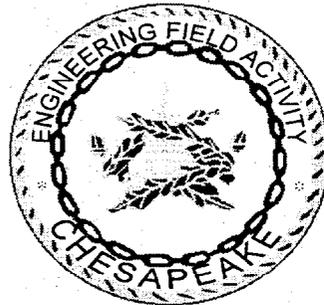


Proposed Plan for Site 44 - Soak Out Area

Indian Head Division
Naval Surface Warfare Center
Indian Head, Maryland



Engineering Field Activity Chesapeake
Naval Facilities Engineering Command

Contract Number N62472-90-D-1298

Contract Task Order 0245

February 2001

PROPOSED PLAN
SITE 44 – SOAK OUT AREA
INDIAN HEAD DIVISION NAVAL SURFACE WARFARE CENTER
INDIAN HEAD, MARYLAND
FEBRUARY 2001

1.0 INTRODUCTION

This Proposed Plan describes the proposed no-action decision for Site 44 (Soak Out Area) at the Indian Head Division Naval Surface Warfare Center (IHDIV-NSWC), Indian Head, Maryland. The Plan also provides the rationale for this decision. This document is issued by the Department of the Navy (Navy), the lead agency for site activities, and the U.S. Environmental Protection Agency (EPA) and the Maryland Department of the Environment (MDE), the support agencies. The Navy, in consultation with EPA and MDE, will select a final remedy for the site after reviewing and considering all information submitted during the 30-day comment period. The Navy, in consultation with EPA and MDE, may modify the no-action decision based on new information or public comments. Therefore, the public is encouraged to review and comment on all the information presented in this Proposed Plan.

The Navy is issuing this Proposed Plan as part of its public participation responsibilities under Section 300.430(f)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as the Superfund Law. This Proposed Plan summarizes information that can be found in detail in the Remedial Investigation (RI) Report and other documents contained in the Administrative Record file for this site. The Administrative Record file is located at the Charles County Public Library-La Plata Branch and the IHDIV-NSWC General Library. Addresses, telephone numbers, and hours of operation for these locations can be found on page 6 of this document. The Navy, EPA, and MDE encourage the public to review these documents to gain a more comprehensive understanding of the site and Superfund activities that have been conducted for the site.

A glossary of some of the words used in this Proposed Plan is provided in Table 1.

2.0 SITE BACKGROUND

Site 44 is located on the northwest-central portion of IHDIV-NSWC (see Figure 1). The site is located between Buildings 903 and 907 and covers an area of approximately 600 square feet (see Figure 2). The area is flat, grassy, and open with a slight grade to the southwest. A drainage ditch extends along the southeastern edge of the site to a culvert that extends beneath Boyd Road.

During the late 1960s and early 1970s, a soak-out tank located on Site 44 was used to remove propellant from rocket motor catapult tubes. The tank was located approximately 75 feet east of Building 1363 and 100 feet south of Building 1182. The tank consisted of two stacked 55-gallon drums that were welded together. The drums were filled with a nonflammable solvent believed to be Penchem 9018, a polysulfide solvent containing mercaptan. Dirty rocket motor catapult tubes were dipped into the solvent and allowed to soak for 2 to 3 days. A smaller tank was placed at the bottom of the larger tank to collect pieces of propellant that fell out of the tubes during cleaning. The amount of solvent spilled as the tubes were removed from the tank is not known. The used solvent was removed from the soak-out tank approximately once per month and stored in 55-gallon drums placed in the woods near Building 1363. This storage area is Site 45 and is being investigated separately. During the 3 to 4 years that the soak-out drums were used, vegetation did not grow within a 10-foot radius. There is currently no stressed vegetation at the site.

IHDIV-NSWC was placed on the Superfund National Priorities List (NPL) in September 1995. Sites on the NPL are subject to the requirements of CERCLA and the NCP.

