0047847

Meeting Minutes
Inter Agency Management Integration Team (IAMIT)
EPA Conference Room
712 Swift Blvd., Richland
August 26, 1997

Appvl.: Jackson Kinzer Date: 9-25-97
Jackson E. Kinzer, RL
IAMIT Representative

Appvl.: Douglas R. Sherwood Date: 9/23/97
Douglas R. Sherwood, EPA
IAMIT Representative

Appvl.: Michael A. Wilson Date: 9/23/97
Michael A. Wilson, Ecology
IAMIT Representative

Prepared by
Appvl.: Terry W. Noland Date: 9/23/97
Terry W. Noland
Fluor Daniel Hanford, Inc.

Distribution

Alexander S. M.	Ecology	B5-18	Sanders, G. H.	RL	A5-15*
Arnold, L. D.	WHC	G3-27	Sands, J. P.	RL	H0-12*
Butler, D. H.	FDH	H8-67	Sautter, S. P.	ODOE	
Dahl, S. L.	Ecology	B5-18*	625 Marion N.E.,	Salem, OR	97310*
Haass, C. C.	RL	S7-51*	Selby, M. A.	Ecology	B5-18*
Hansen, C. A.	RL	S7-41*	Sellers, E. D.	RL	S7-41*
Hepner, N. T.	Ecology	B5-18	Sherwood, D. R.	EPA	B5-01*
Holt, R. G.	RL	S7-41*	Skinnarland, R.	Ecology	B5-18*
Jackson, D. E.	RL	A5-15	Stanley, R.	Ecology	B5-18*
Kinzer, J. E.	RL	S7-50	Taylor, W. J.	RL	K6-51*
McGinley, E. S.	FDH	H8-68	Tebb, G. T.	Ecology	B5-18
McLaughlin, M.A.	FDH	G3-27	Umek, A. M.	FDH	S7-40
Miera, F. R.	RL	A5-15*	Williams, N. H.	FDH	R3-11
Morrison, R. D.	FDH	G3-27*	Wilson, M. A.	Ecology	B5-18*
Noland, T. W.	FDH	G3-27*	Yates, M. K.	FDH	H5-20
Rasmussen, J. E.	RL	A5-15	Yerxa, J. K.	RL	A7-75
Roeder-Smith, L	JAC	H0-51	EDMC		H6-08*

OCT 1997
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EDMC

* W/Attachments

IAMITMIN.826

AGENDA
INTER AGENCY MANAGEMENT INTEGRATION TEAM (IAMIT) MEETING

AUGUST 26, 1997
1:00 PM - 4:00 PM

EPA CONFERENCE ROOM, 712 SWIFT BLVD., SUITE 5

(CHAIRPERSON: J. E. Kinzer)

1:00 pm	CONTRACTOR PRESENCE AND INVOLVEMENT (M. Yates)
1:15 pm	APPROVAL OF FY 1998 IAMIT MEETING SCHEDULE (R. Morrison)
1:20 pm	APPROVAL OF SURPLUS REACTORS RESPONSE TO PUBLIC COMMENTS (F. Miera)
1:25 pm	APPROVAL OF ADJUSTMENT TO M-44 (TANK CHARACTERIZATION) PACKAGE (J. Poppiti, S. Dahl)
1:30 pm	MILESTONE M-32-00 (WASTE TANK CORRECTIVE ACTIONS) ISSUES (M. Ramsey, S. Dahl)
1:40 pm	MILESTONE M-41-22 (SST STABILIZATION) DISPUTE RESOLUTION (C. Haass, S. Dahl)
1:50 pm	MILESTONE M-40-07 (C-103 VAPOR TREATMENT SYSTEM) DISPUTE RESOLUTION (C. Sohn, S. Dahl)
2:00 pm	MILESTONE M-45-03A (SST RETRIEVAL) DISPUTE RESOLUTION (W. Taylor, C. Haass, S. Dahl)
2:25 pm	BREAK
2:30 pm	SPENT NUCLEAR FUELS RISK ASSESSMENT BRIEFING (E. Sellers, N. Williams)
4:00 pm	ADJOURN

IMAGENDA.AUG

ATTENDEES

INTER AGENCY MANAGEMENT INTEGRATION TEAM (IAMIT) MEETING

DATE: 8/26/97

NAME	ORGANIZATION	MAILSTOP	(√) FOR ATTACHMENTS
✓ DALE JACKSON	DOE-RL	A5-15	
✓ FELIX R. MIERA	DOE-RL	A5-15	✓
✓ Suzanne Dahl	Ecology		✓
✓ Drew Butler	OMS ~~Ecology~~ FDH		
✓ Ron Skinnalad	Ecology		✓
✓ George H. Sanders	DOE-RL	A5-15	✓
✓ Roger Stanley	Ecology		✓
✓ MIKE WILSON	ECOLOGY		✓
✓ Jackson Kriz	DOE-RL		✓
✓ Melodie Selby	Ecology	B5-18	✓
✓ Doug Sherwood			
✓ MIKE YATES	FDH		
✓ JON YERXA	DOE		
✓ CAROLYN HAAS	DOE-RL	S7-51	✓

ATTENDEES

INTER AGENCY MANAGEMENT INTEGRATION TEAM (IAMIT) MEETING

DATE: 8/26/97

NAME	ORGANIZATION	MAILSTOP	(√) FOR ATTACHMENTS
✓ MaryAnn McLaughlin	FDH/TPAI	G3-27	
✓ Larry D. Cannon	FDH/TPAI	G3-27	
✓ Steve Sautter	Oregon Office of Energy	Salem	
Mary Lou Blazek	Oregon Energy	Salem	No Address ✓
✓ Norm Hepner	Ecology	B5-18	
✓ Lynne Porter Smith	Jason	H0-51	✓
✓ Tony Uhrich	FDH		—
✓ William Taylor	DOE-TWRS		✓
✓ Skip McGinley	FDH	H8-68	
✓ Nancy Williams	FDH-SNF		
✓ Beth Sellers	DOE SNF		
✓ Charles Hansen	DOE & AMW	S7-41	✓
✓ Jim Rasmussen	DOE/ESH/EAP	A5-15	
✓ Bob Holt	DOE/SNF	S7-41	✓

ATTENDEES

INTER AGENCY MANAGEMENT INTEGRATION TEAM (IAMIT) MEETING

DATE: 8/26/97

NAME	ORGANIZATION	MAILSTOP	(√) FOR ATTACHMENTS
✓ Steve Alexander	Ecology	B5-18	
✓ Terry Noland	FDH-TPAI	G3-27	✓

IAMIT MEETING
August 26, 1997

1. **Approval of Minutes**

   The minutes of the July 22, 1997 IAMIT Meeting were approved by Messrs. Kinzer, Wilson and Sherwood.

2. **Contractor Presence and Involvement**

   Mike Yates, Fluor Daniel Hanford (FDH) discussed the role that the PHMC should play in the IAMIT meetings. The IAMIT Representatives agreed that the contractors should attend the relevant portions of the Milestone Review and IAMIT meetings. The contractors should contribute relevant information and be part of the discussions. Larry Arnold, FDH Tri-Party Agreement Integration will be the focal point for identifying and notifying relevant FDH groups and Subcontractors for attendance at future meetings.

3. **Approval of Fiscal Year 1998 IAMIT and Milestone Review Meeting Schedule**

   The FY 1998 IAMIT and Milestone Review Meeting Schedule (Attachment 1) was approved by the IAMIT Representatives.

4. **Approval of Surplus Reactors Response to Public Comments**

   The two response letters (Attachments 2 and 3) for the public comments regarding the proposed TPA modifications for disposition of Hanford surplus reactors were approved by the three parties.

5. **Approval of Adjustment to M-44 (Tank Characterization) Package**

   IAMIT Decision Form Number 3 (Attachment 4) was signed by the three parties which extends the due date for submittal of the final Waste Information Requirements Document (Draft Milestone M-44-14A) by 5 days until September 5, 1997. The Decision Form also authorizes the extension of the M-44-14A milestone (contained within Change Request M-44-97-03 currently undergoing public comment) by 5 days prior to final approval.

   Carolyn Haass, DOE-RL, stated that the M-44 Package public comments will be resolved as they are received. She also stated that TWRS will be prepared to brief the IAMIT in October regarding the status of M-44.

6. **Approval of Extension to Draft Milestone M-60-14-T01 (Submit Data Quality Objective (DQO) for Low Activity Waste (LAW) Feed Staging)**

   IAMIT Decision Form Number 4 (Attachment 5) was signed by the three parties which extends the due date for submittal of the DOE-RL approved DQO for LAW feed staging to Ecology (Draft Milestone M-60-14-T01) by 30 days to November 30, 1997. The Decision Form also authorizes the extension of the M-60-14-T01 milestone (contained within Change Request

M-60-97-01 currently undergoing public comment) by 30 days prior to final approval.

7. **Milestone M-32-00 (Waste Tank Corrective Actions/Double Shell Tank Integrity Assessment) Issues**

Ecology is scheduled to issue a RCRA Part B permit for existing Hanford site tanks in September 1999. Prior to obtaining the permit, integrity assessments must be made of the tank system per Washington Administrative Code dangerous waste requirements. Carolyn Haass, DOE-RL and Suzanne Dahl, Ecology reported that DOE-RL and Ecology will use a partnering approach at the staff level to determine the extent, methodology, and schedule for completion of the tank integrity assessments.

8. **Elevation and Extension of Dispute for Milestone M-41-22 (Start Interim Stabilization of 6 Single Shell Tanks)**

The dispute regarding the Change Request M-41-97-01 requested extension of the M-41-22 Milestone was elevated to the IAMIT Level (Attachment 6). In addition the dispute at the IAMIT level was extended through September 23, 1997 (next scheduled IAMIT meeting) by IAMIT Decision Form Number 5 (Attachment 7). The statement of dispute papers will be prepared by Ecology and DOE-RL TWRS Program and will be exchanged one week prior to the September IAMIT meeting.

9. **Milestone M-40-07 (C-103 Vapor Treatment System)**

Carolyn Haass, DOE-RL reported that the Project Managers expect to resolve issues regarding C-103 at their level and will be ready to report back at the next IAMIT meeting. IAMIT Decision Form Number 6 (Attachment 8) was approved which extended the dispute through September 27, 1997 at the Project Manager level.

10. **Milestone M-45-03A (Initiate Retrieval of Tank C-106) Dispute**

The dispute positions of Ecology and DOE-RL were discussed (Attachments 9 and 10). After extensive discussion a resolution was not reached. Subsequent to the IAMIT meeting it was determined that the dispute was at the IAMIT level and the dispute time at this level was to expire on August 26, 1997. Agreement was made by the parties to extend the dispute through the September 23, 1997 IAMIT meeting to allow further discussion between the agencies.

11. **Spent Nuclear Fuels Risk Assessment Briefing**

Nancy Williams, FDH and Beth Sellers, DOE-RL presented the preliminary results of the Spent Nuclear Fuels (SNF) Risk Assessment. The draft revised schedule resulting from the assessment shows a 14 month delay to the schedule. First fuel movement would be in July 1999 and completion would be in September 2003. Initial cost estimates indicate a $200 - $220 million increase in total project costs. The cost increase includes scope that was not included previously. Two management reviews of the

assessment are currently in process and scheduled to be completed by September 5, 1997.

Action: **DOE-RL will revise the letter to Hanford Advisory Board regarding the status of SNF to reflect changes as a result of preliminary assessment results.**

Action: **DOE-RL will draft a change package for review by September 30, 1997 based on the new SNF schedule.**

Action: **DOE-RL will perform an analysis of the impacts on the rest of the site budget after the SNF cost profile is approved. The results of the analysis will be reported back to the IAMIT.**

Doug Sherwood, EPA expressed concern that the Engineering Evaluation/Cost Analysis (EE/CA) process may not make sense as the project is no longer expedited. Bob Holt, DOE-RL expressed concern that the permitting process may require delisting.

Tom Tebb, Ecology suggested that DOE-RL consider starting with K-East Basin based on the risk of the two basins.

