

October 17, 1994

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
Contract No. N62467-94-C-0984
RMT Project No. 2826.03

Dear David:

Enclosed, for your use, are two copies of the notes from Technical Review Committee meeting #22 held at the Naval Industrial Reserve Ordnance Plant on September 8, 1994. Other copies of these notes have been distributed according to the attached Distribution List.

Sincerely,



Eric Gredell, P.E.
Project Manager

amt

Attachment



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**Minutes of Meeting
Technical Review Committee Meeting #22
September 8, 1994**

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

Technical Review Committee (TRC) meeting #22 was held at the Naval Industrial Reserve Ordnance Plant (NIROP) in Fridley, Minnesota, on September 8, 1994. A copy of the agenda distributed at the meeting and an attendance list are attached.

A. Introductions

1. David Cabiness opened the meeting.
2. An addendum to the notes that were issued previously for TRC meeting #20 (held on April 21, 1994) was distributed during the meeting (copy attached).
3. One written comment on the notes for TRC meeting #21 (held on June 23, 1994) was received by the Navy from John Flora of the City of Fridley. No other written comments have been received by the Navy, and no further comments were provided during meeting #22. Tom Bloom will complete his review of the notes for meeting #21 and will call David Cabiness with any comments he may have.

B. Actions Since Last TRC Meeting

1. A draft workplan for upgrading the groundwater extraction system (GWES) to improve the capture efficiency of contaminated groundwater was issued. Review comments have been received from the MPCA and USEPA. The draft workplan was also discussed at a meeting attended by the Navy, RMT, the MPCA, and the USEPA on July 28, 1994. The Navy will prepare written responses to the USEPA and MPCA comments and will issue the final workplan.

The approach for upgrading the GWES as described in the workplan includes construction of two new extraction wells located to the south of existing well AT-3A, in the United Defense parking lot. The groundwater flow model for the site was used to determine that two new wells are needed to provide effective capture of contaminated groundwater, instead of one new well as originally planned. A second well is needed primarily due to the presence of a clay layer within the saturated sand at the preferred well location. The clay layer necessitates groundwater extraction separately from the saturated sand above and below the clay. The combined flow rate from the two new wells will be approximately 200 gpm. The groundwater flow modeling also indicated that greater flow rates from the existing wells are important to establish effective hydraulic capture of contaminated groundwater over the entire site. Therefore, the workplan also describes efforts to improve the flow rates produced from the four existing extraction wells. A total flow rate from all six extraction wells (four existing and two new) of approximately 660 gpm is required to achieve effective hydraulic capture.

2. The draft Alternatives Array Document for soil remediation under Operable Unit (O.U.) #2 was issued on July 7, 1994. The report was prepared by RMT, under subcontract arrangements with Halliburton NUS. Review comments were received by RMT from the USEPA, the MPCA, the Navy, and Halliburton. The MPCA provided conditional approval of the draft report, pending resolution of their review comments. The Draft-Final Alternatives Array Document, which addressed the review comments, was issued on August 23, 1994. The USEPA and MPCA have 30 days from their receipt of the draft-final report to approve the report or provide comments. John Betcher commented that the copies of the "red-line" Draft-Final Alternatives Array Document that were sent to the MPCA were not received. RMT sent additional copies to the MPCA. The USEPA did receive copies of the report.

Preparation of the Draft FS Report for soil has begun. The draft FS is due to the agencies within 68 days of approval of the Alternatives Array Document.

Soil cleanup levels are currently being discussed among the Navy, the USEPA, and the MPCA. Cleanup levels will be determined on the basis of either health-based criteria or a soil leaching model. Linda Hicken said there are concerns that use of the MPCA's leaching model will result in required cleanup levels for the unsaturated soil that will preclude use of the preferred presumptive remedy, soil vapor extraction (SVE). The USEPA, MPCA, Navy, and RMT will meet following this TRC meeting to further discuss this matter.

3. Galen Kenoyer said that the MPCA's soil leaching model may not be appropriate for use in this situation. The model is based on the assumption that the unsaturated soil is a primary source of groundwater contamination as a result of leaching of contaminants to the groundwater by surface water infiltration through the soil. A preliminary mass balance based on data from the soil RI Report indicated a total quantity of TCE in the soil that is to be addressed under O.U. #2 of approximately 20 kg. For comparison, the amount of TCE removed in extracted groundwater since the extraction system began operation in 1992 is approximately 5,000 kg. The soil included under O.U. #2 may not be the primary source of contamination that has been removed in groundwater extracted to date. Even if the O.U. #2 soil was a significant source of groundwater contamination in the past, the mass of TCE remaining in the soil indicates that the majority of the TCE has already leached through the unsaturated soil and is presently below the groundwater table at the site. Use of a leaching model to establish soil cleanup levels is not appropriate in the context of soil and groundwater remediation over the entire site.
4. Tom Bloom said the USEPA and MPCA are close to resolving any changes in the MPCA soil leaching model to be used to set cleanup levels for O.U. #2. Mark Ferrey said that comments from the USEPA on the MPCA's leaching model would not significantly affect the cleanup levels based on the MPCA model, and therefore, the model can be used in its present form. He said the assumed biodegradation rate is the most sensitive parameter that affects the cleanup levels determined by the model.
5. The possible use of the "Summer's" leaching model for determining cleanup levels for O.U. #2 soil was discussed. It was agreed by all attendees that the Summer's model is not appropriate for use for the O.U. #2 soil and will not be considered further.
6. RMT is presently evaluating the existing GWES operation to develop recommendations for modifications to the system to increase the flow rate from the existing wells. A list