The Navy conducted several investigations at the site. The results are described in Section 3.0, Site Characteristics. Previous public participation efforts are discussed in Section 7.0, Community Participation.

3.0 SITE CHARACTERISTICS

Site investigations were conducted at Site 44 in 1992, 1993, and 1994 to determine whether shallow soil (to a depth of 15 feet), groundwater, or sediment had been contaminated by spilled solvents.

An RI was performed at the site in 1997 that included surface soil, groundwater, and sediment sampling. The RI, along with previous site investigations, identified the types, quantities, and locations of contamination.

The following summarizes the nature and extent of contamination:

- Analytical data suggest that historic activities at Site 44 have had minimal impact on the soil, shallow groundwater, and sediment quality near the site.
- Low concentrations of volatile organic compounds were detected in two soil-gas samples collected between Buildings 903 and 1182.

- Few organic compounds were detected in Site 44 samples. Nitrocellulose, a component of the propellant, was detected in three of four surface soil samples. Three polynuclear aromatic hydrocarbons (PAHs) were detected at relatively low concentrations in two of the 12 subsurface soil samples.
- In 1992, trichloroethene (TCE) was detected in a single shallow groundwater sample at a low concentration below the Safe Drinking Water Act Maximum Contaminant Level (MCL) but above EPA Region 3 human health risk-based screening concentrations. Concentrations of barium and zinc detected in 1997 samples were greater than activity-wide background concentrations. However, maximum concentrations of all chemicals detected in 1997 were less than their respective EPA Region 3 screening concentrations for groundwater used as tap water.
- Seven metals were detected in surface soil samples at levels higher than activity-wide background concentrations. However, only arsenic and iron were detected at concentrations greater than EPA Region 3 human health risk-based screening concentrations for residential land use. Therefore, arsenic and iron were evaluated in the risk assessment as contaminants of potential concern.
- Petroleum hydrocarbons were detected in one surface soil and one subsurface soil sample at concentrations less than basewide background levels. Fuel-related components were not detected in the environmental media samples.

This site has been an open area from the early 1970s to the present time. It is not used for any other purpose.

4.0 SCOPE AND ROLE OF RESPONSE ACTION

Based on the finding of no unacceptable risk, the Navy has determined that no action is necessary at Site 44. Therefore, remedial action objectives were not developed to prevent current and future exposure to contaminated media. The purpose of this Proposed Plan is to identify the reasons why no action is necessary to address the substances detected at the site.

5.0 SUMMARY OF SITE RISKS

As part of the RI, the Navy conducted a baseline risk assessment to determine the current and future effects of detected substances on human health and the environment. It is the Navy's current judgment that no unacceptable risk exists and that no action is necessary to protect public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment at Site 44.

The site is currently an open area between buildings. The Navy has no plans to develop this area in the future.

Human Health Risks

The human health risk assessment considered the following receptors and exposure pathways:

- Current/future maintenance workers, current/future full-time employees, and current/future adolescent trespassers exposed to surface soil and sediment.
- Future construction workers exposed to surface and subsurface soil, groundwater, and sediment.
- Hypothetical future residents exposed to surface soil, groundwater, and sediment.

Receptor	Cancer Risk	Hazard Quotient
Maintenance worker	6.8E-7	0.01
Full-time employee	5.7E-6	0.11
Adolescent trespasser	2.2E-7	0.01
Construction worker	5.7E-7	0.33
Child resident	9.4E-6	0.97
Adult resident	8.3E-6	0.16

A risk level is determined for potential cancer-causing chemicals based on how much of the chemical is present and its strength as a cancer-causing agent. The acceptable risk range EPA has set for protection of human health is represented as 1E-4 to 1E-6. This range would increase the risk that a male will get cancer from 50 percent (lifetime average cancer risk for a male) to a maximum of 50.01 percent. In addition, the risk that a female will get cancer would increase from 33 percent (lifetime average cancer risk for a female) to a maximum of 33.01 percent. Chemicals producing other harmful effects were compared with reference concentrations (highest concentrations not causing harmful effects) to calculate a Hazard Quotient (HQ). An HQ above 1.0 indicates cleanup may be needed to reduce potential exposures to a safe level. For example, if the chemical concentration results in a daily intake of 25 parts per million (ppm) per day and the reference concentration is 10 ppm per day, the HQ would be 2.5.

