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C-49-09-6-056

September 9, 1996

Scott E. Glass, P.E.
Remedial Project Manager
Department of the Navy
SOUTHNAVFACENGCOM
2155 Eagle Drive
P.O. Box 190010
North Charleston, South Carolina 29419-9010

Reference: CLEAN Contract No. N62467-94-D-0088
Contract Task Order 003

Subject: Naval Industrial Reserve Ordnance Plant, Fridley, Minnesota
Restoration Advisory Board Minutes - Meeting #6

Dear Scott:

Enclosed, for your use, are two copies of the minutes from Restoration Advisory Board meeting #6, held at the Ticonderoga Conference Room, Government Offices, at the Naval Industrial Reserve Ordnance Plant, Fridley, Minnesota on July 24, 1996. These final minutes address review comments on draft minutes provided to Brown & Root Environmental by the Navy. Other copies of these minutes have been distributed according to the attached Distribution List.

Persons receiving copies of these meeting minutes are requested to note that the next Restoration Advisory Board meeting will be held in the Ticonderoga Conference Room, Government Offices, at the Naval Industrial Reserve Ordnance Plant, Fridley, Minnesota, on Wednesday, October 23, 1996 at 10:00 a.m.

Sincerely,

A handwritten signature in cursive that reads "Mark T. Perry" followed by the word "for" written in a smaller, looser script.

Kevin F. Donnelly
Task Order Manager

KFD/dt

Enclosures



C-49-09-6-056
September 9, 1996
Scott E. Glass, P.E.

Distribution: John Flora, City of Fridley, Dept. of Public Works (1 copy)
Kerry Morrow, NAVSEA (1 copy)
Stephen Hoffman, Naval Sea Systems Command (1 copy)
David Douglas, MPCA (1 copy)
Tom Bloom, USEPA - Region V (1 copy)
Doug Hildre, United Defense LP, (1 copy)
Michael Flaherty, Metropolitan Council Environmental Services (1 copy)
Robert Hutchison, Environmental Services, Anoka County Courthouse (1 copy)
Adam Kramer, Minneapolis Water Works (1 copy)
LTC Jan Frye, Defense Contract Management Office - Minneapolis (1 copy)
David Cabiness, SOUTHDIV (1 copy)
Norwood Nelson, RAB Member (1 copy)
Richard Harris, RAB Member (1 copy)
Craig S. Gordon, RAB Member (1 copy)

**Minutes of Meeting
Restoration Advisory Board Meeting #6
July 24, 1996**

**Naval Industrial Reserve Ordnance Plant
Fridley, Minnesota**

Restoration Advisory Board (RAB) meeting #6 was held in the Ticonderoga Conference Room, Government Offices, at the Naval Industrial Reserve Ordnance Plant, Fridley, Minnesota, on Wednesday, July 24, 1996 at 10:00 a.m. A copy of the agenda distributed at the meeting and the attendance sheet are attached (attachment 1 and 2, respectively).

A. Introduction

1. Kerry Morrow opened the meeting at 7:00 p.m. All meeting participants introduced themselves.

B. Minutes of RAB #5

1. There were no comments on the minutes for RAB meeting #5 held on April 25, 1996.

C. Actions Since Last Meeting

1. The Navy indicated that comments on the groundwater capture report were received from the MPCA and the EPA. There is not agreement from the MPCA on whether the Navy has adequately achieved capture of the contaminant plume. The Navy indicated that they are proceeding with the design for the new Operable Unit (OU) #1 groundwater treatment system. The design is similar to current system in that it uses carbon to "strip" the volatile organic compounds from the groundwater. The Navy expressed concern that if the regulators were not satisfied with the current performance of the plume containment the design requirements for the treatment system could change (specifically, flow rates could increase) and require redoing the design. The schedule for design completion is open pending regulatory acceptance of the performance of the current groundwater capture system and completion of the design criteria for the new treatment system.

