



**SITE MANAGEMENT PLAN**

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

**JANUARY 1998**



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



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22 Jan 1998

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

Subj: NIROP FRIDLEY – SITE MANAGEMENT PLAN FOR CY 1998

Dear Tom:

Please find the Site Management Plan for Calender Year 1998 for the Naval Reserve Ordnance Plant, Fridley, Minnesota.

Should you have any questions or comments I can be reached at (803) 820-5587.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott A. Glass".

SCOTT A. GLASS, P.E.  
Remedial Project Manager  
Installation Restoration II Branch

Encl:  
Site Management Plan for CY 1998

Copy to:  
MPCA (David Douglas)  
→ NAVSEA (Tech Rep, Kerry Morrow)  
REICC (Pat Mosites)  
Tetra Tech NUS (Mark Sladic)  
MK (Greg Hibbard)  
RAB (Co-Chair, John Flora)

**NAVAL INDUSTRIAL RESERVE ORDNANCE PLANT**

**FRIDLEY, MINNESOTA**

**SITE MANAGEMENT PLAN**

FOR CY 1998

Prepared by:

**Department of the Navy  
Southern Division  
Naval Facilities Engineering Command  
2155 Eagle Drive  
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CY 1998 Site Management Plan  
Naval Industrial Reserve Ordnance Plant  
Fridley, Minnesota

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SITE MANAGEMENT PLAN  
NAVAL INDUSTRIAL RESERVE ORDNANCE PLANT  
FRIDLEY, MINNESOTA  
CY 1998

**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 STRATEGY**

This SMP sets forth a comprehensive schedule of those 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 first SMP was issued March 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

beneath the NIROP manufacturing building (Navy property) (OU 3). However, the Navy, USEPA, and MPCA have 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. Preliminary on-site investigation results indicate that a potentially large on-site subsurface source area beneath the NIROP manufacturing building (OU 3) exists, and may be highly contaminated relative to smaller on-site subsurface source areas outside the NIROP manufacturing building (OU 2). A decision that it will be more effective to address remedy selection for both OU 2 and OU 3 concurrently was made. Therefore, modification of the site management strategy involves including the potential of combining 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 in under Anoka County Park. Following this assessment, in order to better understand the condition in Anoka County Park, the Navy initiated a sampling effort to collect geological and groundwater contamination information using direct push sampling techniques.

A RCRA Facility Investigation (RFI) is being conducted by United Defense LP to characterize the nature and extent of contamination under the portion of the main industrial building beyond the boundaries of the Navy property. This investigation is being conducted pursuant to a RCRA permit modification separate from the Navy investigation being conducted pursuant to the FFA.

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 by July 1999. An Environmental Baseline Survey (EBS) and Finding of Suitability to Transfer (FOST) have been 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) is being prepared to allow for the early transfer of the NIROP. The EPA Region V Administrator, must approve the CDR with the concurrence of the Governor of Minnesota, to allow the transfer to take place. The transfer of ownership does not change the Site Management Strategy described above, and the Navy will continue with its obligations to execute the IRP at NIROP Fridley in accordance with the requirements of the FFA.

### **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 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 containment and recovery well system is currently in operation. Phase II of the remedy (GW Treatment Facility) is under construction. Anoka County Park data collection efforts completed December 1997.
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) to 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. RI report under development.

#### IV. CY 1998 PROGRAM OBJECTIVES AND DOCUMENT DELIVERABLES

The CY 1998 Program Objectives for the NIROP are as follows:

- Complete construction of Groundwater Treatment Facility (GWTF) for OU 1;
- Begin Long Term Operations (LTO) phase for the GWTP for OU 1;
- Revise Remedial Action Monitoring Plan (RAMP) for OU 1;
- Revise Groundwater Numerical Model (GNM) for OU 1;
- Complete the Remedial Investigation (RI) Report for OU 3;
- Upgrade the 1997 Annual Monitoring Report (AMR) to become a more comprehensive document;
- Revise the Community Relations Plan (CRP);
- Obtain approval of Covenant Deferral Request;
- Issue SMP for CY 1999;
- Assess Anoka County Park Investigation Data;