No unacceptable risks were identified for any of the receptors. All HQs for all receptors were less than the acceptable level of 1.0. The excess lifetime cancer risks for all considered receptors were within or below the EPA target risk range of 1E-4 to 1E-6.

These risks and hazard levels indicate there are no unacceptable potential risks to the receptors under the assumed exposure conditions. The risk estimates are based on reasonable maximum exposure scenarios and were developed by taking into account various conservative assumptions about the

frequency and duration of an individual's exposure to soil, shallow groundwater, and sediment. Assumptions on the toxicity of the detected contaminants were also considered.

Ecological Risks

During the planning stages for the RI, it was determined by the Navy, EPA, and MDE that the potential for risks to ecological receptors at Site 44 was insignificant. Results of previous investigations indicated that contaminants associated with Site 44 were confined to subsurface soil and groundwater in a developed area of limited habitat. The most recent investigation confirmed this finding. In addition, migration of contaminants via overland runoff to surface water or migration of groundwater contaminants to surface water is unlikely because there is limited surface water near the site. Consequently, no quantitative ecological risk assessment was developed for this site.

There are no endangered species or critical habitats at Site 44.

6.0 REMEDIAL ACTION OBJECTIVES AND REMEDIAL ALTERNATIVES

Remedial action objectives and cleanup goals were not developed because the baseline risk assessment showed no unacceptable risks to human health, ecological receptors, or the environment. Remedial alternatives, other than the no-action alternative, were not developed or evaluated in a feasibility study (FS) because there are no unacceptable risks. In addition, none of the chemical concentrations exceeded applicable or relevant and appropriate requirements (ARARs) of federal and state environmental laws. No remedial actions would be implemented, and the site area could be available for unrestricted use. However, the no-action approach can change in response to public comment or new information.

7.0 COMMUNITY PARTICIPATION

The Navy, EPA, and MDE provide information regarding the cleanup of sites at INDIV-NSWC, including Site 44, to the public through public meetings, the Administrative Record file for the site, and announcements published in the *Maryland Independent* and *La Plata-Indian Head Ledger*. The Navy, EPA, and MDE encourage the public to gain a more comprehensive understanding of the site and the Superfund activities that have been conducted at the site.

An important part of the selection of a remedial action is community involvement. The Navy relies on public comments to ensure the selected alternative is fully understood and that community concerns have been considered. The following information is provided to solicit community input into the selection of the no-action decision for Site 44.

Important Dates to Remember

Public comment period begins February 13, 2001

Public Meeting
Tuesday, February 20, 2001
7 to 8:30 pm
Indian Head Senior Center
100 Cornwallis Square
Indian Head, MD 20640

Public comment period ends April 6, 2001

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 or the no-action approach for Site 44. In addition, an overview of the site characterization will be presented.

A collection of general information, including the Administrative Record file, is available to the community in the information repositories at the following locations:

Charles County Public Library La Plata Branch
Charles & Garrett Streets
La Plata, MD 20646
(301) 934-9001

Hours of Operation:
Mon. – Thurs.: 9:00 AM – 8:00 PM
Fri.: 12:00 PM – 5:00 PM
Sat.: Summer (closed)
9:00 AM – 5:00 PM (after Labor Day)
Sun.: Closed

IHDIV-NSWC
General Library
Indian Head Division
Naval Surface Warfare Center
Building 620
101 Strauss Avenue
Indian Head, MD 20640-5035
(301) 744-4747

Hours of Operation:
Mon. – Fri.: 9:00 AM – 5:30 PM
Sat. & Sun.: Closed

Minutes of the public meeting will be made available to the public through the information repositories listed above. A responsiveness summary will be prepared at the conclusion of the comment period to summarize significant comments, criticisms, and new relevant information submitted to the Navy during the comment period. In addition, the summary will include the responses to each issue or question raised at the public meeting. The responsiveness summary will also be included in the Record of Decision (ROD) for Site 44.