2. The Navy reported that the OU #2 NORTH 40 drum investigation is complete. Test pits were excavated in areas where significant magnetic anomalies were identified. Twenty-three drums were removed (one drum contained liquid, others were crushed). Tires, paint cans, foundry waste slag, roofing tar, asbestos siding and two gun mounts were also found. The analytical results were not at the meeting. A report of the removal action will discuss if further work in the NORTH 40 is warranted.

3. The OU #3 Draft Work Plan was submitted for regulatory comment. Comments are due by end of week (July 26, 1996). The Navy requested that EPA and MPCA coordinate their comments to resolve any internal conflicts prior to sending the comments to the Navy. The Navy indicated that the Plating Shop investigation is now combined with the OU #3 investigation. EPA will have the lead oversight for fieldwork. Brown & Root mentioned that some of the proposed monitoring well locations in the Draft Field Sampling Plan were moved due to physical constraints and would be discussed during the comment resolution meeting. A comment resolution meeting is planned within ten days of receipt of comments from the regulators.

Mr. Richard Harris expressed concern that the old production wells in the facility were a source of contamination. Representatives from United Defense described that this was highly unlikely for several reasons: 1) the way the wells were constructed does not provided access to the well head to dump wastes; 2) if any waste was poured down the well it would have been immediately pumped out via the

turbine pump. The wells are currently not in service, however they are not abandoned. The wells cost approximately \$750,000 per well and are being kept for potential use in the future when the groundwater contamination is remediated.

4. Mr. Jeff Delin from the U.S. Geologic Survey presented preliminary results of a seismic study at the NIROP. The seismic imaging study field work was completed in April. Mr. Delin indicated that seismic imaging techniques could not be completed near building due to interference from miscellaneous seismic noise generated by the building. Preliminary interpretation of data collected on a transect along River Road were correlated to lithologic information from existing deep wells/borings. Data is still undergoing reduction and a report is anticipated in September 1996.

5. Mr. Tim Ruda, United Defense, provided a status of operations and maintenance for the groundwater extraction system. Operation and maintenance actions for the groundwater extraction system are summarized on the attached handout (Attachment 3).

6. There was discussion of the potential for enhancing natural biodegradation to remediate the site. Mr. Mark Ferrey, MPCA, provided an overview of a June 26, 1996 meeting with Mr. Terry Hazen, Westinghouse, to discuss the use of biodegradation at the Department of Energy's Savannah River Site (Attachment 4). The MPCA believes the technology has potential applicability at the NIROP. The Navy indicated that they were consulting with Mr. Frank Chappelle, from the U.S. Geologic Survey, on biodegradation issues. The Navy requested a meeting with the MPCA and Mr. Chappelle to discuss sampling strategies for evaluating the applicability of enhanced biodegradation technologies at the NIROP.

7. The Navy, MPCA and EPA are working to finalize language on the settlement agreement to the EPA enforcement action against the Navy. The agreement includes an additional Navy Remedial Project Manager, preparation of a Site Management Plan, \$130,000 in cash penalty, and funding to accelerate the OU #3 investigation. The settlement agreement is currently undergoing Navy legal review. The final settlement will be included in the information repository.

8. EPA is taking the lead in determining future land use. EPA is waiting on information from Mr. Burns from the City of Fridley. EPA (Mr. Bloom) indicated that land use will likely be industrial.

D. Actions for Next Quarter

1. The Navy plans to proceed with the design of the groundwater treatment facility.

2. The Navy plans to incorporate regulatory comments on the Draft OU#3 Remedial Investigation Work Plan and issue the final Work Plan. The EPA and MPCA requested that the Navy include the United Defense property in the investigation of OU#3. This request is currently undergoing Navy legal review and the Navy indicated that the field work would not start until this issue is resolved.

3. A meeting is planned to continue discussions on the applicability of enhanced biodegradation technologies at the NIROP. The Navy will arrange a meeting with Mr. Frank Chappelle, USGS, and the MPCA.

