



SITE MANAGEMENT PLAN

**NAVAL INDUSTRIAL RESERVE
ORDNANCE PLANT
FRIDLEY, MINNESOTA**

MARCH 2001



SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORTH CHARLESTON, SOUTH CAROLINA
29419-9010

5090
Code 1868
March 1, 2001

Mr. Tom Bloom (HSRM-6J)
U.S. Environmental Protection Agency
Region V
77 West Jackson Boulevard
Chicago, IL 60604-3590

Mr. David Douglas
Minnesota Pollution Control Agency
Site Remediation Section
520 Lafayette Road
St. Paul, MN 55155-4194

Subj: NIROP FRIDLEY-SITE MANAGEMENT PLAN FOR CY2001

Dear Tom and David:

Please find the Site Management Plan for Calendar Year 2001 for the Naval Reserve Ordnance Plant, Fridley, Minnesota.

Should you have any questions or comments, I can be reached at (843) 820-5562.

Sincerely,

JOEL R. SANDERS, P.E.
Remedial Project Manager
Installation Restoration II Branch

Encl:
Site Management Plan for CY 2001

Copy to: (w/encl)
NAVSEA (Tech Rep, Al Dietrich)
NAVSEA (John Aubert)
Tetra Tech NUS Inc (Mark Sladic)
CH2M HILL (Venky Venkatesh)
RAB (Co-Chair, Richard Harris)

ENVIR (w/o encl)
18 Circ
186
1868
Daily
J:\1868\FRIDLEY-SMP.DOC

1868
18E2pap *JS*

DEPARTMENT OF THE NAVY

SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
P.O. BOX 180010
2155 EAGLE DRIVE
NORTH CHARLESTON, S.C. 29419-9010

5090
Code 1868
March 1, 2001



Mr. Tom Bloom (HSRM-6J)
U.S. Environmental Protection Agency
Region V
77 West Jackson Boulevard
Chicago, IL 60604-3590

Mr. David Douglas
Minnesota Pollution Control Agency
Site Remediation Section
520 Lafayette Road
St. Paul, MN 55155-4194

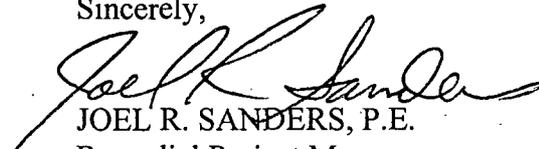
Subj: NIROP FRIDLEY-SITE MANAGEMENT PLAN FOR CY2001

Dear Tom and David:

Please find the Site Management Plan for Calendar Year 2001 for the Naval Reserve Ordnance Plant, Fridley, Minnesota.

Should you have any questions or comments, I can be reached at (843) 820-5562.

Sincerely,


JOEL R. SANDERS, P.E.
Remedial Project Manager
Installation Restoration II Branch

Encl:
Site Management Plan for CY 2001

Copy to: (w/encl)
NAVSEA (Tech Rep, Al Dietrich)
NAVSEA (John Aubert)
Tetra Tech NUS Inc (Mark Sladic)
CH2M HILL (Venky Venkatesh)
RAB (Co-Chair, Richard Harris)

NAVAL INDUSTRIAL RESERVE ORDNANCE PLANT

FRIDLEY, MINNESOTA

**SITE MANAGEMENT PLAN
FOR CY 2001**

Prepared by:

**Department of the Navy
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
N. Charleston, South Carolina**

**CY 2001 Site Management Plan
Naval Industrial Reserve Ordnance Plant
Fridley, Minnesota**

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page No.</u>
I.	INTRODUCTION	2
II.	SITE MANAGEMENT PLAN HIGHLIGHTS 1997-2000	2
III.	OPERABLE UNITS	6
	-Table 1 - OU Description Chart	6
IV.	CY 2001 AND FUTURE PROGRAM OBJECTIVES AND DOCUMENT DELIVERABLES	7
V.	SCHEDULE	8
	Figure 1 - NIROP Fridley Site Management Schedule for Operable Unit #1, 2, 3	
VI.	SPECIFIC ACCOMPLISHMENTS OF THE NIROP PARTNERING TEAM	9
VII.	SPECIFIC GOALS OF THE NIROP PARTNERING TEAM	12

**SITE MANAGEMENT PLAN
NAVAL INDUSTRIAL RESERVE ORDNANCE PLANT
FRIDLEY, MINNESOTA
CY 2001**

I. INTRODUCTION

This Site Management Plan (SMP) is prepared to promote the objectives expressed in the Federal Facility Agreement (FFA) between the Department of the Navy (Navy), the U.S. Environmental Protection Agency, Region V, (USEPA) and the Minnesota Pollution Control Agency (MPCA), dated 28 March, 1991. The basic intent of this plan is to provide:

1. An overall site environmental restoration management strategy for the Naval Industrial Reserve Ordnance Plant (NIROP);
2. A complete list and description of all designated Operable Units (OUs) at the NIROP;
3. A schedule of work to be accomplished and document deliverables (primary and other) to be prepared and submitted by the Navy to USEPA and MPCA in the upcoming Calendar Year (CY);
4. An extended work accomplishment and document deliverable (primary and other) schedule setting forth subsequent (i.e., second year) target completion dates.

It is not the intent of the Navy, USEPA, or the MPCA that this SMP modify or negate those legal rights and obligations acknowledged in or created by the NIROP Fridley FFA. The SMP is to serve as a management tool for optimizing effective implementation of the Installation Restoration Program (IRP) at the NIROP. Should any conflict arise between the terms of the SMP and the FFA, the terms of the FFA shall control.

II. SITE MANAGEMENT PLAN HIGHLIGHTS 1997-2000

This section memorializes some of the highlights and strategies accomplished from 1997-2000. The first SMP was issued March in 1997.

