

August 9, 1995

Commanding Officer
Southern Division
Naval Facilities Engineering Command
Attn: David Cabiness; Code 1869
P.O. Box 190010
North Charleston, SC 29419-9010

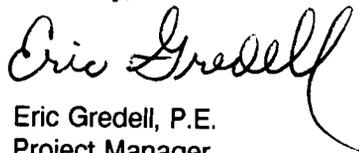
RE: Naval Industrial Reserve Ordnance Plant
Fridley, Minnesota

Dear David:

Enclosed, for your use, are two copies of the notes from Restoration Advisory Board meeting #2, held at the Naval Industrial Reserve Ordnance Plant on July 13, 1995. These final notes address review comments on draft notes provided to RMT by the Navy. Other copies of these notes have been distributed according to the attached Distribution List.

Persons receiving copies of these meeting notes are requested to note that the next Restoration Advisory Board meeting will be held at the **Fridley Municipal Center, 6431 University Avenue NE, on October 12, 1995, at 10:00 a.m.**

Sincerely,



Eric Gredell, P.E.
Project Manager

sgs

Enclosure



RMT, INC. — MADISON, WI
744 HEARTLAND TRAIL = 53717-1934
P.O. BOX 8923 = 53708-8923
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RAB MEETING #2
July 13, 1995**

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**Minutes of Meeting
Restoration Advisory Board Meeting #2
July 13, 1995**

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

Restoration Advisory Board (RAB) meeting #2 was held at the Naval Industrial Reserve Ordnance Plant (NIROP) in Fridley, Minnesota, on July 13, 1995. A copy of the agenda distributed at the meeting and an attendance list are attached.

A. Introductions

1. Pat Mosites opened the meeting.
2. There were no comments on the meeting notes for RAB meeting #1 held on April 6, 1995.

B. Actions Since Last Meeting

1. David Cabiness reported that two new groundwater extraction wells (AT-5A and AT-5B) were successfully started up on June 28, 1995. The total flow rate from all 6 extraction wells is now about 650 gpm. All groundwater is being discharged directly to the sanitary sewer. Groundwater pretreatment is no longer necessary, because the concentrations of volatile organic compounds (VOCs) in the combined flow from the 6 wells remain below the limits in the sewer discharge permit. The pretreatment system is not being used. The permit limits are 3 mg/L for any single VOC, and 10 mg/L for total toxic organics (total VOCs). The trichloroethene (TCE) concentration from the well AT-3A discharge is currently slightly below 3 mg/L; this well has the highest TCE concentrations of the 6 wells. The TCE concentration from well AT-2 is about 2 mg/L. The total VOCs concentration in the combined flow from all 6 wells was 1.4 mg/L in a sample collected shortly after startup of the 2 new wells. A round of water levels was collected by United Defense personnel from all monitoring wells at the NIROP and United Defense sites shortly before startup of the new wells. The discharge to the sanitary sewer will be sampled monthly, as required in the permit. A round of samples was collected from May 23 to 25, from all monitoring wells in the approved well network. The laboratory results for these samples and the samples of the discharge to the sewer will be included in a Progress Report for the second quarter 1995, which will be submitted to the Metropolitan Council Environmental Services (MCES) by United Defense.
2. Michael Flaherty said the MCES performed air monitoring tests in the 96" diameter sanitary interceptor sewer that receives the NIROP groundwater discharge. The purpose of the tests was to determine if the VOCs in the groundwater discharge result in VOC concentrations in the air within the sewer line that would present a health or safety concern for workers who may have to enter the sewer downstream of the NIROP, or for the general public via potential exposure to air that exits sewer manholes or other areas. The air monitoring was performed at a location 400 to 500 feet downstream from the NIROP tie-in point to the interceptor sewer. The results of

the air monitoring tests showed that VOCs in the NIROP discharge do not present a health or safety concern.

