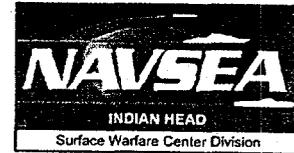


INSTALLATION RESTORATION PROGRAM



INDIAN HEAD DIVISION,
NAVAL SURFACE WARFARE CENTER
101 STRAUSS AVENUE
INDIAN HEAD, MARYLAND
20640-5035



RESTORATION ADVISORY BOARD (RAB) MEETING

Date of Meeting: February 15, 2001

Restoration Advisory Board (RAB) Member Participants:

CAPT Marc A. Siëdband (N)	Mr. Curtis DeTore (S)
Mr. William Bohli (N)*	Mr. Vincent Hungerford (C)*
Mr. Elmer Biles (C)	Mr. Jeff Morris (N)

RAB Members Not in Attendance:

Mr. Gary Davis (L)	Mr. Fred Pinkney (F)
Mr. Stephen Elder (L)	Ms. Karen Wigger (L)
Mr. Dennis Orenshaw (F)	

Additional Attendees:

Ms. Sherry Deskins (N)	Mr. Shawn Jorgensen (N)
Ms. Sharon Geil (C)	Mr. George Latulippe (K)
Mr. Russell Hamilton (C)	Ms. Heidi Morgan (N)

* Co-Chair

C = Community
F = Federal Official
K = Contractor
L = Local Official
N = Navy Official
R = Newspaper Reporter
S = State Official

ENCL (1)

Major Issues Discussed/Accomplished:

1. Meeting Introduction

Mr. William Bohli of the Indian Head Division, Naval Surface Warfare Center (IHDIV-NSWC) began the meeting by introducing himself as the new Head of the Safety Department at IHDIV-NSWC, replacing Ms. Susan Adams, and welcoming everyone to the Indian Head Senior Center. Mr. Bohli also introduced the current Commander of IHDIV-NSWC, Captain Marc A. Siedband; the new Remedial Project Manager (RPM) from Engineering Field Activity Chesapeake (EFACHES), Mr. Jeff Morris, who replaced Mr. Robert Sadorra; as well as the rest of the Indian Head team.

Mr. Bohli then presented the meeting agenda, which is included as Attachment A.

2. Update on Installation Restoration (IR) Site 57

Mr. Shawn Jorgensen of the Indian Head Division, Naval Surface Warfare Center provided an update on the work to be performed at IR Site 57 - Building 292 Trichloroethylene (TCE) Spill. A brief background of the site was provided and the status of the Pre-Feasibility Study (FS) discussed. The Navy plans to conduct the sampling in March 2001 and have a draft of the FS Report for this site available for public review in November 2001.

A copy of Mr. Jorgensen's presentation is included in Attachment B.

3. Update on IR Site 47 - Mercuric Nitrate Disposal Area

Mrs. Heidi Morgan of the Indian Head Division, Naval Surface Warfare Center provided information on the additional sampling that will be conducted at Site 47 to better define the nature and extent of contamination at the site. Additionally, the sampling will be conducted to obtain information on shallow groundwater at the site, such as flow direction.

A copy of Mrs. Morgan's presentation is located in Attachment C.

4. Update on Toxicity Testing at IR Site 42 - Olsen Road Landfill

Mr. Jorgensen provided an update of the Toxicity Identification Evaluation (TIE) testing that was performed at IR Site 42. The demonstration project has been completed and the TIE report is expected in February 2001, which will be used to complete the FS Report for IR Site 42. The anticipated completion date of the IR Site 42 FS Report is April 2001. Preliminary results indicate that ammonia (a confounding factor) is the cause of toxicity in

the samples from the site, not silver. Ammonia is a naturally-occurring chemical in sediments that is unrelated to man-made contamination.

A copy of Mr. Jorgensen's presentation is located in Attachment D.

5. Mattawoman Creek Study Update

Mr. George Latulippe of TetraTech NUS provided an update of the work performed to date on the Mattawoman Creek Ecological Risk Study and the future schedule for the study. A draft work plan containing the finalized problem formulation and the sampling and analysis plan is scheduled to be completed in mid-April 2001. This work plan will require review from the Restoration Advisory Board (RAB).

A copy of Mr. Latulippe's presentation is provided in Attachment E.

6. Update on Remedial Investigation (RI) Work at Sites 11, 13, 17, 21 and 25

Mrs. Heidi Morgan provided the status of the work performed at the following IR sites: IR Site 11 - Caffee Road Landfill, IR Site 13 - Paint Solvents Disposal Ground, IR Site 17 - Disposed Metal Parts Along Shoreline, IR Site 21 - Bronson Road Landfill, and IR Site 25 - Hypo Discharges From X-ray Building No. 2.

Additional samples were taken at IR Sites 17 and 25, which included the installation of shallow groundwater monitoring wells. The draft RI Report for all of the work performed at these sites is expected in April 2001.

A copy of Mrs. Morgan's presentation is included in Attachment F.

7. Update on RI Work Plan for Lab Area

Mrs. Morgan discussed seven sites on which RIs will be conducted in FY 2001. These include: IR Site 15 - Mercury Deposits in Manhole, Fluorine Lab; IR Site 16 - Laboratory Chemical Disposal; IR Site 49 - Chemical Disposal Pit; IR Site 50 - Building 103 Crawl Space; IR Site 53 - Mercury in the Sewage System; IR Site 54 - Building 101 Mercury Contamination; IR Site 55 - Building 102 Mercury Contamination. Mrs. Morgan provided a brief background on these sites and stated that due to the close proximity of these sites to one another, and the similar suspected chemicals involved, they will be studied as one area.

The anticipated completion date of the final work plan for these sites is February 2001, delayed from December 2000, with fieldwork scheduled to be conducted in March and April 2001. The cost of this RI work is estimated at \$950,000.

A copy of Mrs. Morgan's presentation is included in Attachment G.

8. Schedule of Proposed Plans for IR Sites 12, 41, and 44

Mr. Jorgensen discussed the status of the proposed plans for IR Sites 12 (Town Gut Landfill), 41 (Scrap Yard), and 44 (Soak Out Area). In addition, Mr. Jorgensen stated that a public meeting was held on January 23, 2001 to discuss the proposed plan for Site 12. Mr. Jorgensen also stated that a public meeting to discuss the proposed plans for Sites 41 and 44 will be held on Tuesday, 20 February 2001 at the Indian Head Senior Center from 7:00 - 8:30 p.m.

Mr. Jorgensen then reminded everyone that the public comment period for the Site 12 proposed plans ends on March 2, 2001 and the public comment period for the Sites 41 and 44 proposed plans ends on April 6, 2001. Mr. Jorgensen stressed the importance of public review of these proposed plans, since public comments can change the proposed remedial action alternative for a site.

A copy of Mr. Jorgensen's presentation for these sites can be found in Attachment H.

9. Comments, Questions, and Answers

Numerous comments were made and questions asked during the meeting. These comments, questions, and answers are provided in Attachment I.

10. Conclusion

Mr. Bohli concluded the meeting by thanking all in attendance. Mr. Bohli then provided the tentative agenda for the next meeting scheduled for Thursday, June 21, 2001, from 7:00 to 9:00 p.m. at the Indian Head Senior Center. A copy of the tentative agenda is included as Attachment J.

**INDIAN HEAD DIVISION,
NAVAL SURFACE WARFARE CENTER
INSTALLATION RESTORATION (IR) PROGRAM
RESTORATION ADVISORY BOARD (RAB) MEETING
AGENDA**

February 15, 2001

7:00 - 7:10

ARRIVAL/WELCOME

Mr. William H. Bohli
Indian Head Division, Naval Surface Warfare Center
Head, Safety Department

7:10 - 7:20

IR SITE 57 UPDATE

Mr. Shawn Jorgensen
Indian Head Division, Naval Surface Warfare Center
IR Project Manager

7:20 - 7:30

UPDATE ON IR SITE 47

Ms. Heidi Morgan
Indian Head Division, Naval Surface Warfare Center
IR Project Manager

7:30 - 7:40

UPDATE ON TOXICITY TESTING AT IR SITE 42

Mr. Shawn Jorgensen

7:40 - 8:00

MATTAWOMAN CREEK STUDY UPDATE

Mr. George Latulippe
TetraTech NUS
Project Manager

8:00 - 8:10

UPDATE ON RI WORK AT SITES 11, 13, 17, 21, AND 25

Ms. Heidi Morgan

8:10 - 8:20

UPDATE ON RI WORK PLAN LAB AREA

Ms. Heidi Morgan

**RESTORATION ADVISORY BOARD (RAB) MEETING
AGENDA
(continued)**

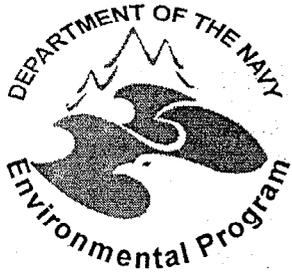
February 15, 2001

8:20 - 8:30 **SCHEDULE OF PROPOSED PLANS FOR IR SITES 12, 41, AND 44**

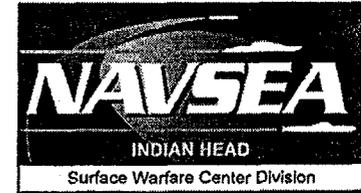
Mr. Shawn Jorgensen

8:30 - 9:00 **COMMENTS, QUESTIONS, AND ANSWERS**

9:00 **ADJOURN**



**NAVAL SURFACE WARFARE CENTER
INDIAN HEAD DIVISION
RESTORATION ADVISORY BOARD**

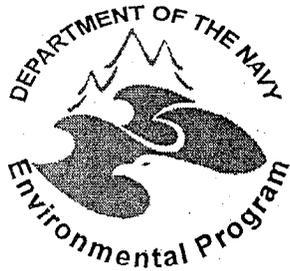


Pre-Feasibility Study Field Work Update

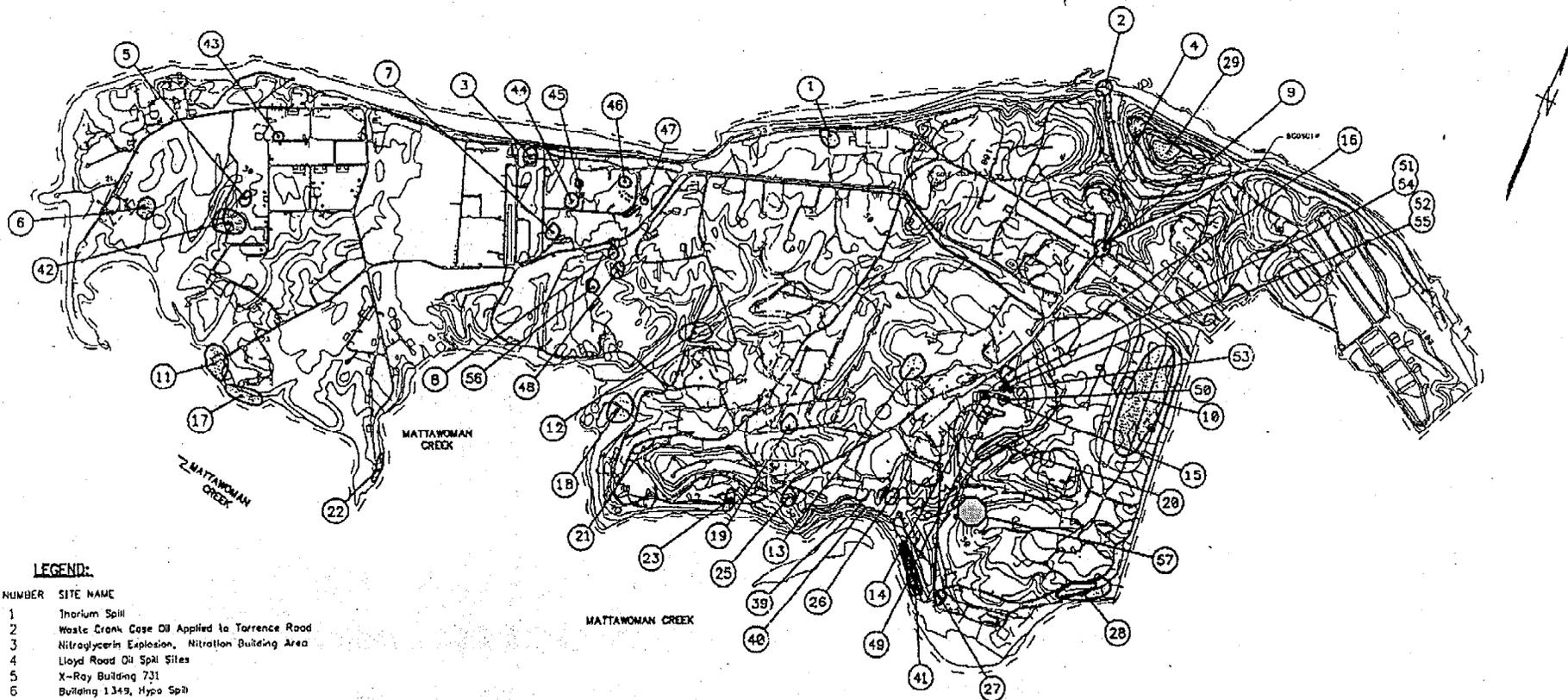
Site 57 - Building 292 TCE Spill

*Shawn Jorgensen
IR Project Manager*

February 15, 2001



NSWC Indian Head IR Site Map



LEGEND:

SITE NUMBER SITE NAME

- 1 Thorium Spill
- 2 Waste 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, O₂ Spill
- 10 Single-base Propellant Grains Spill
- 11 Coffee Road Landfill
- 12 Town Cut Landfill
- 13 Paint Solvents Disposal Ground
- 14 Waste Acid Oxidation Pit
- 15 Mercury Deposits in Manhole, Flourine Lab
- 16 Laboratory Chemical Disposal
- 17 Disposal Metal Parts Along Shoreline
- 18 Has Island

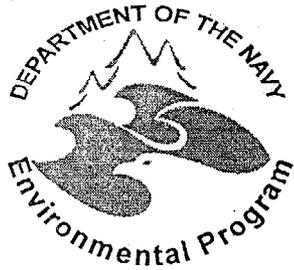
- 19 Catch Basins at Chip Collection Houses
- 20 Single-base Powder Facilities
- 21 Bronson Road Landfill
- 22 NC Slums Burning Site
- 23 Hydraulic Oil Spill Discharges From Extrusion Plant
- 24 Abandoned Drain Lines
- 25 Hypo Discharge X-Ray Building, No. 2
- 26 Thermal Destructor 2
- 27 Thermal Destructor 1
- 28 Original Burning Ground
- 29

