

**SUMMARY MEETING MINUTES
INSTALLATION RESTORATION
TECHNICAL REVIEW COMMITTEE MEETING**

Date of Meeting: August 29, 1994

Project: Installation Restoration (IR) Program
Indian Head Division,
Naval Surface Warfare Center
101 Strauss Avenue
Indian Head, MD 20640-5035

Meeting Participants:

Capt. W. J. Newton*	Mr. Vincent Hungerford*
Ms. Christina Adams*	Mr. Shawn Jorgensen*
Ms. Susan Adams*	Mr. Tony Klimek
Mr. Gary Davis*	Mr. Kim Lemaster*
Ms. Sherry Deskins*	Ms. Jennifer McGraw*
Mr. Stephen Elder*	Ms. Kip Reynolds
Mr. Craig Farkos	Mr. Thomas Symalla*

* Member

Technical Review Committee (TRC) Members Not in Attendance:

Mr. Jeff Bossart	Ms. Susan Luther
Mr. Bob Foley	Ms. Patricia Haddon
Dr. Philip Giguere	Mr. Shawn Phillips

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 new Commander of IHDIVNAVSURFWARCEN, Captain Wayne J. Newton. Ms. Adams then introduced the TRC members to Captain Newton and thanked those members who were able to attend the public meeting, which was held on Thursday, 21 July 1994 to solicit Restoration Advisory Board (RAB) members.

Ms. Adams discussed the fire that occurred on August 1, 1994, in an explosive storage magazine, Building 518. Ms. Adams stated that IHDIVNAVSURFWARCEN will clean up the area of the incident and demolish the building. Also, investigations are currently being conducted to determine the cause of the fire.

ENCLOSURE(1)

Finally, Ms. Adams reviewed the agenda for the meeting. A tour of the Removal Action at IR Site 8 was added after the tentative agenda was sent to TRC members.

2. Progress of IR Site 8 Removal Action

Mr. Tony Klimek of Brown and Root Environmental (B&RE) provided a brief background of IR Site 8 and stated that all of the work for the Removal Action is scheduled to be completed by mid-September 1994.

3. IR Site 8 Biomonitoring Results Update

Mr. Klimek provided the latest results of the Biomonitoring effort at this site. As part of the last round of sampling, which was conducted in April 1994, the livers of two turtles were analyzed for mercury. Although the levels of mercury in the turtle's livers were elevated, B&RE is not certain of the implications of the data results. They are currently searching for additional information on background levels of mercury in turtle livers.

Although it appears that the mercury in the tidal pond at this site has not caused any adverse affects on the biota, two additional open issues need to be resolved before a statement can be made. The first issue concerns the lead contamination in the pond from IR Site 56, and the second is the resulting impact of the removal action on the biota.

A copy of Mr. Klimek's presentation, which includes the progress of the IR Site 8 Removal Action, is included as Attachment A.

4. Tour of IR Site 8 Removal Action

Although the weather was slightly damp, the TRC members in attendance were taken to IR Site 8 to view the Removal Action in progress.

5. IR Site 56 Summary

Mr. Shawn Jorgensen of IHDI VNAV SURFWARCEN provided an update of IR Site 56, which includes an Industrial Wastewater Outfall (IW87) that is contaminated with lead. The soil at the outfall has been found to be toxic for lead using the Toxicity Characteristic Leaching Procedure (TCLP).

The Engineering Evaluation and Cost Analysis (EECA) for this site has been updated to incorporate comments from reviewers. The contract for the Removal Action at this site will be awarded to the Removal Action Contractor, OHM, who is currently conducting the Removal Action at IR Site 8.

Based on samples taken for lead by B&RE in the stream and tidal pond, the scope of the removal has changed slightly. The soil to be removed will be that which is TCLP toxic for lead. In order to locate this soil, additional samples will be taken along the outfall and stream, with assistance from Mr. Kim Lemaster of the Maryland Department of the Environment. The soil that meets the TCLP characteristic for lead will be cleaned to a level of 35 milligrams per kilogram, as discussed in the EECA.

6. Restoration Advisory Board (RAB) Charter, By-Laws, and Membership Applications

Ms. Susan Adams stated that all TRC members should have a copy of the RAB Charter and By-Laws, which were forwarded with the TRC reminder letter. Ms. Adams asked all TRC members to review these items for discussion at the next TRC meeting.

