



Proposed Plan Area of Concern H Former Naval Ammunition Support Detachment

Vieques, Puerto Rico

January 2008

1 Introduction

This **Proposed Plan** identifies the rationale and preferred alternative for Area of Concern (AOC) H, Former Naval Ammunition Support Detachment (NASD), Vieques, Puerto Rico. The U.S. Department of the Navy (Navy), the lead agency for site activities, and the **United States Environmental Protection Agency (EPA)** Region 2, the lead regulatory agency, the **Environmental Quality Board (EQB)** in consultation with the **Municipality of Vieques**, propose no further action (NFA) based on current site conditions, future anticipated land and resource uses, and the results of the environmental investigations at the site, which are summarized in this document and detailed in the **Administrative Record** for the site. Key terms identified by bold print in this Proposed Plan are defined in the Glossary.

The Navy, EPA, in consultation with EQB and the Municipality of Vieques, will make the final decision on the **no action** alternative for AOC H after reviewing and considering all information submitted during the 45-day **public comment period**. If warranted based on public comments, this final decision may modify the proposed no action alternative or propose a **remedial action** based on new information or public comments. Therefore, public

comment on this Proposed Plan is invited and encouraged.

The Navy developed this Proposed Plan as part of public participation requirements under Section 117(a) of the **Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA)**. This Proposed Plan summarizes information that can be found in greater detail in the **Final AOC H Remedial Investigation (RI) Report**, dated July 2007, and previous site investigation documents available in the Administrative Record file and Information Repository for Vieques.

2 Site Description and Summary of Previous Investigations

2.1 Site Description

Vieques Island is the second-largest island in the Commonwealth of Puerto Rico (Figure 1). It is a 33,088-acre island located approximately 7 miles southeast of the eastern tip of the main island of Puerto Rico. The Navy ceased facility wide operations on the former NASD in April 2001, in accordance with the January 30, 2000, Presidential Directive to the Secretary of Defense associated

Mark Your Calendar for the Public Comment Period

45-Day Public Comment Period
Jan. 28 - March 12, 2008

Submit Written Comments

The Navy and EPA will accept written comments on the Proposed Plan during the 45-day public comment period.

Attend the Public Meeting

Thursday February 7, 2008

Time - 5:00 pm to 7:00 pm

Place - Vieques Multiple Use Center

Calle Antonio Mellado - (across from Plaza)

Isabel Segunda, Vieques, PR

The Navy will hold a public meeting to explain the rationale for the proposed no action alternative. Verbal and written comments will also be accepted at this meeting.



Location of Information Repository

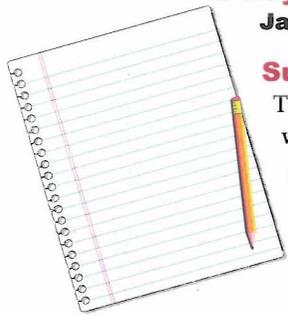
Historical records for AOC H, including the Final RI Report, on which this Proposed Plan is based, can be found in the Administrative Record file at the following location:

Biblioteca Electrónica
Calle Carlos LeBrum #449
Isabel Segunda
Vieques, PR 00765
(787) 741-2114

Or online at

<http://public.lantops-ir.org/sites/public/vieques/default.aspx>

Hours of Operation: Monday - Friday, 8:00 a.m. - 4:00 p.m.



with the transfer of lands of the Navy-owned western portion of Vieques. The land transfer was completed on May 1, 2001, and the Navy has had no military presence at the main operational area since. Navy presence on the former NASD is currently associated with the environmental restoration process.

AOC H comprises approximately 0.5 acre on the NASD and consists of a building (Building 13) formerly used to store power generation equipment, including former diesel generators used to provide electricity to a nearby community from 1941 to 1943. Former above ground storage tanks (ASTs) associated with the generators located on the west side of the building were used to store an estimated 2,000 to 3,000 gallons of diesel fuel. After 1943, the building was vacant until the 1960s, when it was used for fire training operations. Fire training included the use of diesel fuel, which was poured over rubber tires inside the building and ignited to simulate structural fires. Fire training activities ceased in the 1980s. The ASTs are no longer at the site and the building has remained abandoned, become overgrown with vines and shrubs, and is occupied primarily by fruit bats.

2.2 Summary of Investigations

Four investigations were conducted to characterize the site conditions at AOC H.

Environmental Baseline Survey (2000)

In 2000, an Environmental Baseline Survey (EBS) was conducted that identified the former Power Plant (AOC H) just northeast of the main operational area (Figure 2). A records review and personnel interviews were conducted to gather information on the historical uses of the building and potential contaminant releases. Interviews indicated the Power Plant was used during the 1940s for power generation, as discussed above (ERM, October 2000). Records indicated that three generators were used to supply power to a nearby community. No information was found as to the presence or absence of transformers within the building. Concrete wipe samples for polychlorinated biphenyls (PCB) analysis were therefore collected from the floor of the Power Plant during the EBS. No PCBs were detected. However, additional investigation was recommended to evaluate potential releases associated with fire training use during the 1960s.

Ecological Survey (2000)

An ecological survey was conducted in 2000 to characterize the NASD site ecology, identify any federally protected species present, and perform a qualitative impact analysis (Geo-Marine, August 2000). No protected species were identified in the vicinity of AOC H.

