



## 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

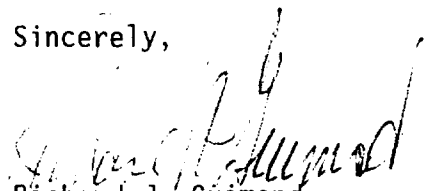
Dear Mr. Conway:

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 incentivize 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

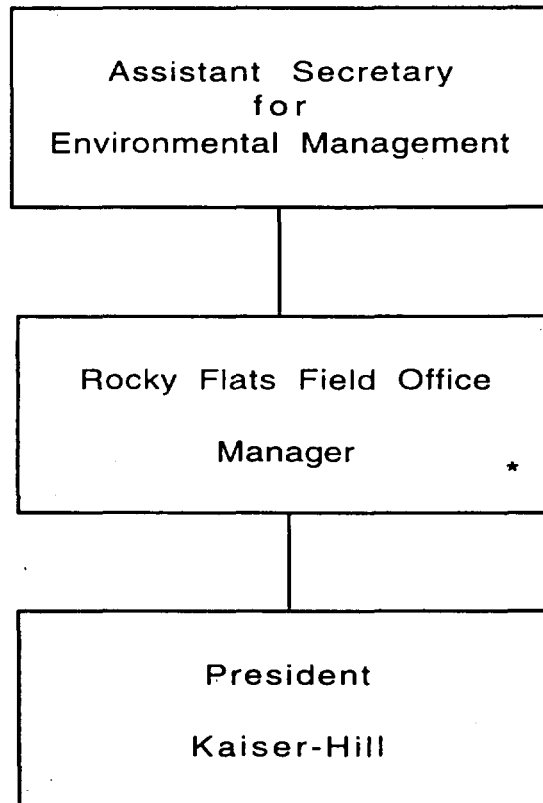
- The plan for combustibles is to stabilize the high-hazard (wet combustibles) in Buildings 774 and 371 by:
  - (a) cementing ion exchange resin beads using the bottle-box process in B774 (268 kg).
  - (b) microwave solidification of oily sludge (7 kg).
  - (c) washing and drying wet inorganic combustibles (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..

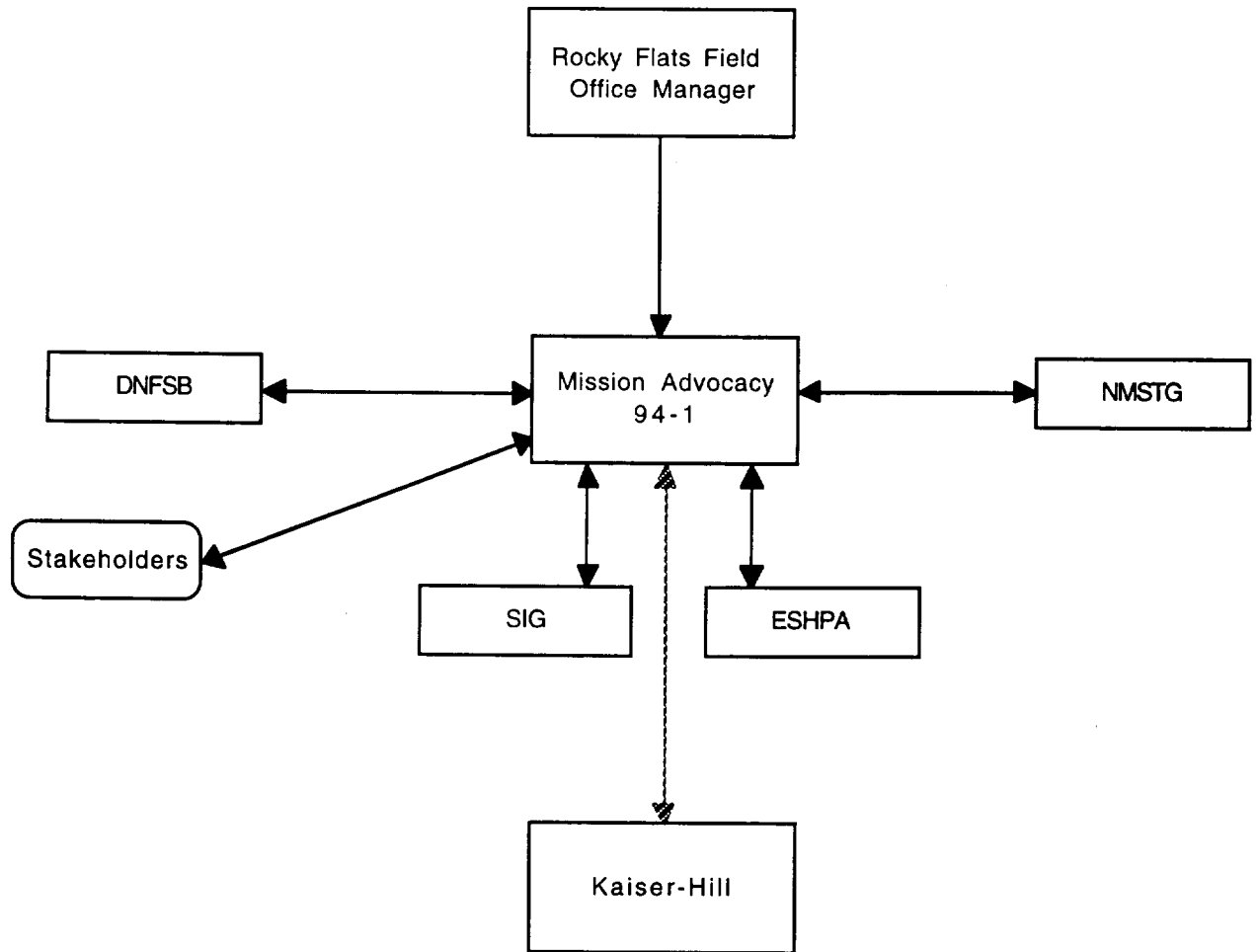
Within the Rocky Flats Field Office, Mission Advocacy will continue to work with the Environmental Health & Safety Program Assessment (ESHPA) and the Strategy, Integration, & Guidance (SIG) organizations in all phases of work from setting Performance Measures to monitoring the contractor against its 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:

