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

5090
Ser 0952/47
8 Feb 95

Mr. Kim Lemaster
Maryland Department of the Environment
CERCLA Response Division
2500 Broening Highway
Baltimore, MD 21224

Dear Mr. Lemaster:

We are forwarding the meeting minutes from the Restoration Advisory Board (RAB) meeting that was held at the General Smallwood Middle School on Thursday, January 26, 1995.

As discussed during the meeting, please review the Engineering Evaluation and Cost Analysis for Installation Restoration (IR) Site 56 and provide comments by March 1, 1995.

In addition, we are forwarding the Report on October 1994 Biomonitoring for Site 8 dated January 1995. This report includes sampling results from October 1992, when the Biomonitoring Program began, through October 1994. This document is being forwarded for your information. However, if you have any comments or questions, please contact us.

Furthermore, we want to thank you for selecting the Community Co-Chair, Mr. Vince Hungerford, prior to the January RAB meeting. We will work closely with Mr. Hungerford to ensure that all community concerns related to the IR Program are properly addressed and noted. Mr. Hungerford has reviewed and concurred with the enclosed meeting minutes.

We realize that sending documents to community members using certified mail may be a problem, since most of the community members work during the day and are not at home to sign for the package. Unfortunately, we need to have a record that the documents and letters we send are received. Therefore, we discussed this problem with Mr. Hungerford. He agreed that enclosing a self-addressed, stamped postcard in the package we send to community members would be the easiest way to deal with this problem. In this way, the postcard can be signed upon receipt and dropped in the mailbox. If this is not convenient, please let us know. However, we will still be sending all documents to federal, state, and local officials using certified mail.

As a final note, please do not forget that the next RAB meeting is scheduled for 7:00 to 9:00 p.m. on April 6, 1995, at the General Smallwood Middle School. You will receive a tentative agenda before the meeting.

If you have any comments or questions concerning the enclosed documents, you may contact Mr. Shawn Jorgensen or Mr. Thomas Symalla on (301) 743-6745/6746. In addition, you may FAX your comments/questions to (301) 743-6745, attention Code 0952. If you prefer, you may submit them in writing to the following address:

Indian Head Division
Naval Surface Warfare Center,
ATTN: Code 0952, Bldg. D-28
101 Strauss Avenue
Indian Head, MD 20640-5035

Once again, I would like to thank you for your participation in the RAB.

Sincerely,

SUSAN P. ADAMS
Director, Environmental Division
By direction of the Commander

Encl:
(1) Meeting Minutes for RAB Meeting of 26 Jan 95
(2) Report on October 1994 Biomonitoring for Site 8
(3) Return Postcard

Copy to:
RAB Members
EFACHES (Code 181)

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: January 26, 1995

Restoration Advisory Board (RAB) Member Participants:

Capt. W. J. Newton (N)
Ms. Susan Adams (N)*
Mr. Elmer Biles (C)
Mr. Gary Davis (L)
Mr. Charles Ellison (C)
Dr. Philip Giguere (C)
Ms. Patricia Haddon (L)
Ms. Marsha Atlee-Harley (C)
Mr. Vincent Hungerford (C)*
Mr. Kim Lemaster (S)
Mr. Shawn Phillips (N)
Ms. Kristen Sprague (C)

* Co-Chair

RAB Members Not in Attendance:

Mr. Stephen Elder (L)
Mr. Bob Foley (F)

Additional Attendees:

Ms. Christina Adams (N)
Mr. Jeff Bossart (N)
Mr. Warren Bowie (C)
Ms. Patty Chalfant (N)
Dr. Chester Clark (C/N)
Ms. Sherry Deskins (N)
Mr. Craig Farkos (K)
Mr. Shawn Jorgensen (N)
Mr. Tony Klimek (K)
Mr. George Latulippe (K)
Ms. Liz McIntyre (N)
Mr. Wayne Mumbert (C)
Mr. Thomas Symalla (N)

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

ENCLOSURE(1)

Major Issues Discussed/Accomplished:

1. Meeting Introduction

Ms. Susan Adams of the Indian Head Division, Naval Surface Warfare Center (IHDIVNAVSURFWARCEN) began the meeting by introducing the Restoration Advisory Board (RAB) members and thanking those community members that were able to attend.