Preliminary Assessment/Site Investigation (2000)

Based on the recommendation of the EBS, a preliminary assessment and site investigation (PA/SI) was conducted in 2000 to determine if there had been a release at the site (CH2M HILL, November 2002). Soil and groundwater samples were collected and analyzed for metals (also referred to as inorganics), volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, PCBs, total petroleum hydrocarbons (TPH), and explosives. The results indicated metals, SVOCs, and pesticides were present in soil and metals and SVOCs were present in groundwater at concentrations above EPA screening levels. It is important to note that concentrations above EPA screening levels do not necessarily

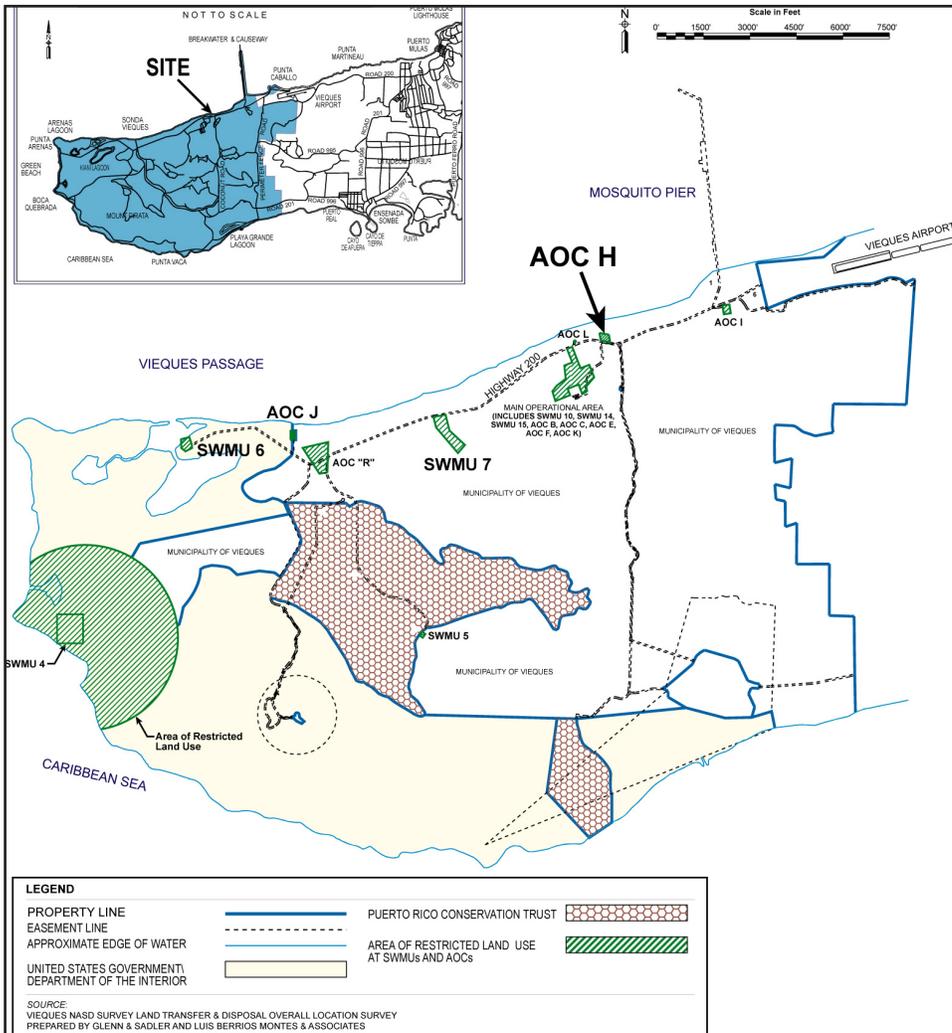


Figure 1 - AOC H and Other IR Sites Location Map Former NASD, West Vieques, Puerto Rico

3 Site Characteristics and Nature and Extent of Contamination

3.1 Site Characteristics

Because the area at and around AOC H is not currently used by people and is heavily vegetated with thorn shrub and coastal forest, it attracts wildlife such as lizards, bats, and birds. In fact, fruit bats have been observed year after year to utilize the abandoned power plant for nesting and roosting. The site is situated between Highway 200, located just south of the site, and the Vieques Passage, approximately 200 feet to the north (Figure 2). A 20- to 40-foot-wide ephemeral stream extends along the western boundary of the site and drains to the Vieques Passage. The ephemeral stream is not tidally influenced under normal conditions, contains brackish water, and has an average depth of 3 to 6 feet. Groundwater generally flows north-northwest toward the Vieques Passage. During storm surges, the mouth of the ephemeral stream may become open to the Vieques Passage.

The lithology at AOC H consists of intermingled layers of sand, silty sand, and gravel. The abandoned building is situated on top of a discontinuous clay layer to approximately 15 feet below ground surface. Groundwater is encountered at approximately 7 feet below ground surface, and is part of the Resolución Valley aquifer system. Groundwater generally flows north toward Vieques Passage with a slight influence west toward the ephemeral

mean there is a potentially unacceptable risk (see **Cancer Risk, Non-cancer Hazard, and Ecological Risk Assessment (ERA)** in the Glossary) associated with exposure to site **media** (in this case, soil and groundwater). It does mean, however, that the data should be evaluated further to determine if there are unacceptable risks present. Surface water and sediment associated with the ephemeral stream west of AOC H, which likely receives runoff from the site, were not evaluated during the PA/SI. However, additional investigation was recommended to further characterize the nature and extent of contamination and assess potential risks to people (in other words, human health risk) and plants and animals (in other words, ecological risks) from exposure to site media, including surface water and sediment in the ephemeral stream.