of the recommended modifications will be sent to United Defense and the Navy. United Defense will then complete the design of the modifications. The Navy may also make arrangements with United Defense to provide construction of the modifications.

7. Tim Ruda presented information on operation and maintenance of the groundwater extraction and pretreatment system. A copy of information distributed at the meeting is attached.

The pipelines for each extraction well system are cleaned periodically by using compressed air that is injected into the pipeline at each wellhead. This method has been relatively successful in removing scale and other deposits from the pipe and other pipe system components. No scale buildup has occurred in the AT-3A piping; however, scale does accumulate in the piping for the other 3 wells. Scale buildup has been found to occur primarily in the riser pipe in the wells from the pumps to the wellhead, rather than in the rest of the piping system. Pipeline cleaning is done when the flow rate from the wells decreases to approximately 50% to 75% of the "clean-pipe" flow rates. To provide a means to inspect the amount of scale buildup on the packing in the air stripping column, an inspection port will be installed at the base of the column.

Air samples were collected from the exhaust stacks on the activated carbon vessel on June 28, July 27, and August 31, 1994. The change-out frequency for the carbon bed is now approximately every 6 months. A PID/FID instrument is being used every 2 weeks to obtain real-time measurements of total VOC concentration in the carbon vessel exhaust. These readings are being compared with the laboratory results from analysis of the monthly air samples. The correlation between FID/PID readings and laboratory results will continue to be evaluated and refined as additional data are collected. This correlation will allow more accurate projections of the carbon bed life for scheduling carbon change-out.

United Defense has submitted a request to the MPCA to revise the method of analysis for air samples. A letter containing the MPCA's response was provided to United Defense during the meeting. John Betcher said that the monitoring methods could be revised again later to possibly reduce the required air sampling frequency based on the data that is being collected to correlate FID/PID readings with the lab results.

8. Doug Hildre reported that during recent construction to reduce the size of the NIROP plating shop, evidence of contaminated soil was observed beneath "east-side" plating tanks that were moved to the "west-side" plating shop area. The east-side equipment was installed in the early 1970s. Spills of plating solutions are known to have occurred in the past, which are believed to be the source of the soil contamination. United Defense contracted with Bay West to collect soil samples in the areas of possible contamination. These samples were collected from each of 2 soil borings. Manual sampling was used due to limited access space. Samples were collected from a depth of only 2' to 4' due to subsurface obstructions. The samples were sent for laboratory analysis for VOCs, copper, chromium, nickel, and cyanide. Results showed TCE at low concentrations at 2' depth, and "no-detect" for all VOCs at the 4' depth. Concentrations of copper, chromium, and nickel were in the range of 10 to 30 ppm; cyanide was reported at 49 ppm. Information describing these findings was sent to the MPCA and Navy. A report on the sampling and lab analysis is expected to be received by United Defense from Bay West in the near future; copies will be sent to the MPCA and Navy. Although the soil contamination was a result of an historical

release(s), United Defense also notified the Minnesota Duty Officer of the observed release. Relocation of the remaining plating tanks is expected to be completed in the first quarter of 1995. United Defense will propose a plan for additional soil investigation, if warranted by observations during the construction. No sewers were removed as part of the work to date. John Betcher requested that the soil samples already collected and any additional samples be tested for pH.

9. John Flora reported that a meeting was held in Fridley on September 7 with representatives for the Navy and the city to discuss the possibility of providing groundwater from the NIROP remedial action to the city as a supplemental potable water supply. He said he believes that the NPDES permit to be issued by the MPCA will require the groundwater to be treated to federal drinking water standards. He said that public comments during the comment period for the permit will dictate "zero TCE" as the limit for discharge to the river. The public is likely to protest any levels of VOCs in the discharge to water or air. If the NPDES permit requires the groundwater to be treated to drinking water standards for discharge to the river, the City of Fridley will probably be willing to take the water for use as a potable water supply. The city has 2 existing wells that pump from the "glacial aquifer." Therefore, the city is already aware of the general water quality characteristics for water from the glacial aquifer that will be pumped at the NIROP. During the winter, the projected flow rate from the NIROP GWES could supply as much as 20% of the city's water demand. If further groundwater treatment would be required prior to use in the city's system, a new treatment facility could be built adjacent to the NIROP along or in the highway right-of-way.