Nancy Williams provided copies of the SNF Risk Assessment Presentation package (Attachment 11).

12. Memorandum of Understanding Between U.S. Department of Energy and State of Oregon

George Sanders, DOE-RL distributed the recently approved Memorandum of Understanding between DOE and the State of Oregon (Attachment 12).

13. Next IAMIT Meeting

Jackson Kinzer, DOE-RL announced that the next scheduled meeting is Tuesday, September 23, 1997. If this date conflicts with the Al Alm visit the meeting may be moved to Wednesday, September 24, 1997.

ATTACHMENT 1

DRAFT

DON'T SAY IT --- *Write It!*

DATE: August 26, 1997

TO: Distribution

FROM: R. D. Morrison, FDH TPAI

Telephone: 376-6574

SUBJECT: Fiscal Year 1998 TPA Meeting Schedule

The following FY 1998 TPA meeting schedule has been reviewed and approved by the DOE, EPA and Ecology IAMIT representatives. If there are any questions, I may be reached on 376-6574.

Tri-Party Agreement Milestone Reviews

Date	Milestones	IAMIT Chairperson
October 28, 1997 (Tuesday)	TWRS Program Review: M-40, 41, 43, 44, 45, 46 M-50, 51 M-60, 61, 90	M. A. Wilson
November 18, 1997 (Tuesday)	M-13, 15, 16, 24, 93 M-80, 82, 83, 89, 92	J. E. Kinzer
December 16, 1997 (Tuesday)	M-19, 26-01, 32, 34, 35 M-20 M-91	D. R. Sherwood
January 27, 1998 (Tuesday)	TWRS Program Review: M-40, 41, 43, 44, 45, 46 M-50, 51 M-60, 61, 90	M. A. Wilson
February 24, 1998 (Tuesday)	M-13, 15, 16, 24, 93 M-80, 82, 83, 89, 92	J. E. Kinzer
March 24, 1998 (Tuesday)	M-19, 26-01, 32, 34, 35 M-20 M-91	D. R. Sherwood
April 28, 1998 (Tuesday)	TWRS Program Review: M-40, 41, 43, 44, 45, 46 M-50, 51 M-60, 61, 90	M. A. Wilson
May 26, 1998 (Tuesday)	M-13, 15, 16, 24, 93 M-80, 82, 83, 89, 92	J. E. Kinzer
June 23, 1998 (Tuesday)	M-19, 26-01, 32, 34, 35 M-20 M-91	D. R. Sherwood

July 28, 1998 (Tuesday)	TWRS Program Review: M-40, 41, 43, 44, 45, 46 M-50, 51 M-60, 61, 90	M. A. Wilson
August 25, 1998 (Tuesday)	M-13, 15, 16, 24, 93 M-80, 82, 83, 89, 92	J. E. Kinzer
September 22, 1998 (Tuesday)	M-19, 26-01, 32, 34, 35 M-20 M-91	D. R. Sherwood

IAMIT Meetings
(Chairperson as noted above)

October 28, 1997	April 28, 1998
November 18, 1997	May 26, 1998
December 16, 1997	June 23, 1998
January 27, 1998	July 28, 1998
February 24, 1998	August 25, 1998
March 24, 1998	September 22, 1998

NOTE: The IAMIT and TPA Milestone Reviews are scheduled for the same day. However, in the event of time limitations, the TPA Milestone Review may be scheduled the day following the IAMIT meeting.

ATTACHMENT 2
47144

Tri-Party Agreement

Mr. Charles Sullivan
731 S.W. Salmon # 506
Portland, Oregon 97207

Dear Mr. Sullivan:

RESPONSE TO COMMENTS FOR PROPOSED TRI-PARTY AGREEMENT (TPA) MODIFICATIONS FOR DISPOSITION OF HANFORD SURPLUS REACTORS (M-93-00)

Thank you very much for your recent comments and support regarding the agencies' proposed TPA modifications covering the U.S. Department of Energy's reactors on the Columbia River.

We would also like to respond to your question regarding the potential to clean up tanks in the 200 Area of the Hanford Site (assuming you are referring to Tank Waste Remediation System Program tanks) under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The CERCLA program is designed to regulate cleanup of inactive hazardous material disposal sites, and is being employed extensively at many inactive sites across the Hanford reservation. In contrast, all tanks actively storing hazardous waste are required to be managed and eventually closed under the Resource Conservation and Recovery Act (RCRA), or an authorized state equivalent program. The Washington State Department of Ecology is the lead regulatory agency responsible for overseeing all RCRA activities on the Hanford Site.

On behalf of the U.S. Department of Energy, the U.S. Environmental Protection Agency, and the Washington State Department of Ecology, we thank you for your interest in these important projects.

Sincerely,

Jackson Kinzer, Assistant Manager
Tank Waste Remediation System
U.S. Department of Energy
Richland Operations Office

Mike Wilson, Manager
Nuclear Waste Program
State of Washington
Department of Ecology

Doug Sherwood, Hanford Project Manager
U.S. Environmental Protection Agency
Region 10

cc: L. D. Arnold, FDH
M. L. Blazek, OOE
R. Jim, YIN
D. Powaukee, Nez Perce
D. R. Sherwood, EPA
J. R. Wilkenson, CTUIR

ATTACHMENT 3
47746

Tri-Party Agreement

Mr. Leslie C. Davenport
Senior Engineer Nuclear Safety (Retired)
Consultant, Criticality Safety
1922 Mahan Avenue
Richland, Washington 99352

Dear Mr. Davenport:

RESPONSE TO COMMENTS FOR PROPOSED TRI-PARTY AGREEMENT (TPA) MODIFICATIONS FOR DISPOSITION OF HANFORD SURPLUS REACTORS (M-93-00)

Thank you for your recent comments regarding proposed new Tri-Party Agreement Milestone M-93-00 covering Disposition of Hanford's Surplus Reactors. Your time spent reviewing the proposed new milestones is greatly appreciated, particularly with your experience in Nuclear and Criticality Safety. The Agencies' are in agreement with your suggestion that the Reactor Record of Decision (ROD), signed September 14, 1993, should periodically be re-evaluated, with regard to the technical and cost assumptions for determining final disposition of the reactors. You will recall, we went through such an exercise during our recent negotiation period in developing this change request. This is also a message received from Hanford Site stakeholders. The agencies also agree that such re-evaluation should not adversely impact other urgently needed remediation activities or surveillance and maintenance at and near the reactors.

With regard to B Reactor, the Agencies' have included a commitment in our change request package to determine if this reactor should be treated in a special manner due to its status on the National Registry of Historic Places. It is our desire that the result of our evaluations will assist us in making a determination on the concept of preserving and maintaining the B Reactor with the expectation of one day having it fully accessible to the public.

Finally, the agencies agree that methodologies for the implementation of the reactors Environmental Impact Statement Record of Decision may need to be revisited as new technologies become available. Our proposed milestones in the M-93-00 change request provide for this. Review of all possible alternatives will continue for several years to come.

We thank you again and appreciate your well developed comments.

Sincerely,

Jackson Kinzer, Assistant Manager
Tank Waste Remediation System
U.S. Department of Energy
Richland Operations Office

Mike Wilson, Manager
Nuclear Waste Program
State of Washington
Department of Ecology

Doug Sherwood, Hanford Project Manager
U.S. Environmental Protection Agency
Region 10

cc: L. D. Arnold, FDH
M. L. Blazek, OOE
R. Jim, YIN
D. Powaukee, Nez Perce
D. R. Sherwood, EPA
J. R. Wilkenson, CTUIR

47741
ATTACHMENT 4

HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

INTER AGENCY MANAGEMENT INTEGRATION TEAM (IAMIT)

DECISION / DETERMINATION / ACTION ASSIGNMENT Number: 3

This form is intended to document the decisions and determinations made by the IAMIT within their authorities under the terms and conditions of the Hanford Federal Facility Agreement and Consent Order. This form is also intended to provide notification, to the affected persons, of the IAMITs decisions / determinations or actions assigned.

SUBJECT (Note the change request number, disputed subject or milestone addressed)

AGREEMENT TO EXTEND DUE DATE FOR M-44-14A IN CHANGE REQUEST M-44-97-03.

DECISION / DETERMINATION / ACTION ITEM (Note the assignee and due date)

As required by Draft Milestone M-44-13A of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement), the U.S. Department of Energy, Richland Operations (DOE-RL) submitted the draft Waste Information Requirements Document (WIRD) to the Washington State Department of Ecology (Ecology) on July 15, 1997. In a partnering meeting held on August 12 and 13, DOE-RL and the contractor decided to pursue updating the WIRD to reflect expected efficiencies during the 1998 fiscal year. Specifically, DOE-RL and the contractor expect early closure of the organic safety issue.

As required by Draft Milestone M-44-14A, the DOE-RL is required to submit the final WIRD to Ecology on August 31, 1997. However, to allow the contractor time to incorporate the updated information, an additional one week will be required to complete the final WIRD. Therefore, the Parties agree that a 5 day extension is granted for the submittal of the final WIRD. The DOE-RL will deliver the final WIRD to Ecology on September 5, 1997. As a result the milestone due date for M-44-14A (contained within Change Request M-44-97-03 currently undergoing public comment) will likewise be extended 5 days prior to final approval.

IS THIS DECISION / DETERMINATION / ACTION ITEM

X FINAL ____ INTERIM (Further action to be taken)

IAMIT Member Approvals

Jackson Kinzer 8-26-97
DOE Date

Douglas P. Sherwood 8/26/97
EPA Date

Michael A. Wilson 8/26/97
Ecology Date

47740
ATTACHMENT 5

HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

INTER AGENCY MANAGEMENT INTEGRATION TEAM (IAMIT)

DECISION / DETERMINATION / ACTION ASSIGNMENT Number: 4

This form is intended to document the decisions and determinations made by the IAMIT within their authorities under the terms and conditions of the Hanford Federal Facility Agreement and Consent Order. This form is also intended to provide notification, to the affected persons, of the IAMITs decisions / determinations or actions assigned.

SUBJECT (Note the change request number, disputed subject or milestone addressed)

AGREEMENT TO EXTEND DUE DATE FOR M-60-14-T01 IN CHANGE REQUEST M-60-97-01.

DECISION / DETERMINATION / ACTION ITEM (Note the assignee and due date)

As required by Draft Milestone M-60-14-T01 of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement), the U.S. Department of Energy, Richland Operations (DOE-RL) will submit a DOE-RL approved Data Quality Objective (DQO) for LAW feed staging to the Washington State Department of Ecology (Ecology).

As required by Draft Milestone M-60-14-T01, the DOE-RL is required to submit the DQO to Ecology on October 31, 1997. However, to allow the DOE-RL time to more fully involve Ecology in the development of this DQO, an additional one month will be required to complete the DQO. Therefore, the Parties agree that a 30 day extension is granted for the submittal of the DQO. The DOE-RL will deliver the DQO to Ecology on November 30, 1997, after assuring Ecology involvement during the development of the DQO. As a result the milestone due date for M-60-14-T01 (contained within Change Request M-60-97-01 currently undergoing public comment) will likewise be extended 30 days prior to final approval.

IS THIS DECISION / DETERMINATION / ACTION ITEM

X FINAL ____ INTERIM (Further action to be taken)

IAMIT Member Approvals

Jackson Kinzer DOE	8-26-97 Date
Douglas R. Sherwood EPA	8/26/97 Date
Michael A. [illegible] Ecology	8/26/97 Date

ATTACHMENT 6

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

AUG 2 5 1997

97-MSD-271

Mr. Mike Wilson, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
P.O. box 47600
Olympia, Washngton 98504

Dear Mr. Wilson:

ELEVATION OF DISPUTE RESOLUTION FOR HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (TRI-PARTY AGREEMENT) CHANGE CONTROL FORM M-41-97-01

References:

1. Letter from G. H. Sanders, RL, to M. Wilson, Ecology, "Hanford Federal Facility Agreement and Consent Order Change Control Form M-41-97-01, Interim Milestone M-41-22, 'Start Interim Stabilization of 6 Single Shell Tanks'," dated June 27, 1997.