- 30-38 Stuma Neck Annex (SEE FIGURE 3-2)---
- 39 Organic Plant Outfall
- 40 Palladium Catalyst in Sediments
- 41 Scrap Yard
- 42 Oxon Road Landfill
- 43 Toluene Disposal Site
- 44 Sook Cut Area
- 45 Abandoned Drums
- 46 Cadmium Sandblast Cnt
- 47 Mercuric Nitrate Disposal Area
- 48 Nitrocellulose Plant Disposal Area

- 49 Chemical Disposal Area
- 50 Building 103, Crawl Space
- 51 Building 101, Dry Wall
- 52 Building 102, Dry Wall
- 53 Mercury Contamination of the Sewage System
- 54 Building 101
- 55 Building 102
- 56 1W87 - Lead Contamination
- 57 TCE Building 292 Area

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

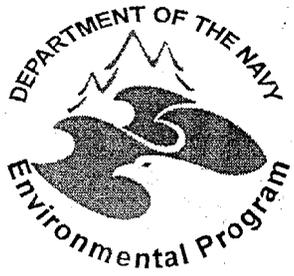




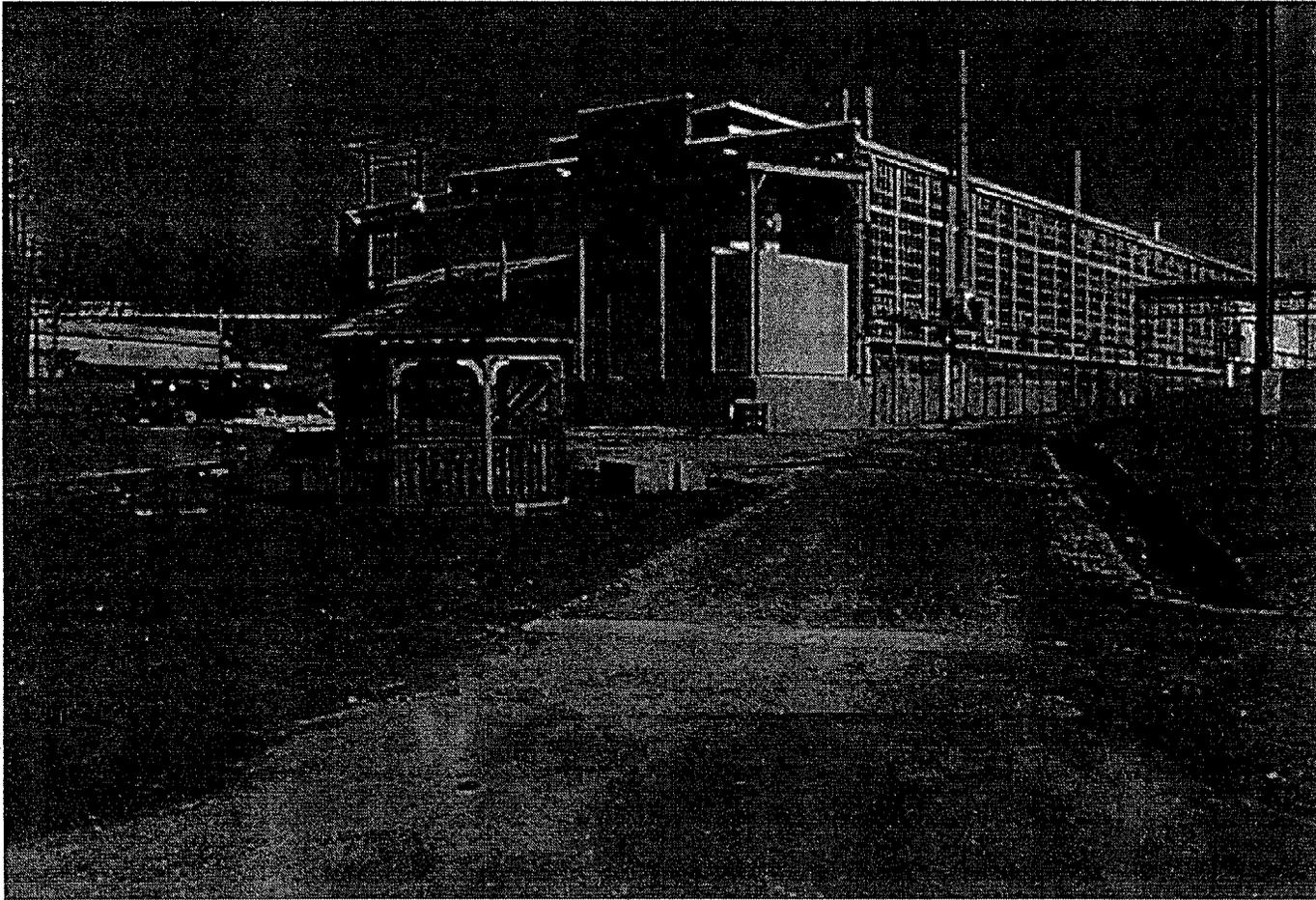
IR Site 57 Background

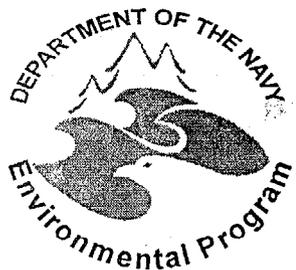


- *TCE discovered in IW-80*
- *Bldg. 292 used TCE for degreasing until 1989 and decanted TCE to drums located outside of the building near storm sewer manhole (MH-1)*
- *Sampling in MH-1 revealed TCE contamination while upstream manholes had no contamination*
- *Soil-gas, soil, and groundwater sampled. TCE in soil and groundwater*
- *Concern of TCE migration from groundwater infiltration into the storm sewer*



IR Site 57

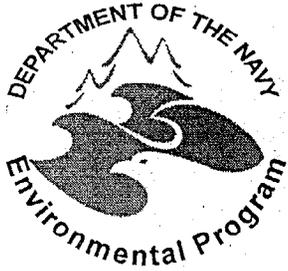




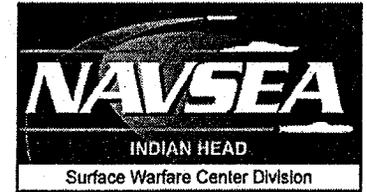
IR Site 57 Work Completed



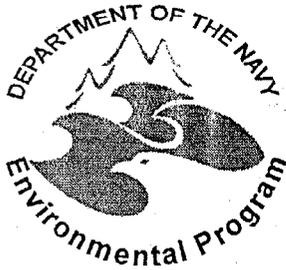
- *September 1995 - Limited sampling of soil-gas, soil, and groundwater conducted*
- *October 1998 - Removal Action (pipe relining) completed*
- *October 1998 - Field work for Phase I of RI (soil sampling) completed*
- *January 1999 - Field work for Phase II of RI (groundwater, sediment, surface water) completed*
- *June 1999 - Draft RI Report*
- *February 2000 - Draft Final RI Report Completed*
- *July 2000 - Final RI Report Completed*



IR Site 57 Future Schedule



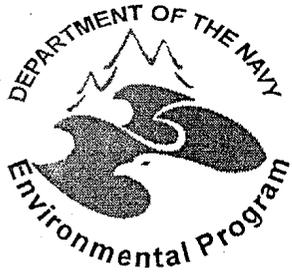
- *March 2000 - Began Feasibility Study (FS)*
 - *Evaluate alternatives to mitigate potential risk to construction workers due to arsenic in soil*
 - *Evaluate alternatives to mitigate high concentrations of TCE in soil and groundwater near southern corner of Building 292*
- *March 2001 - FS Field work*
 - *Cone Penetrometer Test (9 locations)*
 - *Install Wells (8 wells)*
 - *Soil Borings (6 borings)*



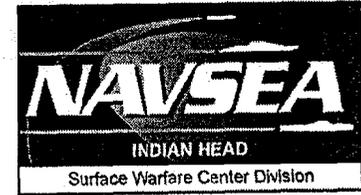
IR Site 57 Future Schedule



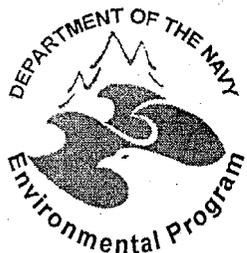
- *Cone Penetrometer Test (9 locations)*
 - *Determine depth to underlying clay layer*
 - *Determine depth of clay layer (up to 10 feet)*
 - *Determine the integrity of the clay layer*
- *Install Wells (8 wells in shallow groundwater)*
 - *Determine the radial extent of TCE*
 - *Determine the viability of natural attenuation*
- *Soil Borings (6 borings)*
 - *Determine the suitability of subsurface soil to possibly implement a passive reactive wall*



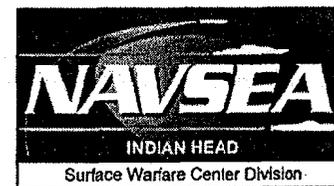
IR Site 57 Future Schedule



-
- *November 2001 - Draft FS Report will be available for public review and comment*
 - *Alternative development*
 - *Alternative evaluation and comparison*
 - *Using Nine Criteria of the National Contingency Plan*
 - *Cost for Site 57 Work To-Date - \$1,168,000*



**NAVAL SURFACE WARFARE CENTER
INDIAN HEAD DIVISION
RESTORATION ADVISORY BOARD**

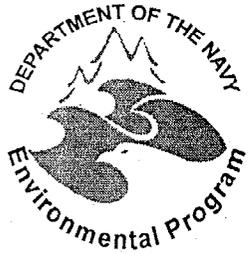


**Remedial Investigation
Project Status**

Site 47 - Mercuric Nitrate Disposal Area

*Heidi Morgan
IR Project Manager*

February 15, 2001

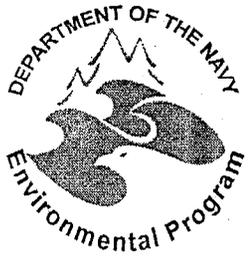


Remedial Investigation Project

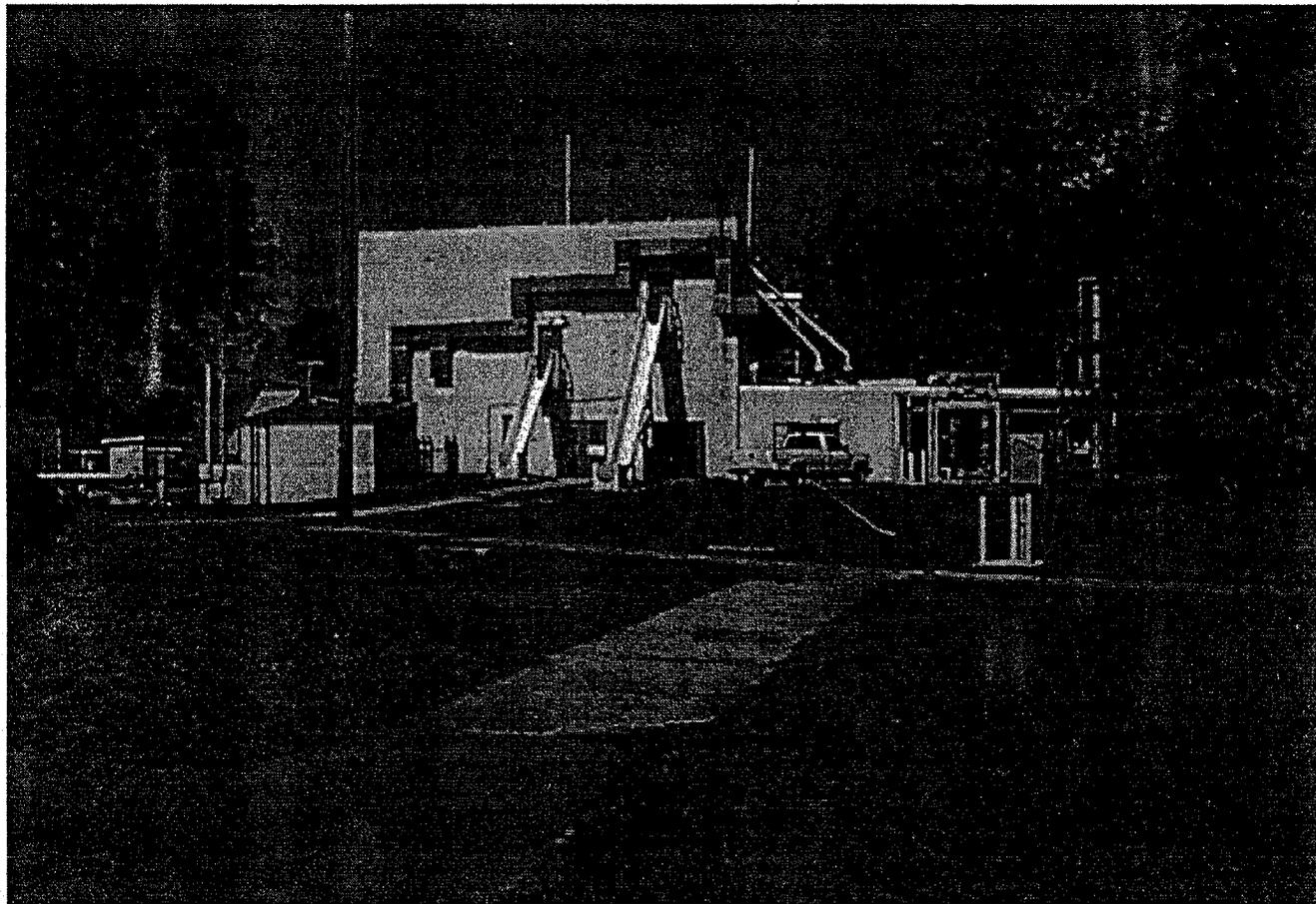
Status - Site 47

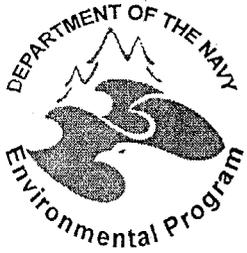


- ***Background of Site 47 - Mercuric Nitrate Disposal Area***
 - *Mercuric Nitrate was disposed in area approximately 24 sq. ft.*
 - *Limestone chips used to neutralize spent nitric acid*
 - *Procedure carried out between 1957 and 1965*
 - *Initial sampling performed for Site Inspection (SI) in 1992 and 1993*
 - *Final SI Report (March 4, 1994) recommended further study*