Remedial Investigation (2000 and 2003)

An RI was performed at AOC H to characterize the nature and extent of contamination and assess potential risks to human health and the environment (CH2M HILL, 2007). Samples were analyzed for metals, SVOCs, pesticides, explosives, and perchlorate. Analytical results from the PA/SI and RI for soil, groundwater, surface water, and sediment data were utilized to characterize the nature and extent of contamination, and to conduct a quantitative **human health risk assessment (HHRA)** and ERA. The RI concluded there are no unacceptable human health and ecological risks associated with exposure to site media for unrestricted land use, which means no remedial action is necessary.

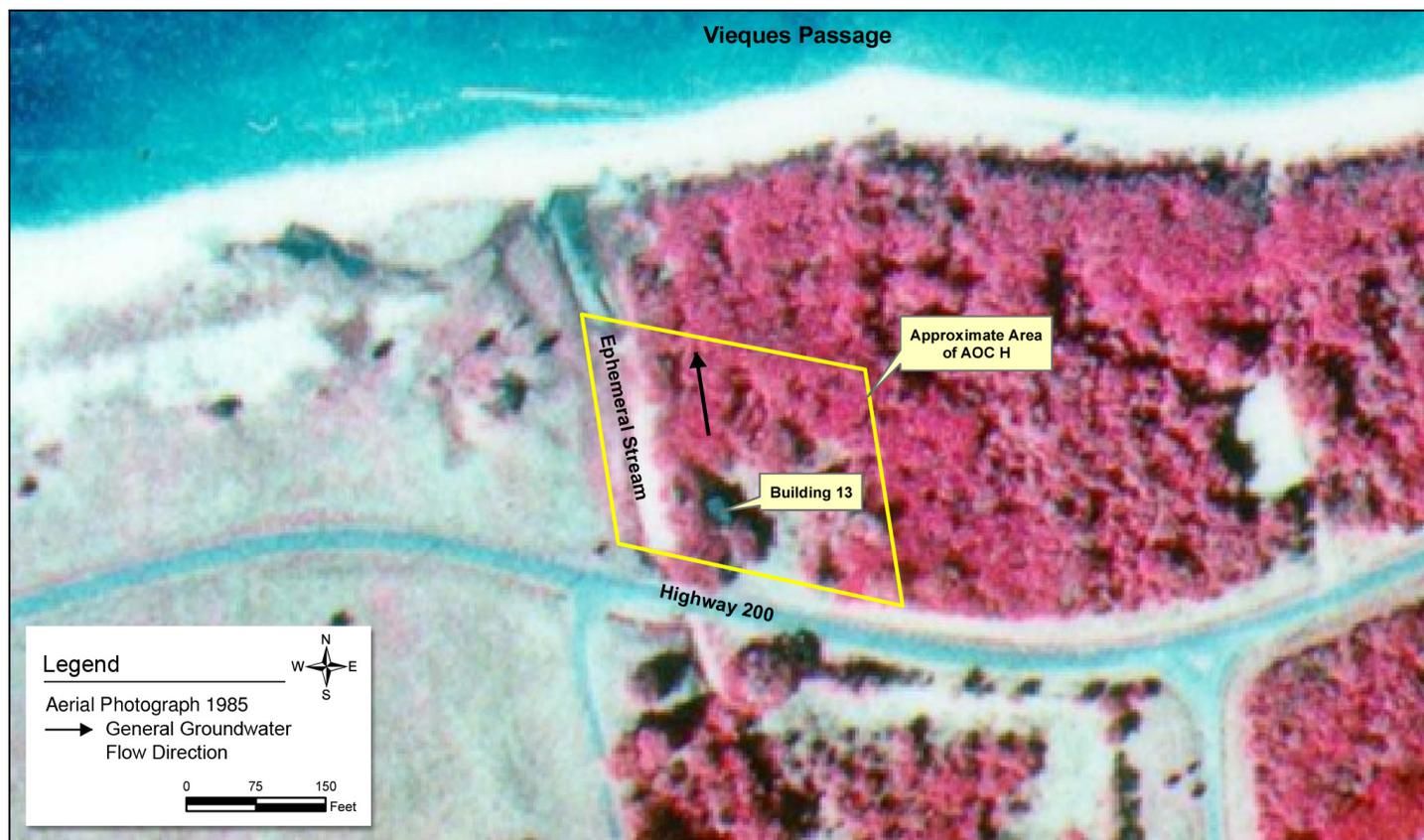


Figure 2 - AOC H Aerial Photograph, Former NASD, West Vieques, Puerto Rico

stream. However, groundwater elevation data do not indicate groundwater is discharging to the stream.

3.2 Results of the Remedial Investigation

The nature and extent of contamination at AOC H is based on the analysis of soil, groundwater, sediment, and surface water samples and comparison of site chemical concentrations to EPA risk based screening criteria for human health (also referred to as preliminary remediation goals [PRGs]) and ecological receptors.