SMP 1997

The overall site management strategy for the NIROP was modified in 1997. Prior management strategy involved the hydraulic containment, on-site treatment, and off-site discharge of contaminated groundwater. The investigation and remediation of on-site subsurface source areas outside the NIROP manufacturing building (Navy property) (OU 2) was to be conducted separately from the investigation and remediation of on-site subsurface source areas underneath the NIROP manufacturing building (Navy property) (OU 3). However, the Navy, USEPA, and MPCA agreed that combining the investigation and remediation of on-site source areas located both outside of and beneath the NIROP manufacturing building will be the

most efficient overall management strategy for the NIROP. This change in management strategy was prompted by results obtained from preliminary on-site investigation of subsurface source areas beneath the NIROP manufacturing building. A decision that it would be more effective to address remedy selection for both OU 2 and OU 3 concurrently was made. Therefore, the site management strategy was modified to combine the remedy selection for OU 2 with the remedy selection for OU 3.

In July 1997, the MPCA Water Quality Department conducted an assessment of the impact to the Mississippi River from the ground water contamination coming from the NIROP. This assessment concluded that an adverse impact to the river may exist based on the surface water quality standards applied to the stretch of the Mississippi River at the NIROP and the concentrations of ground water contamination that remain under Anoka County Park. Following this MPCA Water Quality assessment, the Navy initiated a sampling effort in Anoka County Park to collect geological and groundwater contamination data using direct push sampling techniques.

In early 1997, Naval Sea Systems Command (NAVSEA), the owner of the NIROP, started the process of transferring ownership of NIROP to the private sector. An Environmental Baseline Survey (EBS October 1997) was completed in order to transfer the property. The transfer of ownership does not change the Site Management Strategy described herein, and the Navy will continue with its obligations to execute the IRP at NIROP Fridley in accordance with the requirements of the FFA.

SMP 1998

In September 1998, the Five Year Review for the OU1 remedy, provided a "list of determinations" or data gaps for further assessment and potential actions to be taken in response to the groundwater contamination identified in Anoka County Park. The "list of determinations" included:

(1) By September 1999, the Navy will confirm whether the present GW extraction system has achieved substantial hydraulic containment through evaluation of chemical and physical groundwater data and use of that data in a groundwater model. If the determination is made that a substantial amount of contaminated groundwater is flowing past the extraction well system, the extraction well system will be enhanced so that groundwater from the NIROP does not continue to flow into Anoka County Park.

(2) By September 1999, the Navy will fill data gaps in the existing GW and surface water monitoring network and revise the Remedial Action Monitoring Plan (RAMP) to document the additional monitoring;

(3) By September 1999, the Navy will determine if any sources exist in Anoka County Park that may impact residual GW contamination levels in the area where contamination is present;

(4) The MPCA will conduct another surface water assessment to incorporate new groundwater sampling information and groundwater modeling information to determine whether surface water standards and criteria are exceeded after the recommended actions above are completed.

(5) By September 1999, the Navy will determine what can be done to promote reduction of residual groundwater contamination in Anoka County Park to a level that will significantly reduce residual groundwater contamination, and determine if a response action will enhance the effectiveness of the selected remedy as it relates to residual groundwater in Anoka County Park, and if warranted, will conduct a response action that will significantly reduce residual groundwater contamination and enhance the effectiveness of the selected remedy as it relates to residual groundwater contamination from NIROP in Anoka County Park by September 2000.

SMP 1999

In 1999, the Partnering Team further enhanced the 1997 strategy of combining the OU 2 and OU 3 remedy selection process. In December 1999, the Partnering Team decided to allow Chapter 7, Table 7-1, of the Final RI/BRA for OU 3 as the Alternatives Array Report for OU 2/3 – thus allowing the Navy to proceed with the OU 2/3 Feasibility Study.

Pursuant to the OU 1 Five Year ROD Review action items, 1999 field work was completed for OU 1 and Anoka County Park that provided additional information to address the data gaps identified above in the Five Year Review. The monitoring well network along the Mississippi River was installed in September 1999 and will be incorporated into the Basewide groundwater sampling network.

Naval Sea Systems Command (NAVSEA), the owner of the NIROP, continued the process of transferring ownership of NIROP to the private sector. An Environmental Baseline Survey (EBS October 1997) and Finding of Suitability to Transfer (FOST April 30, 1999) were completed in order to transfer the property. Since the transfer of the property is required prior to completion of all cleanups, a Covenant Deferral Request (CDR) was prepared to allow for the early transfer of the NIROP. The EPA Region V Administrator, approved the CDR January 29, 1999 with the concurrence of the Governor of Minnesota (December 31, 1999), to allow the transfer to take place. The transfer of ownership does not change the Site Management Strategy described herein, and the Navy will continue with its obligations to execute the IRP at NIROP Fridley in accordance with the requirements of the FFA.

SMP 2000

In October 2000, the Partnering Team agreed that the Feasibility Study for OU 2/3 will not be required since the forthcoming risk assessment will allow a remedy requiring land use restrictions. Environmental restoration decision documents (Proposed Plan/Record of Decision) will evaluate against the nine criteria as well as describe the exposure scenario used to select the remedy.

Pursuant to the OU 1 Five Year ROD Review action items, the Field Investigation Report at the Anoka County Riverfront Park was issued in April 2000 to address the findings and recommendations of the 1999 fieldwork for OU 1 and Anoka County Park. Based on this report and subsequent meetings by the Technical Subcommittee, the Partnering Team agreed to the following in August 2000: upgrade the Groundwater Treatment Facility by installing 4 new extraction wells (AT -7, 8, 9, 10), abandoning existing extraction wells AT-1, 2, 4 and water service wells NIROP 2 and 3; re-establish the compliance boundary to the west of the NIROP

property and the western edge of Anoka County Park; conduct a Pilot Scale Study of Vegetable Oil Dechlorination in Anoka County Park. The Partnering Team also agreed that if the vegetable oil dechlorination technology is successful, the process will be implemented full scale in Anoka County Park and will be evaluated, along with any better remedies, to see if the technology can be applied to source areas under the building. If addressing the source area under the building is successful, the lifecycle of the GWTF may possibly be reduced.

