



96-0000688

**Department of Energy**

Washington, DC 20585

March 1, 1996

Mr. John T. Conway  
Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, N.W.  
Suite 700  
Washington, D.C. 20004

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1996 MAR -4 AM 9:09  
DNF SAFETY BOARD

Dear Mr. Conway:

Your letter of January 31, 1996, to Assistant Secretary Grumbly expressed concern regarding the potential delay in meeting certain milestones for stabilization of solid residues at the Rocky Flats Environmental Technology Site. The detailed recovery plan addressing your concerns is enclosed as requested. The baseline schedule presented to your staff during their January 25, 1996, visit to Rocky Flats, shows a six-month slip in the stabilization of 10,000 kg of pyrochemical salt and a twelve-month slip in the stabilization of 4,000 kilograms of sand, slag, and crucible and graphite fines. The recovery plan outlines a set of initiatives that may reduce these schedule slips; however, the schedules presented are credible and given the present situation, represent an aggressive approach to stabilizing the salts and sand, slag and crucibles.

In addition to pursuing the initiatives discussed in the plan, the Rocky Flats Field Office is negotiating performance measures with Kaiser-Hill for Fiscal Year (FY) 1996 to provide incentives for completion of current year milestones that will ensure continued progress toward meeting outyear Recommendation 94-1 commitments. Similar measures will also be developed for FY 1997.

We remain committed to addressing the urgent risks identified in Recommendation 94-1, as expeditiously as possible, and will continue to pursue all potential options for schedule recovery.

Sincerely,

Richard J. Guimond  
Assistant Surgeon General, USPHS  
Principal Deputy Assistant Secretary  
for Environmental Management

Enclosure

**Rocky Flats Solid Residue  
Stabilization Recovery Plan  
for DNFSB Recommendation 94-1**

## **Material Recovery Plans**

### Material Category:

Residue Pyro-chemical Salts

### Plan

- The plan is to stabilize pyro-chemical salts using ten (10) pyro-chemical oxidation furnaces to be installed in Module "A" of Building 707.
- The current baseline schedule shows completion of the 10,000 kgs of high-hazard salts by 06/98. This represents a six month slip from the commitment made in the February 1995 submittal of the Implementation Plan
- Salts will be stabilized in Building 707 instead of Building 779. The basis for this decision is discussed in the summary section (page 8).

### Schedule

See Attachment (1) for schedule of activities.

Assumptions. This schedule is based on the following set of assumptions:

- During construction and operations, building availability is assumed to be 70%.
- During construction, work load is assumed to be 2 shifts/day, 5 days/week, 12 hour shifts.
- During stabilization, equipment availability is assumed to be 90%, combined with an assumed building availability of 70%, would mean an integrated availability (building + equipment) of 60%.
- During stabilization operations work load is assumed to be 3 shifts/day, 5 days/week.
- These assumptions are consistent with data gathered in 1995 for processing material in Building 707 (viz: oxide stabilization).

## Schedule Improvement Opportunities

### Initiative:

**Perform salt processing at other DOE sites**, such as Los Alamos National Laboratory (LANL), in addition to processing salts at Rocky Flats.

### Discussion:

Using other facilities in the DOE complex allows for an earlier start of stabilization at a site that has performed this type of operation as well as decreases the time required to process the salt backlog. LANL has the capability to process approximately 3,000 kg salt per year. Operations could commence at LANL in early 1997. There are a number of issues, such as the availability of shipping containers, shipper receiver agreements, etc. that still need to be resolved. This is being worked through the Nuclear Material Stabilization Task Group.

### Affect on critical path:

Using another DOE facility to process material could provide for an early start on stabilization of the salt backlog by up to two months as well as reduce the baseline schedule slip by up to three months.

In addition, this would reduce programmatic risk as LANL represents additional capacity and capability in the event that Rocky Flats was unable to process materials for an extended period of time.

### Key decision date:

May 1996

Initiative:

**Develop and implement an activity-specific Basis for Operations (BFO) for Building 707 residue processing.**

Discussion:

A major contributor to Building 707 being unavailable to conduct Pu operations is due to the termination of operations when systems or equipment do not meet the requirements specified in the Limiting Conditions of Operation (LCOs). The LCOs in the current Operational Safety Requirements (OSRs) require that specific hardware configurations to be operable. These requirements may be overly conservative given the changes in the Building 707 mission. Analysis underway has the potential for supporting revisions to the LCOs and OSRs. This could increase the time available that Building 707 would be able to conduct Pu processing operations.

Affect on critical path:

The impacts of this initiative are not yet fully understood. Currently Building 707 is assumed to be available for operations 70% of the time. If this could be improved by 10%, this would mean that ability to perform construction and processing could be increased by 10%. This could mean a potential 10% decrease in baseline schedule slip. This could potentially decrease the salt schedule slip by up to six weeks and the SSC/graphite fines schedule slip by up to two months.

Note: This could have a similar affect on the critical path for processing SSC/graphite fines in Building 707 as well as wet combustibles in Building 371.

Key decision date:

This process is already underway. A new OSR for residue processing has been incentivized through Performance Measures for implementation in Building 707 by September 1996. Additionally, a new OSR for residue processing in B371 has been incentivized as a Performance Measure for July 1996.

Initiative:

**Develop alternate paths to acquire and install calorimetric measuring equipment** in Building 707 that can reduce the dependence on long-lead procurement items.

Discussion:

Two paths are being pursued to provide for early calorimetry capability for residue processing. These paths are (1) lease equipment from the Mound Site for temporary usage during installation of permanent equipment, and (2) relocate some equipment from Building 771 to Building 707. Relocated calorimeters would require upgrades to the computer system and could require support system modification.

Affect on critical path:

This action is not expected to reduce the critical path duration/schedule slip. However this can reduce programmatic uncertainty as there are multiple paths being pursued to acquire necessary measuring capability which is a pre-requisite to performing stabilization operations.

Key decision date:

This path is being pursued. Rocky Flats will know the affects of this initiative by July 1996; at that point Rocky Flats should have the calorimetric equipment relocated and installed in Building 707 ready to test.