In surface soil, analytical results indicated the presence of six metals at concentrations above at least one screening criterion and **background concentrations**. One VOC and six SVOCs were detected in surface soil samples above screening criteria. Three pesticides (DDD, DDT, and DDE) also exceeded screening criteria in surface soil. No explosives, PCBs, or perchlorate were detected in the surface soils above screening criteria.

Arsenic was the only metal detected in subsurface soil above the screening criterion and background. There were no organics (VOCs, SVOCs, pesticides, and PCBs) detected above the screening criteria in subsurface soil. Explosives and perchlorate were not detected in subsurface soil.

Several metals in unfiltered groundwater samples (also referred to as total metals) exceeded tap water PRGs. Filtered metal (also referred to as dissolved metals) results showed four metals above tap-water PRGs. However, metals were detected in all wells including the upgradient well, and no distribution patterns indicative of a release from the site were identified. One pesticide (DDD) was detected in groundwater above the PRG. No VOCs, SVOCs, PCBs, explosives, or perchlorate were detected in groundwater above their respective PRGs.

Surface water analytical results indicated the presence of one metal (arsenic) at a concentration above the ecological screening criterion in one unfiltered sample. One SVOC (caprolactam, a common contaminant introduced in the laboratory during sample preparation) was detected in one surface water sample, but its concentration did not exceed risk screening criteria. No pesticides, explosives, or perchlorate were detected in any of the surface water samples.

The sediment analytical results indicated the presence of 21 metals. With the exception of barium, the remaining metals were detected at concentrations below background levels. Barium exceeded background in only one sample and there was no distribution pattern indicative of a barium release at the site. Furthermore, barium was not identified as a contaminant in other site media. No pesticides were detected above screening criteria in the sediment samples. No SVOCs, explosives, or perchlorate were detected in sediment samples.

As noted in Section 2.2, the presence of constituent concentrations above screening criteria does not necessarily mean those concentrations represent a potential risk to people, plants, or animals. The screening criteria are established as conservative benchmarks that indicate additional evaluation of the data is warranted if site media concentrations exceed these benchmark values. This additional evaluation, normally done through a quantitative human health risk assessment and ecological risk assessment, is done to determine whether potentially unacceptable risks are present.

3.3 Fate and Transport

The area around AOC H is densely vegetated; therefore, release of chemicals in soil to the air by wind is not likely. The primary ways chemicals could move through environmental media (also known as transport) at AOC H are surface runoff to the ephemeral stream and vertical migration to groundwater. During rain events, chemicals in soil may be transported with storm water runoff to surface water and sediment in the adjacent ephemeral stream. Chemicals present in the soil also may leach through the unsaturated zone and be transported with groundwater flow to discharge into the Vieques Passage and potentially the ephemeral stream adjacent to the site, even though data collected during the RI suggested groundwater was not discharging to the ephemeral stream at that time. Regardless, levels of chemicals detected in groundwater and surface water and sediment of the ephemeral stream during the RI did not warrant collection of additional information regarding groundwater discharge to the ephemeral stream or Vieques Passage.

Table 1 - AOC H - Human Health Risk Assessment Summary

Media	Human Health Risk				
	Current/Future Recreational User	Future Construction Worker	Future Residential Child and Adult	Future Maintenance Worker	Future Industrial Worker
Soil	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
Groundwater	No Exposure Pathway	Acceptable	Acceptable	No Exposure Pathway	Acceptable
Surface Water	Acceptable	No Exposure Pathway	See Recreational User	No Exposure Pathway	No Exposure Pathway
Sediment	Acceptable	No Exposure Pathway	See Recreational User	No Exposure Pathway	No Exposure Pathway

4 Scope And Role of Response Action

Based on evaluation of the data collected at AOC H, there are no unacceptable human health or ecological risks associated with the site; therefore, the preferred alternative for AOC H is no action. This represents the final action for AOC H and is protective of human health and the environment. AOC H is one of several IR sites being addressed under CERCLA at NASD. The response action does not include or affect any other sites at the facility under the CERCLA process.

5 Summary Of Site Risks

A summary of the results of the HHRA and ERA is presented below and in Tables 1 and 2. Detailed results of the risk assessments completed for AOC H are presented in the Final RI Report, which is available in the Administrative Record File.

5.1 Human Health Risk Summary

The HHRA was conducted to evaluate potential human health risks associated with exposure to soil, groundwater, surface water, and sediment at AOC H. Health risks are based on a health-protective estimate of the potential **carcinogenic risk** and the potential non-cancer hazard, which is expressed as a **hazard index (HI)**. Exposure scenarios evaluated for site media consisted of: exposure to soil, surface water, and sediment by current/future recreational users (adult, youth, and child); exposure to soil and groundwater by a future construction worker, future industrial worker, and future residents (adult/child); and exposure to soil by a future maintenance worker. It is important to note that some of these exposure scenarios are not likely to occur, but are assumed in the risk assessment process as a health-protective measure to ensure that appropriate decisions are made with respect to the need for remediation.

A summary of the human health risk assessment conclusions is provided below.