The two water service wells were abandoned and the 4 new extraction wells were installed in December 2000. Piping, connections, computer upgrades, and abandonment of existing extraction wells will be completed in spring/summer 2001. The Pilot Scale vegetable oil study will begin in the summer 2001 and run for one year.

NOTE: SEE SECTION VI OF THIS PLAN ON OTHER "SPECIFIC ACCOMPLISHMENTS" OF THE PARTNERING TEAM FOR NIROP FRIDLEY.

III. OPERABLE UNITS

Three Operable Units (OUs) have been established at the NIROP in order to facilitate timely and effective investigation and clean-up of contaminated soils and groundwater at the site. OU 1 encompasses contaminated groundwater that originated on-site. OU 2 encompasses on-site subsurface source areas, in the unsaturated zone, outside of the NIROP manufacturing building. OU 3 encompasses all on-site subsurface source areas beneath the NIROP manufacturing building and on-site subsurface source areas, in the saturated zone, outside the NIROP manufacturing building. Consistent with the change in overall site management strategy, if practicable, remedy selection for OU 2 and OU 3 will be addressed concurrently.

Prior investigations conducted at the site indicate that the subsurface source areas in both OU 2 and OU 3 are likely contributing to the groundwater contamination detected in OU 1. Table 1 below further describes each OU and indicates the present status of each in terms of those investigations/remedial efforts, which have been undertaken to date:

Table 1
OU Description Chart

OU	Name	Waste Type	Sources of Contamination	Status of Investigative / Remedial Activities
1	Groundwater Contamination	Solvents	Industrial Operations.	Record of Decision (ROD) executed in 1990. Groundwater Treatment Facility began operation December 1998. Five year review completed September 1998.
2	On-site subsurface source areas, (unsaturated zone) outside of the NIROP manufacturing building.	Solvents, Poly Aromatic Hydrocarbons (PAH)	Drum disposal areas.	Feasibility Study (FS) is finalized. OU 2 remedy selection postponed until OU 3 RI/FS is complete.
3	On-site subsurface source areas, (saturated & unsaturated zone) beneath the NIROP manufacturing building and on-site subsurface source areas, (saturated zone) outside of the NIROP manufacturing building.	Solvents, metals, other unknowns	Industrial Operations.	OU 3 RI/FS field work complete. Draft Final RI/BRA submitted to the regulators August 1999. Submitted OU 2/3 Supplemental RI Report August 1999. Currently addressing regulatory comments on the OU 3 Draft Final RI/BRA and Supplemental RI Report. Initiating OU 2/3 FS.

IV. CY 2001 PROGRAM OBJECTIVES AND DOCUMENT DELIVERABLES

This SMP sets forth a comprehensive schedule of primary and other document deliverables and site response activities to be conducted in a CY. It also sets forth target work completion and document deliverables schedule for the following CY. This SMP is intended to be a tool for effective program management which is updateable on an annual basis or as may otherwise be warranted and mutually agreed upon by the Navy, USEPA and MPCA.

The CY 2001 Program Objectives for the NIROP are as follows:

- Conduct Data Quality Objectives (DQO) for hydraulic containment, groundwater monitoring sampling, diffusion samplers, vegetable oil dechlorination success criteria; and non-Navy sources of contamination.
- Finalize Remedial Action Work Plan (RAWP) for OU 1 for FY2001 groundwater sampling; Finalize Basewide Qapp:
- Complete the Remedial Investigation (RI) Report for OU 3 and the Risk Assessment for OU 2/3;
- Resolve comments on 1999 Annual Monitoring Report (AMR) and submit 2000 AMR and Groundwater Model;
- Complete resolution of Five Year Review recommendations.
- Initiate Pilot Scale Study for Vegetable Oil Dechlorination at Anoka County Park.
- Complete GWTF Upgrade.
- Issue SMP for CY 2002;

The CY 2001 Document Deliverables for the NIROP are as follows:

Primary Documents:

Final Remedial Investigation (RI) Report
For OU 3 and Updated Risk Assessment
for OU 2/3.

5 August 2001

Other Deliverables:

GWTF Upgrade Construction Completion Report
RAWP/QAPP Revision/Diffusion Sampler Implementation
Draft 1999 AMR/GW Model
SMP for CY 2002

9 August 2001
15 September 2001
31 March 2001
31 January 2002

NOTE: SEE SECTION VII OF THIS PLAN ON OTHER "SPECIFIC GOALS" OF THE PARTNERING TEAM FOR NIROP FRIDLEY.

V. SCHEDULE

The SMP schedule reflects submission dates for primary document deliverables. Consistent with FFA requirements, for primary deliverable submittals, review periods to final report issuance will be as follows:

USEPA and MPCA review draft - 30 days

Navy comment on responses to draft and delivery of draft final - 45 days

USEPA and MPCA review/approval of draft final - 30 days

The MPCA has requested that the Navy and UDLP investigations be completed in parallel. The Navy and UDLP coordinated to the greatest extent practical, however, it is apparent that the two investigations will finish at different times.

Consistent with FFA requirements, those draft and draft final primary document deliverable deadlines set forth in the first CY of the SMP schedule (1 January to 31 December) as presented in Figures 1, are enforceable. Those document submittal dates reflected in the out year schedules (1 January to 31 December) are target dates and thus are subject to change prior to finalization in the out year schedules.

As part of the SMP, the Navy, USEPA, and MPCA will discuss Program Objectives and Document Deliverables at the quarterly Restoration Advisory Board (RAB) meetings to assess progress. Changes to the Program Objectives and the Document Deliverable schedule will be noted and discussed at the quarterly RAB meetings.

