posed by other environmental **media** will be presented in a separate PP.

8. Summary of Site Risks

This section presents an overview of how the risks to people, plants, and animals, associated with exposure to soil at MRS 002 (RCZ and RCG) under current and anticipated future land uses, were evaluated.

Human Health Risks (from Exposure to Soil)

Quantitative HHRAs were conducted for MRS 002 as part of the Final RI Report and are summarized below. Please refer to the Final RI Report for detailed information regarding the baseline HHRAs (available in the Administrative Record Information Repository).

Chemical constituents detected in the soil were evaluated by the HHRAs following the process outlined in the text box titled “What is Human Health Risk and How is it Calculated?” Carcinogenic (cancer) risks and noncarcinogenic hazards from exposure to soil were evaluated for the following classifications of people (receptors) who may potentially come in contact with these media:

- Construction Worker
- Industrial Worker
- Maintenance Worker
- Adult Visitor/Trespasser
- Resident (adults and children who might live at the site; assuming the site is redeveloped for residential use)

Each receptor listed above represents different exposure scenarios, which ultimately provide for a range of estimated exposures and risks. The receptor with the maximum potential exposure and risk

is the future resident (adult and child) because this receptor would experience longer periods of exposure and might have more and longer contact with site soil. The inclusion of future residents as potential receptors provides a conservative assessment of the risk because MRS 002 is not currently used for residential purposes, and there are no plans to convert this site to residential use in the future.

The HHRAs assume that all receptors could potentially be exposed to site-related contaminants in soil via the following exposure pathways:

- Ingestion – incidental eating of soil
- Dermal Contact – incidental skin contact with soil
- Inhalation – breathing of vapors from surface soil and dust that become airborne

The first step in the HHRA process consisted of screening chemical constituents detected in soil to identify a list of COPCs. Based on the initial screening of soil samples collected during the SI and RI, the COPCs for soil at MRS 002 are as follows:

MRS 002 – RCZ

- COPCs for surface soil based on maximum detected soil concentrations exceeding direct-contact risk-based screening levels
 - Metals (aluminum, arsenic, cobalt, iron, and thallium)
- COPCs for surface soil based on maximum detected soil concentrations exceeding migration from soil to groundwater screening levels
 - Metals (arsenic, cadmium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium, and thallium)

MRS 002 – RCG

- COPCs for surface soil based on maximum detected soil concentrations exceeding direct-contact risk-based screening levels
 - Metals (aluminum, arsenic, cobalt, iron, and thallium)
- COPCs for surface soil based on maximum detected soil concentrations exceeding migration from soil to groundwater screening levels
 - Metals (antimony, arsenic, cadmium, cobalt, iron, lead, manganese, mercury, thallium, and zinc)

The Navy then developed quantitative risk estimates for these COPCs for each potential receptor to determine if the COPCs are present at concentrations that would result in unacceptable health risks (carcinogenic and noncarcinogenic). RME risks were calculated for each potential receptor in the HHRA.

Human health risk levels were then calculated during the HHRA process. Quantitative estimates of noncarcinogenic and **carcinogenic risks** (HIs and Incremental Lifetime Cancer Risks, respectively) were developed for potential human

Figure 1 – MRS 002 Randle Cliffs, Zuni Launch Site and Randle Cliffs, Gun Mounts



What is Human Health Risk and How is it Calculated?

An HHRA estimates “baseline risk” posed to people exposed to site related contamination. An HHRA is an estimate of the likelihood of health problems occurring if no cleanup action were taken at a site. The Navy undertakes a four-step process to estimate baseline risk at a site:

Step 1: Identify Site-related Contamination

In Step 1, the Navy looks at the concentrations of chemicals found at a site, as well as past scientific studies on the effects these chemicals have had on people (or animals, when human studies are unavailable). Comparisons between site-specific concentrations and concentrations established by the United States Environmental Protection Agency (USEPA) as generic screening levels that are protective of residential exposure help the Navy to determine which chemicals detected at the site are most likely to pose a potential impact to human health. These chemicals are identified as COPCs and are evaluated in the next steps of the HHRA.