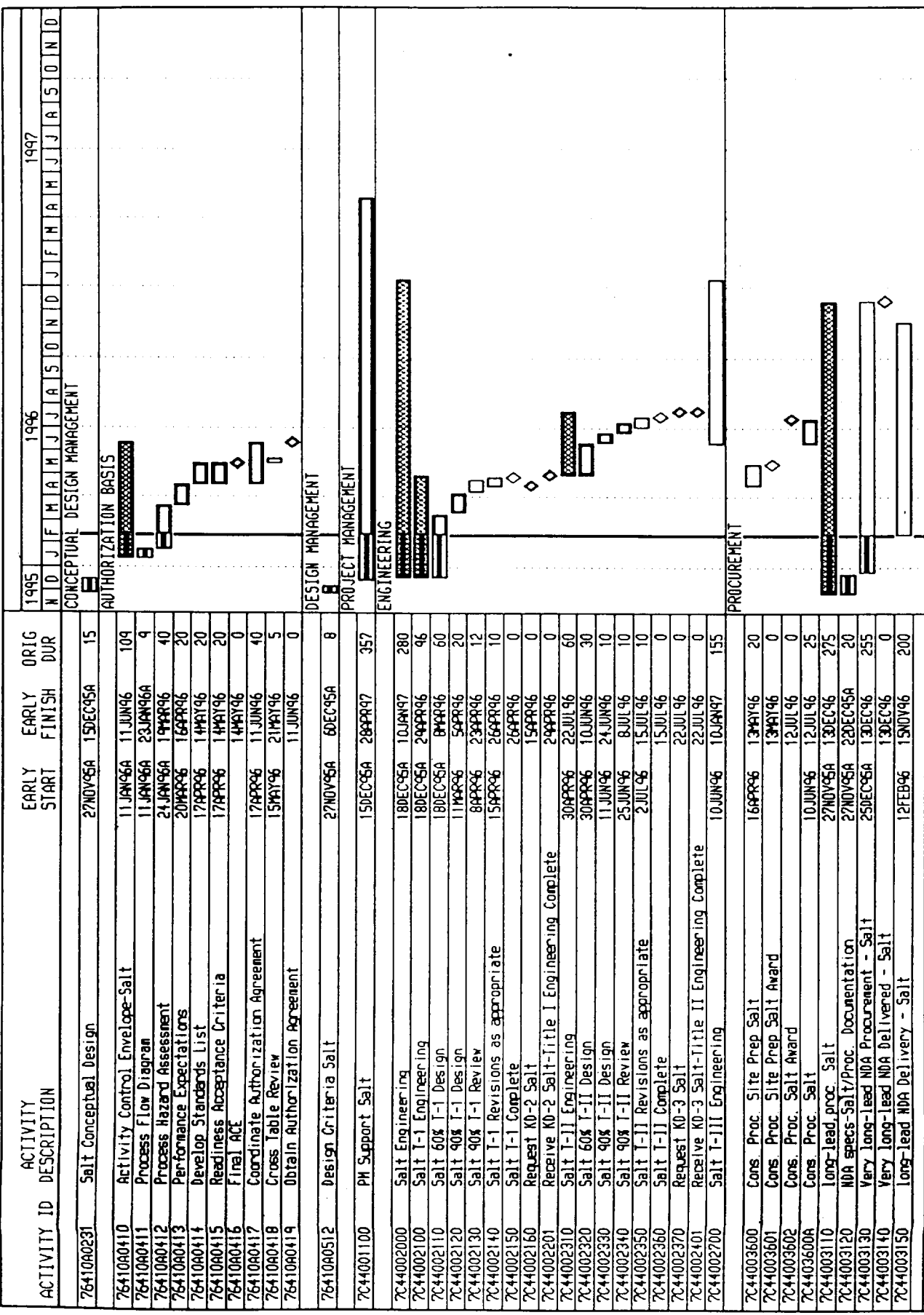
A





B





Activity Classification: User Defined 2

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

Plot Date: 15FEB96  
 Data Date: 11FEB96  
 Project Start: 27NOV95  
 Project Finish: 30MAR97

Activity Classifications: User Defined 2

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

Sheet 1 of 2

RFETS  
 RESIDUE ELIMINATION PROJECTS  
 SALT SCHEDULE

Date	Revision	Checked	Approved

(c) Pr. Inavera Systems, Inc.







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			
					CONSTRUCTION												PROCEDURES/TRAINING/STARTUP												OPERATIONAL ASSESSMENT												OPERATIONS																			
7C44105120	Construction-Ash	8OCT96	10MAR97	110																																																								
7C44105130	Install Long-Lead Ash	11MAR97	7APR97	20																																																								
7C44105140	Ash Facility Construction Testing	8APR97	12MAY97	25																																																								
7C44105150	Project Acceptance & Transfer Ash		12MAY97	0																																																								
7C44105200	Dry Comb-inorg/Repack Construction	30AUG96	13JUN97	206																																																								
7C44105210	Site Preparation - Comb/Repack	30AUG96	2JAN97	90																																																								
7C44105220	Construction-Comb/Repack	13JAN97	16MAY97	90																																																								
7C44105230	Testing -Comb/Repack	19MAY97	13JUN97	20																																																								
7C44105240	Project Acceptance & Transfer -Comb/Repack		13JUN97	0																																																								
76410A0620	Ash Procedures and Training	11APR96	12MAY97	283																																																								
76410A0622	ALARA REVIEW	11APR96	5JUN96	40																																																								