4. A meeting is planned to present the results of the seismic imaging study conducted by the USGS.

E. Community Relations

1. The next RAB meeting is scheduled for Wednesday, October 23, 1996, at 10:00 a.m., in the Ticonderoga Conference Room, Government Offices, Naval Industrial Reserve Ordnance Plant (NIROP), Fridley, Minnesota. Access to the meeting is through Gate 7, "Government Visitors." A list of RAB members will be provided to Security to facilitate check-in.

NAVAL INDUSTRIAL RESERVE ORDNANCE PLANT FRIDLEY
RESTORATION ADVISORY BOARD MEETING #6
JULY 24, 1996
AGENDA

1. INTRODUCTION

2. Corrections to Minutes of RAB #5

3. Actions since last meeting

NAVY

Operable Unit #1 - Groundwater

- Status on design of new treatment facility

Operable Unit #2 - Soils outside plant

- NORTH 40 Drum Investigation

Operable Unit #3 - Soils under NIROP Plant

- Soil Sampling in Plating area
- Status on Remedial Investigation Workplan approval
- Status of Seismic Imaging Survey of Navy Property at Nirop Fridley.

UNITED DEFENSE

- Maintenance and Monitoring Activities

4. Actions Scheduled/Due dates

- OU#3: - Remediation Investigation approval (extension to 26 July) and Workplan Execution by Brown and Root Environmental
- Design of Permanent Groundwater Treatment Plant

5. Other issues/Comments

- Settlement Agreement

RESTORATION ADVISORY BOARD MEETING #6

JULY 24, 1996

NAVAL INDUSTRIAL RESERVE ORDNANCE PLANT, FRIDLEY

LIST OF ATTENDEES

NAME	ORGANIZATION	EMAIL ADDRESS	SIGN-IN
TOM BLOOM	USEPA REGION 5	<u>Tom Bloom</u>	
JOHN FLORA	CITY OF FRIDLEY	<u>J Flora</u>	
ROBERT HUTCHINSON	COUNTY OF ANOKA		
EVAN DRIVAS	DNR		
JOHN BETCHER	MPCA	<u>J Betcher</u>	
DAVE DOUGLAS	MPCA	<u>Dave Douglas</u>	
GARY EDDY	MPCA		
FRED JENNESS	MPCA		
MARK FERREY	MPCA	<u>Mark Ferrey</u>	MARK.FERREY@PCA.STATE.MN.US
PAUL ESTUESTA	MPCA	<u>Paul Estuesta</u>	
AE MICHEAL FLAHERTY	ES MCWS	<u>Michael Flaherty</u>	MICHAEL.FLAHERTY@METC.STATE.MN.US
ADAM KRAMER	MINNEAPOLIS WATER WKS		
SCOTT GLASS	SOUTHNAVFACENGCOM	<u>Scott Glass</u>	
DAVE CABINESS	SOUTHNAVFACENGCOM	<u>Dave Cabiness</u>	DMCABINESS@FFO.SOUTHNAVFAC.NAVY
RICHARD HARRIS	FRIDLEY RESIDENT	<u>Richard Harris</u>	
NORWOOD NELSON	AREA CHAMBER		
KERRY MORROW	NAVSEA	<u>MORROW - PATRICK - K</u>	Hq. NAVSEA.NAVY.NIC
PAT MOSITES	REICC MNPLS	<u>Pat Mosites</u>	PMOSITES@RH-LINK.DCM.DLA.M

DOUGLAS HILDRE

UNITED DEFENSE

TIM RUDA

UNITED DEFENSE

JEFF DELIN

US GEOLOGICAL SERVICE

Tim Ruda Tim_Ruda@NSD.FAC.DOD

Jeff Delin jdelin@usgs.gov

RW ALBERT

NAV SEA

[unclear]

