

JAN 06 1998

ENGINEERING DATA TRANSMITTAL

Page 1 of 1

1. EDT 622848

2. To: (Receiving Organization) Distribution		3. From: (Originating Organization) Tank Waste Retrieval & Disposal		4. Related EDT No.: N/A	
5. Proj./Prog./Dept./Div.: Tank Waste Remediation Systems (TWRS)		6. Cog. Engr.: S. H. Rifaey		7. Purchase Order No.: N/A	
8. Originator Remarks: For approval and release.				9. Equip./Component No.: N/A	
				10. System/Bldg./Facility: N/A	
11. Receiver Remarks: 11A Design Baseline Document? ☐ Yes ☒ No				12. Major Assm. Dwg. No.: N/A	
				13. Permit/Permit Application No.: N/A	
				14. Required Response Date: 1/5/98	

15. DATA TRANSMITTED					(F)	(G)	(H)	(I)
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	Approval Designator	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	HNF-2020		0	TWRS RTP Guidance & Requirements to Deliverables Crosswalk	N/A	1/2	1	

16. KEY									
Approval Designator (F)		Reason for Transmittal (G)				Disposition (H) & (I)			
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)		1. Approval 2. Release 3. Information		4. Review 5. Post-Review 6. Dist. (Receipt Acknow. Required)		1. Approved 2. Approved w/comment 3. Disapproved w/comment		4. Reviewed no/comment 5. Reviewed w/comment 6. Receipt acknowledged	
(G)	(H)	17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)							
Reason	Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN
1	1	Design Authority S. H. Rifaey	<i>[Signature]</i>	1/5/98	VS-121-56	Author R. P. Raven	<i>[Signature]</i>	1/5/98	1
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		Cog. Mgr.	N/A			S.D. Brumley per telecon	<i>[Signature]</i>		1
		QA	N/A						
		Safety	N/A						
		Env.	N/A						

18. <i>[Signature]</i> R. P. Raven Signature on EDT Originator		19. _____ Authorized Representative Date for Receiving Organization		20. <i>[Signature]</i> R. D. Wojtaszek Cognizant Manager		21. DOE APPROVAL (if required) Ctrl. No. ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments	
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1/6/98

Tank Waste Remediation System Retrieval and Disposal Mission Readiness-to-Proceed Guidance and Requirements to Deliverables Crosswalk

C. E. Hall / R. P. Raven
Lockheed Martin Hanford Company, Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-96RL13200

EDT/ECN: 622848	UC: 2030
Org Code: 7B220	Charge Code: D215P
B&R Code: EW3130010	Total Pages: 80

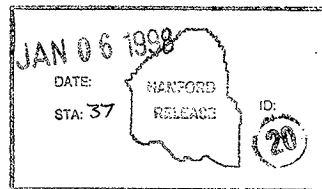
Type of LIMITED USE Information: **Business-Sensitive**

Key Words: TWRS, Retrieval and Disposal Mission, Readiness-to-Proceed

Abstract: Before RL can authorize proceeding with Phase 1B, the PHMC team must demonstrate its readiness to retrieve and deliver the waste to the private contractor(s) and to receive and dispose of the products and byproducts returned from the treatment. The PHMC team has organized their plans for providing these vitrification-support services into the Retrieval and Disposal Mission within the Tank Waste Remediation System (TWRS) Program.

Printed in the United States of America. To obtain copies of this document, contact: WHC/BCS Document Control Services, P.O. Box 1970, Mailstop H6-08, Richland WA 99352, Phone (509) 372-2420; Fax (509) 376-4989.

James Randall 1-6-98
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Tank Waste Remediation System Retrieval and Disposal Mission Readiness-to-Proceed Guidance and Requirements to Deliverables Crosswalk

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Date Published
January 1998

Prepared by Lockheed Martin Hanford Corporation
Richland, Washington

Prepared for the U.S. Department of Energy



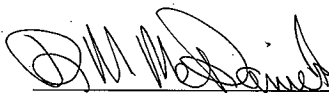
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Hanford Management and Integration Contractor for the
U.S. Department of Energy under Contract DE-AC-0696-RL13200

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Document Title: Tank Waste Remediation System Retrieval and Disposal Mission Readiness-to-Proceed Guidance and Requirements to Deliverables Crosswalk

Approved by:



D. M. McDaniel
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6 Jan 1998

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LIST OF TERMS

DOE	U.S. Department of Energy
FDH	Fluor Daniel Hanford, Inc.
ICD	Interface Control Document
PHMC	Project Hanford Management Contract
RL	U.S. Department of Energy, Richland Operations Office
RTP	readiness to proceed
TWRS	Tank Waste Remediation System

**TANK WASTE REMEDIATION SYSTEM
RETRIEVAL AND DISPOSAL MISSION
READINESS-TO-PROCEED
GUIDANCE AND REQUIREMENTS TO
DELIVERABLES CROSSWALK**

In September 1996, the U.S. Department of Energy, Richland Operations Office (RL) initiated the first of a two-phase program to remediate waste storage in tanks at the Hanford Site in Washington State. Initiating the first phase, RL signed contracts with two private companies who agreed to receive and vitrify a portion of the tank waste in a demonstration and to return the vitrified product and byproducts to the Project Management Hanford Contract (PHMC) team for disposition. The first phase of the overall remediation effort is a demonstration of treatment concepts, and the second phase includes treatment of the remaining tank wastes. The demonstration phase, Phase 1 of the project, is further subdivided into two parts, A and B. During Phase 1A, the vitrification contractors are to establish the technical, operational, regulatory, business, and financial elements required to provide treatment services on a fixed-unit-price basis. Phase 1A deliverables will be evaluated by RL to determine whether it is in the best interest of the government to have one or more vitrification contractors proceed with Phase 1B, in which 6% to 13% of the tank waste would be treated in the demonstration. In addition, before RL can authorize proceeding with Phase 1B, the PHMC team must demonstrate its readiness to retrieve and deliver the waste to the private contractor(s) and to receive and dispose of the products and byproducts returned from the treatment. The PHMC team has organized their plans for providing these vitrification-support services into the Retrieval and Disposal Mission within the Tank Waste Remediation System (TWRS) Project.

Three RL core teams were established to assist in evaluating the PHMC team's readiness, specifically in regard to the following three task areas:

- Waste feed delivery
- Infrastructure and byproducts delivery
- Immobilized products.

The core teams each developed a set of criteria and plans to be used in evaluating the PHMC team's readiness to proceed (RTP). The three core teams are augmented by specialty teams established to provide expertise to the core team in the following five areas:

- Risk management
- Safety
- Quality assurance
- Administration
- Regulatory compliance.

The PHMC team evaluated its own readiness concurrent with an independent assessment of its readiness. Integral to the PHMC team's self-assessment, documents were identified that contain requirements and guidance for PHMC team's Retrieval and Disposal Mission. Some of these documents address portions of the overall TWRS Project that are applicable to the Retrieval and Disposal Mission. Because the parent TWRS Project is already underway, many of the activities needed to support vitrification operations are routine. In identifying evidence of readiness, the PHMC team identified, modified, or, when needed, developed documents at either the program or TWRS level, as appropriate. Proceeding with Phase 1B will employ proven technologies and expand the scope of a successfully operating program.

To facilitate self-assessment of RTP, the PHMC team identified requirements and guidance applicable to the initiation of the Retrieval and Disposal Mission field work. In the self-assessment, the PHMC team further identified which program or project document implements or responds to each guidance item or requirement. Because requirements and guidance are quite extensive, as are the number of program documents, the PHMC team developed a crosswalk linking each requirement or guidance item to one or more project or program planning documents. This crosswalk, or matrix, is included as Table 1. Following is an explanation of how items were selected from the applicable documents for inclusion in the matrix and how a graded level of detail was chosen for itemizing requirements and guidance from various source documents. The guidance/requirement source documents are organized into the following categories:

- A. RL letters regarding PHMC team RTP
- B. U.S. Department of Energy (DOE) Orders and Implementing Guides
- C. Interface Control Documents (ICD)
- D. Draft Evaluation Guidance to the RL Core Teams (four documents)
- E. RL Program Guidance.

The RL Core Team Critical Success Factors, dated December 22, 1997, are each addressed in Table 1, Section A-1, 36 Item Checklist, and Section B-2, DOE Order 425.1, *Startup and Restart of Nuclear Facilities*.

