



DEPARTMENT OF THE NAVY

INDIAN HEAD DIVISION
NAVAL SURFACE WARFARE CENTER
101 STRAUSS AVE
INDIAN HEAD MD 20640-5035

5090
Ser 044SJ/167
5 Nov 02

Mr. Elmer Biles
6315 Indian Head Highway
Indian Head, MD 20640

Dear Mr. Biles:

We are forwarding the minutes from the Installation Restoration (IR) Program Restoration Advisory Board (RAB) meeting that was held on Thursday, October 17, 2002 at the Indian Head Senior Center, which is located at 100 Cornwallis Square, Indian Head, Maryland.

A question arose that could not be definitively answered during the meeting. The question was what is the cost to prepare the full human health risk assessment for IR Site 5. During the meeting, an estimate of \$50k to \$100k was stated. However, upon reviewing previous estimates, the cost will be more in the range of \$20k to \$30k.

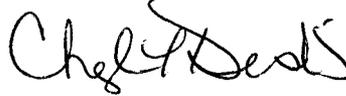
In addition, Mr. Elmer Biles requested to see in writing the purpose of the Mattawoman Creek Study. Enclosure (2) is a page from Attachment H of the RAB Meeting Minutes of October 25, 2001. This page contains the objectives of the study that was presented by Mr. Neal Parker of the Engineering Field Activity Chesapeake. In short, the purpose of the study is to investigate the magnitude of impacts of base-related activities on Mattawoman Creek and to assess the ecological and human health risks associated with those impacts. The result of the study will be to determine the most appropriate course of risk management for the Mattawoman Creek.

We would like to thank everyone that attended the RAB meeting. We hope to see all of you at the next RAB meeting, which is scheduled for Thursday, February 20, 2003, at the Indian Head Senior Center.

5090
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If you have any comments or questions concerning this matter, please contact Mr. Shawn Jorgensen on (301) 744-2263 or Ms. Heidi Morgan on (301) 744-2265.

Sincerely,



CHERYL L. DESKINS
Director, Waste Management and
Prevention Division
By direction of the Commander

Encl:

- (1) Minutes from RAB Meeting of 17 Oct 02
- (2) Page from Attachment H of RAB Meeting Minutes of 25 Oct 01

Copy to:

RAB Members
Meeting Attendees
ATSDR (D. Jackson)
CH2M Hill (A. Estabrook)
TetraTech (G. Latulippe/A. Bernhardt)

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: October 17, 2002

Restoration Advisory Board (RAB) Member Participants:

Mr. Elmer Biles (C)	Mr. Wayne McBain (C)
Mr. Curtis DeTore (S)	Mr. Jeff Morris (N)
Mr. Vincent Hungerford (C)*	CDR Peter Webb (N)

RAB Members Not in Attendance:

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

Additional Attendees:

Ms. Sherry Deskins (N)	Mr. Joe Rail (N)
Mr. Shawn Jorgensen (N)	Mr. Alex Schuman (N)
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

Major Issues Discussed/Accomplished:

1. Meeting Introduction

Ms. Sherry Deskins of the Indian Head Division, Naval Surface Warfare Center (IHDIV-NSWC) began the meeting by introducing herself and welcoming everyone to the Indian Head Senior Center. Ms. Deskins thanked those members for attending the Site 12 - Town Gut Landfill site visit on October 3, 2002.

Mr. Shawn Jorgensen, also of IHDIV-NSWC, updated the Installation Restoration (IR) Site Status chart. The Navy and the EPA have officially signed the No Further Action Record of Decision (ROD) for Site 44 (Soak Out Area). As a result, the work at this site is complete and the land is available for unlimited use. In addition, the Removal Action work at Site 12 (Town Gut Landfill) is underway and the Removal Action work at Site 41 (Scrap Yard) is scheduled to begin in November. A copy of the updated chart is contained in Attachment A.

Ms. Deskins then presented the meeting agenda, which is included in Attachment B.

