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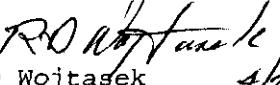
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2	1	Cog. Mgr. C.R. Hutchins	C.R. Hutchins								
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Evaluation Criteria to Deliverables Crosswalk for the Tank Farm Contractor

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

CH2MHILL
Hanford Group, Inc.

Richland, Washington

Contractor for the U.S. Department of Energy
Office of River Protection under Contract DE-AC06-99RL14047

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CH2M HILL Hanford Group, Inc.

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Abstract:

Before the Office of River Protection can authorize proceeding with Phase 1B, the Tank Farm Contractor (TFC) must demonstrate readiness to retrieve and deliver the waste to the privatization contractor and to receive and dispose of the products and by-products returned from treatment. The TFC has organized their plans for providing these support services into the within the River Protection Project.

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Assistant Secretary for Environmental Management

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Document Title:

**Evaluation Criteria to Deliverables Crosswalk
for the Tank Farm Contractor**

Approved by:



R. D. Wojtasek, Project Manager
Readiness to Proceed
CH2M HILL Hanford Group, Inc.

4/22/00
Date

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GUIDANCE AND REQUIREMENTS TO DELIVERABLES CROSSWALK

Table 1 – CRAD Requirements to CHG Deliverables Crosswalk

Table 2 – DOE O 425.1, Minimum Core Requirements to CHG Deliverables Crosswalk

Table 3 – Privatization Contractor Interface Control Documents to CHG Deliverables Crosswalk

Table 4 – External Independent Review Group Line of Inquiry to CHG Deliverables Crosswalk

LIST OF TERMS

BNFL	BNFL Inc. (Privatization Contractor)
CHG	CH2M HILL Hanford Group, Inc.
CRAD	criteria review assessment document
DOE	U.S. Department of Energy
EIR	External Independent Review (Group)
ICD	interface control document
IHLW	immobilized high-level waste
ILAW	immobilized low-activity waste
IPT	Integrated Product/Process Team
LCAM	life-cycle asset management
LOI	line of inquiry
MOA	Memoranda of Agreement
MP	management plan
ORP	Office of River Protection
POL	policy
PRO	procedure
RPP	River Protection Project
RTP	Readiness to Proceed
TBR	Technical Basis Requirements
TFC	Tank Farm Contractor

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EVALUATION CRITERIA TO DELIVERABLES CROSSWALK FOR THE TANK FARM CONTRACTOR

1.0 PURPOSE

The purpose of this document is to provide assurance, by use of a crosswalk to *CH2M HILL Hanford Group, Inc.* (CHG) documentation, that CHG planning and execution documents for the Tank Farm Contractor (TFC) portion of the River Protection Project (RPP) fully and satisfactorily address each of the review criteria that have been proposed by the U.S. Department of Energy (DOE), Office of River Protection (ORP) and the DOE External Independent Review (EIR) Group. In addition, this document provides crosswalks to CHG documents to demonstrate that appropriate planning is in place to meet the requirements of the Privatization Contractor at the interface and to satisfy the minimum core requirements of the DOE O 425.1, *Life Cycle Asset Management* (LCAM).

2.0 REQUIREMENTS CROSSWALKS

2.1 CROSSWALK DEVELOPMENT

Fiscal Year 2000 Performance Incentive No. ORP4.5.1, Revision No. 1, dated February 9, 2000, to the *CH2M HILL Hanford Group, Inc.*, Contract No. DE-AC06-99RL14047 (ORP 2000), requires that CHG submit a memorandum by April 24, 2000, declaring Readiness to Proceed (RTP) with Phase 1 of the RPP and states that the Contractor's RTP will be assessed for deficiencies using, among other things, the criteria review assessment documents (CRADs) developed by ORP. This document provides several crosswalks to show the trail of documentation that demonstrates compliance with the CRAD evaluation criteria used by ORP and the lines of inquiry (LOI) used by the EIR Group to assess CHG's RTP.

Beginning with DOE O 430.1 (LCAM), the ORP has developed a series of CRADs that tailor the LCAM requirements to the RPP mission for use in conducting the RTP evaluation. The DOE O 430.1 addresses the preconceptual-through-turnover phases of a project life cycle. The DOE O 425.1, *Startup and Restart of Nuclear Facilities*, and the 20 associated minimum core requirements for startup and restart address the operations and maintenance phase of a project life cycle. Table 1 identifies the CHG documentation that demonstrates compliance with the CRAD expectations. CRAD criteria, subcriteria, and expectations are shown on the left side of Table 1. The documents that demonstrate satisfaction of each of the CRAD expectations are listed across the top of the table. It should be noted that many of the documents listed existed before this RTP effort and were not created or modified for RTP. Some of the documents listed are generic representations of the documents used to execute the TFC responsibilities. Those documents are defined as follows:

- Level 0 Logics – The highest level logic diagram used to illustrate the sequence of major activities in the RPP.
- Level 1 Logics – The second-level logic diagram used to illustrate the sequence of activities required to deliver each batch of feed to BNFL Inc. (BNFL).

- MOAs – Memoranda of Agreement (MOA) used to define the services that will be provided to CHG by outside contractors such as Fluor Hanford, Inc.
- TBRs – Technical Basis Requirements (TBR) used to describe the work scope, resources, and schedule requirements for a defined unit of work scope.
- ICDs - Interface Control Documents (ICDs) used to define the interface requirements between BNFL and CHG.
- IPTs – Integrated Product/Process Teams (IPT) used by ORP to identify and resolve interface issues between BNFL and CHG.
- HNF-PROs, POLs, MPs, and RPP-PROs – The Hanford Site or RPP procedures (PROs), policies (POLs), and management plans (MPs).
- Tri-Party Agreement – The agreement between the DOE, the U.S. Environmental Protection Agency, and the State of Washington on the timing and extent of cleanup of the Hanford Site (*Hanford Federal Facility Agreement and Consent Order* [Ecology et al. 1996]).
- Project Execution/Management Plans – The project-specific versions of the project execution plans or project management plans.
- Project Systems Engineering Documents – Systems engineering documents used at the project level.

An example table is provided to illustrate the use of the tables in this crosswalk.

CRAD Number	CRAD Expectation	Configuration Management Plan	Programmatic Baseline Summary	Level 0 Logics	TBRs
4.1.1.2	CHG has a system to ensure that changes to the master schedule are passed down to and integrated with the intermediate schedule and similarly to the detail schedules.	X			X
4.1.2.1	CHG has updated the schedules to identify the constraints and decision points for work accomplishment, to provide critical path visibility, and to depict progress against the schedule baseline.		X	X	
4.1.3.1	The schedule activities are logically driven to determine the critical path.		X	X	X

Example Table

The table is used as follows:

- To identify the CRADs that are addressed by each document, look vertically down the columns for the X's. For example, this table shows that the Programmatic Baseline Summary addresses some aspect of CRADs 4.1.2.1 and 4.1.3.1, and the TBRs address some aspects of CRADs 4.1.1.2 and 4.1.3.1.
- To identify the documents that, taken together, satisfy any individual CRAD, look horizontally across the line with the CRAD in it. For example, this table shows that CRAD 4.1.1.2 is satisfied by the Configuration Management Plan and the TBRs, and that CRAD 4.1.3.1 is satisfied by the Programmatic Baseline Summary, the Level 0 Logics, and the TBRs. Many of the documents identified may answer only a small part of the CRAD or provide reference to the document that addresses the subject in more detail. It should be kept in mind that this illustration is only a sample of the crosswalk and does not provide complete answers for these CRADs.

In those cases where individual documents that demonstrate compliance are not listed across the top of the table, the documents are listed in the additional documents column on the right. Note that, although some of the CRAD expectations seem to be written to apply only to ORP, CHG recognizes that the expectation also could apply to CHG. Therefore, Table 1 identifies the CHG documents that demonstrate compliance with those expectations. Table 2 identifies those documents that demonstrate compliance with the minimum core requirements of DOE O 425.1.

In addition to the core requirements in the LCAM and DOE O 425.1, a series of ICDs between CHG and BNFL identify the actions that CHG must take to support the Privatization Contractor facility development and operation. Table 3 provides a crosswalk between the ICD requirements and the CHG documentation that supports compliance with those requirements.

Finally, DOE Headquarters has chartered an EIR Group to conduct a review of the technical, contractual, financial, and regulatory aspects of RPP to evaluate the readiness of the RPP to proceed with the Phase 1, Part B-2 decision. The EIR Group is conducting its on-site review in two parts. The EIR Group's Task A, which has been completed, determined the readiness of RPP to undergo the detailed review in Task B and developed the detailed LOIs and the plan for the detailed review. Task B will comprise the detailed review. The final product will be an independent report to DOE Headquarters on the readiness of the RPP, including BNFL and CHG, to proceed with the Phase 1, Part B-2 decision. Table 4 provides a crosswalk among the LOIs that will be used by the EIR Group in Task B of their review, the CRADs developed by the ORP that address each LOI, and the CHG documents that provide evidence that CHG satisfies each of the LOIs. Note that, although some of the LOIs are written to apply only to ORP or BNFL, CHG recognizes that the LOIs also could apply to CHG. Therefore, Table 4 identifies the CHG documents that demonstrate compliance with those LOIs.

2.2 CROSSWALK VALIDATION

The CRAD and LOI crosswalks, Tables 1 and 4, were developed by consulting with knowledgeable personnel involved in the various disciplines and were reviewed by the CHG RTP management team. A final validation of the resulting crosswalks was performed by having

the authors of each of the documents listed in the crosswalks conduct vertical and horizontal reviews. For the vertical reviews, the document authors checked each location where their documents were cited as evidence of satisfying a CRAD expectation or an LOI to ensure that the documents addressed that item. For the horizontal review, one document author was assigned for each CRAD expectation and each LOI and assigned responsibility for conducting a review among all of the authors of the documents cited in that horizontal line to ensure that the documents fully addressed the expectation or LOI and that the documents were consistent with each other.

