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DEPARTMENT OF THE NAVY
INDIAN HEAD DIVISION
NAVAL SURFACE WARFARE CENTER
101 STRAUSS AVE
INDIAN HEAD MD 20640-5035

5090
Ser 046C/88
14 JUL 2000

Mr. George Latulippe
Tetra Tech NUS
661 Andersen Drive
Pittsburgh, PA 15220-2745

Dear Mr. Latulippe:

We are forwarding the minutes from the Installation Restoration (IR) Program Restoration Advisory Board (RAB) meeting that was held on Thursday, June 15, 2000. The meeting was held at the Indian Head Senior Center, which is located at 100 Cornwallis Square, Indian Head, Maryland, 20640.

Please note that the next RAB meeting is scheduled for **October 19, 2000**, from 7:00 - 9:00 p.m. at the Indian Head Senior Center. Please be sure to mark this date on your calendar if you have not already done so.

Once again, we would like to thank everyone that attended the meeting. We hope to see all of you at the next RAB meeting on Thursday, October 19, 2000, at the Indian Head Senior Center.

If you have any comments or questions concerning this matter, please contact Mr. Shawn Jorgensen on (301) 744-2263.

Sincerely,

SUSAN P. ADAMS
Head, Safety Department
By direction of the Commander

Encl:
(1) Minutes from RAB Meeting of 15 Jun 00

Copy to:
RAB Members
Meeting Attendees
Interested Parties

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: June 15, 2000

Restoration Advisory Board (RAB) Member Participants:

CAPT John J. Walsh (N)
Ms. Susan Adams (N)*
Mr. Elmer Biles (C)
Mr. Curtis DeTore (S)
Mr. Vincent Hungerford (C)*
Mr. Robert Sadorra (N)

RAB Members Not in Attendance:

Mr. Gary Davis (L)
Mr. Stephen Elder (L)
Mr. Jason Groth (L)
Mr. Dennis Orenshaw (F)
Mr. Fred Pinkney (F)

Additional Attendees:

Mr. David Barclift (N)
Mr. Kent Cubbage (K)
Ms. Sherry Deskins (N)
Ms. Sharon Geil (C)
Mr. Russell Hamilton (C)
Mr. Shawn Jorgensen (N)
Mr. George Latulippe (K)
Mr. Wayne McBain (C)
Ms. Sherry Poucher (K)
Ms. Annette Ryburn (R)
Mr. Greg Tracey (K)

* 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

Ms. Susan Adams of the Indian Head Division, Naval Surface Warfare Center (IHDIV-NSWC) began the meeting by welcoming everyone to the Indian Head Senior Center.

Ms. Adams then presented the meeting agenda, which is included as Attachment A.

2. IR Sites 12, 41, and 42 Draft Feasibility Study (FS)

Mr. Robert Sadorra of the Engineering Field Activity, Chesapeake, provided the status of the draft FS Report for Installation Restoration (IR) Sites 12 (Town Gut Landfill), 41 (Scrap Yard), and 42 (Olsen Road Landfill). The fieldwork that was needed for the FS was completed in October 1999. This fieldwork included digging test pits, delineating wetlands, sampling soil, and performing toxicity tests on sediment. The draft FS Report for Sites 12, 41, and 42 was completed February 2000. The revised draft report for IR Sites 12 and 41 will be available for public comment by mid-July 2000. However, the draft FS Report for IR Site 42 will be delayed until additional ecological work is completed.

In addition, Mr. Sadorra discussed the various alternatives for site remediation discussed in the draft FS Report. For the landfills, Sites 12 and 42, the alternatives ranged from no action, which is used as a baseline, to complete removal. Alternatives for the Scrap Yard, Site 41, included no action (baseline) and soil removal. Additional information on these alternatives, including projected costs and alternative comparisons, can be found in Mr. Sadorra's presentation, Attachment B.

3. Toxicity Testing at IR Site 42, Olsen Road Landfill

Mr. Kent Cubbage of TetraTech NUS, whose luggage (which contained his presentation) was lost in transit, provided information on the toxicity testing that was performed at IR Site 42. All of the samples from IR Site 42 showed reduced survival and growth relative to the control sample. However, no correlation was observed between the silver concentration in sediments and observed adverse effects. In addition, a negative correlation was observed between the concentration of ammonia in the samples and observed adverse effects. Ammonia, a confounding factor, builds up in the sample over time and is not a contaminant found at the site.

As a result, silver could not be ruled out as the cause of toxicity in the samples. Therefore, a different approach will be used to determine what caused the toxicity in the samples. This approach is called Toxicity Identification Evaluation (TIE), which is discussed in the next section.

Although it was not used during the meeting, a copy of Mr. Cubbage's presentation is provided in Attachment C.

4. Toxicity Identification Evaluation (TIE) Approach for IR Site 42

Mr. Greg Tracey of SAIC provided information on the TIE process and how it will be used at IR Site 42. TIE is used to determine the cause of toxicity in samples when the results of normal toxicity testing are inconclusive, such as the case at IR Site 42. SAIC has been contracted by the Navy to demonstrate the utility of the TIE procedure, evaluate new TIE methods, and provide a "User's Guide" with study results to promote TIE use and acceptance. Funding for this study has been provided by the Department of the Navy and will not come out of our cleanup budget.

The TIE process that SAIC will be demonstrating at IR Site 42 uses EPA methodologies and procedures. In addition, SAIC will use an alternative approach that they developed. This approach is organized for integration into the Remedial Investigation/Feasibility Study process and will provide data in an understandable format.

The downfall of not completing the TIE at sites that exhibit toxicity is that remediations may be performed at sites when not necessary, for example, if a confounding factor, such as ammonia is causing the toxicity. In addition, cleanup goals may be set for all contaminants of concern (CoCs) when only an individual CoC or few CoCs are actually causing the risk.

A copy of Mr. Tracey's presentation is provided in Attachment D.

5. Mattawoman Creek Study Update

Mr. Cubbage, again without his presentation, provided information on the Ecological Risk Assessment (ERA) process that will be used for the Mattawoman Creek Study. The ERA process follows both published EPA guidance and Department of the Navy policy.

The ERA process is composed of eight steps, which can be separated into three phases. The first two steps are referred to as the "screening-level" assessment, which is a conservative attempt to determine chemicals of potential concern (COPCs). Steps 3 through 7 compose the "baseline ERA," which is a more

focused, more detailed study conducted if the screening-level assessment determines that unacceptable risks could be present. The last step is risk management. This is the step where decisions for remediation are made.

Using the ERA process, the Navy will determine the risks to human health and the environment from past releases of chemicals to the Mattawoman Creek. The study will not be an exhaustive study of all chemical impacts to the Creek; rather, it will focus on impacts and related risks, if any, from base-related activities only.

The Navy is currently at the beginning stages of this study. After initial discussions with the regulatory agencies in late June 2000, a work plan will be prepared for the study. Input from the public will be welcomed and encouraged through the process to ensure that the concerns of all stakeholders are addressed.

Although it was not used during the meeting, a copy of Mr. Cubbage's presentation is provided in Attachment E.

6. IR Site 47 Remedial Investigation (RI) Project Update

Mr. Shawn Jorgensen of the Indian Head Division, Naval Surface Warfare Center provided the status of the RI at IR Site 47 (Mercuric Nitrate Disposal Area). Mr. Jorgensen provided a brief background of the site, including work completed to date.

The draft final RI report is expected in August 2000. This report will be provided to RAB members for comment. In addition, copies will be placed in the Information Repositories for public review.

The cost of the RI at this site was approximately $100,000. A Feasibility Study, which is scheduled to begin in November 2000, is budgeted at $125,000.

A copy of Mr. Jorgensen's presentation is included as Attachment F.

7. Remedial Investigation (RI) Work Plan for Sites 15, 16, 49, and 53

Mr. Jorgensen discussed four sites on which RIs will be conducted in fiscal year (FY) 2000. These include: IR Site 15 - Mercury Deposits in Manhole, Fluorine Lab; IR Site 16 - Laboratory Chemical Disposal; IR Site 49 - Chemical Disposal Pit; and IR Site 53 - Mercury in the Sewage System. Mr. Jorgensen 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 draft final work plan for these sites is August 2000 with fieldwork conducted in October 2000. Copies of the work plan will be sent to RAB members for comment. In addition, copies will be placed in the Information Repositories for public review. The cost for this RI work is estimated at $240,850.

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

8. Remedial Investigation (RI) Project Status for Sites 11, 13, 17, 21 and 25

Mr. Jorgensen discussed five sites on which RIs will be conducted in fiscal year (FY) 2000. These include: 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.

Mr. Jorgensen discussed proposed sampling at each site and stated that copies of the RI Work Plan were provided to RAB members and were placed in the Information Repositories. In addition, the deadline for comments was Friday, 16 June 2000.

The estimated cost for this study is $700,000 with fieldwork scheduled to begin mid-July 2000. The anticipated completion date of the draft RI Report is early 2001.

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

9. Risk Communication in the Workplace

Mr. Jorgensen briefly discussed risk communication in the workplace related to IR sites. The human health risk assessment performed during the RI phase of the IR Program is used to determine if remediation is necessary at a site. That is, if a potential unacceptable risk exists at a site, then remediation activities are required to remove the potential unacceptable risk. However, in the interim, between the time that a potential unacceptable risk is identified and when the potential risk is removed, notification to those Activity personnel and contractors susceptible to the potential risk should be notified.

Therefore, Human Health Risk Fact Sheets (HHRFS) will be prepared for sites identified as posing a potential human health risk,

based on the human health risk assessment conducted in the RI report. HHRFSs have been prepared for IR Sites 41 (Scrap Yard) and IR Site 57 (Trichloroethylene at Building 292).

These sheets will be provided to appropriate personnel and contractors. Those personnel that could potentially be affected by the site will be trained to understand the potential risk posed by the site and how to reduce their potential risk.

A copy of Mr. Jorgensen's presentation can be found in Attachment I.

10. Comments, Questions, and Answers

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

11. Conclusion

Ms. Adams concluded the meeting by thanking all in attendance and apologized for the meeting running over the 2-hour limit. In addition, Ms. Adams reminded everyone that the next meeting is scheduled for Thursday, October 19, 2000, from 7:00 to 9:00 p.m. at the Indian Head Senior Center.

Ms. Adams then presented the tentative agenda for the next RAB meeting, which is included as Attachment K.