IR Site 47

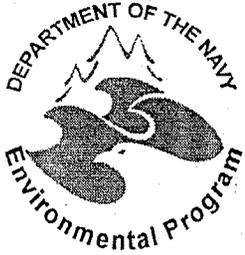




Remedial Investigation Project Status - Site 47



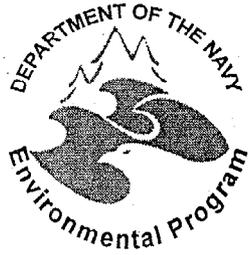
- *Remedial Investigation (RI) Work at Site 47*
 - *Project awarded in November 1998*
 - *Mobilization for field work began July 6, 1999*
 - *RI work included:*
 - *Installing 4 shallow groundwater monitoring wells around Building 856 and sampling the wells*
 - *Taking 10 surface soil samples from around Building 856*
 - *Taking 4 sediment samples from the ditch south of Building 856*
 - *Draft RI report received May 2000 (was expected in December 1999)*



Site 47 Future Schedule and Budget



- *Draft Final RI Report August 2000*
- *Phase II Sampling To Be Performed March - April 2001*
 - *Purpose*
 - *To more fully define the distribution of contaminants in groundwater, the directions of groundwater flow, and the depth, conductivity, and thickness of the clay layer.*
 - *Define the nature and extent of contamination in soil, sediment, and surface water in the drainage ditch originating as Site 47 and extending to Caffee Road and the nature and extent of potential contamination in the soil at the reported chemical disposal area near Building 766.*

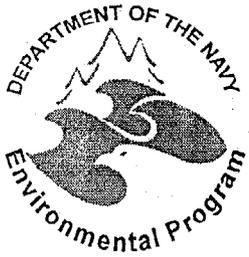


Site 47 Future Schedule and Budget

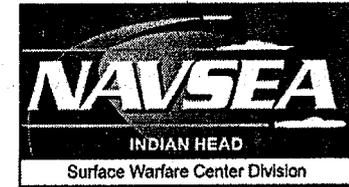


– Sampling

- 15 Membrane Interface Probe/Electric Conductivity Shallow Groundwater Samples*
- 20 Direct Push Samples*
- 6 Subsurface Soil Samples*
- 5 Surface Soil Samples*
- 2 Sediment Samples*
- 2 Surface Water Samples*
- 10 Shallow Groundwater Monitoring Well Samples (6 Groundwater Wells to be Installed)*



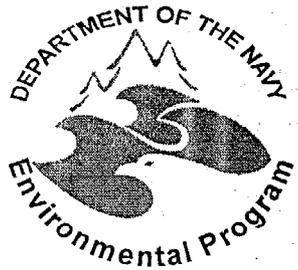
Site 47 Future Schedule and Budget



-
- *Membrane Interface Probe (MIP) Technology*
- *A probe that heats and volatilizes VOCs in the soil and groundwater.*
 - *Samples of the volatilized gas are analyzed on site with a flame ionization detector and an electron capture to measure a total VOCs.*
 - *Analyses are performed continuously as the probe is pushed into the ground (offering a profile of total VOCs concentrations with depth and identifies zones containing contamination).*
 - *MIP profiling approach is performed using a standard direct-push rig and truck carrying the analytical equipment.*
-
-
-



-
- *Draft Final RI Report Revision I Expected August 2001*
 - *Draft Final RI Report Revision II Expected October 2001*
 - *Dollars Spent to-date on IR Site 47 - \$100,000*
 - *Remedial Investigation - \$100,000*



**NAVAL SURFACE WARFARE CENTER
INDIAN HEAD DIVISION
RESTORATION ADVISORY BOARD**

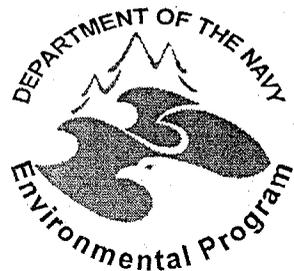


Toxicity Testing Update

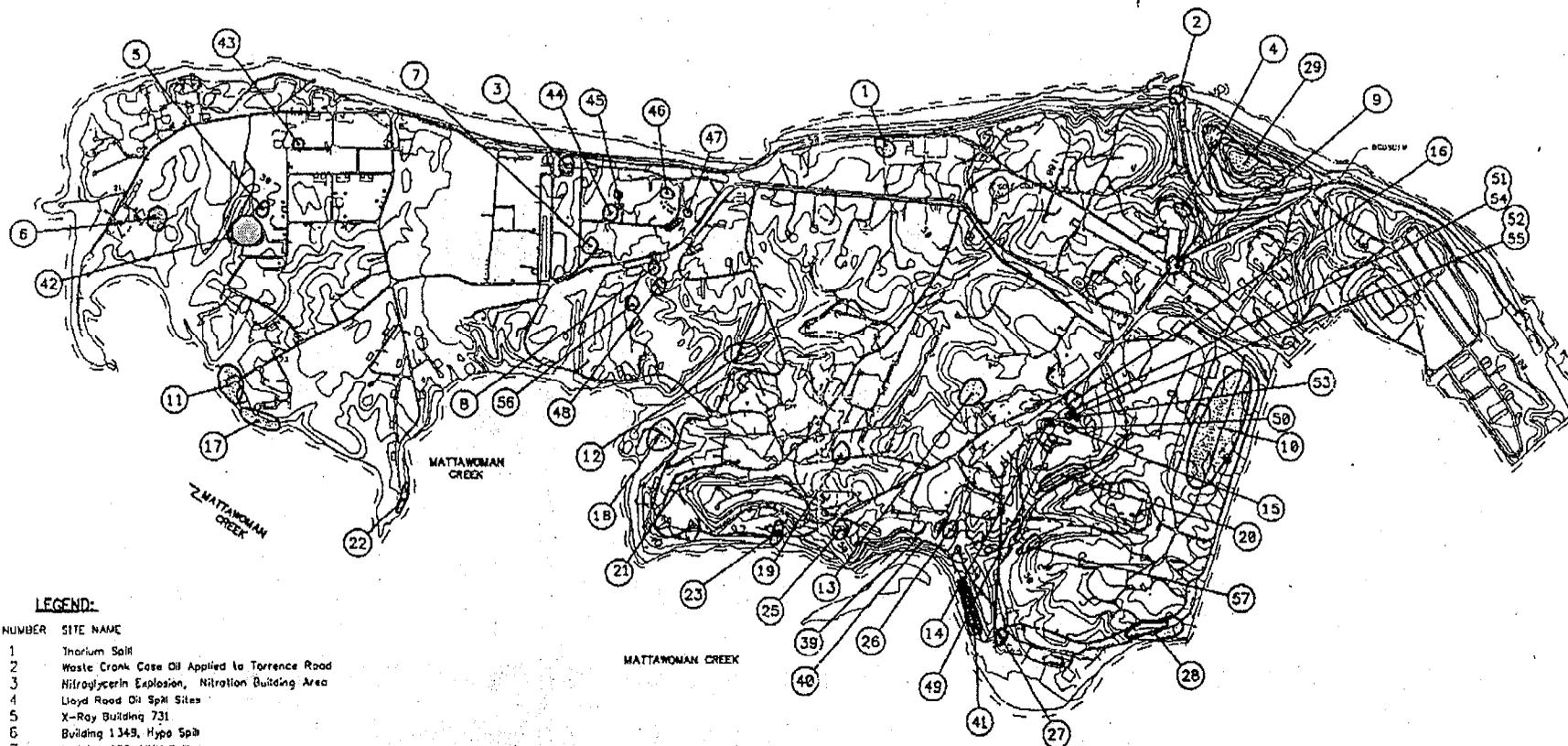
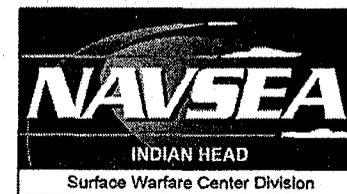
Site 42 - Olsen Road Landfill

*Shawn Jorgensen
IR Project Manager*

February 15, 2001



NSWC Indian Head IR Site Map



LEGEND:

SITE NUMBER SITE NAME

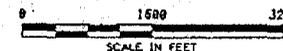
- 1 Thorium Salt
- 2 Waste Crank Case Oil Applied to Torrence Road
- 3 Nitroglycerin Explosion, Nitration Building Area
- 4 Lloyd Road Oil Spill Sites
- 5 X-Ray Building 731
- 6 Building 1349, Hypo Spill
- 7 Building 682, HWX Spill
- 8 Building 766, Mercury Deposits
- 9 Patterson Avenue, Oil Spill
- 10 Single-base Propellant Grains Spill
- 11 Coffee Road Landfill
- 12 Town Cut Landfill
- 13 Paint Solvents Disposal Ground
- 14 Waste Acid Disposal Pit
- 15 Mercury Deposits in Manhole, Flourine Lab
- 16 Laboratory Chemical Disposal
- 17 Disposal Metal Parts Along Shoreline
- 18 noa Island

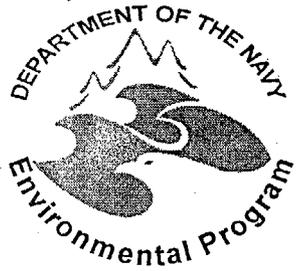
- 19 Catch Basins at Chip Collection Houses
- 20 Single-bate Powder Facilities
- 21 Bronson Road Landfill
- 22 NO Slums Burning Site
- 23 Hydraulic Oil Spill Discharges From Extrusion Plant
- 24 Abandoned Drain Lines
- 25 Hypo Discharge X-Ray Building No. 2
- 26 Thermal Destructor 2
- 27 Thermal Destructor 1
- 28 Original Burning Ground
- 29

- 30-38 Stump Neck Annex (SEE FIGURE 3-2)---
- 39 Organic Plant Outfall
- 40 Palladium Catalyst in Sediments
- 41 Scrap Yard
- 42 Ocean Road Landfill
- 43 Toluene Disposal Site
- 44 Sock Cut Area
- 45 Abandoned Drums
- 46 Cadmium Sandblast Grit
- 47 Mercuric Nitrate Disposal Area
- 48 Nitrocellulose Plant Disposal Area

- 49 Chemical Disposal Area
- 50 Building 103, Craw Space
- 51 Building 101, Dry Wall
- 52 Building 102, Dry Wall
- 53 Mercury Contamination of the Sewage System
- 54 Building 181
- 55 Building 182
- 56 IWB7 - Lead Contamination
- 57 TCE Building 292 Area

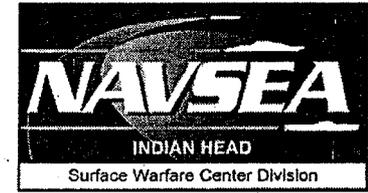
- APPROXIMATE SITE LOCATION
- INTERMITTENT STREAM
- NAVAL RESERVE BOUNDARY
- CONTOUR INTERVAL 10 FEET
- FLOW DIRECTION

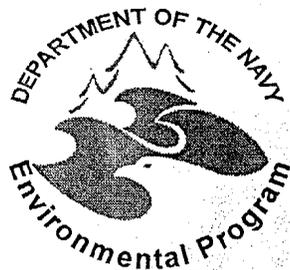




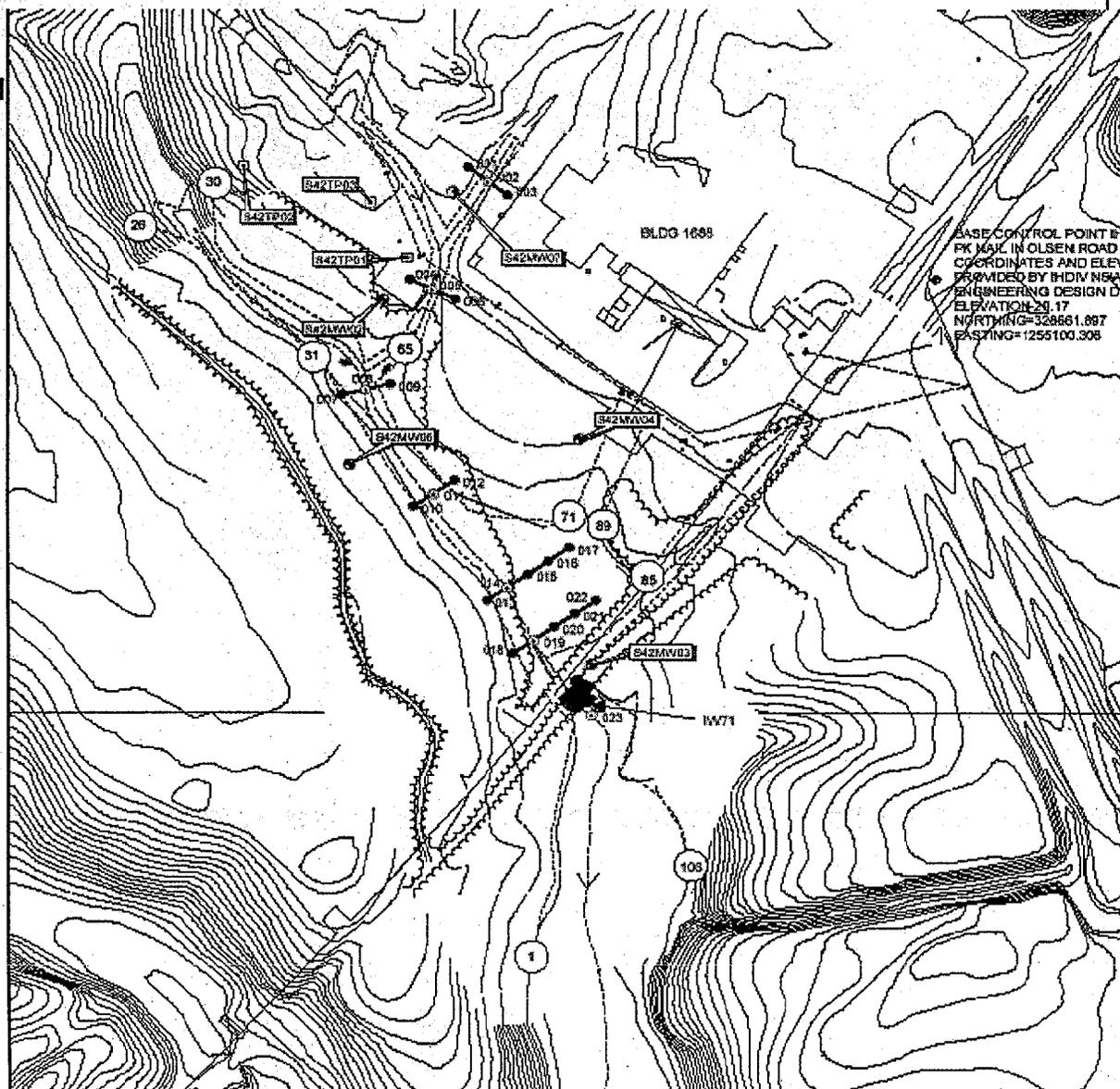
NSWC Indian Head

IR Site 42 Photo

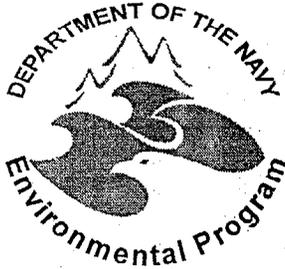




NSWC Indian Head IR Site 42 Photo



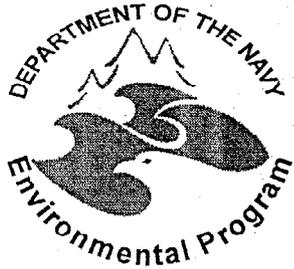
BASE CONTROL POINT BY
PK NAIL IN OLSEN ROAD
COORDINATES AND ELEV
PROVIDED BY HDV NSWC
ENGINEERING DESIGN DT
ELEVATION=29.17
NORTHING=328681.897
EASTING=1255100.308