AN INTEGRATED MASTER SCHEDULE FROM PRESENT TO SITE CLOSEOUT WILL BE PRESENTED TO THE PARTNERING TEAM IN APRIL 2001. THE SCHEDULE WILL BECOME A MANAGEMENT TOOL FOR THE PARTNERING TEAM. THE MASTER SCHEDULE IS NOT INCLUDED IN THIS YEARS SMP BECAUSE THE SMP IS FOR CY2001 ONLY. THE NAVY INTENDS TO CHANGE THE CONCEPT OF THE PLAN FROM A YEARLY PLAN/SCHEDULE TO AN EXIT STRATEGY PLAN/SCHEDULE .

VI. SPECIFIC ACCOMPLISHMENTS OF THE NIROP PARTNERING TEAM

(DECEMBER 6, 2000 (REVISED JANUARY 27, 2001))

- 1. THE TEAM AGREED ON SOIL CLEAN UP NUMBERS FOR SOIL LEACHING IN JANUARY 1997.**
- 2. THE TEAM RESOLVED THE CONTRACT VEHICLE FOR DESIGN/ CONSTRUCTION OF WATER TREATMENT PLANT IN JANUARY 1997.**
- 3. THE TEAM DEVELOPED HBV'S IN JANUARY 1997.**
- 4. THE TEAM AGREED ON OU3 RISK ASSESSMENT METHODOLOGY IN FEBRUARY 1997.**
- 5. THE TEAM FINALIZED THE INITIAL SITE MANAGEMENT PLAN IN MARCH 1997. FOLLOW-UP SMPS ARE PREPARED ANNUALLY.**
- 6. THE TEAM DOCUMENTED REASONABLE LAND USE IN MARCH 1997.**
- 7. THE TEAM COMPLETED TIER II DELIVERABLES IN MARCH 1997.**
- 8. THE TEAM SUBMITTED DRAFT FINAL OU3 WORK PLAN IN APRIL 1997.**
- 9. THE TEAM INITIATED NIROP OU3's RI CONCURRENT WITH UDLP's RI IN AUGUST 1997.**
- 10. THE TEAM STARTED OU3 FIELDWORK IN AUGUST 1997. THE DRAFT RI REPORT WAS COMPLETED IN AUGUST 1998, AND WAS MOST RECENTLY REVISED IN AUGUST 1999.**
- 11. THE TEAM WORKED THROUGH OU1 FUNDING ISSUES BY SEPTEMBER 1997.**
- 12. THE TEAM FINALIZED RAB OPERATING PROCEDURES IN SEPTEMBER 1997.**
- 13. THE TEAM HAD PUT TOGETHER AN INITIAL COMPREHENSIVE SITE GIS DATABASE BY OCTOBER 1997, AND UPDATES IT ROUTINELY.**
- 14. THE NTP TREATMENT PLAN WAS COMPLETED BY NOVEMBER 1997.**
- 15. THE TEAM RESOLVED ALL TREATMENT PLANT ISSUES WITHIN BUDGETARY CONSTRAINTS DURING 1997.**
- 16. THE TEAM WORKED WITH THE MINNEAPOLIS HEALTH DEPARTMENT TO COMPLETE A PUBLIC HEALTH ASSESSMENT DRAFT REPORT THROUGH MARCH 1998. THE FINALIZED HEALTH ASSESSMENT WAS COMPLETED IN SEPTEMBER 1999.**

17. THE TEAM COMPLETED THE INITIAL OUI 5-YEAR REVIEW IN OCTOBER 1998.
18. THE TEAM FACILITATED AN OPERATIONAL GROUND WATER TREATMENT PLANT STARTUP IN DECEMBER 1998.
19. THE TEAM IMPLEMENTED AN EFFECTIVE COMMUNITY RELATIONS PLAN AND DISTRIBUTED IT TO THE RAB IN AUGUST 1999.
20. THE TEAM FACILITATED A SIGNED COVENANT DEFERRAL REQUEST IN AUGUST 1999.
21. TO THE TEAM DEVELOPED FACT SHEETS FOR THE COMMUNITY PRIOR FIELDWORK FOR ANOKA COUNTY PARK IN SEPTEMBER 1999.
22. THE TEAM FINALIZED THE ANOKA COUNTY PARK FIELDWORK PLAN IN AUGUST 1999. ANOKA COUNTY PARK FIELDWORK WAS COMPLETED IN DECEMBER 1999.
23. THE TEAM SUCCEEDED IN MORE EFFECTIVE TIME MANAGEMENT, RESULTING IN MEETING FOR 2 DAYS VERSUS 3 DAYS THROUGHOUT 1999, AND EVENTUALLY TO MEETING FOR A SINGLE DAY PER MEETING STARTING IN 2000.
24. THE NAVY AWARDED A CONTRACT FOR LONG TERM OPERATIONS AND MAINTENANCE TO A LOCAL CONTRACTOR IN 1999.
25. THE TEAM REACHED CONSENSUS ON ACP PILOT SCALE STUDY IN FEBRUARY 2000.
26. THE TEAM AGREED TO USE MPCA GUIDANCE AS SOPs FOR ANNUAL SAMPLING, INCLUDING USING LOWER-FLOW SAMPLING, IN JUNE 2000.
27. THE TEAM AGREED TO REDUCING SITE GROUNDWATER MONITORING TO ANNUAL SAMPLING IN JUNE 2000.
28. THE TEAM AGREED TO ELIMINATION OF CARBON DISULFIDE MONITORING IN THE GWTF DISCHARGE IN JUNE 2000.
29. THE TEAM REALIZED COST SAVINGS BY CHANGING NPDES SAMPLING METHODS TO 624 VERSUS 601 FOR VOCS IN JUNE 2000.
30. THE TEAM AGREED ON MODIFICATION TO PUMP OUT SYSTEM IN AUGUST 2000.

