



RMT, Inc.  
744 Heartland Trail  
P.O. Box 8923  
Madison, WI 53708-8923  
Phone: 608-831-4444  
FAX: 608-831-3334

May 7, 1991

Name and Location of Project: Naval Industrial Reserve Ordnance Plant (NIROP); Fridley, Minnesota

Contract No.: DACA45-86-C-0015  
Modification No. P00008 & P00009  
RMT Project No. 1870.74

U.S. Army Corps of Engineers  
Omaha District  
Attn: CEMRO-ED-ED-2 (John Japp)  
215 North 17th Street  
Omaha, NE 68102-4978

Dear John:

Enclosed for your use are 7 copies of the final Conference Notes for TRC meeting #9, held at the NIROP on March 7, 1991. Other copies of the final notes have been distributed according to the attached Distribution List.

Sincerely,

A handwritten signature in cursive script that reads "Eric Gredell".

Eric Gredell, P.E.  
Project Manager

tfr

Enclosure

1870.73:MSA:JAPP.4

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FINAL CONFERENCE NOTES  
TRC MEETING #9  
MAY 7, 1991

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Minnesota Pollution Control Agency Site Response Section Division of Solid & Hazardous Waste Attn: Mark Lahtinen 520 Lafayette Road St. Paul, MN 55155	1
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TRC MEETING #9  
MAY 7, 1991

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CONFERENCE NOTES  
TECHNICAL REVIEW COMMITTEE MEETING #9  
MARCH 7, 1991

NAVAL INDUSTRIAL RESERVE ORDNANCE PLANT  
FRIDLEY, MINNESOTA

Technical Review Committee (TRC) meeting #9 was held at the Naval Industrial Reserve Ordnance Plant (NIROP) in Fridley, Minnesota, on March 7, 1991. A copy of the agenda distributed at the meeting and an attendance list are attached.

A. Construction Status

1. John Japp presented a summary of construction status for the ground water recovery system.  
  
All plant interior piping is completed; exterior piping has been installed to the new control house. The control house has not been completed. Construction of recovery well AT-4 is almost complete. Construction of well AT-5 and several new observation wells (OWs) has not begun. Problems were encountered at existing wells AT-1 and AT-3 when attempting to redevelop the wells. The USACE has determined that both wells must be replaced. It is expected that at least 2 months will be needed to complete construction of the ground water recovery system. Start-up of the recovery system is scheduled for the end of May, 1991.
2. The USACE will provide a current construction schedule to Black & Veatch, the USEPA, the MPCA, and the Navy.
3. John Japp mentioned that the USACE has not yet received a proposal from their construction contractor, Morrison-Knudsen (M-K), regarding a schedule for construction of well AT-5. The USACE will notify USEPA as soon as the schedule for construction of AT-5 has been set. He also noted that 2 new recovery wells may be needed at the location of AT-5, based on the lithology observed when drilling the test hole for AT-5. At the AT-5 test hole, a clay layer was encountered, which is not present at AT-3. M-K has submitted a preliminary recommendation to the USACE that 2 recovery wells be installed, 1 finished above the clay layer, and 1 screened below the clay layer.
4. A step-rate drawdown test will be performed at each new recovery well and existing recovery well after redevelopment.
5. Jim Shafer said the USACE must send a specific recommendation regarding proposed construction of AT-5, the new OWs, and details for abandonment and replacement of AT-1 and AT-3 to the Navy, USEPA, and MPCA for their review and approval. Approvals must be received from USEPA and MPCA before proceeding with any field work which deviates from the previously approved final design documents. John Japp said that proposed specifications for replacement of AT-1 and AT-3, and construction of 3 new OWs in the Anoka County park, had been sent to the USEPA and MPCA by the USACE. However, Mark Lahtinen had not yet received the specifications.