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

June 15, 2000

7:00 - 7:10	ARRIVAL/WELCOME Ms. Susan P. Adams Indian Head Division, Naval Surface Warfare Center Head, Safety Department
7:10 – 7:30	IR SITES 12, 41, AND 42 DRAFT FEASIBILITY STUDY Mr. Robert Sadorra Engineering Field Activity Chesapeake Remedial Project Manager
7:30 - 7:45	TOXICITY TESTING AT IR SITE 42, OLSEN ROAD LANDFILL Mr. Kent Cubbage Tetra Tech NUS Risk Assessor
7:45 - 8:05	TOXICITY IDENTIFICATION EVALUATION (TIE) APPROACH Mr. Greg Tracy SAIC
8:05 – 8:20	MATTAWOMAN CREEK STUDY UPDATE Mr. Kent Cubbage
8:20 – 8:25	IR SITE 47 REMEDIAL INVESTIGATION (RI) REPORT UPDATE Mr. Shawn Jorgensen Indian Head Division, Naval Surface Warfare Center IR Project Manager
8:25 - 8:30:	RI WORK PLAN FOR SITES 15, 16, 49, AND 53 Mr. Shawn Jorgensen

Attachment A

RESTORATION ADVISORY BOARD (RAB) MEETING
AGENDA

June 15, 2000

8:30 - 8:40	RI WORK PLAN FOR SITES 11, 13, 17, 21, 25 Mr. Shawn Jorgensen
8:40 - 8:45	RISK COMMUNICATION IN THE WORKPLACE Mr. Shawn Jorgensen
8:45 - 9:00	COMMENTS, QUESTIONS, AND ANSWERS
9:00	ADJOURN

NAVAL SURFACE WARFARE CENTER
INDIAN HEAD DIVISION
RESTORATION ADVISORY BOARD

Project Status

Site 12 - Town Gut Landfill
Site 41 - Scrap Yard
Site 42 - Olsen Road Landfill

Robert Sadorra, RPM
Engineering Field Activity Chesapeake
June 15, 2000

Attachment B

Sites 12, 41, 42 - Project Status
Feasibility Study

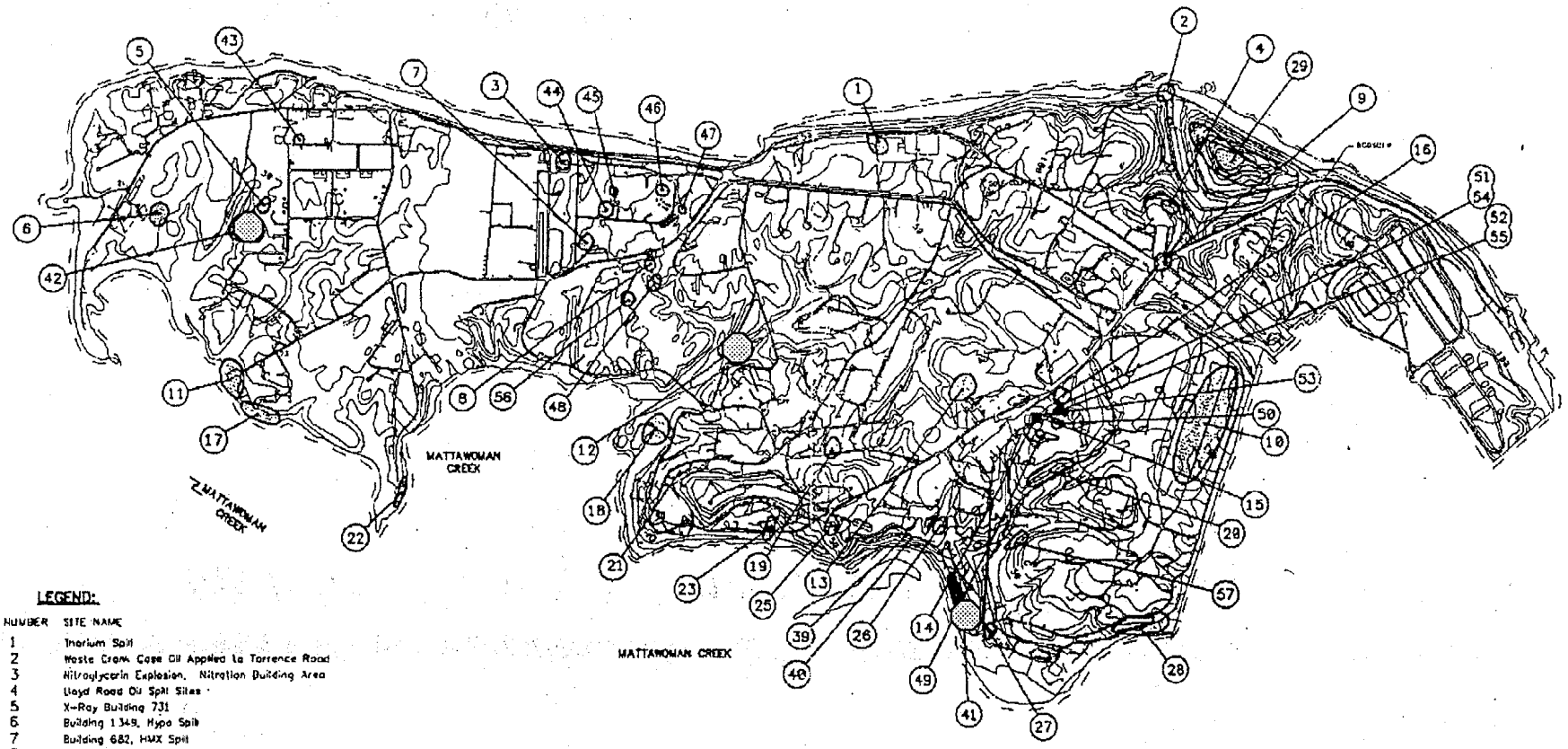
Purpose

- *Describe, evaluate and compare alternatives*
- *Select Remedy*

Tasks

- *Alternative development*
- *Alternative evaluation and comparison*
  - *Overall protection of human health and the environment*
  - *Compliance with ARARs*
  - *Long-term effectiveness and permanence*
  - *Reduction of toxicity, mobility or volume through treatment*
  - *Short-term effectiveness*
  - *Implementability*
  - *Cost*
  - *State Acceptance*
  - *Community Acceptance*

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, Fluorine 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	Branson 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 (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	Soak Cut Area
45	Abandoned Drums
46	Cadmium Sandblast Grit
47	Mercuric Nitrate Disposal Area
48	Nitroglycerine Plant Disposal Area
49	Chemical Disposal Area
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	IW87 - Lead Contamination
57	TCE Building 292 Area

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

0 1600 3200
SCALE IN FEET

Sites 12, 41, 42 - Project Status
Feasibility Study

- *Feasibility Study Field Investigation Work Plan completed May 1999*
  - *Fill engineering data needs*
  - *Obtain data for cost estimation*
- *Field work completed October 1999*
  - *Site 12 - Town Gut Landfill*

    Test Pits, Wetlands Delineation
  - *Site 41 - Scrap Yard*

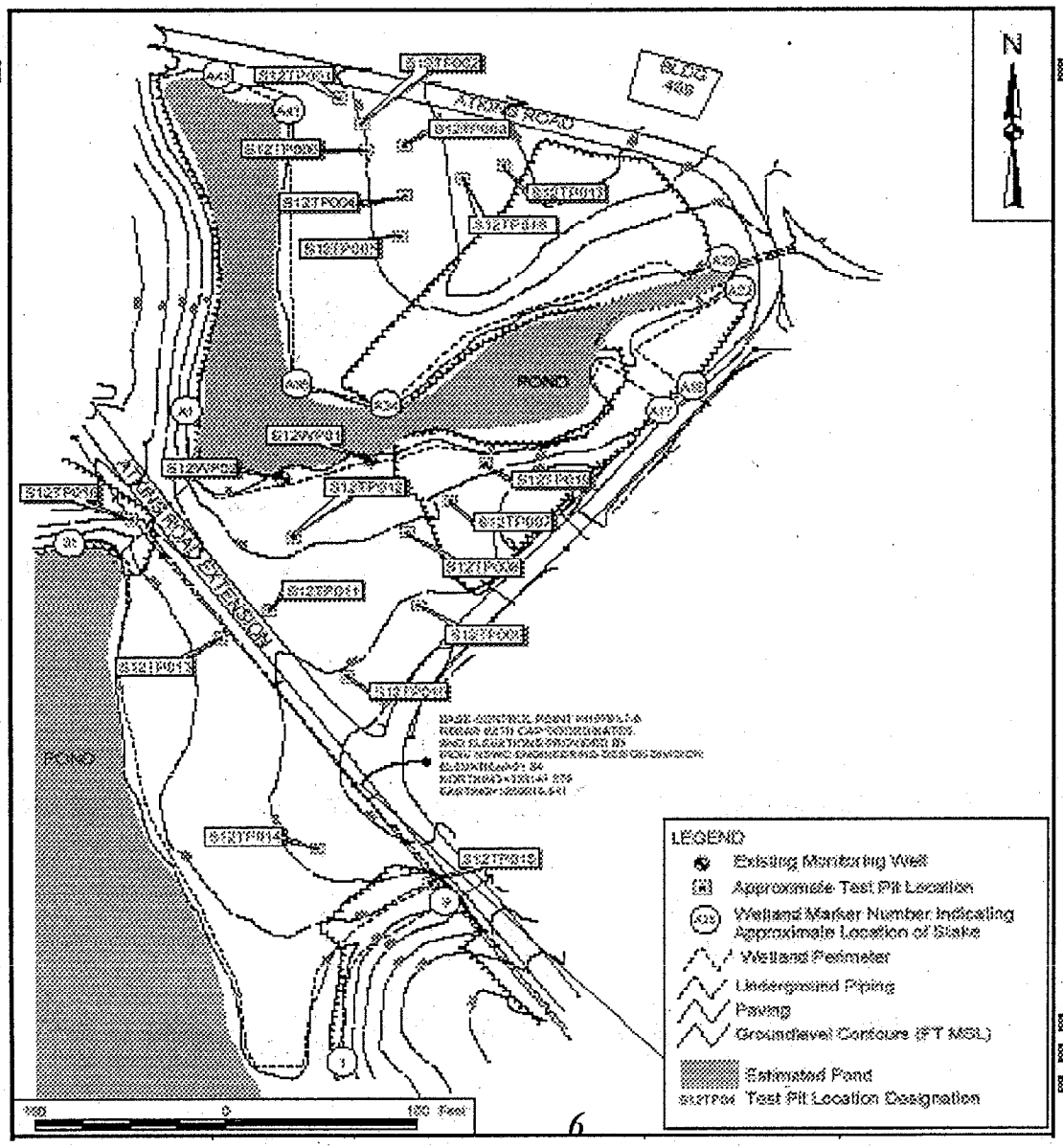
    Surface Soil Sampling
  - *Site 42 - Olsen Road*

    Test Pits, Sediment Sampling, Toxicity Tests, Wetlands Delineation

Sites 12, 41, 42 - Project Status Feasibility Study

- *Draft FS Report for Sites 12, 41 and 42 was completed February 2000*
- *Revised Draft Report for Sites 12 and 41 will be available for public comment by mid-July*
- *Revised Draft Report for Site 42 will be delayed until additional ecological work is completed*