3. David Cabiness said the Navy has received a revised Groundwater Appropriation Permit that authorizes a groundwater pumping rate of up to 700 gpm. A copy of the permit has been provided to United Defense. A copy will also be posted inside the groundwater extraction system Control House.
4. David Cabiness distributed copies of a letter-report dated February 23, 1995, that was prepared and issued by RMT to the Navy. The letter included cost estimates for a "baseline" option for facilities needed to treat the groundwater to a quality suitable for discharge to the river as specified in the Record of Decision (ROD), and 3 options to provide an additional level of treatment to supply the treated groundwater to the City of Fridley as a supplemental drinking water supply. David Cabiness discussed a summary of the information contained in the letter-report. The letter was previously reviewed by a consulting firm retained by the city, who also prepared an independent cost estimate for the 4 treatment options defined in the RMT letter-report. The estimated capital costs prepared by the city's consultant were within 15 to 20% of (lower than) the RMT estimates, primarily due to some differences in assumptions made regarding treatment equipment requirements. A table summarizing the estimated annual treatment system costs prepared by the city's consultant was distributed at the meeting (copy attached). Eric Gredell noted that the estimated annual costs for item #13.3 under Options 3 and 4 in the RMT estimates, the water treatment chemicals cost, contained an error. A revised cost estimate for the treatment chemicals was prepared by RMT and sent to the Navy in March 1995. (A copy of the revised tables is attached to these notes; these tables were not distributed at the meeting.)
5. The final Operation and Maintenance (O&M) Plan - Revision 1 for the groundwater extraction system was issued on May 12, 1995. A working copy of the Remedial Action Workplan (RAWP) - Revision 3 was sent to the USEPA and MPCA for review on July 3, 1995. Eric Gredell said that the RMT Laboratories can achieve detection limits that are less than or equal to the Minnesota Health Risk Limits for all of the VOCs that are analyzed in groundwater samples except for vinyl chloride. This information is included in the RAWP - Revision 3.
6. Addendum No. 1 to the Annual Monitoring Report for 1993 was issued on April 25, 1995. Resolution of some remaining comments from the MPCA on the original 1993 report may still be necessary.
7. Michael Flaherty said the MCES approved the shutdown of the groundwater pretreatment system because the VOC concentrations in the combined extraction well flow to the sewer meet the permit limits without treatment. The MCES required weekly sampling of the discharge until two weeks after startup of the new wells. The MCES will re-evaluate the appropriate sampling schedule based on the results of the initial sampling. The discharge permit is currently being revised by the MCES. The permit will include special conditions that require certain actions if the concentrations in the discharge go above the permit limits. The revised permit will be issued by the end of July. The permit will also include a special condition requiring that the pretreatment system be kept available to be returned to operation if needed. He suggested that the Navy should consider modifying the piping arrangement to allow only the discharge from the wells with the highest VOC concentrations to be treated, with the other wells

discharging directly to the sewer. Tim Ruda said that about one month would be needed for United Defense to prepare a written plan for procedures to bring the pretreatment system back into operation.

8. David Cabiness said the draft Feasibility Study (FS) Report for Operable Unit (O.U.) #2 soil was sent to the USEPA and MPCA. It is presently under review by the agencies. Kerry Morrow said that a copy of the final draft FS Report should be sent to John Flora. Tom Bloom suggested that the report copy provided to John Flora should be unbound, to facilitate making additional copies if needed. David Cabiness said the report would be provided in a 3-ring binder.
9. It was noted that O.U. #2 addresses unsaturated soil located outside the plant buildings up to the existing plant boundary fence lines. Richard Harris asked if any soil sampling was done outside the fence lines. He said that Northern Ordnance owned property located north of the current northern fence line in the past. It was noted in response that soil sampling was done beyond the existing fence, and no soil constituents at concentrations of concern were identified. Tom Bloom said that early studies for the NIROP looked at the property in this area, which was identified as the North Study Area. The area south of the NIROP that was owned by FMC Corporation, identified as the South Study Area, was also investigated.
10. David Cabiness said the Navy has tasked Morrison-Knudsen (M-K) to perform an investigation for possible additional buried drums in the north 40 area, as requested by the MPCA. M-K will also manage excavation and removal of any drums that may be found. Tom Bloom said the information and data from this work should be folded into the results of the remedial investigation for O.U. #2.