Initiative:

**Accelerate the process for DOE evaluating work-place performance.**

Discussion:

Readiness reviews required to start operations are planned to take up to 16 weeks and are on the critical path. A substantial reduction in duration in this activity may be possible without negatively impacting the scope or integrity of the process by performing an initial readiness assessment of a facility for a particular operation, continually assessing and monitoring the readiness of that facility, and then only reviewing the specific operation and changes to the facility caused by the additional operation that are to be started.

Affect on critical path:

As the readiness review is the final activity to be performed before actual processing, any decrease in the duration of this activity would mean a day-for-day reduction in the slip to the baseline schedule. If the readiness review duration was shortened by one-third, this could decrease the schedule slip by 5 weeks.

Note: This could have a similar affect on the critical path for processing SSC/graphite fines.

Key decision date:

This activity is under development based on improved and adequate processes in practice at other DOE sites. Rocky Flats will know the affects of this by December 1996.

Initiative:

**Improve the Nuclear Criticality Safety (NCS) process** for development of criticality evaluations.

Discussion:

There are three (3) areas being worked to decrease the time required to develop criticality evaluations and increase the resources available for development of criticality evaluations. These include: (a) improving the criticality evaluation process (e.g. planning, scheduling, and communications), (b) better utilizing existing NCS resources by working criticality engineers in teams with senior personnel being assigned as mentors, and (c) assigning criticality safety officers to facilities to provide qualified criticality engineers with better process information for developing criticality evaluations.

Affect on critical path:

Criticality evaluations are on the critical path. Any decrease in duration would either decrease the schedule slip or decrease the programmatic risk associated with completing the processing as the site has a history that indicates completing criticality evaluations has a high probability of impacting schedule.

Key decision date:

This process is already underway. An assessment on the effectiveness of this initiative will be available by August 1996.



## Performance Measures

### **FY 96 Performance Measures** under negotiation

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#### Site preparation

- Start site preparation
- Complete removal of one (1) glove box from "A" module gloveline 06/96
- Complete removal of one (1) pump down table from "F" module 06/96
- Complete strip-out/site preparation of "A" module 09/96
- Complete Building 707 Basis for Operations for treating residue salts 09/96

#### Construction

- Start construction in "A" module (the construction work order in place) 07/96
- 

### **FY 97/98 Performance Measures** that will be considered/negotiated

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#### Construction

- Salt construction phase complete 04/97

#### Processing

- Start salt processing-first salt run complete in "A" module 08/97
  - Complete treatment of 500 kg salt 09/97
  - Complete treatment of 2,000 kg salt 10/97
  - Complete treatment of 4,000 kg salt 12/97
  - Complete treatment of 10,000 kg salt 06/98
-

## Summary

- The February 1995 submittal of the Implementation Plan committed to stabilizing 6,000 kg of high-hazard salt by May 1997 and the remaining 4,000 kg of higher-hazard salt by December 1997 using newly installed pyrochemical oxidation furnaces in Building 779.
- The current path forward will install pyrochemical oxidation furnaces in “A” module of Building 707. The first 10,000 kg of this material will be stabilized by June 1998 (6 month slip).
- There are five (5) initiatives that Rocky Flats is pursuing to minimize schedule slip or to reduce the programmatic risk of completing salt stabilization activities. Relocating calorimetric equipment and improving the Nuclear Criticality Safety process are looked at minimizing schedule/programmatic risk, while potentially stabilizing salts at LANL, implementing activity-specific authorization basis, and improving the readiness review process may be able to decrease schedule slip. Although the affects of these initiatives are not fully known at this time, DOE is committed to improve the baseline schedule wherever and whenever possible.
- Building 707 was chosen over Building 779 for the following reasons:
  - a. The known condition of the safety systems in Building 707.
  - b. The well-established/well disciplined infrastructure of Building 707.
  - c. The upgrades to Module “A” to resumption standards and the successful completion of two DOE operational readiness reviews.
  - d. The operating history of Building 707 as this building, unlike Building 779, has a proven track record over the past year in conducting Pu operations.
  - e. Stabilizing salts in Building 779 would not have decreased the schedule slip due to the extensive material and infrastructure upgrades that would have been required to start up pyrochemical stabilization activities.
- Rocky Flats will buy new furnaces rather than relocate furnaces from Building 779. Relocating furnaces that are installed in Building 779 would have not decreased the schedule slip nor have decreased the cost of the project. In addition, the relocation of older equipment would not have been as reliable as installing new furnaces.
- Rocky Flats will use performance measures, as described, in FY96 to incentivize completion of intermediate milestones as well as to try to pull back the baseline schedule discussed above. Performance measures for FY 97 and FY 98, also as discussed, will be developed and made part of the Performance Measure process.

Material Category:

Residue Ash: Sand, slag, & crucible and graphite fines.

Plan

- The plan for sand, slag & crucible (SSC) and graphite fines is to calcine these materials using eight (8) muffle furnaces to be installed in Module "E" of Building 707. Current schedules show completion of 4,000 kgs of this material by 05/98.
- This represents a twelve month (12) slip to the commitment made in the February 1995 submittal of the Implementation Plan as well as using newly installed furnaces in Building 707.

Schedule

See Attachment (1) for schedule of activities.

Assumptions This schedule is based on the following set of assumptions

- During construction and operations, building availability is assumed to be 70%.
- During construction, work load is assumed to be 2 shifts/day, 5 days/week, 12 hour shifts.
- During stabilization, equipment availability is assumed to be 90%, combined with an assumed building availability of 70%, would mean an integrated availability (building + equipment) of 60%.
- During stabilization operations work load is assumed to be 3 shifts/day, 5 days/week.
- Developing process parameters is being done concurrently with Title I design and will have no impact on Title II design.
- These assumptions are consistent with data gathered in 1995 for processing material in Building 707 (viz: oxide stabilization).