The RL Specialty Team Critical Success Factors dated November 22, 1997, are each addressed in Table 1, Section A-1, 36 Item Checklist; Section B-2, DOE Order 425.1; and numerous earlier DOE guidance documents.

Source document guidance and requirements in rows are matrixed to program/project documents in columns. The program/project documents shown are deliverables to RL or supporting information that is available to RL upon request. Program/project document titles are abbreviated in the matrix. Numbers preceding guidance or requirement items are for internal use and have no other meaning. Source document guidance and requirement items are indented to indicate subordination. Applicable items are indicated with an "I" as the matrix element. Dots as matrix elements are for relationship tracking.

A.1 RL letter 97-WDD-129, Contract Number DE-AC06-96RL13200, Tank Waste Remediation System (TWRS) Privatization - Hanford Contractors Readiness to Proceed (36 Item Checklist)

The RL's approach to evaluating the PHMC team's RTP is described in a letter from RL to Fluor Daniel Hanford, Inc. (FDH) (letter 97-WDD-129, *Contract Number DE-AC06-96RL13200, Tank Waste Remediation System (TWRS) Privatization - Hanford Contractors Readiness to Proceed* [Taylor 1997a]). This letter includes the "Readiness-to-Proceed Evaluation Plan," which outlines RL's approach to evaluating the PHMC team's RTP. Each provision of the letter is itemized independently in the matrix, and it is shown where the evidence of response can be found. The first section in the matrix is composed of 36 items taken from the letter's Appendix B, "Checklist for PHMC Team Readiness to Proceed."

A.2 RL letter 97-WDD-129, Contract Number DE-AC06-96RL13200, Tank Waste Remediation System (TWRS) Privatization - Hanford Contractors Readiness to Proceed (Body of Text)

Requirements identified from the balance of the letter (Taylor 1997a) are included in the matrix as line items, and each is linked to one or more program/project planning documents.

A.3 RL letter 97-WDD-182, Review of Tank Waste Remediation System (TWRS) Privatization - Hanford Contractors Readiness to Proceed

The DOE's review of the PHMC team's RTP Plan is included in a letter from RL to FDH (letter 97-WDD-182, *Review of Tank Waste Remediation System (TWRS) Privatization - Hanford Contractors Readiness to Proceed*). Each provision of Taylor (1997b) is itemized independently in the matrix and cross-referenced to program or project plans.

B.1 DOE Order 430.1, Life Cycle Asset Management, GPG-FM-002, Critical Decision Criteria

DOE Order 430.1, *Life Cycle Asset Management*, as implemented through the "Good Practice Guide" GPG-FM-002, *Critical Decision Criteria*, was used extensively in determining which documents were needed for readiness at the Retrieval and Disposal Mission (i.e., the "program") level and which additional program documents were needed, or which program documents would require revision, at the TWRS level. For brevity, the provisions of the Good Practice Guide are included in the matrix at the summary outline level only, with notation corresponding to the specific provisions in the Good Practice Guide. Links are established to these general subject areas for cross-reference to program/project documents.

B.2. DOE Order 425.1, *Startup and Restart of Nuclear Facilities*, Section 4.d.(1)-(20)

The 20 core requirements of DOE Order 425.1 were employed as primary guidance in the development and revision of program/project documents. For brevity, 18 core requirements are listed and cross-referenced to program/project plans. Core requirements 16 and 20 were eliminated as applicable to DOE only.

C.1 Interface Control Documents 1-22

The requirements extracted from the following 22 ICDs include those commitments made by RL for the project and/or program. These are treated as uncompromised requirements. The DOE commitments are itemized in their entirety:

- HNF-SP-1208-ICD-01, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization-Raw Water* (FDH 1997a)
- HNF-SP-1209-ICD-02, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization-Potable Water* (FDH 1997b)
- HNF-SP-1210-ICD-03, *Interface Control Document Between DOE and the PHMC - Radioactive Solid Waste* (FDH 1997c)
- ICD-04, *Interface Between DOE and the PHMC - Dangerous Wastes (not released)* (FDH 1997d)
- HNF-SP-1211-ICD-05, *Interface Control Document Between DOE and the PHMC - Non-Radioactive, Dangerous Liquid Effluent for Phase 1 Privatization* (FDH 1997e)
- HNF-SP-1212-ICD-06, *Interface Control Document Between DOE and the PHMC - Radioactive Dangerous Liquid Effluents* (FDH 1997f)
- ICD-07, *Interface Between DOE and the PHMC - Non-Dangerous Solid Water (not released)* (FDH 1997g)
- ICD-08, *Interface Between DOE and the PHMC - Liquid Sanitary Water (Not Released)* (FDH 1997h)
- HNF-SP-1213-ICD-09, *Interface Control Document Between DOE and the PHMC - Land for Siting Part A Privatization* (FDH 1997i)
- HNF-SP-1214-ICD-10, *Interface Control Document Between DOE and the PHMC - Deactivated Facility and Site for Phase 1 Privatization* (FDH 1997j)

- HNF-SP-1215-ICD-11, *Interface Control Document Between DOE and the PHMC - Electricity* (FDH 1997k)
- HNF-SP-1216-ICD-12, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization Roads and Rails* (FDH 1997l)
- HNF-SP-1217-ICD-13, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization Non-Routine High-Level Solid Wastes* (FDH 1997m)
- HNF-SP-1218-ICD-14, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization Immobilized High-Level Waste Product* (FDH 1997n)
- HNF-SP-1219-ICD-15, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization Immobilized Low-Activity Waste Product* (FDH 1997o)
- HNF-SP-1220-ICD-16, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization Strontium/Transuranic/Entrained Solids* (FDH 1997p)
- HNF-SP-1221-ICD-17, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization Cesium-137 Intermediate Product* (FDH 1997q)
- HNF-SP-1222-ICD-18, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization - ⁹⁹Technetium Secondary Product* (FDH 1997r)
- HNF-SP-1223-ICD-19, *Interface Control Document Between DOE and the PHMC - Low-Activity Waste Feed* (FDH 1997s)
- HNF-SP-1224-ICD-20, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization - High-Level Waste Feed* (FDH 1997t)
- HNF-SP-1225-ICD-21, *Interface Control Document Between DOE and the PHMC - Phase 1 Waste Feed Tank Support Systems Low-Activity Waste Product* (FDH 1997u)
- HNF-SP-1225-ICD-22, *Interface Control Document Between DOE and the PHMC - Air Emissions* (FDH 1997v).

D.1 DOE Detailed Instructions for Assessment of RTP - Appendix C, November 14, 1997

Applicable criteria were identified from this draft guidance to the DOE core teams and specialty teams (RL 1997). These criteria are itemized in detail for cross-reference to the documents.

D.2 Plan for Determining the PHMC Team's RTP for Waste Feed Delivery

Applicable criteria were identified from the body of this draft guidance to the DOE Waste Feed Delivery review team. These criteria are itemized in detail for cross-reference to the planning documents.

D.3 Plan for Determining the PHMC Team's RTP for Waste Feed Delivery (Document Checklist)

Criteria were derived from Table 1 of the DOE Waste Feed Delivery core team's plan (Potter and Treat 1998), which provided examples of what deliverables could be expected from the PHMC team. Because the document titles are draft and are not always precise, and because some of the documents listed could be developed at later stages of the project, the titles are listed and cross-referenced by content to the actual program/project documents.

D.4 PHMC Team RTP Approach for the Evaluation of Administrative Readiness

This DOE document is early-draft planning guidance to its core team. The document was provided to the PHMC team with a caution to expect revision. Therefore, criteria items were selected at the highest level (i.e., those that were considered standards). These summary-level standards are incorporated as line items in the matrix and cross-referenced to program/project planning documents.

D.5 Draft Plan for Determining RTP for Infrastructure and Byproducts Delivery

This DOE draft document outlines criteria for its review teams and includes the checklist in D.6 through D.11 as well as some guidance text. This document is instructions for the DOE review of the RTP deliverables.

D.6 Draft Plan for Determining RTP for Infrastructure and Byproducts Delivery, Appendix A, Technical Baseline Checklist

This source document includes checklists derived from the 36 criteria found in Taylor (1997a). Because the 36 criteria were covered elsewhere in the matrix, restatement of the criteria or listing the items that obviously follow from the 36 criteria was avoided. Instead, checklist items that might be overlooked when using Taylor (1997a) directly are listed in the matrix. (See D.5 for explanation.)