- **Recreational Users** – Potential risks and non-cancer hazards from exposure to soil, surface water, and sediment are within EPA’s acceptable levels. Although exposure to soil by children using the site for recreational use may present a non-cancer hazard above EPA’s target threshold of 1, no individual target organ effect contributes to an HI greater than 1.
- **Construction Workers** – Potential risks and non-cancer hazards from exposure to soil are within EPA’s acceptable levels. Further, potential risks posed by potable use of groundwater are within

What is Human Health Risk and How is it Calculated?

A human health risk assessment (HHRA) estimates the likelihood of health problems occurring if no cleanup action were taken at a site. This is also referred to as “baseline risk.” HHRA’s are conducted using a step-wise process (as outlined in Navy and USEPA HHRA policy and guidance). To estimate baseline risk at a site, the Navy performs the following four-step process:

Step 1: Data Collection and Evaluation

Step 2: Exposure Assessment

Step 3: Toxicity Assessment

Step 4: Risk Characterization

During Data Collection and Evaluation (**Step 1**), the concentrations of chemicals detected at a site are evaluated, including:

- Identifying and evaluating area(s) where site-related chemicals may be found (source areas) and at what concentrations.
- Evaluating potential movement (transport) of chemicals in the environment.
- Comparing site concentrations to risk-based screening levels to determine which chemicals may pose the greatest threat to human health (called “chemicals of potential concern” [COPCs]). The USEPA Region 9 Preliminary Remediation Goals (PRGs) for residential soil and tap water are used to identify COPCs for a site.

In **Step 2**, the Exposure Assessment, potential exposures to the COPCs identified in Step 1 are evaluated. This step includes:

- Identifying possible exposure media (soil, air, groundwater, surface water, sediment).
- Evaluating if/how people may be exposed (exposure pathways).
- Evaluating routes of exposure (for example, ingestion).
- Identifying the concentrations of COPCs to which people might be exposed.
- Identifying the potential frequency and length of exposure.
- Calculating a “reasonable maximum exposure” (RME) dose that portrays the highest level of human exposure that could reasonably be expected to occur.

In the Toxicity Assessment (**Step 3**), both cancer and non-cancer toxicity values are identified for oral, dermal, and inhalation exposures to the COPCs. The toxicity values are identified using the hierarchy of toxicity value sources approved by USEPA.

Step 4 is Risk Characterization, where the information developed in Steps 1-3 is used to estimate potential risk to people. The following approach is used:

- Two types of risk are considered: cancer risk and non-cancer hazard.
- The likelihood of developing cancer as a result of site exposure is expressed as an upper-bound probability; for example, a “1 in 10,000 chance.” In other words, for every 10,000 people that might be exposed under the conditions identified in Step 2, one additional case of cancer may occur as a result of site exposure. An additional cancer case indicates one more person than the number that may get cancer without site exposure.
- For non-cancer health effects, a “hazard index” (HI) is calculated. The HI represents the ratio between the “reference dose,” which is the dose at which no adverse health effects are expected to occur, and the RME dose for a person contacting COPCs at the site. The key concept here is that a “threshold level” (measured as a HI of 1) exists below which no non-cancer health effects are expected to occur.
- The potential risks from the individual COPCs and exposure pathways are summed and a total site risk is calculated for each receptor.
- The risk estimates are evaluated to determine if they are high enough to cause health problems for people at or near the site.
- The uncertainties associated with the risk estimates are presented and their effects on the conclusions of the HHRA are discussed.

What is Ecological Risk and How is it Calculated?

An ecological risk assessment (ERA) is conceptually similar to a human health risk assessment except that it evaluates the potential risks and impacts to ecological receptors (plants, animals other than humans and domesticated species, habitats [such as wetlands], and communities [groups of interacting plant and animal species]). ERAs are conducted using a tiered, step-wise process (as outlined in Navy and USEPA ERA policy and/or guidance) and are punctuated with Scientific Management Decision Points (SMDPs). SMDPs represent points in the ERA process where agreement among stakeholders on conclusions, actions, or methodologies is needed so that the ERA process can continue (or terminate) in a technically defensible manner. The results of the ERA at a particular SMDP are used to determine how the ERA process should proceed, for example, to the next step in the process or directly to a later step. The process continues until a final decision has been reached (i.e., remedial action if unacceptable risks are identified, or no further action if risks are acceptable). The process can also be iterative if data needs are identified at any step; the needed data are collected and the process starts again at the point appropriate to the type of data collected.

An ERA has three principal components:

1. Problem Formulation establishes the goals, scope, and focus of the ERA and includes:

- Compiling and reviewing existing information on the habitats, plants, and animals that are present on or near the site.
- Identifying and evaluating area(s) where site-related chemicals may be found (source areas) and at what concentrations.
- Evaluating potential movement (transport) of chemicals in the environment.
- Identifying possible exposure media (soil, air, water, sediment).
- Evaluating if/how the plants and animals may be exposed (exposure pathways).
- Evaluating routes of exposure (for example, ingestion).
- Identifying specific receptors (plants and animals) that could be exposed.
- Specifying how the risk will be measured (assessment and measurement end-points) for all complete exposure pathways.