## Schedule Improvement Opportunities

### Initiative:

**Process SSC/graphite fines in J-25 and/or J-60 in Building 707.**

### Discussion:

Processing SSC/graphite fines in J-25 and/or J-60 would provide for an accelerated start of processing high-risk materials. The through-put for these furnaces are assumed to be 1.5 kg/run and 1 run/shift and it is assumed that the required calcining temperatures for SSC/graphite fines are within the operating ranges of J-25 and J-60. These parameters will be confirmed and processing could be started after evaluating data obtained from the feasibility study (a FY 96 Performance Measure) scheduled to be completed 06/96. This activity would need to be coordinated with ongoing oxide stabilization activities, as these are the same furnaces used for those operations as well as coordinated with the installation of the 3013 metal and oxide bagless transfer system, that is also scheduled to be installed in "J" module.

### Affect on critical path:

This initiative would allow for an early start by approximately six months (compared to baseline) for processing of SSC/graphite fines. If it is feasible to process materials in these furnaces, up to 400 kgs (10% of the SSC backlog) of material could be processed before the newly installed muffle furnaces become operational in "E" module which could mean a one month decrease in schedule slip.

### Key decision date:

Data from the feasibility study is expected to be ready by 06/96. Based on this data, a key decision on using J-25/J-60 will be made by 07/96.

### Note:

As discussed in the salt material recovery section, improving the Nuclear Criticality Safety process, implementing activity-specific authorization basis, and improving the readiness review process may be able to decrease the schedule slip for processing these materials.

Performance Measures

**FY 96 Performance Measures** under negotiation

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Treatability Study

- Complete SSC/graphite fines treatability study 06/96

Site Preparation

- Start site preparation
    - Initiate ash site preparation-first piece of equipment in module "E" removed 07/96
  - Complete ash site preparation to allow for start of construction 09/96
- 

FY 97/98 Performance Measures that will be considered/negotiated:

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Site Preparation

- Ash site preparation complete 10/96

Construction

- Ash construction complete 02/97

Processing

- Start processing SSC/graphite fines in "E" module 09/97
  - Complete treatment of 300 kg SSC/GF 09/97
  - Complete treatment of 1,000 kg SSC/GF 12/97
  - Complete treatment of 4,000 kg SSC/GF 05/98
-

### Summary

- The February 1995 submittal of the Implementation Plan committed to stabilizing 4,000 kg of high hazard SSC and graphite fines by May 1997 using furnaces in Building 707.
- The current path forward will install muffle furnaces in "E" module of Building 707. The 4,000 kg of high-hazard material will be completed by May 1998 (12 month slip).
- There are four (4) initiatives that Rocky Flats is pursuing to minimize schedule slip or to reduce the programmatic risk of completing SSC/graphite fine stabilization activities. Improving the Nuclear Criticality Safety process is looked at minimizing schedule risks, while potentially stabilizing SSC and graphite fine in B707 "J" module, implementing activity-specific authorization basis, and improving the readiness review process may be able to decrease the schedule slip. Although the affects of these initiatives are not fully known at this time, DOE is committed to improve the baseline schedule where ever and whenever possible.
- Rocky Flats will use performance measures, as discussed, in FY96 to incentivize completion of intermediate milestones as well as to try to pull back the baseline schedule discussed above. Performance measures for FY97 and FY98, also as discussed, will be developed and made part of the Performance Measure process.

Material Category:

Combustibles

Plan

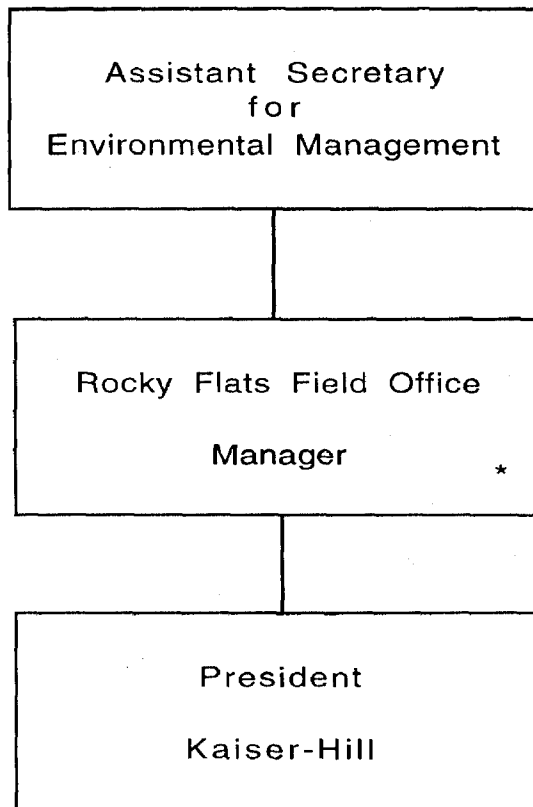
- The plan for combustibles is to stabilize the high-hazard (wet combustibles) in Buildings 774 and 371 by:
  - (a) cementing ion exchange resin beads using the bottle-box process in B774 (268 kg).
  - (b) microwave solidification of oily sludge (7 kg).
  - (c) washing and drying wet inorganic combustibles (approx. 11,000 kg).
  - (d) low temperature thermal desorption wet organic combustibles (approx. 2,100 kg).
  
- Current schedules show completion of all high-hazard material (11,500 kgs) of this material by 11/98, as committed to in the IP.
  
- Performance Measures for FY96 are being negotiated for expedited treatment of (a) ion exchange resins, (b) oily sludge, and (c) acid contaminated leaded-rubber gloves.
  
- This represents a decision on the technologies that will be used for the path-forward in treating these materials. A combustible trade study, now in progress and expected to be completed in June, may change the method of treatment. Ongoing research and development of these technologies will be continued on a complex-wide basis and coordinated through the Nuclear Material Stabilization Task Group:
  - (a) Pyrolysis
  - (b) Chemical and wet chemical oxidation
  
- Rocky Flats will repackage dry combustibles in vented containers without further treatment as these materials can meet interim safe storage criteria by repackaging.

## Program Management Structure

The management structure within the Department of Energy at Rocky Flats has been established in that the Mission Advocacy Organization is the single point-of-contact for all matters relating to 94-1 to the Manager and is the primary interface and point of contact with DOE Headquarters, the Nuclear Material Stabilization Task Group, the Defense Nuclear Facilities Safety Board, etc..