2. Site Screening Report for Site 5

Mr. Shawn Jorgensen discussed the results of the Site Screening Assessment that was performed on IR Site 5, Building 731 X-ray Facility. The draft final report recommends that a full human health risk assessment be performed on the chemicals found in shallow groundwater and surface water at the site. The report was sent to RAB members in September and comments are due October 25, 2002

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

3. Site Screening Areas Report - Sites 32, 33, 34, 36, 37, 51, and 52

Ms. Heidi Morgan of IHDIV-NSWC provided the results of the Site Screening performed on multiple sites. Based on the sample results, no further action is recommended for Sites 32 (Suspected Tool Burial), 34 (Tool Burial), 51 (Building 101 Dry Well), and 52 (Building 102 Dry Well). Further sampling under the Site Screening Process is recommended for Site 33 (Scrap Metal Pit). Remedial Investigations and Feasibility Studies are recommended for Sites 36 (Closed Landfill) and 37 (Causeway).

A copy of Ms. Morgan's presentation is provided in Attachment D.

4. Site 57 Feasibility Study (FS) Report

Mr. Shawn Jorgensen discussed the draft FS Report for Site 57 - Trichloroethylene (TCE) Contamination. The report describes various alternatives for mitigating arsenic contamination in the soil near Building 292 and TCE contamination in the groundwater near Building 292 and downgradient of the building towards the Mattawoman Creek. Treatability studies will need to be conducted to determine the effectiveness of two of the alternatives: the permeable reactive barrier and in-situ bioremediation. Future steps for this site include the preparation of a final FS report and a Proposed Plan for remediation of this site.

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

5. Lab Area Remedial Investigation (RI) Report

Ms. Heidi Morgan provided information contained in the draft Lab Area RI Report. Potential human health risks exist for mercury in soil and arsenic in sediment. In addition, potential ecological risks exist at the site. Therefore, the site will continue into the FS phase of the IR program to identify alternatives that may be used to mitigate the potential risks from this site.

A copy of Ms. Morgan's presentation is provided in Attachment F.

6. Comments, Questions, and Answers

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

7. Conclusion

Ms. Sherry Deskins stated that the meetings in 2003 will be held on February 20th, June 19th, and October 16th. She then presented the tentative agenda for the February 20th RAB meeting. Copies of these overheads are provided in Attachments H and I. In addition, Mr. Elmer Biles requested that an update to the Mattawoman Creek Study be added to the next agenda.

Ms. Deskins proposed changing the meeting start time for future meetings to 5:30. Meeting attendees did not object to an earlier start time. Ms. Deskins stated that we would check into the availability of the Senior Center at the earlier times.

Ms. Sherry Deskins concluded the meeting by thanking all in attendance.

INSTALLATION RESTORATION (IR) SITE STATUS

10/17/02

SITE NAME - SITE NUMBER(S)	PHASE IN IR PROGRAM							ADDITIONAL ACTIONS*	
	SITE SCREENING	REMEDIAL INVESTIGATION	FEASIBILITY STUDY	PROPOSED PLAN	RECORD OF DECISION	REMEDIAL DESIGN	REMEDIAL ACTION	ENG. EVAL./ COST ANAL.	REMOVAL ACTION
Soak Out Area - 44	X	O	X	O	O	X	X		
Town Gut Landfill - 12	X	O	O	O	O	O	O	O	O
Scrap Yard - 41	X	O	O	O	O	O	O	O	
Olsen Road Landfill - 42	X	O	O						
Trichloroethylene (Bldg. 292) - 57	X	O	O						
Mercuric Nitrate Disposal Area - 47	X	O							
Caffee Road Landfill - 11	X	O							
Paint Disposal Area - 13	X	O							
Disposed Metal Parts - 17	X	O							
Bronson Road Landfill - 21	X	O							
X-Ray Bldg. #2 (Bldg. 588) - 25	X	O							
Lab Area - 15, 16, 49, 50, 53, 54, 55	X	O							
Building 1349, Hypo Spill - 6	X	O							
Organics Plant - 39	X	O							
Abandoned Drums - 45	X	O							
Original Burning Ground - 28	X	O							
X-Ray Building 731 - 5	O								
SN: Tool Burial - 32	O								
SN: Scrap Metal Pit - 33	O								
SN: Tool Burial - 34	O								
SN: Closed Landfill - 36	O								
SN: Causeway - 37	O								
Building 101 Dry Well - 51	O								
Building 102 Dry Well - 52	O								

LEGEND

- X - Not Required
- O - In Progress
- O - Completed

* NOTE: Additional Actions can be performed, if warranted.