Feasibility Study Project Status
Site 12 - Town Gut Landfill



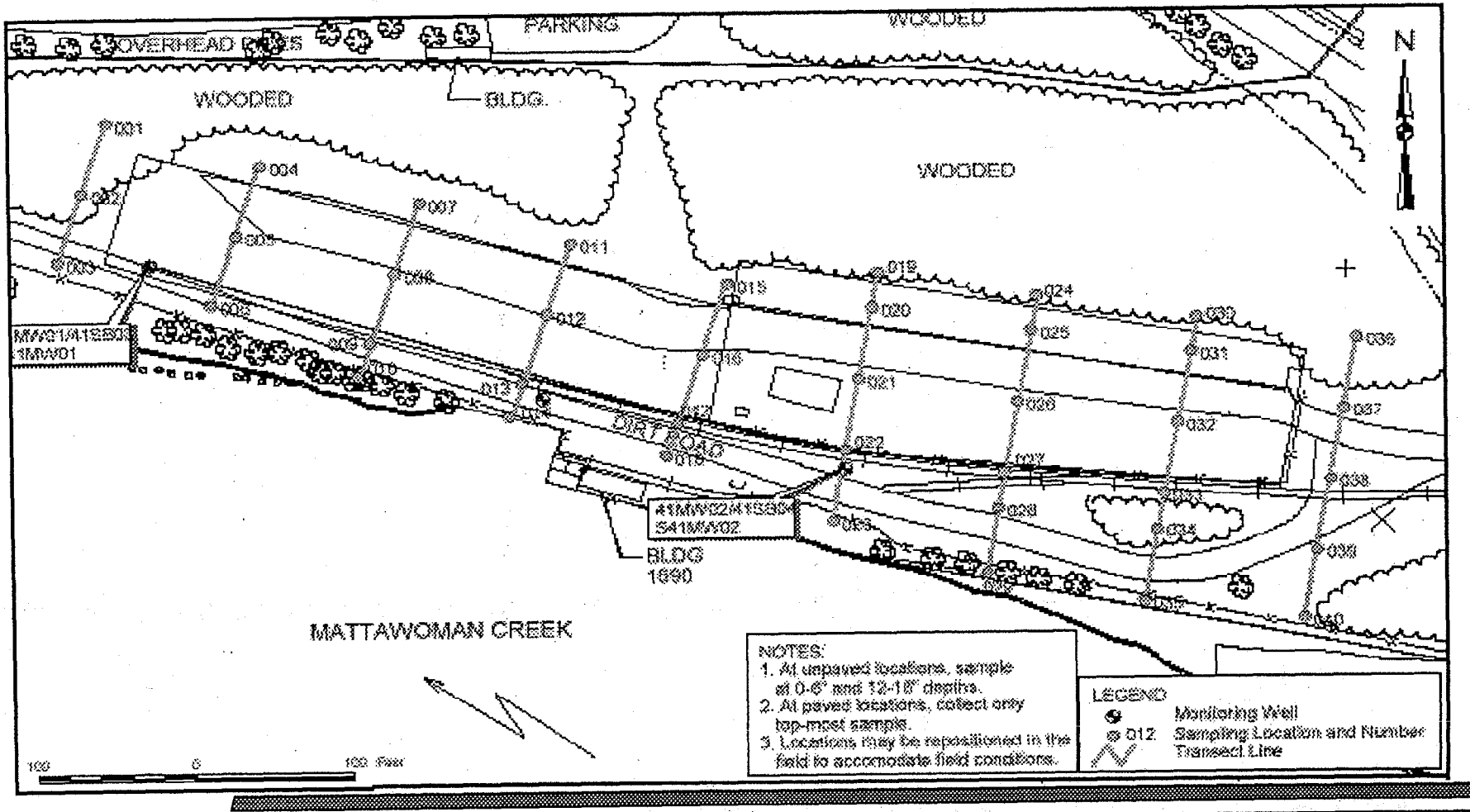
Feasibility Study Project Status
Site 12 - Town Gut Landfill

- *Alternative 1 – No Action*
- *Alternative 2 – Soil Cover with LTM & Institutional Controls*
- *Alternative 3 - Soil Cap with LTM & Institutional Controls*
- *Alternative 4 – Engineered Cap with LTM & Institutional Controls*
- *Alternative 5 – Landfill Removal*

Feasibility Study Project Status
Site 12 - Town Gut Landfill

	Protect HH&Env	ARAR Comp	LT Effect	ST Effect	Imp	Cost	MDE/ EPA	Community
1-No Action	low	low	low	low	high	$ 0	TBD	TBD
2-Soil Cover	med	med	med	med	med	$ 1,257,000	TBD	TBD
3-Soil Cap	med	med	med	med	med	$ 2,266,000	TBD	TBD
4-Eng Cap	med	high	med	med	med	$ 3,442,000	TBD	TBD
5-Removal	high	high	high	med	low	$ 4,780,000	TBD	TBD

Feasibility Study Project Status
Site 41 - Scrap Yard



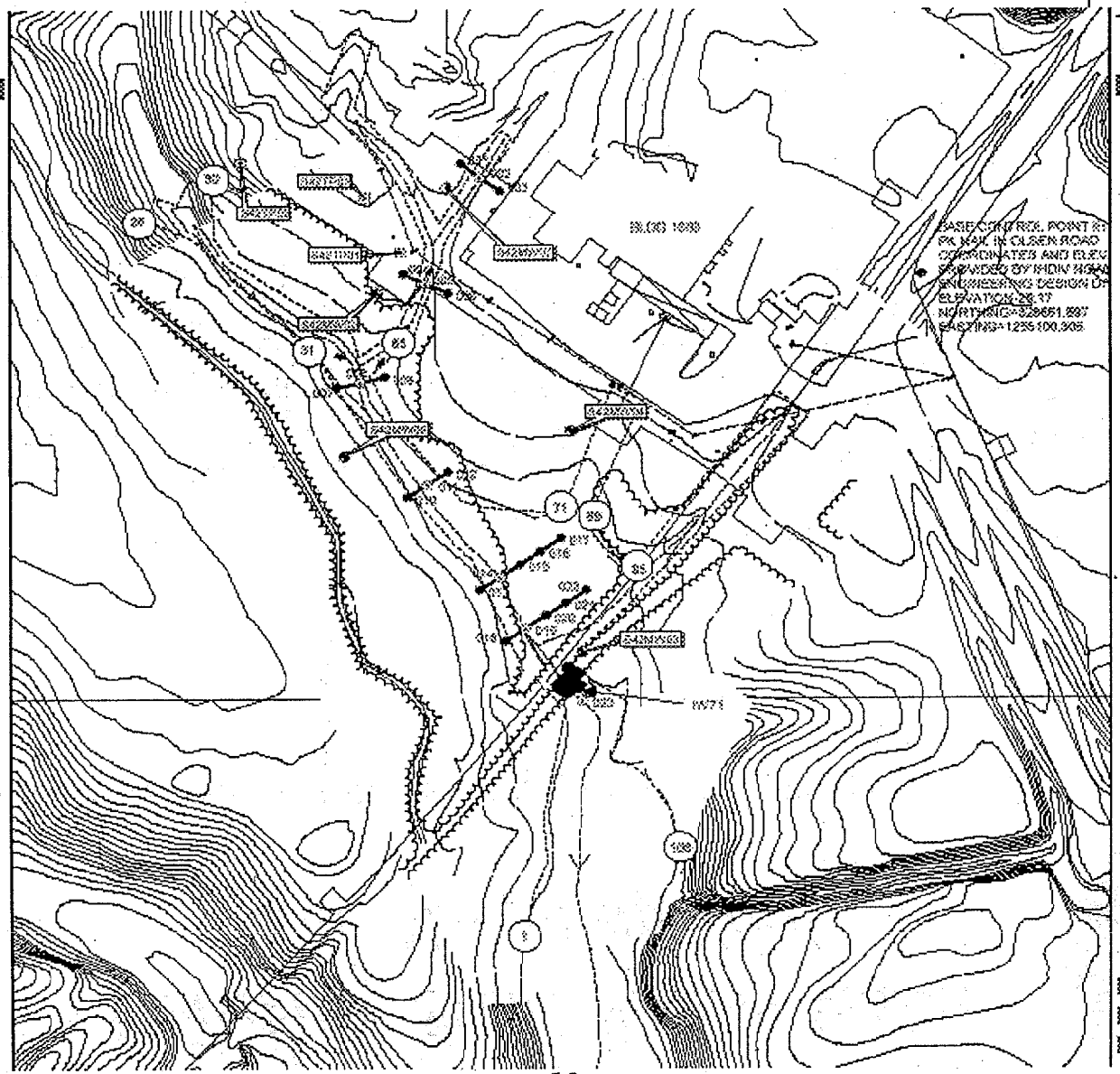
Feasibility Study Project Status
Site 41 - Scrap Yard

- *Alternative 1 – No Action*
- *Alternative 2 – Soil Removal*
  - *Approximately 1,500 cubic yards*
  - *6 inch average depth to concrete pad*
  - *6 to 18 inches of soil would be excavated in areas outside of the fence line*

Feasibility Study Project Status
Site 41 - Scrap Yard

	Protect HH&Env	ARAR Comp	LT Effect	ST Effect	Imp	Cost	MDE/ EPA	Community
1-No Action	low	low	low	low	high	$ 0	TBD	TBD
2-Removal	high	high	high	high	med	$ 1,067,000	TBD	TBD

Feasibility Study Project Status
Site 42 - Olsen Road Landfill



Feasibility Study Project Status
Site 42 - Olsen Road Landfill

- *Alternative 1 - No Action*
- *Alternative 2 - Soil Cover with LTM & Institutional Controls*
- *Alternative 3 - Soil Cap with LTM & Institutional Controls*
- *Alternative 4 - Engineered Cap with LTM & Institutional Controls*
- *Alternative 5a - Partial Landfill Removal*
- *Alternative 5b - Complete Landfill Removal*

Feasibility Study Project Status
Site 42 - Olsen Road Landfill

	Protect HH&Env	ARAR Comp	LT Effect	ST Effect	Imp	Cost (not incl. silver rem)	MDE/ EPA	Community
1-No Action	low	low	low	low	high	$ 0	TBD	TBD
2-Soil Cover	med	med	med	med	med	$ 613,000	TBD	TBD
3-Soil Cap	med	med	med	med	med	$ 988,000	TBD	TBD
4-Eng Cap	high	high	med	med	med	$ 1,599,000	TBD	TBD
5a-Part Rm	high	high	high	med	med	$ 1,669,000	TBD	TBD
5b-Com Rm	high	high	high	med	low	$ 2,875,000	TBD	TBD

Sites 12, 41, 42 - Project Status Feasibility Study Schedule

- *Revised Draft Report for Sites 12 and 41 will be available for public comment by mid-July*
- *Revised Draft Report for Site 42 will be delayed until additional ecological work is completed*

Site 42 - Olsen Road Landfill

Investigation of Potential Silver Toxicity in Stream Sediments

Attachment C

Historical Information

- Sediment samples collected from the stream/drainage swale adjacent to Site 42 during the Site Investigation (SI) contained elevated silver.
- A limited removal action for silver was conducted based on the SI results.
- Results of sediment sampling for the Remedial Investigation (RI) suggested that silver was still present in elevated concentrations.

Sediment Toxicity Testing

- Based on the results of the RI sediment sampling, the regulatory agencies suggested that testing be performed to determine if the silver in sediments was causing toxicity to sediment-dwelling organisms.
- Sediment toxicity testing was performed as part of pre-Feasibility Study (FS) activities using the test organism *Hyalella azteca* and EPA-approved methods.
- The test measures survival and growth of the organisms in sediments from the field over 28 days. Ideally, the data can be used also to determine remediation goals, if necessary.

Where do we go from here?

- The regulatory agencies suggested that silver could not be ruled out as the cause of toxicity due to the uncertainties inherent in the toxicity testing results.
- The regulatory agencies agreed that since no other man-made chemicals are elevated in stream sediments, silver is the only possible man-made chemical in Site 42 sediments that could potentially be toxic.
- The NSWC Indian Head Division partnering team has determined that a toxicity identification evaluation (TIE) approach can be used to better determine the cause of toxicity from the Site 42 toxicity testing.

Toxicity Identification Evaluation (TIE) YO817 Project

Presented by:

Greg Tracey/SAIC

Attachment D

Introduction

- Aquatic sediments act as both habitat for plants and animals (*receptors*) as well as sinks for organic matter.

- Organic matter acts as a sponge to trap chemicals in surface water. This matter eventually sinks to the bottom, resulting in enrichment of the chemical in the sediment.

- Depending on the concentration and strength of attachment to the sediment, the chemical *exposure* may or may not be enough to harm the receptors.

- For this reason, chemistry and toxicity tests are used to assess the potential effects of the chemical as it exists in the habitat (*site-specific exposure conditions*).

Problem

Results of sediment measurements may be inconclusive:

- Chemical concentrations are low, but sample is toxic (*possible enhanced CoC exposure or non-CoC effect?*);
- Chemical concentrations are moderate, and sample is toxic (*what chemicals are responsible for exposure*?)
- Chemical concentrations are high, but samples are non-toxic (*reduced CoC exposure or insensitive test species*)?

How can a TIE Investigation Help Solve the Problem?