The CY 1998 Document Deliverables for the NIROP are as follows:

Primary Documents:

Draft RI Report for OU 3	7 July 1998
Draft Final RI Report for OU 3	45 days from receipt of Agency comments
Final RI Report for OU 3	30 days after issue of Draft Final

Other Deliverables:

Draft 1997 AMR	31 March 1998
Draft CDR	18 February 1998
Final CDR	4 July 1998
CRP	7 July 1998
RAMP Revision	30 September 1998
SMP for CY 1999	31 December 1998
Revise GNM	7 July 1998
Anoka County Park Tech Memo	31 March 1998

**V. SCHEDULE**

The SMP schedule reflects submission dates for both primary and other 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

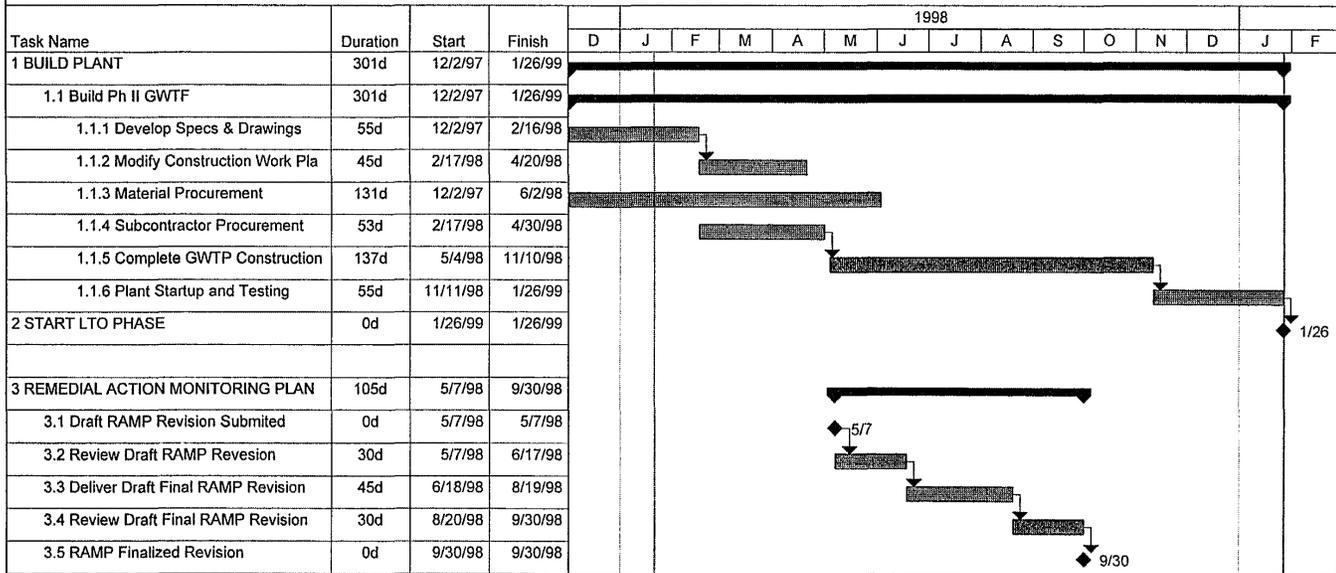
The MPCA has requested that the Navy and UDLP investigations be completed in parallel. The Navy and UDLP will coordinate to the greatest extent practical to minimize the time lag between the completion of these two investigations.

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 - 3, are enforceable. Those document submittal dates reflected in the outyear schedules (1 January to 31 December) are target dates and thus are subject to change prior to finalization in the outyear 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.