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

October 17, 2002

7:00 - 7:10

ARRIVAL/WELCOME

Ms. Sherry Deskins
Indian Head Division, Naval Surface Warfare Center
Director, Waste Management and Prevention Division

7:10 - 7:30

SITE SCREENING REPORT FOR SITE 5

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

7:30 - 7:50

**SITE SCREENING AREAS REPORT – SITES 32, 33, 34, 36, 37, 51
and 52**

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

7:50 - 8:20

SITE 57 FEASIBILITY STUDY (FS) REPORT

Mr. Shawn Jorgensen

8:20 - 8:40

LAB AREA REMEDIAL INVESTIGATION (RI) REPORT

Ms. Heidi Morgan

8:40 - 9:00

COMMENTS, QUESTIONS, AND ANSWERS

9:00

ADJOURN



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



**Site Screening Assessment Report
and Project Status**

Site 5 - X-ray Building 731

*Shawn Jorgensen
IR Project Manager
October 17, 2002*



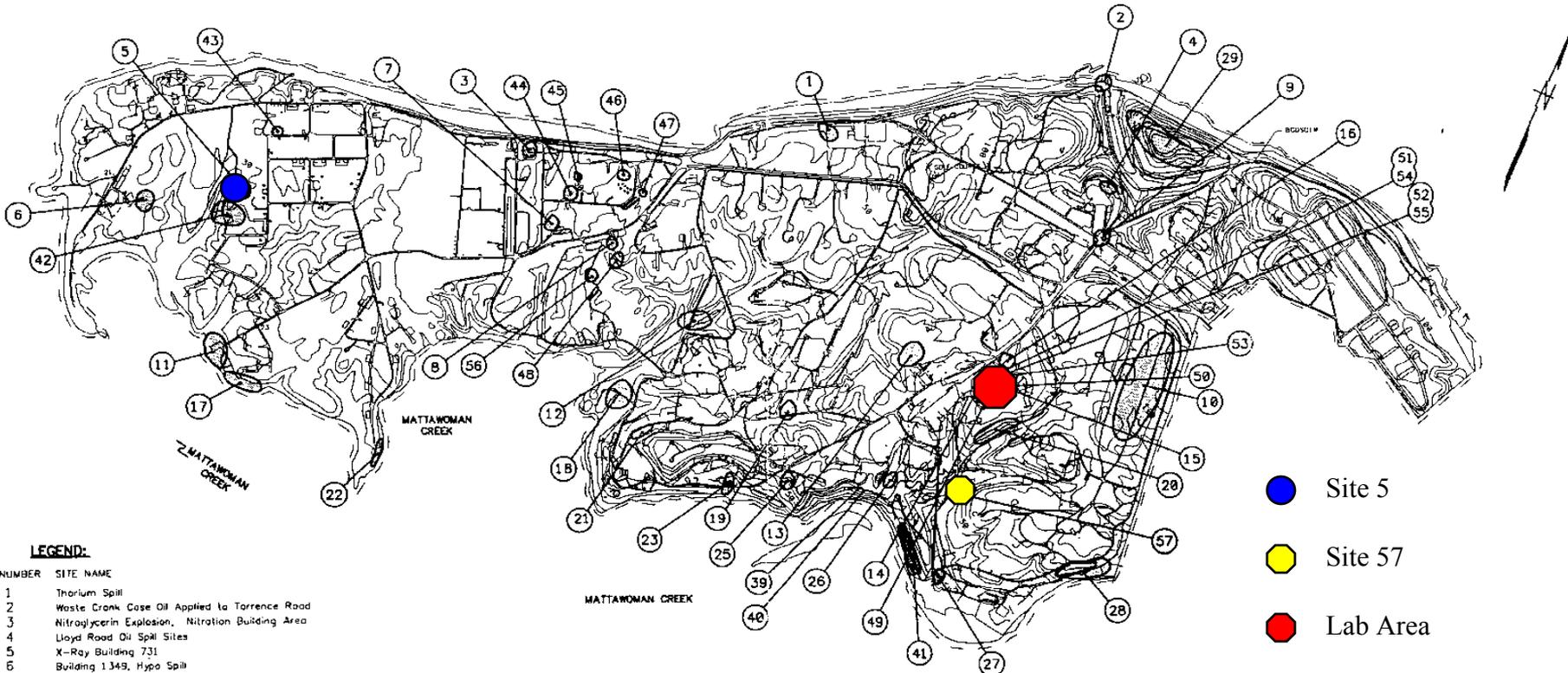
***Site 5
Site Screening Report***



- *Background of Site 5 - X-Ray Building 731*
 - *Building constructed in 1953*
 - *Process waste water containing silver discharged to open swales prior to 1965*
 - *Removal action (soil) performed*
 - *Swale 1: November 1992 to January 1993*
 - *Swale 2: December 1994*
 - *Cleanup level for Silver was 10 parts per million (ppm)*
- *Purpose of Site Screening Sampling*
 - *Determine if silver is in shallow groundwater*



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 Hoe Island

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

- 38-38 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 Soak Cut Area
- 45 Abandoned Drums
- 46 Cadmium Sandblast Grit
- 47 Mercuric Nitrate Disposal Area
- 48 Nitropropylene 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 181
- 55 Building 182
- 56 [W87 - Lead Contamination
- 57 TCE Building 292 Area

- Site 5
- Site 57
- Lab Area

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

 0 1600 3200
 SCALE IN FEET



IR Site 5

X-ray Building 731



Swale 1 - Looking South

Swale 2 - Looking Northeast



Site 5

Site Screening Report



- *Site Screening Project awarded in February 2001*
- *Shallow groundwater, sediment, and surface water sampled in August 2001*
- *Problems encountered with August 2001 Fieldwork*
 - *Filtered equipment blank contained metals*
 - *Most results for filtered metals were rejected*
 - *Sediment and surface water samples taken in incorrect locations*
- *Groundwater, sediment, and surface water resampled February 2002*



Site 5 Site Screening Report



- *Human health risk screening results (potential risks)*