IR Site 42 Toxicity Testing Background



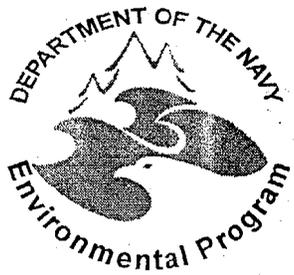
- *EPA's BTAG recommended Toxicity Testing be Performed for Silver*
 - *28-day Test using Hyallolela azteca (organism)*
 - *Toxicity found to be present in samples (Silver? Other causes?)*
- *Toxicity Identification Evaluation (TIE) Demonstration Project for the Naval Facilities Engineering Service Center*
 - *Methodically eliminates possible causes for toxicity to determine actual cause (silver, organics, confounding factors, etc.)*
 - *Enabled Indian Head to sample for toxicity without using allocated cleanup funds*
 - *Additional samples taken in support of Mattawoman Creek Study*



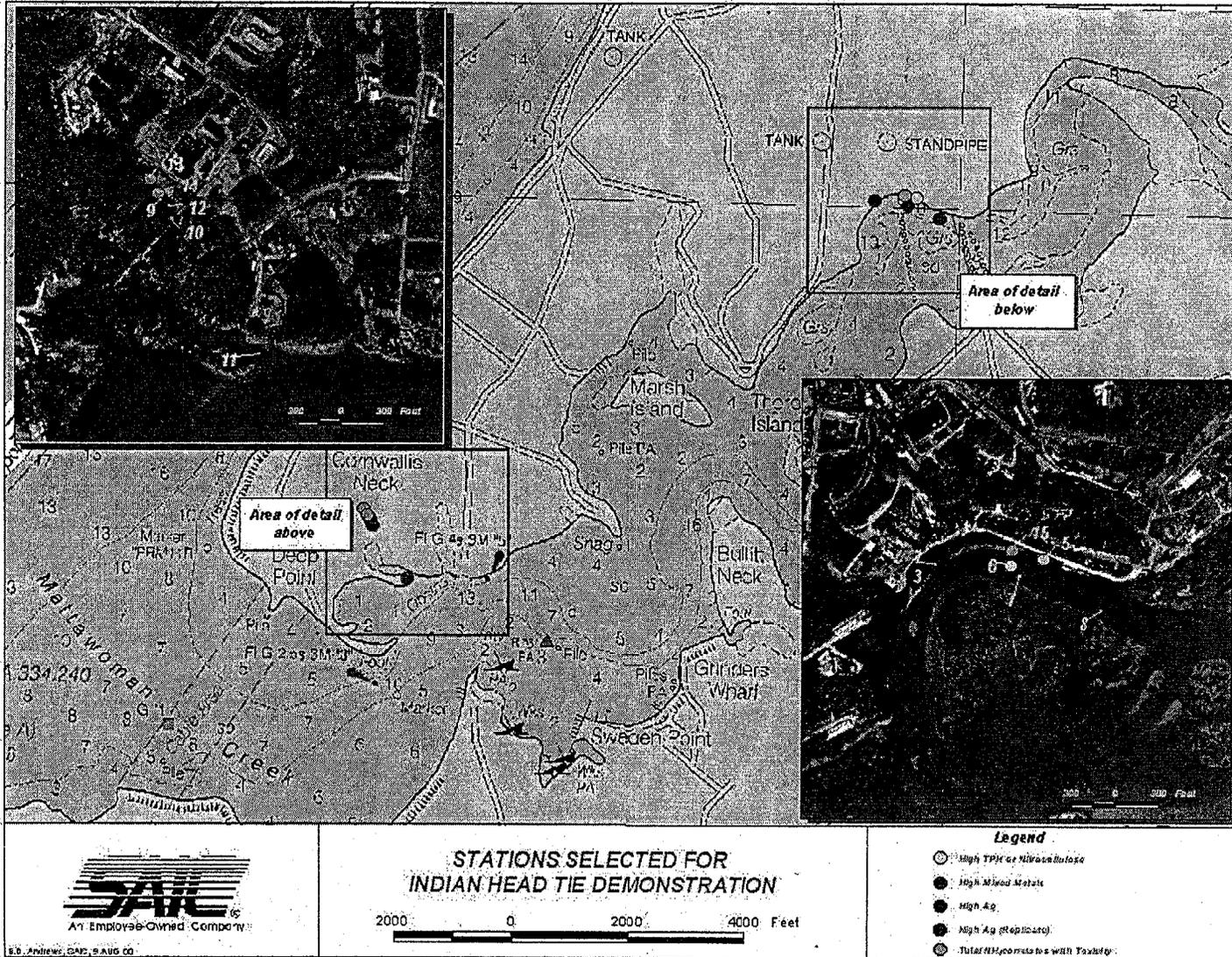
IR Site 42 Toxicity Testing Project Status



- *TIE Study*
 - *October 2000 - TIE Field Work Completed*
 - *February 2001 - Expect Draft TIE Report*
 - *Preliminary Results - Confounding factor (ammonia production) cause for toxicity in samples, not silver*
- *IR Site 42 Feasibility Study (FS) Report*
 - *April 2001 - Draft Site 42 FS Report*



Site 42 - Project Status



MATTAWOMAN CREEK ECOLOGICAL STUDY

IHDIV-NSWC
INDIAN HEAD, MARYLAND

8-STEP ECOLOGICAL RISK ASSESSMENT PROCESS

- Step 1 – Site Visit
 - Pathway Identification / Problem Formulation
 - Toxicity Evaluation
- Step 2 – Exposure Estimate / Risk Assessment
- Step 3a – Refinement of Conservative Exposure Assessment
- Step 3b – Problem Formulation <<<
- Step 4 – Study Design <<<
- Step 5 – Verification of Field Sampling Design
- Step 6 – Site Investigation and Data Analysis
- Step 7 – Risk Characterization
- Step 8 – Risk Management Decisions

MATTAWOMAN CREEK ECOLOGICAL STUDY

**IHDIV-NSWC
INDIAN HEAD, MARYLAND**

PROBLEM FORMULATION

- Description of the ecological setting
- List of preliminary chemicals of potential concern (COPCs)
- Conceptual Model
 - Sources
 - Path through the environment
 - Ecological receptors of concern
- Risk Questions – big picture questions regarding potential ecological risks
- Assessment Endpoints / Measurement Endpoints
 - Approach to answering the risk questions
 - How to interpret the generated data

MATTAWOMAN CREEK ECOLOGICAL STUDY

IHDIV-NSWC
INDIAN HEAD, MARYLAND

PHYSICAL CHARACTERISTICS

- 79-square mile watershed.
- Flows 30 miles to the Potomac River.
- Tidally affected for the last five miles.
- Average discharge rate is 54 cubic feet per second.
- Less than 0.4% of the flow in the Potomac River.
- Classified as tidal freshwater stream for most of the year.
- Average tidal amplitude is approximately 20 inches (fluctuates significantly with weather, season, etc.).
- Channel depth to 17 feet.

MATTAWOMAN CREEK ECOLOGICAL STUDY

IHDIV-NSWC
INDIAN HEAD, MARYLAND

AQUATIC AND SEMI-AQUATIC BIOTA

- Largemouth bass
- Black crappie
- Bluegill
- Catfish
- Blueback herring
- Alewife
- White perch
- Yellow perch
- Gizzard shad
- Striped bass
- Spot
- Winter flounder
- American eel
- Bald eagle
- Blue heron
- Green-backed heron
- Forster's tern
- Belted kingfisher
- Mallard
- American black duck
- Wood duck
- Turtles
- Snakes

MATTAWOMAN CREEK ECOLOGICAL STUDY

IHDIV-NSWC
INDIAN HEAD, MARYLAND

AQUATIC VEGETATION

EMERGENT VEGETATION

- Spatterdock
- Pickerel weed
- Wild rice

SUBMERGED VEGETATION

- Hydrilla
- Najas
- Wild celery

RIPARIAN VEGETATION

- Cattail
- Common reed
- Maples
- Tulip poplar
- Oaks

MATTAWOMAN CREEK ECOLOGICAL STUDY

IHDIV-NSWC
INDIAN HEAD, MARYLAND

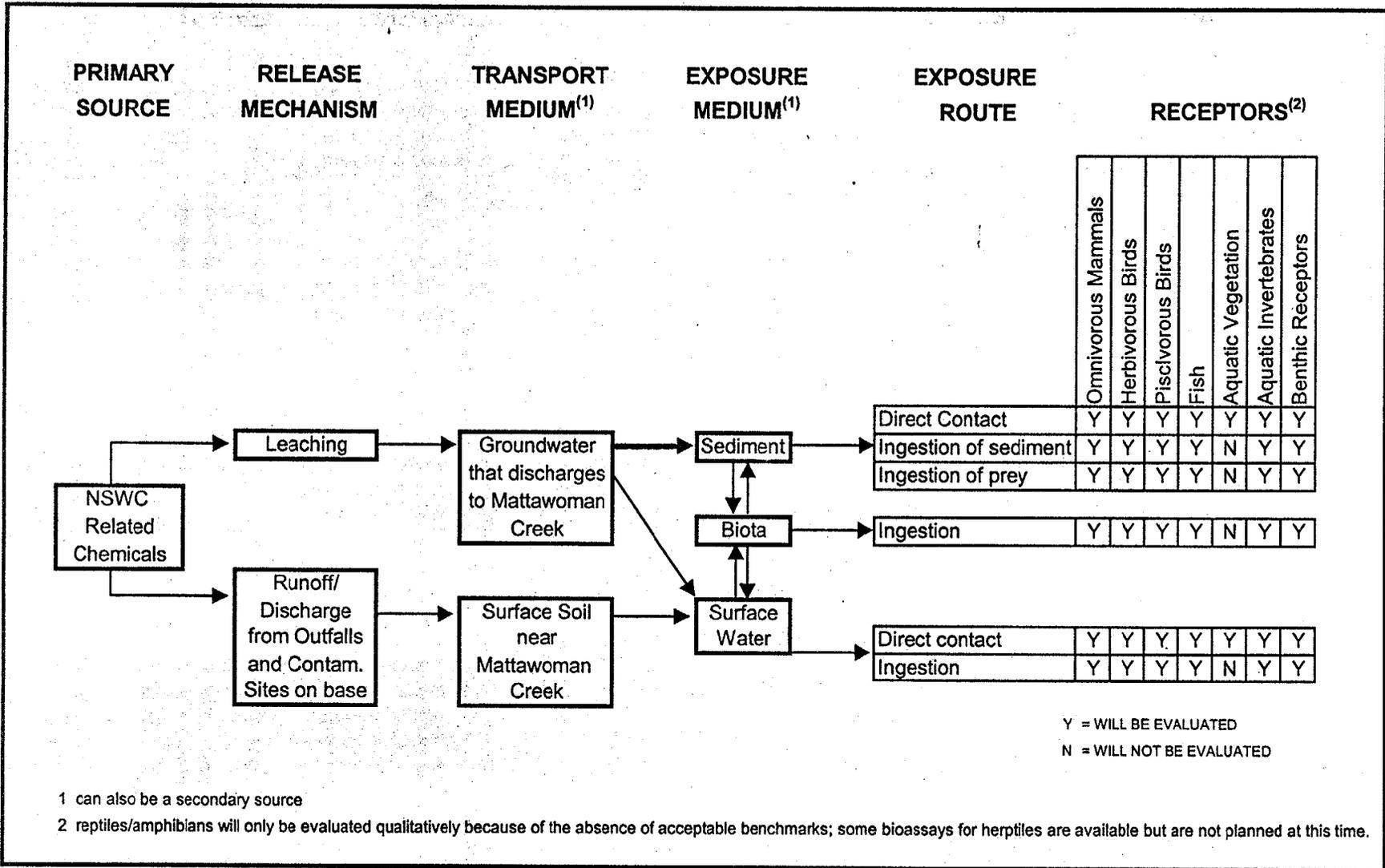
CONTAMINANTS OF POTENTIAL CONCERN (COPC)

SOURCES OF INFORMATION

- Site 39/41 Remedial Investigation Report
- NPDES permits
- Energetic compounds used on the facility
- US Fish and Wildlife studies of Mattawoman Creek
- Ongoing Remedial Investigations
- Mattawoman Creek Ecological Risk Assessment Investigations

CONSIDERATIONS FOR COPC SELECTION

- Detection in prior studies
- Detection in ongoing studies
- Suspicion of presence in Mattawoman Creek
- Facility activities
- Toxicity Identification Evaluation (TIE) Study
- Ecotoxicity



ECOLOGICAL RISK ASSESSMENT SITE CONCEPTUAL SITE MODEL
MATTAWOMAN CREEK
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MATTAWOMAN CREEK ECOLOGICAL STUDY