**NIROP FRIDLEY SITE MANAGEMENT SCHEDULE  
OPERATIONAL UNIT # 1**

**FIGURE 1**

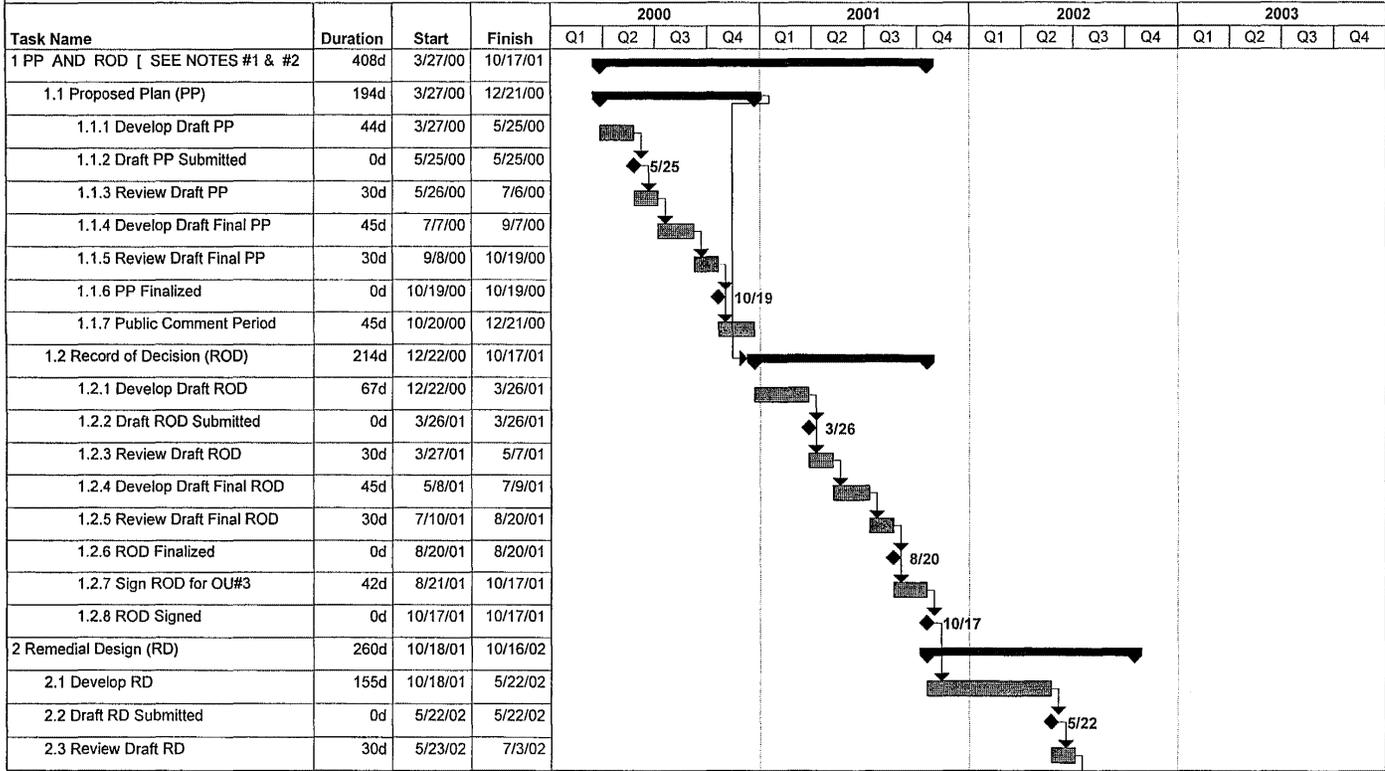


Project : Groundwater Treatment Plant Design  
And Construction  
Date : 1/21/98

Task		Summary		Rolled Up Progress	
Progress		Rolled Up Task			
Milestone		Rolled Up Milestone			