31. THE TEAM IMPLEMENTED DIFFUSION SAMPLING STUDY IN SEPTEMBER 2000.
32. THE USGS PERFORMED AND INTERPRETED PUMP TESTS ON AT5A, AT5B, AT3A, AND AT4. COMPLETED IN SEPTEMBER 2000.
33. THE TEAM REACHED CONSENSUS ON ELIMINATING THE NEED FOR AN ALTERNATIVE ARRAY REPORT AND FEASIBILITY STUDY FOR OU3 IN OCTOBER 2000.
34. THE USGS COMPLETED DOWN-HOLE GEOPHYSICS TO RESOLVE GEOLOGICAL INTERPRETATIONS IN NOVEMBER 2000.
35. THREE CONSECUTIVE MONTHS OF MPCA SAMPLING OF THE MISSISSIPPI RIVER PROVED THAT CONTAMINANT LEVELS ENTERING MINNEAPOLIS WATER WORKS ARE ALL AT NONDETECT LEVELS (BY LOW-LEVEL ANALYSES). SAMPLING WAS COMPLETED IN SUMMER AND FALL 2000.
36. MPCA COMPLETED SAMPLING AND RISK SCREENING FOR ANOKA COUNTY PARK IN DECEMBER 2000.
37. NIROP PRODUCTION WELLS WERE ABANDONED IN DECEMBER 2000.
38. BY OPERATION OF THE UPGRADED GWTF, THE NAVY WENT FROM \$900,000 PER YEAR TO ZERO DOLLARS PAID TO THE CITY OF FRIDLEY AND MCES FOR SEWER FEES DURING 2000.
39. THE GWTF HAS OPERATED SINCE STARTUP IN 1999 AND THROUGHOUT 2000 WITHOUT EXCEEDING DISCHARGE LIMITS.
40. FY1999 AND FY2000 PLANS WERE FULLY EXECUTED WITHOUT FUNDING DELAYS.
41. THE AMR EVOLVED INTO MORE INFORMATIVE AND COMPREHENSIVE DOCUMENTS DURING 2000.
42. THE TEAM DELEGATED INCREMENTAL RESPONSIBILITY TO THE TECHNICAL SUBCOMMITTEE DURING 2000.
43. THE GWTF HAS REMOVED APPROXIMATELY ONE (1) TON PER YEAR OF TCE AND TO DATE ABOUT TWELVE (12) TONS HAVE BEEN REMOVED.
44. YEARLY GROUNDWATER ANNUAL MONITORING REPORTS ARE BEING ISSUED, AND ARE BEING IMPROVED TO INCREASE UTILITY EACH YEAR.

VII. SPECIFIC GOALS OF THE FRIDLEY TEAM

(UPDATED ON DECEMBER 6, 2000)

THE TEAM WILL:

- **PLAN FOR THE ONGOING SHARING OF RESPONSIBILITIES IN THE DEVELOPMENT OF PROJECT DOCUMENTS.**
- **CONTINUE IDENTIFYING AND RESOLVING FUNDING ISSUES.**
- **CONTINUE TO BETTER UTILIZE COMMUNITY MEMBERS IN THE RAB.**
- **CONTINUE TO REFINE THE SITE CONCEPTUAL MODEL AS NEW INFORMATION IS OBTAINED.**
- **CONTINUE TO RESOLVE GROUNDWATER CONTAINMENT, RESIDUAL CONTAMINATION IN ANOKA PARK, AND DISCHARGE OF CONTAMINANTS TO THE RIVER.**
- **CONTINUE TO ATTEMPT TO ELIMINATE SIDE BAR DISCUSSIONS AT TEAM MEETINGS.**
- **CONTINUE TO HAVE OPEN AND HONEST COMMUNICATIONS.**
- **CONTINUE TO COMMIT TO EDUCATING TEAM MEMBERS ON POLICY OBSTACLES.**
- **CONTINUE TO FACILITATE PROPERTY TRANSFER.**
- **DEVELOP A NIROP WEBSITE BY APRIL 2001.**
- **DEVELOP FACT SHEETS FOR THE COMMUNITY PRIOR TO FIELDWORK FOR VEGGIE OIL, EXPECTED TO BE BY MAY 2001.**
- **DEVELOP DQOs FOR VEGGIE OIL, LTM, AND RAL BY MARCH 2001.**
- **BEGIN TO UTILIZE AN INTEGRATED MASTER SCHEDULE BY APRIL 2001 THAT ADDRESSES FROM THE PRESENT TO SITE CLOSEOUT .**
- **SELECT THE REMEDY FOR ACP BY JANUARY 2002.**
- **FINALIZE THE ACP FOUNDRY SAND/ISOCYANATE INVESTIGATION BY OCTOBER 2001.**

- **FIND A NEW MEETING ROOM IF AND WHEN REQUIRED BY NIROP PROPERTY SALE ACTIVITIES.**
- **CONTINUE WITH TECHNICAL SUBCOMMITTEE MEETINGS AS REQUIRED.**
- **DEVELOP A TIER I/II PRESENTATION FOR THE REGIONAL MEETING BEING HELD IN APRIL 2001.**
- **COMPILE SITE ADMINISTRATIVE RECORDS/DATA AND HAVE THEM IN THE RESPOSITORY LOCATION BY MAY 2001.**
- **HAVE A ROD SIGNED FOR OU3 BY JUNE 2001.**
- **CONTINUE TO REVIEW GOALS QUARTERLY.**

THE NAVY WILL

- **COMPLETE THE UPGRADING OF EXISTING GROUND WATER TREATMENT FACILITY BY OCTOBER 2001, AND WILL CONTINUE THE ONGOING MONITORING FOR EFFECTIVENESS.**