D.7 Draft Plan for Determining RTP for Infrastructure and Byproducts Delivery, Appendix B, Programmatic Baseline Checklist

Checklist items that might be overlooked when using Taylor (1997a) directly are listed in the matrix. (See D.5 for explanation.)

D.8 Draft Plan for Determining RTP for Infrastructure and Byproducts Delivery, Appendix C, Infrastructure (Management Baseline) Checklist

Checklist items that might be overlooked when using Taylor (1997a) directly are listed in the matrix. (See D.5 for explanation.)

D.9 Draft Plan for Determining RTP for Infrastructure & Byproducts Delivery, Appendix D, Feed Tank Transfer/Air Emissions (Technical Baseline) Checklist

Checklist items that might be overlooked when using Taylor (1997a) directly are listed in the matrix. (See D.5 for explanation.)

D.10 Draft Plan for Determining RTP for Infrastructure and Byproducts Delivery, Appendix E, Infrastructure Feed Tank Transfer (Programmatic Baseline) Checklist

Checklist items that might be overlooked when using Taylor (1997a) directly are listed in the matrix. (See D.5 for explanation.)

D.11 Draft Plan for Determining RTP for Infrastructure and Byproducts Delivery, Appendix F, Infrastructure Feed Tank Transfer (Management Baseline) Checklist

Checklist items are listed in the matrix that might be overlooked when using Taylor (1997a) directly. (See D.5 for explanation.)

E.1 TWRS Waste Disposal Division Planning Guidance dated July 7, 1997

The TWRS planning guidance was screened for applicability because it is a TWRS Project-wide document. Portions selected as directly or indirectly applicable to the Retrieval and Disposal Mission were listed, summarized, and interpreted as nonrequirement guidance only. These criteria should include those found in the *Draft Plan for Determining RTP for Infrastructure & Byproducts Delivery, Appendix G, Planning Guidance*; therefor, Appendix G criteria were not itemized into the matrix.

REFERENCES

U. S. Department of Energy Good Practice Guides

GPG-FM-002, *Critical Decision Criteria*, Life Cycle Asset Management, Good Practice Guide, U.S. Department of Energy, Washington, D.C.

U. S. Department of Energy Orders

DOE Order 425.1, *Startup and Restart of Nuclear Facilities*, U.S. Department of Energy, Washington, D.C.

DOE Order 430.1, *Life Cycle Asset Management*, U.S. Department of Energy, Washington, D.C.

Documents

FDH, 1997a, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization- Raw Water*, HNF-SP-1208-ICD-01, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.

FDH, 1997b, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization- Potable Water*, HNF-SP-1209-ICD-02, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.

FDH, 1997c, *Interface Control Document Between DOE and the PHMC - Radioactive Solid Waste*, HNF-SP-1210-ICD-03, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.

FDH, 1997d, *Interface Between DOE and the PHMC - Dangerous Wastes*, ICD-04, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington (not released).

- FDH, 1997e, *Interface Control Document Between DOE and the PHMC - Non-Radioactive, Dangerous Liquid Effluent for Phase 1 Privatization*, HNF-SP-1211-ICD-05, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
- FDH, 1997f, *Interface Control Document Between DOE and the PHMC - Radioactive Dangerous Liquid Effluents*, HNF-SP-1212-ICD-06, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
- FDH, 1997g, *Interface Between DOE and the PHMC - Non-Dangerous Solid Water*, ICD-07 prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington (not released).
- FDH, 1999h, *Interface Between DOE and the PHMC - Interface Between DOE and the PHMC - Liquid Sanitary Water*, ICD-08, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington (not released).
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- FDH, 1997k, *Interface Control Document Between DOE and the PHMC - Electricity*, HNF-SP-1215-ICD-11, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
- FDH, 1997l, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization Roads and Rails*, HNF-SP-1216-ICD-12, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
- FDH, 1997m, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization Non-Routine High-Level Solid Wastes*, HNF-SP-1217-ICD-13, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
- FDH, 1997n, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization Immobilized High-Level Waste Product*, HNF-SP-1218-ICD-14, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.
- FDH, 1997o, *Interface Control Document Between DOE and the PHMC - Phase 1 Privatization Immobilized Low-Activity Waste Product*, HNF-SP-1219-ICD-15, prepared by Lockheed Martin Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.

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Table 1. Guidance and Requirements to Deliverables Crosswalk.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	W	X	AA	AB	AC																		
Table 1. Guidance and Requirements to Deliverables Crosswalk.																																												
1		TWRS Mission Analysis Report	TWRS Program Plan	TWRS R&DM Waste Feed	Delivery Plan	TWRS R&DM Infrastructure	Plan	TWRS R&DM ILAW Disposal	Plan	TWRS R&DM IHLW Storage	Plan	TWRS Retrieval Authorization	Basics Amendment Task Plan	TWRS Environmental Program	Plan	TWRS Safety Program Plan	Program Plan	TWRS Quality Assurance	TWRS System Engineering	Management Plan	TWRS Risk Management Plan	TWRS R&DM Risk List	Assumptions	TWRS Configuration	TWRS R&DM Technical	Baseline Summary Description	TWRS Engineering Plan	Operations & Utilization	Plan (Update)	TWRS R&DM Interface Control	Documents	TWRS Initial Updated Retrieval	& Disposal Baseline Summary	TWRS R&DM Phase 1	Financial Analysis	Level 0 and Level 1 Logics	TWRS R&DM RTP	Memorandum	Management Assessment of	TWRS RTP	TWRS R&DM RTP Internal	Independent Assessment		
2	A.1 DOE Letter to H. J. Hatch, FDH, from W. J. Taylor, DOE, dated August 8, 1997, #9757162A (36 ITEM CHECKLIST)																																											
3	Checklist # 1. TWRS mission analysis is complete and consistent with higher level plans and specifications.	I																		I																								
4	Checklist # 2. Requirements are identified, validated, and documented.	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
5	Checklist # 3. Requirements are allocated to functions.	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
6	Checklist # 4. Each activity is tied to and necessary to support a contractual requirement.																																											
7	Checklist # 5. Architecture is defined based upon analyses of the mission and the functions and requirements.	I																																										
8	Checklist # 6. All enabling assumptions have been formally documented. Assumptions which have been replaced with facts or decisions have been changed in requirements documentation.	I																																										
9	Checklist # 7. Technical logic are complete at all levels; the program makes sense logically, and lower level-logic rolls up properly to higher-level logic.		I																																									
10	Checklist # 8. Operations plans that describe how the PHMC team will execute the tech baseline have been prepared for all projects and are supported by lower-tier plans. The operation plans are consistent with MYWP and LCAM. Ops. and Maintenance plans are integrated.		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
11	Checklist # 9. System boundaries and interfaces with other organizations and programs/projects are defined.																																											
12	Checklist # 10. Interface control documents have been prepared, DOE comments have been resolved, issues have been addressed, and approved interfaces are managed.																																											
13																																												

Table 1. Guidance and Requirements to Deliverables Crosswalk.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	W	X	AA	AB	AC
1																										
2																										
14	Checklist # 11. Waste feed plans and implementing actions and procedures are on track.			I																I						
15	Checklist # 12. Infrastructure support plan and implementing actions and procedures are on track.				I																					
16	Checklist # 13. Immobilized waste product project plans and implementing actions and procedures are on track.					I	I																			
17	Checklist # 14. Plans and implementing actions that support privatization contract requirements for dealing with waste processing plan by-products including interfacing with other contractors are on track.																									
18	Checklist # 15. Technical risks have been identified and are being managed.									I	I	I														
19	Checklist # 16. The technical baseline is complete and defensible, and represents best value to the government.										I	I	I													
20	Checklist # 17. The technical baseline under configuration control.																									
21	Checklist # 18. System reliability, availability, and maintainability have been assessed and are sufficient to support processing rate requirements.																									
22	Checklist # 19. The physical integrity of existing systems, structures, and components has been verified.																									
23	Checklist # 20. Waste has been characterized as necessary to satisfy all data quality objectives.																									
24	Checklist # 21. The ability of the PHMC team to support alternatives other than the baseline has been evaluated from a technical perspective.																									