Step 2: Estimate Exposure

In Step 2, the Navy considers the different ways that people might be exposed to the COPCs identified in Step 1, the concentrations that people might be exposed to, and the potential frequency and duration of exposure. Using this information, a “**reasonable maximum exposure**” (RME) scenario is calculated that portrays the highest level of human exposure reasonably expected to occur. A **central tendency exposure** (CTE) scenario may also be considered to describe median, rather than the upper limit, exposures.

Step 3: Assess Toxicity

In Step 3, the Navy compiles information on the toxicity of the COPCs. The toxicity assessment defines the relationship between the magnitude of exposure and possible severity of adverse effects, and weighs the quality of available toxicological evidence. Two types of adverse effects are evaluated: carcinogenic and noncarcinogenic. For noncarcinogenic effects, information evaluated includes the type of noncarcinogenic effect that is associated with exposure (for example, exposure that could result in liver damage).

Step 4: Characterize Site Risk

In Step 4, the Navy combines the information gathered in the previous steps to evaluate whether exposure to site contaminants is sufficient to cause health effects in people exposed to the site contamination. The results of the three previous steps are combined, evaluated, and summarized. The likelihood of any kind of cancer resulting from exposure to chemicals at 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 individual may develop cancer as a result of exposure to site contaminants. For noncarcinogenic health effects, a “**hazard index**” (HI) is calculated. The key concept here is that a “threshold level” exists below which noncarcinogenic health effects are not expected to occur, even in sensitive receptors. For noncarcinogenic health effects, the HI can be added based on the particular effect or target organ (for example, if exposure to two or more COPCs at a site would all affect the liver in some way, these are summed for a liver-specific HI).

receptors directly contacting site environmental media. Media with risk estimates exceeding MDE’s cumulative cancer risk benchmark of 1×10^{-5} and the upper bound of USEPA’s target risk range of 1×10^{-4} to 1×10^{-6} or an HI of 1 are identified. No potentially unacceptable risks to current and/or future receptors were identified in the HHRA and no COCs were identified for soil at MRS 002 (RCZ and RCG).

Ecological Risks from Exposure to Soil

ERAs were conducted for MRS 002 as part of the Final RI Report and are summarized below. For detailed information regarding the ERAs, please refer to the Final RI Report (available in the Administrative Record Information Repository).

The ERAs evaluated surface soil at MRS 002 (RCZ, and RCG). Based on the initial screening of the chemical data, several chemical constituents were initially selected as COPCs because they were detected at concentrations that exceeded conservative screening levels (i.e., they had ecological effects quotients greater than 1.0 in the conservative food chain model) or because they did not have screening levels.

These chemical constituents were then further evaluated to refine the list of COPCs and to better characterize risks to ecological receptors. No chemical constituents were retained as COCs for potential risks to terrestrial plants, soil invertebrates, mammals, or birds at MRS 002 (RCZ and RCG).

9. Proposed Action

The Navy, with the support of MDE, propose No Action for soil at MRS 002 (RCZ and RCG). No Action is proposed because there is no evidence of munitions or munitions residue at the site and the soil media at MRS 002 (RCZ and RCG) did not identify unacceptable risks to human health or ecological receptors that would warrant remedial action under any land use, including unrestricted land use.

10. Community Participation

Community participation is a key component of the decision-making process for soil at MRS 002 (RCZ and RCG). Local individuals and others interested in MRS 002 are encouraged to provide input on this PP by using the public comment period to identify their concerns.

The 30-day public comment period for this PP is April 6, 2018 through May 6, 2018. The location of the Public Information Repository is provided on page 1. The public notice will be published in the local newspaper (Calvert Recorder).

Should a public meeting be held, a transcript of the public meeting minutes will be included in the DD and the Administrative

What is Ecological Risk and How is it Calculated?

An ERA evaluates the potential adverse effects that exposure to site related contaminants could have on the plants, insects, and animals that make up ecosystems. The ERA process follows a phased approach similar to that of the HHRA. The risk assessment results are used to help determine what measures, if any, are necessary to protect plants and animals.