6. Jim Shafer summarized the results from a meeting held on February 14, 1991, at the NIROP, attended by representatives of the Navy, USACE, USEPA, MPCA, FMC, and RMT. The purpose of the meeting was to discuss review comments on the final design documents for the ground water recovery system provided by the USEPA and MPCA.

During the meeting, the Navy mentioned that a video camera had been run down well AT-3 to investigate the cause of the problem encountered when trying to redevelop the well. The camera showed that the screen had been badly twisted and torn, thus allowing excessive amounts of formation material to enter the well.

The video camera was not used to investigate the problem at AT-1; the cause of the problem at AT-1 is still unknown. The USACE has determined that both AT-1 and AT-3 must be replaced.

**B. Soil Investigation Results**

1. Bernd Rehm gave a presentation of the results of the ground water and soil sampling performed in October 1990.
2. Commander Hogan mentioned that, based on the findings from the October 1990 field work and knowledge of past plant operations, a buried utility corridor in the northeast corner of the plant is suspected, in the vicinity of the former Hazardous Waste Storage Area C.

**C. Hazardous Waste Storage Area C**

1. Darlene Weber said that the current schedule for closure of Hazardous Waste Storage (HWS) Area C, submitted by FMC in February 1991, was based on information regarding the expected time when results from the soil investigation work performed in October 1990 would be available. However, the last closure plan revision was submitted to the MPCA before the results from the October 1990 sampling were available. Comments are needed from MPCA regarding how this affects the closure schedule and possibly the closure cleanup standards.
2. Fred Jenness said that the closure will be certified as complete by MPCA only after all required remediation is completed. He said that a revised closure plan is not required.
3. Jim Shafer noted that according to the forthcoming Federal Facility Agreement, soil remediation at Area C would be addressed under RCRA, and ground water remediation at Area C would be addressed under CERCLA.

Fred Jenness noted that "clean" closure of Area C is still required. He said that no alternate cleanup levels apply at this time. However, the MPCA will consider site-specific factors affecting Area C that may develop. Closure alternatives in addition to clean closure include setting alternate concentration limits or closing with contaminants remaining in soil, in which case long-term post-closure monitoring would be required.

D. **Ground Water Sampling Results**

1. It was reported that detectable concentrations of VOCs were observed in the ground water sample collected at well 5-PC in October 1990. This was the first time that VOCs above method reporting levels had been observed in this background (upgradient) bedrock well. However, at the time of sampling in October 1990, it was observed that the well lock had been removed. In addition, RMT field staff reported that water from the well was black colored and had a noticeable chemical odor. Therefore, evidence suggests that vandalism of the well may have occurred. It was noted that well 5-PC is located to the northeast of the NIROP, on property owned by QUE-BE-COR, a printing company. Commander Hogan said that a report should be filed with the police regarding the suspected tampering with well 5-PC. Mark Lahtinen said that he will check with the MPCA's "hotline" to ask what action they suggest be taken. Commander Chattin suggested that more frequent security checks of all off-site monitoring wells should be done. It was mentioned that the USACE has a current access agreement with QUE-BE-COR for sampling the wells on their property.
2. Jim Shafer discussed the lab results from sampling of Fridley well #13, sampled in February 1991. The lab report for this sampling was routed to attendees during the meeting. The results showed only 1 hit of chloroform, at 3.4 µg/L, which is substantially lower than the Maximum Contaminant Level (MCL).
3. John Japp mentioned that Fridley well #13 will not be sampled during the pumping test at well AT-4, to be performed by the USACE. No observable effects on Fridley well #13 from the AT-4 pumping test are expected. Bernd Rehm mentioned that a pumping test performed in approximately 1983 showed no measurable effect on water levels at NIROP monitoring wells during a pumping test at Fridley well #13.