NIROP FRIDLEY SCHEDULE

Task Name	% Comp.	Duration	Begin	End	1999				2000				2001			
					Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct
1.0 OU3 REMEDIAL INVESTIGATION REPORT	79%	718 days	08/19/99	08/05/01												
1.1 Distribute Draft Final Report	100%	1 day	08/19/99	08/19/99												
1.2 Partnering Team Review	100%	138 days	08/20/99	01/04/00												
1.3 Propose Responses to Comments	100%	37 days	01/05/00	02/10/00												
1.4 Partnering Team Review	100%	68 days	02/11/00	04/18/00												
1.5 Technical Committee Meeting	100%	2 days	04/12/00	04/13/00												
1.6 Finalize Report	100%	30 days	04/18/00	05/17/00												
1.7 Distribute Final Report	100%	1 day	05/18/00	05/18/00												
1.8 MPCA Review	100%	91 days	05/19/00	08/17/00												
1.9 MPCA-TTNUS Discuss Issues	100%	32 days	08/18/00	09/18/00												
1.10 Provide Additional Information to MPCA	100%	1 day	09/19/00	09/19/00												
1.11 MPCA Review	100%	28 days	09/20/00	10/17/00												
1.12 Determine Data Set	100%	31 days	10/17/00	11/16/00												
1.13 New Data Entry, RA Statistics	100%	44 days	11/17/00	12/30/00												
1.14 Updated Risk Assessment	100%	23 days	12/31/00	01/22/01												
1.15 Interim Regulatory Review	100%	14 days	01/23/01	02/05/01												
1.16 Updated Risk Assessment	100%	21 days	02/06/01	02/26/01												
1.17 Regulatory Review	20%	30 days	02/27/01	03/28/01												
1.18 Draft Text for RA	0%	21 days	03/29/01	04/18/01												
1.19 MPCA Review	0%	30 days	04/19/01	05/18/01												
1.20 Finalize RA Test	0%	14 days	05/19/01	06/01/01												
1.21 EPA Draft Chapter 7	0%	21 days	06/02/01	06/22/01												
1.22 Team Review Chapter 7	0%	30 days	06/23/01	07/22/01												
1.23 Finalize OU2/OU3 Report	0%	14 days	07/23/01	08/05/01												
2.0 OU1/OU2 RI REPORT ADDENDUM	78%	713 days	08/19/99	07/31/01												
2.1 Distribute Draft Addendum	100%	1 day	08/19/99	08/19/99												
2.2 Partnering Team Review	100%	138 days	08/20/99	01/04/00												
2.3 Respond to Comments	100%	35 days	01/05/00	02/10/00												
2.4 Partnering Team Review	100%	68 days	02/11/00	04/18/00												