Ms. Adams briefly reviewed the agenda for the meeting, which is included as Attachment A, and then introduced Mr. Tony Klimek of Brown & Root Environmental.

2. Progress of IR Site 5 Removal Action

Mr. Klimek discussed the Removal Action (RA) that is being performed at IR Site 5. The RA involved the excavation of 2400 cubic yards of silver containing soil. The silver in the soil was a result of the discharge of spent fixer, which is used in developing X-Ray film, from the back of Building 731. This discharge occurred from 1953 to 1965. A copy of Mr. Klimek's presentation slides are provided in Attachment B.

3. Progress of IR Site 8 Removal Action

Mr. Klimek provided a brief background of IR Site 8 and stated that all of the work for the Removal Action at this site has been completed. The slides from this presentation are also included in Attachment B.

4. IR Site 8 Biomonitoring Program

Mr. Klimek provided the latest results of the Biomonitoring effort at this site. The last round of sampling was conducted in October 1994. Based on the information obtained to date, it appears that the mercury in the tidal pond at this site has not caused any adverse affects on the biota. However, additional sampling must be performed to address the lead in the pond from IR Site 56. The slides from this presentation are also included in Attachment B.

5. IR Site 56 Engineering Evaluation and Cost Analysis

Mr. Shawn Jorgensen of IHDIVNAVSURFWARCEN provided a copy of the Engineering Evaluation and Cost Analysis (EECA) for IR Site 56 and a brief description of the purpose of an EECA, which is to determine alternatives for restoration and choose the best alternative based on a number of criteria. Two alternatives discussed in the EECA meet the objective of protecting human health and the environment and are cost effective. The Removal

Action contractor will evaluate these two alternatives to determine the best one to use. However, the Navy will ultimately decide which of the two methods will be used for remediation at this site.

In addition, Mr. Jorgensen stated that the EECA will be available in the IR Information Repositories in the near future. These are located at the IHDIVNAVSURFWARCEN General Library, Building D-40, and the La Plata Branch of the Charles County Public Library.

A copy of this presentation is included in Attachment C.

6. Comments, Questions, and Answers

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

7. Conclusion

Ms. Susan Adams concluded the meeting by thanking all in attendance. In addition, she stated that the agenda for the next RAB meeting would include post-removal action reviews for IR Sites 5 and 8; an update on IR Site 56; Community Relations Plan review; and discussion of a new site, IR Site 57.

In addition, Ms. Adams stated that RAB members would receive meeting minutes from this meeting. All non-RAB members can view these minutes at the IHDIVNAVSURFWARCEN General Library, Building D-40, the La Plata Branch of the Charles County Public Library, and for a limited time at the Bryans Road Branch of the Charles County Public Library.

8. Future Schedule

Ms. Adams ended the meeting by stating that the next RAB meeting is scheduled for Thursday, April 6, 1995, at 7:00 p.m. in the General Smallwood Middle School library.

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

January 26, 1994

7:30 - 7:40	INTRODUCTION Ms. Susan P. Adams Director, Environmental Division
7:40 - 7:55	IR SITE 5 REMOVAL ACTION UPDATE Mr. Tony Klimek Brown & Root Environmental
7:55 - 8:15	IR SITE 8 AND BIOMONITORING UPDATE Mr. Tony Klimek
8:15 - 8:30	IR SITE 56 ENGINEERING EVALUATION AND COST ANALYSIS Mr. Shawn Jorgensen IR Project Engineer
8:30 - 9:00	OPEN DISCUSSION

NOTE: The next RAB Meeting is scheduled for April 6, 1995

Attachment A

JANUARY 26, 1995

RAB MEETING

Presentation by:

Anthony P. Klimek, P.E.