A representative of M-K gave a summary of the drum investigation work to date. M-K subcontracted with a company to perform an electromagnetic survey of the north 40 area. This survey has been completed. Instruments used included an EM-31 and EM-61. An EM-34 was also available, but was used very little. The EM-61 has resolution sufficient to identify a single drum-sized metal object to a depth of about 10 feet. The EM-31 has similar resolution down to 22 feet. The EM-34 is capable of resolution to about 50 feet, and can also be used to identify certain types of contaminant plumes in certain soil conditions. The EM-31 proved to be most useful for this survey. The EM-61 also gave good results. All EM instruments were set to identify drum-size targets, but not smaller objects. This electromagnetic survey used a much denser spacing for the soundings than the previous survey done in 1983, which used soundings at only 50-foot centers. The survey that was recently completed is believed to be much more accurate and complete than the 1983 survey. The results of the EM survey showed 9 areas with notable anomaly readings. Excavations in these 9 areas will be done this summer. A report on the results of the EM survey will be prepared, with a workplan for the excavation project. The report and workplan will be sent to the RAB members for review.

11. Scott Glass reported on activities related to O.U.#3, which he said includes the soil beneath the plant buildings above the groundwater table. The Navy sent a scope of work to one of their remediation contractors on July 10 to perform some follow-on work in the East Plating Shop area. The Navy is also currently negotiating with a contractor to formally begin tasks under O.U. #3. The target date for award of the Phase I work is August 1, 1995. Phase I includes preparation of a Remedial Investigation (RI) Workplan. The first task will include a record search, interviews with

past and current employees, plant inspections, etc., to identify potential areas of concern within the plant. The results of these initial tasks will be used to develop plans for further investigations. The current schedule includes providing the draft RI Workplan to the USEPA and MPCA by December 31, 1995.

Richard Harris said that contamination on the Burlington Northern Railroad (BNR) property, particularly diesel fuel, may be causing some contamination on the NIROP property. It was noted that the work under O.U. #3 will include investigation of potential contamination from the BNR property.

12. Tom Bloom said the Navy and the USEPA have reached an agreement regarding the enforcement action. David Douglas said the settlement reached is also acceptable to the MPCA.
13. Tim Ruda gave a status report on operation and maintenance activities for the groundwater extraction system. Construction of 2 new extraction wells was completed on June 17. A complete round of water level readings including all NIROP and United Defense monitoring wells was completed on June 27. The new wells were started up on June 28. The next monitoring well sampling round is scheduled for the week of August 21. (A summary of operation and maintenance information is attached.)

C. Actions for Next Quarter

1. A round of water level measurements will be completed from July 24 to 26, from all monitoring wells at the NIROP and United Defense sites. This data will be used to re-evaluate the improved efficiency of hydraulic capture of contaminated groundwater due to the effect of the 2 new extraction wells. The results of the capture evaluation will be summarized in a Technical Memorandum that is scheduled to be issued to the USEPA and MPCA by October 13, 1995. The Technical Memo will generally include the type of information that was contained in the initial Determination Document which was issued 90 days after initial startup of the groundwater extraction system.

Tom Bloom said the Technical Memo should include a discussion of how the plume under the park area is attenuating. Eric Gredell said this topic can be addressed in the Technical Memo. However, the assessment will be based primarily on hydraulic data and results from use of the groundwater flow model, rather than on groundwater chemistry data. There will be an insufficient amount of chemistry data and inadequate elapsed time since startup of the new wells to assess the effect of the new wells on plume attenuation.