Table 1. Guidance and Requirements to Deliverables Crosswalk.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	W	X	AA	AB	AC
1																										
2																										
25	Checklist # 22. Resource-loaded estimates have been completed for all activities.																									
26	Checklist # 23. The critical path is identified and float has been calculated.																									
27	Checklist # 24. Activities have been properly funded.																									
28	Checklist # 25. Analysis of budget against resource requirements has been completed.																									
29	Checklist # 26. There is agreement among scope, budget, and schedule. The scope of work can be performed within budget and on schedule.																									
30	Checklist # 27. Schedule risk has been identified and is being managed.																									
31	Checklist # 28. The programmatic baseline is under configuration management and a change control system is implemented.																									
32	Checklist # 29. The ability to support alternatives other than the baseline has been evaluated from a programmatic perspective.																									
33	Checklist # 30. Management systems are in place to track and report cost, schedule, and technical performance and take appropriate corrective actions.																									
34	Checklist # 31. Program planning encompasses all organizations and facilities, including support, that contribute to the mission.																									
35	Checklist # 32. Environmental permits and safety authorization bases are in place as required for authorization-to-proceed decision.																									

Table 1. Guidance and Requirements to Deliverables Crosswalk.

Table 1. Guidance and Requirements to Deliverables Crosswalk.																												
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	AA	AB	AC
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36	Checklist # 33. Staff, including managers, are in place and trained.	I																							I			
37	Checklist # 34. A records management program, including technical drawings, has been implemented.	I									I														I			
38	Checklist # 35. A risk and decision management program has been implemented at all levels.	I									I	I	I	I											I			
39	Checklist # 36. The PMHC team has prepared a readiness-to-proceed memorandum and has identified deficiencies and corrective actions, including funding, necessary to support privatization.																								I			
40	A.2 DOE Letter to H. J. Hatch, FDH, from W. J. Taylor, DOE, dated August 8, 1997, #9757162A (BODY OF TEXT)																											
41	General PHMC Responsibilities from RL's 8/8/97 letter, Section 2.1																											
42	1. Establish a sound technical baseline including ICDs	I										I																
43	2. Develop a resource-loaded, logic driven schedule, including critical path	I																							I			
44	3. An executable programmatic baseline exists	I																										
45	4. Work in the technical baseline can be performed																									I		
46	5. Costs and schedules in the programmatic baseline can be met																											

Table 1. Guidance and Requirements to Deliverables Crosswalk.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	W	X	AA	AB	AC
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Table 1. Guidance and Requirements to Deliverables Crosswalk.																													
1		TWRS Mission Analysis Report	TWRS Program Plan																										
2			TWRS R&DM Waste Feed																										
58		5. A plan-of-action exists that assesses the ability of the PHMC Team to proceed with Phase 1B	Delivery Plan																										
59			TWRS R&DM Infrastructure																										
60		6. Self Assessment functional areas are identified for assessment for readiness-to-proceed	Plan																										
61			TWRS R&DM ILAW Disposal																										
		7. All required administrative actions are understood and planned	Plan																										
			TWRS R&DM IHLW Storage																										
		8. A Readiness-to-Proceed Memorandum has been submitted	TWRS Retrieval Authorization																										
			Plan																										
			TWRS Environmental Program																										
			Plan																										
			TWRS Safety Program Plan																										
			Program Plan																										
			TWRS Quality Assurance																										
			Program Plan																										
			TWRS System Engineering																										
			Management Plan																										
			TWRS Risk Management Plan																										
			TWRS R&DM Risk List																										
			Assumptions																										
			TWRS Configuration																										
			Management Plan																										
			TWRS R&DM Technical																										
			Baseline Summary Description																										
			TWRS Engineering Plan																										
			TWRS Operations & Utilization																										
			Plan (Update)																										
			TWRS R&DM Interface Control																										
			Documents																										
			TWRS Initial Updated Retrieval																										
			& Disposal Baseline Summary																										
			TWRS R&DM Phase 1																										
			Financial Analysis																										
			Level 0 and Level 1 Logics																										
			TWRS R&DM RTP																										
			Memorandum																										
			Management Assessment of																										
			TWRS RTP																										
			TWRS R&DM RTP Internal																										
			Independent Assessment																										

Table 1. Guidance and Requirements to Deliverables Crosswalk.

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Table 1. Guidance and Requirements to Deliverables Crosswalk.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	AA	AB	AC
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Table 1. Guidance and Requirements to Deliverables Crosswalk.																									
1																									
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84	b. Include a list of (internal review team) members in the internal review plans provided to DOE																								
85	c. Include the review criteria and approach in the internal review plans provided to DOE																								
86	d. Include the checklists used by the review teams in the internal review plans provided to DOE																								
87	e. Include the results and recommended actions in the internal review plans provided to DOE																								
88	11. Make a QA plan available for DOE review in January.																								
89	a. Address implementing procedures (of the QA Plan)																								
90	b. Address corresponding resources (for the QA implementing procedures)																								
91	c. Show how QA will be implemented in the waste feed delivery																								
92	e. Show how QA will be implemented in the infrastructure																								
93	f. Show how QA will be implemented in waste storage and disposal																								
94	12. Develop Operations and Maintenance Strategy and make it available for DOE Review.																								

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	W	X	AA	AB	AC
Table 1. Guidance and Requirements to Deliverables Crosswalk.																											
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Table 1. Guidance and Requirements to Deliverables Crosswalk.																															
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106	2.2.6 ES&H Program Plan																														
107	2.2.7 Project Risk Criteria																														
108	1. Risk Assessment																														
109	2.2.8 Acquisition Strategy Criteria																														
110	1. Diversity																														
111	2. Contracting Methods																														
112	2.2.9 Project Management Criteria																														
113	1. Organizational Planning																														
114	2.2.10 Stakeholder Considerations																														
115	1. Stakeholders																														
116	2.3.2 Funding Profile																														

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	W	X	AA	AB	AC
Table 1. Guidance and Requirements to Deliverables Crosswalk.																											
1		TWRS Mission Analysis Report	TWRS Program Plan	TWRS R&DM Waste Feed Delivery Plan	TWRS R&DM Infrastructure Plan	TWRS R&DM ILAW Disposal Plan	TWRS R&DM IHLW Storage Plan	TWRS Retrieval Authorization Basis Amendment Task Plan	TWRS Environmental Program Plan	TWRS Safety Program Plan	TWRS Quality Assurance Program Plan	TWRS System Engineering Management Plan	TWRS Risk Management Plan	TWRS R&DM Risk List	TWRS R&DM Key Enabling Assumptions	TWRS Configuration Management Plan	TWRS R&DM Technical Baseline Summary Description	TWRS Engineering Plan	TWRS Operations & Utilization Plan (Update)	TWRS R&DM Interface Control Documents	TWRS Initial Updated Retrieval & Disposal Baseline Summary	TWRS R&DM Phase 1 Financial Analysis	Level 0 and Level 1 Logics	TWRS R&DM RTP Memorandum	Management Assessment of TWRS RTP	TWRS R&DM RTP Internal	Independent Assessment
2			I														I										
117	2.3.3 Baseline: Work Scope (Technical) Criteria																										
118	1. QA Requirements		I								I																
119	2.3.4 Baseline: Cost Criteria																										
120	1. Total Estimated Cost (TEC)																					I	I				
121	2. Total Project Cost (TPC)																					I	I				
122	3. Life Cycle Cost (LCC)																					I	I				
123	2.3.5 Baseline: Schedule Criteria																										
124	1. Milestones																					I					
125	2.3.6 Environment, Safety and Health Criteria																										
126	1. Safety Analysis		I					I	I																		
127	2. Permits, Licenses, and Regulatory Approval		I					I																			

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	AA	AB	AC		
Table 1. Guidance and Requirements to Deliverables Crosswalk.																															
1		TWRS Mission Analysis Report	TWRS Program Plan																												
2																															
		2.3.7 Project Risk Criteria																													
128																															
		1. Risk Assessment																													
129																															
		2. Risk Management																													
130																															
		2.3.8 Acquisition Strategy																													
131																															
		1. Diversity																													
132																															
		2. Partnering																													
133																															
		3. Contracting Methods																													
134																															
		4. Procurement																													
135																															
		2.3.9 Project Management Criteria																													
136																															
		1. Project Planning Documentation																													
137																															
		2. Baseline Change Control																													
138																															

Table 1. Guidance and Requirements to Deliverables Crosswalk.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	AA	AB	AC
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		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	AA	AB	AC	
Table 1. Guidance and Requirements to Deliverables Crosswalk.																														
1		TWRS Mission Analysis Report	TWRS Program Plan																											
2																														
172		5. Contingency Management																												
173		2.4.10 Stakeholder Considerations																												
174		2.5.3 Baseline Workscope Technical Criteria																												
175		2.5.4 Baseline: Cost Criteria																												
176		1. Life Cycle Cost (LCC)																												
177		2.5.6 Environment, Safety and Health Criteria																												
178		1. Safety Analysis																												
179		2. Occupational Safety Concerns																												
180		3. D&D Plans																												
181		2.5.9 Project Management																												
182		1. Configuration Management																												

Table 1. Guidance and Requirements to Deliverables Crosswalk.