Brown & Root Environmental

A Division of Halliburton NUS

PRESENTATION AGENDA

SITE 5 - SILVER SITE

- Removal Action Status

SITE 8 - MERCURY SITE

- Removal Action Status
- Biomonitoring Results

SITE 5 BACKGROUND

Removal Action Objective - Excavate and Remove Soil from Site 5 Swale With Silver Concentrations Above Action Level (10 mg/kg or ppm)

- Investigation and Removal Action Design Completed by Brown & Root Environmental in 1994
- Removal Action Construction Activities Performed by OHM (Remedial Action Contractor or RAC) from November 1994 to January 1995
- Sampling and Analysis During Removal Action by Brown & Root Environmental

SITE 5 - REMOVAL ACTION

- Site Preparation
- Excavate Soil From Site 5 Swale
- Place Excavated Soil in Borrow Pit at Stump Neck Annex
- Restore Excavated Area of Site 5 Swale

SITE 5 - REMOVAL ACTION

- SITE PREPARATION
  - Mobilize and Layout Site
  - Install Erosion and Sediment Controls

- EXCAVATE SOIL FROM SITE 5 SWALE
  - Clear and Grub
  - Excavate Soil from Site 5 Swale
  - Hand Excavate Soil Between Buildings 731 and 1136
  - Perform Confirmatory Sampling and Analysis

SITE 5 - REMOVAL ACTION

- PLACE EXCAVATED SOIL IN BORROW PIT AT STUMP NECK ANNEX
  - Place and Compact Soil in Pit
  - Cap and Restore Area

- RESTORE EXCAVATED AREA OF SITE 5 SWALE
  - Backfill and Regrade
  - Seed and Mulch Disturbed Areas
  - Replace Sidewalk
  - Final Site Restoration and Cleanup

SITE 5 - CURRENT STATUS

Excavation Complete - Confirmatory Sampling and Analysis Verified Achievement of Removal Action Objective

- Remaining Activities
  - Reconstruct Sidewalk
  - Establish Revegetation
  - Remove Erosion and Sediment Control Systems

SITE 5 - REMOVAL ACTION SUMMARY

- Approximately 2,400 Cubic Yards of Soil was Excavated
- The Removal Action Objective was Achieved. Soil with Silver Concentrations Above Action Level (10 ppm) was Excavated and Removed from Site 5 Swale

SITE 8 - BACKGROUND

Removal Action Objective - Excavate and Remove Sediment/Soil with Mercury Concentrations Above 10 ppm Action Level

- Design Completed by Brown & Root Environmental in 1993
- Removal Action Construction Performed by OHM from June 1994 to October 1994
- Sampling and Analysis During Removal Action by Brown & Root Environmental

SITE 8 - REMOVAL ACTION

- Site Preparation
- Excavate Sediment/Soil from Upper Section of Stream
- Place Excavated Sediment/Soil in Earthen Berm of Building 606
- Restore Upper Section of Stream

SITE 8 - REMOVAL ACTION

- SITE PREPARATION
  - Mobilize and Layout Site
  - Install Erosion and Sediment Control
  - Construct Stormwater Management Systems
  - Install Swamp Mats

- EXCAVATE SEDIMENT/SOIL FROM SITE 8 STREAM
  - Clear and Grub
  - Excavate Sediment/Soil from Upper Section of Stream
  - Perform Confirmatory Sampling and Analysis

SITE 8 - REMOVAL ACTION

- PLACE EXCAVATED SEDIMENT/SOIL IN EARTHEN BERM OF BUILDING 606
  - Excavate Berm
  - Place Sediment/Soil in Berm
  - Cap and Restore Area

- RESTORE UPPER SECTION OF STREAM
  - Backfill and Regrade
  - Place Gabions and Riprap
  - Seed and Mulch Disturbed Areas
  - Final Site Restoration and Cleanup

SITE 8 - CURRENT STATUS

Excavation Complete - Confirmatory Sampling and Analysis Verified Achievement of Removal Action Objective

- Remaining Activities
  - Establish Revegetation
  - Plant Trees Adjacent to Stream

SITE 8 - REMOVAL ACTION SUMMARY

- Approximately 440 Cubic Yards of Sediment/Soil was Excavated

- The Removal Action Objective was Achieved - Sediment/Soil with Mercury Concentrations Above Action Level (10 ppm) was Excavated and Removed from Upper Section of Site 8 Stream