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INDIAN HEAD, MARYLAND

RISK QUESTIONS AND ASSESSMENT ENDPOINTS

<u>Risk Question</u>	Assessment Endpoint(s)	Measurement Endpoint (Measure of Effects)	Rely on Existing Data?	Requires New Data based on DQO Specification?
Do base-related chemical concentrations in Mattawoman Creek present an unacceptable risk to benthic macroinvertebrates?	Survival, growth, and reproduction of healthy benthic macroinvertebrate populations.	<ol style="list-style-type: none"> 1. <i>Hyalella azteca</i> 10-day survival and growth toxicity tests. 2. Community analysis metrics and indices (as an indicator of reproduction). 3. Comparison of sediment chemical concentrations to sediment screening guidelines (e.g., ER-Ls, ER-Ms). 	No	Yes
Do base-related concentrations of bioaccumulatable chemicals in Mattawoman Creek present an unacceptable risk to piscivorous birds?	Survival, growth, and reproduction of healthy piscivorous bird populations.	Model potential risks (doses) to the great green heron using site-specific prey concentrations.	No	Yes
Do base-related concentrations of bioaccumulatable chemicals in Mattawoman Creek present an unacceptable risk to carnivorous mammals?	Survival, growth, and reproduction of healthy carnivorous mammal populations.	Model potential risks (doses) to the mink using site-specific prey concentrations.	No	Yes
Do base-related concentrations of bioaccumulatable chemicals in Mattawoman Creek present an unacceptable risk to herbivorous birds?	Survival, growth, and reproduction of healthy herbivorous bird populations.	Model potential risks (doses) to the mallard using site-specific forage concentrations.	No	Yes

MATTAWOMAN CREEK ECOLOGICAL STUDY

IHDIV-NSWC
INDIAN HEAD, MARYLAND

RISK QUESTIONS AND ASSESSMENT ENDPOINTS

Risk Question	Assessment Endpoint(s)	Measurement Endpoint (Measure of Effects)	Rely on Existing Data?	Requires New Data based on DQO Specification?
Do base-related concentrations of inorganics in Mattawoman Creek present an unacceptable risk to aquatic vegetation?	Survival, growth, and reproduction of healthy emergent vegetation communities.	<ol style="list-style-type: none"> 1. Compare tissue concentrations of wild celery to upgradient/reference locations. 2. Compare tissue concentrations of vegetation screening levels. 	No	Yes
Do base-related concentrations of chemicals in Mattawoman Creek present an unacceptable risk to aquatic invertebrates?	Survival, growth, and reproduction of aquatic invertebrates.	Compare Mattawoman Creek surface water chemical concentrations to screening guidelines (e.g., AWQCs)	No	Yes
Do base-related chemical concentrations in Mattawoman Creek present an unacceptable risk to fish (at different trophic levels)?	Survival, growth, and reproduction of fish communities.	<ol style="list-style-type: none"> 1. Compare Mattawoman Creek surface water chemical concentrations to screening guidelines (e.g., AWQCs) 2. Compare body burdens of chemicals in fish tissue to upgradient/reference locations and tissue-effects levels. 	No	Yes

1 Reptiles/amphibians are acknowledged as receptors of concern, but cannot be quantitatively evaluated due to the absence of acceptable benchmark values. Bioassays for risks to herptiles are available but not planned at this time.

MATTAWOMAN CREEK ECOLOGICAL STUDY

**IHDIV-NSWC
INDIAN HEAD, MARYLAND**

WORK PLAN

- Locations to be sampled
- Media to be sampled at each location
- Quantity of samples per location per media
- Type of analysis for each sample
- Analytical methods to be employed
- Field methods for collecting samples

MATTAWOMAN CREEK ECOLOGICAL STUDY

IHDIV-NSWC
INDIAN HEAD, MARYLAND

PLANNED ANALYSES

- Sediment "Triad"
 - Co-located samples
 - Chemical analysis
 - Toxicity testing
 - Benthic macroinvertebrate community analysis
- Surface water for chemical analysis
- Fish for chemical analysis
 - Whole-body samples
 - Fillets
- Vegetation for chemical analysis
- Food chain modeling

MATTAWOMAN CREEK ECOLOGICAL STUDY

**IHDIV-NSWC
INDIAN HEAD, MARYLAND**

HUMAN HEALTH RISK SCENARIOS

- Residential
 - Adult
 - Child (0 to 6 years)
- Recreational User
 - Adult
 - Adolescent (7 to 16 yeas)
- Fish Ingestion
 - Adult
 - Adolescent (7 to 16 yeas)
- Construction Worker



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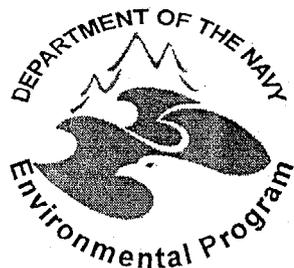
Remedial Investigations - Project Status

Sites 11, 13, 17, 21, and 25

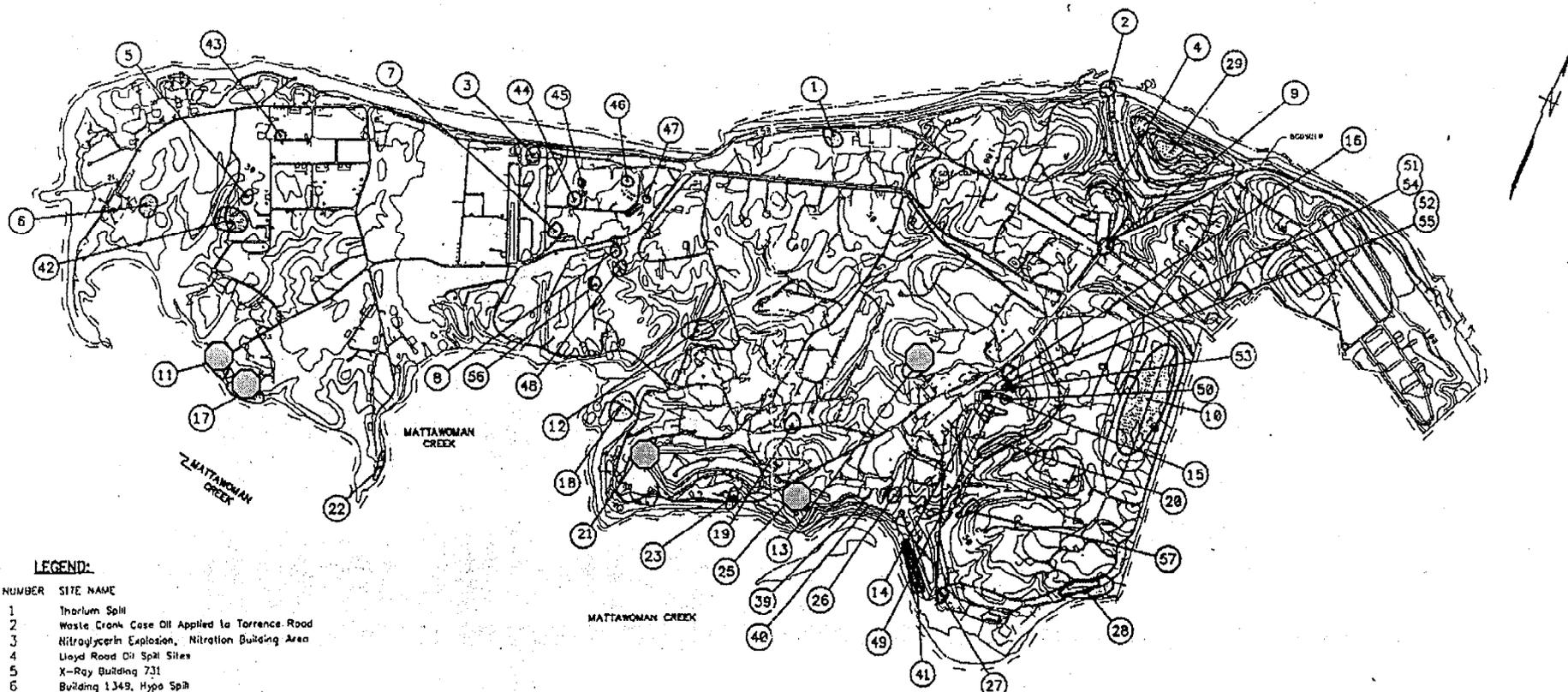
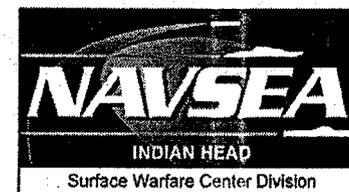
*Heidi Morgan
IR Project Manager*

February 15, 2001

Attachment F



NSWC Indian Head IR Site Map



LEGEND:

SITE NUMBER SITE NAME

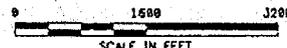
- 1 Thorium Spill
- 2 Waste Crank Case Oil Applied to Torrence Road
- 3 Nitroglycerin Explosion, Nitration Building Area
- 4 Lloyd Road Oil Spill Sites
- 5 X-Ray Building 731
- 6 Building 1349, Hypo Spill
- 7 Building 682, HMX Spill
- 8 Building 766, Mercury Deposits
- 9 Patterson Avenue, Oil Spill
- 10 Single-base Propellant Grains Spill
- 11 Coffee Road Landfill
- 12 Town Cut Landfill
- 13 Paint Solvents Disposal Ground
- 14 Waste Acid Disposal Pit
- 15 Mercury Deposits in Manhole, Flourine Lab
- 16 Laboratory Chemical Disposal
- 17 Disposal Metal Parts Along Shoreline
- 1A Hoop 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

- 38-38 Slump Neck Annex (SEE FIGURE 3-2)
- 39 Organic Plant Outfall
- 40 Palladium Catalyst in Sediments
- 41 Scrap Yard
- 42 Oligon Road Landfill
- 43 Solvent Disposal Site
- 44 Soak Cut Area
- 45 Abandoned Drums
- 46 Cadmium Sandblast Pit
- 47 Mercuric Nitrate Disposal Area
- 48 Nitration Plant Disposal Area

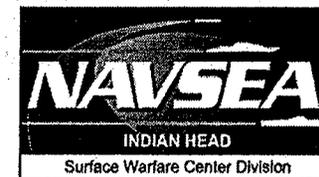
- 49 Chemical Disposal Area
- 50 Building 103, Crawl Space
- 51 Building 101, Dry Wall
- 52 Building 102, Dry Wall
- 53 Mercury Contamination of the Sewage System
- 54 Building 101
- 55 Building 102
- 56 [W87 - Lead Contamination]
- 57 TCE Building 292 Area

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





Sites 11, 13, 17, 21, and 25 - Project Status Sites To Be Studied

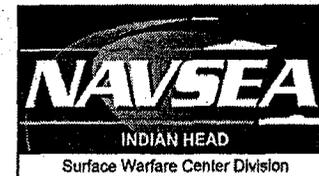


- *11 - Caffee Road Landfill*
- *13 - Paint Solvents Disposal Ground*
- *17 - Disposed Metal Parts Along Shoreline*
- *21 - Bronson Road Landfill*
- *25 - Hypo Discharges From X-ray Building No. 2*



Sites 11, 13, 17, 21, and 25 - Project Status

Site 11 - Caffee Road Landfill



- *Background*
 - *One to two acre area located at the end of Caffee Road on the shore of Mattawoman Creek*
 - *Contains various building debris, bulk metal items, and residue from open burning*
- *Completed Sampling*
 - *Surface Soil Samples: 36*
 - *Subsurface Soil Boring Samples: 7*
 - *Groundwater Samples: 11*
 - *Surface Water Samples: 7*
 - *Sediment Samples: 7*
 - *Waste Samples: 2*
- *No additional sampling proposed*



IR Site 11

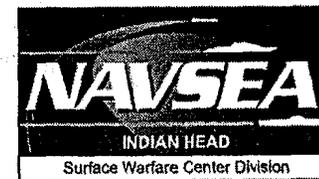
Caffee Road Landfill





Sites 11, 13, 17, 21, and 25 - Project Status

Site 13 - Paint Solvents Disposal Ground

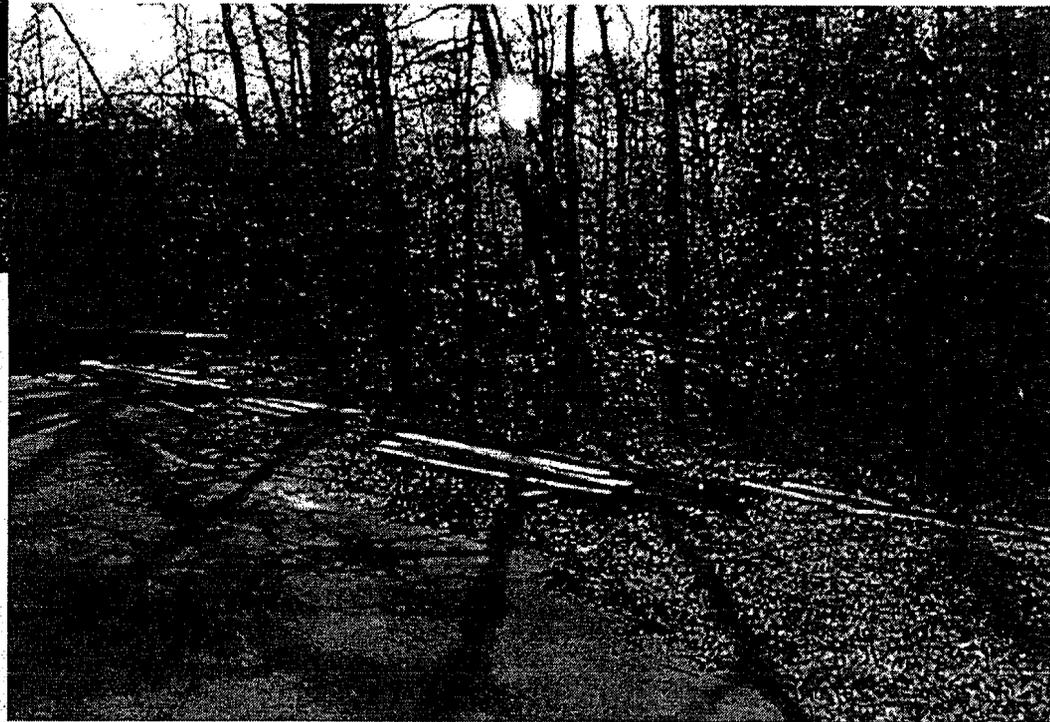
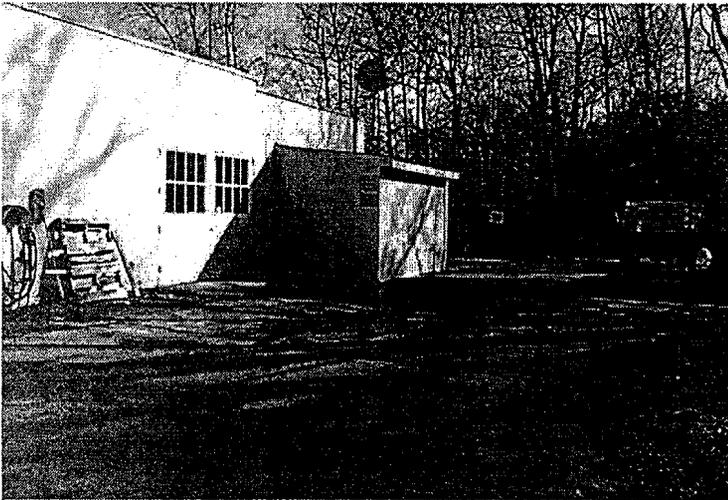
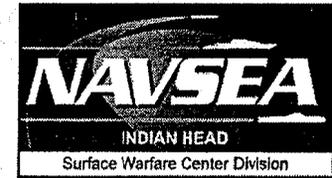