76410A0624	CSOLs	25APR96	17OCT96	126																																																								
76410A0626	Procedures	3SEP96	6JAN97	90																																																								
76410A0628	Training for Operational Assessment	7JAN97	12MAY97	90																																																								
76410A0629	Training For Operations	18MAR97	29AUG97	119																																																								
76410A0640	Dry Comb-inorg/Repack Procedures and Training	6JUN96	12JUN97	266																																																								
76410A0642	ALARA REVIEW	6JUN96	31JUL96	40																																																								
76410A0644	CSOLs	6JUN96	20NOV96	120																																																								
76410A0646	Procedures	27SEP96	13FEB97	100																																																								
76410A0648	Training for Operational Assessment	21FEB97	12JUN97	80																																																								
76410A0649	Training for Operations	18APR97	1OCT97	119																																																								
76410A0720	Ash	13MAY97	1SEP97	80																																																								
76410A0722	Ash Operational Assessment	13MAY97	1SEP97	80																																																								
76410A0724	Ash Operationally Ready		1SEP97	0																																																								
76410A0740	Dry Comb-inorg/Repack	16JUN97	3OCT97	80																																																								
76410A0742	Dry Comb-inorg/Repack Operational Assessment	16JUN97	3OCT97	80																																																								
76410A0744	Dry Comb-inorg/Repack Operationally Ready		3OCT97	0																																																								
76410A0725	Ash Operations	2SEP97	30MAY02	1238																																																								
76410A0745	Dry Comb-inorg/Repack Operations	6OCT97	30MAY02	1214																																																								