A		B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	AA	AB	AC
1																												
2																												
183	2.5.10 Stakeholder Considerations		I																									
184	1. Public Participation		I																									
185	B.2 DOE Order 425.1, "Start-Up and Restart of Nuclear Facilities," Section 4.d.(1)-(20)																											
186	425.1 Core Requirement (1) - Procedures and Safety Limits		I																	I								
187	425.1 Core Requirement (2) - Training and Qualification		I																	I								
188	425.1 Core Requirement (3) - Operations Level of Knowledge		I																	I								
189	425.1 Core Requirement (4) - Safety Documentation																											
190	425.1 Core Requirement (5) - Operability Checks of Safety Systems																			I								
191	425.1 Core Requirement (6) - Audit Deficiency Resolution		I																									
192	425.1 Core Requirement (7) - DOE Order Conformance		I																									
193	425.1 Core Requirement (8) - Management Programs are established; Personnel and Supporting Personnel are Adequate		I																								I	

Table 1. Guidance and Requirements to Deliverables Crosswalk.

Table 1. Guidance and Requirements to Deliverables Crosswalk.																												
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	AA	AB	AC
1																												
2																												
194	425.1 Core Requirement (9) - Routine and Emergency Operations Drill Program	TWRS Mission Analysis Report	I	TWRS R&DM Waste Feed Delivery Plan	TWRS R&DM Infrastructure Plan	TWRS R&DM ILAW Disposal Plan	TWRS R&DM IHLW Storage Plan	TWRS Retrieval Authorization Basis Amendment Task Plan	TWRS Environmental Program Plan	TWRS Safety Program Plan	TWRS Quality Assurance Program Plan	TWRS System Engineering Management Plan	TWRS Risk Management Plan	TWRS R&DM Risk List	TWRS R&DM Key Enabling Assumptions	TWRS Configuration Management Plan	TWRS R&DM Technical Baseline Summary Description	TWRS Engineering Plan	TWRS Operations & Utilization Plan (Update)	TWRS R&DM Interface Control Documents	TWRS Initial Updated Retrieval & Disposal Baseline Summary	TWRS R&DM Phase 1 Financial Analysis	Level 0 and Level 1 Logics	TWRS R&DM RTP Memorandum	Management Assessment of TWRS RTP	TWRS R&DM RTP Internal Independent Assessment		
195	425.1 Core Requirement (10) - Startup Test Program	I	I																									
196	425.1 Core Requirement (11) - Functions; Assignments; Responsibilities; Relationships	I																										
197	425.1 Core Requirement (12) - Conduct of Operations	I																										
198	425.1 Core Requirement (13) - Personnel Qualifications	I																										
199	425.1 Core Requirement (14) - ES&H Site-Wide Safety Culture	I						I	I	I	I								I									
200	425.1 Core Requirement (15) - Facility Complies With Safety Basis	I								I	I	I	I							I								
201	425.1 Core Requirement (17) - Adequacy of Contractor Operational Readiness Review	I										I								I								
202	425.1 Core Requirement (18) - Procedures and Training Reflect Actual Facility	I																		I								
203	425.1 Core Requirement (19) - Technical and Management Qualifications for Operations of the Facility are Adequate	I																										I

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	W	X	AA	AB	AC
1	Table 1. Guidance and Requirements to Deliverables Crosswalk.																									
2	C.1 Interface Control Documents	TWRS Mission Analysis Report	TWRS Program Plan	TWRS R&DM Waste Feed Delivery Plan	TWRS R&DM Infrastructure Plan	TWRS R&DM ILAW Disposal Plan	TWRS R&DM IHLW Storage Plan	TWRS Retrieval Authorization Basis Amendment Task Plan	TWRS Environmental Program Plan	TWRS Safety Program Plan	TWRS Quality Assurance Program Plan	TWRS System Engineering Management Plan	TWRS Risk Management Plan	TWRS R&DM Risk List	TWRS R&DM Key Enabling Assumptions	TWRS Configuration Management Plan	TWRS R&DM Technical Baseline Summary Description	TWRS Engineering Plan	TWRS Operations & Utilization Plan (Update)	TWRS R&DM Interface Control Documents	TWRS Initial Updated Retrieval & Disposal Baseline Summary	TWRS R&DM Phase 1 Financial Analysis	Level 0 and Level 1 Logics	TWRS R&DM RTP Memorandum	Management Assessment of TWRS RTP	TWRS R&DM RTP Internal Independent Assessment
204																										
205		1. Raw Water			I																I					
206		1. Provide up to 760 liters per minute (lpm) (24-hour average) of process water to the Contractor.																								
207		2. Provide and maintain a pipeline for process water to the Contractor's site perimeter.																								
208		3. Provide up to a total of 9,450 lpm of fire water to be shared among the Contractors.																								
209		4. Provide and maintain a pipeline for fire water to each Contractor's site perimeter.																								
210		5. Monitor raw water usage.																								
211		6. Function as the Site Water Purveyor.																								
212		7. Notify the Contractor in advance of scheduled interruption of services.	I																							
213		2. Potable Water			I																					
214		1. Provide up to 95 lpm (24-hour average) of potable water to the Contractor.																								

Table 1. Guidance and Requirements to Deliverables Crosswalk.

Table 1. Guidance and Requirements to Deliverables Crosswalk.																										
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	W	X	AA	AB	AC
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Table 1. Guidance and Requirements to Deliverables Crosswalk.																											
1		1. During Part A, provide the Contractor site-investigation access to the region shown in Section J, Attachment 3, <i>Siting Plan/Aerial View of Proposed Contractor Locations</i> .	TWRS Mission Analysis Report	TWRS Program Plan	TWRS R&DM Waste Feed Delivery Plan	TWRS R&DM Infrastructure Plan	TWRS R&DM ILAW Disposal Plan	TWRS R&DM IHLW Storage Plan	TWRS Retrieval Authorization Basis Amendment Task Plan	TWRS Environmental Program Plan	TWRS Safety Program Plan	TWRS Quality Assurance Program Plan	TWRS System Engineering Management Plan	TWRS Risk Management Plan	TWRS R&DM Risk List	TWRS R&DM Key Enabling Assumptions	TWRS Configuration Management Plan	TWRS R&DM Technical Baseline Summary Description	TWRS Engineering Plan	TWRS Operations & Utilization Plan (Update)	TWRS R&DM Interface Control Documents	TWRS Initial Updated Retrieval & Disposal Baseline Summary	TWRS R&DM Phase 1 Financial Analysis	Level 0 and Level 1 Logics	TWRS R&DM RTP Memorandum	Management Assessment of TWRS RTP	TWRS R&DM RTP Internal Independent Assessment
2																											
248		2. At the start of Part B, select and lease a 6-hectare site within the region shown in Section J, Attachment 3.																									
249		3. Establish baseline site and environmental conditions through a third party.								I																	
250		4. Ensure that site-use satisfies requirements through the environmental checklist process at the initiation of Part B.								I																	
251		5. Provide Site Evaluation Reports.																									
252		6. Provide land corridors and required siting information for tank waste transfer lines.																									
253		10. Deactivate Facility and Site																									
254		1. Authorize facility deactivation.																									
255		11. Electricity																									
256		1. Deliver up to 20 MW of power at 13.8 kV, 60 Hz, 3 Phase AC																									
257		2. Deliver power to the Contractor's site perimeter.																									
258																											

Table 1. Guidance and Requirements to Deliverables Crosswalk.

A		B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	W	X	AA	AB	AC
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Table 1. Guidance and Requirements to Deliverables Crosswalk.