SITE 8 - BIOMONITORING PROGRAM

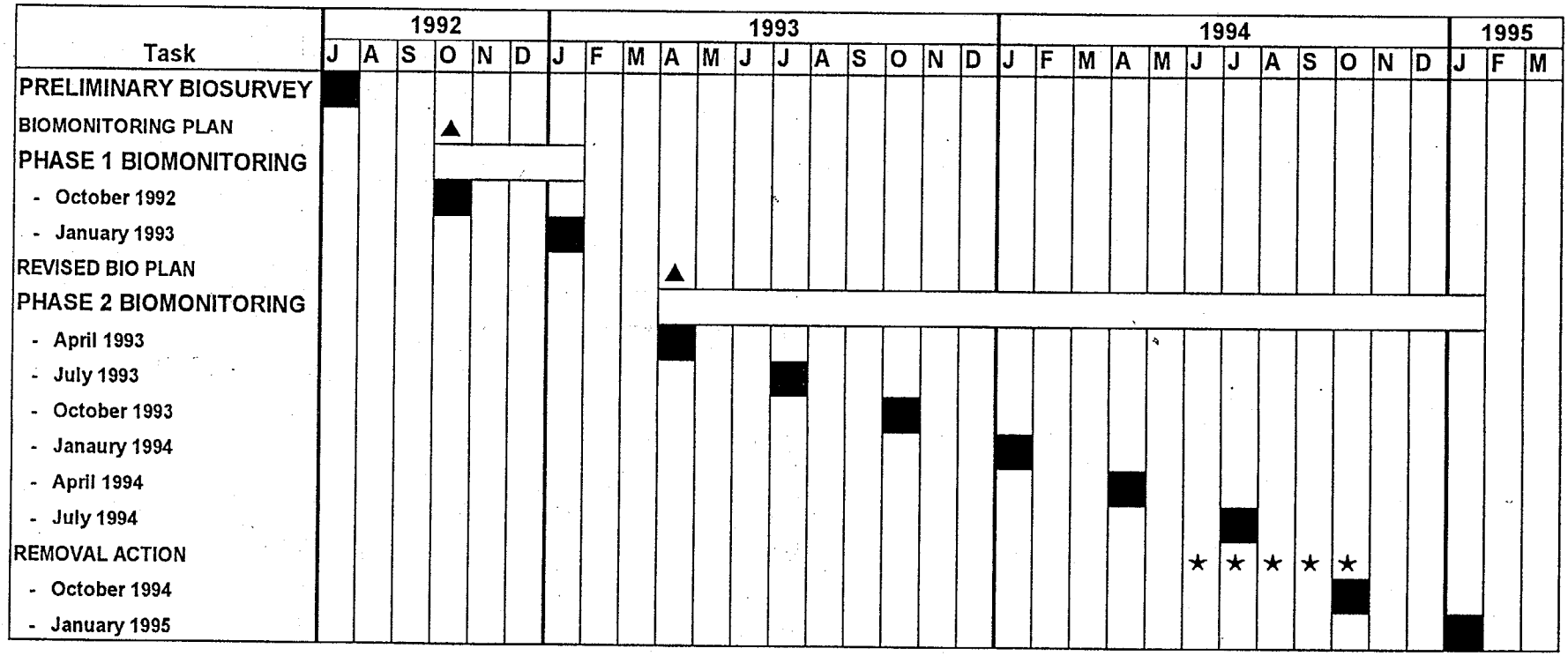
- Program Objectives: Assess the Impact of the Site 8 Mercury and Lead Concentrations on the Wildlife of the Site 8 Pond/Marsh and Evaluate Potential Environmental Impact of the Removal Action

- Program Strategy: Determine Conditions of Site 8 Pond/Marsh Biota and Compare it to Control Sites and Monitor Conditions at Site 8 Before and After Removal Action to Assess Changes

SITE 8 - BIOMONITORING PROGRAM

- PROGRAM SCHEDULE
  - Quarterly Biomonitoring from July 1992 Through January 1995
- BIOMONITORING SITES
  - Site 8 Pond/Marsh
  - Control Site 1 - Beaver Pond Control Site
  - Control Site 2 - Mattawoman Creek
- PROGRAM MODIFICATIONS AND ADDITIONS
  - Supplemental Sediment Sampling Performed in April 1994
  - Lead Added to Analytical Program in April 1994