Project Manager:
Date: 02/26/01

Task



Progress



Milestone



Summary



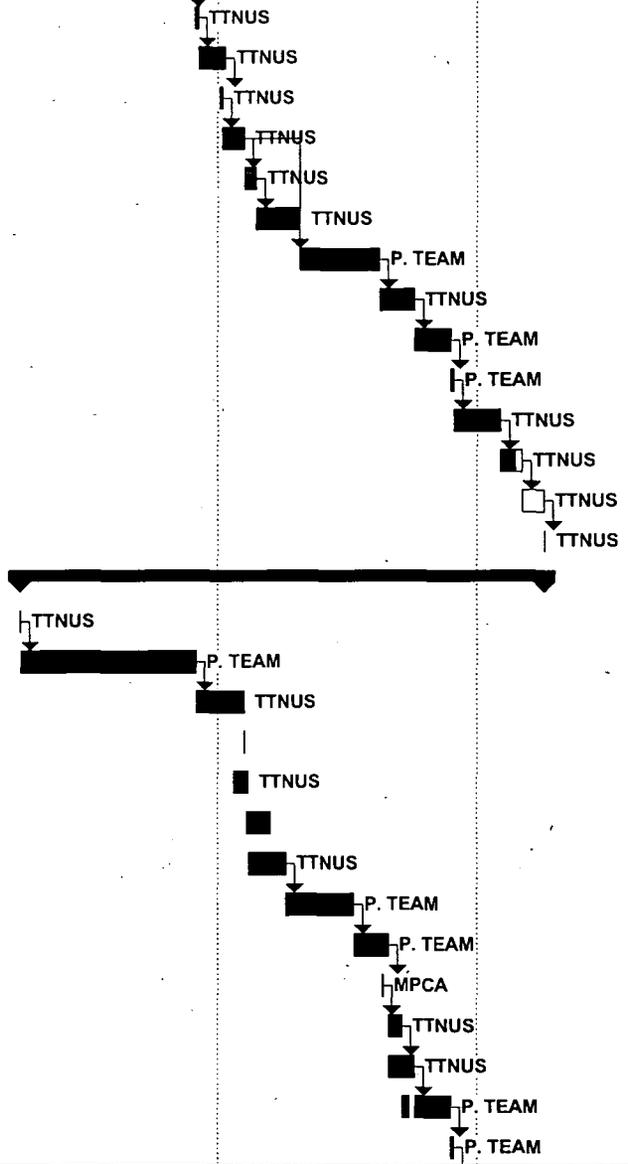
NIROP FRIDLEY SCHEDULE

Task Name	% Comp.	Duration	Begin	End	1999				2000				2001				
					Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	
2.5 Prepare Revised Report	100%	30 days	04/19/00	05/18/00						■ TTNUS							
2.6 Distribute Final Report	100%	1 day	05/19/00	05/19/00						TTNUS							
2.7 MPCA Review	100%	91 days	05/20/00	08/18/00						■ P. TEAM							
2.8 MPCA-TTNUS Discuss Issues	100%	32 days	08/18/00	09/18/00						■ P. TEAM							
2.9 Provide Additional Information to MPCA	100%	1 day	09/19/00	09/19/00						TTNUS							
2.10 MPCA Review	100%	28 days	09/20/00	10/17/00						■ MPCA							
2.11 Determine Data Set	100%	31 days	10/17/00	11/16/00						■ P. TEAM							
2.12 New Data Entry, RA Statistics	100%	44 days	11/17/00	12/30/00						■ TTNUS							
2.13 Updated Risk Assessment	100%	23 days	12/31/00	01/22/01						■ TTNUS							
2.14 Interim Regulatory Review	100%	14 days	01/23/01	02/05/01						■ P. TEAM							
2.15 Updated Risk Assessment	100%	16 days	02/06/01	02/21/01						■ TTNUS							
2.16 Regulatory Review	20%	30 days	02/22/01	03/23/01						□ P. TEAM							
2.17 Draft Text for RA	0%	21 days	03/24/01	04/13/01						□ TTNUS							
2.18 MPCA Review	0%	30 days	04/14/01	05/13/01						□ MPCA							
2.19 Finalize RA Test	0%	14 days	05/14/01	05/27/01						□ TTNUS							
2.20 EPA Draft Chapter 7	0%	21 days	05/28/01	06/17/01						□ EPA							
2.21 Team Review Chapter 7	0%	30 days	06/18/01	07/17/01						□ P. TEAM							
2.22 Finalize OU2/OU3 Report	0%	14 days	07/18/01	07/31/01						□ TTNUS							
3.0 OU2/OU3 FEASIBILITY STUDY REPORT	72%	265 days	01/13/00	10/03/00						■ EPA							
3.1 EPA Opinion on Well (OU1 or OU3)	44%	49 days	01/13/00	03/01/00						■ TTNUS							
3.2 Prepare Draft Feasibility Study	100%	49 days	01/15/00	03/03/00						■ P. TEAM							
3.3 Partnering Team Review	100%	46 days	03/04/00	04/18/00						TTNUS							
3.4 Technical Committee Meeting	100%	2 days	04/12/00	04/13/00						■ TTNUS							
3.5 Address Outstanding Issues	100%	15 days	04/14/00	04/28/00						■ TTNUS							
3.6 Prepare Revised Report (Focused FS)	100%	49 days	04/29/00	06/16/00						□ P. TEAM							
3.7 Partnering Team Review	0%	63 days	06/17/00	08/18/00						■ EPA							
3.8 EPA Determines Not Required	100%	48 days	08/17/00	10/03/00													
4.0 ANOKA PARK INVESTIGATION	93%	570 days	09/13/99	04/04/01						■ TTNUS							
4.1 Install Wells	100%	68 days	09/13/99	11/19/99													

Project Manager: _____ Task Progress Milestone Summary
 Date: 02/26/01

NIROP FRIDLEY SCHEDULE

Task Name	% Comp.	Duration	Begin	End	1999				2000				2001			
					Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct
4.2 Sample Wells	100%	5 days	11/29/99	12/03/99												
4.3 Sample Analysis	100%	39 days	12/04/99	01/11/00												
4.4 Sample Replacement Well	100%	4 days	01/04/00	01/07/00												
4.5 Sample Analysis	100%	31 days	01/08/00	02/07/00												
4.6 Data Validation	100%	17 days	02/08/00	02/24/00												
4.7 Prepare Draft Report	100%	62 days	02/25/00	04/26/00												
4.8 Partnering Team Review Report	100%	113 days	04/27/00	08/17/00												
4.9 Respond to Comments	100%	49 days	08/18/00	10/05/00												
4.10 Review Responses to Comments	100%	52 days	10/06/00	11/26/00												
4.11 Tech Committee Meeting	100%	4 days	11/27/00	11/30/00												
4.12 Prepare Tech Memo	100%	64 days	12/01/00	02/02/01												
4.13 Partnering Team Review	70%	30 days	02/03/01	03/04/01												
4.14 Finalize Tech Memo	0%	30 days	03/05/01	04/03/01												
4.15 Distribute Tech Memo	0%	1 day	04/04/01	04/04/01												
5.0 ANNUAL MONITORING REPORT	95%	735 days	03/31/99	04/03/01												
5.1 Distribute Draft 1998 AMR	100%	1 day	03/31/99	03/31/99												
5.2 Partnering Team Review	100%	244 days	04/01/99	11/30/99												
5.3 Respond to Comments	100%	69 days	12/01/99	02/07/00												
5.4 Final 1998 Activity	100%	1 day	02/07/00	02/07/00												
5.5 Data Validation	100%	21 days	01/24/00	02/13/00												
5.6 UDLP, MK Provide Data	100%	34 days	02/11/00	03/15/00												
5.7 Prepare Draft 1999 AMR	100%	53 days	02/14/00	04/06/00												
5.8 Partnering Team Review	100%	97 days	04/07/00	07/12/00												
5.9 Resolve 2000 AMR Network	100%	49 days	07/13/00	08/30/00												
5.10 MPCA Follow-Up Letter	100%	1 day	08/22/00	08/22/00												
5.11 Respond to MPCA Comments	100%	19 days	08/31/00	09/18/00												
5.12 Respond to EPA Comments	100%	36 days	08/31/00	10/05/00												
5.13 Review Responses to Comments	100%	62 days	09/19/00	11/26/00												
5.14 Tech Committee Meeting	100%	4 days	11/27/00	11/30/00												