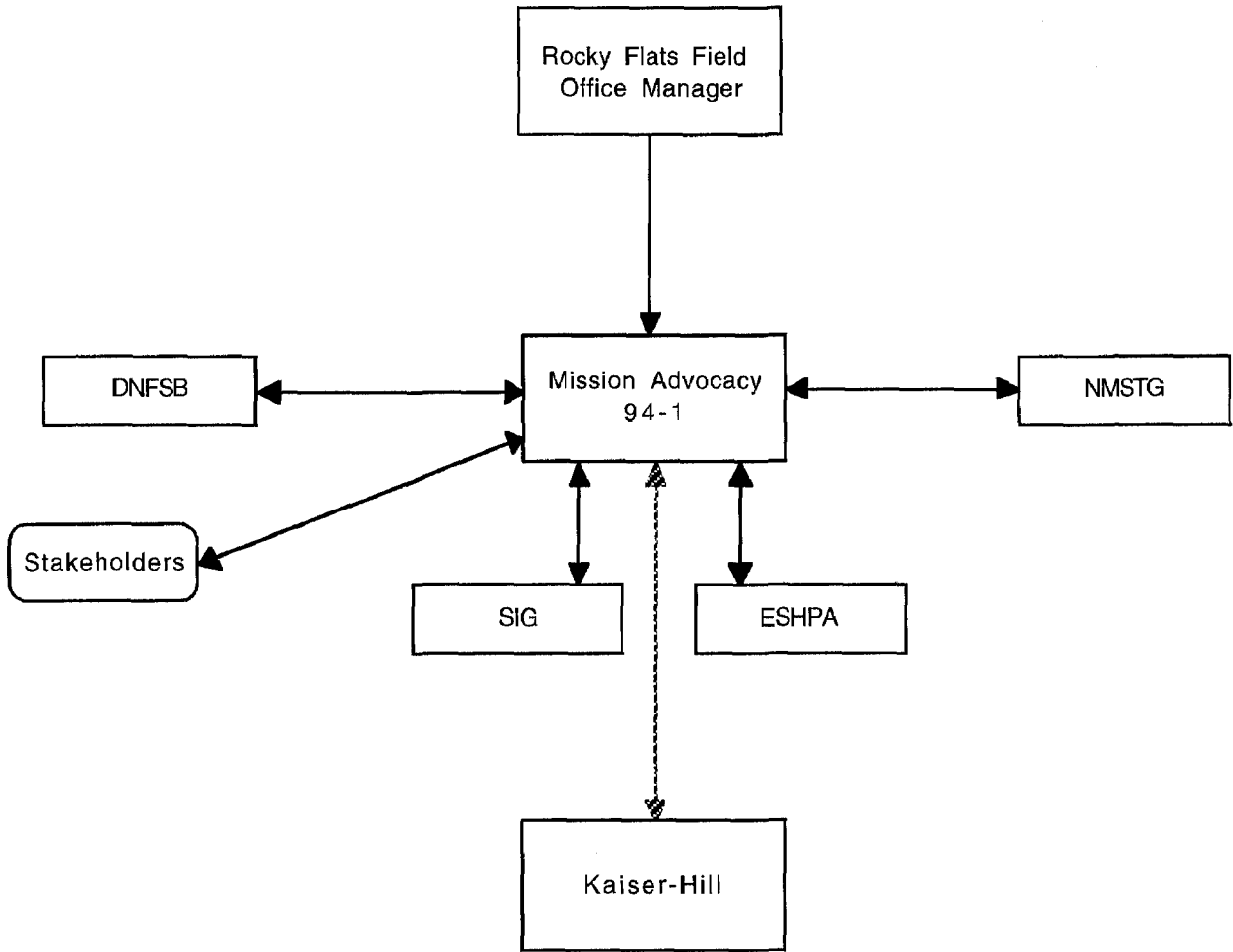
Within the Rocky Flats Field Office, Mission Advocacy will continue to work with the Environmental Health & Safety Program Assessment (ESHPA) and the Strategy, Integration, & Guidance (SIG) organizations in all phases of work from setting Performance Measures to monitoring the contractor against its baseline to awarding incentive fee for completing milestones. This includes providing real-time recommendations to the RFFO manager concerning policy, direction, and guidance to the contractor that may be needed to ensure 94-1 commitments continue to be technically sound and that adequate progress is being made to meet stabilization objectives. A diagram of the organizational structure is included below:

A

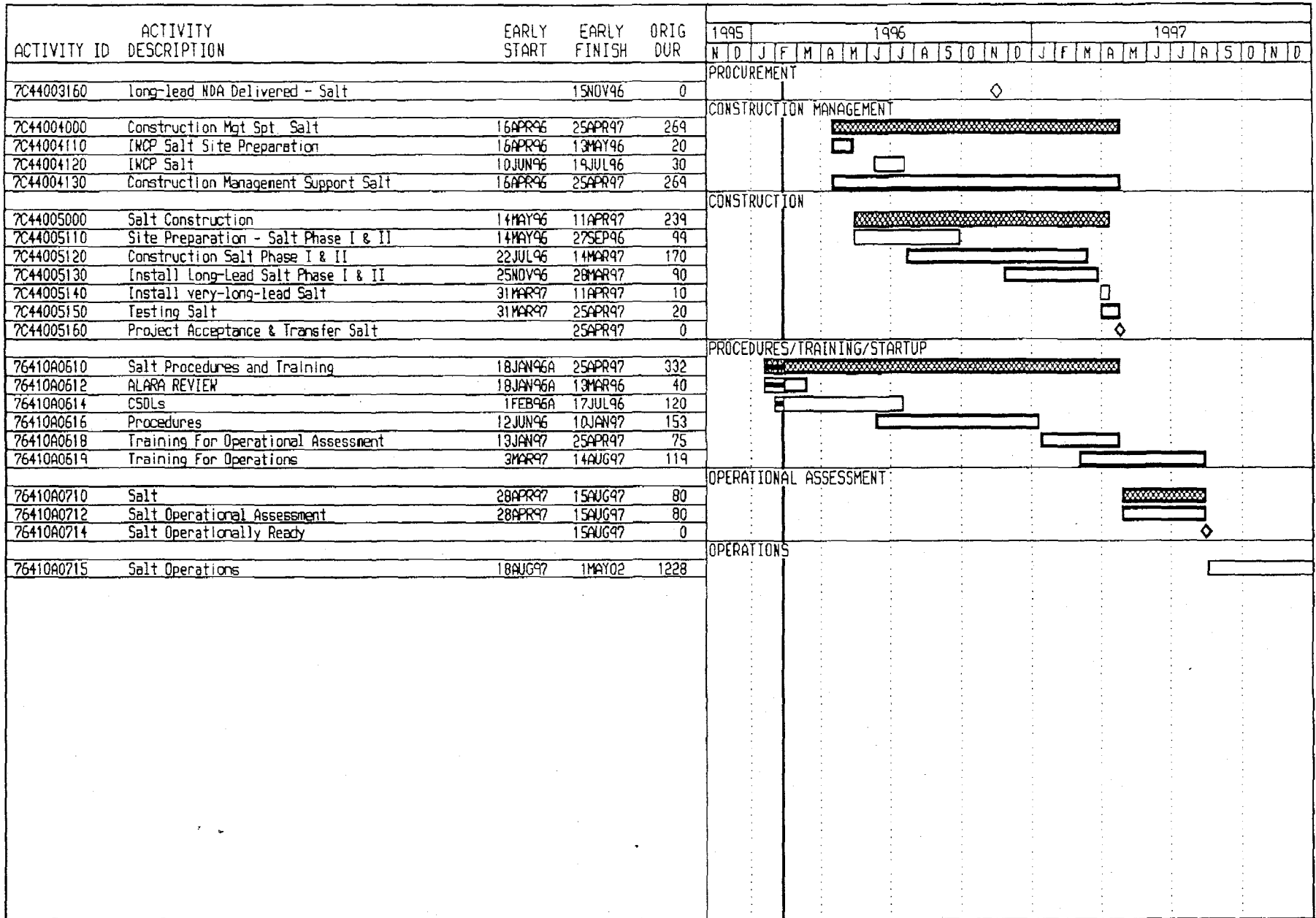




B







Activity Classification: User Defined 2

MANMOCK

Plot Date 15FEB96  
 Data Date 11FEB96  
 Project Start 7NOV95  
 Project Finish 30MAY02

Activity Bar/Early Dates  
 Critical Activity  
 Progress Bar  
 Milestone/Flag Activity

REPC

Sheet 2 of 2

RFETS  
 RESIDUE ELIMINATION PROJECTS  
 SALT SCHEDULE

Date	Revision	Checked	Approved

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR	1996												1997																							
					1995												1996												1997											
					N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D										
					CONCEPTUAL DESIGN MANAGEMENT																																			
76410A0232	Ash Conceptual Design	27NOV95A	27NOV95A	1																																				
76410A0234	Dry Comb-inorg/Repack Conceptual Design	27NOV95A	27NOV95A	1																																				
76410A0245	Cementation Mixtures for Ash	25MAR96	7JUN96	55																																				
					AUTHORIZATION BASIS																																			
76410A0420	Activity Control Envelope-ash	5MAR96	4NOV96	175																																				
76410A0421	Process Flow Diagram	5MAR96	11MAR96	5																																				
76410A0422	Process Hazard Assessment	20MAR96	15JUL96	84																																				
76410A0423	Performance Expectations	16JUL96	12AUG96	20																																				
76410A0424	Develop Standards List	13AUG96	9SEP96	20																																				
76410A0425	Readiness Acceptance Criteria	13AUG96	9SEP96	20																																				
76410A0426	Final ACE		9SEP96	0																																				
76410A0427	Coordinate Authorization Agreement	10SEP96	4NOV96	40																																				
76410A0428	Cross Table Review	27AUG96	2SEP96	5																																				
76410A0429	Obtain Authorization Agreement		4NOV96	0																																				
76410A0440	Activity Control Envelope-Dry Comb-inorg	18JUN96	17OCT96	88																																				
76410A0441	Process Flow Diagram	18JUN96	24JUN96	5																																				
76410A0442	Process Hazard Assessment	25JUN96	25JUL96	23																																				
76410A0443	Performance Expectations	26JUL96	22AUG96	20																																				
76410A0444	Develop Standards List	23AUG96	19SEP96	20																																				
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76410A0516	Design Criteria Dry Comb-inorg/Repack	27NOV95A	6DEC95A	8																																				
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7C44101101	PM Support-Combustibles/Repack	15DEC95A	16JUN97	392																																				
					ENGINEERING																																			
7C44102000	Ash Engineering	18DEC95A	14APR97	346																																				
7C44102010	Ash T-I Engineering	18DEC95A	20MAY96	111																																				
7C44102020	Ash 60% T-I Design	18DEC95A	8MAR96	60																																				
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7C44102050	Ash T-I Revisions as appropriate	7MAY96	20MAY96	10																																				
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7C44102070	Request KD-2 Ash		20MAY96	0																																				
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7C44102310	Ash T-II Engineering	21MAY96	7OCT96	100																																				
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Activity Classification: User Defined 2

NONHDDX

Plot Date 15FEB96  
 Data Date 11FEB96  
 Project Start 7NOV95  
 Project Finish 30MAY02