Activity Classification: User Defined 2

WIP/DCK

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 3 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
					CONCEPTUAL DESIGN MANAGEMENT																																				
76410A0233	Wet-371 Conceptual Design	27NOV95A	15DEC95A	15	[Gantt bar]																																				
76410A0247	Wet Systems Effectiveness	22JAN96A	5APR96	55	[Gantt bar]																																				
					AUTHORIZATION BASIS																																				
76410A0430	Activity Control Envelope-Wet-371	15MAY96	20DEC96	144	[Gantt bar]																																				
76410A0431	Process Flow Diagram	15MAY96	20MAY96	4	[Gantt bar]																																				
76410A0432	Process Hazard Assessment	21MAY96	15JUL96	40	[Gantt bar]																																				
76410A0433	Performance Expectations	16JUL96	12AUG96	20	[Gantt bar]																																				
76410A0434	Develop Standards List	13AUG96	9SEP96	20	[Gantt bar]																																				
76410A0435	Readiness Acceptance Criteria	13AUG96	9SEP96	20	[Gantt bar]																																				
76410A0436	Final ACE		9SEP96	0	[Gantt bar]																																				
76410A0437	Coordinate Authorization Agreement	13AUG96	20DEC96	80	[Gantt bar]																																				
76410A0438	Cross Table Review	10SEP96	16SEP96	5	[Gantt bar]																																				
76410A0439	Obtain Authorization Agreement		20DEC96	0	[Gantt bar]																																				
					DESIGN MANAGEMENT																																				
76410A0518	Design Criteria Wet-371	27NOV95A	6DEC95A	8	[Gantt bar]																																				
					PROJECT MANAGEMENT																																				
7C44201100	PM Support-Wet/371	15DEC95A	4JUL97	406	[Gantt bar]																																				
					ENGINEERING																																				
7C44202000	Wet/371 Engineering	18DEC95A	3JUL97	404	[Gantt bar]																																				
7C44202100	Wet T-I Engineering	18DEC95A	6JUN96	124	[Gantt bar]																																				
7C44202110	Wet 60% T-I Design	18DEC95A	8MAR96	60	[Gantt bar]																																				
7C44202120	Wet 90% T-I Design	11MAR96	3MAY96	40	[Gantt bar]																																				
7C44202130	Wet 90% T-I Review	6MAY96	17MAY96	10	[Gantt bar]																																				
7C44202140	Wet T-I Revisions as appropriate	20MAY96	6JUN96	14	[Gantt bar]																																				
7C44202150	Wet T-I Complete		6JUN96	0	[Gantt bar]																																				
7C44202160	Request KD-2 Wet		17MAY96	0	[Gantt bar]																																				
7C44202201	Receive KD-2 Wet (Title I Engineering Complete)		6JUN96	0	[Gantt bar]																																				
7C44202310	Wet T-II Engineering	7JUN96	26SEP96	80	[Gantt bar]																																				
7C44202320	Wet 60% TII Design	7JUN96	14AUG96	49	[Gantt bar]																																				
7C44202330	Wet 90% TII Design	15AUG96	11SEP96	20	[Gantt bar]																																				
7C44202340	Wet 90% TII Review	12SEP96	12SEP96	1	[Gantt bar]																																				
7C44202350	Wet TII Revisions as appropriate	26SEP96	26SEP96	1	[Gantt bar]																																				
7C44202360	Wet TII Complete		26SEP96	0	[Gantt bar]																																				
7C44202370	Request KD-3 Wet		12SEP96	0	[Gantt bar]																																				
7C44202401	Receive KD-3 Wet (Title II Engineering Complete)		26SEP96	0	[Gantt bar]																																				
7C44202700	Wet T-III Engineering	30AUG96	3JUL97	220	[Gantt bar]																																				
					PROCUREMENT																																				
7C44203600	Cons Proc Site Prep Wet/371	10MAY96	7JUN96	21	[Gantt bar]																																				
7C44203601	Cons. Proc. Site Prep Wet/371 Award		7JUN96	0	[Gantt bar]																																				
7C44203602	Cons Proc Wet/371	16AUG96	19SEP96	25	[Gantt bar]																																				
7C44203110	Long-Lead Procurement Wet/371	22JAN96A	7FEB97	275	[Gantt bar]																																				
7C44203120	NDA Specs-Wet/371/Procurement Documentation	22JAN96A	16FEB96	20	[Gantt bar]																																				
7C44203130	Very long-lead NDA Delivery - Wet	19FEB96	7FEB97	255	[Gantt bar]																																				
7C44203140	Very long-lead NDA Delivered - Wet		7FEB97	0	[Gantt bar]																																				
7C44203150	long-lead NDA Delivery - Wet	19FEB96	22NOV96	200	[Gantt bar]																																				