- *Background*
 - *Approximately 200 square-foot area located behind Building 870*
 - *Contains paint-related wastes - thinners, solvents, and used paint*
 - *Disposal took place from 1953 to 1979*
 - *Estimated 20,000 pounds of waste disposed (~2,000 gallons)*
- *Completed Sampling*
 - *Surface Soil Samples: 7*
 - *Subsurface Soil Boring Samples: 4*
 - *Groundwater Samples: 0*
- *No additional sampling proposed*



IR Site 13

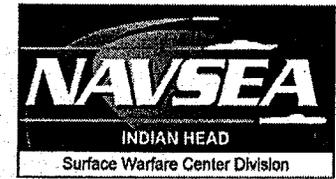
Paint Solvents Disposal Ground





Sites 11, 13, 17, 21, and 25 - Project Status

Site 17 - Disposed Metal Parts Along Shoreline



- *Background*
 - *1,000-foot stretch of shoreline along Mattawoman Creek located east of Caffee Road Landfill*
 - *Metal parts disposed from 1960 - 1980*
- *Completed Sampling*
 - *Surface Soil Samples: 11*
 - *Subsurface Soil Boring Samples: 11*
 - *Sediment Samples: 6*
 - *Surface Water Samples: 6*



Sites 11, 13, 17, 21, and 25 - Project Status

Site 17 - Disposed Metal Parts Along Shoreline

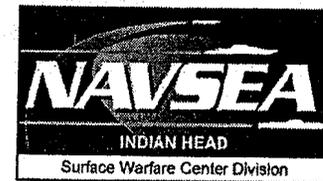


-
- *Phase 2 Sampling (completed October 2000)*
 - *Surface Soil Samples: 5*
 - *Subsurface Soil Boring Samples: 5*
 - *Groundwater Samples: 3*
 - *Installation Of 3 Groundwater Monitoring Wells*



IR Site 17

Disposed Metal Parts Along Shoreline





Sites 11, 13, 17, 21, and 25 - Project Status

Site 21 - Bronson Road Landfill



- *Background*

- *2-acre "borrow pit" near Building 1384*
- *Contains solid waste from various manufacturing processes*
- *Disposal occurred from 1975 to 1982*
- *Waste and estimated amounts include*
 - *Solid waste - 1,500 tons*
 - *Barium sludge - 2.5 tons*
 - *Asbestos - 3.3 tons*
 - *Paint sludge - 3 tons*

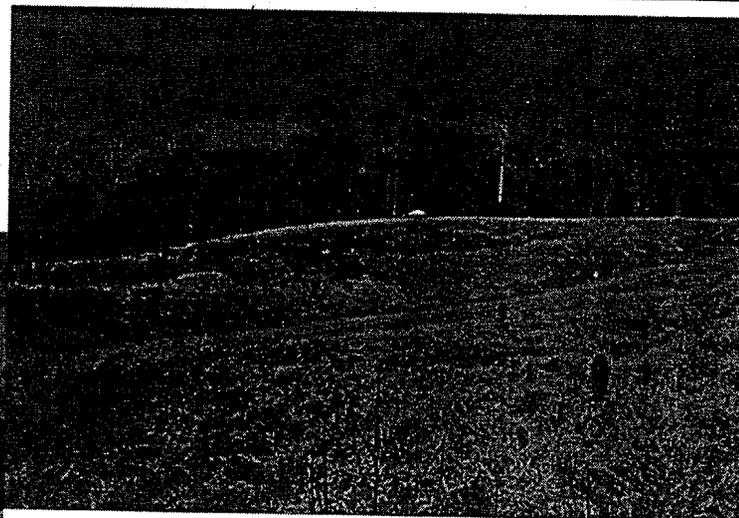
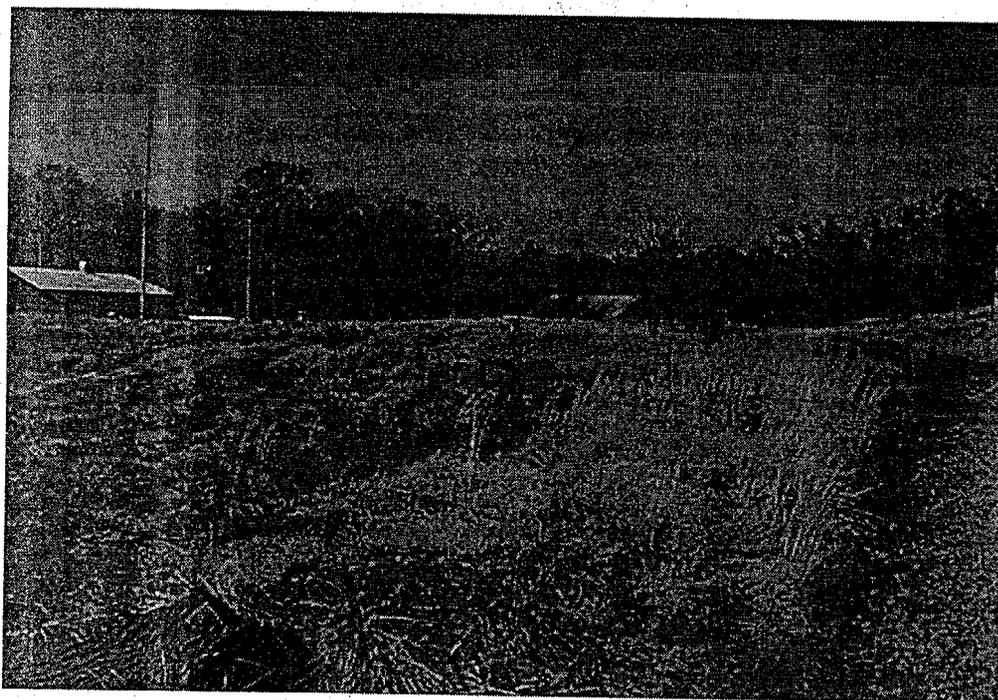
- *Completed Sampling*

- *Surface Soil Samples: 22*
 - *Groundwater Samples: 4*
 - *Installation Of 2 Groundwater Monitoring Wells*
-
-
-



IR Site 21

Bronson Road Landfill





Sites 11, 13, 17, 21, and 25 - Project Status

Site 25 - Hypo Discharges From X-Ray Building No. 2

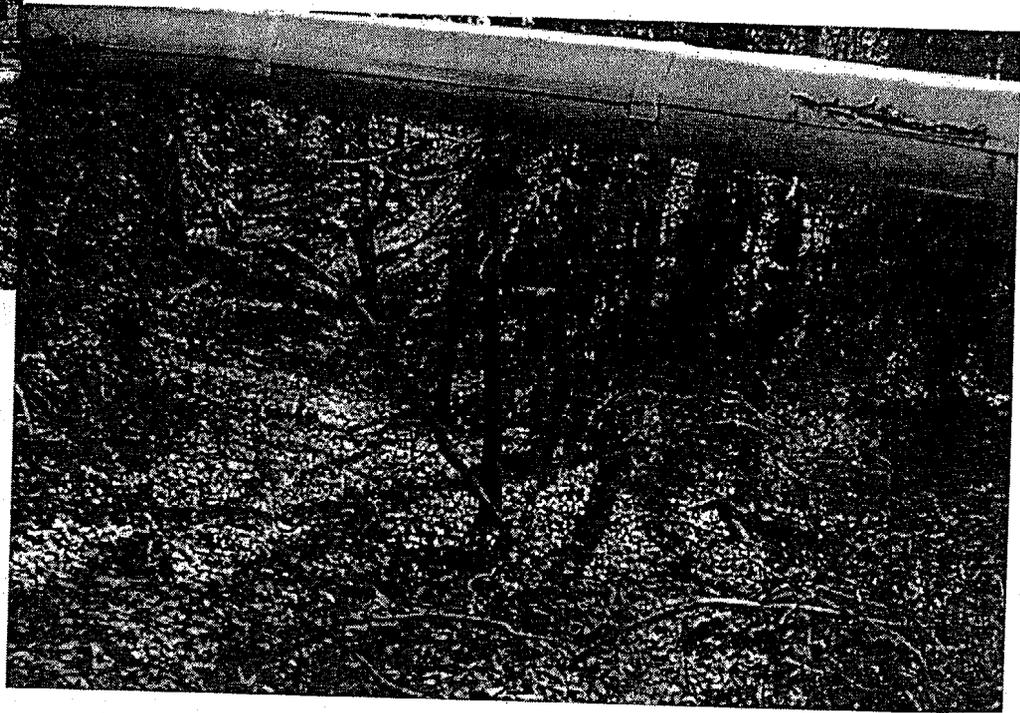
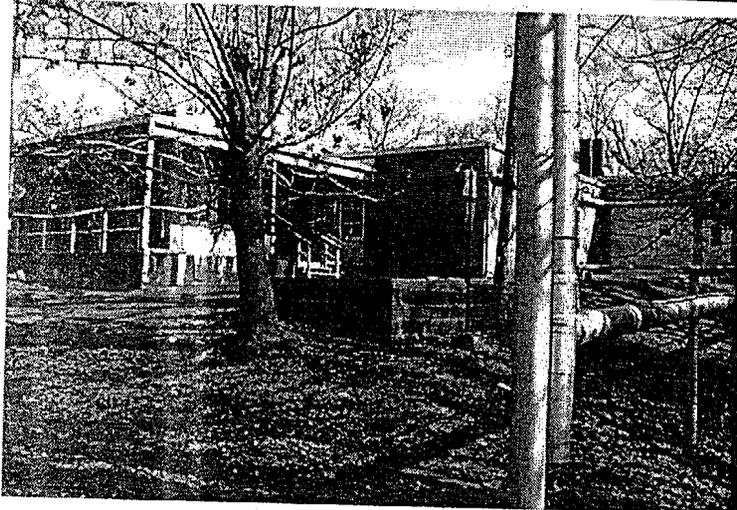
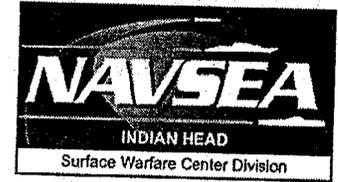


- *Background*
 - *Drainage swales located behind Building 588*
 - *Contains silver from spent fixer and developer used to process x-ray film*
 - *Discharged from 1944 - 1964*
 - *Estimated 864 pounds of silver discharged*
- *Completed Sampling*
 - *Surface Soil Samples: 21*
- *Phase 2 Sampling (completed October)*
 - *Surface Soil Samples: 3*
 - *Subsurface Soil Samples: 6*
 - *Groundwater Samples: 2*



IR Site 25

Hypo Discharges From X-Ray Building No. 2

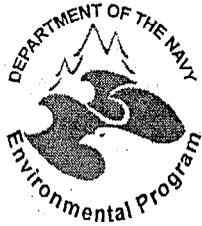




Sites 11, 13, 17, 21, and 25 - Project Status Future Schedule



- *Remedial Investigation*
 - *Contract Award - February 2000*
 - *Draft Work Plan - May 2000*
 - *Final Work Plan - July 2000*
 - *Field Work*
 - *Phase 1 - July 2000*
 - *Phase 2 - October 2000*
 - *Draft RI Report - April 2001*
 - *Cost for RI - \$798,000*



Sites 11, 13, 17, 21, and 25 - Project Status Additional Information



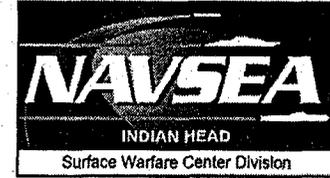
Information Repositories

Indian Head Division
Naval Surface Warfare Center
Building 620 (Powder Keg)
101 Strauss Avenue
Indian Head, MD
20640-5035

Charles County Public Library
La Plata Branch
Charles & Garrett Streets
La Plata, MD 20646



**NAVAL SURFACE WARFARE CENTER
INDIAN HEAD DIVISION
RESTORATION ADVISORY BOARD**



**Remedial Investigation
Work Plan**

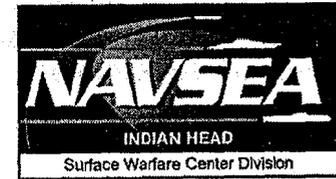
***Sites 15, 16, 49, 50, 53, 54 and 55
Lab Area - Project Status***

*Heidi Morgan
IR Project Manager*

February 2001



Lab Area - Project Status Sites To Be Studied



- *15 - Mercury Deposits in Manhole, Fluorine Lab*
 - *16 - Laboratory Chemical Disposal*
 - *49 - Chemical Disposal Pit*
 - *50 - Building 103 Crawl Space*
 - *53 - Mercury Contamination of Sewage System*
 - *54 - Building 101 Mercury Contamination*
 - *55 - Building 102 Mercury Contamination*
- Due to the close proximity of these sites to one another, and the similar suspected chemicals involved, these sites will be studied as one area.*
-
-
-



Lab Area - Project Status Site Background



-
- *Site 15 - Mercury Deposits in Manhole, Fluorine Lab*
 - *Laboratory waste released from Buildings 502 and 103 to storm sewer from 1942 to 1981*
 - *Approximately 1 pound of mercury and 64 pounds of lead*