2. Caroline Voelkers said a meeting will be held within a few weeks between the MPCA and the City of Minneapolis to resolve some remaining issues raised by the city regarding the NPDES permit. After addressing these issues, the MPCA intends to issue the final permit. No changes from the draft permit are expected to be made in the final permit. However, if the city's concerns cannot be mutually resolved, the matter may have to be brought to the Minnesota Pollution Control Board (the Board) for resolution, at the Board's August or September meeting. She said the MPCA believes that the issue of aquatic toxicity is adequately addressed in the draft permit. The concentrations of iron and manganese that are expected in the groundwater treatment facility (GWTF) effluent are not an issue for the permit, since the concentrations will pose no threat to the Minneapolis Water Treatment Plant intake

water quality. She said the compliance point for the proposed discharge is at the effluent from the GWTF prior to mixing with any other water sources. David Douglas said that all surface water discharges that receive and comply with a NPDES permit issued by the state are considered by the state to be protective of the total environment and human health.

Tom Bloom clarified that the USEPA and MPCA are planning to meet with representatives from the cities of Fridley, Minneapolis, and Columbia Heights to discuss issues raised by the cities regarding the NIROP NPDES permit. He said that if the cities' issues cannot be resolved, the matter will be directed to the Board. If this occurs and if the permit as currently drafted is denied by the Board, the existing non-groundwater discharges from the NIROP that are also addressed in the permit would be required to cease when the current permit expires. This would require the NIROP to shut down all operations and stop all runoff sources that contribute flow to the permitted outfalls.

David Douglas said there are no remaining technical issues that would affect the MPCA's plans to issue the final permit. However, he said that if the permit review is brought to the Board, the actions that the Board may take are uncertain. He said that to assist the MPCA and USEPA in addressing the concerns of the cities, it is necessary for the positions, issues, and concerns of the cities to be prepared in writing and provided to the agencies prior to the scheduled meeting.

John Flora stated that the City of Fridley is not opposed to the MPCA issuing the final NPDES permit. However, he said the permit should include a stipulation that when the expected final effluent quality has been determined during design of the GWTF, the Navy should be required to provide this information to the city for their use in assessing whether the treated water would be desirable as a supplemental municipal water supply. Caroline Voelkers said the MPCA does not have the authority to include such a stipulation in a NPDES permit. John Flora said the Navy should be required to define the expected GWTF effluent quality before the final permit is issued. He said the city can't comment on the projected annual operation and maintenance cost for supplemental treatment of the water that the city may be willing to incur until they see the GWTF design basis. He said the city expects the effluent quality will be less than 5 ppb TCE. However, the city would not want the water if the TCE concentration is at the permitted concentration of 5 ppb. Tom Bloom said the permit will require the effluent to comply with several other parameters in addition to TCE.

3. David Cabiness said the Navy is currently negotiating with a company called Resolution Resources to perform seismic imaging at the NIROP facility. The purpose of the work is to produce geologic maps that would help identify locations where TCE product may be present. The seismic instruments to be used can obtain measurements through the plant floors. The information will be used in preparing the RI Report for O.U. #3, and also to help locate any future extraction wells that may be needed.
4. Working copies of Revision 1 of the Community Relations Plan (CRP) are expected to be issued within about one month. The CRP will include information regarding the RAB purpose and procedures.
5. David Cabiness said the design of the GWTF is expected to be approximately 30% complete within the next 6 months.

6. A Technical Memorandum presenting a re-evaluation of groundwater capture effectiveness is expected to be issued.
7. The Navy has issued a contract for preparation of a geostatistical analysis of the monitoring well network that is currently being used for groundwater monitoring. The purpose of the analysis is to determine the most efficient well network to meet the objectives for groundwater monitoring under O.U. #1. Copies of the contractor's report will be provided to the USEPA and MPCA.

D. RCRA Status

The status of the soil vapor extraction system at the location of former Hazardous Waste Storage Area "C" was briefly discussed.

E. Community Relations

1. Kerry Morrow said the proposed operating procedures for the RAB that were previously distributed are based on standard RAB policies contained in a November 1994 guidance document issued by the Navy. He said he would like to resolve all comments on the proposed operating procedures so the final procedures can be issued by the date of the next RAB meeting.