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TABLES

GUIDANCE AND REQUIREMENTS TO DELIVERABLES CROSSWALK

Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 1.0 - Project Management (4 Sheets)

CRAD 1.0 - PROJECT MANAGEMENT		Criterion/Specific Consideration	Number	Narrative	DOE Expectation	Implementation Document
1.1	Project Management - Do the appropriate project plans, systems and processes exist to describe, baseline, and guide the project?	1.1.1	1.1.1.1	The work scope planned for execution reflects current mission goals and objectives.		
1.1.1	Is the RPP work scope reflective of current mission requirements? (CRAD Area 2.0 includes detailed considerations related to mission goals and objectives).	1.1.1.2	1.1.1.2	There is process that ensures the work scope reflects current mission goals and objectives.		
1.1.2	Is the project work scope organized in a logical work breakdown structure (WBS)? (CRAD Area 3.0 includes considerations related to technical scope).	1.1.2.1	1.1.2.1	The WBS structure is organized so that cost and schedule performance can be effectively tracked. The WBS structure is described as a summation of sub-division elements.		
1.1.3	Is the project work scope reflected in a project baseline that includes schedule and cost? (CRAD Areas 4.0 and 5.0 include detailed considerations related to schedule and cost, respectively).	1.1.2.2	1.1.2.2	The WBS structure is organized so that cost and schedule performance can be effectively tracked. The RPP baseline includes scope, cost and schedule for all work by contractors and organizations.		
1.2	Performance Management - Is there a performance management system in place to effectively improve performance of the project?	1.1.3.1	1.1.3.1			
1.2.1	Are performance incentives defined so as to create quantifiable benefits to the project in terms of cost, time and risk reduction?	1.2.1.1	1.2.1.1	ORP has established performance incentives for its contractors that reduce project cost, time and risk.		
1.2.2	Are there systems, methods, and organizations to cause improved performance in terms of cost and schedule?	1.2.1.2	1.2.1.2	River Protection Project incentives are structured to support and benefit from the PHMIC incentives.		
1.3	Are staffing requirements for the ORP been defined and filled with skilled and experienced people?	1.2.2.1	1.2.2.1	The ORP contract have an incentive to reduce costs and improve project performance.		
1.3.1		1.2.2.2	1.2.2.2	ORP can capture improvements by changes to its planned schedule, cost, and scope.		
1.3.1.1		1.3.1.1	1.3.1.1	Present staff is sufficient to begin Phase 1B-2.		
1.3.1.2		1.3.1.2	1.3.1.2	The ORP staff is organized to manage the project.		
1.3.1.3		1.3.1.3	1.3.1.3	ORP can change its staff mix and skill as the needs of the project change.		
1.3.1.4		1.3.1.4	1.3.1.4	Key positions (i.e., RPP Project Manager, Deputy Project Manager, Deputy Manager Technical, Manager Operations, Manager Systems Acquisition, ES&Q Manager, Project Integration Manager) have been defined and filled by qualified staff.		
1.4	Change Control-Has the Office of River Protection established the change control process necessary to successfully manage changes to the River Protection Project baseline?					

Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 1.0 - Project Management (4 Sheets)

DOE Expectation		Implementation Document	
CRAD 1.0 - PROJECT MANAGEMENT	Criterion/Specific Consideration	Number	Narrative
	1.4.1 Is there a well-defined process for managing changes to the project baseline – does the process address the review, evaluation of impacts, approval, integration, and dispositioning of changes?	1.4.1.1	A well-defined process for managing changes to the project baseline has been established and the process includes the review, evaluation of impacts, approval, integration, and dispositioning of changes.
	1.4.2 Does the process address scope, schedule, and cost changes to the Project baseline?	1.4.2.1	The change control process addresses scope, schedule, and cost changes to the Project's baseline.
	1.4.3 Does the process address performing contract changes to the Project baseline? (i.e., BNFL, CHG) contract changes to the Project baseline.	1.4.3.1	The process addresses performing contractor (i.e., BNFL, CHG) contract changes to the Project baseline.
	1.4.4 Does the process integrate scope, schedule, cost and contract changes?	1.4.4.1	The process integrates scope, schedule, cost and contract changes.
	1.4.5 Has a Change Control Plan or Procedure documenting the Project's change control process been established for the River Protection Project?	1.4.5.1	A Change Control Plan or Procedure documenting the Project's change control process has been established for the River Protection Project.
	1.4.6 Have change control approval thresholds and authorities been established?	1.4.6.1	Change control approval thresholds and authorities have been established.
	1.4.7 Have key Project staff been trained on the Change Control Plan or Procedure?	1.4.7.1	Key Project staff have been trained on the Change Control Plan or Procedure.
	1.4.8 Is the change control process configured in a way that promotes timely processing of changes to the Project baseline?	1.4.8.1	The change process is designed to promote timely processing of changes to the Project timely changes to the Project baseline.
	1.4.9 Have metrics been established for the monitoring and improvement of the change process?	1.4.9.1	Metrics for monitoring of the performance of the change process have been established and are being used to improve performance.
	1.5 Project Interfaces • Has the Office of River Protection established the interfaces needed to successfully accomplish Phase 1 B2 of the River Protection Project?	1.5.1	Project Interfaces • Has the Office of River Protection established the interfaces needed to successfully accomplish Phase 1 B2 of the River Protection Project?
	1.5.1 Have interface requirements been defined and interface commitments (i.e., ICDs, IMCs) been executed between the parties?	1.5.1.1	The following interfaces have been identified – stakeholder, regulator, DOE-RL, DOE-HQ, DOE-ORNL.
	1.5.1.2 For each interface, interface requirements and commitments of the parties have been defined and documented in the interface agreement.	1.5.1.2	For each interface, interface requirements and commitments of the parties have been defined and documented in the interface agreement.
	1.5.2 Have interface points of contact and roles/responsibilities been established?	1.5.2.1	For each interface, interface points of contact have been established and documented in the interface agreement.
	1.5.3 Have interfacing mechanisms/vehicles (e.g., IPTs) been established?	1.5.3.1	For each interface, an interface agreement containing all necessary elements has been prepared and signed by all the parties.
	1.5.4 Have the interface plans/schedules been developed, integrated into the project schedule, and implemented (or under implementation)?	1.5.4.1	For each interface, the mechanism(s)/vehicle(s) for interfacing are working.
		1.5.4.2	For each interface, the plan/schedule of the interface requirements has been developed, documented in the interface agreement and incorporated into the project schedule.
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Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 1.0 - Project Management (4 Sheets)

CRAD 1.0 - PROJECT MANAGEMENT		DOE Expectation		Implementation Document	
Criterion Number	Criterion/Specific Consideration	Number	Narrative	Additional Documents	
1.6	Project Management Plan: Does CRP have a plan to describe, baseline, and guide the RPP?	1.6.1	The plan is for the entire life cycle of the project mission, with an increased level of planning detail in the near term.		
	Does the CRP have a plan for managing the life-cycle mission and all components of the River Protection Project? (Interface with 2.0 and 5.0)	1.6.1.1	The plan is inclusive of the work by all project participants, including contractors and agencies. The plan includes an integrated baseline for all project scope, schedule and cost for all the required work.	x	
		1.6.1.2	The project baseline schedule identifies significant logic ties and a critical path.	x	
		1.6.2.1	The baseline schedule identifies critical milestones and decision points important to the success of the project.	x	
		1.6.2.2	A project work breakdown structure (WBS) is indicated, and is the basis for the schedule and performance reporting.	x	
		1.6.2.3	A project performance measurement/management system is described in the plan.	x	
		1.6.2.4	A project budget requests plans are supported by the project cost baseline.	x	
		1.6.2.5	A project performance measurement/management system is described in the plan.	x	
		1.6.2.6	Project budget requests plans are supported by the project cost baseline.	x	
		1.6.3.1	The plan includes a strategy for obtaining necessary funds.	x	
	Does the plan address a strategy for obtaining funding, executing procurements, obtaining required permits, and managing quality, safety, risk and communications? (Interface with CRADs 6.0, 7.0, 8.0, and 9.0)	1.6.3			
		1.6.4.1	The plan includes a procurement strategy.	x	
		1.6.4.2	A permitting strategy is identified in the plan.	x	
		1.6.4.3	The process for managing quality, safety, risk, and communications is addressed in the plan.	x	
	Does the plan describe how the project will be managed and organized and assign responsibilities for its key functions? (detailed in CRAD 1.3)	1.6.4	The plan describes the project management approach.	x	
		1.6.4.4	The plan describes the organization and the critical roles and assigns responsibilities.	x	
		1.6.4.5	Project internal and external interfaces are identified in the plan.	x	
		1.6.5.1	An interface management process is described in the plan.	x	
	Does the plan describe how it will manage its internal and external interfaces? (detailed in CRAD 1.5)	1.6.5			
	Contract Management	1.7	Has the Office of River Protection established the contract management plans, key personnel, and key procedures necessary for successfully managing the BNFL and CHG contracts under the River Protection Project?		
	Has key contract management procedures been developed (e.g. procedures for monitoring and reporting contract performance, procedures for DOE and contractor-driven contract changes and equitable adjustments, procedures for dispute resolutions, and procedures for tracking, reviewing, and approving contract deliverables, etc.)?	1.7.1	Contract Management Plans for the CHG and BNFL contracts have been developed.		
		1.7.2	Key contract management procedures have been developed.		

Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 1.0 - Project Management (4 Sheets)

DOE Expectation		Implementation Document	
CRAD 1.0 - PROJECT MANAGEMENT	Criterion/Specific Consideration	Number	Narrative
	Criterion Number		
	1.7.3	Have key ORP/Ofc contract management personnel been identified for each contract – Contracting Officer (CO), Contracting Officer's Representative (COs), and Contract Specialists (CS)?	1.7.3.1 Key ORP/Ofc contract management personnel have been identified for each contract.
	1.7.4	Do the key personnel have the appropriate knowledge, experience, and qualifications to manage/ administer the contracts?	1.7.4.1 Key personnel have the appropriate knowledge, experience, qualifications to manage the contracts.
	1.7.5	Have key personnel and other staff been trained on the key features of the contracts and the contract management plans and procedures?	1.7.5.1 Key personnel and other staff have been trained on the key features of the contracts and contract management plans and procedures.
	1.7.6	Are mechanisms in place for regular interfacing/communication between ORP and contractor contract management staff?	1.7.6.1 Mechanisms are in place for regular interfacing/communication between ORP and contractor contract management staff.
	1.7.7	Are mechanisms in place for regular interfacing/communication between ORP contracting, technical, business/finance staff?	1.7.7.1 Mechanisms are in place for regular interfacing/communication between ORP contracting, technical, business/finance staff.
	1.7.8	Have contract files been developed and are they co-located with the contracting personnel?	1.7.8.1 Contract files have been developed and are co-located with contracting personnel.
	1.8	Requirements Management – Is ORP ready to adequately manage the requirements of the River Protection Project (RPP)?	
	1.8.1	Are project requirements defined and communicated/documents?	1.8.1.1 Project Requirements are defined and documented.
	1.8.2	Is there a well-defined process for managing the body of requirements inherent to this complex project, including programmatic, technical and regulatory requirements?	1.8.2.1 A well-defined process for managing the requirements is in place that covers the variety of requirements for the RPP.
	1.8.3	Are project requirements under a configuration management and change control plan? Is there a document hierarchy?	1.8.3.1 Methods are in place for integrating requirements across the design, construction, and operational aspects of the RPP.
	1.8.4	Are project requirements linked/traceable to the performing Contractors (i.e., BNFL and CHG)?	1.8.4.1 Project requirements are disseminated to the respective performing Contractors within their respective Contracts.
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Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 2.0 - Project Mission (1 Sheet)

DOE Expectation		Implementation Document	
Criterion Number	Criterion/Goal/Program Mission/Specific Consideration	Number	Narrative
2.0	Mission/Goal/Program - Does the project continue to support and remain consistent with DOE Strategic Plan Goals and Objectives (CD-2)?		
2.1	Does the River Protection Project continue to support the DOE Strategic Plan?		
		2.1.1	The goals and objectives of the River Protection Project are clearly stated.
		2.1.2	Clear alignment and linkage exist between the River Protection Project goals and objectives and the DOE Strategic Plan.
		2.1.3	Successful accomplishment of the planned River Protection Project will advance the DOE Strategic Plan.
2.2	Program Strategic Plan -- Does the Project remain integrated with goals and objectives established in the Program Strategic Plan (CD-2)?		
		2.2.1	Will new technical information or increased understanding be absorbed, by plan, into the project plan/goals?
		2.2.2	Does the project continue to support the Program Office's Strategic Plan?
		2.2.3	Do the project outcomes align/link to actions/activities identified by the Program Office Plan?
2.3	Identification of Related Agencies - Have identifiable outside requirements and/or constraints that could affect project mission and benefits been evaluated for applicability to the design / execution (CD-2)?		
		2.3.1	Have all related outside organizations been identified?
		2.3.2	Have working relations been established with related outside organizations?
		2.3.3	Has the potential impact of related outside organizations been established?
		2.3.4	Are potential problems with related outside organizations being resolved and documented?
2.4	Site Location - Has the site selection process been completed?		
		2.4.1	Has the selection process been completed for location of the Waste Processing Plant?
CD-09	CD-09		
		2.4.1.1	A specific Waste Processing Plant site has been chosen.
		2.4.1.2	-Documentation exists that demonstrates the correctness of the Waste Processing Plant site selection choice. -The documentation includes consideration of the impacts of construction, operation, and disposal.

Table 1. CRAD Requirement to CHG Deliverables Crosswalk. (23 Sheets)
CRAD 3.0 - Project Work Scope (4 Sheets)

CRAD 3.0 - PROJECT WORK SCOPE		Criteria/Specific Consideration		Number	Narrative	DOE Expectation	
Criteria/Number	Technical Work Scope	Criteria/Number	Technical Work Scope				
3.0.0	System Engineering and Process Verification – Is the contractor using a system engineering approach for design of the feed delivery system? Is this approach effective?	3.1.1.1	Has CHG provided a systems engineered technical baseline including functional and operational requirements compatible with ORP's technical baseline?	3.1.1.1	CHG has provided a technical baseline including functional and operational requirements based on ORP guidance and direction.		
	Has CHG demonstrated the technical expertise to successfully execute the feed delivery scheme?	3.1.2.1	Has CHG identified activities, including science and technology activities that are necessary to support design permitting, construction and operation of feed delivery systems?	3.1.2.1	CHG has demonstrated the technical expertise as evidenced by Program planning documentation, technical reports and design documentation and operations history.		
		3.1.3.1	Has CHG planned a viable feed delivery system consistent with ORP technical guidance and requirements	3.1.3.1.1	Known technical risks have been identified and mitigation plans appropriately developed for the waste feed delivery program.		
		3.1.3.2		3.1.3.2	CHG has defined technology insertion points in the MYWP Test and evaluation requirements are identified.		
		3.1.3.3		3.1.3.3	CHG has planned a feed delivery system that includes necessary and sufficient contingencies, redundancies, and preparedness for credible failures and upset conditions in time for initial feed delivery of each envelope.		
		3.2	Conceptual Design – For the item construction projects, has the conceptual design confirmed and developed the preferred alternative and has established the work scope and planning documentation that are necessary to proceed into the execution phase?				
		3.3.2.1	Has CHG generated the information necessary to proceed with definitive design?	3.2.1.1	CHG has completed the Conceptual Design including construction planning requirements and has defined the project work scope.		
		3.3.2.2	Has CHG identified long lead items requiring early procurement and established plans to acquire those materials?	3.2.2.1	CHG had identified the procurement items requiring special lead time (or other special procurement issues) and has established the mechanism to acquire those materials.		
		3.3.2.3	Has CHG developed a procurement and subcontracting strategy and plan consistent with the baseline schedule?	3.2.3.1	CHG has developed a procurement and subcontracted services strategy.		
		3.3.2.4	Has CHG established plans for mobilization of the construction work force?	3.2.4.1	CHG has established line phase requirements for construction labor and assessed the availability of required labor sources.		
		3.3.2.5	Has CHG completed construction reviews of the design that demonstrate constructability of the design?	3.2.5.1	CHG has completed and documented constructability reviews of the facility design.		

Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 3.0 - Project Work Scope (4 Sheets)

CRAD 3.0 - PROJECT WORK SCOPE		DOE Expectation		Implementation Document	
Criterion	Criterion/Specific Consideration	Number	Narrative		
3.2.6	Has CHG provided a conceptual feed delivery design that is feasible enough to respond to changing feed needs (i.e. changes in tank sequence and envelopes)?	3.2.6.1	The conceptual design for the feed delivery system is flexible enough to provide feed from 4 envelopes from tanks within the expected minimum order quantity within 30 days of notification after May 2006.		
3.3	Detail Design - Has Detailed Design produced the final technical products that are required to support the physical construction?				
3.3.1	Have construction packages and bid documents been prepared and coordinated with all parties affected by the project?	3.3.1.1	The construction packages which include certified drawings and procurement specifications, and bid documents complies with requirements of contracts (excluding CHG and BNFL contracts)		
3.3.2	Are the construction packages prepared to include an adequate work scope for execution?	3.3.2.1	In addition to the physical and functional description of the facilities, the scope of work also includes a description of the services that are to be provided.		
3.3.3	Does the construction packages demonstrate flexibility, robustness and efficiency in the design concepts chosen?	3.3.3.1	Consistent alternative evaluations and decision making structure is maintained through the life cycle of the project.		
3.3.4	Will the construction packages support procurement and schedule constraints?	3.3.4.1	The level of construction packages development is sufficient to support procurement in support of construction.		
3.3.5	Will the construction packages support environmental permitting requirements?	3.3.5.1	The construction packages are compliant with environmental regulations and permitting conditions		
3.3.6	Has CHG defined construction work packages, which will allow timely initiation of construction?	3.3.6.1	CHG is on schedule to complete all necessary documentation and permits to initiate site preparation and construction.		
3.4	Value Engineering - Is the contractor performing value engineering studies to reduce cost and improve reliability of the feed delivery system? Are these studies effective?				

Table 1. CRAD Requirement to CHG Deliverables Crosswalk. (23 Sheets)
CRAD 3.0 - Project Work Scope (4 Sheets)

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Table 1. CRAD Requirement to CHG Deliverables Crosswalk. (23 Sheets)
CRAD 4.0 - Project Schedule (5 Sheets)

DOE Expectation			
Implementation Document			
CRAD 4.0 - PROJECT SCHEDULE			
Criterion/Specific Consideration	Number	Narrative	
4.0	Schedule		
4.1	Master Schedule – Has the master schedule been updated to define the work sequence and significant task interdependences, including critical path and contingencies for the construction phase?	<p>4.1.1.1 CHG has updated the master, intermediate and detailed schedules to depict the tasks needed to meet the construction and follow-on milestone dates?</p> <p>4.1.1.2 CHG has updated the schedules to identify the constraints and decision points for work accomplishment, to provide critical path visibility and to depict progress against the schedule baseline.</p>	<p>4.1.1.1 CHG has updated the master, intermediate and detailed schedules to depict the tasks needed to meet the construction and follow-on milestone dates.</p> <p>4.1.1.2 CHG has a system to ensure that changes to the master schedule are passed down to and integrated with the intermediate schedule and similarly to the detail schedules.</p>
4.1.2	Has CHG updated the schedules to identify the constraints and decision points for work accomplishment, to provide critical path visibility and to depict progress against the schedule baseline?	<p>4.1.2.1 CHG has updated the schedules to identify the constraints and decision points for work accomplishment, to provide critical path visibility and to depict progress against the schedule baseline.</p>	<p>4.1.2.1 CHG has updated the schedules to identify the constraints and decision points for work accomplishment, to provide critical path visibility and to depict progress against the schedule baseline.</p>
4.1.3	Are the schedule activities logically tied to allow the calculation of a critical path and to determine appropriate strategies to manage the schedule?	<p>4.1.3.1 The schedule activities are logically driven to determine the critical path</p>	<p>4.1.3.1 The schedule activities are logically driven to determine the critical path</p>
4.1.4	Are the activities and logic identified for interfaces between CHG and PHMC subcontractors?	<p>4.1.4.1 Interfaces between CHG and PHMC subcontractors are clearly identified.</p> <p>4.1.4.2 PHMC's subcontractors and allocated appropriate resources to support the agreed to milestones with CHG.</p>	<p>4.1.4.1 Interfaces between CHG and PHMC subcontractors are clearly identified.</p> <p>4.1.4.2 PHMC's subcontractors and allocated appropriate resources to support the agreed to milestones with CHG.</p>
4.1.5	Do schedules contain appropriate contingency?	<p>4.1.5.1 Schedules are prepared at 80% confidence</p>	<p>4.1.5.1 Schedules are prepared at 80% confidence</p>
4.2	Milestones – Key project milestones for completing the design and construction phases have been defined and execution milestones have been scheduled.	<p>4.2.1 Has CHG developed a proposed baseline schedule against which actual performance of major activities and milestones for the execution phase and subsequent project phases can be compared and from which forecast data can be generated?</p>	<p>4.2.1 CHG has developed a proposed baseline schedule against which actual performance of major activities and milestones for the execution phase and subsequent project phases can be compared and from which forecast data can be generated.</p>
4.3	Performance Trends in Schedule – Has CHG demonstrated the capability to establish and control their schedule?	<p>4.3.1 Has a Master, Intermediate, and Detailed Schedule baseline been established with a "rolling wave concept" where less schedule detail is required for our year scope?</p> <p>4.3.2 Has CHG incorporated ORP guidance into schedule and is this traceable to NYWP?</p>	<p>4.3.1 Schedules have been established with a "rolling wave concept" with less schedule detail required for our year scope.</p> <p>4.3.2 ORP guidance are traceable to the NYWP schedule.</p>
4.4	Management of Schedule Baseline – Has CHG developed and demonstrated a schedule control process to assure timely completion of the project?	<p>4.4.1 Is the schedule control process clearly defined?</p> <p>4.4.1.1 Changes to the schedules are processed through change control plans, in line with approved quality assurance requirements.</p>	<p>4.4.1 Is the schedule control process clearly defined?</p> <p>4.4.1.1 Changes to the schedules are processed through change control plans, in line with approved quality assurance requirements.</p>
Vol VIII, Sec 1.1			
Vol VIII, Sec 1.1			
RPP-PRO-522, NYWP RPP-PRO-519, Schedule Development			

Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 4.0 - Project Schedule (5 Sheets)

CRAD 4.0 - PROJECT SCHEDULE		DOE Expectation		Implementation Document	
Criterion	Criterion/Specific Consideration	Number	Narrative		
4.4.2	Is the implemented schedule control process efficient and effective?	4.4.2.1	Project performance is being reported regularly and corrective measures identified in accordance with approved CHG project control procedures and tracked to closure.		
4.4.3	Have critical paths been determined?	4.4.3.1	Critical paths for each individual project have been determined and are used to focus management attention and resources on specific activities to maintain each project's schedule.		
		4.4.3.2	A critical path for the entire CHG work activity has been determined and is used to focus management attention and resources on specific work activities to maintain the overall project schedule.		
		4.4.3.3	CHG has the capability to estimate the impact of compressed time frames, concurrent activities, potential conflicts and other time critical schedule elements.		
4.5	Achievability of Schedule - Is there a high likelihood that the CHG schedule can be met?	4.5.1	Are the schedule activities tied to associated cost and scope?	4.5.1.1	A well-defined and logical WBS ties activities in the schedule.
		4.5.2	Are the activities and logic identified for interfaces with PHMC sub-contractors?	4.5.2.1	Interfaces between CHG and external organizations are clearly identified and all external organizations agree with the associated activities, resource loading, and logic.
		4.5.2.2	Memorandums of Understanding, contracts, or similar agreements are in place between CHG and PHMC sub-contractor organizations for the appropriate interfaces.		
		4.5.3	Is the quantity of resources assigned to the scheduled activities reasonable for the activity?	4.5.3.1	Resource loading is comparable to that used by other contractors for projects of similar size and technical complexity.
		4.5.4	Are risks associated with meeting the schedule managed per the CHG Risk Management Procedure?	4.5.4.1	CHG has a risk management list for each project where schedule risks are maintained and mitigating actions are identified and implemented.
		4.5.4.2	CHG has a critical risk management list for the entire CHG project where critical schedule risks are maintained and mitigating actions are identified and implemented.		
4.6	Design/Construction Planning - Is the CHG schedule for construction of the project effective in meeting the schedule requirements with minimum risk of cost/schedule overrun and ensure project success?	4.6.1	Has CHG generated the information necessary to proceed with detailed design and initiate construction?	4.6.1.1	CHG had completed all construction planning requirements defined in PT-2000 WTP.
		4.6.2	Has CHG identified "long-lead" items requiring early procurement and established plans to acquire those materials (i.g., exotic materials, uniquely designed and limited supply items)?	4.6.2.1	CHG has identified the long-lead procurement items and has established the procurement mechanism to acquire those materials.
		4.6.3	Has CHG developed a procurement and subcontracting strategy and plan consistent with the baseline schedule?	4.6.3.1	CHG has developed a procurement and subcontracted service strategy and plan to support the baseline construction schedule.
		4.6.4	Has CHG identified labor resource needs and assessed their availability?	4.6.4.1	CHG has estimated time phased requirements for construction labor and assessed the availability of required labor sources.
		4.6.5	Has CHG established plans for mobilization of the construction work force?	4.6.5.1	CHG has established a realistic construction plan and construction mobilization plan.

Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 4.0 - Project Schedule (5 Sheets)

CRAD 4.0 - PROJECT SCHEDULE		DOE Expectation	Implementation Document
Criterion Number	Criterion/Specific Consideration	Number	Narrative
4.6.6	Has CHG completed construction reviews of the design that demonstrate constructability of the design?	4.6.6.1	CHG has completed and documented constructability review of the facility design.
4.6.7	Has CHG defined construction work packages that will allow timely initiation of construction?	4.6.7.1	CHG is on schedule to complete all necessary documentation and permits to initiate site preparation and construction.
		4.6.7.2	CHG has prepared construction work packages for initial items requiring procurement.
4.6.8	Has CHG provided a sufficiently detailed construction plan to assess the feasibility of the overall construction schedule?	4.6.8.1	The construction schedule is integrated with procurement, design, and permitting.
4.7	Start-up - Are start-up plans sufficient to support construction turnover to start-up, start-up to operations, staff training, and permitting of the CHG project that will achieve proposed B-2 schedule requirements?	4.7.1	CHG successfully defined the interfaces, linkages, and sequence of activities necessary to transition between construction turnover and start-up and between start-up and turnover to operations?
		4.7.1.1	CHG has established a start-up schedule that integrates construction turnover/interface start-up, start-up to operations, staff training, preliminary waste products qualification, and completes necessary permitting activities (e.g. RAWP).
		4.7.1.2	CHG has provided an acceptable start-up schedule to DOE.
		4.7.1.3	CHG effectively planned for the transition between construction, facility acceptance, and operational acceptance of the facility, e.g. it is clear when the operations manager assumes responsibility for the facility operations.
		4.7.1.4	CHG had developed a schedule and plan to perform the Operational Readiness Review activities prior to radioactive operations. Level of detail in plans reflect maturity of project development.
4.7.2	Has CHG successfully defined and addressed the interfaces and interface requirements, linkages, and sequence of activities necessary to integrate PHMC and DOE operational and regulatory activities, e.g., TIA milestones, ICOb, etc.?	4.7.2.1	CHG has established a start-up schedule that integrates BNFL waste feed staging and product acceptance activities and completes final permitting and compliance actions.
4.8	Operations and Maintenance - Is planning and maintenance sufficient to support operations and maintenance to support operations and maintenance schedule?	4.8.1	Has CHG defined supporting operations and maintenance activities in the schedule?
		4.8.1.1	Key operations and maintenance activities have been defined and scheduled, e.g., staffing plan, ongoing staff training and qualification, routine and non-routine, i.e., forced, outage frequencies, preventive maintenance plan, consumable materials usage plan and spare parts equipment requirements plan.
4.9	Interface Definition (ICOb) - Are the DOE/PHMC/BNFL interfaces sufficiently defined to determine the needed project schedule?	4.9.1	Does the CHG project schedule contain the necessary CHG planning, design, construction, operations, and deactivation activities that support interfacing BNFL activities?
		4.9.1.1	There is a process to identify and agree upon interface points.
		4.9.1.2	Identified interfaces and in the CHG schedule.
		4.9.1.3	All interface milestones are logically driven, i.e., interface milestones have either predecessor or a successor.
		4.9.1.4	Details include information necessary to determine a schedule for the planning, design, construction, and operation of the interfaces.
		4.9.1.5	The BNFL/DOE approved ICOb reflect consensus among the appropriate parties.

Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 4.0 - Project Schedule (5 Sheets)

CRAD 4.0 - PROJECT SCHEDULE		DOE Expectation		Implementation Document	
Criterion Number	Criterion/Specific Consideration	Number	Narrative	Additional Documents	
4.10	RPP Schedule – Has DOE integrated the RPP schedules which include the activities of CHG, BNFL, DOE ORP, DOE RL and other RPP Participants?	4.10.1	Consistent scheduling system standards, specifications and guidance are used in the preparation and maintenance of the RPP schedule.	RPP-PRO-519, Schedule Development Training Records	
	Integrated Planning Process – Is there a process in place for integrating the activities of CHG, BNFL, DOE ORP, DOE RL and other RPP participants?	4.10.1.1	RPP participants are aware of their roles in schedule preparation and update, and a communication system between RPP Participants has been established.		
		4.10.1.2	RPP participants are aware of their roles in schedule preparation and update, and a communication system between RPP Participants has been established.		
		4.10.1.3	Requirements and processes are in place for regular and systematic schedule updates, schedule analysis, and monitoring of actual duration and milestones.		
		4.10.1.4	DOE Procedure and documents for preparing RPP schedule are in place.		
	Schedule Basis – Are schedule bases such as planning guidance, scope of work, work breakdown structure used in the preparation of the RPP Schedule documented?	4.10.2	All schedule bases such as planning guidance, scope of work, work breakdown structure are documented and traceable to the development of the RPP schedule.		
		4.10.2.1			
		4.10.2.2	There is traceability between the RPP schedule and its Integrated Priority List.		
	Schedule Development – Is technical logic complete at all levels, the program makes sense logically, and each activity is tied to and necessary to support a contractual requirement?	4.10.3	The RPP schedule was developed based on the RPP Work Breakdown Structure.		
		4.10.3.1			
		4.10.3.2	The RPP schedule includes milestones, inter-project interfaces (logic ties) and all updates obtained from the activities of ORP, CHG, BNFL and other RPP participants.		
		4.10.3.3	Technical logic is complete at all levels, and overall logic roll-up property to higher-level logic. The critical path is identified and has been calculated.		
		4.10.4	Critical Path Schedule – Is the RPP critical path identified?		
		4.10.4.1	The rationale used for identifying the critical path is documented.		
		4.10.4.2	The RPP schedules contain all Tri-Party Agreement milestones applicable to the vitrification of Hanford tank waste.		
		4.10.5	Identification of Milestones – Have baseline and integrated milestones been developed, against which actual performance can be measured for all major activities and phases of the RPP?		
		4.10.5.1			
		4.10.5.2	The RPP schedules contain all DNFSB milestones applicable to the vitrification of Hanford tank waste.		
		4.10.5.3	The RPP schedules contain milestones to control, monitor and measure performance of critical activities at various phase of the project.		
	Milestone Traceability – Is a method, procedure or system established to allow traceability of milestones to the next upper or lower level schedule?	4.10.6	Milestones traceability is provided by using a unique milestone identification number 4.10.6.2. Milestones are identified by Owner who has responsibility for control and completion of the milestones.		
		4.10.6.1	Milestones are identified by Owner who has responsibility for control and completion of the milestones.		
		4.10.6.2	Milestone Description documents, which identifies the information and criteria for completion, is provided for baseline milestones.		
		4.10.7	Milestone Completion – Is each milestone provided with a clear definition of completion?		
		4.10.7.1	Milestone Description documents, which identifies the information and criteria for completion, is provided for baseline milestones.		
		4.10.8	Assumption Identification – Are key assumptions used in the preparation of the RPP schedule identified and documented?		
		4.10.8.1	Assumption Identification – Are key assumptions used in the preparation of the RPP schedule identified and documented?		

Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 4.0 - Project Schedule (5 Sheets)

DOE Expectation		Implementation Document	
Criterion Number	Criterion/Specific Consideration	Number	Narrative
		4.10.8.2	The criteria for designating an enabling assumption is well documented.
		4.10.8.3	The basis for the assumptions, document source, are identified.
4.10.9	Schedule Risk – Are appropriate activities and resources identified for mitigating schedule risk?	4.10.9.1	Schedule risk has been identified and is being managed.
		4.10.9.2	Mitigating actions have been developed and responsible parties identified for each risk.
		4.10.9.3	Actions are in place to mitigate the impact on schedule for the need for a large contingent of skilled labor resources by both CH2M Hill and BNFL, especially during the peak periods of construction.
4.10.10	Reporting – Is a reporting system in place?	4.10.10	Management systems in place to track and report schedule performance and take appropriate corrective actions.
4.10.11	Change Control Process – Is a change control process in place, which defines the requirements for the identification, planning, execution, documentation and approval of changes to the RPP schedules?	4.10.11.1	A procedure is in place, which defines change control requirements for the RPP schedules.
		4.10.11.2	Changes to the RPP schedules are only implemented after change documents have been reviewed and approved by the proper approval authority.
		4.10.11.3	Schedules are not re-baselined to remove a negative schedule variance (behind schedule).

Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 5.0 - Project Cost (2 Sheets)

Implementation Document			
DOE Expectation			
Criterion Number	Criterion/Specific Consideration	Number	Narrative
5.0	Cost Validation – Has the Life Cycle Cost (LCC) been reviewed and reconciled?	5.1.1	ICs have been conducted on the CHG portion of the LCC.
5.1	Have ICs been conducted on the LCC portion of the LCC?	5.1.1.1	ICs have been conducted on the CHG portion of the LCC.
5.1.2	Have differences between the CHG ICs and the LCC been reconciled?	5.1.2.1	Differences between the CHG ICs and the LCC have been reconciled.
5.1.3	Has ORP completed the review of BNFL's estimate in accordance with the Decision Criteria?	5.1.3.1	ORP has completed the review of BNFL's estimate in accordance with the Decision Criteria.
5.2	Time Phased Cost Plans – Has a time phased cost plan been developed consistent with the most recent scope and schedule and in compliance with contractual requirements.	5.2.1	Has the LCC for the entire RPP been defined?
5.2.1	Has the LCC for the entire RPP been defined?	5.2.1.1	The LCC for the entire RPP has been defined.
5.2.2	Were the approved assumptions used in developing the LCC?	5.2.2.1	The approved assumptions were used in the development of the LCC.
5.2.3	Is the LCC based on the most current and approved project scope and schedule?	5.2.3.1	The LCC is based on the most current, approved project scope and schedule.
5.2.4	Is the LCC estimate used as a basis to obtain funding?	5.2.4.1	The LCC is the estimate used to formulate the budget.
5.2.5	Does the LCC include the costs for all the contractors?	5.2.5.1	The LCC includes all costs for all the contractors and DOE related to the RPP.
5.2.6	Does the LCC include incurred costs, estimate to complete, escalation, and contingency appropriate to the project risk?	5.2.6.1	The LCC includes incurred costs, estimate to complete, escalation, and contingency appropriate to the project risk.
5.2.7	Does the LCC allow the comparison of actual versus forecast costs with available funds and obligations?	5.2.7.1	The LCC allows for the comparison of actual versus forecast costs with available funds and obligations.
RPP-SD-WM-SP-012 Operational and Utilization Plan, RPP-Ref, Ref.			
TWS-SRID, HNF-SD-MP-SRID-001 Project Facility Technical Interim Document			
TWS-SRID, HNF-SD-MP-SRID-003 Project System Analysis, HNF-SP-0217 Project System Management Plans			
TWS-SRID, HNF-SD-MP-SRID-005 Mission Summary Diagram, RPP-SP-026			
TWS-SRID, HNF-SD-MP-SRID-007 Project System Design, RPP-SP-028			
TWS-SRID, HNF-SD-MP-SRID-010 Project System Design, RPP-SP-030			
TWS-SRID, HNF-SD-MP-SRID-013 Project System Design, RPP-SP-033			
TWS-SRID, HNF-SD-MP-SRID-016 Project System Design, RPP-SP-036			
TWS-SRID, HNF-SD-MP-SRID-018 Project System Design, RPP-SP-038			
TWS-SRID, HNF-SD-MP-SRID-020 Project System Design, RPP-SP-040			
TWS-SRID, HNF-SD-MP-SRID-022 Project System Design, RPP-SP-042			
TWS-SRID, HNF-SD-MP-SRID-024 Project System Design, RPP-SP-044			
TWS-SRID, HNF-SD-MP-SRID-026 Project System Design, RPP-SP-046			
TWS-SRID, HNF-SD-MP-SRID-028 Project System Design, RPP-SP-048			
TWS-SRID, HNF-SD-MP-SRID-030 Project System Design, RPP-SP-050			
TWS-SRID, HNF-SD-MP-SRID-032 Project System Design, RPP-SP-052			
TWS-SRID, HNF-SD-MP-SRID-034 Project System Design, RPP-SP-054			
TWS-SRID, HNF-SD-MP-SRID-036 Project System Design, RPP-SP-056			
TWS-SRID, HNF-SD-MP-SRID-038 Project System Design, RPP-SP-058			
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TWS-SRID, HNF-SD-MP-SRID-050 Project System Design, RPP-SP-070			
TWS-SRID, HNF-SD-MP-SRID-052 Project System Design, RPP-SP-072			
TWS-SRID, HNF-SD-MP-SRID-054 Project System Design, RPP-SP-074			
TWS-SRID, HNF-SD-MP-SRID-056 Project System Design, RPP-SP-076			
TWS-SRID, HNF-SD-MP-SRID-058 Project System Design, RPP-SP-078			
TWS-SRID, HNF-SD-MP-SRID-060 Project System Design, RPP-SP-080			
TWS-SRID, HNF-SD-MP-SRID-062 Project System Design, RPP-SP-082			
TWS-SRID, HNF-SD-MP-SRID-064 Project System Design, RPP-SP-084			
TWS-SRID, HNF-SD-MP-SRID-066 Project System Design, RPP-SP-086			
TWS-SRID, HNF-SD-MP-SRID-068 Project System Design, RPP-SP-088			
TWS-SRID, HNF-SD-MP-SRID-070 Project System Design, RPP-SP-090			
TWS-SRID, HNF-SD-MP-SRID-072 Project System Design, RPP-SP-092			
TWS-SRID, HNF-SD-MP-SRID-074 Project System Design, RPP-SP-094			
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TWS-SRID, HNF-SD-MP-SRID-082 Project System Design, RPP-SP-102			
TWS-SRID, HNF-SD-MP-SRID-084 Project System Design, RPP-SP-104			
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TWS-SRID, HNF-SD-MP-SRID-096 Project System Design, RPP-SP-116			
TWS-SRID, HNF-SD-MP-SRID-098 Project System Design, RPP-SP-118			
TWS-SRID, HNF-SD-MP-SRID-100 Project System Design, RPP-SP-120			
TWS-SRID, HNF-SD-MP-SRID-102 Project System Design, RPP-SP-122			
TWS-SRID, HNF-SD-MP-SRID-104 Project System Design, RPP-SP-124			
TWS-SRID, HNF-SD-MP-SRID-106 Project System Design, RPP-SP-126			
TWS-SRID, HNF-SD-MP-SRID-108 Project System Design, RPP-SP-128			
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TWS-SRID, HNF-SD-MP-SRID-124 Project System Design, RPP-SP-144			
TWS-SRID, HNF-SD-MP-SRID-126 Project System Design, RPP-SP-146			
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TWS-SRID, HNF-SD-MP-SRID-130 Project System Design, RPP-SP-150			
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TWS-SRID, HNF-SD-MP-SRID-162 Project System Design, RPP-SP-182			
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TWS-SRID, HNF-SD-MP-SRID-166 Project System Design, RPP-SP-186			
TWS-SRID, HNF-SD-MP-SRID-168 Project System Design, RPP-SP-188			
TWS-SRID, HNF-SD-MP-SRID-170 Project System Design, RPP-SP-190			
TWS-SRID, HNF-SD-MP-SRID-172 Project System Design, RPP-SP-192			
TWS-SRID, HNF-SD-MP-SRID-174 Project System Design, RPP-SP-194			
TWS-SRID			

Table 1. CRAD Requirement to CHG Deliverables Crosswalk. (23 Sheets)
CRAD 5.0 - Project Cost (2 Sheets)

CRAD 5.0 - COST		Criterion/Specific Consideration	Narrative	Number
5.2.8	Is there a documented process tracking changes to scope, cost, schedule, and funding and its impact on the LCC?	5.2.8.1	There is a documented process tracking changes to scope, cost, schedule, and funding and its impact on the LCC.	5.2.9.1
			The recommendations from audits/reviews conducted over the last 2 years have been incorporated into the LCC.	
			Have the recommendations from audits/reviews conducted over the last 2 years been incorporated, as appropriate, into the development of the LCC?	