Activity Classification: User Defined 2

■ ■■■■

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 2

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	J	A	N	J	A	N	J	A	N
					CONCEPTUAL DESIGN MANAGEMENT											
76410A0235	Shape Sanitation Conceptual Design	27NOV95A	27NOV95A	1												
					DESIGN MANAGEMENT											
76410A0519	Design Criteria Shapes	27NOV95A	6DEC95A	8												
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												
					PROJECT MANAGEMENT											
7C44301100	PM Support-Shapes	15DEC95A	31OCT97	491												
					ENGINEERING											
7C44302000	Shapes Engineering	18JAN96A	30OCT97	466												
7C44302310	SS 1-1/T-II Engineering	18JAN96A	22AUG96	156												
7C44302320	SS 60% T-1/T-II Design	18JAN96A	26JUN96	115												
7C44302330	SS 1-1/T-II Review	27JUN96	27JUN96	1												
7C44302340	SS 90% Design	28JUN96	22AUG96	40												
7C44302350	SS 90% 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 [T-II] Engineering Complete		22AUG96	0												
7C44302700	SS T-III Engineering	16MAY97	30OCT97	120												
					PROCUREMENT											
7C44303600	Cons. Proc. Shape San.	23AUG96	26SEP96	25												
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												
					CONSTRUCTION MANAGEMENT											
7C44304000	Const Mgt Spt-Shapes	16MAY97	30OCT97	120												
7C44304110	IWCP-Shapes	16MAY97	12JUN97	20												
7C44304120	Const Mgt-Shapes	16MAY97	30OCT97	120												
					CONSTRUCTION											
7C44305000	Shapes Construction	27SEP96	30OCT97	285												
7C44305105	Site Preparation - Shapes	27SEP96	2JAN97	70												
7C44305110	Construction-Shapes	13JUN97	20CT97	60												
7C44305120	Testing-Shapes	30CT97	30OCT97	20												
7C44305130	Project Acceptance and Transfer-Shapes		30OCT97	0												
					PROCEDURES/TRAINING/STARTUP											
76410A0650	Shape Procedures and Training	1AUG96	22OCT97	320												
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												
					OPERATIONAL ASSESSMENT											
76410A0750	Shapes	31OCT97	19FEB98	80												
76410A0752	Shape Sanitation Operational Assessment	31OCT97	19FEB98	80												
76410A0754	Shape Sanitation Operationally Ready		19FEB98	0												
					OPERATIONS											
76410A0755	Shapes Sanitation Operations	20FEB98	30MAY02	1115												

Plot Date 15FEB96 Data Date 11FEB96 Project Start 7NOV95 Project Finish 30MAY02		REPC RFETS RESIDUE ELIMINATION PROJECTS CLASSIFIED SHAPES	Sheet 1 of 1 Bar Defined 2 HMMDDC	<table border="1"> <thead> <tr> <th>Date</th> <th>Revision</th> <th>Checked</th> <th>Approved</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Date	Revision	Checked	Approved																
Date	Revision	Checked	Approved																					