- Procedure involves treating a sub-sample (*fraction*) of sediment in various ways to make various chemical types to render them biologically unavailable, thus non-toxic.
- Analysis of toxicity responses in various fractions can help identify types of chemicals causing toxicity.
- Knowing type of chemicals causing the toxicity allows better decisions as how to address the contamination (*what chemical to clean up, if any, to reduce the risks*).

Objectives of TIE YO817 Project

Navy funding obtained to:

- Demonstrate the utility of TIE procedure at Navy sites with various environmental settings/problems;
- Evaluate new TIE methods; and
- Provide a "User's Guide" with study results to promote TIE use and acceptance.

Evaluating Sites for TIE Demonstration

Requirements:

- Potential CoC-related risks suspected; and
- Acute sediment toxicity observed; but
- Inconclusive toxicity-chemical exposure relationships.

Selected Sites:

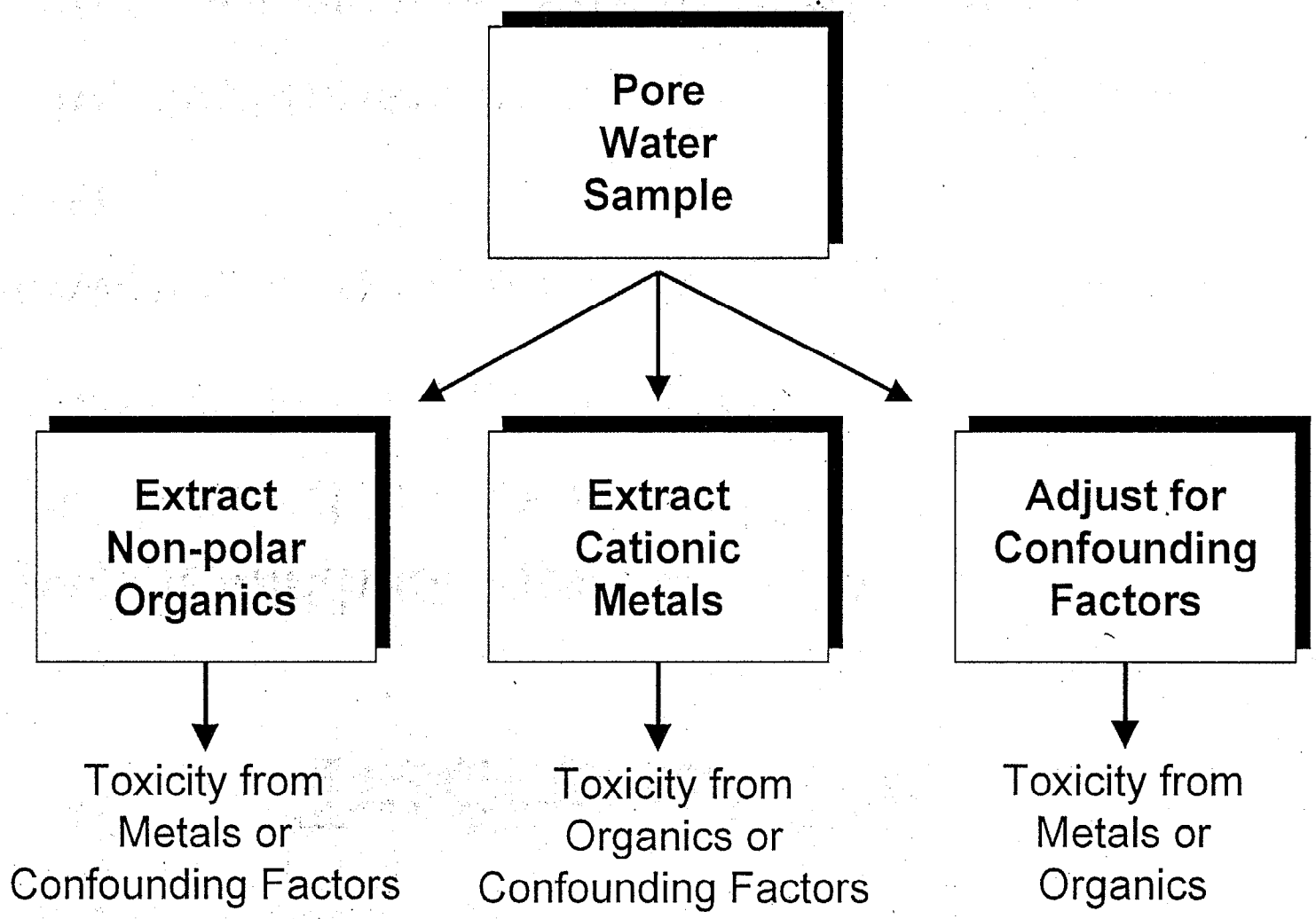
- Indian Head Site 42, MD
- Hunters Pt Naval Shipyard, CA

Traditional TIE

- Specific methodologies and QA/QC procedures developed by EPA;
- Uses parallel testing of fractions
- However, limitations to the original process exist:
  - no recommended standardized approach
  - does not discuss how to implement procedures into RI/FS project

EPA

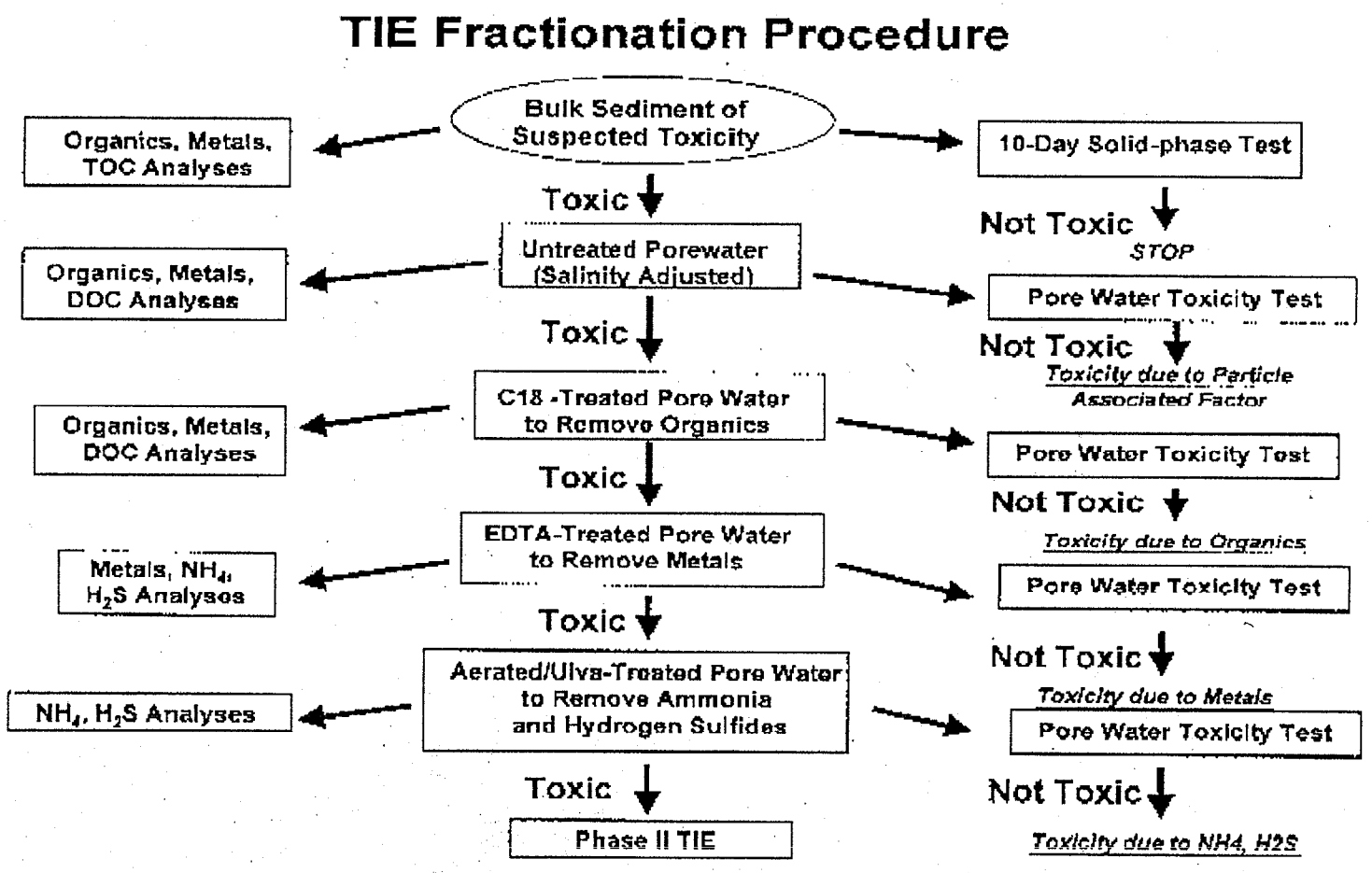
TIE Fractionation Procedure



TIE Demonstration Through YO817

- Uses EPA methodologies and Procedures; but
- Utilizes a alternative approach developed by SAIC:
  - uses sequential testing of fractions,
  - organized to be integrated into the RI/FS process,
  - provides a understandable format for reporting data.

Figure 2.4-1. Toxicity Identification Evaluation porewater chemical fractionation procedure.



Example Sequential TIE Results

Site: Goss Cove, Naval Subase New London, CT
Test Species: *Medinia beryllina* (Inland Silverside)

TIE Fractionation and Testing Sequence →

Station	PW[1]		C18		EDTA		Ulva	
	LC50[2] (% control[3])	Flag[4]	LC50[2] (% control[3])	Flag[4]	LC50[2] (% control[3])	Flag[4]	LC50[2] (% control[3])	Flag[4]
GC-1	85.7	+	68.8	++	70.6	+	100.0	-
GC-2	68.8	++	73.7	+	64.3	++	100.0	-
GC-3	75.0	+	64.3	++	64.3	++	100.0	-
GC-4	73.7	+	64.3	++	68.8	++	100.0	-
GC-5	36.7	+++	43.3	+++	50.0	++	84.6	+
GC-6	90.0	+	75.0	+	60.0	++	100.0	-
GC-7	64.3	++	66.7	++	64.3	++	100.0	-
GC-8	100.0	-	83.3	+	100.0	-	100.0	-
GC-9	100.0	-	66.7	++	100.0	-	100.0	-
GC-10	100.0	-	90.0	+	100.0	-	100.0	-

Expected Benefits of Project

- Have a proven tool that can be used in future Navy projects
- Enable the Navy to identify what chemical class of site related COCs or confounding factors are causing toxicity
- Could aide in focusing on which COCs need cleanup goals developed

Downfalls of Not Completing a TIE Study

- If a confounding factor is contributing to risk, remediation may be completed when it is really not necessary
- Cleanup goals may be set for all site CoCs, when only an individual CoC or a few CoCs are causing risk

Questions?

Mattawoman Creek Ecological and Human Health Risk Study

NSWC Indian Head Division

Attachment E

The Ecological Risk Assessment (ERA) Process: a Brief Overview

- The process used follows published EPA guidance.
- Department of the Navy (DON) ERA policy is also followed, which supplements the EPA process.

Steps in the ERA Process

- The process is composed of 8-steps.
- The first two steps are referred to as the "screening-level" assessment, which is a conservative first shot at determining chemicals of *potential* concern (COPCs).
- Steps 3 through 7 compose the "baseline ERA," which is a more focused, more detailed study conducted if the screening-level assessment determines that unacceptable risks could be present.
- Navy policy requires that a refinement of COPCs be performed after the screen. This interim step re-evaluates the COPCs using less conservative assumptions and data to more fully determine if the baseline ERA is, indeed, necessary.
- Step 8 is risk management (e.g., remedial decisions).