 - *Site 16 - Laboratory Chemical Disposal*
 - *Laboratory waste released from wastewater collection system in Building 600 from 1944 to present*
 - *Potential chemicals include acids, amines, cyanide compounds, metals, chlorinated solvents and non-chlorinated solvents*
 - *Actual chemicals and amounts released unknown*
-
-
-



Lab Area - Project Status Site Background



- *Site 49 - Chemical Disposal Pit*
 - *Disposal of laboratory waste into a brick pit*
 - *Had limited use up to the early 1970's*
 - *Actual chemicals and amounts disposed unknown*

- *Site 50 - Building 103 Crawl Space*
 - *From 1902 to 1985, the two sinks in Building 103 drained to the ground under the building*
 - *Mercury-containing equipment was once used in the building.*
 - *Actual chemicals and amounts discharged unknown*



Lab Area - Project Status Site Background

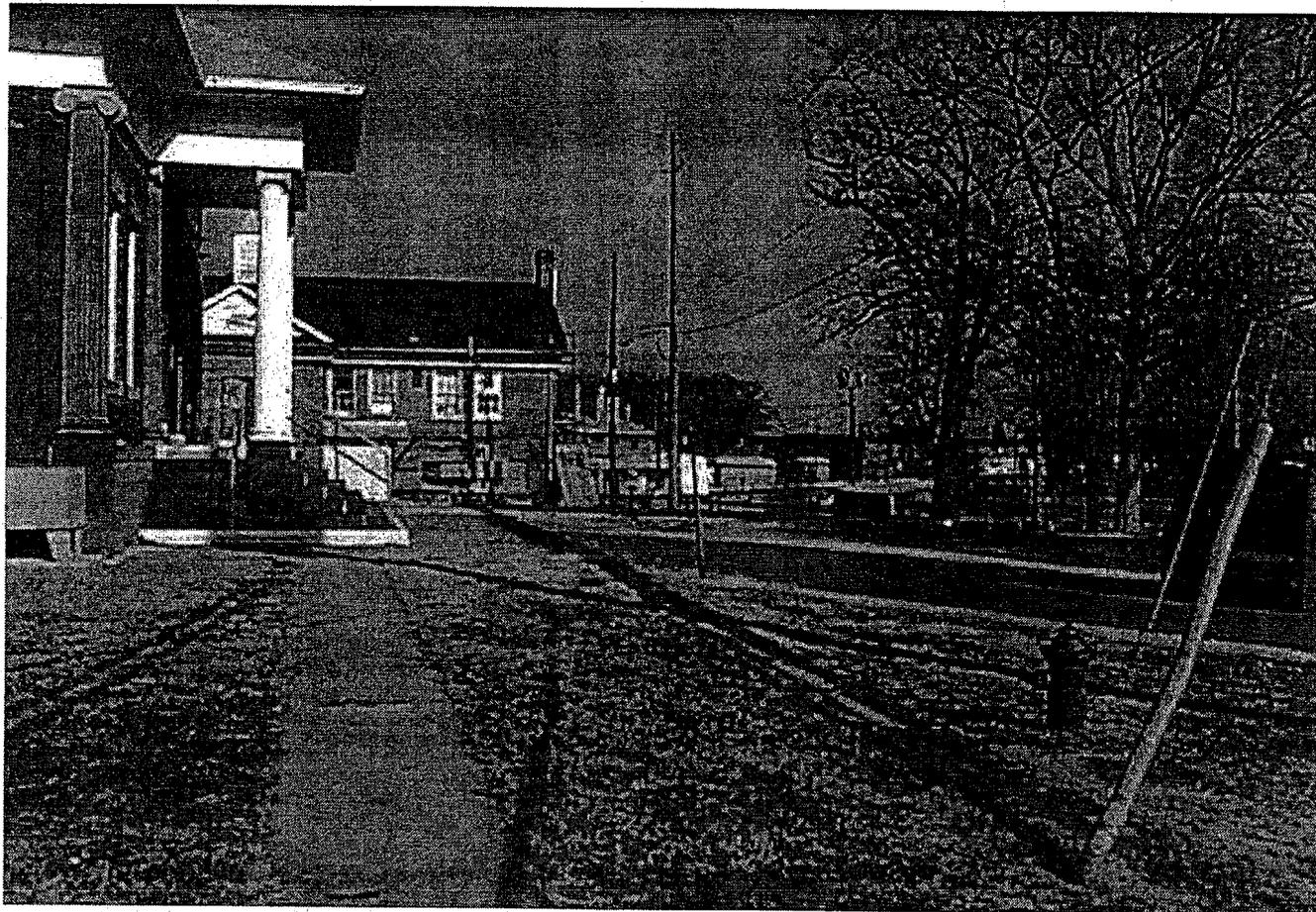


- *Site 53 - Mercury Contamination of Sewage System*
 - *Mercury from Building 102 released to storm and sanitary sewer systems from 1909 through 1986*
 - *Laboratory workers estimated one liter of mercury lost per month. This translates into 28,000 pounds over the 77 year history.*
- *Site 54 - Building 101 Mercury Contamination and
Site 55 - Building 102 Mercury Contamination*
 - *Mercury contamination in flooring of buildings*
 - *Possible discarding of small amounts of mercury outside of these buildings*



Lab Area - Project Status

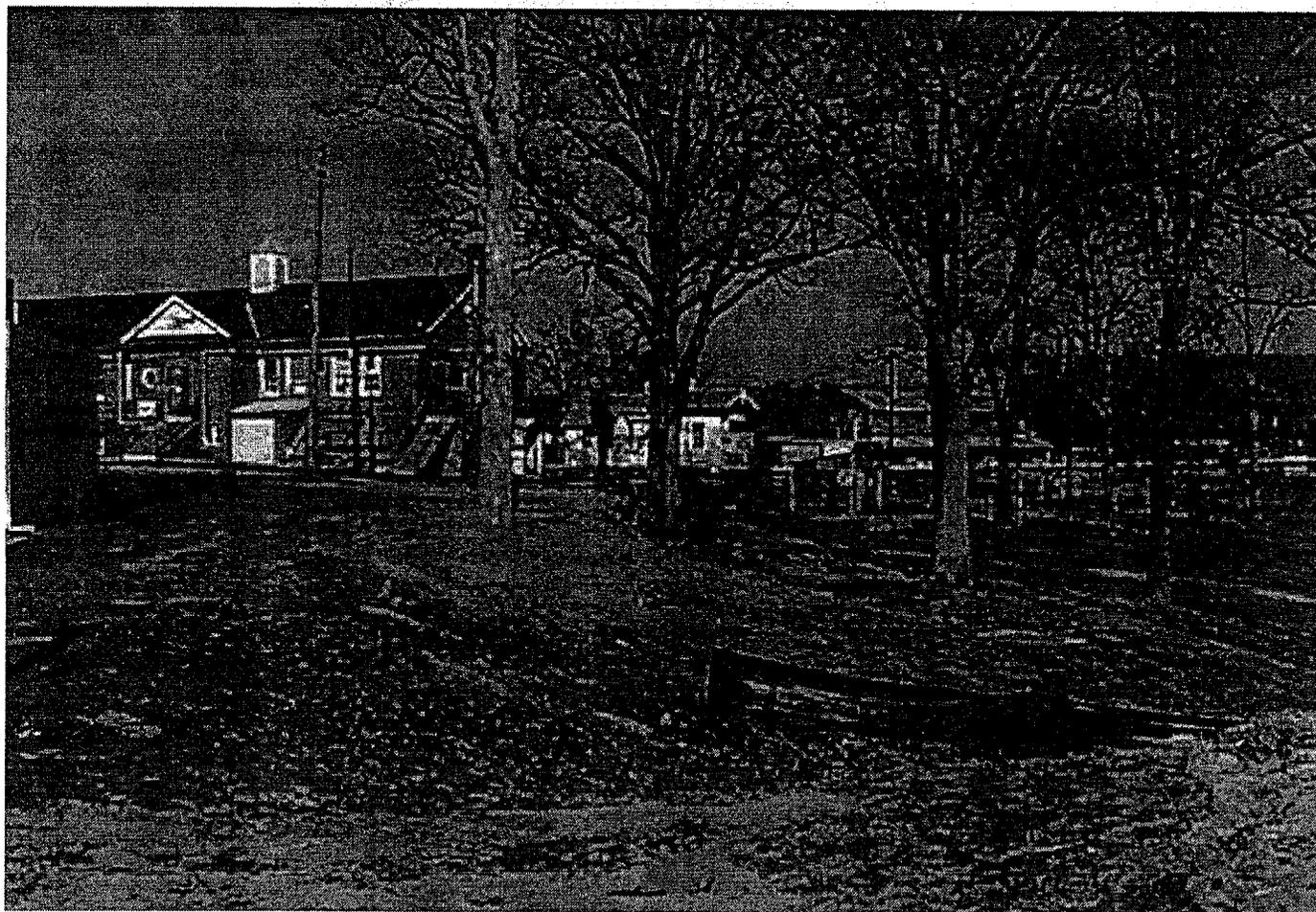
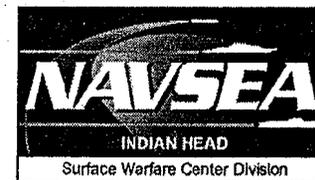
Sites 15, 16, 53, 54, and 55





Lab Area - Project Status

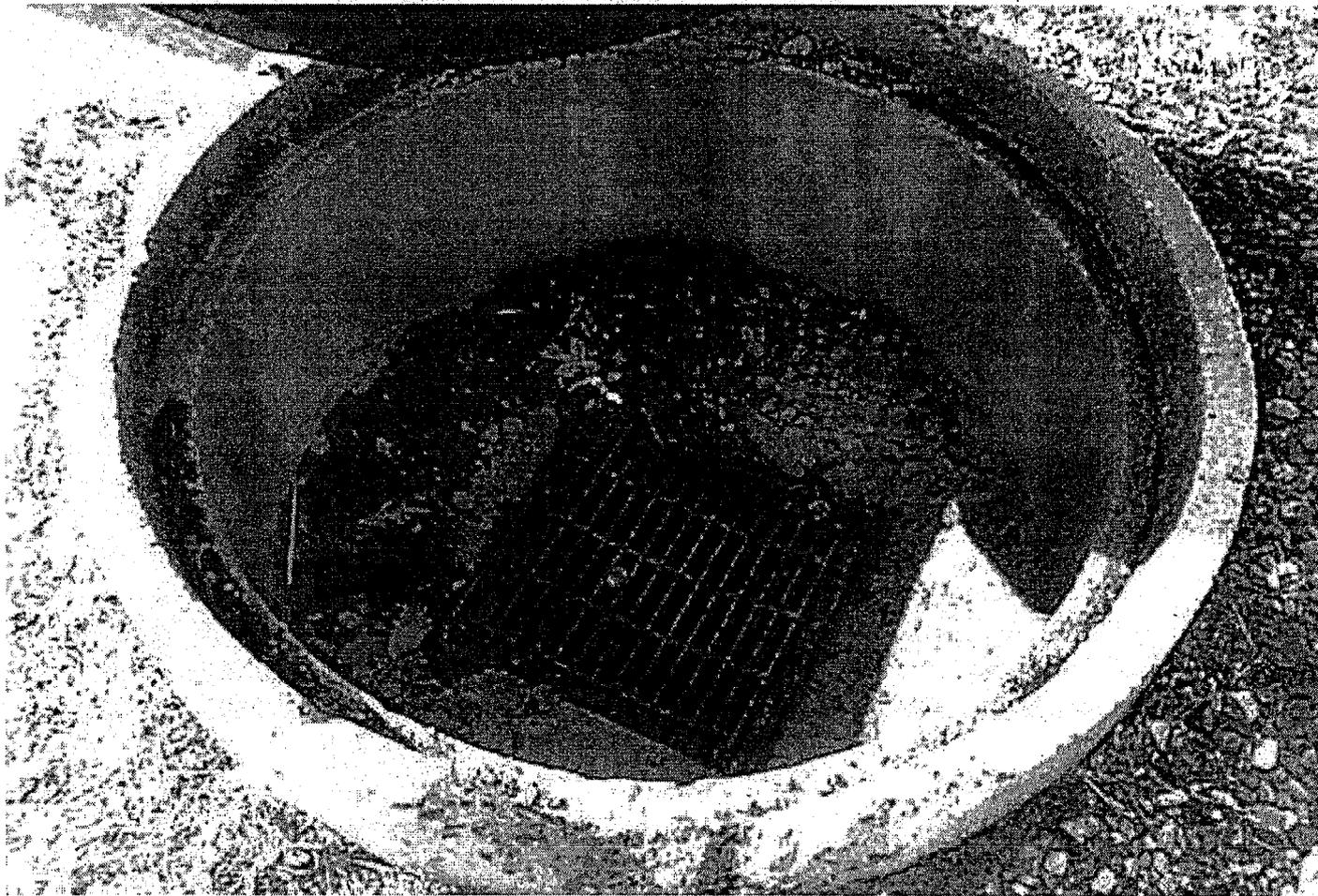
Sites 15, 16, 50, 53 and 55





Lab Area - Project Status

Site 49





Lab Area - Project Status

Site 49

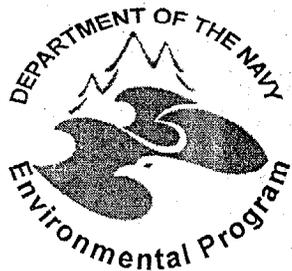




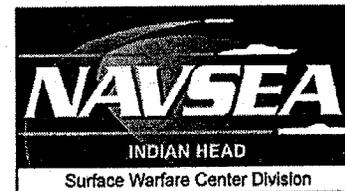
Lab Area - Project Status Future Schedule



-
- *Remedial Investigation (RI)*
 - *Contract Award - February 2000*
 - *Draft RI Work Plan - July 2000*
 - *Final RI Work Plan - February 2001 (delayed from December 2000)*
 - *Field Work - March - April 2001 (delayed from December 2000)*
 - *Draft RI Report - August 2001 (delayed from June 2001)*
 - *Cost for RI - \$950,000*
-
-
-