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20. High-Level Waste Feed																											
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Table 1. Guidance and Requirements to Deliverables Crosswalk.																															
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325	21. Waste Feed Tanks																														
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329	22. Air Emissions - Permits																														
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368	16. Show an ability to meet all schedules needed by the private contractors for receiving immobilized LAW and HLW and separated cesium.	1																										
369	17. Identify activities most at risk in schedules and logic diagrams (for ILAW, IHLW, and Cesium).																											
370	18. Identify projects which directly support Immobilized Waste Storage and Disposal in the project plans.																											
371	19. Describe the PHMC Team's risk management program and show it will be used to support the privatization contractor(s).																											
372	20. Describe the overall risk of proceeding with Phase 1B, individual risks, and risk handling actions for each.																											
373	21. Show that the PHMC Team is on schedule for completing safety-related documents supporting the private contractor(s).																											
374	22. Identify any safety-related documents behind schedule and impact of failure.																											
375	23. Show an ability to support private contractors regarding waste feed and delivery through the PHMC Team's QA Program.																											
376	24. Show an ability to support private contractors regarding the infrastructure to receive by-products through the PHMC Team's QA Program.																											
377	25. Show an ability to support private contractors regarding the immobilized product receipt and storage, through the PHMC Team's QA Program.																											
378	26. Describe the PHMC Team's administrative procedures regarding the ability to support private contractors.																											

Table 1. Guidance and Requirements to Deliverables Crosswalk.

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412		27. Licensing Strategy																												
413		28. W-151 Notification of Startup (EPA)																												
414		29. Retrieval Permit Incorporate Comments																												
415		30. (Alternatives study) Best Basis/Inventory Estimate AX Farms Ancillary Equipment																												
416		31. TWRS Functions and Requirements Document																												
417		32. (Private Contractor) Interface Control Documents																												
418		33. PHMC-Team Work Packages																												
419		34. Safety Analysis Reports																												
420		35. PHMC Team QA Plan																												
421		36. PHMC Team Emergency Response Plan																												
422		37. PHMC Team Risk Management Plan																												

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423	38. PHMC Team Decision Support Documentation		I																							
424	D.3 Plan for Determining PHMC-Team's RTP for Waste Feed Delivery: Document Checklist (Table 3)																									
425	1. Plans call for providing envelope A, B, and C waste to the privatization contractors within 60 days of request in the amount assumed in TWRS process flowsheet per paragraph 2.2.2.6.														I											
426	2. Plans call for implementing sludge-washing capability to provide sludge to privatization contractor(s) in Phase 1B.														I											
427	3. Plans call for retrieving DST waste to make room for SST waste, to optimize tank storage, and to stage waste.														I											
428	4. Plans resolve tank 106-C high-heat safety issue.																									
429	5. Plans include demonstrating past-practice-sludging technology.																									
430	6. Plans call for providing high-level waste feed to the privatization contractor(s).																									
431	7. Plans call for retrieval of 99% tank inventory to support closure.																									
432	8. Plans include D&D of the retrieval project facilities.																									
433	9. Plans support the HTI demo. of retrieval technologies, retrieval performance objectives, and risk performance assessments.																									

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445	21. Plans are to perform acceptance testing of received ToS/Tru.																									
446	22. Plans are to arrange for delivery of ToS/Tru back to a DST Tank Farm.																									
447	23. Plans are to store separated Tc, entrained HLW solids, and Sr/Tru products and collect costs of this transport and storage.																									
448	24. Plans are that TWR will be responsible for consolidation and feed staging for Phase 1 treatment.																									
449	25. Plans are that TWR will be responsible to ensure safe minimum ops of SST farms after SSTs are interim-stabilized by 2002.																									
450	26. Plans are that TWR will be responsible for DST farm ops in FY06 and for S&M of all farms for which TWR assumes responsibility.																									
451	27. Plans are for the PHMC to complete retrieval of at least one tank farm and 36 SSTs.																									
452	28. Plans are for the 113 remaining to be retrieved by a private contractor, who will assume responsibility for ops and maintenance of those tank farms.																									
453	29. Plans are to transfer DST ops to a private contractor in 2012.																									
454	30. Plans are for the 242-A evaporator to be supplied by the Liquid Effluents Program to support ops until the immobilization facilities are in operation.																									
455	31. Plans are for upgrades to the evaporator needed to extend ops. to 2011 to occur by 2005.																									

Table 1. Guidance and Requirements to Deliverables Crosswalk.

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1		TWRS Mission Analysis Report	TWRS Program Plan	TWRS R&DM Waste Feed Delivery Plan	TWRS R&DM Infrastructure Plan	TWRS R&DM ILAW Disposal Plan	TWRS R&DM HLW Storage Plan	TWRS Retrieval Authorization Basis Amendment Task Plan	TWRS Environmental Program Plan	TWRS Safety Program Plan	TWRS Quality Assurance Program Plan	TWRS System Engineering Management Plan	TWRS Risk Management Plan	TWRS R&DM Risk List	TWRS R&DM Key Enabling Assumptions	TWRS Configuration Management Plan	TWRS R&DM Technical Baseline Summary Description	TWRS Engineering Plan	TWRS Operations & Utilization Plan (Update)	TWRS R&DM Interface Control Documents	TWRS Initial Updated Retrieval & Disposal Baseline Summary	TWRS R&DM Phase 1 Financial Analysis	Level 0 and Level 1 Logics	TWRS R&DM RTP Memorandum	Management Assessment of TWRS RTP	TWRS R&DM RTP Internal Independent Assessment
467	43. Plans describe defining feed process & retrieval system using systems engineering.											I														
468	44. Plans integrate the waste feed delivery technical baseline.																I									
469	45. Plans define retrieval project requirements to interface with Hanford Tanks Initiative (HTI) & other EM-50 funded technology development projects.											I					I									
470	46. Plans describe completion of planning for tank-106 Heel removal using ACTR-defined technology.											I					I									
471	47. Plans include preparation and update of the waste feed delivery DQOs.			I															I							
472	48. Plans include preparation of the Tank Waste Ops and Utilization Plan to be consistent with the feed staging plans.			I															I							
473	49. Plans include establishing a long term strategy for waste retrieval and feed staging based on latest inventory assessment.																I		I							
474	50. Plans describe PHMC managing the interface during prep of Phase 1 feed envelope with Waste Processing Project.		I	I																I						
475	51. Plans describe completion of LAW feed definition and LAW process flowsheets.			I													I		I							
476	52. Plans include performance of Alternative Generation Analyses and testing integral to the Waste Ops and Utilization Plan.												I						I							
477	53. Plans define equipment requirements, infrastructure requirements, and recommend a preferred alternative consistent with DOE guidance.			I	I													I								

Table 1. Guidance and Requirements to Deliverables Crosswalk.

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478	54. Plans include update of retrieval and feed delivery requirements required to define Phase 2 privatization.	I																								
479	55. Plans describe providing feed delivery support to the privatization requirements definition and down-select process.	I																								
480	56. Plans include resolving feed delivery/composition issues identified by the IP/Process Teams during development of the feed ICDs and specs.																		I							
481	57. Plans include performing alternative analyses needed to support the ATP decision and TWRS Program review per EIS ROD.								I																	
482	58. Plans describe reassessing the timing and needs for procurement of additional mixer pumps for DSTs, considering the need dates and availability of advanced mixer-pump designs.																									
483	59. Plans describe evaluation of the sludge-washing process as required by TPA M-50-03 (Completed).																									
484	60. Plans include updating the tank retrieval sequence document (TPA-45-02B-V) per the Waste Tank Ops and Utilization Plan; Update consistent with consolidation requirements and feed plans to Phase 1 contractors.																									
485	61. Plans include completion of SST Retrieval System CDR, including system definition, leak detection mitigation and monitoring as required per TPA.																									
486	62. Plans include formulating the requirements for Subsequent SST Retrieval System (SSSTRS) Project.	I																								
487	63. Plans include completion of the C-106 waste retrieval sufficient to satisfy the resolution of the high-heat tank waste safety issue. (See also HTI)																									
488	64. Plans include meeting feed quantity requirements for Phase 1 and allowing the HTI heel demonstration to proceed.																									