E. **Federal Facility Agreement**

1. Jim Shafer mentioned that negotiation of the Federal Facility Agreement (FFA) is expected to be completed by the end of March. Items still not resolved among the parties include deadlines and cost reimbursement. The USEPA has said that they want a signed ROD for soil by June 30, 1994.
2. Gary Eddy said that setting of deadlines is a significant remaining issue. He said the MPCA Board will meet on March 26, 1991. The MPCA hopes to present the final FFA to the Board at that meeting for approval.

F. **Status of Reports and Other Submittals**

1. **Community Relations Plan (CRP)**

The draft-final CRP was submitted to the USEPA and MPCA for review and comments on November 2, 1990. Review comments were received by the Navy from the USEPA in mid-February, 1991. These comments have been discussed and resolved with the USEPA. The final CRP is expected to be issued by the end of March. A copy of the final CRP will be placed in the official document repository.

2. Remedial Action Monitoring Plan (RAMP)

- a. The draft RAMP has been sent to the USACE and Navy for review. The draft-final RAMP is currently being prepared, addressing review comments on the draft RAMP provided to RMT by the USACE and Navy. The draft-final RAMP is expected to be issued to the USEPA and MPCA for review in 3 to 4 weeks.
- b. A Quality Assurance Project Plan (QAPP) will be prepared for the ground water monitoring tasks defined in the RAMP. This QAPP will follow current USEPA guidance documents. Soil investigations performed in 1990 were based on a workplan (Quality Control Plan and Sampling Plan) that was prepared following USACE guidance documents. A pre-QAPP meeting with USEPA's Quality Assurance Section may be held in April, 1991.

3. Operation and Maintenance (O&M) Plan

The USEPA's construction contractor will prepare an O&M manual that addresses routine maintenance and operating instructions for the ground water recovery system equipment. RMT will prepare supplemental information for the manual addressing other required topics not covered by the construction contractor, such as operational contingency measures.

4. Ground Water Treatability Testing and Reuse Study

- a. RMT will be contracted by the Navy to perform ground water treatment tests, as part of the design criteria development stage. A work plan describing the proposed testing objectives and methods will be prepared. The work plan will be sent to the USEPA and MPCA for their review prior to the start of testing.
- b. The initial task to be performed by RMT under the Navy contract will be a study of options for reusing treated ground water from the remedial action. Several TRC representatives will be contacted by RMT to obtain information pertinent to this study.

5. Technical Memos

- a. The draft-final Technical Memo No. 1, which addresses the field investigations performed in October 1990, is expected to be issued to the USEPA and MPCA by March 20, 1991.
- b. The draft-final Technical Memo No. 2, which addresses the results of ground water sampling performed in February 1991, is expected to be issued to the USEPA and MPCA by July 3, 1991.

6. RI/FS Workplan for Soil

A RI/FS Workplan for soil will be prepared. The initial draft is to be submitted to USEPA and MPCA by October 1, 1991. The workplan will include a QAPP, a Sampling and Analysis Plan, and a Site Health and Safety Plan, which will be based on current USEPA guidance documents. A pre-QAPP meeting with USEPA may be held in April, 1991.

G. Revision of MWCC Policy

Mike Pliml said that the MWCC has finalized revisions to the Service Availability Charge (SAC) system. The SAC system has been eliminated. A new "add-on service charge" system has been set up in its place. The new charge system is applicable to dischargers of ground water into the MWCC sanitary sewer system, such as the NIROP. Jim Shafer mentioned that although the MWCC policy has changed, and the economic evaluation presented in the FS Report has been significantly affected by the change, the Navy intends to proceed with design of the on-site ground water treatment system. He said that the Navy would like to have the fact that the MWCC policy has changed noted for the record.