BROWN & ROOT

DOUGLAS HILDRE

UDLP-ASD

Fred Janness

MPCA

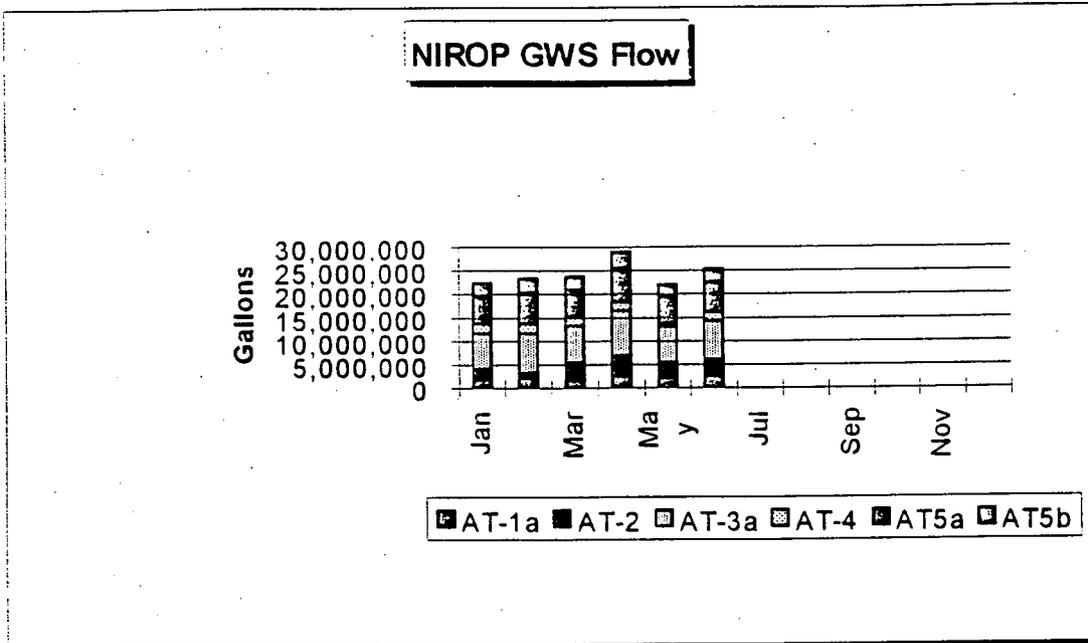
Kevin P. Donnelly BBRE048@BARI
045-B-R.C

[unclear]

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NIROP Maintenance Activities 25 April to 24 July 1996.



- Monitoring wells and extraction well sampling was conducted 29 April to 2 May.
- Groundwater removed 1996 2nd qtr. 76 million gallons (yr. total 149 mg).
- Water Level Readings taken 2 May.
- Extraction Well AT4 well pump was acid cleaned and line sparged 21-31 May.

Extraction Well flowrates:

<u>AT1a</u>	<u>AT2</u>	<u>AT3A</u>	<u>AT4</u>	<u>AT5A</u>	<u>AT5B</u>
53 to 61	85 to 111	193 to 198	27 to 43	145 to 152	63 to 67

- Total flowrate approximately 579 to 614 gpm

Planned Activities

- Water level readings 30 October
- Extraction well and monitoring well sampling 15-30 October. (potentially natural attenuation parameters to be included)

- JVE UNDER BUILDING:
 - BULK REMOVAL
 - ENHANCE BIODEGRADATION
- VERTICAL SAMPLING & CHARACTERIZATION
 - DNAPL
 - CLAY ABOVE WT
 - COARSE SAND BELOW
 - ALLOWS TARGET REMOVAL
- SOURCE REMOVAL
 - SIGNIF. REDUCE TIME TO RESTORATION

• UNDER BUILDING:

- INCREASE VERTICAL CHARACTER.
- KEEP BORINGS OPEN FOR REMEDIAL OPTIONS
- TAKE ADVANT. OF SEWER LINES & OTHER STRUCTURES.

• BIOREMEDIATION:

- POSSIBLE TARGET AREAS
- O₂, TOC DATA NEEDS
- NAT. ATTEN. POTENTIAL
- RIVER SEDIMENT COMPONENT

PHASED APPROACH :

- AGGRESSIVE SOURCE REM.
- CHARACTERIZATION OF
CONTAM, e^- ACCEPTORS
- ADD O_2
- POSSIBLY NUTRIENTS,
METHANE
- MICROCOSM STUDIES