Screening-level ERA

- The basic framework of the ERA is set forth, which includes endpoints, exposure routes, and ecological receptors of concern.
- The maximum detected chemical concentrations from site media (e.g., sediment) are compared to conservative ecological screening levels.
- Simple modeling of risks in the foodchain may also be performed. This compares modeled doses of chemicals for wildlife to potentially toxic doses.
- If a chemical has a maximum concentration greater than the screening level, or the modeled dose exceeds the toxic dose, the chemical is selected as a COPC.

Baseline ERA

- Step 3A, the refinement of COPCs, is performed. Background, detection frequency, less conservative screening levels, and other factors are considered.
- If unacceptable risks are still present or risk management is not appropriate, a baseline ERA may be conducted, which focuses on the remaining COPCs.
- The elements of the ERA, such as endpoints, are refined and re-focused.
- Additional testing (site-specific data collection) based on these elements is conducted. This may include toxicity testing, community analysis, etc.

Step 8 - Risk Management

- Risk management alternatives are evaluated.
- Remediation goals are calculated, preferably based on the site-specific data generated during the baseline ERA.

Mattawoman Creek Study: why this study and what is the scope?

- Limited historical data suggest that releases of chemicals to Mattawoman Creek from NSWC Indian Head Division have occurred. Thus, the Navy is initiating the study to determine the risks to human health and the environment, if any, from these releases.
- The project is in its formative stages, with a kick-off meeting for the entire base partnering team scheduled for late in June.
- Although some initial scoping materials will be organized for the kick-off meeting, no formal deliverables have been generated.
- The study will not be an exhaustive study of all chemical impacts to Mattawoman Creek. Rather, the focus of the study is impacts and related risks, if any, from base-related activities only.

Where are we in the ERA process?

- In short, we are at the beginning.
- Some risk assessment has been performed for certain portions of Mattawoman Creek (i.e., along IR Sites 39 and 41), but impacts from the base on the remainder of the creek have not been assessed. Therefore, data gaps exist.

Where are we going from here?

- It is anticipated that after initial discussions with the regulatory agencies, the Navy will prepare a work plan for the study.
- Input from the public will be welcomed and encouraged throughout the process to ensure that the concerns of all stakeholders are addressed.

NAVAL SURFACE WARFARE CENTER
INDIAN HEAD DIVISION
RESTORATION ADVISORY BOARD

Remedial Investigation
Project Status

Site 47 - Mercuric Nitrate Disposal Area

Shawn Jorgensen
IR Project Manager

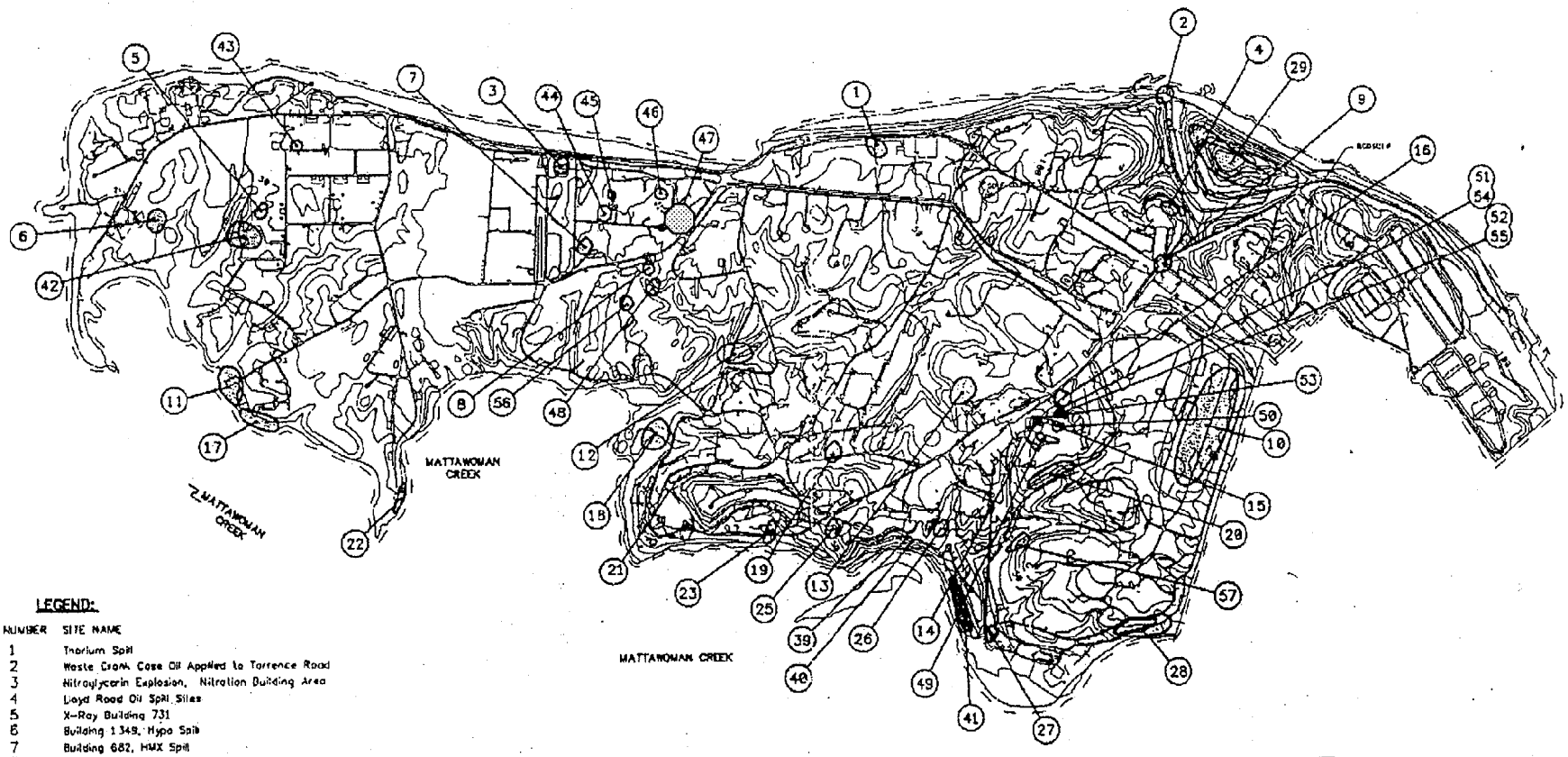
June 15, 2000

Attachment F

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*

NSWC Indian Head
IR Site Map



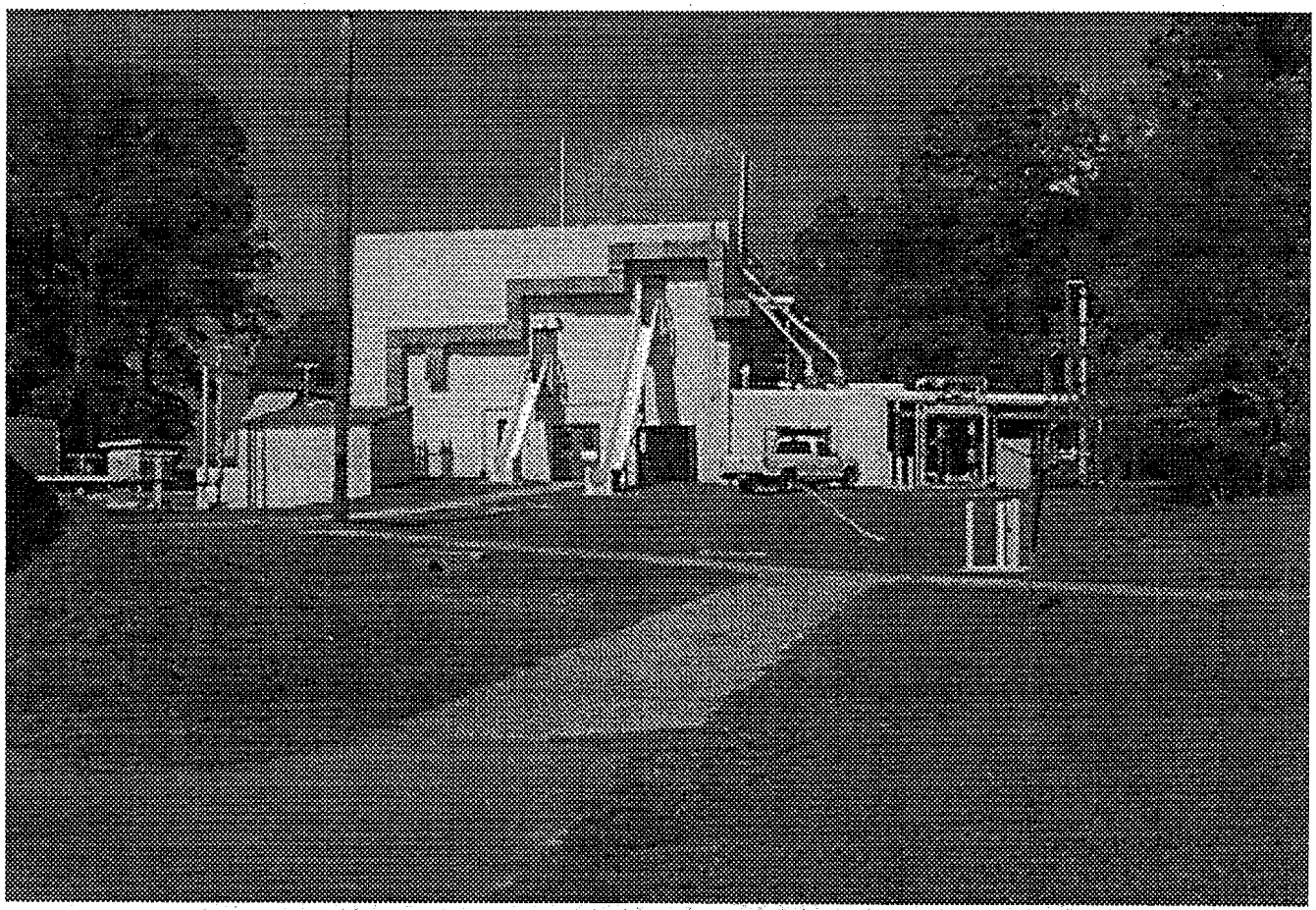
LEGEND:

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
18	Hog 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	The Valley
30-38	Stump 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	Soak Cut Area
45	Abandoned Drums
46	Cadmium Sandblast Grit
47	Mercuric Nitrate Disposal Area
48	Nitroglycerine 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	IW87 - Lead Contamination
57	TCE Building 292 Area

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

0 1600 3200
SCALE IN FEET

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 Expected August 2000*
- *Dollars Spent to-date on IR Site 47 - $100,000*
  - *Remedial Investigation - $100,000*
- *Projected Cost of Feasibility Study - $125,000*
  - *Scheduled to begin November 2000*