BIOMONITORING PROGRAM SCHEDULE



SITE 8 - BIOMONITORING PROGRAM

- Water Quality
- Periphyton
- Benthic Macroinvertebrates
- Fish and Turtles

PRELIMINARY BIOMONITORING RESULTS

Site 8 Pond has a Relatively Simple Community Structure

- WATER QUALITY: Site 8 Pond is a Shallow, Freshwater Pond Capable of Supporting Non-sensitive Biota
- PERIPHYTON: Site 8 Periphyton Community Varies with Seasons. Periphyton in Site 8 Pond do not Indicate Adverse Impacts from Elevated Mercury Concentrations
- BENTHIC MACROINVERTEBRATES: Benthic Community is Composed of Herbivores. Benthics in Site 8 Pond do not Indicate Adverse Affects from Elevated Mercury Concentrations
- FISH: Diversity of Fish Species is low at Site 8 Pond. Mercury Concentrations in Fish Tissues at Site 8 Pond are consistent with Other Maryland Waterways.

BIOASSAY RESULTS

MERCURY CONCENTRATIONS

Location	Organism	Mercury Concentrations (mg/kg)						
		October 1992	January 1993	April 1993	July 1993	October 1993	April 1994	October 1994
SITE 8 POND	Carp	--	--	--	--	--	0.03	--
	Notropis (shiner)	--	--	--	--	0.05	--	--
	Creek chubsucker	--	0.03	--	--	--	--	--
	Brown bullhead	0.04	--	--	0.05	0.05	--	0.06
	Gambusia (mosquitofish)	0.06	0.15	--	--	0.12	--	0.27
	Pumpkinseed	--	--	--	--	--	0.09	--
	Warmouth	--	--	--	0.23	--	--	--
	Bluegill	0.02	0.02	0.06	0.09	--	0.07	0.07
	White Crappie	--	--	--	--	--	--	0.06
	Crayfish	--	--	--	0.07	0.09	--	--
	Frog	--	--	0.03	--	--	--	--
	Turtle (Liver)	--	--	--	--	--	1.3	0.35
	Turtle (Muscle)	--	--	--	--	--	--	0.07
CONTROL SITE 1 BEAVER POND	American eel	--	--	--	--	0.11	--	--
	Eastern mudminnow	--	--	0.07	--	--	--	--
	Redfin pickerel	--	--	--	0.21	--	--	--
	Notropis (shiner)	--	--	--	--	0.07	0.04	0.07
	Creek chubsucker	--	--	--	--	--	--	0.07
	Creek chub	--	0.03	--	0.09	0.11	--	--
	Pumpkinseed	--	--	--	--	0.11	0.13	--
	Largemouth bass	--	--	--	--	--	--	0.29
CONTROL SITE 2 MATTAWOMAN CREEK	Notropis (shiner)	--	--	0.04	--	--	--	--
	Spottail shiner	--	--	--	--	--	0.02	--
	Creek chubsucker	--	--	--	--	0.02	--	0.03
	Brown bullhead	--	--	--	--	--	0.05	<0.02
	White perch	--	--	0.02	--	--	--	--
	Pumpkinseed	--	--	--	--	0.01	0.29	--
	Warmouth	--	--	--	--	--	--	0.14
	Bluegill	--	--	--	--	0.03	0.04	<0.02
	Largemouth bass	--	--	--	--	--	--	0.1

BIOASSAY RESULTS

LEAD CONCENTRATIONS

Location	Organism	Lead Concentrations (mg/ kg)		
		October 1993	April 1994	October 1994
Site 8 Pond	Carp	—	BQ	—
	Notropis sp.	10 U	—	0.2
	Brown bullhead	10 U	—	0.5
	Gambusia (Mosquito fish)	10 U	—	—
	Pumpkinseed	—	0.2 U	—
	Bluegill	20 U	BQ	0.2 U
	White Crappie	—	—	0.2 U
	Turtle (liver only)	—	0.5	0.24 U/ 0.3
Control Site 1 Beaver Pond	Creek Chub	10 U	—	0.2 U
	Notropis sp.	10 U	0.3	0.4
	Pumpkinseed	10 U	BQ	—
	American Eel	10 U	—	< 0.2
	Large Mouth Bass	—	—	—
Control Site 2 Mattawoman Creek	Creek Chubsucker	10 U	—	0.2 U
	Brown bullhead	—	0.3	< 0.2
	Pumpkinseed	10 U	0.3	—
	Bluegill	10 U	0.2 U	0.2 U
	Warmouth	—	—	0.2 U
	Large Mouth Bass	—	—	0.2 U