 - *Groundwater*
 - *Arsenic*
 - *Chromium*
 - *1,1-dichloroethene*
 - *Tetrachloroethene*
 - *Bis(2-ethylhexyl)phthalate*
 - *Surface water*
 - *Iron*
 - *Sediment*
 - *None*
- *Ecological risk assessment results (potential risks)*
 - *None*



Site 5 - Site Screening Report Recommendation/Cost



- *Report recommends a full human health risk assessment (HHRA) be conducted on the chemicals found in the shallow groundwater and surface water that exceed screening values*
- *Results of HHRA will be included in the final site screening assessment report*
- *\$968,000 spent on site to date, includes interim removal actions and current site screening study*

Reminder: Comments on report due October 25, 2002



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



Site Screening Areas

Sites 32, 33, 34, 36, 37, 51, and 52

Field Investigation Conducted February 2002

Investigation Cost to Date \$133,000

*Heidi Morgan
IR Project Manager*

October 17, 2002

1



***Site Screening Area
Site 32 - Suspected Tool Burial***



- ***Background of Site 32 - Suspected Tool Burial***
 - *Special Beryllium-Copper Alloy Hand Tools used in Ordnance Disassembly Discarded by Burial in the Vicinity of Building 31SN*
- ***Site Sampling was determined based on the Results of the Sampling Conducted at Site 34***

2



Site Screening Area Site 33 - Scrap Metal Pit



- **Background of Site 33 - Scrap Metal Pit**
 - *Burial of Metal that consisted of Torpedoes, Mine Parts, and other Inert Items located near Bldg. 2136*
- **Sampling Results**
 - *Subsurface Samples: 6*
 - *No Human Health or Eco Risk*
 - *Shallow Groundwater Samples: 3*
 - *Arsenic (high turbidity) (Potential Human Health Risk)*
- **Site Recommendations**
 - *Perform a Supplemental Investigation*
 - *Install a Temporary Shallow Groundwater Well so a Low Turbidity Sample can be Obtained and Analyzed. If results show no Human Health Risk then “No Action” is recommended.*



Site Screening Area Site 34 - Tool Burial



- **Background of Site 34 - Tool Burial**
 - *Special Beryllium-Copper Alloy Hand Tools used in Ordnance Disassembly Discarded by Burial in the Vicinity of Bldg. D-21C*
- **Sampling Results**
 - *Subsurface Soil Samples: 2*
 - *Beryllium and Copper were detected, but did not exceed Screening Levels*
 - *Shallow Groundwater Sample: 1*
 - *Beryllium and Copper were detected, but did not exceed Screening Levels*
- **Site Recommendations**
 - *“No Action”*
 - *There are No Potential Human Health or Eco Risk at this Site*