**NIROP FRIDLEY SITE MANAGEMENT SCHEDULE  
OPERABLE UNIT #2**

**FIGURE 2**



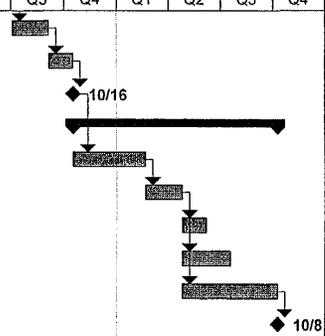
Project : OU #2 Remedy Selection	Task		Summary		Rolled Up Progress	
Date : 1/21/98	Progress		Rolled Up Task			
sag	Milestone		Rolled Up Milestone			

NOTE : [1] OU #2 PP and ROD efforts are incorporated into the OU #3 PP and ROD;

**NIROP FRIDLEY SITE MANAGEMENT SCHEDULE  
OPERABLE UNIT #2**

**FIGURE 2**

Task Name	Duration	Start	Finish	2000				2001				2002				2003			
				Q1	Q2	Q3	Q4												
2.4 Deliver Draft Final RD	45d	7/4/02	9/4/02																
2.5 Review Draft Final RD	30d	9/5/02	10/16/02																
2.6 RD Finalized	0d	10/16/02	10/16/02																
3 Remedial Action	255d	10/17/02	10/8/03																
3.1 Develop RA Work Plans	90d	10/17/02	2/19/03																
3.2 Review/Approve RA Work Plans	45d	2/20/03	4/23/03																
3.3 Develop Specs/Drawings	30d	4/24/03	6/4/03																
3.4 Procure Mat'l/Subs	60d	4/24/03	7/16/03																
3.5 Complete Remedy Construction	120d	4/24/03	10/8/03																
4 Long Term Operations Phase Begins	0d	10/8/03	10/8/03																



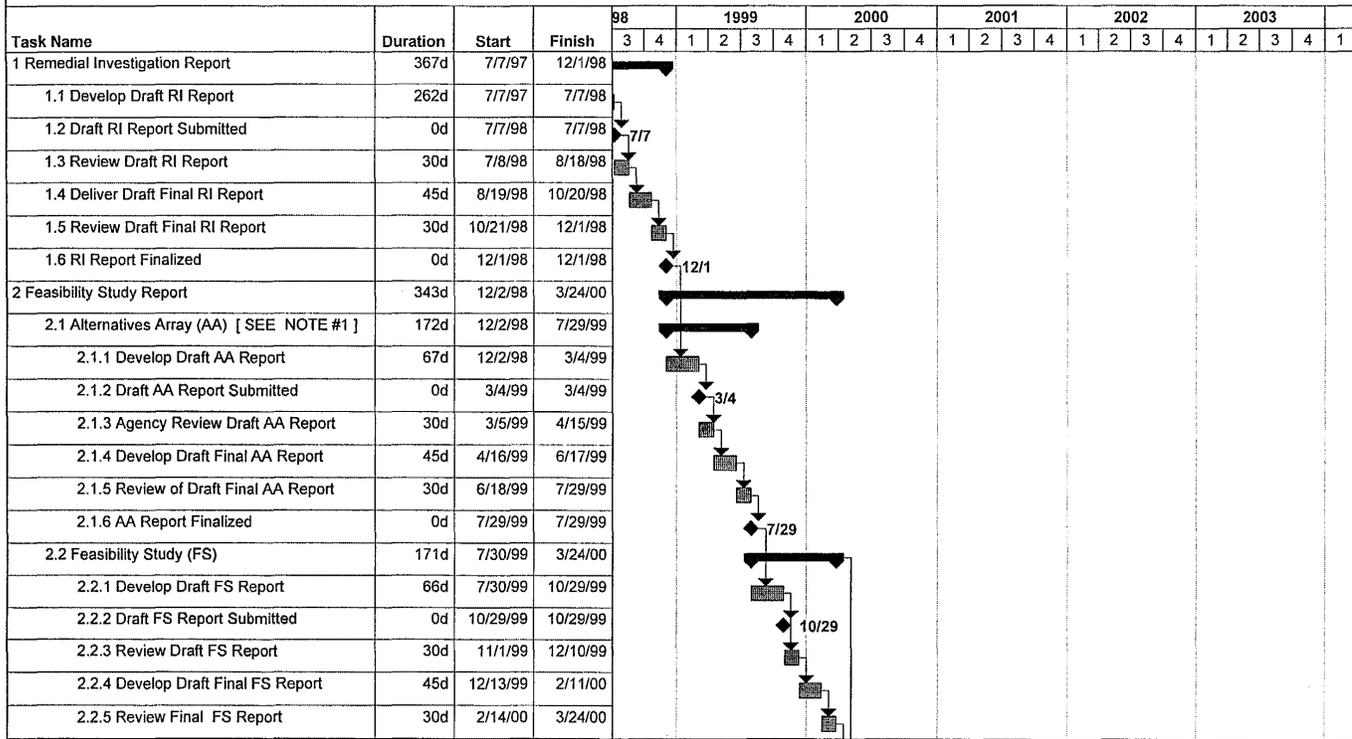
Project : OU #2 Remedy Selection  
Date : 1/21/98  
sag