SUPPLEMENTAL SEDIMENT/SOIL SAMPLING AND ANALYSIS

- Sediments in Downstream Section of Stream and Pond/Marsh Contain Elevated Levels of Lead

- Control Site 1 - Elevated Levels of Mercury were not detected in Beaver Pond Sediments

BIOMONITORING PROGRAM

- PRELIMINARY CONCLUSION: Elevated Levels of Mercury in the Sediment/Soil at the Site 8 Pond/Marsh Appear to have had Virtually no Effect on the Site 8 Pond/Marsh Biota

INSTALLATION RESTORATION SITE 56
LEAD CONTAMINATION AT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
INDUSTRIAL WASTEWATER OUTFALL (IW) 87

I. BACKGROUND

A. BIAZZI NITRATION FACILITY

1. CONSTRUCTED IN 1953
2. MANUFACTURE OF NITRATE ESTERS

B. BUILDING 790

1. CONSTRUCTED IN 1953
2. STORAGE OF SPENT NITRIC AND SULFURIC ACIDS

C. PROBLEM

1. LEAD-LINED FLOOR
2. WASH DOWN TO FLOOR DRAIN
3. PIT/PIPE/STREAM
4. CRACKED PIPE

Attachment C

INSTALLATION RESTORATION SITE 56

II. ENGINEERING EVALUATION AND COST ANALYSIS (EECA)

A. DETERMINE CLEANUP ALTERNATIVES

B. EVALUATE ALTERNATIVES

1. PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT
2. IMPLEMENTABILITY
3. COST EFFICIENCY
4. CONSISTENCY WITH FINAL REMEDIAL GOALS AND APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARs)

C. RECOMMEND A CLEANUP ALTERNATIVE BASED ON FOUR CRITERIA ABOVE

INSTALLATION RESTORATION SITE 56

III. ALTERNATIVES IN EECA

A. NO ACTION

B. ABANDONMENT OF PIPE WITH REMOVAL OF SEDIMENTS IN THE PIT AND THE STREAM

C. REMOVAL OF SEDIMENT FROM PIT, PIPE, AND STREAM

D. REMOVAL OF SEDIMENT AS ABOVE WITH PIPE RELINING

E. REMOVAL OF SEDIMENT AS ABOVE WITH PIPE ABANDONMENT

F. REMOVAL OF SEDIMENT AS ABOVE WITH REMOVAL OF PIPE

G. STABILIZE SEDIMENT IN PLACE

H. OTHER METHODS OF CONTAINMENT OF SEDIMENT IN PLACE

I. IN SITU SOIL FLUSHING

J. SOIL WASHING

INSTALLATION RESTORATION SITE 56

IV. SELECTED ALTERNATIVE(S)

A. REMOVAL OF SEDIMENT FROM PIT, PIPE, AND STREAM WITH PIPE RELINING

B. REMOVAL OF SEDIMENT AS ABOVE WITH PIPE ABANDONMENT

V. REASONS FOR SELECTIONS

A. CONSTRUCTABILITY .....HIGH

B. EFFECTIVENESS IN PROTECTING HUMAN HEALTH AND THE ENVIRONMENT .....HIGH

C. CONSISTENT WITH FINAL REMEDIAL ACTION ..... YES

D. COMPLIANCE WITH ARARs ..... YES

E. ESTIMATED COST .....$207,000 - $255,000*

* Does not include disposal costs.

INSTALLATION RESTORATION SITE 56

VI. CLEANUP LEVEL OF 35 MILLIGRAMS PER KILOGRAM CHOSEN

A. DETERMINED IN CONSULTATION WITH THE MARYLAND DEPARTMENT OF THE ENVIRONMENT

B. ENSURES PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT

C. IS CONSISTENT WITH FINAL REMEDIAL GOALS

D. IS BASED ON AN ARAR (NOAA ER-L FOR LEAD)

NOTE: The NOAA generated ER-L (Effects Range Low) value is the level to which aquatic life have been subjected to without any adverse effects.