2. Letter from G. H. Sanders, RL, to M. Wilson, Ecology, "Invocation of Dispute Resolution for Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Change Control Form M-41-97-01, Interim Milestone M-41-22, 'Start Interim Stabilization of 6 Single Shell Tanks'," dated July 16, 1997.

3. Letter from G. H. Sanders, RL, to M. Wilson, Ecology, "Extension to Dispute Resolution for Hanford Federal Facility Agreement and Consent Order Milestone M-41-97-01," dated August 14, 1997.

On June 27, 1997, the U.S. Department of Energy, Richland Operations Office (RL) submitted Change Request M-41-97-01, requesting a change in the due date for Interim Milestone M-41-22, "Start Interim Stabilization of 6 Single Shell Tanks," from September 30, 1997, to March 31, 1998 (Reference 1). The basis for this change request was the continuing need to resolve flammable gas issues before making a final determination on the safe operation of interim stabilization activities for the tanks. Since approval was not received by July 11, 1997 the change request was, therefore, denied by the State of Washington Department of Ecology (Ecology). On July 16, 1997, RL invoked the Dispute Resolution provisions of the Tri-Party Agreement (Reference 2).

Since the Dispute Resolution provisions were invoked, RL and Ecology Project Managers have met to discuss the change request, but have been unable to reach agreement during the 30 day period provided for discussion at that level. An extension of the dispute at the Project Manager level through August 26, 1997, was requested and approved by Ecology on August 14, 1997 (Reference 3).

Due to Ecology's rejection of the M-41-97-01 Change Request and a verbal indication by Ecology on August 19, 1997, it is apparent that further extensions of this dispute at the Project Manager level will not be approved by Ecology. By this letter of objection, RL exercises its right under Tri-Party Agreement Article VIII, Section 30 A, to elevate this matter to the Interagency Management Integration Team (IAMIT) for further consideration.

We look forward to initiating IAMIT discussions concerning the resolution of the Tri-Party Agreement Change Request M-41-97-01 dispute. If you have any questions, please contact me on (509) 376-6888 or James K. McClusky, Director of the Waste Storage Division, on (509) 372-0947.

Sincerely,

George H. Sanders, Administrator
Hanford Tri-Party Agreement

cc: J. Wilkenson, CTUIR
D. Powaukee, Nez Perce Tribe
R. Jim, YIN
S. L. Dahl, Ecology
N. T. Hepner, Ecology
M. A. Selby, Ecology
D. R. Sherwood, EPA
L. D. Arnold, FDH
A. M. Umek, FDH
B. D. Williamson, FDH
B. G. Erlandson, LMHC

47743 ATTACHMENT 7

HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

INTER AGENCY MANAGEMENT INTEGRATION TEAM (IAMIT)

DECISION / DETERMINATION / ACTION ASSIGNMENT Number: 5

This form is intended to document the decisions and determinations made by the IAMIT within their authorities under the terms and conditions of the Hanford Federal Facility Agreement and Consent Order. This form is also intended to provide notification, to the affected persons, of the IAMITs decisions / determinations or actions assigned.

SUBJECT (Note the change request number, disputed subject or milestone addressed)

EXTENSION TO DISPUTE RESOLUTION FOR HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER CHANGE REQUEST M-41-97-01

DECISION / DETERMINATION / ACTION ITEM (Note the assignee and due date)

On July 16, 1997 the U.S. Department of Energy invoked the dispute resolution provisions of Tri-Party Agreement Article VIII concerning Tri-Party Agreement Change Request M-41-97-01. The initial period during which the Department of Energy and Ecology Project Managers seek resolution of the dispute was extended through August 26, 1997. On August 26, 1997 the dispute was elevated to the Inter Agency Management Integration Team (IAMIT) for resolution. The period during which the IAMIT seeks resolution of the dispute is hereby extended through September 23, 1997.

cc: L. D. Arnold, FDH
S. L. Dahl, Ecology
B. G. Erlandson, LMHC
C. C. Haass, DOE
N. T. Hepner, Ecology
D. R. Sherwood, EPA
A. M. Umek, FDH
J. K. Yerxa, DOE
D. Powaukee, Nez Perce
R. Jim, YIN
B. Burke, CTUIR
Administrative Record

IS THIS DECISION / DETERMINATION / ACTION ITEM

X FINAL ____ INTERIM (Further action to be taken)

IAMIT Member Approvals

Jackson Kruger 8-26-97
DOE Date

EPA Date

Michael A. Wilson 8/26/97
Ecology Date

47742 ATTACHMENT 8

HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

INTER AGENCY MANAGEMENT INTEGRATION TEAM (IAMIT)

DECISION / DETERMINATION / ACTION ASSIGNMENT Number: 6

This form is intended to document the decisions and determinations made by the IAMIT within their authorities under the terms and conditions of the Hanford Federal Facility Agreement and Consent Order. This form is also intended to provide notification, to the affected persons, of the IAMITs decisions / determinations or actions assigned.

SUBJECT (Note the change request number, disputed subject or milestone addressed)

EXTENSION TO DISPUTE RESOLUTION FOR HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER MILESTONE M-40-07

DECISION / DETERMINATION / ACTION ITEM (Note the assignee and due date)

On April 9, 1997 the U.S. Department of Energy invoked the dispute resolution provisions of Tri-Party Agreement Article VIII concerning the State of Washington Department of Ecology assertions about completion of Interim Milestone M-40-07. The period during which the Department of Energy and Ecology Project Managers seek resolution of the dispute was previously extended through August 28, 1997. The dispute resolution period is hereby further extended through September 27, 1997 at the Project Manager level.

cc:	L. D. Arnold,	FDH
	S. L. Dahl,	Ecology
	B. G. Erlandson,	LMHC
	C. C. Haass,	DOE
	A. B. Stone,	Ecology
	D. R. Sherwood,	EPA
	A. M. Umek,	FDH
	J. K. Yerxa,	DOE
	D. Powaukee,	Nez Perce
	R. Jim,	YIN
	B. Burke,	CTUIR
	Administrative Record	

IS THIS DECISION / DETERMINATION / ACTION ITEM

_X_ FINAL ____ INTERIM (Further action to be taken)

IAMIT Member Approvals

Jackson Kinzer 8-26-97
DOE Date

N/A
EPA Date

Michael A. Lin 8/26/98
Ecology Date

ATTACHMENT 9

POSITION PAPER FOR DISPUTE RESOLUTION FOR CHANGE OF DUE DATE OF HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER MILESTONE M-45-03A

DOE-RL

August 1997

POSITION PAPER FOR DISPUTE RESOLUTION FOR CHANGE OF DUE DATE OF HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER MILESTONE M-45-03A

Ecology and DOE-RL agreed to:

1) each prepare a paper on their respective positions for the dispute resolution on changing the due date for the Tri-Party Agreement (TPA) M-45-03A interim milestone and

2) provide what each prepared to the other prior to the August 1997 IAMIT meeting where this dispute resolution is being discussed at the IAMIT level.

The following is the DOE's position paper prepared for this purpose.

Summary

In the early part of fiscal year 1997, DOE-RL communicated to the Washington Department of Ecology (Ecology) that it had determined (along with its contractors) that proceeding with the TPA M-45-03A requirement to initiate sluicing retrieval of Tank C-106, without resolving outstanding safety issues, would be an unsafe activity. DOE believes that "TPA Creation Of Danger, Article XXXII" would be applicable, if sluicing is initiated prior to the resolution of safety issues. Impacts to the completion date have occurred due to activities being constrained during the time period required for resolution. The completion date for M-45-03A needs to be changed to September 1998 to accommodate the impacts of this resolution. These events are considered good cause for extending the due date for M-45-03A according to the related TPA Article XL.

Discussion

M-45-03A is the Fiscal Year 1998 interim milestone to initiate sluicing retrieval of Tank C-106 by October 1997. Project W-320 provides the retrieval system necessary to transfer high-heat waste from Tank C-106 to Tank AY-102 to demonstrate retrieval capability and to resolve the high-heat safety issue.

In 1994, the Secretarial Safety Initiative accelerated the project schedule by one-year to initiate C-106 sluicing by October 1996. To provide for meeting the initiative date, the project completed "fast-track" actions by eliminating conceptual design, combining Title I and Title II design, and conducting construction in parallel with design efforts.

Project construction and Safety Analysis (SA) failed to be complete by August 1996 as required to meet the Secretarial Safety Initiative (October 1996). SA issues remained unresolved with the adequacy of sluicing process control and receipt tank

capability to address flammable gas retention. Sluicing equipment installation was complete, however, some of the equipment installed were not compliant with November 1996 issued Standing Order 97-01 and Justification for Continuing Operations (JCO).

At the beginning of FY 97, Hanford selected new site contractors responsible for the project. New contractor project review was conducted to rebaseline the project to meet the TPA milestone for October 1997. The new contractor discovered an overestimate in tank AY-102 cooling capability which affects the ability of AY-102 to adequately cool waste from C-106 resulting in potential "steam bump" conditions. Project rebaseline concluded major analysis, using expertise from national laboratories, would be required to complete SA and streamline process control details. A significant modification to the facility has resulted from the SA and process control details. Modifications include upgrading existing equipment to meet Standing Order 97-01 for control of flammability, installation of new equipment (including humidity monitor, mass flow meter and temperature monitor) to control waste transfer and monitoring of waste behavior more precisely to prevent flammable gas retention and steam bump from occurring.

Cost and schedule estimates projections to complete the project proceeded in FY 97 on a unfavorable trend. The trend was in part, due to conservative design decisions pending SA outcomes. Due to the time required to complete these activities, the project could not be completed to meet the TPA and DNFSB milestones, even with parallel path activities, and minimum activity durations.

Based on the forementioned discussion, DOE-RL decided to complete project SA and process control documentation prior to completion of equipment modification and new equipment design and construction. This will ensure safety of the sluicing operation. Moreover, this will allow for the establishment of a sound technical and safety basis, and well defined scope to determine firm cost and schedule baseline for the project, prior to any facility modifications.

Currently, the SA has been modified resulting in a significant modification to the facility. Cost and schedule estimates will be finalized by September 1997 after the safety analysis is approved by RL. Expectation is that the project completion and initiation of sluicing will be achievable by September 30, 1998. Outstanding activities include completion of construction modification, acceptance and operational testing, and operational readiness reviews prior to sluicing operations.

RL requests the due date for M-45-03A be moved to September 30, 1998, to accommodate completion of the above activities to initiate sluicing in a safe compliant manner.

Ecology indicated their disagreement (in reference 3) that good cause exists for an extension to the due date and refers to the

related TPA Article XL. DOE believes the events related to M-45-03A are good cause for extending the due date for M-45-03A and for that reason the due date is impacted due to DOE being prevented from proceeding.

The references related to this dispute are:

(1) Letter, from G. Sanders, RL to M. Wilson, Ecology, "Request to Change Due Date for Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Interim Milestone M-45-03A," dated May 6, 1997.

(2) Letter, from G. Sanders, RL to M. Wilson, Ecology, "Invocation of Dispute on Hanford Federal Facility Agreement and Consent Order Change Control Form M-45-97-03," dated May 27, 1997.

(3) Letter, from M. Wilson, Ecology to J. Kinzer and G. Sanders, RL, "Change Package M-45-97-03 and Letter Number 97-WDD-058," dated May 20, 1997.

(4) Letter, from G. Sanders, RL to M. Wilson , Ecology, "Statement of Dispute Resolution for Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Interim Milestone M-45-03A and Elevation to Interagency Management Integration Team (IAMIT)," dated July 22, 1997.

ATTACHMENT 10

STATEMENT OF DISPUTE

Washington Department of Ecology
U.S. Environmental Protection Agency

August 14, 1997

The following Ecology/EPA statement has been prepared for consideration by the parties Inter-Agency Management Integration Team (IAMIT) pursuant to the provisions of the Hanford Federal Facility Agreement and Consent Order (Agreement) Article VIII.