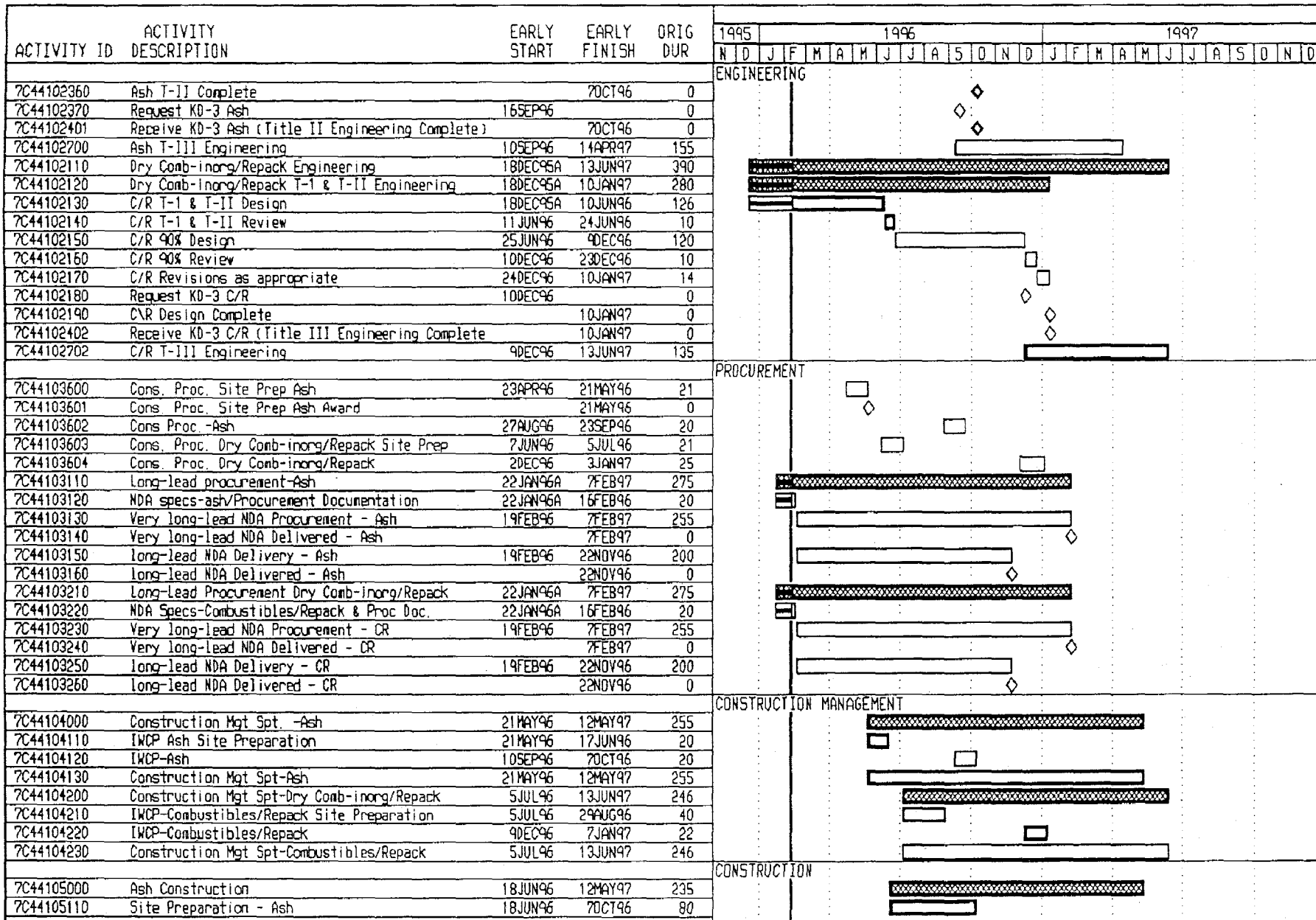
Activity Bar/Early Dates  
 Critical Activity  
 Progress Bar  
 Milestone/Flag Activity

REPC

Sheet 1 of 3

RFETS  
 RESIDUE ELIMINATION PROJECTS  
 ASH & DRY SCHEDULE

Date	Revision	Checked	Approved



Activity Classification: User Defined 2

HWYBCK

Plot Date 15FEB96  
 Data Date 11FEB96  
 Project Start 7NOV95  
 Project Finish 30MAY02

Activity Bar/Early Dates  
 Critical Activity  
 Progress Bar  
 Milestone/Flag Activity

REPC

Sheet 2 of 3

RFETS  
 RESIDUE ELIMINATION PROJECTS  
 ASH & DRY SCHEDULE

Date	Revision	Checked	Approved



ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR	1995												1996												1997											
					N D J F M A M J J A S O N D												N D J F M A M J J A S O N D												N D J F M A M J J A S O N D											
					<b>CONCEPTUAL DESIGN MANAGEMENT</b>																																			
76410A0233	Wet-371 Conceptual Design	27NOV95A	15DEC95A	15	[Bar]																																			
76410A0247	Wet Systems Effectiveness	22JAN96A	5APR96	55	[Bar]																																			
					<b>AUTHORIZATION BASIS</b>																																			
76410A0430	Activity Control Envelope-Wet-371	15MAY96	2DEC96	144	[Bar]																																			
76410A0431	Process Flow Diagram	15MAY96	20MAY96	4	[Bar]																																			
76410A0432	Process Hazard Assessment	21MAY96	15JUL96	40	[Bar]																																			
76410A0433	Performance Expectations	16JUL96	12AUG96	20	[Bar]																																			
76410A0434	Develop Standards List	13AUG96	9SEP96	20	[Bar]																																			
76410A0435	Readiness Acceptance Criteria	13AUG96	9SEP96	20	[Bar]																																			
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76410A0437	Coordinate Authorization Agreement	13AUG96	2DEC96	80	[Bar]																																			
76410A0438	Cross Table Review	10SEP96	16SEP96	5	[Bar]																																			
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					<b>DESIGN MANAGEMENT</b>																																			
76410A0518	Design Criteria Wet-371	27NOV95A	6DEC95A	8	[Bar]																																			
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7C44201100	PM Support-Wet/371	15DEC95A	4JUL97	406	[Bar]																																			
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7C44202340	Wet 90% TII Review	12SEP96	12SEP96	1	[Bar]																																			
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					<b>PROCUREMENT</b>																																			
7C44203600	Cons. Proc. Site Prep Wet/371	10MAY96	7JUN96	21	[Bar]																																			
7C44203601	Cons. Proc. Site Prep Wet/371 Award		7JUN96	0	[Bar]																																			
7C44203602	Cons. Proc. Wet/371	16AUG96	19SEP96	25	[Bar]																																			
7C44203110	Long-Lead Procurement Wet/371	22JAN96A	7FEB97	275	[Bar]																																			
7C44203120	NDA Specs-Wet/371/Procurement Documentation	22JAN96A	16FEB96	20	[Bar]																																			
7C44203130	Very long-lead NDA Delivery - Wet	19FEB96	7FEB97	255	[Bar]																																			
7C44203140	Very long-lead NDA Delivered - Wet		7FEB97	0	[Bar]																																			
7C44203150	long-lead NDA Delivery - Wet	19FEB96	22NOV96	200	[Bar]																																			