2. The following comments on the proposed RAB procedures were discussed.

John Flora said the wording in items 1.6 and 1.7 is contradictory. Kerry Morrow said the intent is that RAB members will only make recommendations, not vote on specific items. The wording will be changed to indicate that the RAB will present a "consensus" opinion or recommendation. Tom Bloom noted that the RAB applies to a wide range of Navy projects. Item 1.7 will be deleted.

John Flora said item 2.1 should be revised to indicate that other state or local groups will be invited to participate in the RAB. Kerry Morrow said the previous Technical Review Committee (TRC) included several other groups, which are expected to continue their involvement in the NIROP activities. The Navy advertises for RAB meetings, which should provide sufficient notification to interested parties. He said RAB information will be sent to all members of the previous TRC.

John Flora said the language in items 2.3.2 and 2.4.1 is too strong or blunt. Tom Bloom said the procedures need to accommodate persons who attend the meetings only periodically. Kerry Morrow said that any person may bring an issue to their representative on the RAB, or they may attend the meetings to listen to the discussions. The wording will be revised to clarify the procedures for ending participation on the RAB. The language throughout the procedures will be "softened."

Under item 2.9.3, the words "non-site specific" will be changed to "non-environmental." Regarding item 2.10.1, it was noted that the Navy has limited funds for advertisements.

John Flora recommended that future meetings be held at the city's offices.

It was noted that the RAB is intended to provide a forum for resolving disputes with members of the general public, organizations, or groups. The Federal Facility Agreement (FFA) defines procedures to address disputes among the regulatory agencies and the Navy. The intent of items 2.12.1 and 2.12.2 is to eliminate extensive arguments during meetings. Although alternative opinions are welcome, the meetings must move toward resolution of issues. Tom Bloom said the community can request funds through the USEPA to hire a technical consultant to help represent their position, if desired. Richard Harris said the operating procedures should provide an opportunity for other opinions to be heard and entered into the record. Kerry Morrow will revise items 2.12.1 and 2.12.2 to address the points raised.

3. David Douglas said the Navy's guidance document for RABs should be provided to all RAB members for comments. The guidelines should be amended to be consistent with revisions that are made to the proposed operating procedures.
4. David Douglas said the review of work products is the key for RAB members to understand the environmental activities at the site. The timing of RAB members receipt of documents for review is important. He said a standard approach to scheduling distribution of documents for review should be developed. Decisions regarding distribution of documents to all RAB members must also be made, e.g., whether early drafts should be distributed, or only final drafts. John Flora suggested that preliminary results of data, etc., could be presented at RAB meetings, to give an advance notice of the general "direction" and conclusions in reports. It was decided that only draft-final versions of documents would be distributed.
5. The current RAB membership was described, in response to a question from Richard Harris. The definition of "stakeholder" was also clarified by Kerry Morrow as a person who has a direct concern or stake in the cleanup of the site. These persons could be any residents of Fridley, any person who believes they may be potentially affected by contamination, or the local community in general. John Flora said the City of Minneapolis should be represented on the RAB. Richard Harris said he knows several people who are concerned about what is happening at the NIROP and the Twin Cities Army Ammunition Plant sites.
6. John Flora said the city issues a quarterly newsletter. He said an information insert regarding the NIROP could be included in the newsletter. Kerry Morrow said that separate Fact Sheets must also be prepared. John Flora will send a schedule for issuing the newsletters to Kerry Morrow, who will contact a city representative regarding procedures for including a NIROP information insert in the newsletter.
7. Minutes from RAB meetings will be available to the public at the Fridley Municipal Center.
8. Kerry Morrow will prepare a revision of the proposed RAB operating procedures and will send this to all RAB members for review.

F. General Topics

1. Tom Bloom said the RAB meeting notes must continue to be formatted to address requirements in the FFA for Quarterly Progress Reports. If the format of the meeting notes changes, separate Quarterly Progress Reports may be required.