Project Manager: _____ Date: 02/26/01

Task Progress Milestone Summary

NIROP FRIDLEY SCHEDULE

Task Name	% Comp.	Duration	Begin	End	1999				2000				2001				
					Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	
5.15 Prepare Tech Memo	100%	64 days	12/01/00	02/02/01													TTNUS
5.16 Partnering Team Review	70%	30 days	02/03/01	03/04/01													P. TEAM
5.17 Finalize Tech Memo	0%	30 days	03/05/01	04/03/01													TTNUS
5.18 Distribute Tech Memo	0%	1 day	03/26/01	03/26/01													TTNUS
6.0 REMEDIAL ACTION WORK PLAN/QAPP	88%	769 days	04/02/99	05/09/01													
6.1 Distribute Draft Report	100%	1 day	04/02/99	04/02/99													TTNUS
6.2 Partnering Team Review	100%	211 days	04/03/99	10/30/99													P. TEAM
6.3 Navy Selects Contractor	100%	1 day	02/01/00	02/01/00													
6.4 Prepare Revised RAMP	100%	34 days	02/02/00	03/06/00													P. TEAM
6.5 Resolve AMR Issues	100%	118 days	08/05/00	11/30/00													P. TEAM
6.6 DQO Training	0%	4 days	03/20/01	03/23/01													
6.7 Finalize Report	0%	30 days	03/24/01	04/22/01													P. TEAM
6.8 Partnering Team Review	0%	16 days	04/23/01	05/08/01													TTNUS
6.9 Distribute Final Report	0%	1 day	05/09/01	05/09/01													P. TEAM
																	TTNUS
7.0 STRATEGIC EXIT PLAN	100%	188 days	04/26/99	10/30/99													
8.0 GROUNDWATER MODEL	92%	609 days	08/04/99	04/03/01													
8.1 Prepare/Calibrate Model	100%	60 days	08/04/99	10/02/99													TTNUS
8.2 Particle Tracking	100%	30 days	10/03/99	11/02/99													TTNUS
8.3 Modeling Report/Documentation	100%	45 days	10/03/99	11/16/99													TTNUS
8.4 Partnering Team Review	100%	66 days	11/17/99	01/21/00													P. TEAM
8.5 Add Anoka Park Data/Revised Report	100%	92 days	03/01/00	05/31/00													TTNUS
8.6 Issue Revised Report	100%	1 day	05/31/00	05/31/00													TTNUS
8.7 EPA Lead Review	100%	31 days	05/31/00	06/30/00													EPA
8.8 Resolve ACP Report Issues	100%	55 days	10/07/00	11/30/00													P. TEAM
8.9 Prepare Tech Memo	100%	64 days	12/01/00	02/02/01													TTNUS
8.10 Partnering Team Review	70%	30 days	02/03/01	03/04/01													TTNUS
8.11 Revise Report (If necessary)	0%	30 days	03/05/01	04/03/01													TTNUS
9.0 Diffusion Sampler Study	85%	386 days	04/17/00	05/07/01													
9.1 Install Samplers	100%	6 days	04/17/00	04/22/00													USGS

Project Manager:
Date: 02/26/01

Task



Progress



Milestone



Summary



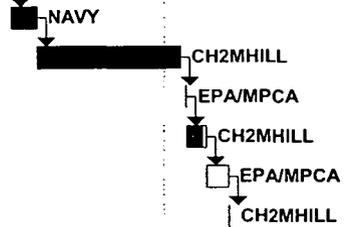
NIROP FRIDLEY SCHEDULE

Task Name	% Comp.	Duration	Begin	End	1999				2000				2001			
					Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct
9.2 Remove Samplers	100%	6 days	05/15/00	05/20/00												
9.3 Analyses	100%	45 days	05/21/00	07/04/00												
9.4 Draft Report	100%	112 days	07/05/00	10/24/00												
9.5 Partnering Team Review	100%	43 days	10/25/00	12/06/00												
9.6 Pre-Draft Implementation Plan	100%	51 days	12/07/00	01/26/01												
9.7 Tech Committee Review	100%	18 days	01/27/01	02/13/01												
9.8 Conference Call	100%	1 day	02/13/01	02/13/01												
9.9 DQO Training	0%	4 days	03/20/01	03/23/01												
9.10 Draft Implementation Plan	0%	45 days	03/24/01	05/07/01												
10.0 Decision Documents	98%	618 days	07/01/99	03/09/01												
10.1 Management Concurs with ESD Approach	100%	1 day	05/05/00	05/05/00												
10.2 Draft Minor Mod Fact Sheet	100%	59 days	05/01/00	06/28/00												
10.3 Review Minor Mod	100%	198 days	06/29/00	01/12/01												
10.4 Finalize Draft Fact Sheet	100%	69 days	07/01/99	01/19/01												
10.5 EPA Final Review	100%	28 days	01/20/01	02/16/01												
10.6 Finalize Fact Sheet	70%	20 days	02/17/01	03/08/01												
10.7 Distribute Fact Sheet RAB/Community	0%	1 day	03/09/01	03/09/01												
11.0 NIROP GW Remedy	48%	443 days	05/26/00	08/11/01												
11.1 Draft Work Plan Submitted	100%	14 days	05/26/00	06/08/00												
11.2 Partnering Team Review	100%	35 days	06/09/00	07/13/00												
11.3 Finalize Work Plan	100%	13 days	07/14/00	07/26/00												
11.4 Partnering Team Review	100%	11 days	07/27/00	08/06/00												
11.5 Regulatory Approval to Install Remedy	100%	1 day	08/06/00	08/06/00												
11.6 Install Wells/Pump Tests	100%	74 days	10/11/00	12/23/00												
11.7 Install Piping	0%	90 days	03/01/01	05/29/01												
11.8 System Restart	0%	10 days	05/31/01	06/09/01												
11.9 Construction Report	0%	63 days	06/10/01	08/11/01												
12.0 ACP GW Remedy	88%	304 days	06/01/00	03/31/01												
12.1 Cost Proposal to Navy	100%	1 day	06/01/00	06/01/00												

Project Manager: _____ Task Progress Milestone Summary
 Date: 02/26/01

NIROP FRIDLEY SCHEDULE

Task Name	% Comp.	Duration	Begin	End	1999				2000				2001				
					Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	
12.2 Negotiate and Award	100%	36 days	06/02/00	07/07/00							■						
12.3 Strawman Work Plan Submitted	100%	200 days	07/08/00	01/23/01							■						
12.4 Partnering Team Review Meeting	100%	1 day	02/01/01	02/01/01													
12.5 Finalize Work Plan	80%	27 days	02/02/01	02/28/01													
12.6 Partnering Team Review	0%	30 days	03/01/01	03/30/01													
12.7 Regulatory Approval to Install Remedy	0%	1 day	03/31/01	03/31/01													



Project Manager:
Date: 02/26/01

Task

Progress

Milestone

Summary