SUBJECT: Extension request for M-45-03A (Initiate sluicing retrieval of wastes from tank 241-C-106)

INTRODUCTION: Milestone M-45-03A calls for the initiation of retrieval of waste from single-shell tank C-106 by October, 1997. This milestone was created to address two issues: 1) to resolve the high-heat safety issue within C-106, and 2) to demonstrate sluicing retrieval of single-shell tank waste. The high heat safety issue is created by heat producing waste within C-106, far exceeding the allowable design and operating limits for the tank. If the tank is allowed to heat up excessively, it would damage the tank structure, and could lead to a dome collapse, with subsequent loss of containment of tank contents. This creates a need to keep the waste cooled by adding water to the tank (about 10,000 gallons every six weeks). Adding water to this single-shell tank increases the risk of leakage. If the tank were to begin leaking DOE would have no choice but to continue to add water and keep the waste cooled until sufficient waste is removed to reduce the heat loading on the tank.

Sluicing of single-shell tank waste has not been performed in recent years at Hanford. The second purpose of the M-45-03A milestone is to govern the demonstration of past-practice sluicing capabilities and mobilizing and transferring waste from single-shell tanks. This action is an important first step in retrieving and treating the tank wastes contained in all SSTs. Upon completion of the demonstration, DOE will have better definition of the performance abilities of this technology. This information will be used to drive technology refinements and developments for future tank waste retrieval actions.

ISSUE: SHOULD THE DOE BE GRANTED AN EXTENSION TO THE M-45-03A MILESTONE IN ACCORDANCE WITH AGREEMENT ARTICLE XL.

Perceived DOE Position: DOE is asking for an extension to this project due to what they term "recently identified" safety issues. The extension would provide time to complete a Safety Assessment (SA) for the project, and implement the design and construction changes identified by the SA. The requested extension is from October, 1997, to September, 1998.

Ecology/EPA Position: **The safety issues identified by the DOE in the change request have been known for many years. The cause of the delay is DOE's poor management of the safety issues, and lack of resolution of those issues.** In addition, the project suffered from delays to other activities including construction delays. The project has installed equipment which was not in compliance with previously instituted safety controls at the tank farms, which must now be retro-fitted to conform with DOE's own requirements.

- The flammable gas safety issue identified by DOE as being one of the recent safety developments that are cause for delay to the project has been known for many years. The phenomenon of flammable gas generation in Hanford tanks has been known since at least 1979. The original flammable gas generating tanks were listed on the Watchlist in January, 1991. During late 1994 and 1995 Westinghouse Hanford Company (WHC) conducted additional evaluations of tanks for flammable gas problems. In late 1995, WHC conducted a review of the C-106 sluicing retrieval project (W-320 project) and potential impacts on the project safety assessment from the flammable gas USQ, and determined that the safety assessment should move ahead. In late 1995 and early 1996, WHC and DOE-RL made a recommendation to DOE-HQ to add more tanks to the "Watchlist" for flammable gas concerns. DOE-RL later retracted this recommendation before DOE-HQ acted upon it. This not only emphasizes the seriousness of the flammable gas problem and the potential it could have on all projects at Hanford, but also indicates DOE-RL's inability to reach a technically defensible position and act upon it.

- In December of 1995 the DOE sent Ecology a "Creation of Danger" invocation letter under the TPA (see Article XXXII). In this letter, DOE stated that flammable gas controls had been placed on all 177 high-level waste storage tanks, and subsequently provided detailed information regarding the rationale for imposing those controls. Ecology subsequently denied DOE's request for relief under the "Creation of Danger" clause. During all of this discussion, the W-320 project was continuing forward with it's safety assessment, fully aware of the various flammable gas issues it would have to overcome before authorization could be approved.

- In spite of these activities the safety assessment (SA) was continuously criticized by external safety groups for its shortcomings. These concerns were substantiated when the Lockheed Martin Hanford Company (LMHC), who took over the project from WHC in October of 1996, identified numerous problems with the SA. DOE performed a review of these issues and was forced to accept most of them, since they were elements required by their own safety requirements. **It is this lack of adequate and timely technical work by the contractor, in conjunction with a lack of oversight and management by DOE that have led to the need to complete the SA before the project can move ahead.** The additional scope identified by LMHC has driven the cost up and pushed the schedule out, which led DOE to decide in February of 1997 to put the project on hold until the SA is completed and approved.

- **The potential for a steam bump in both the receipt tank, and C-106, was discussed by the Chemical Reaction sub-TAP (CRS) in November of 1995. It appears that the DOE and WHC did not take these comments seriously for the receipt tank (AY -102) and only attempted to address them for C-106.**

- In October of 1996, the new contractor performed a review of the heat ventilation capacity of AY-102. **They found that the assumptions made by WHC in the SA were wrong, and modifications to the ventilation system on AY-102 would have to be made before the waste transfer could begin.** This is a fundamental aspect of the project. The primary reason the high-heat waste from C-106 is being moved into AY-102 is that AY-102 is designed to accommodate the higher heat loading. The important point is that no attempt was made by DOE or WHC to determine if these critical assumptions were valid. **The DOE must take responsibility for knowing that the heat loading in C-106, which has been estimated due to lack of characterization data, must be accommodated by the receipt tank, in this case AY-102.** This is central to the entire mission of the project.

- In 1994 tank C-106 was the highest priority for the tank waste characterization program for getting core samples from the tank. Due to problems with the characterization program, project W-320 decided to move ahead with the SA without characterization information. Following extensive criticism by the CRS, grab samples were taken from the tank which subsequently were found not to be representative of the waste and only added to the uncertainty of the SA. **There are important safety concerns which remain uncertain (for example, the amount and distribution of the heat generating material in the waste) which have led to the use of overly conservative and restrictive requirements in the SA. The failure of the DOE to provide adequate and timely characterization information has made it very difficult for the project to define an adequate SA, and thereby define the requirements for the project.** Inadequate characterization information has led to overly conservative safety assumptions for many TWRS projects.

- **The real reason that the project was put on hold by DOE TWRS management is that the cost and scope of the project continue to increase, due to a lack of definition of the safety basis.** Until DOE and their contractors have an approved safety basis for this project, one which can address the external experts concerns and is technically satisfactory, the project will continue to be at risk of further scope and cost changes.

- Ecology was continually told throughout 1996 that the TPA milestone was still achievable, in spite of the safety basis problems. Ecology specifically questioned DOE on the need for and wisdom of placing conservative flammable gas controls on all 177 tanks in January of 1996. Ecology asked for the rationale and the subsequent process for handling these safety controls, and raised concerns about DOE's ability to

make TPA commitments for TWRS given this safety stance at the tank farms. Ecology's concerns were never fully addressed. The DOE believed that the TPA milestone, and in fact the Secretarial Safety Initiative (SSI), scheduled a year ahead of the milestone, were still achievable. It wasn't until the summer of 1996 that the DOE began to doubt their ability to make the SSI. It wasn't until the new contractor identified the safety assessment weaknesses, including the previously installed equipment that did not meet the safety standards at the time of installation, that the DOE recognized the potential for missing the TPA milestone. **This lack of understanding of their own safety requirements and processes continues to put this project and many others within TWRS in jeopardy. The DOE must improve their ability to make real, effective safety plans, and implement them in a timely manner.**

August 14, 1997

List of Support Information for C-106 Dispute Resolution

Date	Title	Contents
1994, 0615	Single Shell Tank Unit Manager Meeting Minutes	Indicates intent of DOE to sample C-106. States a Tank Characterization Plan (necessary before sampling can begin) has been done for C-106 and indicates sampling of C-106 was imminent. The document states ' The work package for tank BY-106 is being accelerated due to last minute problems in gaining access to C-106.'
1995, 1017	Tank Farm Occurrence Report 1995-0088	This occurrence report notifies recipients of a 'Recent study results in recommending 23 tanks be added to the Flammable Gas Unreviewed Safety Question (USQ)
1995, 1027	Watch List Evaluation For Potential Tanks	Notification from Roger Bacon of WHC to Jackson Kinzer of DOE concerning the potential addition of tanks to the Flammable Gas Watch List. A formal recommendation will be made on December 15, 1995.
1995, 1128	Recommendations from the 16th meeting of the Chemical Reaction Sub-TAP	Main points: • Safety Assessment for C-106 retrieval is not adequate for these purposes (page 2) • Inadequate data to proceed and recommendation of core sampling ' We question whether C-106 can be adequately understood (especially with regard to distribution of heat generating materials) without data from additional core samples. (page 5) • Previous comment repeated again for emphasis (pages 5, 8 & 8) • Attempt to add tanks to Flammable Gas Watch List is not technically defensible (page 11)
1995, 1218	Recommendation for Flammable Gas Watch List	Recommendation from Roger Bacon of WHC to Jackson Kinzer of DOE to add 25 tanks to the Flammable Gas Watch List.
1995, 1227	Recommendation to Add Tanks to the Flammable Gas Watch List	Memo from Jackson Kinzer to Stephen P. Cowan of DOE-HQ recommending the addition of 25 tanks to the Flammable Gas Watch List.
1996, 0108	Letter from Toby Michelena of Ecology to Jackson Kinzer of DOE	This communication directed ten questions related to the flammable gas issue and its potential impacts on the TPA. Question number 10 relates to C-106 and Ecology raises the question "USDOE has tentatively scheduled the retrieval of SST 241-C-106 in 1996 which will not only evaluate a potential retrieval technology (sluicing) but will also resolve a high heat safety issue. What impacts with this decision (i.e. the placing of FG controls on all 177 tanks) have upon the retrieval of C-106 high heat sludge.' (page 5)
1996, 0225	Recommendations from the 18th meeting of the Chemical Reaction Sub-TAP	Main point: • The CRS does not support the technical work associated with adding tanks to the FG WL. 'It is therefore our unanimous, technical opinion that the presented study does not represent an adequate technical basis for supporting addition of specific tanks to the FGWL.'

1996, 0315	Letter from Jackson Kinzer to Mike Wilson of Ecology	This letter responds to the letter from Ecology on January 8, 1996 associated with DOE's decision to place controls on all 177 tanks. DOE replies to question number 10 relating to C-106 that 'The restrictions imposed in the Tank Farms . . . will not impact either the cost or the schedule of the W-320 Sluicing Retrieval Project.' The reply continues 'The safety analysis addresses the flammable gas hazard regardless of the addition of the recent administrative and access controls.' (pages 8 and 9, respectively.)
1996, 0410	CRS Workshop on RCR Resolution Meeting	Main points: • Issue of steam bump in C-106 and AY-102 included. 'A better predictive picture of the heat balance in each tank (C-106 and AY-102) needs to be made. . . Also assurance needs to be provided that the evaluation of the steam bump event in W-320 will remain within the Safety Basis . . . (page 1) • Flammable Gas issues in AY-102 included. "Concern continues over potential for addition of C-106 waste to AY-102 to result in a situation in which gas is retained with episodic releases (GRE).' (page 5) • The issue is discussed of whether the equipment installed for C-106 meets flammable gas requirements. 'A new issue was raised during the workshop relating to requirement for use of intrinsically safe equipment in AY-102 and C-106. . . ' (page 8)
1996, 0428	Recommendations from the 19th meeting of the Chemical Reaction Sub-TAP	Main point: • The CRS questions the equipment installed/planned for C-106 fulfills the necessary flammable gas safety requirements. 'Some of the equipment planned for use in the receiver tank. . is not certified for use in a flammable gas atmosphere. We question whether this situation is consistent with flammable gas controls currently in place.' (page 2)
1996, 0631	Revised Recommendation to Add Tanks to Flammable Gas Watch List	Memo from Jackson Kinzer of DOE-RL to Stephan Cowan, DOE-HQ, retracting recommendation to add 25 tanks to the Flammable Gas Watch List. This memo also refers to an earlier communication on this issue on April 22, 1996 of which Ecology does not have a copy.
1996, 8096	Recommendations from the 21st meeting of the Chemical Reaction Sub-TAP	Main point: • CRS approved of the new data provided by the grab samples. 'These data strongly suggest there will be no significant safety- or success-related, chemical-compatibility problems associated with the proposed transfer. This new information appears reassuring with regard to the distribution of heat generating materials and potential success of this project… We look forward to a definitive presentation of the best-estimate heat-generating material distribution…' (page 1)
1997, 0214	Recommendations from the 25th meeting of the Chemical Reaction Sub-TAP	Main points: • The grab samples proved inadequate to resolve safety issues unlike what was hoped during the 21st CRS visit. 'We question whether uncertainties in knowledge of heat generating material distribution have been adequately considered and request a comprehensive review of <u>all data</u> and associated <u>interpretations</u> related to such material (both soluble and insoluble) within C-106 waste.' (underlining is directly from the CRS report on page 4) • Thermal uncertainties are too great due to lack of adequate data.