Activity Classification: User Defined 2

BAR HATCH

Plot Date 15FEB96  
 Data Date 11FEB96  
 Project Start 27NOV95  
 Project Finish 30MAY02

[Bar] Activity Bar/Early Dates  
 [Bar] Critical Activity  
 [Bar] Progress Bar  
 [Diamond] Milestone/Flag Activity

REPC

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RFETS  
 RESIDUE ELIMINATION PROJECTS  
 WET SCHEDULE

Date	Revision	Checked	Approved

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR	1996												1997											
					N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
7C44203160	long-lead NDA Delivered - Wet		22NOV96	0	PROCUREMENT																							
					CONSTRUCTION MANAGEMENT																							
7C44204000	Const Mgt. Spt -Wet/371	7JUN96	3JUL97	280	[Gantt bar: 7JUN96 to 3JUL97]																							
7C44204110	INCP Wet/371 Site Preparation	7JUN96	1AUG96	40	[Gantt bar: 7JUN96 to 1AUG96]																							
7C44204120	INCP Wet/371	30AUG96	19DEC96	80	[Gantt bar: 30AUG96 to 19DEC96]																							
7C44204130	Construction Mgt. Wet/371	7JUN96	3JUL97	280	[Gantt bar: 7JUN96 to 3JUL97]																							
					CONSTRUCTION																							
7C44205000	Wet/371 Construction	2AUG96	3JUL97	240	[Gantt bar: 2AUG96 to 3JUL97]																							
7C44205110	Site Preparation - Wet	2AUG96	19DEC96	100	[Gantt bar: 2AUG96 to 19DEC96]																							
7C44205120	Construction-Wet/371	20DEC96	5JUN97	120	[Gantt bar: 20DEC96 to 5JUN97]																							
7C44205130	Testing-Wet/371	6JUN97	3JUL97	20	[Gantt bar: 6JUN97 to 3JUL97]																							
7C44205140	Project Acceptance and Transfer - Wet		3JUL97	0	[Milestone diamond at 3JUL97]																							
					PROCEDURES/TRAINING/STARTUP																							
76410A0630	Wet-371 Procedures and Training	12FEB96	3JUL97	364	[Gantt bar: 12FEB96 to 3JUL97]																							
76410A0632	ALARA REVIEW	31MAY96	25JUL96	40	[Gantt bar: 31MAY96 to 25JUL96]																							
76410A0634	CSDLs	12FEB96	26JUL96	120	[Gantt bar: 12FEB96 to 26JUL96]																							
76410A0636	Procedures	29JUL96	16JAN97	124	[Gantt bar: 29JUL96 to 16JAN97]																							
76410A0638	Training For Operational Assessment	14MAR97	3JUL97	80	[Gantt bar: 14MAR97 to 3JUL97]																							
76410A0639	Training For Operations	9MAY97	22OCT97	119	[Gantt bar: 9MAY97 to 22OCT97]																							
					OPERATIONAL ASSESSMENT																							
76410A0730	Wet-371	4JUL97	23OCT97	80	[Gantt bar: 4JUL97 to 23OCT97]																							
76410A0732	Wet Operational Assessment	4JUL97	23OCT97	80	[Gantt bar: 4JUL97 to 23OCT97]																							
76410A0734	Wet Operationally Ready		23OCT97	0	[Milestone diamond at 23OCT97]																							
					OPERATIONS																							
76410A0735	Wet Operations	24OCT97	30MAY02	1200	[Gantt bar: 24OCT97 to 30MAY02]																							

Activity Classification: User Defined 2

■ W/PROCK

Plot Date 15FEB96  
 Data Date 11FEB96  
 Project Start 7NOV95  
 Project Finish 30MAY02

▬ Activity Bar/Early Dates  
 ▬ Critical Activity  
 ▬ Progress Bar  
 ◇ / # Milestone/Flag Activity

REPC

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RFETS  
 RESIDUE ELIMINATION PROJECTS  
 WET SCHEDULE

Date	Revision	Checked	Approved



ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR	1995				1996				1997				1998			
					N	D	E	C	J	A	N	O	J	A	N	O	D	E	C	J
76410A0235	Shape Sanitation Conceptual Design	27NOV95A	27NOV95A	1	CONCEPTUAL DESIGN MANAGEMENT															
76410A0519	Design Criteria Shapes	27NOV95A	6DEC95A	8	DESIGN MANAGEMENT															
76410A0530	Develop A-E Specifications (Shapes)	30NOV95A	17JAN96A	35																
76410A0534	Develop A-E Specifications	30NOV95A	6DEC95A	5																
76410A0536	A-E Negotiation Period	7DEC95A	17JAN96A	30																
76410A0537	Subcontract Award		17JAN96A	0																
7C44301100	PM Support-Shapes	15DEC95A	31OCT97	491	PROJECT MANAGEMENT															
7C44302000	Shapes Engineering	18JAN96A	30OCT97	466	ENGINEERING															
7C44302310	SS T-1/T-II Engineering	18JAN96A	22AUG96	156																
7C44302320	SS 60% T-1/T-II Design	18JAN96A	26JUN96	115																
7C44302330	SS T-1/T-II Review	27JUN96	27JUN96	1																
7C44302340	SS 40% Design	28JUN96	22AUG96	40																
7C44302350	SS 40% Review	28JUN96	25JUL96	20																
7C44302360	SS Revisions as appropriate	26JUL96	22AUG96	20																
7C44302370	Request KD-3 SS	28JUN96		0																
7C44302380	SS Design Complete		22AUG96	0																
7C44302401	Receive KD-3 SS-Title I/II Engineering Complete		22AUG96	0																
7C44302700	SS T-III Engineering	16MAY97	30OCT97	120																
7C44303600	Cons. Proc. Shape San.	23AUG96	26SEP96	25	PROCUREMENT															
7C44303110	Long-Lead Procurement Shapes	22JAN96A	27JUN97	375																
7C44303120	NDA Specs-Shapes & Proc. Doc.	22JAN96A	5JUL96	120																
7C44303130	Very long-lead NDA Procurement - Shapes	8JUL96	27JUN97	255																
7C44303140	Very long-lead NDA Delivered - Shapes		27JUN97	0																
7C44303150	Long-lead NDA Delivery - Shapes	8JUL96	11APR97	200																
7C44303160	Long-lead NDA Delivered - Shapes		11APR97	0																
7C44304000	Const Mtg Spt-Shapes	16MAY97	30OCT97	120	CONSTRUCTION MANAGEMENT															
7C44304110	TWCP-Shapes	16MAY97	12JUN97	20																
7C44304120	Const Mtg-Shapes	16MAY97	30OCT97	120																
7C44305000	Shapes Construction	27SEP96	30OCT97	285	CONSTRUCTION															
7C44305105	Site Preparation - Shapes	27SEP96	2JAN97	70																
7C44305110	Construction-Shapes	13JUN97	20CT97	80																
7C44305120	Testing-Shapes	30CT97	30OCT97	20																
7C44305130	Project Acceptance and Transfer-Shapes		30OCT97	0																
76410A0650	Shape Procedures and Training	1AUG96	22OCT97	320	PROCEDURES/TRAINING/STARTUP															
76410A0652	ALARA REVIEW	1AUG96	25SEP96	40																
76410A0654	CSOLs	26SEP96	12MAR97	120																
76410A0656	Procedures	13MAR97	30JUL97	100																
76410A0658	Training For Operational Assessment	31JUL97	22OCT97	60																
76410A0659	Training For Operations	28AUG97	10FEB98	119																
76410A0750	Shapes	31OCT97	19FEB98	80	OPERATIONAL ASSESSMENT															
76410A0752	Shape Sanitation Operational Assessment	31OCT97	19FEB98	80																
76410A0754	Shape Sanitation Operationally Ready		19FEB98	0																
76410A0755	Shapes Sanitation Operations	20FEB98	30MAY02	1115	OPERATIONS															