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	AA	AB	AC		
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1		TWRS Mission Analysis Report	TWRS Program Plan	TWRS R&DM Waste Feed Delivery Plan	TWRS R&DM Infrastructure Plan	TWRS R&DM ILAW Disposal Plan	TWRS R&DM IHLW Storage Plan	TWRS Retrieval Authorization Basis Amendment Task Plan	TWRS Environmental Program Plan	TWRS Safety Program Plan	TWRS Quality Assurance Program Plan	TWRS System Engineering Management Plan	TWRS Risk Management Plan	TWRS R&DM Risk List	Assumptions	TWRS Configuration Management Plan	TWRS R&DM Technical Baseline Summary Description	TWRS Engineering Plan	TWRS Operations & Utilization Plan (Update)	TWRS R&DM Interface Control Documents	TWRS Initial Updated Retrieval & Disposal Baseline Summary	TWRS R&DM Phase 1 Financial Analysis	Level 0 and Level 1 Logics	Memorandum	Management Assessment of TWRS RTP	TWRS R&DM RTP Internal Independent Assessment		
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520	20. Staffing, Personnel Training and Qualification - SPT&Q strategies consider a range of options including training and education, hiring and recruitment, subcontracting, part time employment, and others.		I																							
521	21. Systems Engineering - SE is the PHMC Team's way of doing business. There is management sponsorship, worker ownership, and continuous improvement.		I																							
522	D.5 Draft Plan for Determining RTP for Infrastructure & Byproducts Delivery																									
523	1. Show the ability to provide infrastructure at the correct rate to the correct location.																									
524	2. Provide correct level-1 and mid-level logics and schedules that support the infrastructure support.																									
525	3. Provide validatable task duration estimates.																									
526	4. Provide confirmable critical path and float activities not on the path.																									
526	5. Show the ability to meet the June, 2002 hot start.																									
527	6. Identify those activities most at risk for meeting the June, 2002 hot start.																									
528	7. Ensure ICDs are compatible with PHMC's RTP Package.																									
529	8. Show that correct procedures and policies have been established at the Program level and passed down to the Project level.																									
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342	19. Show that space has been provided for temporary facilities when needed (Sections 4.1.9 and 4.1.10)	TwRS Mission Analysis Report	TwRS Program Plan	TwRS R&DM Waste Feed Delivery Plan	TwRS R&DM Infrastructure Plan	TwRS R&DM ILAW Disposal Plan	TwRS R&DM IHLW Storage Plan	TwRS Retrieval Authorization Basis Amendment Task Plan	TwRS Environmental Program Plan	TwRS Safety Program Plan	TwRS Quality Assurance Program Plan	TwRS System Engineering Management Plan	TwRS Risk Management Plan	TwRS R&DM Risk List	TwRS R&DM Key Enabling Assumptions	TwRS Configuration Management Plan	TwRS R&DM Technical Baseline Summary Description.	TwRS Engineering Plan	TwRS Operations & Utilization Plan (Update)	TwRS R&DM Interface Control Documents	TwRS Initial Updated Retrieval & Disposal Baseline Summary	TwRS R&DM Phase 1 Financial Analysis	Level 0 and Level 1 Logics	Memorandum Management Assessment of TwRS RTP	TwRS R&DM RTP Internal
343	20. Show infrastructure design meets seismic and wind-loading requirements. (Sections 4.1.10 and 4.1.11)																	I							
344	21. Show interface description in ICDs, MOUs, funding, engineering, document sign-off, with Safety, Emergency, Maintenance, LMHC internal, construction, coordination, DOE interface, and configuration control of MYWPI/ICDs has been covered (Sections 5.1.1-5.1.15; 5.2.1-5.2.6)			I					I							I	I	I		I					
345	22. Validation of enabling assumptions and planning document update is scheduled, funded, proceduralized and/or managed. (Sections 6.1.1 and 6.1.2)		I																						
346	23. Risk management includes uncertainties from CDR and IPT meetings., issues from ICDs, general risk template. (Sections 6.2.1 through 6.2.5)													I											
347	24. Provide complete Alternatives Generations Analyses (AGAs) with checklists and decision process checklists. (Sections 6.3.1 through 6.3.3)											I													
348	25. Provide the completed quantitative reliability/availability/maintainability analysis (Section 6.4.1)											I													
349	26. Provide the risk/benefit analysis and identify risks on risk list. (Sections 6.4.2 and 6.4.3)											I													
350	27. Show that the schedule status report is available, used for management, and rolls-up to the next level (6.7.1-6.7.4)		I																						
351	D.7 Draft Plan for Determining RTP for Infrastructure & Byproducts Delivery, Appendix B. Programmatic Baseline Checklist.																								
352	28. Indicate that all activities on logic diagrams are tiered from contractual or MAR requirements. (1.1.1)	I																						I	

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553			29. Indicate that activities needed to support privatization are defined in Level-1 Logic. (1.1.2)																						I			
554			30. Indicate that the Infrastructure Level-1 Logic is consistent with the CDR schedules, the feed delivery schedules, the Privatization Contractor's schedules, and other appropriate interface schedules. (2.1.1-2.1.3)			I																		I				
555			31. If an Operations Plan is needed and exists, indicate that it is infrastructure- need-specific, consistent with LCAM and MYWP. (2.2.2-2.2.4)		I																							
556			32. Indicate that the WBS is accurate and consistent with the MYWP. (2.3.1-2.3.2)		I																							
556			33. Provide Economic Analyses and Life Cycle Cost analyses, and Independent Cost Estimates. (2.3.2-2.3.4)																					I				I
557			34. Show that the critical path contains schedule contingency. (2.4.3)																									
558			35. Provide schedule risks and identify how schedules are managed to reduce risk. (2.5.1-2.5.7)		I											I	I	I										
559			36. Provide ICE/Validation Reports consistent with MYWP/10 yr. budget profile. (3.1.1-3.1.2)																									I
560			37. Indicate that historical change requests have been processed through BCC. (4.2.1)															I										
561			38. Provide the Critical Path Diagram Schedule (CPDS). (4.1.4)																									
562			D.8 Draft Plan for Determining RTP for Infrastructure & Byproducts Delivery, Appendix C, Infrastructure (Management Baseline) Checklist																									

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2																			I								
596		60. Show that the Master Blueprint and Engineering studies and Alternative Generation Analyses (AGAs) are complete.(4.1.1-4.1.3)																									
597		61. Evaluate the need for Fire Hazards Analysis. (4.1.9)									I																
598		62. Provide for infrastructure control systems to ensure safe construction, ops and maintenance. (4.1.5-4.1.8)									I							I									
599		63. Show that space has been provided for temporary facilities when needed. (4.1.9 and 4.1.10)																	I								
990		64. Show infrastructure design meets seismic and wind-loading requirements. (4.1.10 and 4.1.11)																	I								
591		65. Show INTERFACE description in ICDs, MOUs, funding, engineering, document sign-off, with Safety, Emergency, Maintenance, LMHC internal, construction, coordination, DOE interface, and configuration control of MYWPI/ICDs has been covered. (5.1.1 -5.1.15; 5.2.1-5.2.6)									I							I	I		I						
592		66. Validation of enabling assumptions and planning document update is scheduled, funded, proceduralized and/or managed. (6.1.1-6.1.2)															I										
593		67. Risk management includes uncertainties from CDR and IPT meetings, issues from ICDs, general risk template. (6.2.1-6.2.5)														I											
594		68. Provide complete Alternatives Generations Analyses (AGAs) with checklists and decision process checklists. (6.3.1-6.3.3)												I													
595		69. Provide the completed quantitative reliability/availability/maintainability analysis. (6.4.1)																	I								
596		70. Provide the risk/benefit analysis and identify risks on risk list. (6.4.2-6.4.3)												I		I											