		'It appears to us that uncertainties in input to the predictive model dominate uncertainties in the model.' (Page 5) • Process control activities possess uncertainties due to poor data. 'We look forward to a more comprehensive discussion of the "estimated gas retention rate" and how it is derived. We are especially interested in how uncertainties related to such factors as "fluffing" in AY-102 may impact retention.' (underlining is as found in the report on page 5)

Hanford Spent Nuclear Fuel Project

Schedule Risk Assessment

Presentation to:

IAMIT

N. H. Williams

Fluor Daniel Hanford, Inc.

August 26, 1997

ATTACHMENT 11

Background

January 1997: Integrated Schedule

- **Integrated sub-projects**
- **Incorporated safety issues known at that time**
  - ***Tornado hardening***
  - ***MHM design***
  - ***Results of KW "Lift and Look"***
- **Five month slip in beginning fuel movement (May 31, 1998)**

Background
(Continued)

June 1997: Schedule Risk Assessment

- **Design changes and unresolved technical/safety issues emerged during safety analysis**
  - ***92 Enabling Assumptions identified***
  - ***Closure constrained by availability of characterization data***
  - ***Parallel design and safety analysis impacts quality***
  - ***MHM design complexity***
  - ***Closure of CVD reaction rate***
- **QA Program Implementation and worker safety events have slowed progress**
- **ORR Readiness**

General Concept of Risk

• What can go wrong?	Identify Events
• How likely is it to happen?	Evaluate Frequency
• What are the consequences?	Evaluate Consequence

✔ ***Identify major contributions to risk and manage them***

Programmatic (Schedule) Risk

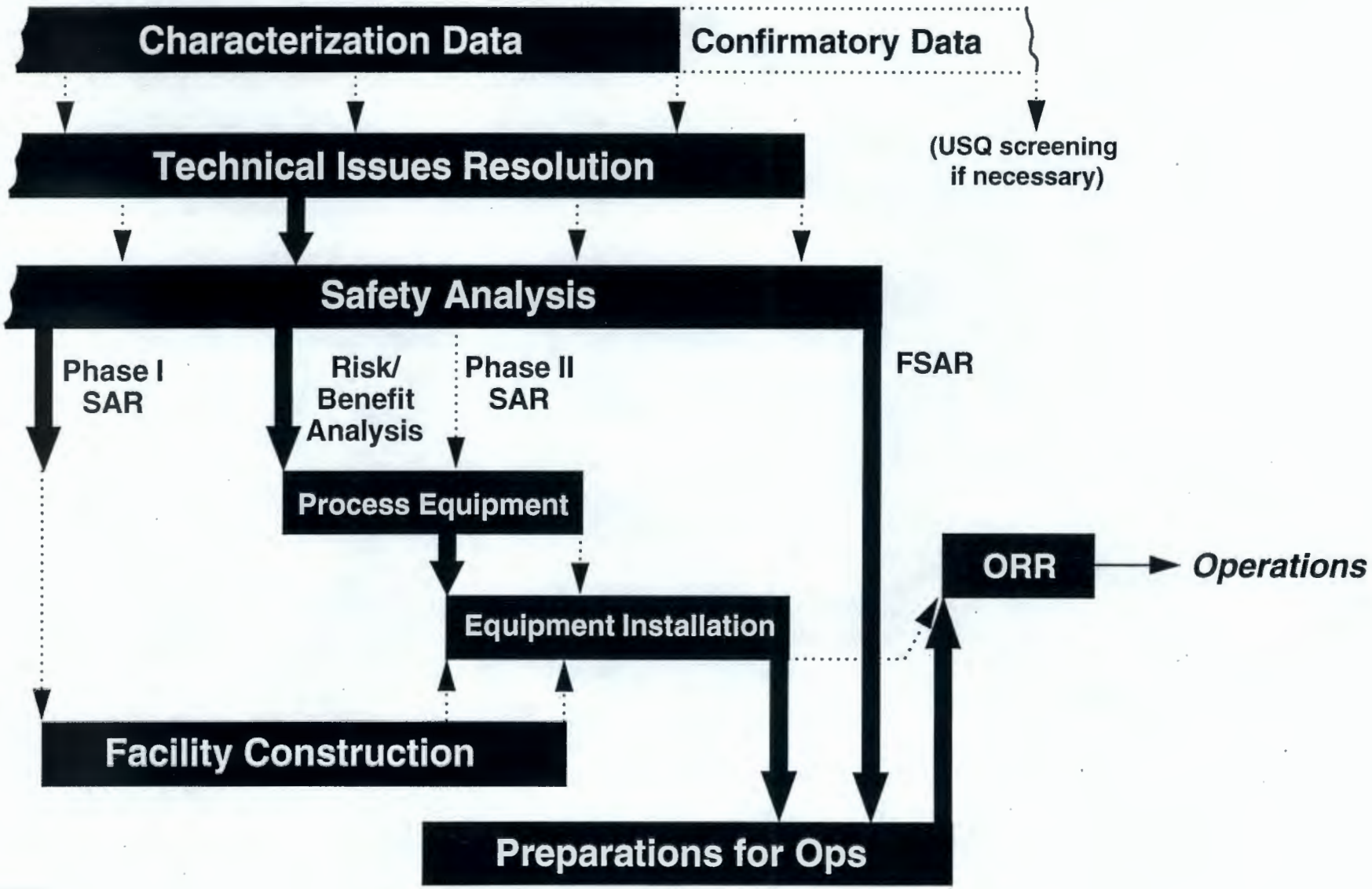
Expressed as:

- **Probability of Exceeding schedule, or conversely**
- **Probability of not exceeding schedule (success)**

Significant Accomplishments Associated with Schedule Risk Assessment

- **Identified closure of Enabling Assumptions (EA's) and SAR documentation as schedule drivers**
- **Chartered an integrated working group to develop path forward and overlay on the project schedule**
  - ***DOE***
  - ***Regulators***
  - ***FDH***
  - ***DESH***
  - ***ARES***
- **Group Enabling Assumptions into bins relative to project risk and closure schedule**
- **Agreed upon EA's closure schedule and the integration into the schedule via the MCO Topical**
- **Developed procurement strategy in the context of the SAR cycle**

Safety Analysis/Facility Construction Strategy



Safety Analysis/Facility Construction Strategy

- **Phased SAR's utilized to enable early construction and procurement**
  - ***Construction phase(s) (Completed)***
  - ***Process equipment phase***
- **Final Safety Analysis Report (FSAR) supports facility operation**
  - ***Ties all previous phases together***
  - ***Incorporates as-built design and procedures***
- **Phased approach allows closure of technical issues to occur in parallel to facility construction/installation**
  - ***Enabling Assumptions used to accommodate technical uncertainties in early phases are risk managed***
  - ***All Enabling Assumptions closed prior to FSAR approval***

Major Technical Safety Issues Requiring Closure

- **Oxygen gettering during fuel storage**
  - ***Must prove hydrogen detonation incredible***
- **Uranium metal reaction rates**
  - ***Determine runaway reaction/MCO failure potential***
- **Retained water radiolysis rates**
  - ***A factor in H_2 detonation and MCO pressurization***
- **Water retained after CVD and HCS**
  - ***Determines MCO pressurization behavior***
- **MCO particulate inventory**
  - ***Impacts severity of MCO blowdown events***

Critical Enabling Assumptions

- Post-CVD water inventory
- Runaway reactions
- CVD Hydrogen detonation/deflagration
- Runaway reactions limited by reactants
- CSB Hydrogen detonation/deflagration
- Fuel surface area
- Uranium corrosion rates
- Behavior of hydrides
- MCO drop in CSB tube
- Purge/vent cart air ingress

Critical Enabling Assumptions
(Continued)

- MCO blowdown particle release
- Blowdown at service station
- Blowdown in tube when lid is removed
- MCO recovery operations impacts

Task Team -- Process Overview

Integrated Teams challenged current approach

- **HCS Evaluation**
  - *Site planning moved HCS procurement into 1999*
  - *Performed preliminary assessment of the possibility of eliminating HCS process step*
- **MHM**
  - *Complex design*
  - *Evaluate elimination of inerting*

Risk Based Schedule Modifications

- Optimized closure of technical issues and established frame work for minimal risk procurement and installation
- Incorporated SAR template to decouple from critical path as much as possible
- Revised CVD procurement strategy to accelerate first of four units to test
- Added MHM preassembly strategy
- Recognize need to upgrade technical baseline and make program improvements now to be ready for ORR
- Optimized ORR preparation schedule while providing appropriate durations
- Added new scope (KW rack and sludge removal, sludge pretreatment)
- Deferral of HCS to study need for second conditioning step

Key Risk Drivers

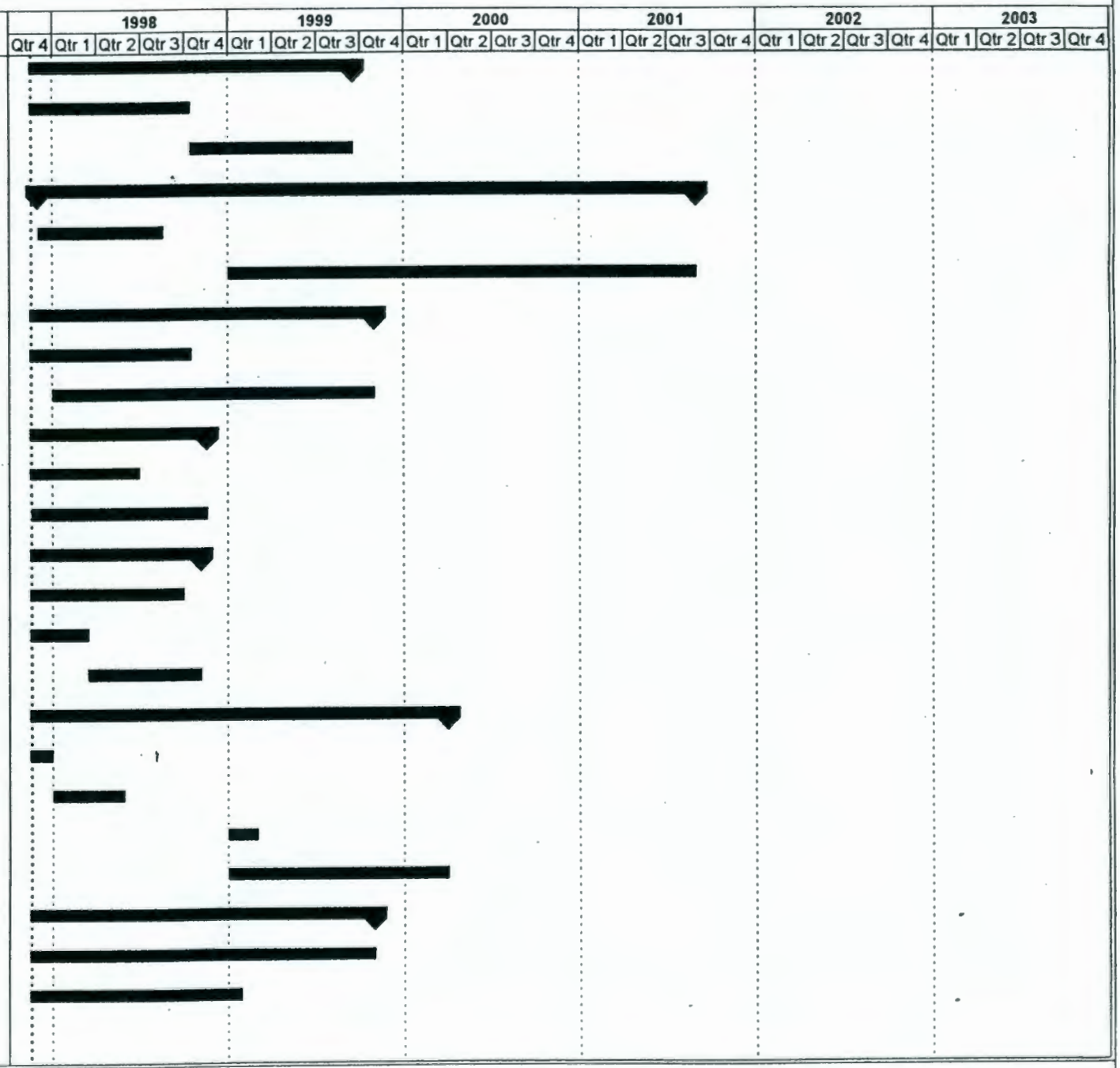
- Closure of Enabling Assumptions
- Implementation of revised safety analysis strategy
- Availability of characterization data
- Process equipment delivery (MHM, CVD, FRS)
- ORR Readiness preparation
  - *Technical baseline documentation*
  - *QA Program Implementation*
  - *Procedure development*
  - *Operator training*
- Approval of regulator strategy (EE/CA)
- Sludge pre-treatment design