2. Risk Analysis which includes:

- Exposure Estimate - An estimate of potential exposures (concentrations of chemicals in applicable media) to plants and animals (receptors). This includes direct exposures of chemicals in site media (such as soil) to lower trophic level receptors (organisms low on the food chain such as plants and insects) and upper trophic level receptors (organisms higher on the food chain such as birds and mammals). This also includes the estimated chemical dose to upper trophic level receptors via consumption of chemicals accumulated in lower food chain organisms.
- Effects Assessment - The concentrations of chemicals at which an adverse effect may occur are determined.

3. Risk Calculation or Characterization:

- The information developed in the first two steps is used to estimate the potential risk to plants and/or animals by comparing the exposure estimates with the effects thresholds.
- Also included is an evaluation of the uncertainties (potential degree of error) that are associated with the predicted risk estimate and their effects on the conclusions that have been made.

The three principal components of an ERA are implemented within the framework of an 8-step, 3-tiered process as follows:

1. Screening Level ERA (Steps 1-2; Tier 1) – The Screening Level ERA (SLERA) conducts an assessment of ecological risk using the three steps described above and very conservative assumptions (such as using maximum chemical concentrations).
2. Baseline ERA (Steps 3-7; Tier 2) – If potential risks are identified in the SLERA, a Baseline ERA (BERA) is typically conducted. The BERA is a reiteration of the three steps described above but uses more site-specific and realistic exposure assumptions, as well as additional methods not included in the SLERA, such as consideration of background concentrations. The BERA may also include the collection of site-specific data (such as measuring the concentrations of chemicals in the tissues of organisms, such as fish) to address key risk issues identified in the SLERA.
3. Risk Management (Step 8; Tier 3) – Step 8 develops recommendations on ways to address any unacceptable ecological risks that are identified in the BERA and may also include other activities such as evaluating remedial alternatives.

EPA's acceptable levels. Although exposure to manganese in groundwater by construction workers poses a non-cancer hazard above EPA's target threshold of 1, the manganese concentrations are likely attributable to background.

- Industrial Workers – Potential risks and non-cancer hazards from exposure to soil are within EPA's acceptable levels. Further, potential risks posed by potable use of groundwater are within EPA's acceptable levels. Potable use of groundwater may result in a non-cancer hazard above EPA's target threshold of 1 due to iron, manganese, and thallium. However, iron and manganese concentrations are likely a result of naturally-occurring reducing conditions. In addition, total metals concentrations were used for risk assessment purposes, which are not indicative of a potable use scenario because groundwater at the site is brackish (average total dissolved solids concentration of approximately 15,000 mg/L) and, therefore, would require filtration/treatment to remove the suspended particulates prior to potable use. Dissolved thallium was not detected in site groundwater, indicating that the presence of thallium is a result of suspended particulates in groundwater which would be filtered in the event of potable use.

- Residents - Future residential use of AOC H may result in a non-cancer hazard above 1 due to exposure to arsenic and vanadium in soil, and arsenic, iron, manganese, thallium, and vanadium in groundwater. However, arsenic and vanadium soil concentrations are consistent with background concentrations. In addition, as noted above, total metals concentrations were used for risk assessment purposes, which are not indicative of a potable use scenario. Dissolved concentrations of the above chemicals were much lower, indicating that the presence of these constituents is likely the result of suspended particulates in groundwater, which would be filtered and/or treated in the event of potable use. Cancer risk estimates associated with exposure to site soil and groundwater are within EPA's acceptable risk range.

- Maintenance Workers – Potential risks and non-cancer hazards from exposure to soil are within EPA's acceptable levels.

Based on the above information, the Navy, in partnership with EPA, in consultation with EQB and the Municipality of Vieques, concluded that there are no unacceptable risks relative to background for either current or potential future recreational, construction, industrial, or residential use of the site.

5.2 Ecological Risk Summary

The site is relatively undisturbed and provides suitable terrestrial habitat for plant, invertebrate, reptile, bird, and mammal communities. The adjacent aquatic brackish water/saltwater habitat associated with the ephemeral stream is supportive of fish, invertebrate, aquatic plant (mangroves), and semi-aquatic bird communities. Groundwater is not discharging to the ephemeral stream based on water level data and, therefore, is not a complete exposure pathway for ecological receptors.

The results of the ERA concluded chemicals detected in surface soil do not pose unacceptable risks to directly exposed plants and animals and other wildlife potentially feeding on those plants and animals. Although some metals and a few organic chemicals were identified as COPCs, risks to lower **trophic level** receptors were negligible based on the few screening value exceedances and comparison of metals concentrations to background/upgradient data. No significant risks associated with past releases were identified for upper trophic level receptors feeding on plants and animals at the site.

Five metals (aluminum, arsenic, barium, cobalt, and manganese) were identified as COPCs in surface water due to a screening value exceedance (arsenic only) or lack of screening values. Of these, aluminum, arsenic, and cobalt were detected only as total (unfiltered) metals. Because these metals were not detected in any of the filtered (dissolved) surface water samples, they are likely associated with suspended sediment particulates, which are not readily **bioavailable** to directly exposed aquatic plants and animals. Therefore, the Navy, in partnership with EPA, and EQB in consultation with the Municipality of Vieques, determined there are no unacceptable risks associated with past releases for ecological exposure to site surface water.