Site Screening Area Site 36 - Closed Landfill



- **Background of Site 36 - Closed Landfill**
 - Filled in Wetland/Marsh Area Approximately 1 to 2 Acres
 - Fill believed to be made up of Inert Mines, Bombs and Torpedos.
 - The Landfill was used from 1972 to 1974.
- **Investigation Concluded**
 - Based of the Geophysical Survey and Site History there is Evidence that a Relatively Large Quantity of Waste has been Disposed at this Site.
 - RI and FS recommended for this Site.



Site Screening Area Site 37 - Causeway



- **Background of Site 37 - Causeway**
 - The Causeway is a narrow neck of land which has been built up with fill materials.
 - The fill materials consist of Rubble and Old Inert Torpedo Casings.
- **Sampling Results**
 - **Subsurface Soil Samples:** 5
 - No Human Health or Eco Risk
 - **Shallow Groundwater Samples:** 3 (Potential Human Health and Ecological Risk)
 - Arsenic and Barium, Exceeded Screen Levels
 - Naphthalene (SVOC) Exceeded Screening Level
 - RDX (Explosive) Exceeded Screening Level (Tap Water MCL)



Site Screening Area Site 37 - Causeway



- **Surface Water Samples: 4 (Potential Human Health and Ecological Risk)**
 - Iron, Manganese and Thallium Exceeded Screening Levels (high turbidity (14 NTUs), Thallium maybe a false positive)
 - Naphthalene (SVOC) Exceeded Screening Level
 - 4,4'-DDD (Pesticide) Exceeded Screening Level
- **Sediment Samples: 3 (Potential Ecological Risk)**
 - Aluminum, Arsenic, Iron, Lead and Manganese Exceeded Screening Levels
 - Benzo(a)pyrene (SVOC)
- **Site Recommendations**
 - Based on the Potential Human Health and Eco Risk it is Recommended that an RI and FS be performed on the Site



Site Screening Area Site 51 & 52 - Dry Wells At Buildings 101 and 102



- **Background of Site 51 & 52 - Dry Wells at the Lab Area**
 - Dry Wells were used for Steam Condensate Discharge
- **Investigation Conducted**
 - There were no Indications from the GPR of any Dry Wells in the locations Specified on Drawings of Bldgs. 101 and 102
 - Ground Penetrating Radar (GPR) Indicated Abandoned Lines From Bldgs. 101 and 102 going to a pit (2-3 foot below ground with no bottom, and an open grate as a top)



Site Screening Area Site 51 & 52 - Dry Wells At Buildings 101 and 102



- ***Sampling Results***

- ***Subsurface Soil Samples: 2***

- *No Chemicals of Potential Concern were Found, so No Unacceptable Risks to Human Health and Eco Receptors were Identified*

- ***Groundwater was Not Sampled*** - *The Depth to Shallow Groundwater is over 30' in this area and the Soils were Identified in an Early Study as having Very Low Permeability above the Shallow Groundwater Table*

- ***Site Recommendations***

- *"No Action"*





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



Feasibility Study Report

Site 57 - Building 292 TCE Spill

*Shawn Jorgensen
IR Project Manager*

October 17, 2002



**IR Site 57
Feasibility Study Report**



- *Site Information*
 - *Trichloroethylene (TCE) is in the soil and shallow groundwater near Building 292 and area downgradient*
 - *Arsenic is contained in the soil near Building 292*
- *Purpose of 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 shallow groundwater near southern corner of Building 292 and downgradient*



IR Site 57



IR Site 57 Feasibility Study Report



- Preliminary Remedial Goals (PRGs) - Soil

CHEMICAL	MAXIMUM CONCENTRATION	PRG
<i>Arsenic</i>	<i>103 mg/kg</i>	<i>65 mg/kg (Const. Worker) 22.5 mg/kg (Child Resident)</i>
<i>Cis-1,2-dichloroethene</i>	<i>77,000 µg/kg</i>	<i>200 µg/kg</i>
<i>Trichloroethylene (TCE)</i>	<i>220,000 µg/kg</i>	<i>28 µg/kg</i>