In addition, Ms. Adams stated that only five RAB Membership Applications were received. The initial goal was to add eight community members to the TRC to form the RAB. However, Ms. Adams stated that if community concern does not exist, then we would not have to form a RAB at all, as long as we properly document that we reasonably tried to obtain members. Ms. Adams suggested that we either accept the community members that applied and begin the RAB or we go out again for additional applications.

Mr. Jorgensen expressed his concern that the community members that did apply for membership may not be representative of the Indian Head community. In addition, if we did accept those that applied, we would have to document our efforts of obtaining members that are representative of the Indian Head community. As a result, the decision was made to reissue letters and applications to prospective members that did not initially respond.

7. Future Schedule

Ms. Adams ended the meeting by stating that the application deadline will be extended to 15 September 1994, indoctrination training will be at the end of October 1994, and the first RAB meeting is still scheduled for the end of January 1995. The next TRC meeting has not been scheduled.

AUGUST 29, 1994

TRC MEETING

Presentation by:

Anthony P. Klimek, P.E.

Brown & Root Environmental

Site 8 - Nitroglycerin Plant Office

- **Removal Action**
 - **Construction Status**
 - **Remaining Work**
- **Biomonitoring Program**
 - **Biomonitoring Results**
 - **Sediment Sampling and Analysis**