Media	Ecological Risk
	All Receptors
Soil	Acceptable
Groundwater	No Exposure Pathway
Surface Water	Acceptable
Sediment	Acceptable

Table 2 - AOC H - Ecological Risk Assessment Summary

Eight metals (aluminum, barium, beryllium, cobalt, iron, manganese, thallium, and vanadium) were identified as COPCs in sediment at AOC H. However, the concentrations of all these metals (except barium) were below background levels. Barium exceeded background in only one sample and there was no distribution pattern indicative of a barium release at the site. Furthermore, barium was not identified as a contaminant in other site media. There-

fore, the Navy, in partnership with EPA, and EQB in consultation with the Municipality of Vieques, determined there are no unacceptable ecological risks associated with past releases from exposure to site sediment."

6 Preferred Alternative

The Navy and EPA, in consultation with EQB and the Municipality of Vieques, agree that the preferred alternative for AOC H is no action. The preferred alternative meets the statutory requirements of CERCLA for protection of human health and the environment. Based on a review of the site information, including human health and ecological risk assessments conducted during the RI, there are no unacceptable risks associated with past releases at AOC H. Therefore, no alternative other than the no action alternative requires evaluation. Under this alternative, no response action will be performed at AOC H and no restrictions on land use or exposure are necessary. The Navy and EPA, in consultation with EQB and the Municipality of Vieques, may reconsider no action as the preferred alternative or select another alternative if additional data indicate that another alternative warrants consideration or selection.

7 Community Participation

A community relations program has been ongoing for the Vieques environmental restoration program since 2001. The community relations program fosters two-way communication of investigation and remediation activities between the stakeholder agencies (Navy, EPA, EQB, and the Municipality of Vieques) and the public. A Restoration Advisory Board (RAB) was formed in 2004 to provide for expanded community participation. Regular meetings are held to provide an information exchange among community members, the Navy, EPA, EQB, Fish and Wildlife Service, and the Municipality of Vieques. These meetings are open to the public and are held about every 3 months.

Public input is a key element in the decision-making process. Nearby residents and other interested parties are strongly encouraged to use the comment period to relay any questions and comments about the preferred alternative for AOC H. The Navy will summarize and respond to substantive comments in a Responsiveness Summary, which will become part of the official **Record of Decision (ROD)** for AOC H.

This Proposed Plan fulfills the public participation requirements of CERCLA Section 117(a), which specifies that the lead agency (the Navy) must publish a plan outlining any remedial alternatives evaluated for a site and identify the preferred alternative. All documentation pertaining to the investigation of AOC H and the development of the

preferred alternative presented in this Proposed Plan is available for public review in the Administrative Record at the Information Repository (see Section 7.3 below).

7.1 Public Comment Period

The public comment period for the Proposed Plan provides an opportunity for the public to provide input regarding the preferred alternative for AOC H. The public comment period will be from January 28 to March 12, 2008, and a public meeting will be held on Thursday February 7, 2008, at the INSERT MEETING LOCATION. All interested parties are encouraged to attend the meeting to learn more about the preferred alternative for AOC H. The meeting will provide an additional opportunity to submit comments on the Proposed Plan to the Navy.

Comments on the preferred alternative, or this Proposed Plan, must be postmarked no later than March 12, 2008. On the basis of comments or new information, the Navy and EPA, in consultation with EQB and the Municipality of Vieques, may modify the preferred alternative or choose another alternative. The comment page included as part of this Proposed Plan may be used to provide comments to the Navy.

7.2 Record of Decision

After the public comment period, the Navy, EPA, in consultation with EQB and the Municipality of Vieques, will make a final decision for AOC H, based on this Proposed Plan and public comments submitted. If any substantial changes are made to the preferred alternative, additional public comments may be solicited. If no changes are warranted or the changes are not substantial, the EPA and the Navy will prepare ROD, which will be signed by the Navy, EPA, EQB, and the Municipality of Vieques. The ROD will detail the alternative chosen for the site and will include the Navy's responses to substantive comments received during the public comment period.

7.3 Available Information

The technical reports for AOC H are available to the public in the NASD Administrative Record, which is located at:

Biblioteca Electrónica

Calle Carlos LeBrum #449

Isabel Segunda

Vieques, PR 00765

(787) 741-2114

Hours of Operation:

Monday – Friday, 8:00 a.m. – 4:00 p.m.

or online at:

<http://public.lantops-ir.org/sites/public/vieques/default.aspx>

**During the comment period,
interested parties may
submit written comments to
the following address:**

Kevin R. Cloe, P.E.

Environmental Engineer
NAVFAC Atlantic
Code EV41
6506 Hampton Blvd.
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(757) 322-4736
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Lcda. Josefina A. González

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P.O. Box 11488
San Juan, PR 00910
(787) 767-8181
Fax: (787) 767-4861
josefinagonzalez@jca.gobierno.pr

Copies of reports pertaining to AOC H can also be viewed at the Vieques office of Mr. Daniel Rodriguez/USEPA. The box above lists the office address.

Questions or comments can be submitted to any of the individuals listed in the box above during the public comment period.

Glossary

Administrative Record: Site information is compiled in an Administrative Record and placed in an Information Repository located at or near the facility to facilitate public review. The administrative record for Vieques can also be viewed at the following website: <http://public.lantops-ir.org/sites/public/vieques/default.aspx>

Background Concentration: Concentrations of naturally occurring and anthropogenic (due to mankind) constituents, such as metals, found in groundwater, soil, sediment, and surface water at levels not influenced by site-specific releases. Background concentrations of some metals and other constituents are often at levels that may pose a risk to human health or the environment. However, background concentrations of site chemicals are factored into risk management determinations to ensure remedial actions are not implemented for constituents whose concentrations are attributable to background conditions and not indicative of a site-related release.