IR Site 57 Feasibility Study Report



- *PRGs – Shallow Groundwater*

CHEMICAL	MAXIMUM CONC.	PRG
<i>Cis-1,2-dichloroethene</i>	<i>1,400 µg/L</i>	<i>70 µg/L (MCL)</i>
<i>1,1-Dichloroethene</i>	<i>74 µg/L</i>	<i>7 µg/L (MCL)</i>
<i>Diethyl ether</i>	<i>4,800 µg/L</i>	<i>1,094 µg/L (risk-based)</i>
<i>Tetrachloroethene (PCE)</i>	<i>7.1 µg/L</i>	<i>5 µg/L (MCL)</i>
<i>Trichloroethene (TCE)</i>	<i>12,000 µg/L</i>	<i>5 µg/L (MCL)</i>
<i>Vinyl chloride</i>	<i>1,500 µg/L</i>	<i>2 µg/L (MCL)</i>



IR Site 57 Feasibility Study Report



- *Volume of contaminated media*
 - *Soil – 1,950 cubic yards*
 - *Shallow Groundwater – 5.2 million gallons*
- *General Response Actions typically considered*
 - *No action*
 - *Institutional actions*
 - *Containment*
 - *Removal*
 - *Treatment*
 - *Disposal*



IR Site 57 Feasibility Study Report



- Remedial alternatives evaluated for soil

<i>ALTERNATIVE</i>	<i>30-YEAR PRESENT-WORTH COST (TIME TO REACH OBJECTIVE)</i>
1. No Action	\$0 (N/A)
2. Capping with Land Use Controls	\$526,000 (3 Months)
3. Excavation and Off-Site Disposal	\$907,000 (3 Months)



IR Site 57 Feasibility Study Report



- Remedial alternatives evaluated for shallow groundwater

<i>ALTERNATIVE</i>	<i>30-YEAR PRESENT-WORTH COST (PROPOSED TIME TO REACH PRGs)</i>
1. No Action	\$0 (N/A)
2. Monitored Natural Attenuation	\$397,000 (70 Years)
3. In-Situ Bioremediation	\$1,320,000 (1 Year)
4. Permeable Reactive Barrier	\$1,046,000 (Need Additional Studies)
5. Extraction and Treatment	\$1,083,000 (19 Years)



IR Site 57 Feasibility Study Report



- *Next Steps*
 - *Conduct Treatability Studies to determine effectiveness of Permeable Reactive Barrier and In-Situ Bioremediation*
 - *Prepare Final FS Report*
 - *Prepare Proposed Plan for Site Remediation*
- *Cost for Site 57 work to date*
 - *\$1,258,000*



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



Remedial Investigation

***Lab Area (Sites 14, 15, 16, 49, 50, 53, 54 and 55)
Project Status***

Heidi Morgan

October 17, 2002

1



Lab Area - Project Status



- *14 - The Old Waste Acid Pit*
- *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 proximity of these sites to one another, and the similar suspected chemicals involved, these sites were studied as one area.*

2



Lab Area - Project Status Site Background



- *Site 14 – The Old Waste Acid Pit*
 - *Laboratory waste disposed of from Buildings 444 and 881 into a 15' x 20' pit from 1940 to 1970*
- *Site 15 - Mercury Deposits in Manhole, Fluorine Lab*
 - *Laboratory waste released from Buildings 502 and 103 to storm sewer from 1942 to 1981*
- *Site 16 - Laboratory Chemical Disposal*
 - *Laboratory waste released from wastewater collection system in Building 600 from 1944 to present*
- *Site 49 - Chemical Disposal Pit*
 - *Disposal of laboratory waste into a brick pit*



Lab Area - Project Status Site Background



- *Site 50 - Building 103 Crawl Space*
 - *From 1902 to 1985, the two sinks in Building 103 drained to the ground under the building*
- *Site 53 - Mercury Contamination of Sewage System*
 - *Mercury from Building 102 released to storm and sanitary sewer systems from 1909 through 1986*
- *Sites 54 and 55 - Buildings 101 and 102 Mercury Contamination*
 - *Mercury contamination in flooring of 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



7



Lab Area - Project Status Site 49



8



Lab Area - Project Status Sampling Results



- **Chemicals of Concern for Potential Human Health Risk**

- Surface Soil Samples - Mercury
- Subsurface Soil Samples - Mercury
- Sediments Samples - Arsenic
- Surface Water Samples - None

* Shallow Groundwater was not investigated.