1995	1996	1997	1998
N	D	J	F
J	F	M	A
A	M	J	J
J	A	S	J
O	N	D	J
J	F	M	A
M	J	J	J
A	S	J	J
S	J	J	J
O	N	D	J
N	D	J	F

ACTIVITY ID	ACTIVITY DESCRIPTION	EARLY START	EARLY FINISH	ORIG DUR	REM DUR	TOTAL FLT
76410A0200	Conceptual Design Management	7NOV96	25JUN96	166	97	0
76410A0210	Complete Conceptual Design	7NOV96	15DEC96	29	0	
76410A0212	Determine Process Configuration	7NOV96	9NOV96	3	0	
76410A0214	Modify A-E Subcontract	7NOV96	24NOV96	14	0	
76410A0216	Determine Equipment Requirements	10NOV96	13NOV96	2	0	
76410A0218	Determine Facility Requirements	14NOV96	16NOV96	3	0	
76410A0220	Initial DOE Briefing	17NOV96	17NOV96	1	0	
76410A0222	Coordinate Facility Use	20NOV96	22NOV96	3	0	
76410A0224	Develop Facility Layout	15NOV96	21NOV96	5	0	
76410A0226	DOE Briefing	22NOV96	22NOV96	0	0	
76410A0230	Develop Conceptual Designs	23NOV96	15DEC96	17	0	
76410A0236	Conceptual Designs Complete (less shapes)	15DEC96	15DEC96	0	0	
76410A0237	Revised Cost Estimate	23NOV96	24NOV96	5	0	
76410A0240	Determine Operational Parameters	22JAN96	25JUN96	112	97	0
76410A0248	Container System Coordination	22JAN96	25JUN96	112	97	39
76410A0250	Determine Storage Requirements	14NOV96	16MAY96	133	69	0
76410A0252	Determine Final Storage Requirements	14NOV96	18MAY96	90	26	1575
76410A0254	Estimate Volume Output	18MAY96	22MAY96	5	5	1575
76410A0256	Estimate Secondary Waste Volume	25MAY96	30MAY96	8	8	1575
76410A0258	Determine Proposed Waste Storage Fac. Capab	4MAY96	18MAY96	11	11	1575
76410A0260	Decision on Waste Storage Facility Requirements	18MAY96	18MAY96	0	0	1575
76410A0261	Initiate Action for Storage Facility	18MAY96	18MAY96	0	0	1595
76410A0263	Initiate Storage Facility Design/Coordination	18MAY96	18MAY96	0	0	1595
76410A0264	Estimate on Facility Costs	19MAY96	16MAY96	20	20	1575
76410A0270	Financial Management	7NOV96	13DEC96	27	0	
76410A0271	Obtain Interim Funding/Funds Planning	7NOV96	24NOV96	17	0	
76410A0272	BCP-Expense Funding	7NOV96	8NOV96	2	0	
76410A0274	BCP Approved	9NOV96	24NOV96	15	0	
76410A0280	Prepare for Line Item and LI support funding	23NOV96	3JAN96	30	0	
76410A0282	Develop PMP/MP-Capital	30NOV96	13DEC96	10	0	
76410A0283	Obtain Capital Funding	15DEC96	15DEC96	0	0	
76410A0284	Develop PMP/MP-Expense	23NOV96	13DEC96	15	0	
76410A0285	Submit BCP	3JAN96	3JAN96	0	0	
76410A0286	Obtain Expense Funding	3JAN96	3JAN96	0	0	
76410A0290	Prepare HQ documentation/Validation	30NOV96	13DEC96	10	0	
76410A0291	Determine Revised IPC	30NOV96	6DEC96	5	0	
76410A0292	Revise Schedule 44	7DEC96	13DEC96	5	0	
76410A0294	Revise ADS	7DEC96	13DEC96	5	0	
76410A0296	Ready for Validation	13DEC96	13DEC96	0	0	
76410A0300	Ecology/Regulatory/Nepea	7NOV96	4DEC96	282	213	0

ECOLOGY/REGULATORY/NEPEA

Date	Revision	Checked	Approved

Sheet 1 of 2

RFETS

RESIDUE ELIMINATION PROJECTS

SUPPORT SCHEDULE

Legend:

- Activity Start/Early Dates
- Critical Activity
- Progress Bar
- Milestone/Log Activity

Plot Date: 15FEB96

Data Date: 11FEB96

Project Start: 7NOV96

Project Finish: 30MAY02

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