John Flora said that information on the groundwater quality in the Prairie du Chien/Jordan (PCJ) aquifer at the NIROP has not been published yet. He said it is necessary to inform the public of the condition of the PCJ aquifer. Tom Bloom said that this information was previously made available to the general public during the RI/FS and Record of Decision phases of the project, and that this data has already been considered by the USEPA and MPCA. Tom will send a copy of pertinent data to Mr. Flora.

C. Actions for Next Quarter

1. Responses to review comments from the USEPA and MPCA on the Annual Monitoring Report for 1993 will be issued with an addendum to the report that addresses the comments.
2. The Navy prefers to issue the final O&M Plan separately from the final O&M Manual that was prepared by the USACE. Tom Bloom said this was acceptable; he said it is understood that both the Plan and the Manual will need to be revised over time. David Cabiness said the Navy has received a computer disk containing the text for the O&M Manual.
3. Caroline Voelkers said the MPCA is still revising the draft NPDES permit. The draft permit is expected to be issued for the public comment period during the week of September 12. A public meeting is not currently planned by the MPCA. The MPCA requires that 20 to 25 written requests be received before a public hearing on a draft permit will be held. A lower number of requests or comments is needed to warrant scheduling of an informational public meeting. The MPCA will issue a notice to the

local Post Office, Fridley City Hall, and local newspapers, announcing the draft permit availability and the start of the comment period. However, newspapers are not required to publish the notice. The notice will also be mailed to the MPCA's full mailing list. Persons who want a copy of the draft permit can request a copy from the MPCA. The discharge limits for Outfall 020 that will be included in the draft permit will be the same limits shown in the preliminary copies of the permit provided previously to the Navy and United Defense by the MPCA. The comment period can be extended if necessary, at the MPCA's discretion. A public meeting could be held after the close of the formal comment period, if necessary.

Gary Eddy said the schedule for issuing the final permit must be considered with respect to the other work related to the groundwater remedial action. The NPDES permit will apply to construction, operation, and discharge from the planned groundwater treatment facility (GWTF). It will also address stormwater discharges. Drawings and specifications for the GWTF must be submitted to the MPCA for approval. The permit will be valid for 5 years. The planned reduction in the discharge flow rate of non-contact cooling water due to the new closed-loop cooling water system will be addressed.

4. The Navy has proposed to use health-based standards to set cleanup levels for soil under O.U. #2. Mark Ferrey said the O.U. #2 soil must eventually be remediated to levels that prevent further groundwater contamination. Linda Hicken said it is premature to clean O.U. #2 soil to very low levels until the soil under O.U. #3 is addressed. The Navy has a letter addressed to the MPCA regarding this issue that will be distributed and discussed at the meeting today following the TRC meeting.

David Douglas said the calculated TCE mass of 20 kg. does not address the distribution of TCE over the O.U. #2 area. The MPCA model would be appropriate to hot spots of TCE if the distribution is not uniform.

Galen Kenoyer said the estimate of 20 kg. was based on a summation of mass estimates from concentrations of all soil samples collected, times the estimated soil volume associated with each sample. He said if the MPCA model is used, input parameters for biodegradation rate that are different from the parameters selected by the MPCA should be used. It is likely that the majority of TCE from past releases in the O.U. #2 area has already reached the groundwater.

Doug Hildre said that data from the FMC site indicates that most TCE is in the groundwater, not in the unsaturated soil. At the FMC site, 12,000 lb. of VOCs have been removed in the groundwater, but the estimated amount in soil is less than 10% of this mass. He said it would be difficult to calculate a mass balance for TCE under the NIROP buildings.

Tom Bloom said he is concerned about possible hot spots of TCE under the plant buildings. Gary Eddy said that a "reasonable search" of soil under the buildings must eventually be performed. John Betcher said it could be more cost-effective for cleanup of the overall site to consider O.U. #3 soil in the near future; the MPCA has encouraged the Navy in the past to do this evaluation. Linda Hicken said the work under O.U.'s #2 and #3 should be integrated to determine the most practical approach for overall soil cleanup.

David Douglas said the presumptive remedy for O.U. #2, SVE, would be acceptable to the MPCA if the remedy selection guidance developed by the USEPA is followed. The MPCA is using presumptive remedies for other Minnesota Superfund sites. Selection of SVE as the presumptive remedy for O.U. #2 or #3 depends on the distribution of contaminants in both units. The MPCA will consider these factors in deciding how far to go with O.U. #2 cleanup.