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

Installation Restoration (IR) Site 5

Question: Mr. Elmer Biles asked what is the longevity of the caution tape placed over the clay cover of the silver containing soil at Stump Neck Annex.

Answer Mr. Tony Klimek stated that the tape is made for underground use. It is the same tape that is used by the electric companies.

Question Mr. Biles asked why a liner was not used, since the silver may leach from the soil.

Answer: Mr. Klimek responded that the soil was tested using the Toxicity Characteristic Leachate Procedure (TCLP), which simulates placement in a landfill. The result of the test was that the silver is not leaching (not a hazardous waste), therefore, no liner is required.

Comment In addition, Ms. Susan Adams added that the clay cover was not required, but IHDIVNAVSURFWARCEN requested it at an additional cost of approximately $4000.

Comment Dr. Giguere stated that the soil contains insoluble salts that won't dissolve.

Comment Mr. Shawn Phillips stated that the concern with this site was the movement of soil particles themselves, not the solubility of the silver, based on the TCLP test.

Installation Restoration (IR) Site 8

Question Ms. Pat Haddon asked if an analysis was performed to determine the effect an explosion would have on the magazine berm holding the mercury containing soil.

Attachment D

Answer — Ms. Adams explained that the magazine is constructed to allow the force of an explosion to escape through the front of the building. This force will then hit an earthen berm which directs the blast upward and away from personnel and the community.

Question — Mr. Vince Hungerford asked if this was the second time a Removal Action was performed at this site.

Answer — Ms. Adams responded that during construction in 1984, the drain line from Building 766 was hit by the contractor and mercury was observed in the soil. At that time, approximately 200 drums of mercury containing soil was removed and mercury traps were placed on the drains in the building.

IR Site 8 Biomonitoring Program

Question — Ms. Haddon asked what type of analysis was used, statistical analysis or bioassay.

Answer — Mr. Klimek stated that statistical analysis of the community structures was performed.

Question — Mr. Warren Bowie asked if there is any chance that mercury could get into the Mattawoman Creek.

Answer — Ms. Adams explained that the tidal pond, downstream of the site acts as a natural sediment basin. In addition, a weir was installed at the upstream side of the culvert under Noble Road which leads from the pond to the Mattawoman Creek. The weir aids the ponds natural settling ability by providing additional time for particles, such as soil, to settle out of the water.

IR Site 56 Engineering Evaluation and Cost Analysis

Question — Mr. Biles asked if geological information for the site is available.

Answer — Mr. Thomas Symalla stated that information on the geology of the Indian Head Division, Naval Surface Warfare Center (IHDIV, NSWC) is available. In addition, Mr. Jeff Bossart stated that a survey was recently performed on the geology of IHDIV, NSWC and the report generated from this survey could be included in the IR Information Repository.

Question Captain Newton asked about the solubility of the lead at this site.

Answer Mr. Shawn Phillips responded that a Toxicity Characteristic Leaching Procedure (TCLP) test was performed on the lead containing soil, which is mostly sand. The test simulates placement of the soil in a landfill. The sample is subjected to water with a pH of 4 (similar to that of acid rain); the solution is filtered; and the resulting liquid, or leachate, is sampled for a TCLP listed chemical, which in this case was lead. The leachate contained enough lead to make the soil, which will be removed, a hazardous waste. Therefore, special disposal requirements exist for this soil. Mr. Phillips also mentioned that the soils at IR Sites 5 and 8 were not hazardous wastes, allowing for placement of these soils on-site.

General

Question Ms. Kristen Sprague asked if there are worse or more serious sites than the ones discussed.

Answer Ms. Adams stated that IR Site 8 is considered the most serious site at this time, but IR Site 5 is not the second. She then explained that the IR Program is funded by the Engineering Field Activity Chesapeake (EFACHES). EFACHES will perform Risk Assessments on the sites to determine the order in which they should be evaluated and restored, if required.