NAVAL SURFACE WARFARE CENTER
INDIAN HEAD DIVISION
RESTORATION ADVISORY BOARD

Remedial Investigation
Work Plan

Sites 15, 16, 49 and 53 - Project Status

Shawn Jorgensen
IR Project Manager

June 15, 2000

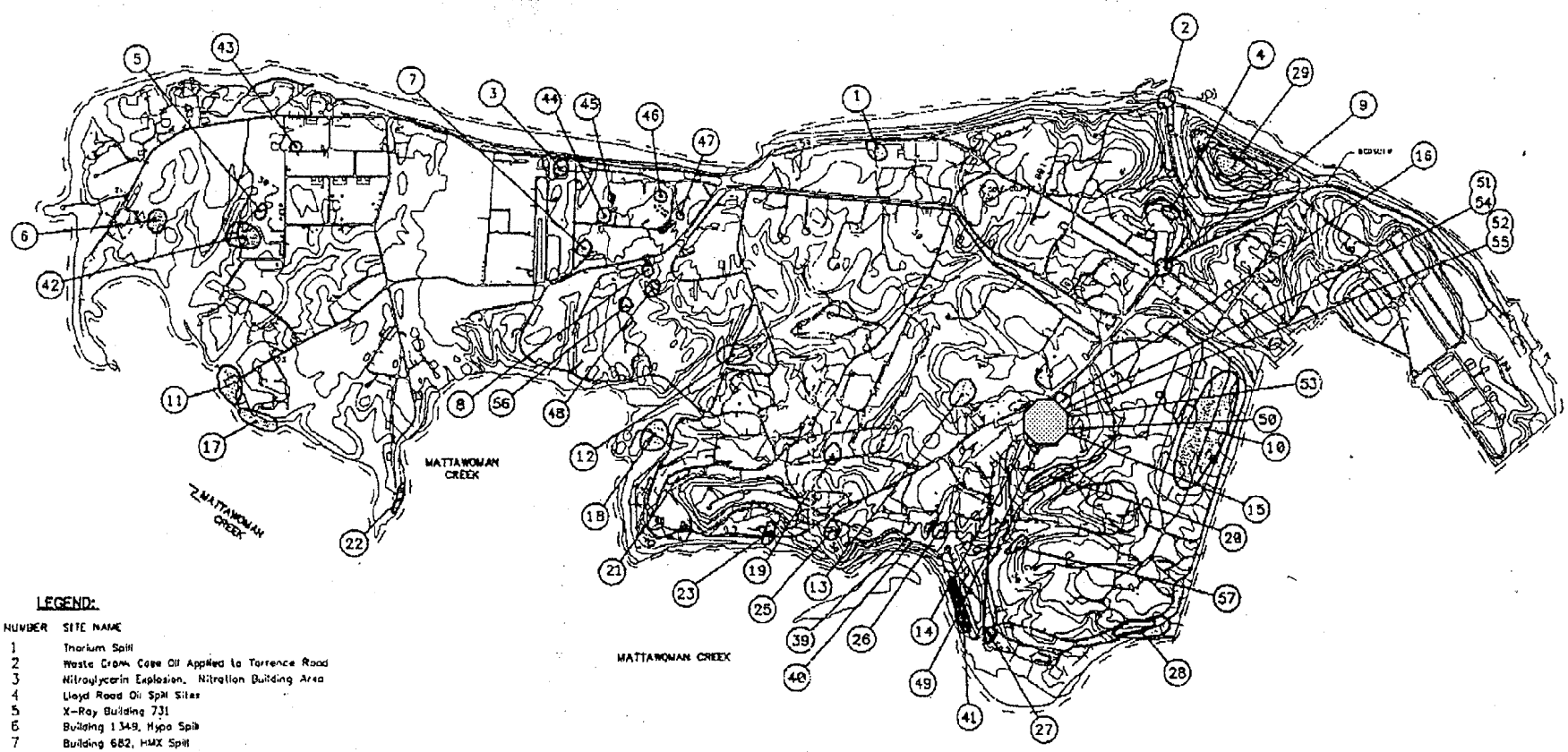
Attachment G

Sites 15, 16, 49 and 53 - Project Status
Sites To Be Studied

- *15 - Mercury Deposits in Manhole, Fluorine Lab*
- *16 - Laboratory Chemical Disposal*
- *49 - Chemical Disposal Pit*
- *53 - Mercury Contamination of Sewage System*

- *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.*

NSWC Indian Head
IR Site Map



LEGEND:

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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, Fluorine 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	Branson Road Landfill
22	NC Slums Burning Site
23	Hydraulic Oil Spill Discharges From Extrusion Plant
24	Abandoned Drain Lines
25	Hypo Discharge K-Ray Building No. 2
26	Thermal Destructor 2
27	Thermal Destructor 1
28	Original Burning Ground
29	The Valley
38-38	Stump 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	Soak Out Area
45	Abandoned Drums
46	Cadmium Sandblast Grit
47	Mercuric Nitrate Disposal Area
48	Nitroglycerine 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	IW87 - Lead Contamination
57	TCE Building 292 Area

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

0 1600 3200
SCALE IN FEET

Sites 15, 16, 49 and 53 - 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*

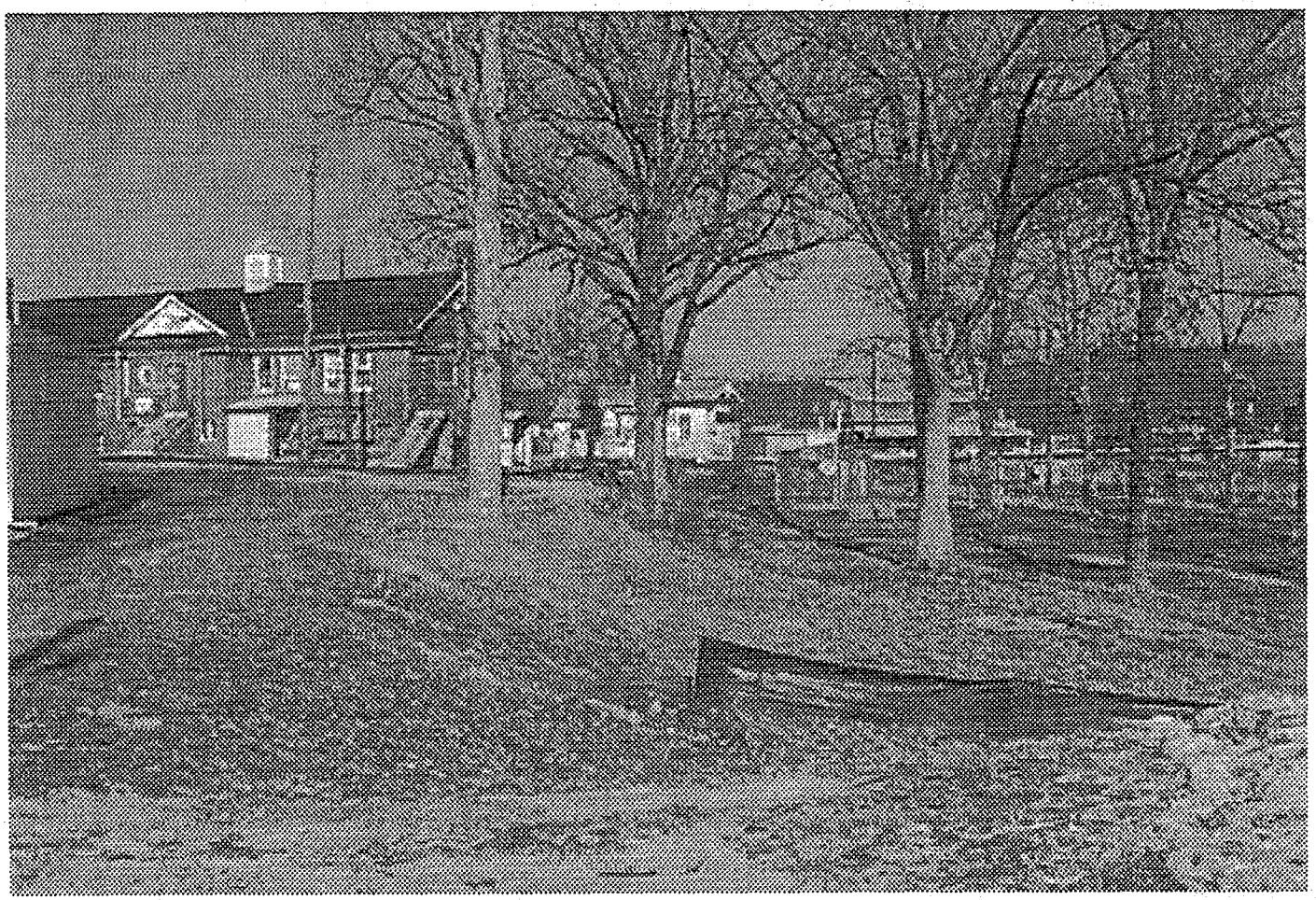
Sites 15, 16, 49 and 53 - Project Status
Site Background

- *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*

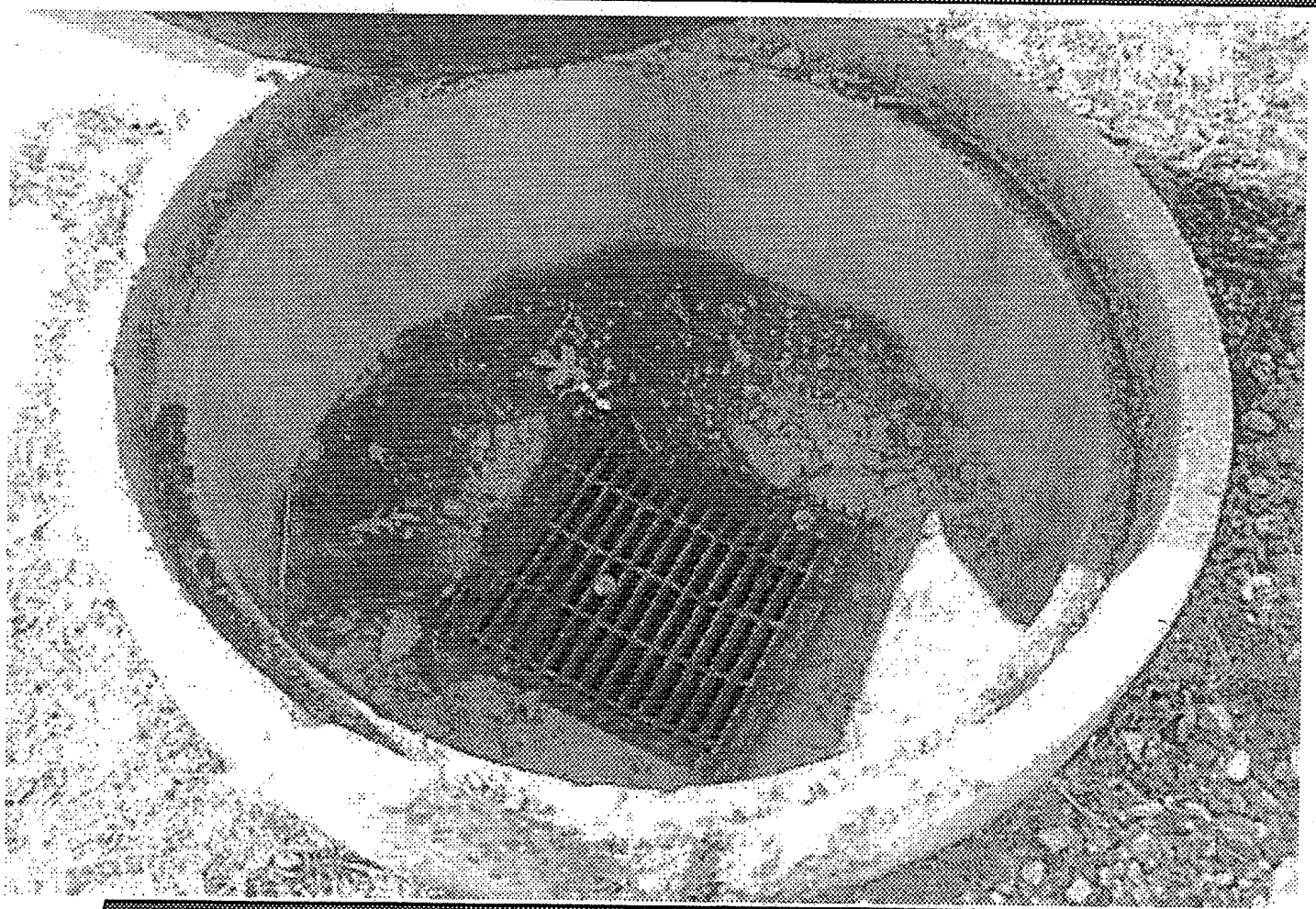
- *Site 53 - Mercury Contamination of Sewage System*
  - *Mercury from Building 102 released to storm and sanitary sewer systems from 1909 through 1986*
  - *Laboratory workers estimated one liter of mercury lost per month. This translates into 28,000 pounds over the 77 year history.*