Key Risk Drivers
(Continued)

- **Resource limitations**
  - *Internal and external SAR reviews*
  - *Procedure preparation*
  - *Operations/start-up personnel*
- **On-going construction and operations safety**

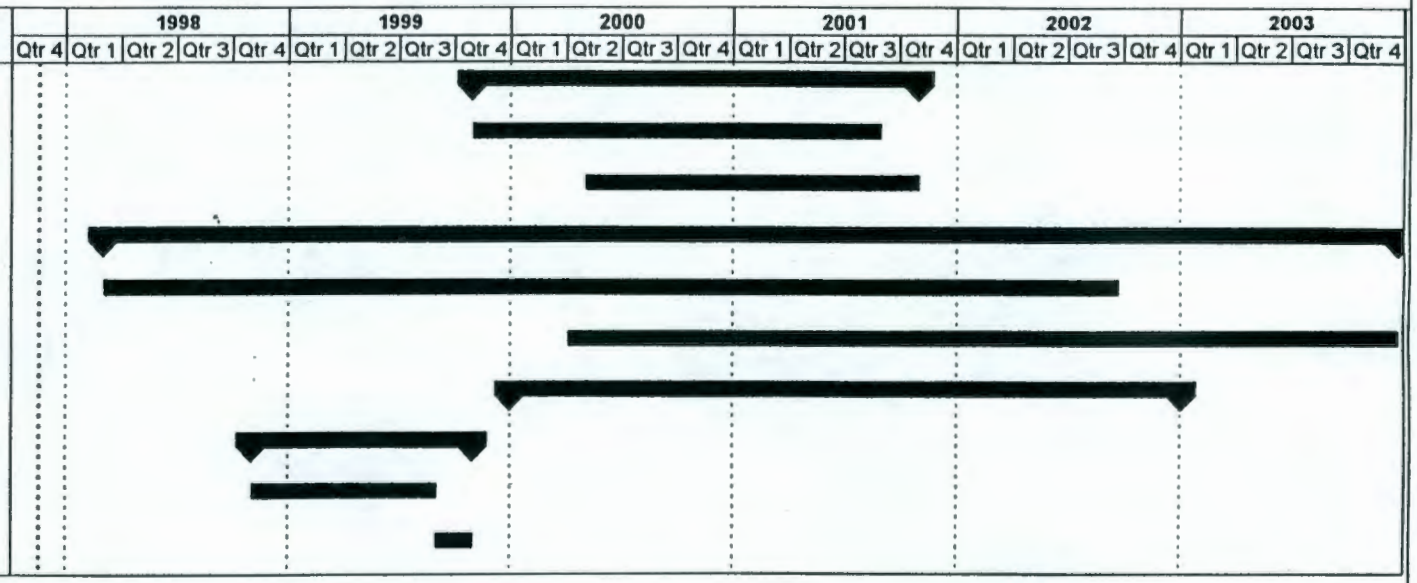
SNF Selected Tasks Schedule

ID	Task Name
1	**Characterzation**
2	Data Analysis
3	Confirmatory Data
4	**MCO Acquisition**
5	First Five
6	Remainder
7	**Fuel Retrieval Sub-Project**
8	K-West Construction
9	K-East Construction
10	**Cold Vacumn Drying Sub-Project**
11	Design
12	Construction
13	**Cannister Storage Building Sub-Project**
14	Construction
15	MHM Procurement
16	MHM Installation
17	**Hot Conditioning Sub-Project**
18	Detailed Design
19	Requirement Assessment
20	Finalize Design
21	Procurement/Construction
22	**Basin Modifications**
23	IWTS
24	Cask Loading
25	



SNF Selected Tasks Schedule

ID	Task Name
26	**Fuel Removal Operations**
27	K-West
28	K-East
29	**Sludge Removal**
30	Design/ Installation
31	Operation
32	**Debris Removal Operations**
33	**Operational Readiness Reviews**
34	MSA/Affidavits/ORR PREP
35	ORR



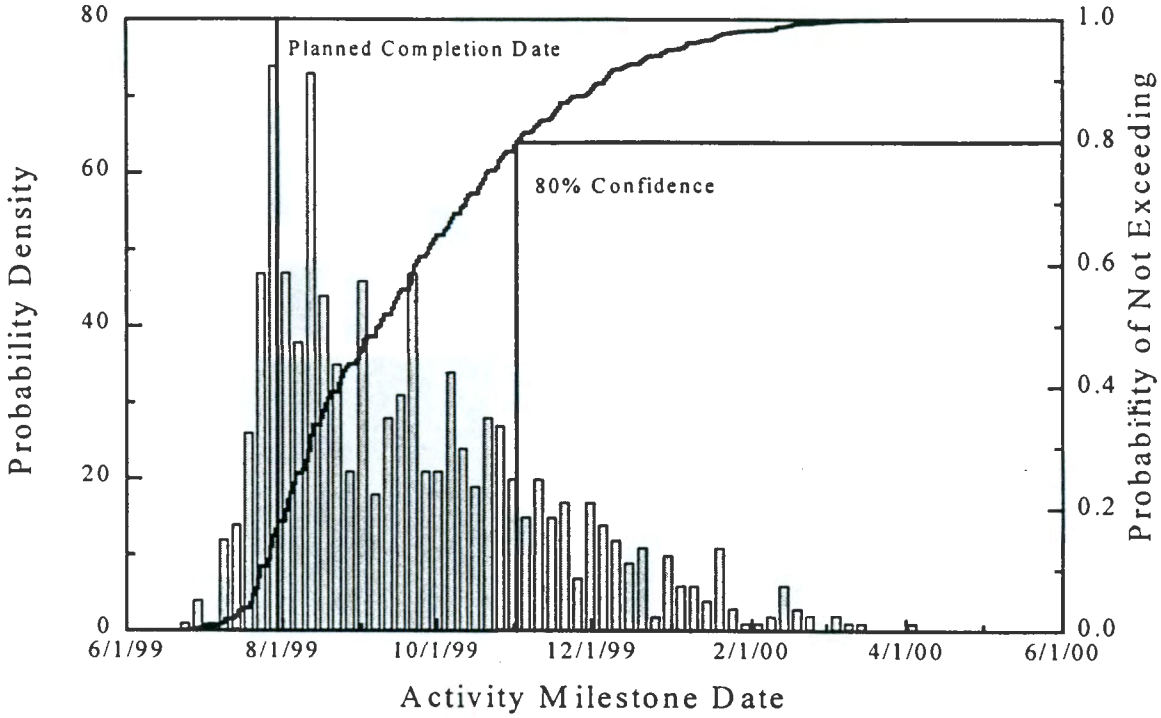
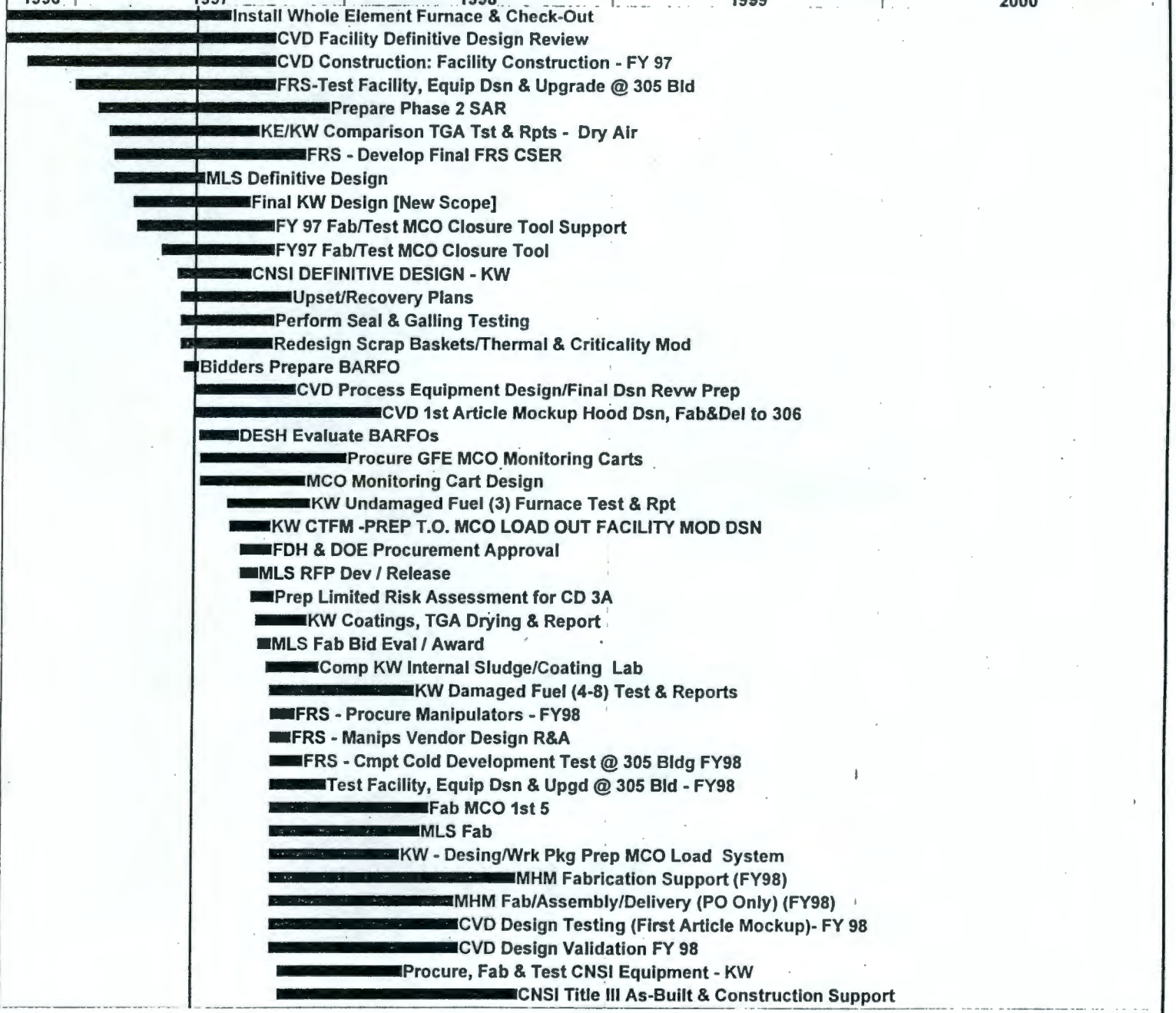