The ERA process includes three steps:

Step 1: Problem Formulation

The problem formulation includes:

- Compiling and reviewing existing information on the site habitat, plants, and animals that are present
- Evaluating how the plants and animals may be exposed
- Identifying and evaluating area(s) where site-related chemicals may be found
- Evaluating potential movement of chemicals in the environment
- Evaluating routes of exposure (for example, ingestion)
- Identifying receptors (plants and animals that could be exposed)
- Identifying exposure media (soil, air, water)
- Developing how the risk will be measured for all complete pathways (determining the risk where plants and/or animals can be exposed to chemicals)

Step 2: Analysis

The second step of the ERA is risk analysis, in which potential exposures to plants and animals are estimated and the concentrations of chemicals at which an effect may occur are evaluated.

Step 3: Risk Characterization

The third step in the ERA is risk characterization, in which all of the information identified in the first two steps is used to estimate the risk to plants and animals. Also included is an evaluation of the uncertainties (potential degree of error) that are associated with the predicted risk evaluation and their effects on the conclusions that have been made.

Record File. All comments received during the comment period will be summarized, and responses will be provided in the DD, which is the document that will present the selected remedy and be included in the Administrative Record file.

Written comments can be submitted via mail or e-mail, and should be sent to the addresses shown in the dotted box below:

11. References

The Administrative Record contains all the information used to select the preferred remedy for soil at MRS 002 (RCZ and RCG). It also provides important background and site investigation information in more detail than is presented in this PP. The following is a list of the primary documents in the Administrative Record where pertinent site-related information can be obtained:

Malcolm Pirnie. 2006. *Preliminary Assessment Report Naval*

Research Laboratory, Naval Research Laboratory Chesapeake Bay Detachment, Chesapeake Beach, Maryland. September.

Malcolm Pirnie. 2010. *Site Inspection Report Naval Research Laboratory, Naval Research Laboratory Chesapeake Bay Detachment, Chesapeake Beach, Maryland.* May.

Tetra Tech. 2016. *Remedial Investigation Report for MRS 001 – Hypervelocity Low Pressure Gun, MRS 002 – Randle Cliffs, Zuni Launch Site, MRS 002 – Randle Cliffs, Gun Mounts, and MRS 003 – Small Arms Range for Naval Research Laboratory – Chesapeake Bay Detachment. Revision 1.* June.

12. Glossary of Terms

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

Background concentration: Amount of chemical substances that is representative of the area surrounding the site and not attributable to a single identifiable source.

Carcinogenic Risk: The risk that a person will develop cancer, expressed as a number reflecting the increased chance that a person will develop cancer if exposed to a contaminant.

Central Tendency Exposure (CTE): Portrays the median, rather than upper limit, exposure that could reasonably be expected to occur.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): Also known as the Superfund Law, as amended by the **Superfund** Amendments and Reauthorization Act of 1986. CERCLA provides the authority and procedures for responding to releases of hazardous substances, pollutants, and contaminants from inactive hazardous waste disposal sites.

Ms. Regina Adams

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Washington, DC 20374

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For further information, you may also contact:

Ms. Peggy Williams

Land and Materials Administration
Maryland Department of the Environment
1800 Washington Blvd., Suite 625
Baltimore, MD 21230-1710

Email: peggy.williams@maryland.gov

Constituent of Concern (COC): Chemicals that are site-related and pose a potential risk to human health, the environment, or leaching to groundwater.

Constituent of Potential Concern (COPC): Compound or analyte identified early in the risk assessment process needed for more detailed evaluation to determine the potential for risk to human health and exposed organisms.

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

Decision Document (DD): An official public document that explains which cleanup alternative(s) will be used at an environmentally contaminated site. The DD is based on information and technical analysis generated during the RI/ focused feasibility study and consideration of public comments and community concerns. The DD explains the remedy selection process and is issued by the Navy in consultation with MDE following the public comment period.

Ecological Risk: The chance of harmful effects posed to ecological receptors such as plants and animals from exposure to existing concentrations of chemicals detected at a site.

Ecological Risk Assessment (ERA): An evaluation of the potential health risks posed to plants and animals from exposure to existing levels of contamination.