H. Ground Water Reuse Study and Flow Model

1. Ground Water Reuse Study

- a. Jim Shafer mentioned that a request for proposal has been issued to RMT to perform a study of alternatives for reuse of ground water from the on-site treatment system. Alternatives to be evaluated include industrial and municipal water users.
- b. Mark Lahtinen said that the General Mills-Honeymead plant, located to the southeast of the NIROP, has filed a permit application with the MPCA to restart two existing production wells on their property. The two wells produce either 600 GPM flow each, or 600 GPM total; the exact flow capacity is uncertain. The wells are both finished in the PCJ aquifer. John Betcher said he is concerned about the likely effect on the ground water capture and recovery system currently in operation at the FMC site near the water treatment plant, due to the significant pumping volume at the General Mills site. It was noted that General Mills may be a potential user of treated ground water from the NIROP.
- c. Jim Shafer requested information from anyone who was aware of potential water users in the vicinity of the NIROP.
- d. Jim Shafer noted that reinjection of treated ground water into on-site soil will also be evaluated as a reuse option. Mark Lahtinen mentioned that the MPCA would consider such an option. At another site, the MPCA is considering a request for a variance from state regulations to allow reinjection of treated ground water. A public hearing is required as part of the variance request procedures. A similar variance request would be required for the NIROP. Adam Kramer said that the State Health Department must also be involved in the variance request review. It was also noted that an amendment to the ROD would be required if ground water reinjection was proposed.

2. Ground Water Flow Model

- a. Jeff Ciocco mentioned that RMT will also prepare a numerical ground water flow model for the site. Purposes for the model are to assess the effectiveness of the ground water capture system and to predict responses to pump system changes. The model will be developed using MODFLOW, a 3-dimensional model developed by the USGS. The flow model will be included in the

Determination Document, which will be submitted to the USEPA and the MPCA within 90 days after start-up of the ground water recovery system.

- b. John Betcher said that the USGS has done a flow model on a much larger regional area near the NIROP. Adam Kramer said that a draft report presenting the USGS model and results of their regional ground water study is being prepared. The model considers ground water contamination in the vicinity of the NIROP. Jeff Ciocco requested that the Navy be notified when the USGS report is issued. The report is expected to be available for public review.
- c. Bernd Rehm said that the USGS model will be useful for defining boundary conditions for the model to be prepared by RMT for the NIROP site. He said that data from the FMC site remediation will be used for gross data input to the model, particularly the geological information available from FMC. Integration of geological and hydrogeological data from the FMC site work with the NIROP model will be considered.
- d. RMT will contact Mike Schulenburg of the USGS to obtain the regional MODFLOW results.

I. Corrections to Notes for TRC Meeting #8

1. Adam Kramer said that he did not receive a copy of the notes for TRC meeting #8. He also mentioned that the correct spelling for the name of the new Minneapolis City Engineer is "Straub."
2. Mark Winson said that he did not make the comment regarding cleaning of the aquifer to MCLs; this comment was made by a representative of the Navy.
3. Darlene Weber said that FMC collected 5 samples of potable water within the plant in 1988, in response to questions by employees regarding quality of the water. She said that VOCs were detected at concentrations above the MCLs. (This comment was a clarification of the notes for meeting #8, in response to a question by Mark Winson, rather than a correction to the notes.)
4. Adam Kramer mentioned that he was not aware that VOC concentrations in the NIROP storm water discharge to the river exceeded the MCLs.

J. General Topics

1. Jim Shafer said that RMT has been selected by the Navy to design the on-site ground water treatment system, and to perform any future site investigations related to the CERCLA action. Contracting with RMT is being transitioned from the USACE to the Navy. The USACE will be involved in the project only until their current activities under Phase I of the ground water remedial action are completed.
2. The Navy will invite a representative of the USGS to attend TRC meeting #10. Mark Lahtinen will give Jim Shafer the name and address of the person at USGS who should attend the TRC meeting or receive the notes.

3. For the next TRC meeting, the DPRO will be at a new location at the plant. Visitors were asked to go to the new parking lot constructed at the north end of the plant, and to go to the second floor of the building marked as the DPRO.

**The next TRC meeting will be held at the DPRO office at the NIROP on Wednesday, June 5, 1991, at 1:00 p.m. (Note change from Thursday to Wednesday).**