Task Summary   
Progress Rolled Up Task   
Milestone Rolled Up Milestone

NOTE : [1] OU #2 PP and ROD efforts are incorporated into the OU #3 PP and ROD;

**NIROP FRIDLEY SITE MANAGEMENT SCHEDULE  
OPERABLE UNIT #3**

**FIGURE 3**

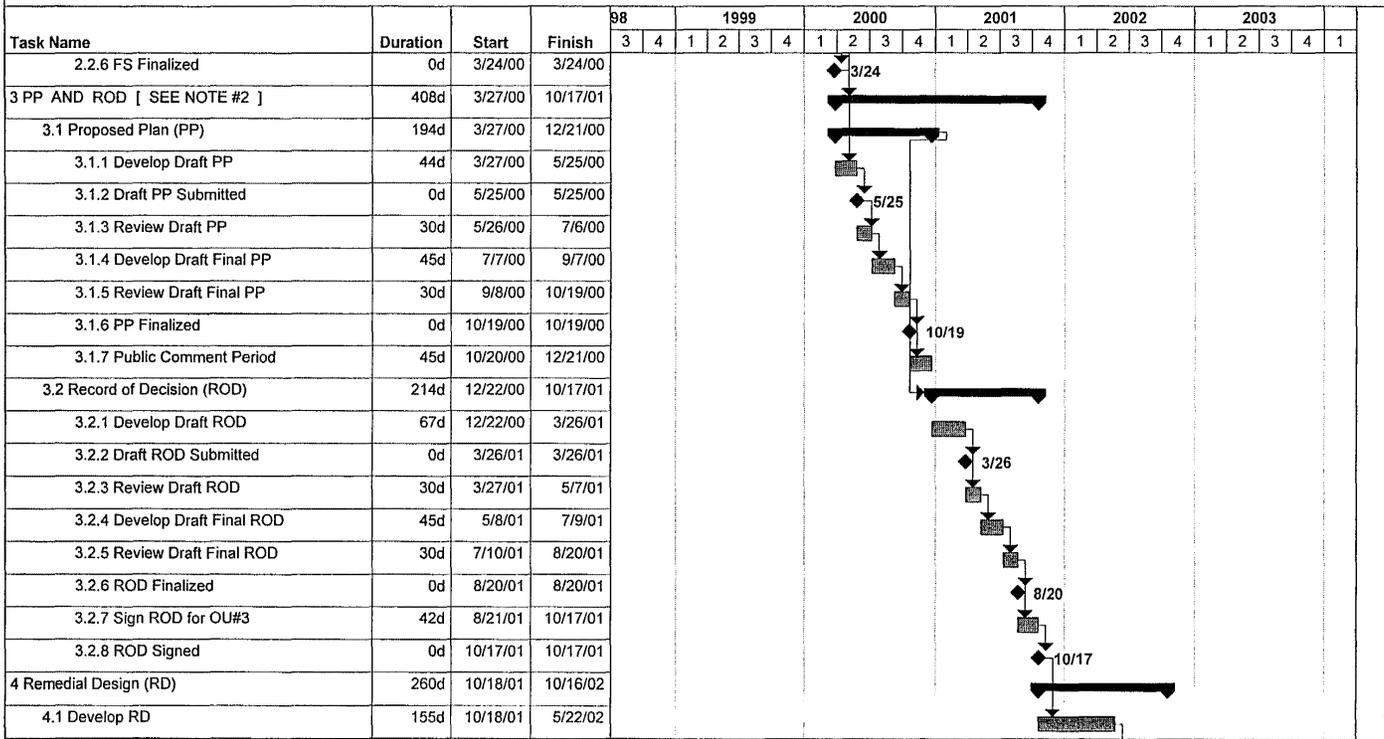


Project	OU #3 RI/FS, PP, & ROD	Task		Summary		Rolled Up Progress	
Date	: 1/21/98	Progress		Rolled Up Task			
		Milestone		Rolled Up Milestone			

NOTE : [1] OU #2 FS is integrated into the OU #3 AA; [2] OU #2 PP/ROD are incorporated into the OU #3 PP/ ROD; PAGE: 9