Plot Date 15FEB96  
 Data Date 11FEB96  
 Project Start 2NOV95  
 Project Finish 30MAY02

Activity Bar/Early Dates  
 Critical Activity  
 Progress Bar  
 Milestone/Flag Activity

REP

Sheet 1 of 1

User Defined 2  
 HATCH

RFETS  
 RESIDUE ELIMINATION PROJECTS  
 CLASSIFIED SHAPES

Date	Revision	Checked	Approved



ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR	REM DUR	TOTL FLT	1995												1996												1997												1998											
							N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
							<b>ECOLOGY/REGULATORY/NEPA :</b>																																															
76410A0310	NEPA Activities	7NOV95A	15APR96	115	46	0																																																
76410A0312	Revise/Modify as Required	7NOV95A	4DEC95A	20	0																																																	
76410A0314	Complete NEPA Activities	5DEC95A	15APR96	95	46	25																																																
76410A0316	Publish FONSI		15APR96	0	0	25																																																
76410A0320	RCRA Permitting	4JAN96A	4DEC96	240	213	0																																																
76410A0322	Reactivate Permitting Process	4JAN96A	17JAN96A	10	0																																																	
76410A0324	Prepare and Submit Permit Mod(s)	18JAN96A	10APR96	60	43	102																																																
76410A0326	Public Comment Period	11APR96	14AUG96	90	90	102																																																
76410A0328	Incorporate Comments	15AUG96	4DEC96	80	80	102																																																
76410A0329	Permit Mod Approved/Issued		4DEC96	0	0	102																																																
76410A0330	CAA Minor Source(s)	25JAN96A	29MAY96	90	78	0																																																
76410A0332	CAA Assessment	25JAN96A	21FEB96	20	8	37																																																
76410A0334	Prepare Notification to State	22FEB96	6MAY96	10	10	37																																																
76410A0336	Initial Permit Issued		29MAY96	0	0	37																																																
							<b>AUTHORIZATION BASIS</b>																																															
76410A0400	Authorization Basis	11JAN96A	2JAN97	256	234	0																																																
76410A0460	Security & Quality Planning	12FEB96	6SEP96	150	150	177																																																
76410A0461	Safeguards & Security Plan	12FEB96	21AUG96	138	138	177																																																
76410A0462	Quality Assurance Plan	12FEB96	21AUG96	138	138	177																																																
76410A0464	Waste Management Plan	22JAN96A	6SEP96	150	150	165																																																
							<b>DESIGN MANAGEMENT</b>																																															
76410A0500	Design Management	27NOV95A	12JAN96A	39	0																																																	
76410A0510	Design Criteria	27NOV95A	6DEC95A	8	0																																																	
76410A0520	A-E Subcontract Actions	30NOV95A	17JAN96A	35	0																																																	
76410A0521	Develop A-E Specifications (except shapes)	30NOV95A	15DEC95A	12	0																																																	
76410A0522	Develop A-E Specifications	30NOV95A	6DEC95A	5	0																																																	
76410A0525	A-E Negotiation Period	7DEC95A	15DEC95A	7	0																																																	
76410A0526	Subcontract Award		15DEC95A	0	0																																																	
76410A0570	Request KD-1		1DEC95A	0	0																																																	
76410A0580	Obtain KD-1		15DEC95A	0	0																																																	
							<b>PROGRAM MANAGEMENT SUPPORT</b>																																															
76410A0800	Program Management Support	15DEC95A	10FEB98	563	522	0																																																
76410A0810	Program Support - FY96	15DEC95A	10FEB98	563	522	1122																																																
							<b>PROCEDURES/TRAINING/STARTUP</b>																																															
76410A0600	Procedures/Training/Startup	18JAN96A	22OCT97	460	443	0																																																
							<b>OPERATIONAL ASSESSMENT</b>																																															
76410A0700	Operational Assessment	28APR97	19FEB98	214	214	0																																																

Activity Classification: User Defined 2

■ HATCH

Plot Date 15FEB96  
 Data Date 11FEB96  
 Project Start 7NOV95  
 Project Finish 30MAY02

Activity Bar/Early Dates  
 Critical Activity  
 Progress Bar  
 Milestone/Flag Activity

REPC

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RFETS  
 RESIDUE ELIMINATION PROJECTS  
 SUPPORT SCHEDULE

Date	Revision	Checked	Approved