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

Ms. Christina Adams
Public Affairs Officer
Indian Head Division
Naval Surface Warfare Center
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Indian Head, MD 20640-5035
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Fax: (301) 744-6524
adamscs@ih.navy.mil

For further information, please contact:

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Table 1 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 File: A record made available to the public that includes all information considered and relied on in selecting a remedy for a site.

Applicable or Relevant and Appropriate Requirements (ARARs): The federal and state environmental laws that a selected remedy will meet. These requirements may vary among sites.

Background Concentrations: Concentrations of chemical compounds in environmental media that are representative of naturally occurring conditions or that may be attributable to historic, widespread human activity.

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

Clean-up: Actions taken to deal with a release or threatened release of hazardous substances that could affect public health or the environment. The noun "cleanup" is often used to describe various response actions or phases of remedial responses, such as an RI.

Comment Period: A time for the public to review and comment on various documents and actions taken, either by the Navy, EPA, or MDE. For example, a comment period is provided when EPA proposes to add sites to the NPL. 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. Under the program, EPA can do either of the following:

- Pay for site cleanup when parties responsible for the contamination cannot be located or are unwilling or unable to perform the work.
- Take legal action to force parties responsible for site contamination to clean up the site or pay back the federal government for the cost of the cleanup.

Contaminants: 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.

Ecological Receptors: A plant or animal that is introduced to a compound in 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 Quotient (HQ): The ratio of the daily intake of a chemical from on-site exposure divided by the reference dose for that chemical. 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.

Metals: Metals are naturally occurring elements in the earth. Arsenic, cadmium, calcium, copper, magnesium, and zinc are examples of metals. Exposure to some metals, such as arsenic, cadmium, copper, and zinc, can have toxic effects. Other metals, such as calcium and magnesium, 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. An example of an organic compound detected at Site 44 is trichloroethene. 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 concentration that can cause harmful effects can also vary widely.

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. 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.

Record of Decision (ROD): An official public document that explains which clean-up alternative will be used at an NPL site. 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 Action: The actual construction or implementation phase that follows the remedial design for the selected clean-up alternative at a site on the NPL. Remedial action and remedial design are usually not required for a site where it is determined that no action is required to protect human health or the environment.

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." The RI is intended to gather data needed to determine the type and extent of contamination and establish criteria for cleaning up a site. The FS is intended to identify and screen clean-up alternatives for remedial action and analyze in detail the technology and costs of the alternatives. An FS is typically not conducted when the RI concludes that no action is warranted to protect human health and the environment.

Remedial Response: A long-term action that stops or substantially reduces a release or threatened release of hazardous substances that is serious but does not pose an immediate threat to human health or the environment.

Response Action: As defined in 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.

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

Safe Drinking Water Act Maximum Contaminant Level (MCL): The maximum permissible level of a contaminant in water that is delivered to any user of a public water system.

Screening Concentrations: The lowest concentration of a chemical compound in an environmental media that may result in current or potential future adverse human health or environmental effects in the event of exposure under certain conditions.

Soil Gas: Air trapped below the ground surface.

Superfund: An informal name for CERCLA.

Superfund Amendments and Reauthorization Act (SARA): The public law enacted to authorize 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.