- **Potential Ecological Risk**

- Surface Soil Samples - Copper, Mercury, Lead, Zinc and some Organics
- Surface Water Samples – Aluminum, Copper, Cyanide, Iron, Lead, Manganese and Mercury
- Sediment Samples – Lead, Mercury and Zinc



Lab Area - Project Status Removal of Chemical Disposal Pit





Lab Area Site Recommendations



- **Feasibility Study**
 - *A Focused Feasibility Study or Engineering Evaluation/Cost Analysis Evaluating the Removal of Hot Spots.*
 - *Ecological Risk Assessment*



Lab Area - Project Status Schedule and Budget



- **Remedial Investigation (RI)**
 - *Contract Award - February 2000*
 - *Field Work - Completed June 2001*
 - *Draft RI Report – June 2002*
 - *Draft Final Report – December 2002*
 - *Cost for RI - \$300,000*
- **Feasibility Study (FS)**
 - *Contract Award - December 2000*
 - *Draft Feasibility Study – June 2003*
 - *Cost for FS, Proposed Plan, and Record of Decision - \$80,000*

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

October 17, 2002

Introduction

Question: Could you include a copy of the Installation Restoration (IR) Site Status Chart in the meeting minutes?

Answer: Yes.

Question: Are the sites listed on the chart by priority?

Answer: Yes. The high priority sites are listed at the top of the chart.

Question: Where can I find a list of the site priorities?

Answer: The site priorities can be found in the Site Management Plan, which was previously provided to RAB members. A copy of the plan is also in the Information Repository.

Site Screening Report for Site 5, Building 731 X-ray Facility

Question: What is the price tag on the full human health risk assessment (HHRA)?

Answer: An estimate to prepare a HHRA is \$50,000 to \$100,000.

Comment: We will include a better estimate in the meeting minutes.

Question: When will the full HHRA be completed?

Answer: This effort has not been budgeted, yet.

Question: Do we have enough data to prepare the HHRA?

Answer: Yes.

Question: This effort is not included in this budget year?

Answer: No, it is not currently included in this budget year.

Comment: Building 731 was not built to be an x-ray facility. It was converted to x-ray items in the Cast Plant in the early 1960s.

Site Screening Areas Report - Sites 32, 33, 34, 36, 37, 51, and 52

Sites 32, 33, and 36

No questions were asked nor comments made concerning these sites.

Site 34

Question: For the tool burial sites, do you have a default time, such as after 30 years the tools are disintegrated?

Answer: The tools are still buried. They were found and look the same as they did when they were originally buried.

Site 37

Question: How close is shallow groundwater sampling to drinking water in the area?

Answer: Not close. The samples are probably tidal. The Causeway is a narrow strip of land between the Potomac River and the Chicamuxen Creek.

Question: What is the risk for at this site? Ingestion? Dermal contact?

Answer: The potential risk at this site is for drinking water Maximum Contaminant Levels (MCLs).

Comment: This was just a screening. Direct comparison of sample results to MCLs is used during screening.

Sites 51 and 52

Comment: These were not among the high priority sites. We wanted to do a little inexpensive sampling in an attempt to write these sites off.

Site 57 Feasibility Study (FS) Report

Question: Can you cap any time of year?

Answer: The soil cap can be placed on the site anytime of year. The asphalt, however, cannot be done in the winter.

Question: On page 7 of the overheads, is the reason you are doing number 2 or 3 because number 1 (No Action) is not acceptable?

Answer: Yes, there is a potential risk from the site for construction workers so "No Action" is not acceptable.

Comment: But the area is currently being used.

Answer: This is true, but the issue is with construction workers that would work at the site 250 days per year for 8 hours per day. This type of work is not occurring at the site.

Comment: But construction work has gone on there in the past.

Answer: Yes. OHM, our Remedial Action Contractor (RAC), performed this work, which included the installation of a dock in the front of Building 292. OHM personnel were required to wear the proper personal protective equipment (PPE) while preparing the site for the construction contractor. OHM poured the footers of the dock and placed a vapor barrier over the site, so the construction contractor would not be exposed to any chemicals while installing the actual dock.