**TOWN GUT
LANDFILL AREA**

**AREA DOWNSTREAM
OF NOBLE ROAD**

**CONSTRUCTION
SOLUTION
DEBRIS DISPOSAL
AREA**

**MARSH / POND
AREA**

**MARSH / STREAM
TRANSITION AREA**

**LOWER SECTION
OF STREAM**

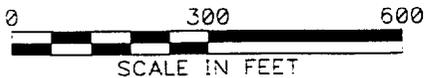
**MID SECTION
OF STREAM**

**UPPER SECTION
OF STREAM**

**BUILDING 768
AREA**

BUILDING 608

BUILDING 768



REMOVAL ACTION

- **Design Completed in 1993 by Brown & Root Environmental (Halliburton NUS)**

- **Construction began in June 1994 by RAC (OHM)**
 - **Site Preparation**

 - **Sediment/Soil Excavation**

 - **Sediment/Soil Placement**

 - **Stream Reconstruction**

- **Sampling and Analysis During Construction by Brown & Root Environmental.**

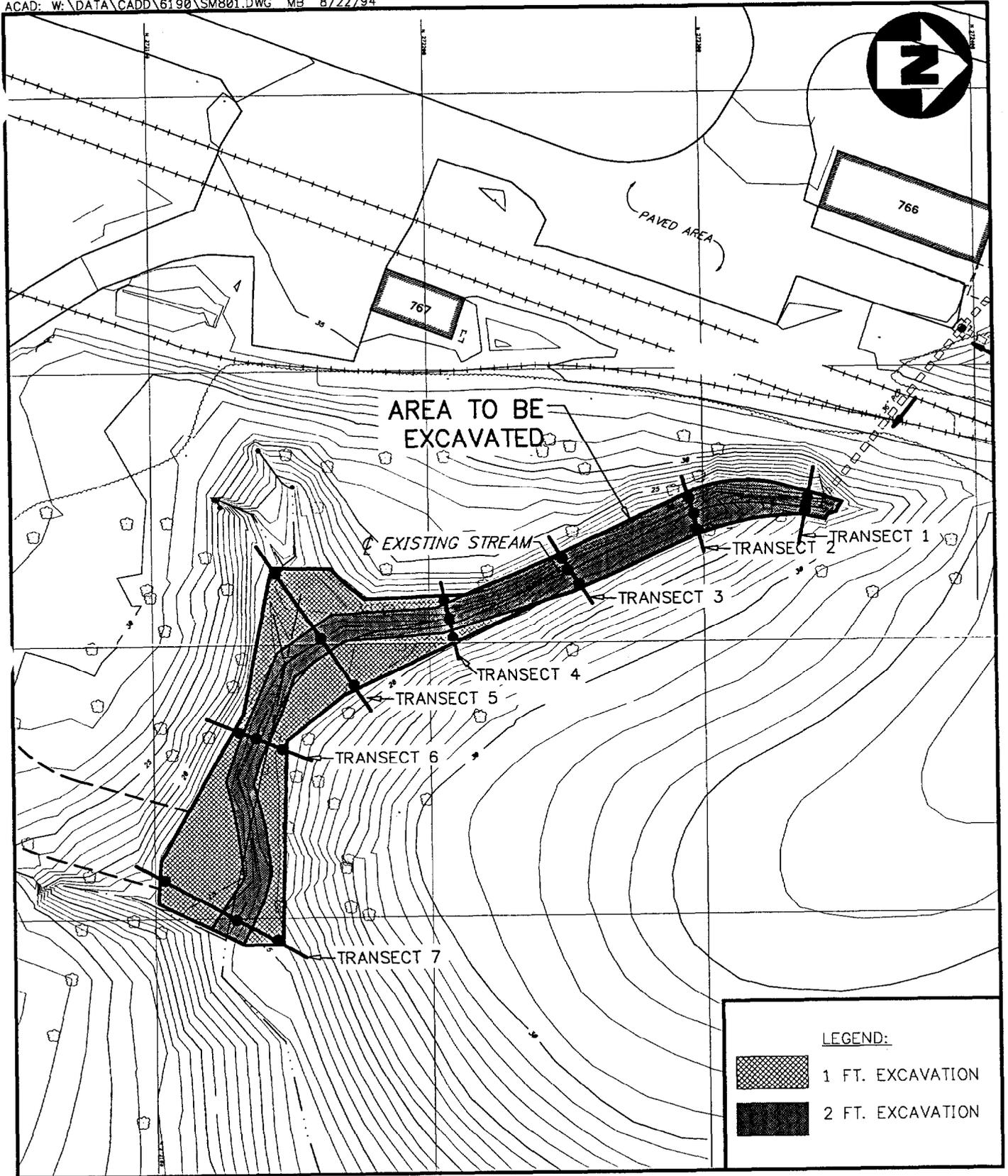
REMOVAL ACTION CONSTRUCTION

- **Site Preparation**
 - Mobilize and Lay Out Site
 - Install Erosion and Sediment Controls
 - Construct Stormwater Management Systems

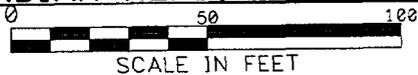
- **Excavate Mercury-Contaminated Sediment/Soil from Upper Section of Stream**
 - Clear and Grub
 - Excavate Contaminated Sediment/Soil
 - Sample and Analyze Excavated Areas

- **Place Contaminated Sediment/Soil in Earthen Berm**
 - Excavate Berm
 - Place Contaminated Sediment/Soil
 - Cap and Restore Area

- **Restore Upper Section of Stream**
 - Backfill and Regrade
 - Place Gabions & Riprap, Establish Vegetation
 - Site Restoration and Cleanup



PROPOSED REMOVAL ACTION
SITE 8 - NITROGLYCERIN PLANT SITE
INDIAN HEAD, MARYLAND



LEGEND:

	1 FT. EXCAVATION
	2 FT. EXCAVATION

CURRENT STATUS

- **Site Preparation (OHM)**
- **Sediment/Soil Excavation (OHM)**
- **Sampling and Analysis (Brown & Root Environmental)**
- **Site Restoration (OHM)**

SAMPLING AND ANALYSIS PROGRAM

- **Mercury Action Level set at 10 mg/kg (parts per million or ppm)**
- **Area to be Excavated Established by Previous Sampling Performed by Brown & Root Environmental**
- **Tree Stumps from Area to be Excavated, Sampled and Analyzed**
- **Sediment/Soil Sampling by Brown & Root Environmental after Excavation**
 - **Quick Turnaround (24-hour) Analysis**
 - **Decision to Continue Excavation Made the Day After Sampling**

TREE STUMP ANALYTICAL RESULTS

Stump	Mercury Concentration in Wood Samples (mg/kg)	Mercury Concentration in Residual Soil Samples (mg/kg)
Stump 01	0.532	0.057 U
Stump 02	0.205	0.416
Stump 03	0.540	1.73