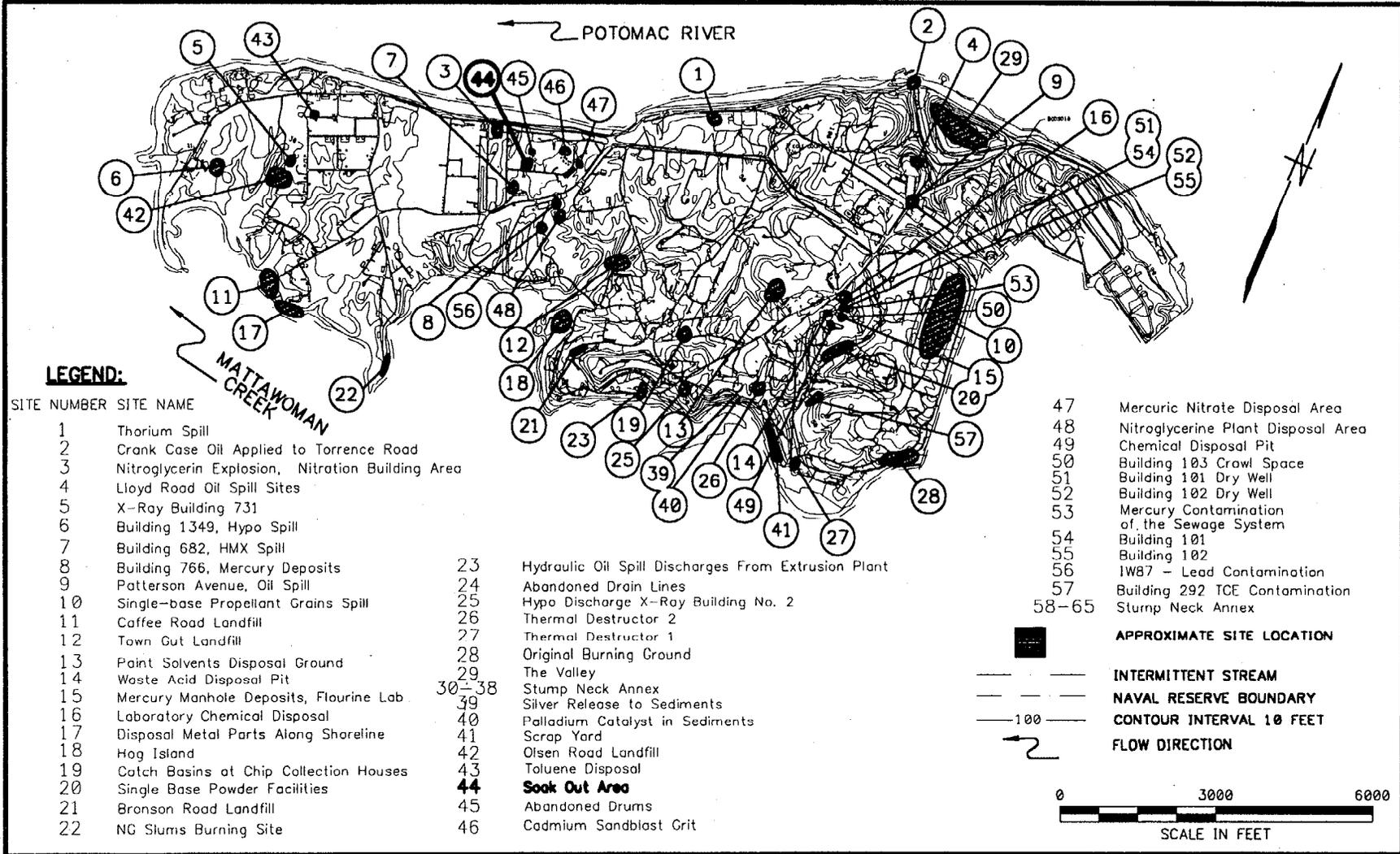
Total Petroleum Hydrocarbons: An analytical test used to determine the presence and extent of spilled petroleum products (gasoline, waste oil, etc.).

Volatile Organic: A chemical compound that evaporates readily at normal temperatures and pressures.