Bioavailable: the portion of a chemical that can be absorbed, transported, and utilized physiologically

Cancer Risk or Carcinogenic Risk: Cancer risks are expressed as a number reflecting the increased chance that a person will develop cancer if exposed to carcinogenic chemicals or substances. For example, EPA's acceptable risk range is 1×10^{-4} to 1×10^{-6} , meaning there is 1 additional chance in 10,000 (1×10^{-4}) to 1 additional chance in 1 million (1×10^{-6}) that a person will develop cancer if exposed to site contamination.

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA): A Federal law, commonly referred to as the "Superfund" Program, passed in 1980 and amended by the Superfund Amendments and Reauthorization Act of 1986. CERCLA provides for cleanup and emergency response in connection with existing inactive hazardous waste disposal sites that endanger public health and safety or the environment.

Chemical of Potential Concern (COPC): A chemical that, based upon comparison to regulatory screening criteria, has potential to pose unacceptable risks or hazards to receptors at the site.

Ecological Risk Assessment (ERA): A conservative, scientific evaluation of the potential adverse effects on plants and animals if they are exposed to contamination at a site.

Environmental Quality Board (EQB): The agency responsible for administration and enforcement of environmental regulations for Puerto Rico.

Groundwater: Subsurface water that occurs in soils and geologic formations.

Human Health Risk Assessment (HHRA): A conservative, scientific estimate of the potential adverse health effects on people if they are exposed to contamination at a site.

Media (singular, Medium): Soil, groundwater, surface water or sediments at the site.

Municipality of Vieques: Property owner of Vieques.

No Action: Cleanup actions are not necessary to be protective of human health and the environment.

Non-cancer Hazard (Hazard Index): Non-cancer hazard is an expression of adverse health effects to humans associated with exposure to non-carcinogens. Non-cancer hazards are expressed as a ratio of the average daily intake of a chemical (ADI) to its reference dose (a threshold level of exposure below which no adverse health effects are likely to occur). When this number is equal to or less than the EPA acceptable hazard threshold of 1, no adverse health effects are anticipated. However, if it exceeds 1, the potential for non-cancer effects exists.

Proposed Plan: A document that presents the proposed alternative for a site and requests public input.

Public Comment Period: The time allowed for the community members to express views and concerns regarding an action proposed by the lead agency(ies) to be taken at a site, such as a Superfund remedy selection.

Receptors: Humans, animals, or plants that may be exposed to contaminants related to a given site.

Record of Decision (ROD): A legal document that describes the cleanup action or remedy selected for a site, the basis for choosing that remedy, and substantive public comments.

Remedial Action: A cleanup method proposed or selected to address contaminants at a site. It is also the implementation of the remedy, once selected in accordance with the CERCLA process.

Remedial Investigation (RI): A study of a site that supports a final decision for a site where hazardous substances have potentially been disposed or released. The RI identifies the nature and extent of contamination at the site and the associated risks.

Site: The area where a hazardous substance waste, or constituent; pollutant; or contaminant from the facility has been released; has migrated; or has otherwise come to be located.

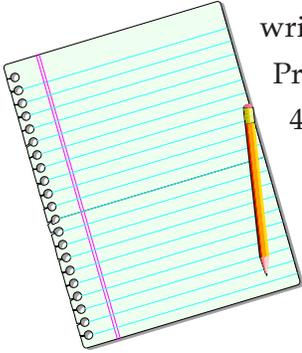
Trophic Level: A group of organisms that occupy the same position in a food chain.

United States Environmental Protection Agency (EPA): The federal agency responsible for administration and enforcement of CERCLA (and other Federal environmental regulations), and with final approval authority for the ROD.

Mark Your Calendar for the Public Comment Period

**45-Day Public Comment Period
Jan. 28 – March 12, 2008**

Submit Written Comments



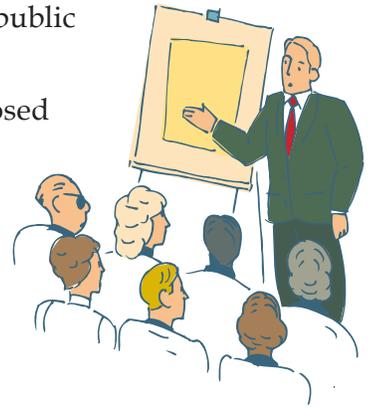
The Navy and EPA will accept written comments on the Proposed Plan during the 45-day public comment period.

Attend the Public Meeting

**Thursday February 7, 2008 at
5:00 pm to 7:00 pm**

**Vieques Multiple Use Center
Calle Antonio Mellado – (across from Plaza)
Isabel Segunda, Vieques, PR**

The Navy will hold a public meeting to explain the rationale for the proposed no action alternative. Verbal and written comments will also be accepted at this meeting.



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Place
stamp
here

NAVFAC Atlantic
Attention: Code EV41/Mr. Kevin Cloe
6506 Hampton Blvd.
Norfolk, VA 23508-1278