Figure E-x. Start K West Fuel Removal Operations

Early Start	Early Finish	
01OCT96A	31JUL97	Install Whole Element Furnace & Check-Out
01OCT96A	30SEP97	CVD Facility Definitive Design Review
29OCT96A	30SEP97	CVD Construction: Facility Construction - FY 97
02JAN97A	30SEP97	FRS-Test Facility, Equip Dsn & Upgrade @ 305 Bld
03FEB97A	12DEC97	Prepare Phase 2 SAR
18FEB97A	09SEP97	KE/KW Comparison TGA Tst & Rpts - Dry Air
25FEB97A	11NOV97	FRS - Develop Final FRS CSER
25FEB97A	27JUN97	MLS Definitive Design
24MAR97A	27AUG97	Final KW Design [New Scope]
28MAR97A	30SEP97	FY 97 Fab/Test MCO Closure Tool Support
01MAY97A	30SEP97	FY97 Fab/Test MCO Closure Tool
22MAY97A	29AUG97	CNSI DEFINITIVE DESIGN - KW
27MAY97A	23OCT97	Upset/Recovery Plans
27MAY97A	30SEP97	Perform Seal & Galling Testing
28MAY97A	29SEP97	Redesign Scrap Baskets/Thermal & Criticality Mod
02JUN97A	20JUN97	Bidders Prepare BARFO
16JUN97	30OCT97	CVD Process Equipment Design/Final Dsn Revw Prep
16JUN97	23FEB98	CVD 1st Article Mockup Hood Dsn, Fab&Del to 306
23JUN97	15AUG97	DESH Evaluate BARFOs
24JUN97*	08JAN98	Procure GFE MCO Monitoring Carts
24JUN97	14NOV97	MCO Monitoring Cart Design
01AUG97	21NOV97	KW Undamaged Fuel (3) Furnace Test & Rpt
04AUG97*	29SEP97	KW CTFM -PREP T.O. MCO LOAD OUT FACILITY MOD DSN
18AUG97	30SEP97	FDH & DOE Procurement Approval
18AUG97*	11SEP97	MLS RFP Dev / Release
02SEP97*	03OCT97	Prep Limited Risk Assessment for CD 3A
10SEP97	18NOV97	KW Coatings, TGA Drying & Report
12SEP97	30SEP97	MLS Fab Bid Eval / Award
24SEP97	04DEC97	Comp KW Internal Sludge/Coating Lab
29SEP97	13APR98	KW Damaged Fuel (4-8) Test & Reports
01OCT97*	03NOV97	FRS - Procure Manipulators - FY98
01OCT97	28OCT97	FRS - Manips Vendor Design R&A
01OCT97	14NOV97	FRS - Cmpt Cold Development Test @ 305 Bldg FY98
01OCT97	15DEC97	Test Facility, Equip Dsn & Upgd @ 305 Bld - FY98
01OCT97	05MAY98	Fab MCO 1st 5
01OCT97	23APR98	MLS Fab
01OCT97*	25MAR98	KW - Desing/Wrk Pkg Prep MCO Load System
01OCT97	31AUG98	MHM Fabrication Support (FY98)
01OCT97	09JUN98	MHM Fab/Assembly/Delivery (PO Only) (FY98)
01OCT97	15JUN98	CVD Design Testing (First Article Mockup)- FY 98
01OCT97	15JUN98	CVD Design Validation FY 98
13OCT97	30MAR98	Procure, Fab & Test CNSI Equipment - KW
13OCT97	03SEP98	CNSI Title III As-Built & Construction Support



Project Start	01OCT92
Project Finish	03JUL18
Data Date	16JUN97
Run Date	15AUG97

Early Bar
Progress Bar
Critical Activity

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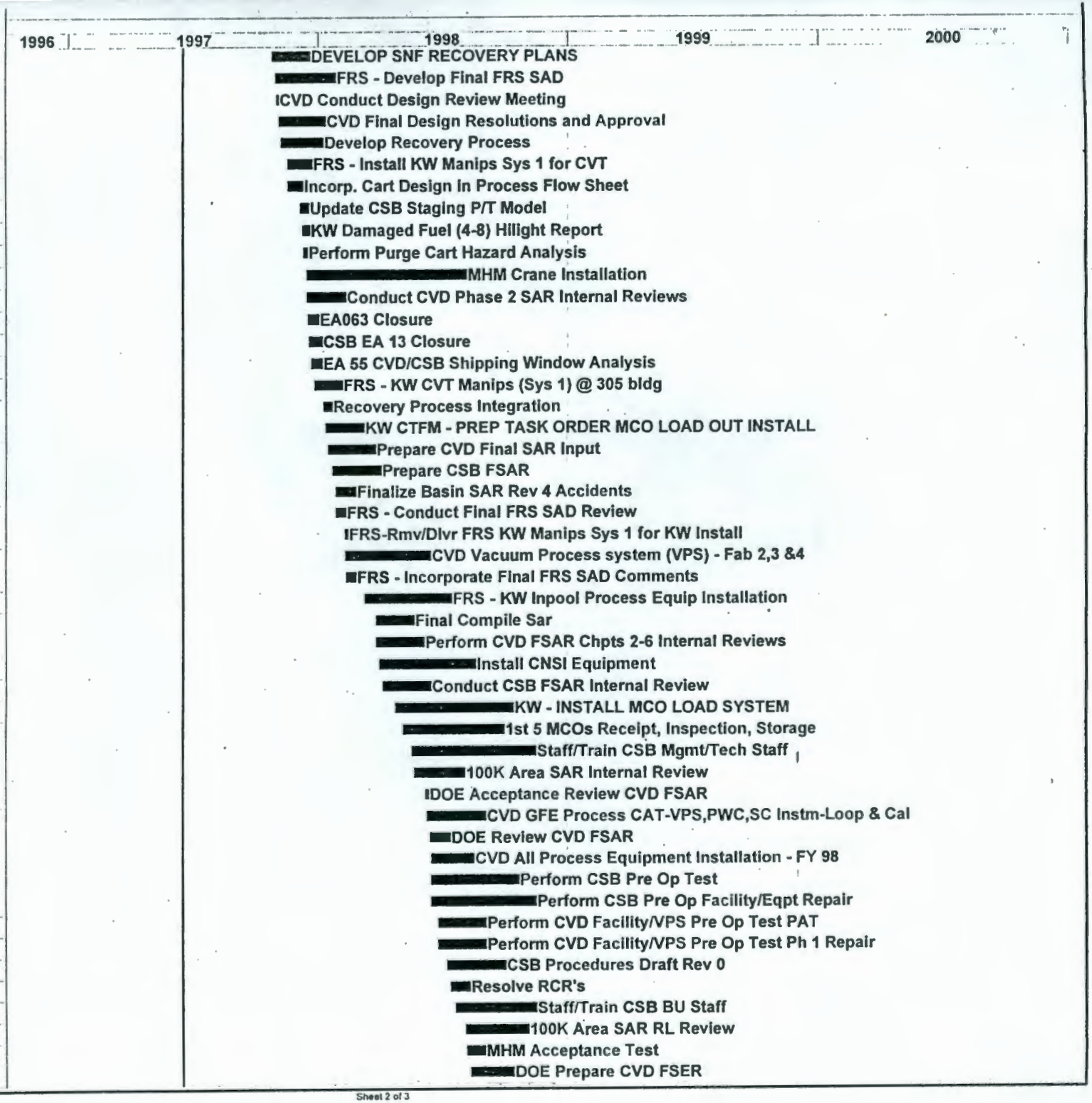
0813