Table 1. CRAD Requirement to CHG Deliverables Crosswalk. (23 Sheets)
CRAD 6.0 - Project Financial Management (1 Sheet)

DOE Expectation			
Implementation Document			
Criterion Number	Narrative	Number	Comments
CRAD 6.0 - FINANCIAL MANAGEMENT	<p>Criterion Management</p> <p>6.0 Funding Profile Are FY01 River Protection Project (RPP) requirements funded for the B-2 Decision?</p> <p>6.1.1 Is privatization set-aside funding profile is supported by DOE-HQ, OMB, and Congress?</p> <p>6.1.2 Is OPR funded for FY01? Is it supported by DOE-HQ, OMB, and Congress?</p> <p>6.1.3 Is CHG funded for FY01? Is it supported by DOE-HQ, OMB, and Congress?</p> <p>6.1.4 Are DOE-RL efforts in support of OPR funded for FY01? Are they supported by DOE-HQ, OMB, and Congress?</p> <p>6.1.5 Does the RPP have financial staff to administer funding activities?</p>	<p>6.1.1 An FY01 privatization set-aside funding profile is identified with support from DOE-HQ, OMB, and Congress.</p> <p>6.1.2.1 An FY01 OPR funding profile is identified with support from DOE-HQ, OMB, and Congress.</p> <p>6.1.3.1 An FY01 CHG funding profile is identified with support from DOE-HQ, OMB, and Congress.</p> <p>6.1.4.1 An FY01 DOE-RL funding profile is identified with support from DOE-HQ, OMB, and Congress.</p> <p>6.1.5.1 OPR staffing meets financial staffing requirements.</p>	<p>OPR Responsibility</p> <p>The FY01 privatization requirement is \$400-500M above the target of \$320M. Baseline estimation is high risk.</p> <p>OPR Responsibility</p>
CRAD 6.0 - FINANCIAL MANAGEMENT	<p>6.2 Alternative Analyses Funding - Is there a funding profile for the River Protection Project under consideration that meets projected expenditures for alternative(s)?</p> <p>6.2.1.1 OPR has identified funding profiles for various alternative paths and is supported by DOE-HQ.</p> <p>6.2.2 OPR staffing meets financial staffing requirements to perform an alternative path, if executed.</p>	<p>6.2.1.1 OPR has identified funding profiles for various alternative paths and is supported by DOE-HQ.</p> <p>6.2.2.1 OPR staffing meets financial staffing requirements to perform each path, if executed.</p>	<p>Technology Insertion Points, FY08 PEP 1.3.2.c Closure packages, TPs submitted for baseline technology needs.</p> <p>Technology Insertion Points, FY08 PEP 1.3.2.c Closure packages, TPs submitted for baseline technology needs.</p>
CRAD 6.0 - FINANCIAL MANAGEMENT	<p>6.3 Prioritized Planning Process - Does a funding process exist in which all entities of the RPP funding requirements are integrated; activities can be prioritized, and the project can adjust to funding deviations?</p> <p>6.3.1 Does OPR have a clear process to determine funding requirements, execute the funds, and manage deviations as an integrated project, which includes OPR, DOE-RL, and the project's contractors?</p> <p>6.3.2 Does OPR need additional tools to assist in the management of the funding process?</p>	<p>6.3.1.1 OPR has created RPP process flowchart to assist in decisions with the annual budget development in which work scope is prioritized and has been issued to the contractors.</p> <p>6.3.2.1 Based on the priority list, work scope can be adjusted and realigned to allow for deviations in funding. The priority list addresses the critical needs for project continuance and success. Refer to CRAD 1.4 "Project Management Tools" for change control tools.</p>	<p>OPR Responsibility</p>

Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 7.0 - Project ESH-Q-EIR (4 Sheets)

DOE Expectation		Implementation Document	
Criterion Number	Criterion/Specific Consideration	Number	Narrative
7.0	ESH&Q		
7.1A	ES&H Program Plan - A detailed ES&H program plan has been completed (Contractor)		
7.1A.1	Does the ES&H Program Plan or equivalent documentation identify the specific, detailed ES&H requirements and considerations affecting the River Protection Project?	7.1A.1.1	The Contractor has an ES&H program which complies with the requirements of DOE rules (10 CFR 630, 120 and 10 CFR 835) and is effectively implemented.
7.1A.2	Is the ES&H Program Plan or equivalent documentation effectively implemented?	7.1A.2.1	The Contractor has developed an integrated safety management system (SMS) per DOE Clause 970.5204-2 and has demonstrated effective SMS implementation.
7.1A.3	Does the Contractor effectively assess their implementation of their ES&H Program Plan or equivalent documentation?	7.1A.2.2	The Contractor has identified a set of applicable Federal laws and regulations, and DOE directives tailored for the associated work and hazards for the River Protection Project by using a DOE approved process per DOE 970.5204-78.
7.1A.4	Does the Contractor monitor their ES&H performance to established performance goals?	7.1A.3.1	The Contractor has demonstrated effective implementation of the DOE approved set of requirements for the River Protection Project.
7.2	NEPA Activities - Does the Office of River Protection have required National Environmental Policy Act (NEPA) activities completed and a process in place to support the Phase 1 B-2 decision?	7.1A.3.2	The Contractor has presented a detailed schedule (with milestones) to fulfill the remaining after RPP EST&H gaps.
		7.1A.4	The Contractor has established applicable ES&H performance measures and evaluated ES&H performance per DOE Clauses 970.5204-2 and 970.5204-86.
7.2.1	Does ORP have a NEPA Process in place to assure appropriate NEPA review and generation of NEPA documentation, interfaces needed to assure a comprehensive NEPA review of projects, compliance with NEPA requirements, and ORP and HQ review and approval of NEPA determinations?	7.2.1.1	ORP will have a NEPA Process in place to assure appropriate NEPA review and generation of NEPA documentation, interfaces needed to assure a comprehensive NEPA review of projects, compliance with NEPA requirements, and ORP and HQ review and approval of NEPA determinations.
7.2.2	Does the ORP have a designated NEPA Compliance Officer responsible for coordination of NEPA activities and the ORP Manager with advice regarding compliance with NEPA requirements and approval of NEPA determinations?	7.2.1.2	The NEPA Process will provide for an integrated schedule to assure NEPA documentation, reviews, etc. are executed in a timely fashion to meet other scheduled and unrelated activities, including decision making.
7.2.3	Do the Contractor(s) have 1) a NEPA process in place to assure appropriate NEPA review and generation of NEPA documentation, and 2) a designated NEPA Coordinator in place to interface with the ORP NEPA Document Manager?	7.2.2.1	ORP will have a designated NEPA program manager responsible for coordination of NEPA activities and documentation; and to provide the ORP Manager with advice regarding NEPA compliance and decision requirements.
		7.2.3.1	The Contractor(s) will have: 1) a NEPA process in place to assure appropriate NEPA review and generation of NEPA documentation, and 2) a designated NEPA Coordinator in place to interface with the ORP NEPA Document Manager.
		7.2.3.2	ORP Project Managers shall ensure that all project documentation required to support NEPA review and documentation are provided to the NEPA reviewer /document preparer to sustain the NEPA compliance plan and schedule.
			RPP-PRO-452
			RPP-PRO-1987 & 99-DBD-015

Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 7.0 - Project ESH-Q-EIR (4 Sheets)

DOE Expectation		Implementation Document	
Criterion Number	Criterion/Specific Consideration	Number	Narrative
		7.2.3	BNFL and CHG shall support ORP NEPA reviews, NEPA documentation, and NEPA decision making by providing timely project documentation and professional consultation services (relating to project design and operations) as directed by ORP.
7.3	Safety Analysis - A Safety Analysis Report (SAR)	7.3.1	Does CHG have an adequate AB for waste storage and transfer?
		7.3.2	Is the AB adequately implemented?
		7.3.3	Are plans in place to amend the AB to support waste feed delivery and associated projects?
		7.3.4	Is there an adequate Unreviewed Safety Question (USQ) process in place?
		7.3.5	Are procedures in place for review of the AB documents?
		7.3.6	Is there an independent review of the safety analysis documents?
		7.3.7	Does CHG have management infrastructure, processes, and procedural guidance necessary to provide a timely review of the FSAR and all AB documents?
		7.3.8	Does CHG have adequate staff with appropriate skills to provide for review and approval of the FSAR in a timely manner?
		7.3.9	Does CHG have an adequate AB management structure in place e.g. AB document management systems, configuration control systems, etc.?
		7.3.10.	Are ORP authorities and responsibilities clearly outlined and assigned, with adequate staff to perform the required activities to oversight the FSAR?
VI.1.1			
		7.4	Occupational Safety Concern— Has the detailed compliance plan been reviewed and revised as appropriate, and has it been implemented?
7.4.1			Does the occupational health and safety program effectively implement DOE rules, orders, and policies as related to operations and activities in the tank farms?
Q.12 & 19			

Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 7.0 - Project ESH-Q-EIR (4 Sheets)

CRAD 7.0 - ESH&Q		Criterion/Specific Consideration	Number	Narrative	Implementation Document	DOE Expectation
			7.4.2	DOE expectations also include the plan to remediate any new safety hazards that may impact specific work activities or tasks in the tank farms.		
		7.4.2	7.4.2.1	Perform assessments and audits to evaluate the adequacy of qualified safety and health professionals for implementing the occupational safety and health programs.		
		7.4.3	7.4.3.1	ORP must be ready to effectively manage occupational safety concerns within ORP itself as well as oversee contractor work.		
		7.4.3	7.4.3.2	ORP must implement an adequate occupational safety employee concerns program.		
		7.5	Waste Minimization and Pollution Prevention			
		7.5.1	7.5.1.1	A Pollution Prevention/Minimization plan has been written by including RPP which applies to waste feed delivery and associated operations		
		7.5.1	7.5.1.2	The plan is acceptable to DOE-ORP		
		7.5.1	7.5.1.3	The plan is being implemented and adhered to		
		7.6	Waste Management			
		7.6.1	7.6.1.1	The waste management plan identifies and controls the types and quantities of waste expected during construction, start-up, and operation of facilities, systems, structures, or components?		
		7.6.2	7.6.2.1	A process is implemented to document reviews, changes, and approvals of the waste management plan.		
		7.6.3	7.6.3.1	The waste management plan integrates waste production and disposal with BNFL, CH2M Hill, Hanford Site Waste, Department of Energy		
		7.6.4	7.6.4.1	The waste management plan includes: -an implementation schedule, -measures and practices that will be used to manage, treat, and dispose of wastes?		

Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 7.0 - Project ESH-Q-EIR (4 Sheets)

DOE Expectation		Implementation Document	
Criterion Number	Criterion/Specific Consideration	Number	Narrative
7.7	Permits, Licenses and Regulatory Approvals - Have applicable permits, licenses and regulatory approvals been obtained and have milestone dates for pending and new application been reviewed and revised as appropriate?	7.7.1	The RPP does operate under a DOE approved SRID. Applicable environmental requirements are in Sections 16 and 20.
7.7.1	Does the RPP operate under a DOE approved SRID? Are applicable environmental requirements in Sections 16 and 20?	7.7.1.1	The RPP does operate under a DOE approved SRID. Applicable environmental requirements are in Sections 16 and 20.
7.7.2	Does the RPP permitting program identify and schedule all permits needed to support feed delivery?	7.7.2.1	The RPP permitting program does identify and schedule all permits needed to support feed delivery.
7.7.3	Are sufficient funds allocated in the annual planning schedule to prepare planned permits within cost and on schedule?	7.7.3.1	Sufficient funds are allocated in the annual planning schedule to prepare planned permits within cost and on schedule.
7.7.4	Is out year planning to identify needed permits done so these are assured to be in the RPP annual planning process?	7.7.4.1	Out year planning to identify needed permits is done so these are assured to be in the RPP annual planning process.
7.7.5	Does the RPP Authorization Envelope contain all approved environmental permits? Is a listing of such routinely generated?	7.7.5.1	The RPP Authorization Envelope does contain all approved environmental permits. A listing of such is routinely generated.
7.7.6	Does BNFL and RPP have sufficient interface control agreements to ensure waste feed delivery on time and within cost?	7.7.6.1	BNFL and RPP do have sufficient interface control agreements to ensure waste feed delivery on time and within cost.
7.7.7	Does RPP have procedures to ensure that permit approval conditions are implemented in the field?	7.7.7.1	RPP does have procedures to ensure that permit approval conditions are implemented in the field.
Volume VI, Sec 1.2		Volume VI, Section 1.2	
Quality Assurance Program		Volume VI, Section 1.2	
7.8.1	Do we have an adequate Quality Assurance Program (QAP) for waste storage and transfer?	7.8.1.1	CHG has completed the QAP for waste storage and transfer.
7.8.2	Is the QAP adequately implemented?	7.8.2.1	CHG has effectively implemented all QAP requirements into auditable QA programs and procedures.
7.8.3	Are Plans in place to update the QAP as needed to support waste feed delivery and associated projects?	7.8.3.1	CHG has a detailed plan in place to amend the QAP to support waste feed delivery and associated projects.
7.8.4	Are procedures in place for surveillance and audits of the implementation of the contractor QAP programs?	7.8.4.1	CHG has an adequate audit and surveillance program to assure compliance with the requirements of the QAP.
7.8.5	Are appropriate Price Anderson Amendment Act coordination and program oversight functions established?	7.8.5.1	Are appropriate Price Anderson Amendment Act coordination and program oversight functions established?
		Guidance For The Determination Of Significance And Responsibility Of 10 CFR 835 Potential Noncompliances (PNA), HNF-1980	

Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 8.0 - Project Risk (1 Sheet)

CRAD 8.0 - PROJECT RISK		Criterion/Specific Consideration	Number	Narrative	DOE Expectation	
Criterion Number	Project Risk				Additional Documents	
8.0	DOE Risk Management	8.1	CHG Risk Management – Does CHG have a risk management program in place necessary for successful management of the lifecycle of the project?	8.2.1.1	Clear roles and responsibility are defined for risk management at all levels within CHG.	
8.2.1	Is CHG responsible for managing risks?	8.2.2.1	Does CHG have a risk management plan/procedure for evaluating and managing risk?	8.2.2.1	Appropriate CHG staff & management have been trained on the risk management procedure. Reviewing the CHG training matrix shows that all those identified for the training have received it.	
8.2.2	Does CHG assume the role of risk manager as appropriate?	8.2.2.2		8.2.2.2	A risk management procedure has been developed and is being used that identifies how risks will be managed in Phase 1B-2.	
8.2.3	Has CHG assumed the role of risk manager as appropriate?	8.2.3.1		8.2.3.1	CHG identifies risk managers and holds them accountable for actions according to a defined structure.	
8.2.4	Has CHG identified project risks?	8.2.3.2		8.2.3.2	CHG has identified project risks, using a systematic methodology.	
8.2.5	Does CHG Phase 1B-1 risk management performance demonstrate the ability to successfully establish and execute the risk management program for Phase 1B-2?	8.2.3.3		8.2.3.3	Risks identified can be tied to the project baseline through a project WBS.	
8.2.6	Is there a single risk management process for the project?	8.2.3.4		8.2.3.4	Critical risks within the life cycle of the project have been identified.	
8.2.7	Is it clear what risk is inherent in decisions made by DOE?	8.2.3.5		8.2.3.5	CHG has taken an integrated approach to risk management.	
		8.2.4.1		8.2.4.1	The assessment of the risk potential of baseline change requests is routinely performed by CHG.	
		8.2.4.2		8.2.4.2	CHG has evaluated risk that is inherent in the project.	
		8.2.5.1		8.2.5.1	An active risk management program was in place during Phase 1B-1. Risk management and staff attention on significant potential problems are to aid in communications which will be used in Phase 1B-2.	
		8.2.5.2		8.2.5.2	A mechanism is in place to take advantage of lessons learned in Phase 1B-1 risk management process that can be applied to Phase 1B-2.	
		8.2.5.3		8.2.5.3	CHG has identified metrics to assess the effectiveness of the risk management process.	
		8.2.5.4		8.2.5.4	CHG uses the results from metric assessments to continually improve the risk management approach.	
		8.2.6.1		8.2.6.1	CHG is integrated into a single risk management process for the project.	
		8.2.6.2		8.2.6.2	A risk allowance is maintained and allocated as appropriate.	
		8.2.7.1		8.2.7.1	For significant risks to the project, the decision to which they are tied is identified.	
						Lessons learned from RPP-1
						To be included in FY 2000 revision of Risk Management Plan
						To be included in FY 2000 revision of Risk Management Plan
						TBR Process

Table 1. CRAD Requirement to CHG
Deliverables Crosswalk. (23 Sheets)
CRAD 9.0 - Project Communications (1 Sheet)

Implementation Document			
DOE Expectation	CRAD 9.0 - COMMUNICATIONS	Criterion Specific Consideration	Narrative
Criterion Number	Number	Contents	ORP Responsibility
9.0	Communications		
9.1	Stateholders - What are the Office of River Protection Office of Communications Best Practices?	9.1.1 Does the ORP Office of Communications have a plan and strategy for dealing with "government-related" communications efforts?	The ORP Office of Communications has a plan and strategy for dealing with "government-related" communications efforts.
9.1.2	Does the ORP Office of Communications have a plan and strategy for dealing with "non-governmental" entities in its communications efforts?	9.1.2.1	The ORP Office of Communications has a plan and strategy for dealing with "non-governmental" entities in its communications efforts.
9.1.3	Has the ORP Office of Communications developed clear definitions of Stakeholders' and "Public" involvement?	9.1.3.1	The ORP Office of Communications has clear definitions of "Stakeholders" and "Public" involvement.
9.1.4	Does the ORP Office of Communications have an Outreach Program in place to educate employees, Stakeholders, and the public?	9.1.4.1	An Outreach Program is in place to educate employees, Stakeholders, and the public about ORP's progress and activities.
9.1.5	Are there ongoing evaluation activities to assess the effectiveness of the Outreach Program?	9.1.5.1	There are ongoing evaluation activities that assess the Outreach Program.
9.1.6	Is there a Policy of Openness that fosters continuing dialogue and provides access and opportunities for interested parties to become familiar with the project?	9.1.6.1	There is an Openness Policy that fosters dialogue and provides access to interested parties who may want to become familiar with the project.
9.2	Public Involvement - Is a Public Involvement program, which meets, legally mandated requirements, in place?		
9.2.1	Does the Office of River Protection Office of Communications have a list of legally mandated requirements?	9.2.1.1	The ORP Office of Communications maintains a list of legally mandated requirements for public involvement and stakeholder interaction for the River Protection Project.
9.2.2	What are the ENEL, CH2MH, Regulators, and ORP roles and responsibilities for meeting these requirements, and who has the lead?	9.2.2.1	The roles and responsibilities of ENEL, CH2MH, Regulators, and the Office of River Protection are incorporated in the ORP Communications Plan with ORP in the lead role to meet requirements for success.
9.2.3	What is the timeline to implement required public involvement activities?	9.2.3.1	A calendar and timeline for public involvement and stakeholder interaction are maintained and kept up-to-date within the ORP Office of Communications.

Table 2. DOE Order 425.1, Minimum Core Requirements to CHG Deliverable Crosswalk. (2 Sheets)

DOE Order 425.1 Core Requirement		Implementation Document	
1	Procedures and Safety Limits - There are adequate and correct procedures and safety limits for operating the process systems and utility systems.		
2	Training and Qualification Programs - Training and qualification programs for operations and operations support personnel have been established, documented, and implemented. (The training and qualification program encompasses the range of duties and activities required to be performed.)		
3	Level of Operator Knowledge - Level of knowledge of operations and operations support personnel is adequate based on reviews of examinations and examinations and selected interviews of operating and operations support personnel.		
4	Safety Documentation - Facility safety documentation is in place that describes the "safety envelope" of the facility. The safety documentation should characterize the hazards associated with the facility and should identify mitigating measures (systems, procedures, administrative controls, etc.) that protect workers and the public from those hazards. Safety systems and systems associated with worker and public safety are defined and a system to maintain control over the design and modification of facilities and safety-related utility systems is established.		
5	Safety System Operation - A program is in place to confirm and periodically reconfirm the condition and operability of safety systems, including safety related systems and safety related utility systems. This includes examinations of records of tests and calibration of safety systems and other instruments that monitor limiting conditions of operation or that satisfy Technical Safety Requirements. All systems are currently operable and in a satisfactory condition.		
6	Audit Safety Deficiencies - A process has been established to identify, evaluate, and resolve deficiencies and recommendations made by oversight groups, official review teams, audit organizations, and the operating contractor.		
7	Safe Operations and Conformance with DOE Orders - Formal agreements establishing requirements are in place between the operating contractor and DOE, via the contract or other enforceable mechanism, which govern the safe operations of the facility. A systematic review of the facility's conformance to these requirements has been performed. These requirements have been implemented in the facility, or compensatory measures are in place, and formally agreed to during the period of implementation. The compensatory measures and the implementation period are approved by DOE.		
8	Operational Support Services - Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure operational support (e.g., training, maintenance, waste management, environmental protection and health physics, emergency preparedness, fire protection, quality assurance, critical safety, and engineering) are adequate for operations.		
9	Emergency Drill Program - A routine and emergency operations drill program, including program records.		
10	Startup Test Program - An adequate startup or restart test program has been developed that includes adequate plans for graded operations testing to simultaneously confirm operability of equipment, the viability of procedures, and the training of operators.		
11	Safety Responsibilities - Functions, assignments, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented with the management responsibility for control of safety.		