Sites 15, 16, 49 and 53 - Project Status
Sites 15, 16 and 53

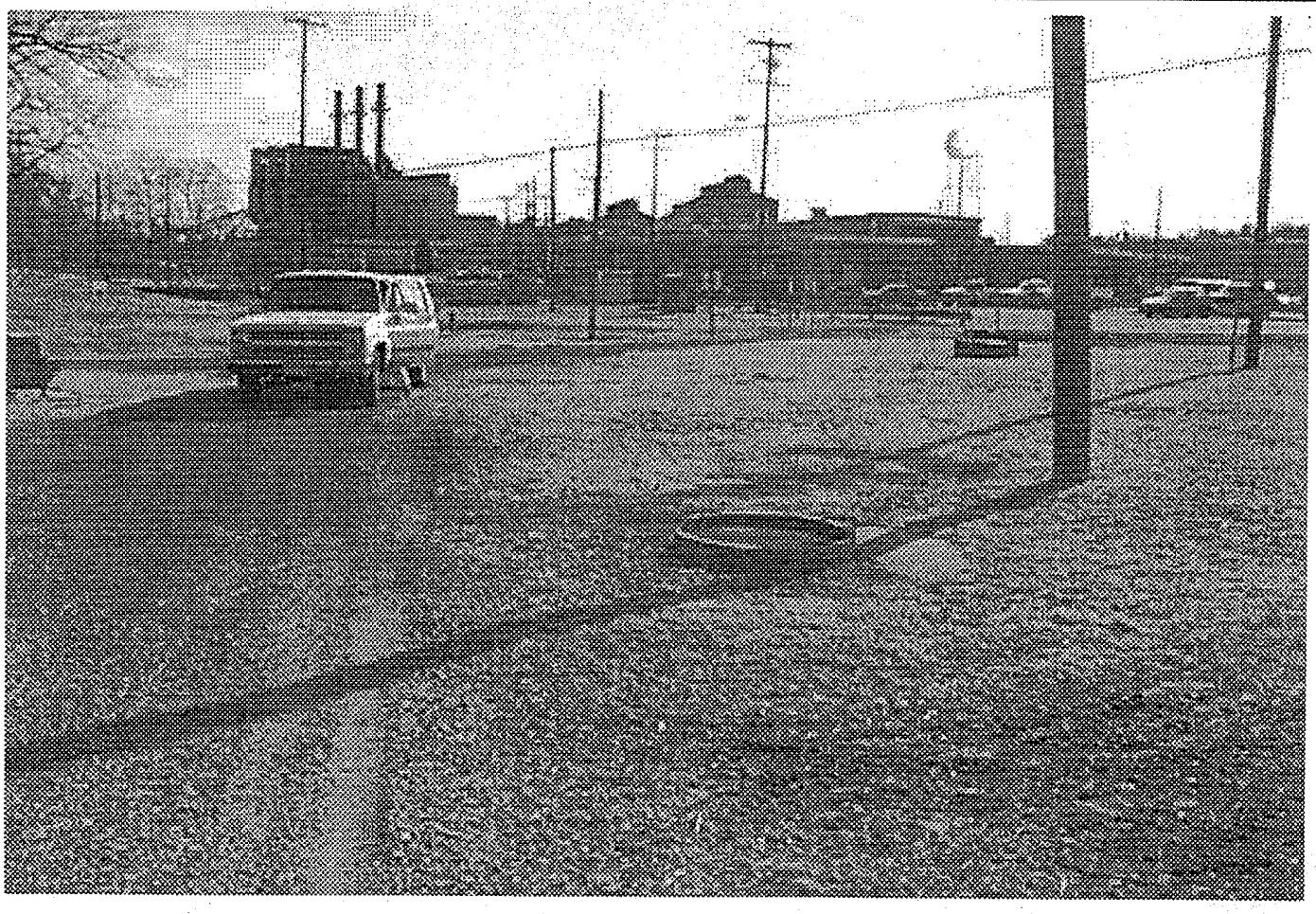
Sites 15, 16, 49 and 53 - Project Status
Sites 15, 16 and 53



Sites 15, 16, 49 and 53 - Project Status
Site 49



Sites 15, 16, 49 and 53 - Project Status
Site 49



Sites 15, 16, 49 and 53 - Project Status
Future Schedule

- *Remedial Investigation (RI)*
  - *Contract Award - February 2000*
    - *Draft RI Work Plan - July 2000*
    - *Draft Final RI Work Plan - August 2000*
    - *Field Work - October 2000*
    - *Draft RI Report - April 2001*
  - *Cost for RI - $240,850*

NAVAL SURFACE WARFARE CENTER
INDIAN HEAD DIVISION
RESTORATION ADVISORY BOARD

Remedial Investigations - Project Status

Sites 11, 13, 17, 21, and 25

Shawn Jorgensen
IR Project Manager

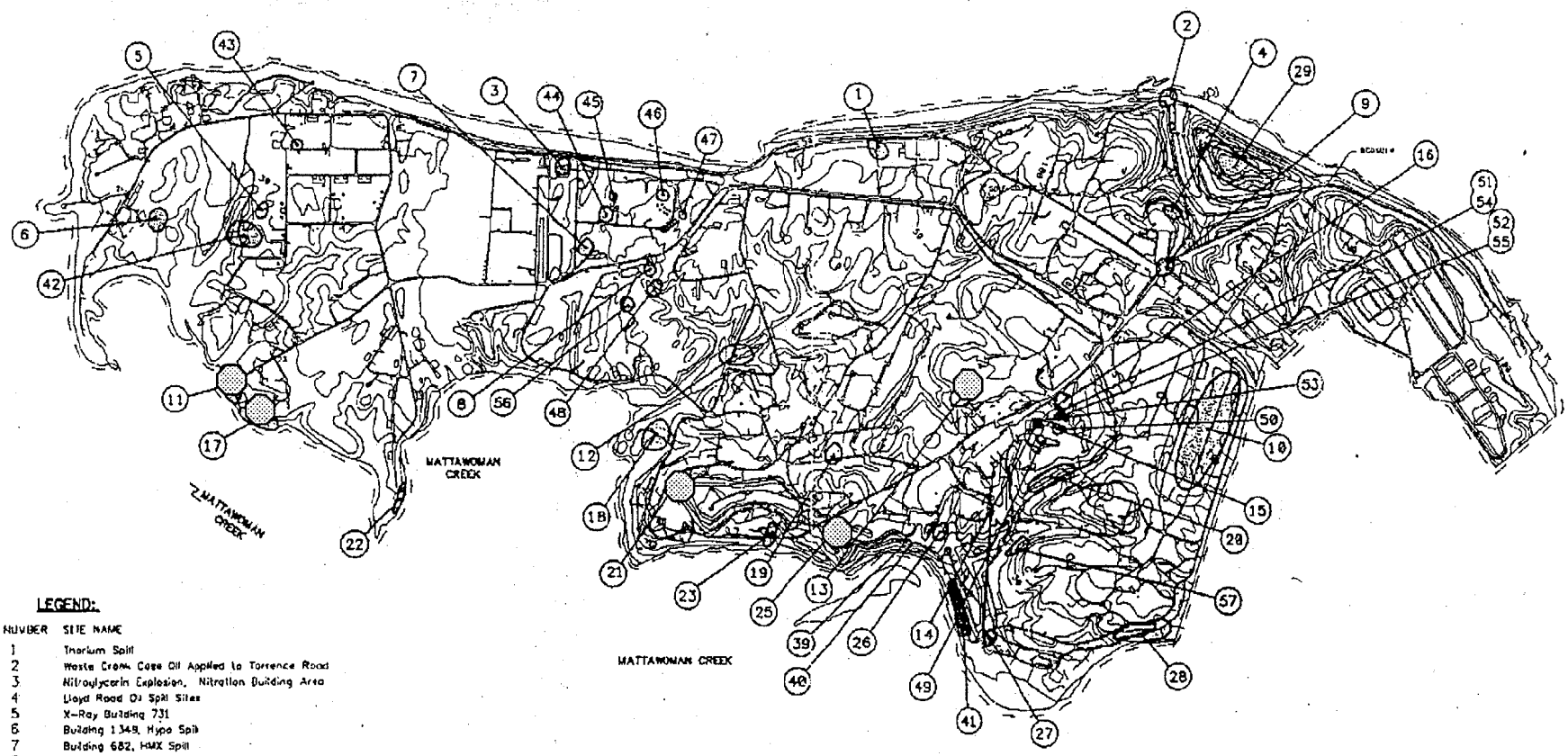
June 15, 2000

Attachment H

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*

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	Caltex Road Landfill
12	Town Gut 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	Hog Island
19	Catch Basins at Chip Collection Houses
20	Single-base Powder Facilities
21	Branson 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	The Valley
30-38	Stump 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	Soak Out Area
45	Abandoned Drums
46	Cadmium Sandblast Grit
47	Mercuric Nitrate Disposal Area
48	Nitroglycerine Plant Pigeonhole 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	IW87 - Lead Contamination
57	TCE Building 292 Area

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

0 1600 3200
SCALE IN FEET

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*
- *Proposed Sampling*
  - *Surface Soil Samples: 23 to 59*
  - *Subsurface Soil Boring Samples: 20 to 56*
  - *Groundwater Samples: 11*
  - *Surface Water Samples: 7*
  - *Sediment Samples: 7*
  - *Waste Samples: 17 to 53*

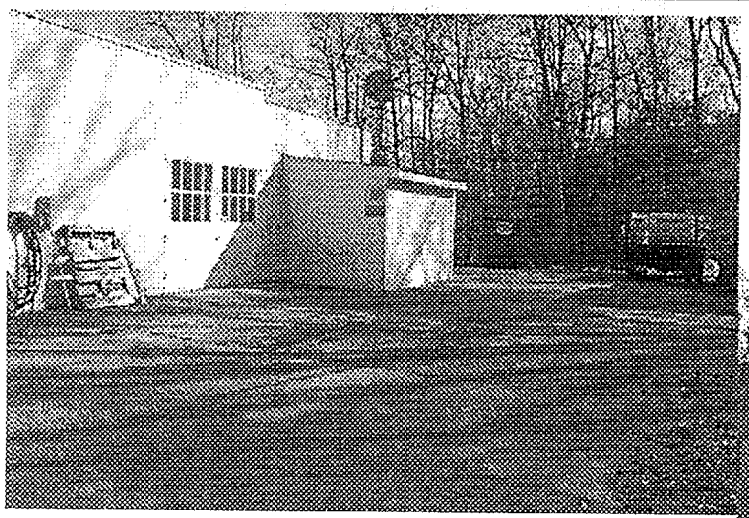
IR Site 11
Caffee Road Landfill

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)*
- *Proposed Sampling*
  - *Surface Soil Samples: 9*
  - *Subsurface Soil Boring Samples: 5*
  - *Groundwater Samples: 3*

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*
- *Proposed Sampling*
  - *Surface Soil Samples: 10*
  - *Subsurface Soil Boring Samples: 10*
  - *Groundwater Samples: 3*
  - *Sediment Samples: 6*