2. David Cabiness said the Navy determined that it would be cost-prohibitive for the Navy to provide treated groundwater to the city at the water quality required by the city. He said that although the city's technical consultant agreed that air stripping alone would provide sufficient treatment to reach NPDES permit discharge limits, the water quality that the city wants would require extensive additional treatment facilities. He said the city was also unwilling to provide operation and maintenance for any additional treatment facilities that the Navy might consider providing to produce the higher water quality required by the city. For these and other reasons, the Navy has decided to proceed with the original plan to treat the groundwater for discharge to the river.
3. John Flora said the Navy has not provided any written proposal to the city regarding providing NIROP groundwater for municipal use. There has only been one meeting between the city and the Navy to discuss the water supply issue, and no agreements have been reached. He said it is still uncertain at this time whether the Navy will have to provide treatment for iron and manganese removal even if the discharge is to the river. He said it is inappropriate to say that the city should be responsible for all operation and maintenance costs related to providing supplemental treatment because the Navy has not defined the treatment process that will be used for discharging the water to the river. He said he believes that iron and manganese removal will be required even if the effluent goes to the river. He said the City of Minneapolis is also concerned that aeration of the groundwater may cause a color problem in the discharge to the river. Mr. Flora said the city does not need the NIROP groundwater for its water supply. He said the issue is that discharging the water to the river is not the best use of the groundwater resource. He said the Navy will pump about 1 MGD of groundwater to the surface and treat the water to drinking water standards. He said the city will be required to install a significant amount of equipment to provide an additional potable water supply due to the limited groundwater resource, as required by the Metropolitan Council and the Minnesota DNR. He said the "extra" million gallons per day of water from the NIROP would help the city address this water supply need.
4. Gary Eddy said the MPCA has previously requested the City of Fridley and the Navy to summarize their positions regarding providing treated groundwater to the city in writing. He said the MPCA is still willing to assist in mediating the discussions between the city and the Navy. However, it is difficult for the MPCA to do this without a clearer understanding of the positions taken by both parties. Tom Bloom requested the Navy to prepare a written summary of the results from the previous meeting between the Navy and Fridley.

David Douglas said the Navy currently has no obligation to provide treated groundwater to the city. He said the ROD allows the treated water to be discharged to the river under a NPDES permit. The issue of providing the water to the city has come up again only because of the recent enforcement action. He said the Navy has demonstrated that the cost of the facilities required to provide the water to the city at the quality required by the city is too high to compensate for the penalties under the enforcement action. Therefore, the Navy does not believe that the additional cost of providing the water to the city can be justified.

Gary Eddy said an agreement whereby the Navy would provide the water to the city would not be reasonable unless the city agreed to share the cost. He said it is not cost-effective to provide the groundwater to the city, and the city should pay some of

the additional cost if they expect to pursue the matter. He also said the MPCA does not have the authority to force the Navy to provide the water to the city.

Richard Harris said the groundwater must be viewed as a resource, to evaluate cost of treatment in the proper perspective. He said the Navy seems to have an "out-of-sight/out-of-mind mentality" regarding the issue.

David Cabiness said the Navy-Southern Division does not have the authority to pay for providing drinking water to the city. He said it would be necessary for politicians to obtain approval from Navy Headquarters before the Navy could make any agreements with the city. He said the Navy is not funded to provide drinking water supplies to a city where the Navy was not responsible for any impairment of the city's water supply due to environmental problems. The Navy has sent a letter to the Mayor of Fridley stating this position. He said the city should seek funding authorization through the U.S. Congress for the water supply the city is seeking from the Navy.

David Douglas said the MPCA postponed the enforcement action process while the city and Navy attempted to resolve the groundwater issue. However, because an agreement was not reached, it was necessary for the MPCA to proceed with resolving the fines issued to the Navy.

Tom Bloom said it is not appropriate to consider the groundwater that the Navy would discharge to the river as "extra" groundwater that could be given to the city for direct use as a water supply. He said it would be very expensive to provide the additional treatment needed to supply the improved water quality required by the city.