Spent Nuclear Fuel Project

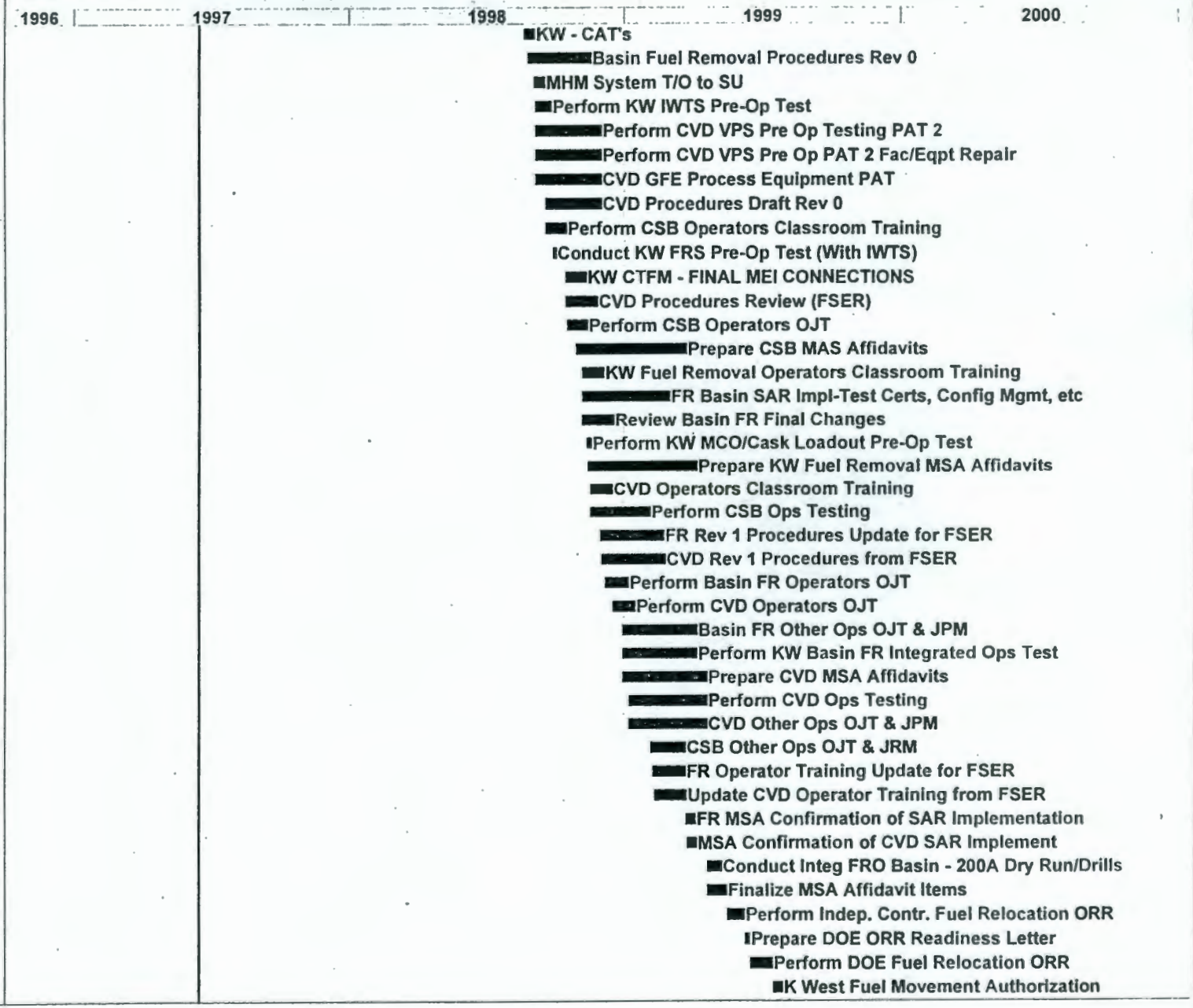
8/13 Risk Schedule

Critical Path Schedule

Early Start	Early Finish	
24OCT97	19DEC97	DEVELOP SNF RECOVERY PLANS
29OCT97	27JAN98	FRS - Develop Final FRS SAD
31OCT97	03NOV97	CVD Conduct Design Review Meeting
04NOV97	12JAN98	CVD Final Design Resolutions and Approval
07NOV97	08JAN98	Develop Recovery Process
17NOV97	23DEC97	FRS - Install KW Manips Sys 1 for CVT
17NOV97	09DEC97	Incorp. Cart Design In Process Flow Sheet
05DEC97	18DEC97	Update CSB Staging P/T Model
08DEC97	19DEC97	KW Damaged Fuel (4-8) Hilight Report
10DEC97	16DEC97	Perform Purge Cart Hazard Analysis
15DEC97	06AUG98	MHM Crane Installation
15DEC97	11FEB98	Conduct CVD Phase 2 SAR Internal Reviews
17DEC97	02JAN98	EA063 Closure
19DEC97	06JAN98	CSB EA 13 Closure
22DEC97	07JAN98	EA 55 CVD/CSB Shipping Window Analysis
26DEC97	06FEB98	FRS - KW CVT Manips (Sys 1) @ 305 bldg
09JAN98	22JAN98	Recovery Process Integration
12JAN98*	09MAR98	KW CTFM - PREP TASK ORDER MCO LOAD OUT INSTALL
15JAN98	26MAR98	Prepare CVD Final SAR Input
23JAN98	03APR98	Prepare CSB FSAR
28JAN98	25FEB98	Finalize Basin SAR Rev 4 Accidents
28JAN98	10FEB98	FRS - Conduct Final FRS SAD Review
09FEB98	13FEB98	FRS-Rmv/Dlvr FRS KW Manips Sys 1 for KW Install
10FEB98	15JUN98	CVD Vacuum Process system (VPS) - Fab 2,3 &4
11FEB98	25FEB98	FRS - Incorporate Final FRS SAD Comments
10MAR98	16JUL98	FRS - KW Inpool Process Equip Installation
27MAR98	21MAY98	Final Compile Sar
27MAR98	05JUN98	Perform CVD FSAR Chpts 2-6 Internal Reviews
31MAR98	20AUG98	Install CNSI Equipment
06APR98	15JUN98	Conduct CSB FSAR Internal Review
24APR98	14OCT98	KW - INSTALL MCO LOAD SYSTEM
06MAY98	30SEP98	1st 5 MCOs Receipt, Inspection, Storage
19MAY98	16NOV98	Staff/Train CSB Mgmt/Tech Staff
22MAY98	04AUG98	100K Area SAR Internal Review
08JUN98	12JUN98	DOE Acceptance Review CVD FSAR
10JUN98	03SEP98	CVD GFE Process CAT-VPS,PWC,SC Instm-Loop & Cal
15JUN98	14JUL98	DOE Review CVD FSAR
16JUN98	18AUG98	CVD All Process Equipment Installation - FY 98
17JUN98	21OCT98	Perform CSB Pre Op Test
17JUN98	16NOV98	Perform CSB Pre Op Facility/Eqpt Repair
26JUN98	03SEP98	Perform CVD Facility/VPS Pre Op Test PAT
26JUN98	03SEP98	Perform CVD Facility/VPS Pre Op Test Ph 1 Repair
09JUL98	01OCT98	CSB Procedures Draft Rev 0
15JUL98	11AUG98	Resolve RCR's
21JUL98	16NOV98	Staff/Train CSB BU Staff
05AUG98	04NOV98	100K Area SAR RL Review
07AUG98	01SEP98	MHM Acceptance Test
12AUG98	14OCT98	DOE Prepare CVD FSER



Early Start	Early Finish	
21AUG98	03SEP98	KW - CAT's
26AUG98	18NOV98	Basin Fuel Removal Procedures Rev 0
02SEP98	16SEP98	MHM System T/O to SU
04SEP98	25SEP98	Perform KW IWTS Pre-Op Test
04SEP98	01DEC98	Perform CVD VPS Pre Op Testing PAT 2
04SEP98	01DEC98	Perform CVD VPS Pre Op PAT 2 Fac/Eqpt Repair
04SEP98	01DEC98	CVD GFE Process Equipment PAT
17SEP98	01DEC98	CVD Procedures Draft Rev 0
18SEP98	15OCT98	Perform CSB Operators Classroom Training
28SEP98	01OCT98	Conduct KW FRS Pre-Op Test (With IWTS)
15OCT98	11NOV98	KW CTFM - FINAL MEI CONNECTIONS
15OCT98	25NOV98	CVD Procedures Review (FSER)
16OCT98	12NOV98	Perform CSB Operators OJT
28OCT98	22MAR99	Prepare CSB MAS Affidavits
05NOV98	04DEC98	KW Fuel Removal Operators Classroom Training
05NOV98	01MAR99	FR Basin SAR Impl-Test Certs, Config Mgmt, etc
05NOV98	18DEC98	Review Basin FR Final Changes
12NOV98	18NOV98	Perform KW MCO/Cask Loadout Pre-Op Test
13NOV98	07APR99	Prepare KW Fuel Removal MSA Affidavits
16NOV98	15DEC98	CVD Operators Classroom Training
17NOV98	03FEB99	Perform CSB Ops Testing
30NOV98	22FEB99	FR Rev 1 Procedures Update for FSER
02DEC98	24FEB99	CVD Rev 1 Procedures from FSER
07DEC98	06JAN99	Perform Basin FR Operators OJT
16DEC98	15JAN99	Perform CVD Operators OJT
30DEC98	07APR99	Basin FR Other Ops OJT & JPM
30DEC98	07APR99	Perform KW Basin FR Integrated Ops Test
30DEC98	19APR99	Prepare CVD MSA Affidavits
08JAN99	19APR99	Perform CVD Ops Testing
08JAN99	19APR99	CVD Other Ops OJT & JPM
04FEB99	22MAR99	CSB Other Ops OJT & JRM
08FEB99	22MAR99	FR Operator Training Update for FSER
10FEB99	24MAR99	Update CVD Operator Training from FSER
23MAR99	05APR99	FR MSA Confirmation of SAR Implementation
25MAR99	07APR99	MSA Confirmation of CVD SAR Implement
20APR99	10MAY99	Conduct Integ FRO Basin - 200A Dry Run/Drills
20APR99	17MAY99	Finalize MSA Affidavit Items
18MAY99	08JUN99	Perform Indep. Contr. Fuel Relocation ORR
09JUN99	15JUN99	Prepare DOE ORR Readiness Letter
16JUN99	15JUL99	Perform DOE Fuel Relocation ORR
16JUL99	29JUL99	K West Fuel Movement Authorization



ATTACHMENT 12

MEMORANDUM OF UNDERSTANDING
between
U.S. DEPARTMENT OF ENERGY
and
STATE OF OREGON

I. **PURPOSE.** The U.S. Department of Energy, Richland Operations Office (RL) and the State of Oregon, through its Office of Energy (OOE), herein after referred to as the Agencies, enter into this Memorandum of Understanding (MOU) for the purpose of documenting understandings and agreements that currently exist between the two agencies. In entering into this MOU, the Agencies agree to consult, and whenever possible, cooperate on Hanford environmental issues, or actions needed to address these issues. Each agency shall bear the responsibility for providing for the necessary funding to carry out its respective responsibilities under this MOU; however, this MOU does not preclude sharing of resources, including funding through grants, between the parties. The Agencies further agree that:

A. RL will work to ensure that OOE has the information and the opportunity needed to adequately review and comment on Hanford environmental issues and proposed actions before major decisions of interest to OOE and Oregon are made.

B. OOE will provide its issues of concern on specific areas of interest and/or recommendations, to RL in written form when possible. To assist OOE in formulating timely responses, RL will continue to provide OOE with simultaneous copies of information provided to the State of Washington Department of Ecology and the U.S. Environmental Protection Agency (EPA) on Hanford environmental, health and safety, and budget issues. OOE agrees to provide RL in a timely manner any information which OOE has, and which RL does not have related to Hanford environmental, health and safety, and budget issues.

C. RL will attempt to resolve OOE concerns within established decision-making timeframes. Both parties mutually agree to commit adequate time to meet or otherwise discuss concerns and recommendations formally identified by OOE.

II. **MEETINGS.** RL agrees to meet with OOE staff periodically to review issues of mutual concern. Such issues may include, but are not limited to, funding levels for environmental management, planned accomplishments, pending federal legislation, DOE proposed rules, Orders and other proposed agency actions. The Agencies agree that the primary vehicle to accomplish this is to combine these meetings with other scheduled meetings if suitable.

A. Management from the Agencies shall meet every other month beginning the effective date of this MOU. The purpose of these meetings will be to discuss key policy issues, to

develop joint strategies and positions and to review cooperative efforts. RL representatives will include the Director of the Environmental Assurance, Permits, and Policy Division and/or the Administrator of the Hanford Federal Facilities Agreement and Consent Order (TPA) and the Director of the Office of External Affairs. OOE representatives will include the OOE Nuclear Safety Division Administrator, and/or other OOE senior management.

The agenda for such meetings will be developed by the designated point of contact for each agency. Meeting locations will be alternated between Oregon and Washington to the extent possible.

B. To the extent practicable, the Agencies will satisfy their meeting obligations identified above through attendance in monthly Inter-Agency Management Integration Team (IAMIT) meetings and milestone review meetings as established in Amendment 6 to the TPA. In August, 1996, EPA, Ecology and RL agreed to OOE participation in the IAMIT limited to meetings for agenda items of interest to Oregon and not related to dispute resolution, negotiations, and enforcement matters. The OOE Nuclear Safety Division Administrator will continue to be placed on the distribution list for agenda and minutes for IAMIT meetings. Nothing in this MOU will supersede the Agreement on Oregon/Washington Cooperation on Hanford Cleanup dated August 12, 1996.

III. CORRESPONDENCE.

RL will place OOE on distribution for all TPA correspondence it sends to EPA and to the State of Washington Department of Ecology. With regard to electronic communications and access, RL will provide the same level of communication as to other parties. RL will make a request to EPA to also routinely include OOE on distribution for its TPA correspondence.

IV. TRI-PARTY AGREEMENT NEGOTIATIONS

RL will continue in current efforts to keep OOE, as well as other affected stakeholders, apprised during TPA negotiations. The purpose of this effort will be to discuss the progress and direction of the negotiations and will be to keep OOE apprised of issues and negotiation progress, to understand Oregon's concerns, and to seek to adequately address Oregon's concerns in these negotiations.

V. PUBLIC INVOLVEMENT.

RL will consult with and include OOE in planning and conducting Hanford-related public involvement activities in Oregon. The Agencies will work together to ensure that public involvement activities in Oregon are cost-effective and satisfy legal requirements and public interests. RL will interface with HQ to ensure that these objectives are met.

RL will seek to obtain OOE agreement and input on DOE plans for Hanford public

involvement in Oregon for which DOE has sole responsibility. In the case of TPA public involvement activities where responsibility is shared by the State of Washington, Department of Ecology, EPA, and the DOE, RL will urge that the three parties jointly seek OOE input.

RL will recommend to EPA and Ecology, that OOE staff be invited to participate in Tri-party efforts to plan public involvement activities, including routine and periodic meetings of public involvement staff. OOE agrees to work jointly with the TPA parties in planning TPA public involvement activities in Oregon. OOE further agrees to keep the parties of TPA fully apprised of the interests and concerns relating to such involvement activities.

To the extent OOE undertakes additional public involvement activities, such efforts must be agreed to in advance by both parties for funding to support the additional work under the terms and agreements of the existing Hanford Technical Assistance Grant.

VI. POINTS OF CONTACT.

The DOE point of contact for overseeing this cooperative effort is the Administrator of the TPA. The Oregon point of contact is the OOE Administrator of the Nuclear Safety Division. In addition to the specific responsibilities laid out in this agreement, the contacts will be responsible for general facilitation of the cooperative efforts. Staff should address any questions or concerns regarding consultation and cooperation to the contacts. In addition, a DOE-HQ point of contact (e.g., the Director of EM-75, Office of Environmental and Regulatory Analysis) shall be identified by DOE to assist in addressing questions or concerns, and give Oregon the opportunity to provide input on issues of a national scope.

OTHER PROVISIONS.

1. Not all information which affects Hanford or Oregon's interests is generated by RL. To the extent practicable, RL agrees to provide Oregon information which it has on national nuclear waste issues and any other issues either related to Hanford or which affect Hanford or Oregon. Oregon will work with RL to identify specific items of interest and sources.

2. DOE will continue the current policy of making special efforts to work with Oregon on transportation of radioactive materials, an area of special concern to Oregon. This includes emergency response training and support, agreement with Oregon on accident prevention measures such as timing of shipments, shipping routes, driver and shipper certification, and advance notification of shipments. DOE would also consult with Oregon on waste handling and disposal decisions and new missions at Hanford which might impact transportation of radioactive materials through Oregon.

John D. Wagoner, Manager
U. S. Department of Energy
Richland Operations Office

8/11/97
Date

John A. Kitzhaber, M.D.
Governor
State of Oregon

8/1/97
Date