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INDIAN HEAD DIVISION
RESTORATION ADVISORY BOARD**



Proposed Plan Schedules

Site 12 - Town Gut Landfill

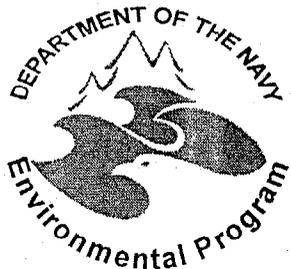
Site 41 - Scrap Yard

Site 44 - Soak Out Area

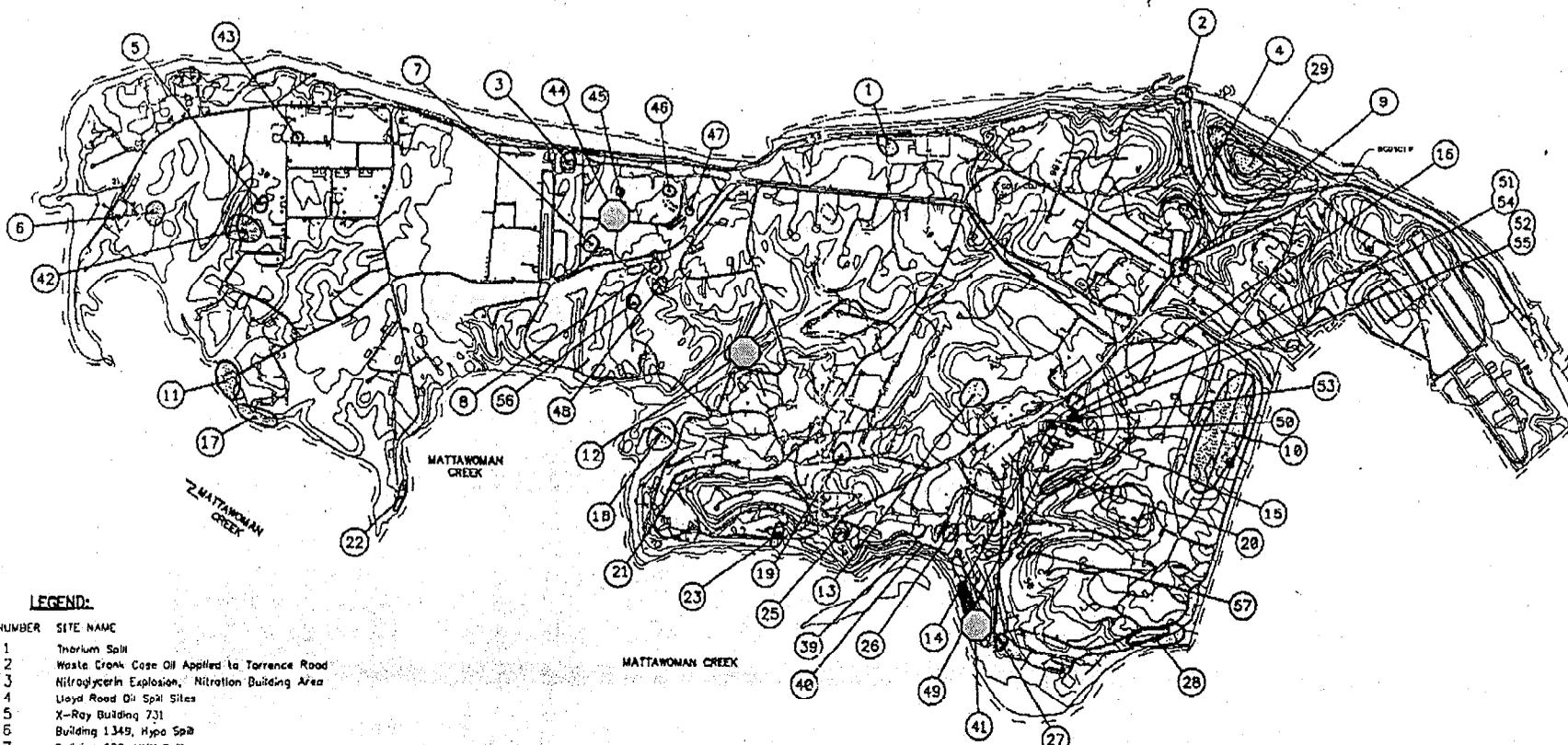
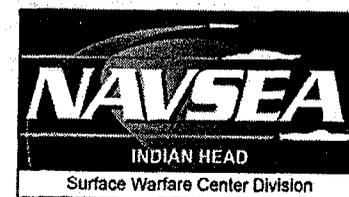
Shawn Jorgensen

IR Project Manager

February 15, 2001



NSWC Indian Head IR Site Map



LEGEND:

SITE NUMBER SITE NAME

- 1 Thorium Salt
- 2 Waste 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 Coffee Road Landfill
- 12 Town Cut Landfill
- 13 Paint Solvents Disposal Ground
- 14 Waste Acid Disposal Pit
- 15 Mercury Deposits in Manhole, Flourine Lab
- 16 Laboratory Chemical Disposal
- 17 Disposal Metal Parts Along Shoreline
- 18 Iroa Island

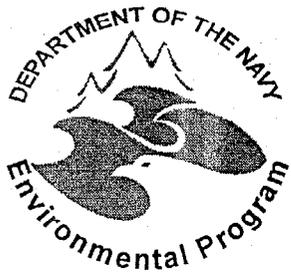
- 19 Catch Basins at Chip Collection Houses
- 20 Single-base Powder Facilities
- 21 Bronson Road Landfill
- 22 NG Slums Burning Site
- 23 Hydraulic Oil Spill Discharges From Extrusion Plant
- 24 Abandoned Drain Lines
- 25 Hypo Discharge X-Ray Building No. 2
- 26 Thermal Destructor 2
- 27 Thermal Destructor 1
- 28 Original Burning Ground
- 29

- 30-38 Slump Neck Annex (SEE FIGURE 3-2) ---
- 39 Organic Plant Outfall
- 40 Palladium Catalyst in Sediments
- 41 Scrap Yard
- 42 Olson Road Landfill
- 43 Toluene Disposal Site
- 44 Spill Cut Area
- 45 Abandoned Drums
- 46 Calcium Sandblast Cut
- 47 Mercuric Nitrate Disposal Area
- 48 Nitroglycerine Plant Offshoot Area

- 49 Chemical Disposal Area
- 50 Building 103, Crawl Space
- 51 Building 101, Dry Wall
- 52 Building 102, Dry Wall
- 53 Mercury Contamination of the Sewage System
- 54 Building 101
- 55 Building 102
- 56 LW87 - Lead Contamination
- 57 TCE Building 292 Area

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

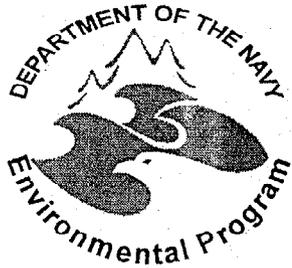




Proposed Plan Schedules



-
- *Purpose of Proposed Plan*
 - *Outline Feasible Remedial Action Alternatives for a Site*
 - *Recommend a Course of Action for Site Remediation*
 - *Inform the Public of Navy's Proposed Remedial Action for a Site*
 - *Allow the Public to Comment on Navy's Proposed Remedial Action*
 - *At Least 30 Days Allowed for Review by Law*
 - *CAN Change the Proposed Remedial Action Alternative for a Site*

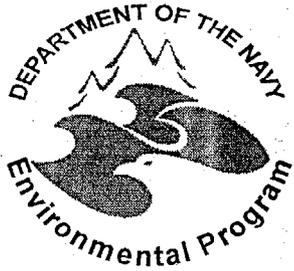


Proposed Plan Schedules



- *Site 12 - Town Gut Landfill*
 - *January 16, 2001: Beginning of Public Comment Period*
 - *January 23, 2001: Public Hearing Held*
 - *March 2, 2001: End of Public Comment Period*

- *Site 41 - Scrap Yard and Site 44 - Soak Out Area*
 - *February 13, 2001: Beginning of Public Comment Period*
 - *February 20, 2001: Public Hearing Will Be Held*
 - *April 6, 2001: End of Public Comment Period*



What's Next?

Site 12 and Site 41



- *Record of Decision (ROD)- dependent on Public Comment*
 - *Describes Selected Remedial Action Alternative*
 - *Requires Acceptance and Signature by Navy and EPA*
 - *Scheduled for Completion in 2001 (actual date dependent on public comment)*
- *Remedial Design (RD)*
 - *Construction Specifications Other Design Plans*
 - *Final Scheduled for:*
 - *November 2001 for Site 12*
 - *March 2002 for Site 41*
- *Remedial Action (RA)*
 - *Cleanup Site to Environmental Standards*
 - *Scheduled for 2002*

INSTALLATION RESTORATION PROGRAM



INDIAN HEAD DIVISION,
NAVAL SURFACE WARFARE CENTER
101 STRAUSS AVENUE
INDIAN HEAD, MARYLAND
20640-5035



RESTORATION ADVISORY BOARD (RAB) MEETING COMMENTS, QUESTIONS AND ANSWERS

February 15, 2001

Update on IR Site 57 - Building 292 TCE Spill

Question: Has the TCE migrated that far (to the creek)?

Answer: Yes. The distance is approximately 3000 feet from Building 292 to the creek. The TCE has a preferential path, the pea gravel around the storm sewer pipe.

Question: A lot of money has been spent at this site. What was the original date when we discovered the contamination?

Answer: The TCE was discovered in September 1995.

Question: You have spent more than one million dollars at this site. Is there no way to identify employees that have had exposures in the past. Not just at this site, but at all sites.

Answer: This is a question that you have asked us formally in a letter and our response is currently being routed up the Navy chain. The bottom line is that the IR Program does not cover past exposures, just current and future exposures. We have a program in place to address current exposures, as required by the Occupational Safety and Health Act (OSHA).

Question: What was the building used for?

Answer: The 2000-gallon tank was a vapor degreaser, used to prepare rocket motor cases for casting propellant in them.

Update on IR Site 47 - Mercuric Nitrate Disposal Area

Question: How deep is a shallow well?

Answer: The shallow wells in this area are approximately 18 feet deep.

Question: If samples show a lot of contamination, will you expand the number of samples?

Answer: Yes.

Question: Who is the contractor?

Answer: CH2M Hill is the contractor that will perform this sampling.

Question: How far does the Membrane Interface Probe (MIP) go down? If you get readings, will you continue to go further?

Answer: The sampling is not continuous. Therefore, we will go down a foot, sample, then go further. We will continue to sample further down as long as we are finding contamination.

Question: Could you go down and get nothing, then go further down and find contamination?

Answer: Yes. We will be sampling down to the underlying clay layer and up to 10 feet into the clay layer.

IR Site 42 - Olsen Road Landfill Toxicity Testing Update

Question: How many acres is this site?

Answer: Approximately 1 to 2 acres.

Question: Where is Rum Point?

Answer: Rum Point is located across the Mattawoman Creek by our Stump Neck Annex.

Mattawoman Creek Study Update

Question: Step 4 of the process is a work plan. At what stage will the work plan be completed?

Answer: We expect to have the work plan completed this spring with work beginning shortly afterwards. The work plan will include the Problem Formulation and the Sampling and Analysis Plan.

Question: When you do this testing, will you have baseline data?

Answer: Nanjemoy Creek will be used as a reference for this study.

Question: Will the sampling methodology, such as when and how the sampling will be done, be included in the work plan?

Answer: Yes. We are working on that now and it will be available for RAB member review in the spring.

Comment: Sampling rate may vary depending on species.

Comment: We worked with the EPA's Biological Technical Assistance Group (BTAG), contractors, and facility to determine where the sensitive areas are and we will focus on them.

Comment: Detection of certain high levels of contaminants may have originated from other than the Activity.

Comment: We tried to narrow the area of the Creek that NSWC-IH could have affected and are planning on getting our samples from above those areas.

Question: Is anyone from U.S. Fish & Wildlife (USF&W) Service on the BTAG?

Answer: Yes. The BTAG has members from the USF&W Service and the National Oceanic and Atmospheric Administration (NOAA).

Question: Are sewage discharges located upgradient of NSWC-IH?

Answer: Yes. The Indian Head Sewage Treatment Plant discharges upgradient of NSWC-IH.

Question: How are we acquiring fish for this effort?

Answer: We will bring in a subcontractor, who will use traps and nets.

Update on RI Work at IR Sites 11, 13, 17, 21, and 25

Comment: At Site 17, we are concentrating our efforts on the metal drums we found in this area. Through sampling, we found some contamination present at the site. At Site 25, since we didn't find silver, as expected, we could terminate our efforts there. However, we did find some chemicals that are found in solvents and paints. Therefore, we have taken additional samples at both Sites 17 and 25.

Update on RI Work Plan for Lab Area

Question: Where does the Chemical Disposal Pit go?

Answer: The Pit goes to the storm drain, which discharges into the Mattawoman Creek.

Schedule of Proposed Plans for IR Sites 12, 41, and 44

Question: Where is the Scrap Yard located?

Answer: Along the Mattawoman Creek near Building 436 on the southeast portion of NSWC-IH.

Comment: The existing scrap metal in the Scrap Yard will be removed by mid-March 2001.

Comment: Site 44 doesn't show up on the slide with Sites 12 and 41 because the proposed action at Site 44 is for "no action" based on the human health risk assessment. However, we will still need to prepare a Record of Decision for the site.

Question: Do you have an overall schedule with all sites on it.

Answer: We can have that by the next meeting.

Comment: At Site 41, we will be performing a remedial action in 2002. We are currently removing all of the scrap metal. After the remedial action is performed, we will manage the scrap metal differently to prevent recontaminating the area.

Question: Do you have a schedule to complete?

Answer: Since the signing of the Federal Facilities Agreement (FFA) between the EPA and the Navy, we are required

to prepare a Site Management Plan, which will include the schedules for all sites, i.e., where they are in the program and when we believe that remedial actions will occur.

Miscellaneous

Comment: Fish spawning will need to be considered during the Mattawoman Creek Study.

Comment: Some fish and other animals only spend part of their lives in the area.

Question: What about crabs?

Answer: Crabs have not been considered. We will discuss this with our ecological risk assessor.

**INDIAN HEAD DIVISION,
NAVAL SURFACE WARFARE CENTER**

**INSTALLATION RESTORATION PROGRAM
RESTORATION ADVISORY BOARD (RAB)
MEETING AGENDA
(Tentative)**

June 21, 2001

- 1. IR Sites 11, 13, 17, 21, and 25 Update**
- 2. IR Sites 15, 16, 49, 40, 53, 54 and 55 Update**
- 3. IR Site 47 Update**
- 4. IR Site 57 Update**
- 5. Mattawoman Creek Study Update**
- 6. IR Sites 5, 6, 39, and 45 Update**