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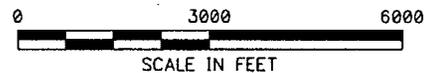
SITE NUMBER SITE NAME

- 1 Thorium Spill
- 2 Crank Case Oil Applied to Torrence Road
- 3 Nitroglycerin Explosion, Nitration Building Area
- 4 Lloyd Road Oil Spill Sites
- 5 X-Ray Building 731
- 6 Building 1349, Hypo Spill
- 7 Building 682, HMX Spill
- 8 Building 766, Mercury Deposits
- 9 Patterson Avenue, Oil Spill
- 10 Single-base Propellant Grains Spill
- 11 Caffee Road Landfill
- 12 Town Out Landfill
- 13 Paint Solvents Disposal Ground
- 14 Waste Acid Disposal Pit
- 15 Mercury Manhole Deposits, Flourine Lab
- 16 Laboratory Chemical Disposal
- 17 Disposal Metal Parts Along Shoreline
- 18 Hog Island
- 19 Catch Basins at Chip Collection Houses
- 20 Single Base Powder Facilities
- 21 Bronson Road Landfill
- 22 NG Slums Burning Site

- 23 Hydraulic Oil Spill Discharges From Extrusion Plant
- 24 Abandoned Drain Lines
- 25 Hypo Discharge X-Ray Building No. 2
- 26 Thermal Destructor 2
- 27 Thermal Destructor 1
- 28 Original Burning Ground
- 29 The Valley
- 30-38 Stump Neck Annex
- 39 Silver Release to Sediments
- 40 Palladium Catalyst in Sediments
- 41 Scrap Yard
- 42 Olsen Road Landfill
- 43 Toluene Disposal
- 44 **Soak Out Area**
- 45 Abandoned Drums
- 46 Cadmium Sandblast Grit

- 47 Mercuric Nitrate Disposal Area
- 48 Nitroglycerine Plant Disposal Area
- 49 Chemical Disposal Pit
- 50 Building 103 Crawl Space
- 51 Building 101 Dry Well
- 52 Building 102 Dry Well
- 53 Mercury Contamination of the Sewage System
- 54 Building 101
- 55 Building 102
- 56 1W87 - Lead Contamination
- 57 Building 292 TCE Contamination
- 58-65 Stump Neck Annex