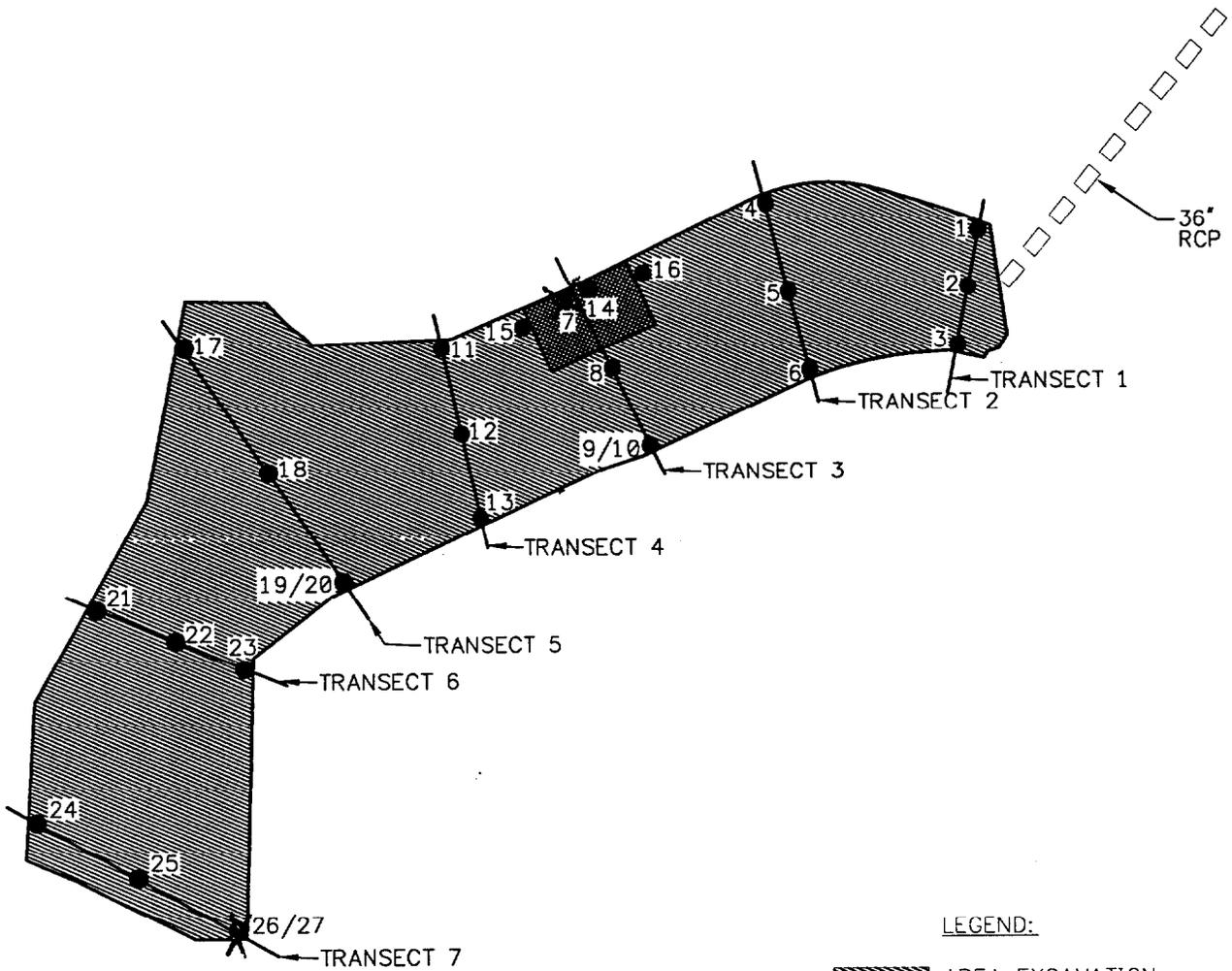
U = Mercury was not detected; value shown is quantitation limit.

SEDIMENT/SOIL ANALYTICAL RESULTS

Transect Number	Approximate Distance from 36-Inch RCP (Feet)	Sample ID	Total Mercury Concentration (mg/kg)	Comments
1	5	01	0.518	
		02	0.056 U	
		03	0.052 U	
2	50	04	0.124	
		05	0.076	
		06	5.17	
3	100	07	42.8	Exceeds 10 mg/kg action level
		08	0.051 U	
		09	1.63	
		10	1.85	Duplicate of 09
3	100	14	8.65	Supplemental sample for 07
		15	4.92	Supplemental sample for 07
		16	0.939	Supplemental sample for 07
4	150	11	0.505	
		12	0.761	
		13	0.463	
5	200	17	0.072 U	
		18	0.057 U	
		19	0.218	
		20	0.224	Duplicate of 19
6	250	21	0.060 U	
		22	1.28	
		23	0.049 U	
7	300	24	0.74	
		25	0.46	
		26	52.6	Exceeds 10 mg/kg action level
		27	71.5	Duplicate of 26

U = Mercury was not detected; value shown is quantitation limit.