Focused Feasibility Study (FFS): The study that develops and analyzes the potential cleanup alternatives for a site. The FFS usually recommends selection of a cost-effective alternative for one particular media.

Groundwater: Water beneath the ground surface that fills pore spaces between materials such as sand, soil, or gravel to the point of saturation. Groundwater may transport substances that have percolated downward from the ground surface as it flows towards its point of discharge.

Hazard Index (HI): Indicates the noncarcinogenic health risk to an individual from the presence of multiple substances at one site, or exposures to the same chemicals through multiple media and pathways. The HI may be summed by each specific target organ or critical effect.

Human Health Risk: The chance of harmful effects posed to people from exposure to existing concentrations of chemicals detected at a site.

Human Health Risk Assessment (HHRA): An evaluation of the potential health risks posed to people from exposure to existing concentrations of chemicals and metals detected at a site.

Information Repository: A file containing information, technical

reports, and reference documents regarding a National Priority List site. This file is usually maintained in a place with easy public access, such as a public library.

Maryland Department of the Environment (MDE): The regulatory agency that preserves the state's air, water, and land resources and safeguards the environmental health of Maryland's citizens. MDE's duties include enforcement of environmental laws and regulations, long-term planning and research, and providing technical assistance to state industry and communities for pollution, growth issues, and environmental emergencies.

Media: Air, surface soil, subsurface soil, groundwater, surface water, or sediments that are the subject of regulatory concern, investigation, and cleanup.

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

No Action (NA): No actions are required to accomplish proposed site cleanup.

Proposed Plan (PP): A public participation requirement of CERCLA (Superfund Amendments and Reauthorization Act), in which the lead agency summarizes for the public the preferred cleanup strategy. The PP may be prepared either as a fact sheet or as a more detailed document.

Public Comment Period: A time for the public to review and comment on various documents and actions taken, either by the Navy 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 PP.

Public Meeting: Meeting where the lead agency presents and discusses the PP, and accepts written and oral comments and questions from the community members.

Reasonable Maximum Exposure (RME): The highest exposure that is reasonable expected to occur at a site, and it is intended to estimate a conservative exposure case (i.e., well above the average case) that is still within the range of possible exposures.

Remedial Action: The execution of a selected remedy to accomplish proposed site cleanup.

Remedial Investigation (RI): An in-depth study designed to gather data needed to determine the nature and extent of contamination at a site and to evaluate the potential risks posed by exposure of people, plants, and animals to the contamination.

Response Action: As defined by CERCLA, a removal 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 the comments prepared by the lead agency. The Responsiveness Summary is an important part of the DD, highlighting community concerns for decision makers.

Risk Assessment: A study on the chance of harmful effects posed to people, plants, and animals from exposure to existing levels of contamination.

Sediment: Saturated soil, such as silt, sand, gravel, or chemical precipitates, that is transported and deposited by water, ice, or wind.

Site Investigation (SI): A preliminary study designed to gather data to determine the types of contamination that may be at a site.

Subsurface Soil: Any soil below the top 6 inches.

Superfund: The program operated under CERCLA legislative authority that carries out solid waste, emergency, and long-term removal and remedial activities. These activities include investigating sites for inclusion on the National Priorities List (NPL), determining site priority, and conducting and/or supervising the cleanup and other remedial actions.

Surface Soil: The top 6 inches of soil.

Surface Water: Water found on the surface of the earth such as in a river, lake, wetland, or ocean.

Mark Your Calendar for the Public Comment Period

Public Comment Period

April 6, 2018 – May 6, 2018

Submit Written Comments

Written comments must be postmarked no later than the last day of the public comment period, which is May 6, 2018. Based on the public comments or on any new information obtained, the Navy may modify the preferred alternative. The back page of this Proposed Plan may be used to provide comments, although use of the form is not required. If the form is used to submit comments, please fold page, seal, add postage where indicated, and mail.



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Place
stamp
here

NAVFAC Washington
Public Affairs Office
Attention: Ms. Regina Adams
1314 Harwood Street SE
Washington, D.C. 20374