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Table 1. Guidance and Requirements to Deliverables Crosswalk.																									
1																									
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597	D:10 Draft Plan for Determining RTP for Infrastructure & Byproducts Delivery, Appendix E, Infrastructure Feed Tank Transfer (Programmatic Baseline) Checklist	71.. Show that the schedule status report is available, used for management, and rolls-up to the next level. (6.7.1-6.7.4)	I																						
598																									
599		72. Indicate that all activities on logic diagrams are tiered from contractual or MAR requirements. (1.1.1)	I																						
600		73. Indicate that activities needed to support privatization are defined in Level-1 Logic. (1.1.2)																							
601		74. Indicate that the Infrastructure Level-1 Logic is consistent with the CDR schedules, the feed delivery schedules, the Privatization Contractor's schedules, and other appropriate interface schedules. (2.1.1-2.1.3)																							
602		75. If an Operations Plan is needed and exists, indicate that it is infrastructure- need-specific, consistent with LCAM and MYWP. (2.2.2-2.2.4)																							
603		76. Indicate that the WBS is accurate and consistent with the MYWP. (2.3.1-2.3.2)																							
604		77. Provide Economic Analyses and Life Cycle Cost analyses, and Independent Cost Estimates. (2.3.3-2.3.4)																							
605		78. Show that the critical path contains schedule contingency. (2.4.3)																							
606		79. Provide schedule risks and identify how schedules are managed to reduce risk. (2.5.1-2.5.7)	I																						
607		80. Provide ICE/Validation Reports consistent with MYWP/10 yr. budget profile. (3.1.1-3.1.2)																							

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606		81. Indicate that historical change requests have been processed through BCC. (4.2.1)																								
609		82. Provide the Critical Path Diagram Schedule (CPDS). (4.1.4)																								
610		D.11 Draft Plan for Determining RTP for Infrastructure & Byproducts Delivery, Appendix E, Infrastructure Feed Tank Transfer (Management Baseline) Checklist																								
611		83. Indicate that adequate reports of schedule, cost, cost variances, project status, DOE requirements, problem resolution, and task tracking by WBS are in place and timely. (1.1-1.1.8;1.1.10-1.1.11)	I																							
612		84. Identify the manager assigned to each cost account. (1.1.9)																								
613		85. Confirm the Organizational Breakdown Structure (OBS) crosswalks to WBS (1.2.1-1.2.3)	I																							
614		86. Confirm the Project and SEMP execution plans are to be developed. (1.2.4;1.2.7)																								
615		87. Confirm D&D is considered during design. (1.2.8)																								
616		88. Provide Acquisition Plan or Procurement Plan which contains vendor prequalification and testing/verification and which provide procurement event-sequence leading to project completion on time. (1.2.9)	I																							
617		89. Show acceptable environmental permits and safety bases are in place. (1.3.1-1.3.2)																								
618		90. Confirm that if USOs exist, strategy for resolving them is in the baselines, and strategy to implement Safety Authorization. Bases to get to hot start are in place. (1.3.3)	I																							

Table 1. Guidance and Requirements to Deliverables Crosswalk.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	W	X	AA	AB	AC
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630	TD (EM-50) will be supported through the STCG Process.		I																						
631	Alternative strategies, risk reduction, core competencies and capsule disposition, closure get lowest budget priority																				I				
632	Specify technology activities which support core competencies and alt. path planning, regardless of funding source, in the integrated technology section of each project description (FY98 MYWP R1321711 (TFA) WBS 1.1.3.1.01.01 series of tasks (Tech. Dev. Needs); R123121 and R123122 (ESW Shipments) WBS 1.1.3.1.01.02.03.03 (Settle/Decant); 1.1.3.1.01.02.03.04 (Dilution/Dissolution) 1.1.3.1.01.02.03.07 (Clean Salt); 1.1.3.1.01.02.03.08 (ESW), 1.1.3.1.01.02.03.09 (TFA).																								
633	Project plan for management, administrative, and system definition of projects WIT plan for support to WDD.											I													
634	Division will assume responsibility for TWRS Waste Storage program beginning in 2002 and Management Systems functions in fiscal year 2006.														I										
635	Baseline schedule for Retrieval will be a subset of the TWRS Project Master Baseline Schedule.		I																	I					
636	Interfaces between elements and external interfaces must be represented in the PBMS (of which WDD baseline schedule is a subset).		I																I	I					
637	Use the Phase 1 and 2 schedules to establish the WDD schedule.		I																	I					
638	Establish logic between retrieval, waste processing, infrastructure, and immobilized tank waste storage and disposal projects.																					I			
639	Ensure logic between privatized and non-privatized activities through added detail.																						I		

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2																											
640		Establish all detailed schedule, consistent with TWRS Level 1 logic.																									
641		Use a code field to facilitate roll-up of detailed schedules to TWRS Level 1 and to Level 0.																									
642		Changes to Levels 1 and 0 resulting from roll-up must be put into MYWP.																									
643		Plan WDD at greatest detail in CY, less in next two (but sufficient for logic-driven cost), less in next 7, and sufficient detail beyond ten to define baseline for entire project.	I																								
644		Add sufficient detail in schedules to define critical path and logical sequences.																									
645		Prepared detailed planning describing work scope, schedule, milestones and budget to complete work scope.	I																								
646		Financial staff must define task package control numbers which allow for proper collection of costs by schedule activity.																									
647		(Projects) identify the impact of funding shortfall on mission.																									
648		PHMC develop sludge washing capability.		I																							
649		Private contractor(s) will perform retrieval for Phase 2 (show in plans, schedule, budget).		I																							
650		Retrieve and blend DST waste to make room for SST waste.		I																							

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2				I													I				I	I						
651	Waste Retrieval Project will plan for the 18 Phase 1 items in paragraph 3.2.1.																											
652	Waste Retrieval Project will assume the 11 items in paragraph 3.2.2.			I													I				I	I						
653	Waste Feed Delivery will define feed process and retrieval systems, integrate the waste feed delivery technical baseline and define Retrieval Project requirements to interface with HTI and other EM-50 funded projects.			I													I				I							
654	WFD prepare Operations and Utilization Plan consistent with feed staging plans and using inventory assessment results.																		I									
655	Complete LAW feed definition, staging plans, process flowsheets.																I				I							
656	Waste Feed Delivery will provide feed delivery support to the Privatization requirements definition and down-select processes.			I																I								
657	Resolve feed/delivery composition issues identified during ICD development.			I																I								
658	Reassess the timing and needs for the procurement of additional mixer pumps for DST's and evaluate the enhanced sludge washing process (Completed). HNF-SD-TWRP-AGA-002 and HNF-SD-TWRP-AGA-003																											
659	Update the RTSD (TPA-45-02B-V) per Operations & Utilization Plan, consistent with consolidation and planned feed rate requirements.	I																	I									
660	Complete design activities and safety studies to support the installation of mixer pumps in AP-102, AP-104 and AN-105.								I	I																		
661	Waste Processing will prepare the 13 plans outline in paragraph 3.3.1.																I											

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662	Waste Processing will make the Phase 1 assumptions outlined in paragraph 3.3.2.1.														I		I										
663	Include M&I and Vendor Interface funding and work scope for Phases 1 and 2 in Process Waste Support PBS.																				I						
664	Show PHMC preparing, reviewing, signing interface control documents (PHMC assisting in integration of PHMC and private contractor functions) in WDD Plans.	I																		I							
665	Show scope and schedule for WIT and PHMC in the WDD plans.	I																			I						
666	Infrastructure will support new or modified physical interfaces with the privatization contractors.			I																I							
667	Infrastructure will ensure all needs identified by the private contractors and agreed to by DOE are satisfied.			I																I							
668	Infrastructure will manage the construction of the 6 elements listed in paragraph 3.3.3.3, and provide and maintain utilities and serves as agreed to with the privatization contractor.			I																I							
669	Decontaminate and decommission all infrastructure that provided services to the PC's and deactivate systems following D&D of the facilities.			I																I							
670	Immobilized Tank Waste Storage and Disposal Project will use the items listed in paragraph 3.4.1 as a basis for planning.																										
671	The Storage and Disposal project will ensure the requirements in paragraph 3.4.2 are met.								I	I																	
672	The storage and disposal project is responsible for the planning assumptions outlined in paragraph 3.4.3 for ILAW, IHLW and Cesium and Strontium Capsules.					I	I																				

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2			ILAW Storage/Disposal will continue waste form data collection and determine the long-term properties of the waste form.				I																				
673			IHLW Storage will update the statement of work to prepare conceptual design for IHLW storage facilities and issue for review a conceptual design and preliminary safety evaluation.					I			I							I	I								
674			Cesium and Strontium Capsules project will update the Alternative Generation Analysis and Decision Analysis Report and the Cesium Strontium Capsule Disposition Decision Analysis.										I					I									
675			The Retrieval MYWP will provide top-level, technical logic, technical requirements, and associated interrelationships to define the total Retrieval work scope.																								
676			Retrieval will follow the special MYWP requirements outlined in paragraph 4.2.																I								
677																											

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