5. A revision of the Remedial Action Workplan (RAWP) will be issued to address some proposed changes to the groundwater monitoring program and other items that have been identified since Revision 2 of the RAWP was issued in September 1992.
6. A revision of the Community Relations Plan (CRP) will be issued, primarily to address the creation of the Restoration Advisory Board.
7. Design of the upgrade for the GWES will proceed.

D. RCRA Status

No topics were discussed.

E. Community Relations

1. David Cabiness said that representatives of the Navy, the USEPA, and the MPCA attended a "kick-off" meeting for the creation of a Restoration Advisory Board (RAB) for management of the NIROP remedial activities. The Navy will schedule and present a public meeting to explain the purpose and function of the RAB to the general public. The Navy's intent is to have ample representation by the local community on the RAB. John Flora said the public meeting could be held at the Fridley public hall, with sufficient notice. The Navy will publish information on the RAB in local newspapers. Additional information will be published over time as the RAB program develops. The initial RAB meeting will be similar to the format of previous TRC meetings, and will be held during normal business hours. Depending on public interest, subsequent RAB meetings may be scheduled for evening hours, with regular TRC meetings held during the day. A decision regarding the format and scheduling for RAB meetings will be made later. The Navy will publish a sign-up sheet for RAB membership. The RAB will be comprised of a maximum of 20 people. John Flora will be the community co-chairman with David Cabiness representing the Navy. An announcement of the RAB creation will be published in the Fridley Focus and the Minneapolis Sun Times within the next 2 weeks. Several Fact Sheets and News Releases regarding the RAB will be published in the fourth quarter of 1994.

The MPCA requested that a team of MPCA staff be appointed to the RAB. Tom Bloom requested to review drafts of press releases before they are issued by the Navy.

2. John Flora reported that a location for the public information repository has not yet been selected. The repository is currently in the Defense Plant Representative Office at the NIROP.

F. General Topics

1. Tom Bloom explained the general requirements regarding obtaining permits under the Superfund program. David Douglas said the MPCA decided to waive the air permit requirement for the groundwater remedial action at the NIROP. The problems that have occurred related to compliance with the air emission limits for the groundwater pretreatment system are being addressed by the MPCA under an enforcement action, outside of a formal permit process. The Navy is responsible for compliance with the air limits under the provisions of the FFA.
2. John Flora asked about the type of "fail-safe systems" that will be provided for the planned GWTF, to address the public's concerns regarding potential discharge of contaminants to the air or surface water. David Douglas said these topics have been discussed at previous TRC meetings, which are open to the public. He said that health-based criteria define the air emission limits, and a suitable air emission control device is currently in operation. John Flora said the concern is not whether there are controls in place, but whether the limits have been met consistently. David Douglas said the previous incidents of non-compliance with the air limits were not addressed more quickly by the MPCA because the first monitoring data were not provided to the MPCA until February 1994. David Douglas said he will send a copy of the air monitoring data to John Flora. Gary Eddy said that public meetings were also held during the Record of Decision phase to provide information to the public regarding the details of the planned remedial action.
3. Stephen Beverly said the Navy must submit a proposed plan to the USEPA and MPCA by October 20, 1994, for additional remedial activities to be undertaken at the NIROP. This additional action would be associated with the settlement of the recent enforcement action. Some initial tasks related to O.U. #3 are being considered by the Navy to be included in the additional remedial action.
4. Representatives of Liesch Associates, Inc. requested a copy of the Annual Monitoring Report for 1993. They will contact the USEPA or MPCA to obtain a copy.
5. Tom Bloom said that data from operation and maintenance logs kept by United Defense operating personnel do not have to be sent to the public document repository.
6. Kerry Morrow reported that the Burlington Northern Railroad (BNR) is continuing thermal treatment operations for contaminated soil. These operations are occurring on BNR property immediately adjacent to the northeast corner of the NIROP property. The BNR brings contaminated soil to this area from other locations, and stockpiles the soil prior to treatment in a mobile incinerator. The stockpiles are not covered or protected from the elements. David Cabiness said he has discussed these activities with David Jeffries, the head Environmental Engineer for the BNR.

The Navy is concerned that contamination from the soil stockpiles from wind-blown dust, surface water runoff, or leachate into the groundwater may be affecting the soil or groundwater quality on Navy property. The Navy has previously requested the MPCA to investigate these activities, but has not received any information from the MPCA to date. David Douglas said he will send a copy of MPCA permits issued to the BNR and other information on the activities to David Cabiness.