Comment: Our Dig Permit process was originally prepared because so many contractors were hitting utility lines, such as water and electric. The Dig Permit process has expanded to include other areas of concern, such as areas around eagle's nests and archeological sites, as well as IR sites. No digging is allowed in these areas without prior approval to ensure that all applicable laws and regulations are being followed.

Question: If you are taking every step to protect the construction worker, how can you justify the expense of going in and cleaning up the area?

Answer: There are a few reasons. We still have groundwater from this area infiltrating into the storm sewer line, which goes to the Mattawoman Creek. We also want to remove land use restrictions on this area so anyone

can dig here without potential exposure to chemicals at levels that exceed acceptable risks.

Comment: It also costs additional money to have contractors work in IR sites because of the additional training and PPE requirements.

Question: Is there much interest in the information repository?

Answer: We have not been keeping track. However, we have now removed the information from the La Plata library and only have the on-site library information repository. In order for people to view the documents in the repository on-site, they must contact our Public Affairs Office to gain access.

Lab Area Remedial Investigation (RI) Report

Question: What are the plans for Building 101?

Answer: Mercury is in the flooring of the building. However, we cannot use Installation Restoration (IR) funds to clean up the inside of the building. Therefore, Activity funds would be required to perform any clean up inside of the building.

Comment: We probably won't remove the building because it is an historical building.

Miscellaneous

Comment: Mr. Elmer Biles would like to add a Mattawoman Creek Study update to the agenda for the next meeting.

Response: We will try to add an update to the Mattawoman Creek Study in the next meeting.

Comment: Mr. Biles wants it noted that he is not satisfied with the sampling in the Creek. In particular, he believes that we should sample on the opposite side of the Creek.

Response: The Activity is not contributing to that side of the Creek.

Comment: We are supposed to be evaluating the Mattawoman Creek in terms of what is happening for health and safety.

Response: Only what we have done to it.

Comment: Mr. Biles would like to see in writing what the purpose of the study is.

Response: We will go back and look at notes from previous meetings and provide this.

Response: Instead of sampling each area discretely, we are sampling the waterfront as one area to eliminate piecemealing the sampling.

Comment: How you contribute to the Creek does not just impact the shoreline. There is tidal action and storms that spreads contamination. You cannot just sample the shore on the main side to determine the impact to the health and safety of users of the Creek.

Comment: There may be depositional areas on the other side of the Creek.

Response: We are sampling the source, which includes the land and a couple of hot spots in the Creek.

Comment: Contamination occurred 40, 50, and 60 years ago. You don't know what impact this has had on the Creek.

Comment: The same could be said for the Potomac River. Where does it end?

Response: Some sampling was performed on the opposite side of the Creek.

Comment: Yes, but samples were not taken near the island and where most use occurs in the Creek.

Response: We do have the EPA's Biological Technical Assistance Group (BTAG) reviewing the Study.

Comment: Perhaps BTAG is unaware of the swimmers in the Creek.

Response: BTAG is aware of recreational activities in the Creek. BTAG has been on-site and was given a boat tour of the Mattawoman Creek.

Comment: During World War II, the Creek looked terrible.

Response: Yes, but look at the Creek now. It is thriving.

**PROPOSED DATES FOR
RESTORATION ADVISORY BOARD
MEETINGS
IN
2003**

- 1. Thursday, February 20, 2003**
- 2. Thursday, June 19, 2003**
- 3. Thursday, October 16, 2003**

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

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

February 20, 2003

- 1. Results of Site 12 Removal Action**
- 2. Progress of Site 41 Removal Action**
- 3. Site 28 Remedial Investigation (RI) Activities**
- 4. RI Report for Sites 11, 13, 17, 21, and 25**
- 5. Site 47 RI Report**
- 6. RI Report for Sites 6, 39, and 45**

Objectives of the Study

- Investigate magnitude of impacts of base-related activities on Mattawoman creek
- Assess ecological and human health risks associated with the impacts
- Field sampling/laboratory analysis will provide data to answer these questions
- Data will be used to determine the most appropriate course of risk management for Mattawoman creek