**NIROP FRIDLEY SITE MANAGEMENT SCHEDULE  
OPERABLE UNIT #3**

**FIGURE 3**



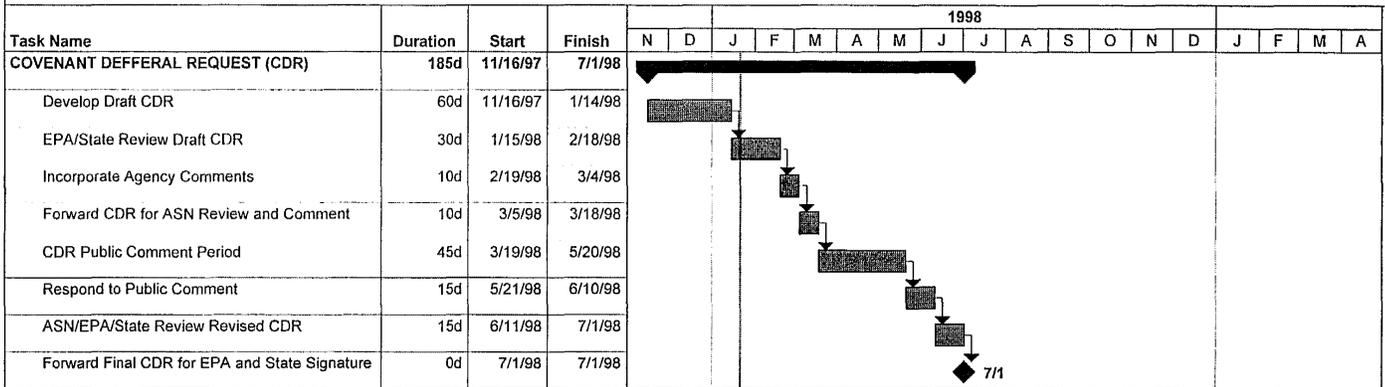
Project : OU #3 RI/FS, PP, & ROD Date : 1/21/98	Task		Summary		Rolled Up Progress	
	Progress		Rolled Up Task			
	Milestone	◆	Rolled Up Milestone	◇		

NOTE : [1] OU #2 FS is integrated into the OU #3 AA; [2] OU #2 PP/ROD are incorporated into the OU #3 PP/ ROD; PAGE: 10



**NIROP FRIDLEY SITE MANAGEMENT SCHEDULE  
PROPERTY TRANSFER**

FIGURE 4



Project: Prop Transfer Date: 1/21/98	Task		Summary		Rolled Up Progress	
	Progress		Rolled Up Task			
	Milestone		Rolled Up Milestone			