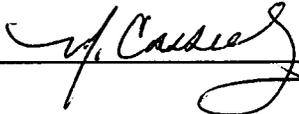
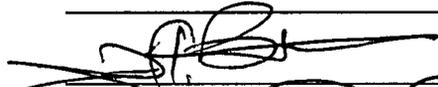
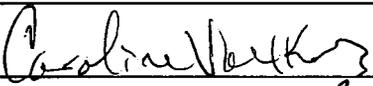
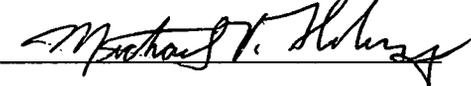
7. David Douglas requested the Navy to prepare a written schedule for key work items, reports, etc., for use at RAB meetings and for other purposes. Action items, information needed, and other topics should be included in the schedule. Stephen Beverly said the NIROP FFA, unlike FFA's for other Navy sites, does not require a Site Management Plan (SMP) that would include this type of information; however, he agreed that a SMP would be helpful for this site. Tom Bloom said the FFA could be revised later if it is agreed that a SMP should be required for this site.
8. The next meeting will be held on **Thursday, November 17, 1994, at 10:00 a.m.** in the Defense Plant Representative Office (DPRO) at the NIROP Fridley. At this meeting, the existing TRC members will elect the persons to participate on the RAB.

TECHNICAL REVIEW COMMITTEE (TRC) MEETING #22

September 8, 1994

NIROP FRIDLEY, MINNESOTA

LIST OF ATTENDEES

<u>NAME</u>	<u>ORGANIZATION</u>	
Margaret Casserly	Black and Veatch	
Scott Erickson	City of Fridley	
John Flora	City of Fridley	
Robert Hutchinson	County of Anoka	
Evan Drivas	DNR	
John Dresch	DPRO United Defense Minneapolis	
Keith Lura	DPRO United Defense Minneapolis	
Sue Oetterer	DPRO United Defense Minneapolis	
CDR Stephenson	DPRO United Defense Minneapolis	
Richard Ninesteel	Halliberten Nus	
James de Lambert	Liesch Associates Inc.	
Larry Cole	Minneapolis Water Works	
John Betcher	MPCA	
Dave Douglas	MPCA	
Gary Eddy	MPCA	
Mark Ferrey	MPCA	
Fred Jenness	MPCA	
Carolyn ^{Voelckers} Volker	MPCA	
Michael Flaherty	MWCC	

NAME

ORGANIZATION

Charles Smith	Naval Weapons Station	
Jeff Allison	NAVSEA	
Steve Hoffman	NAVSEA	
Kerry Morrow	NAVSEATECHREP Office	
Pat Mosites	REICC, Minneapolis	
Eric Gredell	RMT, Inc.	<i>Eric Gredell</i>
Linda Hicken	RMT, Inc.	<i>Linda Hicken</i>
Galen Kenoyer	RMT, Inc.	<i>Galen Kenoyer</i>
Charles Black	SOUTHNAVFACENGCOM	
Steve Beverly	SOUTHNAVFACENGCOM	<i>Steve Beverly</i>
David Cabiness	SOUTHNAVFACENGCOM	<i>David Cabiness</i>
Douglas Hildre	United Defense	<i>Douglas Hildre</i>
Timothy Ruda	United Defense	<i>Tim Ruda</i>
Thomas Bloom	USEPA	<i>Thomas Bloom</i>
<i>Bruce Lehwaldt</i>	<i>B.A. Liesch Associates</i>	<i>Bruce Lehwaldt</i>
<i>Paul Keski</i>	<i>City of Mpls</i>	<i>Paul Keski</i>
<i>MARK EAGOS</i>	<i>RMT</i>	<i>Mark Eagos</i>

NIROP FRIDLEY TRC MTG #22
SEPTEMBER 8, 1994
AGENDA

1. Introduction
2. Corrections to Minutes of TRC #21 and addendum to minutes of TRC #20.(copy attached)
3. Actions since last meeting.

Navy/RMT

- TRC Meeting #23 will be designated a Restoration Advisory Board(RAB) meeting in January timeframe.
- Annual Monitoring Report comments.
- Groundwater Extraction System(GWES) Upgrade workplan draft review meeting/final submission.
- Alternatives Report for Soil submission/comments
- Soil Leaching Model
- O&M Manual for Groundwater Extraction System
- Request to MPCA and USEPA for formal approval of sampling and sampling analysis modifications. (Revision of RAWP and QUAPP)
- FFA outstanding document completion schedule for OUI and OU2.
- Hydraulic evaluation of existing GWES by RMT.
- Overview of Enforcement Action

United Defense

- Maintenance & Monitoring Activities
- Letter to MPCA requesting approval of modification to current monthly sampling schedule for monitoring air emissions from the carbon vessel.
- Release from electroplating tanks.

MPCA

- NPDES Permit draft review/issue and Public comment period.

City_of_Fridley

- Availability of space at Fridley Municipal Center for Repository
- Navy providing program data to City's Technical Consultants.