Shading indicates exceedance of action level.



LEGEND:

-  AREA EXCAVATION AS OF 8/18/94
-  SUPPLEMENTAL EXCAVATION
-  Hg CONC. BELOW 10 mg/Kg
-  Hg CONC. ABOVE 10 mg/Kg

SCHEMATIC DIAGRAM
SITE 8 – NITROGLYCERIN PLANT SITE
INDIAN HEAD, MARYLAND
 NTS

FIGURE 2

REMAINING REMOVAL ACTION WORK

- **Construction**
 - **Sediment/Soil Excavation from Site 8**
 - **Sediment/Soil Placement**
 - **Site Restoration**

- **Sampling and Analysis**

- **Post-Removal Action Report**

BIOMONITORING PROGRAM

- **Biomonitoring Program**
 - **Began July 1992**
 - **Quarterly Biomonitoring Through Jan. 1995**
- **Recent Biomonitoring Results**
- **Sediment Sampling and Analysis**
 - **Lead at Site 8**
 - **Mercury at Beaver Pond Control Site**

BIOMONITORING PROGRAM

PROGRAM OBJECTIVES: Assess the impact of the Site 8 mercury and lead contamination on the biota of the Site 8 Pond/marsh and evaluate potential environmental impacts of the Interim Removal Actions.

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.

PRELIMINARY BIOMONITORING RESULTS

GENERAL: 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 mercury contamination.

BENTHIC MACROINVERTEBRATES: Benthic community is composed of herbivores. Benthics in Site 8 Pond do not indicate adverse affects from mercury contamination.

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 IN FISH AND TURTLE TISSUE

Location	Organism	Mercury Concentrations (mg/kg)					
		Oct. 1992	Jan. 1993	April 1993	July 1993	Oct. 1993	April 1994
Site 8 Pond	Carp	--	--	--	--	--	0.03
	<i>Notropis</i> (shiner)	--	--	--	--	0.05	--
	Creek chubsucker	--	0.03	--	--	--	--
	Brown bullhead	0.04	--	--	0.05	0.05	--
	<i>Gambusia</i> (mosquitofish)	0.06	0.15	--	--	0.12	--
	Pumpkinseed	--	--	--	--	--	0.09
	Warmouth	--	--	--	--	--	--
	Bluegill	0.02	0.02	0.06	0.09	0.06	0.07
	Turtle (Liver only)	--	--	--	--	--	1.3
Control Site 1: Beaver Pond	Eastern mudminnow	--	--	0.07	--	--	--
	Redfin pickerel	--	--	--	0.21	--	--
	<i>Notropis</i> (shiner)	--	--	--	--	0.07	0.04
	Creek chub	--	0.03	--	0.09	0.11	--
	Pumpkinseed	--	--	--	--	0.11	0.13
Control Site 2: Mattawoman Creek	<i>Notropis</i> (shiner)	--	--	0.04	--	--	--
	Spottail Shiner	--	--	--	--	--	0.02
	Creek chubsucker	--	--	--	--	0.02	--
	Brown Bullhead	--	--	--	--	--	0.05
	White perch	--	--	0.02	--	--	--
	Pumpkinseed	--	--	--	--	0.01	0.29
	Bluegill	--	--	--	--	0.03	0.04

BIOASSAY RESULTS
LEAD CONCENTRATIONS IN FISH & TURTLE TISSUE

Location	Organism	Lead Concentrations (mg/kg)	
		Oct. 1993	April 1994
Site 8 Pond	Carp	---	BQ
	<i>Notropis sp.</i>	10 U	---
	Brown bullhead	10 U	---
	Gambusia (Mosquito fish)	10 U	---
	Pumpkinseed	---	0.2 U
	Bluegill	20 U	BQ
	Turtle (liver only)	---	0.5
Control Site 1: Beaver Pond	Creek Chub	10 U	---
	<i>Notropis sp.</i>	10 U	0.3
	Pumpkinseed	10 U	BQ
	American Eel	10 U	---
Control Site 2: Mattawoman Creek	Creek Chubsucker	10 U	---
	Brown bullhead	---	0.3
	Pumpkinseed	10 U	0.3
	Bluegill	10 U	0.2 U

BQ Detected, not below measurable quantity

U Value is nondetected as reported by laboratory. Value is the detection limit.