- APPROXIMATE SITE LOCATION
- INTERMITTENT STREAM
- NAVAL RESERVE BOUNDARY
- CONTOUR INTERVAL 10 FEET
- FLOW DIRECTION

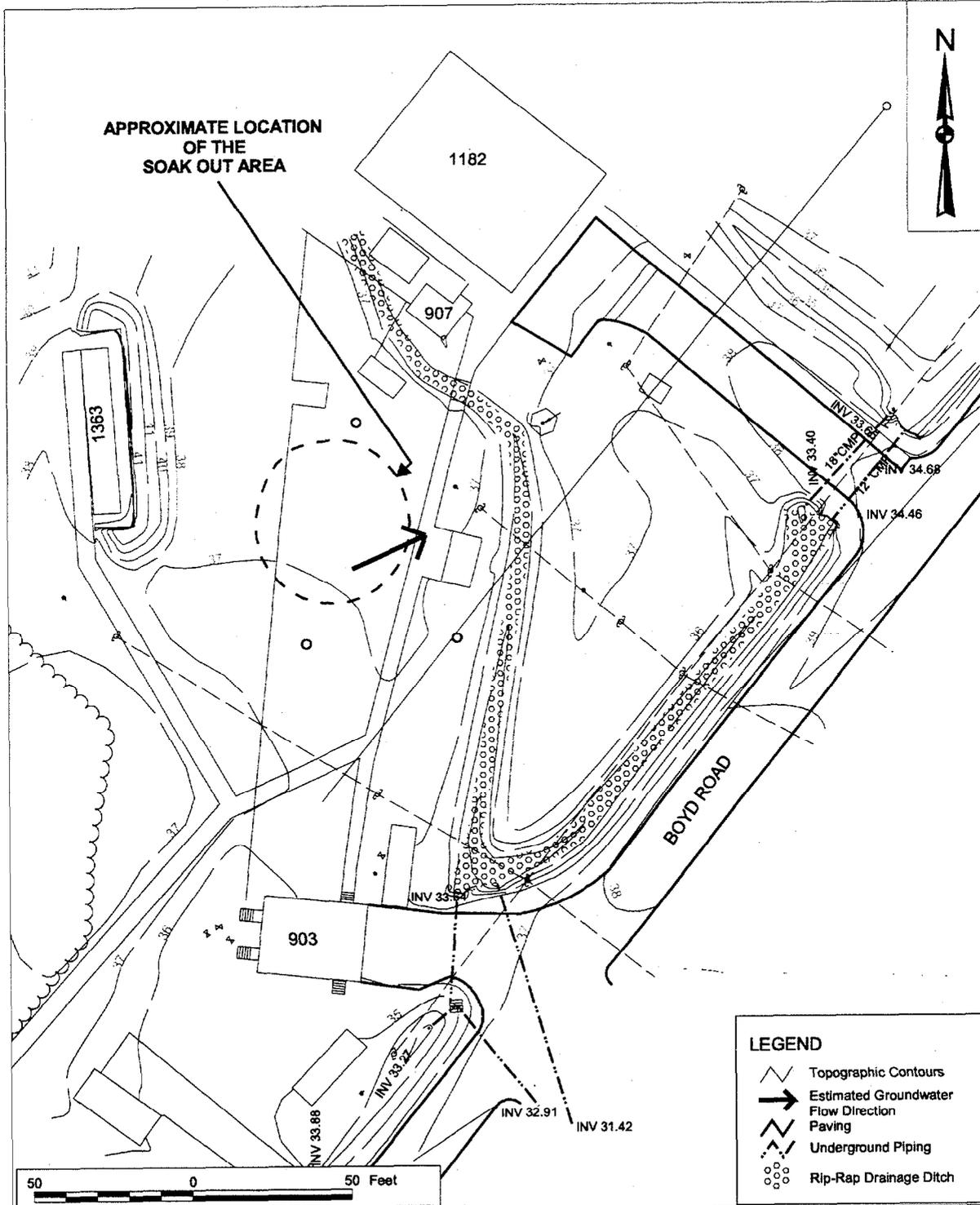


DRAWN BY HJP	DATE 8/22/00
CHECKED BY	DATE
COST/SCHED-AREA	
SCALE AS NOTED	

Tetra Tech NUS, Inc.

**SITE LOCATION MAP
INDIAN HEAD NSWC
INDIAN HEAD, MARYLAND**

CONTRACT NO. 7129	OWNER NO.
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO.	FIGURE 1
	REV. 0



LEGEND	
	Topographic Contours
	Estimated Groundwater Flow Direction
	Paving
	Underground Piping
	Rip-Rap Drainage Ditch

DRAWN BY J. BELLONE	DATE 7/10/00	Tetra Tech NUS, Inc. SITE CONDITIONS SITE 44 - SOAK OUT AREA IHDIV-NSWC, INDIAN HEAD, MARYLAND	CONTRACT NUMBER —	OWNER No. —
CHECKED BY	DATE		APPROVED BY —	DATE —
COST/SCHEDULE-AREA			APPROVED BY —	DATE —
SCALE AS NOTED			DRAWING No. FIGURE 2	REV 0

P:\GIS\INDIANHD\7129 APR\SITE 44 - SITE CONDITIONS LAYOUT JCB 7/10/00

MAILING LIST

If you are not on the mailing list and would like to receive future publications pertaining to Site 44 or other sites at IHDIV-NSWC 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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