4. Actions scheduled for next six months

- Formation of Restoration Advisory Board
- Obtain NPDES Permit
- Preliminary design of the new Groundwater Treatment Facility(GWTF)
- Upgrade of GWES to include addition of 2 wells and improvement of flowrates from existing wells.
- Working toward completion of GWTF design
- Work on Soil Feasibility Study for DU 2.

5. Other issues/comments

- Admin record/Public Repository requirements.

6. Next TRC Meeting

**Addendum to Minutes of
TRC Meeting #20
Held on April 21, 1994**

The following comments were provided by persons who received the notes for TRC meeting #20. The item numbers shown below correspond to the item numbers in the notes for TRC meeting #20.

A. Comments by Tom Bloom, USEPA

Item B.1., third paragraph:

Revise the first sentence to read: "He said the USEPA is proceeding with formal enforcement action due to non-compliance with the FFA and will require the Navy to continue action on this project."

Item C.3.:

Revise the second sentence to read: "Design criteria will be available within 2 to 3 weeks."

Item C.6.:

Add the following sentence at the end of this item: "Caroline Voelkers will provide design criteria limits in 2 to 3 weeks."

Item C.8., first sentence:

Add the word "model" after "soil cleanup."

Item C.9.:

Add the following sentence at the end of this item: "Tom Bloom noted that presently the Navy is out of compliance with the FFA, and that the agreed upon schedule to deliver documents (Alternatives Array) should take precedence over lengthy "contract arrangements" being finalized."

Item C.10.:

Add the following sentence at the end of the first paragraph: "Tom Bloom also mentioned the O&M Manual is a "working document;" therefore, changes and adjustments are understandable."

Item E.11.:

Add the following sentence at the end of this item: "It was noted that the public must be informed of the change in location."

Item F.8.:

Add the following sentence at the end of this item: "Tom Bloom explained that the regulatory agencies must also comply with such laws, and therefore, this does not justify non-compliance with the FFA."

Item F.9.:

Add the following at the end of this item: "Tom Bloom inquired about results. Chris Bartku said that results were not available yet."

Item F.10.:

Add the following sentence at the end of this item: "Doug Hildre said to "hold off" proceeding with name changes due to the potential for the name to change back within a couple of years."

B. Comments by David Douglas - MPCA

Item B.1., third paragraph:

Revise the first sentence to read: "He said the USEPA is proceeding with formal enforcement action because the Navy is in non-compliance with the FFA."

Item C.2., third sentence:

The meeting was planned to be held at the MPCA's office, not RMT's office.

Item C.3.:

Revise the fourth sentence to read: "The discharge limits will be equivalent to the state Recommended Allowable Limits, Health Risk Limits, or state water quality standards, whichever are most stringent." Delete the fifth and sixth sentences.

Item C.8.:

Revise to read as follows: "David Douglas said the MPCA has nearly completed preparation of the MPCA soil cleanup levels. The final MPCA/USEPA numbers will be available in the near future."

Item F.8., first sentence:

Delete the words "difficulties in arranging appropriate and efficient"

C. Comments by John G. Flora - City of Fridley

Item C.4., second sentence:

The sentence is in error. The city has not distributed water with any identified VOC levels since November 1992.

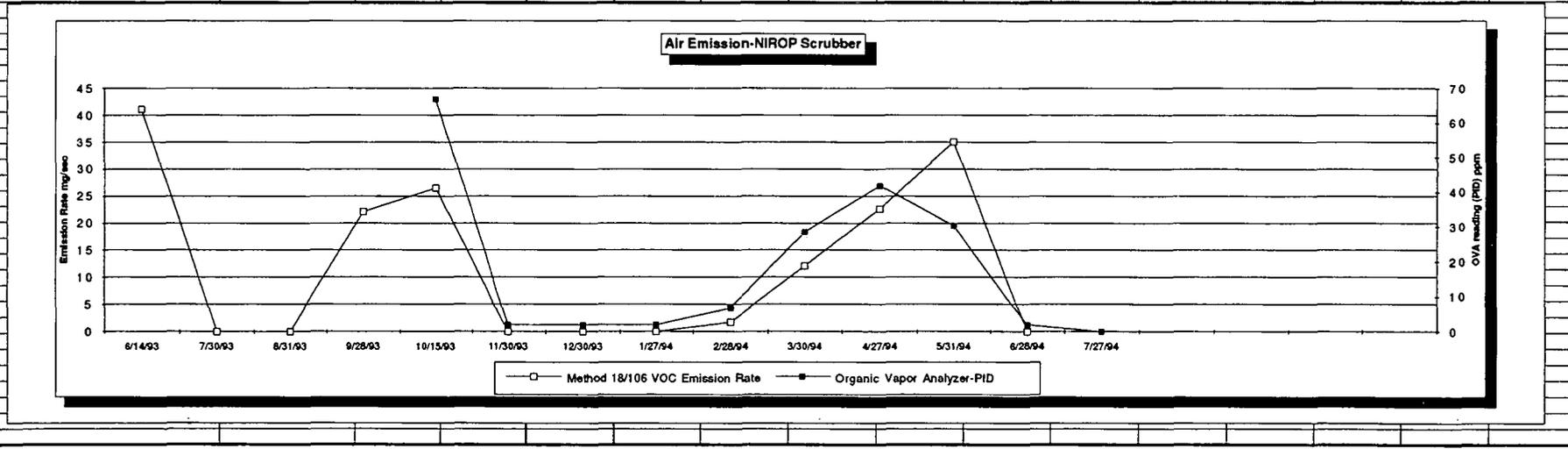
Item F.1. third paragraph, fifth sentence:

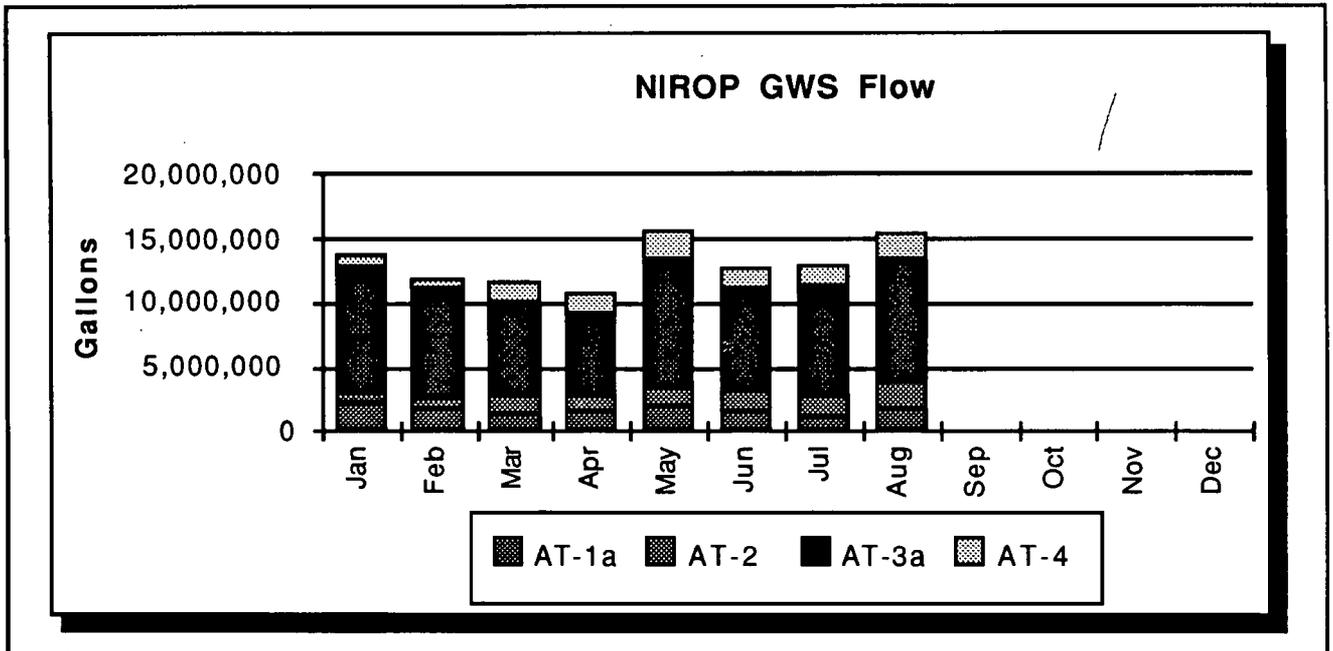
It was suggested that granular activated carbon should be used, not liquid-phase activated carbon.

Item F.1., fourth paragraph, third sentence:

Insert the acronym "VOC" after "zero-detect."