Gary Eddy said the MPCA would prefer that the positions of the city and the Navy be prepared in writing prior to the upcoming meeting among the agencies and the cities of Fridley, Minneapolis, and Columbia Heights. He said the issue may have to be brought to the Board before the final NPDES permit is issued. The ROD process included public involvement, which the MPCA believes provided sufficient opportunity for the city or others to raise concerns. However, he said the city has the right to dispute the plan for groundwater remediation.

5. Richard Harris asked who is responsible for assuring the Mississippi River water quality. David Douglas said the Minnesota DNR and the MPCA function as the Natural Resource Trustees for the river. The Department of Interior has designated the river as a Natural and Scenic resource. Tom Bloom said the Department of Interior has been informed of all actions and decisions regarding the NIROP cleanup to date.
6. John Flora said the inactive production wells at the NIROP should be pumped temporarily to sample the bedrock groundwater quality. Tom Bloom said the USEPA and MPCA agree that this would not be advisable, since pumping the wells could draw contamination down into the bedrock. In addition, none of the 3 inactive production wells at the plant are in working order. A table showing the laboratory results from the 4 most recent sampling rounds of bedrock monitoring wells was distributed at the meeting (copy attached).

Richard Harris said he is aware that the Minnesota Department of Health recently issued a letter to another party that owns an inactive production well advising them of certain requirements for abandoning the well. He said the inactive production wells at the NIROP should also be properly abandoned.

David Douglas said he will discuss the matter of the old production wells with John Betcher, and the topic will be discussed at the next RAB meeting.

7. David Cabiness said the design of the GWTF will include provisions to manage the expected problems with scaling of equipment and pipelines. Tim Ruda said the primary scaling problems with the existing groundwater extraction and pretreatment facilities are due to calcium carbonate, not iron and manganese. He said iron is only a significant problem due to fouling of the well pump impellers by iron-bacteria. Eric Gredell said the proposed GWTF design does not include special facilities for removal of iron and manganese.
8. David Douglas said it should be understood that the shallow aquifer at the site is not the same as the bedrock aquifer. He said if there were no groundwater extraction wells at the site, groundwater in the shallow aquifer would flow under natural conditions into the river, where it would mix with the river water and potentially reach the Water Plant intake. Tom Bloom and David Douglas said that during the ROD process, the City of Minneapolis representatives stated that the groundwater discharge to the river is necessary for recharging the river, especially during droughts such as occurred in 1988.
9. David Cabiness distributed schedules showing dates for key deliverables or events related to Operable Unit #1 (groundwater) and Operable Unit #2 (soil) (copies attached). David Douglas suggested that scheduled dates for all upcoming events, deliverables, etc., be included in the agendas that are prepared for all future meetings. It was agreed that the Navy will do this.
10. The next RAB meeting (#3) is scheduled for **Thursday, October 12, 1995, at 10:00 a.m.** at the **Fridley Municipal Center, 6431 University Avenue N.E., Fridley, Minnesota.** (NOTE LOCATION CHANGE)

Proposed dates for future RAB meetings were included in the agenda for this meeting (attached).

NIROP FRIDLEY RESTORATION ADVISORY BOARD MEETING #2
JULY 13, 1995
AGENDA

1. INTRODUCTION

2. Corrections to Minutes of RAB #1

3. RAB Formation

- Goals/Role of RAB
- Procedures/Policy
 - a. Review/comment/discuss(MPCA/Fridley -received)
 - b. consolidate comments
 - c. draft "final" procedures
 - d. final review
 - e. issuance/RAB member approval
- Agenda Items
 - a. submittal of items
- Major milestones/time extensions
 - (1) copy to RAB Co-Chairs

4. Actions since last meeting

NAVY/RMT

Operable Unit #1 - Groundwater

- GWES Upgrade Field Work/Startup
- Groundwater Appropriation Permit for two additional wells
- Water for City of Fridley
- O&M Plan for GWES
- RAWP Revision #3
- Addendum No. 1 to Annual Monitoring Report for 1993
- MCES PERMIT
 - 1) Discontinuing pretreatment.
 - 2) Sampling procedure for startup of upgrade.
 - 3) Permit renewal.