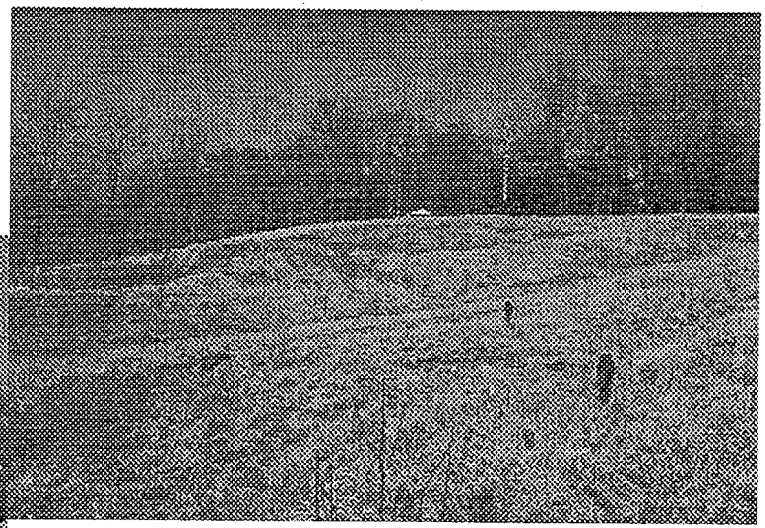
IR Site 17

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*
- *Proposed Sampling*
  - *Surface Soil Samples: 18*
  - *Groundwater Samples: 4*

IR Site 21
Bronson Road Landfill

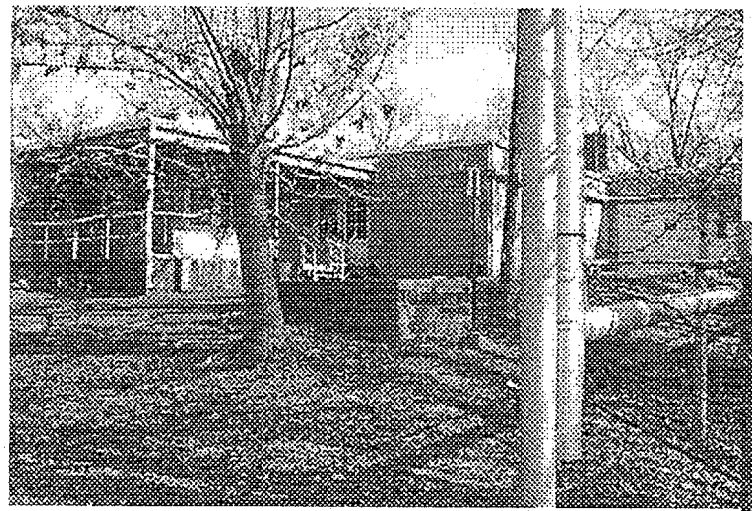


Sites 11, 13, 17, 21, and 25 - Project Status
Site 25 - Hypo Discharges From X-Ray Building No. 2

- *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*
- *Proposed Sampling*
  - *Surface Soil Samples: 17*
  - *Subsurface Soil Boring Samples: 8*
  - *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*
    - *Field Work - July 2000*
    - *Draft RI Report - Early 2001*
  - *Cost for RI - $700,000*

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

Risk Communication in the Workplace

Shawn Jorgensen
IR Project Manager

June 15, 2000

Attachment I

Risk Communication in the Workplace
Background

- *Potential human health risks identified at some Installation Restoration sites as a result of the Human Health Risk Assessment conducted during Remedial Investigations*
- *Employees, including contractors, that could be exposed to unacceptable levels of chemicals must be notified of potential risk*

Risk Communication in the Workplace
Actions To Address Issue

- *Prepare Human Health Risk Fact Sheets for sites identified as posing a potential human health risk. Include the following:*
  - *Potential receptors*
  - *Contaminants causing potential risk*
  - *Routes of exposure leading to unacceptable risk*
  - *Health effects of chemicals at the site that could potentially cause unacceptable risk*
  - *Definitions*
  - *Disposal information*
  - *EPA Fact Sheets of chemicals at the site that may pose unacceptable risk*
  - *Additional information, as required*

Risk Communication in the Workplace
Actions To Address Issue

- *Provide Human Health Risk Fact Sheets to:*
  - *All personnel potentially exposed to unacceptable levels of risk, including, as appropriate:*
    - *Full-time workers*
    - *Contractors*
    - *Maintenance workers*
    - *Pregnant workers*
- *Provide training to personnel, as required by law*

Risk Communication in the Workplace
Status of Actions

- *Work Completed*
  - *Human Health Risk Fact Sheets prepared for*
    - *IR Site 41 - Scrap Yard*
    - *IR Site 57 - Trichloroethylene at Building 292*
- *Work To Be Completed*
  - *Provide Fact Sheets to appropriate personnel*
  - *Provide appropriated training to potentially affected personnel*

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

June 15, 2000

IR Sites 12, 41, and 42 Feasibility Study (FS)

General

Question: Will the delays with Site 42 impact funding for next year?

Answer: A little. However, we only have enough funding for cleanup of one site.

Question: What is the scope of work for Site 42?

Answer: The contractor will explain the Toxicity Identification Evaluation (TIE) process.

Question: Will there be additional sampling at Site 42?

Answer: Yes, using a new approach.

Site 12

Question: Are you required to do any venting at Site 12 (Town Gut Landfill)?

Answer: This is mostly a rubble landfill containing bricks, shingles, and landscaping waste. It is not a sanitary or chemical waste landfill. Therefore, venting is not required.

Question: Is long-term monitoring (LTM) for 30 years?

Answer: LTM can be longer or shorter then 30 years. There are 5-year review cycles to check on the progress of the remedial action.

Question: Is it the responsibility of the Safety Department at Indian Head to perform this sampling?

Attachment J

Answer: The first five years are funded by EFACHES. After that, it is the Activity's responsibility to fund the LTM.

Question: What are the abbreviations on the chart in the overhead?

Answer: Protect HH & Env - Protectiveness of Human Health and the Environment.
ARAR Comp - Applicable or Relevant and Appropriate Requirements (ARAR) Compliance
LT Effect - Long-term Effectiveness
ST Effect - Short-term Effectiveness
Imp - Implementability
MDE/EPA - Meets approval of MDE and EPA
Community - Meets approval of the community of Indian Head

Question: Is monitoring only performed to measure the effectiveness of the cap?

Answer: Monitoring is performed to determine the effectiveness of the remediation.

Question: Is the remediation for Olsen Road Landfill similar to that for the Town Gut Landfill?

Answer: It's a little different because the level of the shallow groundwater is different.

Question: Looking at each site individually, how do we determine what to do? There is only so much money.

Answer: The RAB will be asked to provide input on the alternatives, assessment of those alternatives, and which sites to cleanup first.

Comment: The amount of available funding should not be used to determine how to remediate a site. You should look at which alternatives meet your obligations.

Site 41

Question: Is it all or nothing with respect to moving the scrap to allow for remediation?

Answer: Contamination was found throughout the site and must be remediated. Therefore, we may move all of the scrap to one side of the Scrap Yard, remediate the

uncovered soil, then move all of the scrap to other half of the Scrap Yard and remediate the rest of the soil.

Site 42

Question: What kind of contamination is present at Site 42 (Olsen Road Landfill)?

Answer: Silver is present at the toe of the landfill, which is from the x-ray facility located upgradient of the landfill.

Question: With partial removal, do you cover what's left?

Answer: The steam line shown in the figure is what is causing the problem. Therefore, partial removal involves removing fill from the toe of the landfill (the stream) to the steam line. The fill remaining at the site will be covered.

Toxicity Testing at IR Site 42, Olsen Road Landfill

Question: Is there any correlation between silver and ammonia levels?

Answer: Ammonia is from a biological activity, not chemical. Therefore, the production of ammonia in the sample is not related to the presence of silver concentrations in the sample.

Toxicity Identification Evaluation (TIE) Approach

Question: Is this a first for this method?

Comment: For this technology, yes.

Question: What is a CoC?

Answer: A chemical of concern.

Comment: In the risk assessments in the Remedial Investigations (RI) this is called a chemical of potential concern (COPC).

Question: The rate of absorption will vary by type of animal. How do you make a distinction between animals to use?

Answer: Right now we are concerned with animals associated with sediment.

Question: How does it affect humans in the area?

Answer: That's a human health risk assessment question. A lot of the same principles apply, such as full-time worker, construction worker, etc. We take all of these things into account. For example, at Site 42, the sediment dwelling creatures are determined to be the most at risk from the silver at the site.

Question: Each step appears to be a 10-day sequence from the example chart.

Answer: No. The duration is per standard EPA method.

Question: When will we get the results?

Answer: Once samples have been taken, it takes approximately 3 weeks. We are currently working on scoping and the work plan for this effort.

Question: Do you take into account seasonal considerations?

Answer: Samples will be taken in the September time frame. We may have the results for the October RAB meeting or at least the February 2001 RAB meeting.

Question: Will this method apply to the Mattawoman Creek Study?

Answer: TIE may or may not be useful in the Mattawoman Creek Study. At this point, it is too early in the process to tell.

Mattawoman Creek Study Update

Question: How do human health and ecological risk assessments interact, or do they? Are they done separately?

Answer: No. They are done together and the risk assessors work together.

Question: Who will be developing the sampling plans?

Answer: The sampling plans will be developed in conjunction with the EPA, MDE, and the Biological Technical Assistance Group (BTAG), which includes a member from the U.S. Fish and Wildlife Service (USFW) and the

National Oceanic and Atmospheric Administration (NOAA). The public will have the opportunity to comment on the plans.

Question: When will the work plan be done?

Answer: We will be meeting with the EPA, MDE, and BTAG in late June to discuss philosophies on the study. Afterwards, we will begin working on the plan. It will not be done until late July at the earliest.

Question: Is the data analysis coordinated between the human health and ecological risk assessors?

Answer: The data is analyzed, reviewed for Quality Assurance (QA), and is then put into a database. Both risk assessors draw from the same data.

Question: Don't you sometimes get results like "a human eating this fish gets sick, but the fish doesn't actually have the problem"?

Answer: Both risk assessors read from common data and read each other's conclusions. The assessors only diverge while performing the actual risk assessment.

Comment: We want to ensure the results are coordinated and make sense.

IR Site 47 Remedial Investigation (RI) Report Update

No comments made or questions asked.

RI for Sites 53, 49, 15, and 16

No comments made or questions asked.

RI for Sites 11, 13, 17, 21, and 25

Question: Was any silver recovery done?

Answer: Yes. However, we are not sure what year we started recycling.

Question: Money. How are we doing this year?

Answer: Our money was awarded before it was pulled back this year.

Question: How much has been spent this year?

Answer: The whole 3 million dollars that was budgeted has been spent, or obligated.

Risk Communication in the Workplace

Question: Have any of the Human Health Risk Fact Sheets been given out to employees yet? If not, do you have a timeline for doing so? Also, would it be possible to see them?

Answer: We have not handed out the Fact Sheets to all employees that could be potentially affected by Sites 41 (Scrap Yard) and 57 (Trichloroethylene), yet. We have provided a draft copy to the manager of our water line repair personnel for review. We want to get feedback to ensure that the Fact Sheets are informative and helpful and will be used. In addition, we will provide a draft copy to the manager of the Scrap Yard next week for comment.

Once the format has been accepted, then we will provide the Fact Sheets to all potentially affected personnel. In addition, the Fact Sheets will be prepared in the future by our contractor and will be a part of the RI document.

INDIAN HEAD DIVISION, NAVAL SURFACE WARFARE CENTER

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

October 19, 2000

1. IR Sites 11, 13, 17, 21, and 25 Update
2. IR Sites 12 and 41 Update
3. IR Sites 15, 16, 49, and 53 Update
4. IR Site 47 Update
5. IR Site 57 Update
6. Mattawoman Creek Study Update
7. IR Site 42 Toxicity Identification Evaluation (TIE) Progress

Attachment K