CONTAMINANTS	ALLOWABLE	6/14/93	7/30/93	8/31/93	9/28/93	10/15/93	11/30/93	12/30/93	1/27/94	2/28/94	3/30/94	4/27/94	5/31/94	6/28/94	7/27/94	
	EMISSION RATE	Jun-93	Jul-93	Aug-93	Sep-93	Oct-93	Nov-93	Dec-93	Jan-94	Feb-94	Mar-94	Apr-94	May-94	Jun-94	Jul-94	
	(UG/SEC) (AER)	(UG/SEC) (ER)														
Benzene (71-43-2)	4,600	< 140	< 25	< 260	ND	ND	< 29	< 40	< 26	< 29	< 60	< 33	< 33	< 33	< 33	
Toluene (108-88-3)	429,800	< 210	< 16	< 18	ND	ND	< 20	< 27	< 18	< 20	< 12	< 22	< 22	< 22	< 22	
Xylene (mixed) (1330-20-7)	497,700	< 210	< 16	< 18	ND	ND	< 20	< 27	< 18	< 20	< 12	< 22	< 22	< 22	< 22	
Ethylbenzene (100-41-4)	497,700	< 210	< 16	< 18	ND	ND	< 20	< 27	< 18	< 20	< 12	< 22	< 22	< 22	< 22	
Chloroform (67-63-3)	1,600	< 180	< 240	< 250	ND	ND	< 276	< 380	< 250	< 270	< 320	< 320	< 320	< 320	< 320	
Dichlorodifluoromethane (75-71-8)	767,200	< 260	< 60	< 60	ND	ND	< 65	< 90	< 60	< 65	< 3	< 1.5	1.64	< 0.075	2.2	
1,1-Dichloroethane (75-34-3)	1,918,000	< 190	< 68	< 71	ND	ND	< 77	< 99	< 71	< 77	95	160	< 88	< 88	< 88	
1,2-Dichloroethane (107-06-2)	1,500	< 140	< 25	< 26	ND	ND	< 29	< 40	< 26	< 29	< 60	< 33	< 33	< 33	< 33	
1,1-Dichloroethylene (75-35-4)	800	< 340	< 120	< 66	ND	ND	< 72	< 99	< 66	< 72	< 150	< 82	< 82	< 82	< 82	
1,2-Dichloroethylene (540-59-0)	2,083,900	1200	< 65	< 390	1200	4000	< 73	< 100	< 67	1300	4000	6500	3100	< 84	< 84	
Dichlorofluoromethane (65-43-4)	105,300	< 220	< 52	< 52	ND	ND	< 56	< 77	< 52	< 56	< 2.8	< 1.3	0.128	< 0.064	< 0.032	
Methylene Chloride (75-09-02)	80,600	< 1800	< 250	< 400	ND	ND	< 430	< 590	< 400	< 430	< 900	< 500	< 500	< 500	< 500	
1,1,2,2-Tetrachloroethane (79-34-5)	700	< 280	< 100	< 110	ND	ND	< 120	< 160	< 110	< 120	< 240	< 140	< 140	< 140	< 140	
Tetrachloroethylene (127-18-4)	65,200	<1300	< 95	< 100	ND	ND	< 110	<160	< 100	< 110	< 220	< 120	< 120	< 120	< 120	
1,1,1-Trichloroethane (71-55-6)	3,835,800	< 47	< 84	< 89	ND	ND	< 96	< 130	< 89	< 96	< 200	< 110	< 110	< 110	< 110	
1,1,2-Trichloroethane (79-00-5)	2,400	< 220	< 84	< 88	ND	ND	< 95	< 130	< 88	< 95	< 200	< 110	< 110	< 110	< 110	
Trichloroethylene (79-01-6)	22,600	40000	< 83	< 1900	21000	22500	< 94	< 130	< 86	450	8000	16000	32000	< 110	< 110	
Trichlorofluoromethane (75-69-4)	2,685,100	< 280	< 69	< 68	ND	ND	< 74	< 100	< 68	< 74	2.4	< 1.6	0.172	< 0.086	2.2	
Vinyl Chloride (75-01-4)	460	< 140	< 31	< 31	ND	ND	< 34	< 47	< 31	< 34	3.9	4.1	8.4	5	10	
Comments																
Carbon Vessel replaced		6/23/93						10/26/93						6/10/94		
Organic Vapor Meter Reading East Stack (PID)						43	1		1		2.7	14.1	20	15.8	1	0
Organic Vapor Meter Reading West Stack (PID)						24	1		1		4.1	14.5	22	14.6	1	0
Organic Vapor Meter Reading East Stack (FID)																0
Organic Vapor Meter Reading West Stack (FID)																0
TVOC ppm PID unit sum total of 2 stacks						67	2		2		6.8	26.6	42	30.4	2	0
Total VOC emission rate mg/sec		41.2	0	0	22.2	26.5	0	0	0	1.75	12.10	22.66	35.11	0.01	0.01	





NIROP Maintenance Activities June 23 to August 8.

- * Monitoring Well sampling conducted August 9-11. Including well 25S, 4D, 12D and 13D.
- * Water Level Readings taken June 30.
- * Pipe lines sparged with air on July 26.
- * RMT conducted equipment evaluation August 11, 12.

Planned Activities

- * *Quarterly water Level readings September 27.*
- * *Monitoring and Extraction Well sampling November 7.*
- * *Sampling port installation for scrubber packing.*
- * *Carbon Bed Modeling to be conducted in October with*