SUPPLEMENTAL SEDIMENT/SOIL SAMPLING

- **Performed in May 1994**
- **Lead at Site 8**
- **Mercury at Control Site 1 - Beaver Pond**

SEDIMENT/SOIL ANALYTICAL RESULTS

LEAD AT SITE 8

Sample Number	Location Description	Lead Results (mg/kg)
SO-400-00/01	Pond Transect No. 2, 15 feet from west bank	236
SO-401-00/01	Pond Transect No. 2, 100 feet from east bank	163
SO-402-00/01	Pond Transect No. 4, 25 feet from west bank (403 Dup)	246
SO-403-00/01	Pond Transect No. 4, 25 feet from west bank (402 Dup)	220
SO-404-00/01	Pond Transect No. 4, 20 feet from east bank	199
SO-405-00/01	Pond Transect No. 6, 80 feet from west bank	704
SO-406-00/01	Pond Transect No. 6, 30 feet from east bank	196
SO-407-00/01	Lower Section of Stream - Transect No. 8, center of stream in marsh	811
SO-408-00/01	Lower Section of Stream - 50 Feet north of Transect 8	780
SO-409-00/01	Lower Section of Stream - 50 Feet downgradient of SS-35	491
SO-410-00/01	Lower Section of Stream - Center of stream (Dup of 411)	40.6
SO-411-00/01	Lower Section of Stream - Center of stream (Dup of 410)	73.0
SO-412-00/01	Lower Section of Stream - Immediately downstream of discharge (IW-31)	79.2
---	NPDES Discharge Point	---
SO-413-00/01	Lower Section of Stream - Upgradient of discharge (IW-31)	6.73

PRELIMINARY SUMMARY OF LEAD ANALYSIS IN SITE 8 SEDIMENT/SOIL

- **Elevated Levels Below NPDES Discharge Point**
- **Elevated and Fairly Consistent Distribution in Site 8
Pond/Marsh**

SEDIMENT/SOIL ANALYTICAL RESULTS
MERCURY AT CONTROL SITE 1 - BEAVER POND

Sample Number	Location Description	Mercury Results (mg/kg)
SO-500	Edge of pond across from primary tributary of stream near the beaver dam.	0.086 U
SO-501	Where primary tributary stream feeds into the Beaver pond.	0.064 U
SO-502	In the stream which feeds the beaver pond downstream of the walking bridge. (Duplicate for SO-503)	0.066 U
SO-503	In the stream which feeds the beaver pond downstream of the walking bridge. (Duplicate for SO-502)	0.091 U

U - Value is a nondetect as reportedly by the laboratory.

**SUMMARY OF
MERCURY ANALYSIS AT CONTROL SITE 1
BEAVER POND**

- **Control Site 1 does not appear to be contaminated with Mercury**
- **Control Site 1 has lower levels of Mercury in Sediment/Soil compared to Site 8 Pond.**

OUTSTANDING BIOMONITORING ISSUES

- **Elevated Levels of Mercury in Turtle Livers.**
- **Lead Contamination at Site 8 Pond.**
- **Impact of Removal Action.**

BIOMONITORING PROGRAM SUMMARY

PRELIMINARY SUMMARY: Mercury contamination at the levels observed in the Site 8 Pond appear to have had virtually no effect on the Site 8 biota.

INSTALLATION RESTORATION
TECHNICAL REVIEW COMMITTEE MEETING
AGENDA

August 29, 1994

- 1300 - 1310 INTRODUCTION
Ms. Susan P. Adams
Director, Environmental Division
- 1310 - 1325 PROGRESS OF IR SITE 8 REMOVAL ACTION
Mr. Tony Klimek
Brown & Root Environmental
- 1325 - 1340 IR SITE 8 BIOMONITORING RESULTS UPDATE
Mr. Tony Klimek
- 1340 - 1430 TOUR OF IR SITE 8
- 1430 - 1440 UPDATE OF IR SITE 56
Mr. Shawn Jorgensen
Project Engineer
- 1440 - 1500 RAB CHARTER, BY-LAWS, AND MEMBERSHIP APPLICATIONS
Ms. Susan P. Adams
- 1500 - 1530 OPEN DISCUSSION
- 1530 ADJOURN

ENCLOSURE(2)