Operable Unit #2 - Soils outside plant

- Feasibility Study
- Geophysical Work in North 40

Operable Unit #3 - Soils under Nirop Plant

- Soil Sampling in East Plating
- Navy to start investigation of OU#3

Miscellaneous

- Enforcement Action Status
- Community Relations Plan(CRP) update

CITY OF FRIDLEY

- Evaluation of Prairie Du chien/Jordan aquifer update

UNITED DEFENSE

- Maintenance and Monitoring Activities

MINNESOTA POLLUTION CONTROL AGENCY

- NPDES Permit Status

5. Actions Scheduled for Next Six Months

- Design of New Groundwater Treatment Facility(GWTF)
- Seismic Imaging Survey of entire Navy property at NIROP Fridley.
- Approval of Feasibility study for OU#2
- Capture evaluation for upgraded GWES
- Groundwater Containment Report(RMT)
- Geostatistical Analysis of Groundwater Monitoring.

6. Other issues/Comments

7. Next Meeting

- Discuss proposed annual meeting schedule.

0930 12 OCT 95

0930 11 JAN 96

0930 11 APR 96

0930 11 JUL 96

RESTORATION ADVISORY BOARD MEETING #2

JULY 13, 1995

NAVAL INDUSTRIAL RESERVE ORDNANCE PLANT, FRIDLEY

LIST OF ATTENDEES

NAME	ORGANIZATION	
DAVE OLSON	OPNAV	_____
MARGARET CASSERLY	BLACK AND VEATCH	_____
TOM BLOOM	USEPA REGION 5	<i>Tom Bloom</i>
JOHN FLORA	CITY OF FRIDLEY	<i>[Signature]</i>
ROBERT HUTCHINSON	COUNTY OF ANOKA	_____
EVAN DRIVAS	DNR	_____
RICHARD NINESTEEL	HALLIBERTEN NUS	<i>Richard Ninsteel</i>
JAMES DELAMBERT	LIESCH ASSOCIATES	_____
BRUCE REHWALDT	LIESCH ASSOCIATES	_____
JOHN BETCHER	MPCA	_____
DAVE DOUGLAS	MPCA	<i>Dave Douglas</i>
GARY EDDY	MPCA	<i>Gary Eddy</i>
FRED JENNESS	MPCA	_____
MARK FERREY	MPCA	<i>Mark Ferrey</i>
CAROLYN VOLKER	MPCA	<i>Carolyn Volker</i>
MICHEAL FLAHERTY	MCWS	<i>Michael V. Flaherty</i>
ADAM KRAMER	MINNEAPOLIS WATER WKS	_____
ERIC GR ^E DELL	RMT INC.	<i>Eric Gr^Edell</i>
LINDA HICKEN	RMT INC.	_____
GALEN KENOYER	RMT INC.	_____

MARK BRIGGS

SCOTT GLASS

DAVE CABINESS

RICHARD HARRIS

GEN PETERSEN

CORINNE HOEFT

KERRY MORROW

PAT MOSITES

DOUGLAS HILDRE

TIM RUDA

CDR STEPHENSON

LTC FREYE

Alice Johnson, State Rep.

DLRICH J. CORDON

Richard Harris

DAVE OLSON

RMT INC.

SOUTHNAVFACENGCOM

SOUTHNAVFACENGCOM

FRIDLEY RESIDENT

LEAGUE/WOMEN VOTERS

DISTRICT REP CONGRESSMAN LUTHER

NAVSEA

REICC MNPLS

UNITED DEFENSE

UNITED DEFENSE

DPRO UNITED DEFENSE

DPRO UNITED DEFENSE

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St. Paul 55155 296-5510

Morrison-Knudsen Corp. W.C. Cook

6200-Refinement Terr.

Self 571-4097

CNO (N453) David L. Olson

Mal Byrd

Scott Glass

David Cabiness

(PRESENT)

Morrow

Mosites

Tim Ruda

Stephenson

Freye

Cordon

Harris

Olson