9 Emergency Drill Program - A routine and emergency operations drill program, including program records.

10 Startup Test Program - An adequate startup or restart test program has been developed that includes adequate plans for graded operations testing to simultaneously confirm operability of equipment, the viability of procedures, and the training of operators.

11 Safety Responsibilities - Functions, assignments, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented with the management responsibility for control of safety.

HNF-IP-0842, Vol. I, Sec. 2.1
-HNF-PRO-389
-HNF-PRO-229
-HNF-PRO-223

HNF-IP-0842, Vol. II, Sec. 2.11
4.1, 7.1, 7.2, 7.5
-HNF-IP-0842, Vol. III, Sec. 3.1
-HNF-IP-0842, Vol. IX, Sec. 11, 4.1
-HNF-PRO-085, 074, 153, 170, 171, 172, 175, 176, 177, 249, 124, 573

HNF-IP-0842, Vol. III, Sec. 7.3, 7.5
249
-HNF-IP-0842, Vol. IV, Sec. 3.4.5
5, 4, 5.6, 5.7, 5.8, 10
-HNF-PRO-082, 705
-RPP-PRO-229, 233, 440, 540, 700, 702, 703, 704, 705

HNF-IP-0842, Vol. I, Sec. 2.1, 2.4.
3.2.1
-HNF-IP-0842, Vol. IV, Sec. 1.2.
2.1, 4.28, 5.2, 5.6
-HNF-IP-0842, Vol. 5, Sec. 6.2, 7.1, 7.2, 7.3
-RPP-PRO-052, 060, 067, 068, 072, 229, 410, 653

HNF-IP-0842, Vol. I, Sec. 2.4
4.10, 653
-RPP-PRO-052, 060, 067, 068, 072

HNF-IP-0842, Vol. I, Sec. 6.3
-RPP-PRO-205

HNF-IP-0842, Vol. I, Sec. 2.1
2.1, 3.11, 3.21, 3.28, 3.30, 3.32, 3.45, 4.2
-HNF-IP-0842, Vol. V, Sec. 3.1
7.1, 7.2, 10.3, 10.6
-HNF-IP-0842, Vol. IV, Sec. 4.23, 5.8
-HNF-IP-0842, Vol. VI, Sec. 12, 2.2, 4.1, 5.6
-HNF-IP-0842, Vol. VII, Sec. 1.1
-HNF-IP-0842, Vol. XI, Sec. 5.1
RPP-PRO-084, 101, 115, 120, 153, 157, 170, 172, 175, 324, 350, 351, 324, 456, 451, 452, 453, 459, 540, 541, 1618, 1619, 1621, 1629
-HNF-PRO-171, 175

RPP-PRO-024

HNF-IP-0842, Vol. II, Sec. 2.8, 4.8, 3
-HNF-IP-0842, Vol. III, Sec. 10.8
-HNF-IP-0842, Vol. IV, Sec. 28, 5.4
RPP-PRO-072, 229, 440, 572
-HNF-PRO-082, 552

HNF-IP-0842, Vol. I, Sec. 3.1
-HNF-IP-0842, Vol. 5, Sec. 4.1, 1
-HNF-PRO-088, 4616

Table 2. DOE Order 425.1, Minimum Core Requirements
to CHG Deliverable Crosswalk (2 Sheets)

DOE Order 425.1 Core Requirements		CHG Deliverable Requirements	
12	Conduct of Ops - The implementation status for DOE EAS 15, CONDUCT OF OPERATIONS REQUIREMENTS FOR DOE FACILITIES, of 7-9-90, is adequate for operations.		
13	Qualified Operations - There are sufficient numbers of qualified personnel to support safe operations.		
14	Safety Awareness Program - A program is established to promote a site-wide culture in which personnel exhibit an awareness of public and worker safety, health, and environmental protection requirements and, through their actions, demonstrate a high priority commitment to comply with these requirements.		
15	Systems Considerations with Safety Basis - The facility systems and procedures, as affected by facility modifications, are consistent with the description of the facility, procedures, and accident analysis included in the safety basis.		
16	(DOE) Personnel Qualifications - The technical and managerial qualifications of those personnel at the DOE Field organization and at DOE Headquarters who have been assigned responsibilities for providing direction and guidance to the contractor, including the Facility Representatives, are adequate (DOE Operational Readiness Review only).		
17	(DOE) Operational Readiness Review - The breadth, depth, and results of the responsible contractor management programs for operations (DOE Operational Readiness Review only).		
18	Procedures and Training (Batch Modifications) - Modifications to the Facility - Procedures have been reviewed for potential impacts on processes and training and qualification. Procedures have been revised to reflect these modifications and training has been performed to these revised procedures.		
19	(CHG) Technical and Management Qualities - The technical and management qualifications of contractor personnel responsible for facility operations are adequate.		
20	(DOE) Oversight - DOE Operations Office Oversight Programs, such as Occurrence Reporting, Facility Representative, Corrective Action, and Quality Assurance Programs, are adequate (DOE Operational Readiness Review only).		

Table 3. Privatization Contractor Interface Control Documents to CHG Deliverables Crosswalk. (20 Sheets)
ICD-01/ICD-02 (2 Sheets)

Implementation Document		Responsibility	ICD No.	ICD Title	Number	Narrative	Comments
ICD No.	ICD Title						
ICD-01 RAW WATER	ICD-02 POTABLE WATER	2.0	Responsibilities	1	Provide up to 760 liters per minute (Lpm) of process water to BNFL Inc. at a minimum operating pressure of 50 psig and a nominal operating pressure between 115 and 130 psig (Section 4.5). Deliver raw water for operations by August 4, 2003. (Section 4.3)		Project technical specifications
				2	Provide and maintain a pipeline for process water to the BNFL Inc. defined physical interface.		Project technical specifications
				3	Provide up to 9,450 Lpm of fire water ("Section 4.2) by start of construction (Dec 2000). (Section 4.3)		Project technical specifications
				4	Provide and maintain a loop pipeline for fire water to the BNFL Inc. site perimeter. (Section 4.3)		Project technical specifications
				5	Monitor raw water usage.		Operational plans
				6	Function as DOE Hanford Site Water Purveyor, up to the interface with BNFL Inc.'s Site.		Operational plans
				7	Provide BNFL Inc. 72-hr written notification in advance of scheduled interruption of services.		Operational plans
				8	Provide BNFL Inc. 7 calendar days written notification in advance of scheduled inspection of the raw water system.		Operational plans
				9	Provide to BNFL Inc. any available data on raw water composition, and static, and maximum flow line pressures for the raw water supply measured at the BNFL Inc. site defined physical interface.		Operational plans
				10	Provide raw water for BNFL Inc. construction activities by the start of site work (December 4, 2000).		
				11	The DOE Hanford Site Water Purveyor shall review and approve the BNFL Inc. design within 30 calendar days of the final submittal of the design.		

Table 3. Privatization Contractor Interface Control Documents to CHG Deliverables Crosswalk. (20 Sheets)
1CD-01/1CD-02 (22 Sheets)

Table 3. Privatization Contractor Interface Control Documents to CHG Deliverables Crosswalk. (20 Sheets)

Implementation Document			
Responsibility	ICD No.	ICD Title	Number
ICD-03 RADIOACTIVE SOLID WASTES	2.0	Responsibilities	<p>1 Review the HSSWAC Waste Certification Summary and [if the certification complies with applicable HSSWAC requirements,] accept certified radioactive [and radioactive mixed] solid waste from BNFL Inc. [Note – Waste Certification Summary to be changed to Waste Profile upon closure of issue #12.]</p> <p>2 Negotiate any necessary modifications to [Iron-BNFL Inc] Hanford Site [treatment, storage, and disposal] permits with the regulator(s).</p> <p>3 Establish and maintain the HSSWAC. [Provide written notification to BNFL Inc. identifying explicit revisions/ modifications to the HSSWAC.]</p> <p>4 Implement the Waste Verification and Confirmation Program, as defined in the HSSWAC.</p> <p>5 Provide transportation services and vehicles for transporting radioactive solid waste from the BNFL Inc. facility to the disposal facility. [Tiedowns and restraints shall be provided.]</p> <p>6 Notify BNFL Inc. [30 calendar days] in advance of scheduled interruptions of services [that would affect this interface.]</p> <p>7 Notify BNFL Inc. 60 calendar days in advance of solid waste forecast update due date.</p> <p>8 Provide, subject to receipt of necessary regulatory permit changes, Radioactive Solid Waste Services for waste feed tank modifications by January 2004 or per the IMP, whichever is later.</p> <p>9 Provide, subject to receipt of necessary regulatory permit changes, Radioactive Solid Waste services for operations by January 2005 or per the IMP, whichever is later.</p> <p>10 Negotiate special case waste (e.g., failed melters) disposal actions with BNFL Inc. to support schedule requirement for DOE to prepare for waste receipt and transport.</p>
Mission Analysis Report, DOE/ORP-2000-10			
Waste Feed Delivery Plan, HNF-6017			
Waste Disposal Task Plan HNF-1577			
Health and Safety Plan HNF-1577			
Infrastructure Plan HNF-1722			
HLW Storage Plan, Vol. IX			
Environmental Program Description, RPP-1751			
Sys. Eng. Mgmt. Procedure, Vol. XI			
Risk Mgmt. Procedure, Sec. 2.6			
Configuring Plan, RPP-6114			
Technical Baseline Plan HNF-1947			
Programmatic Baseline Sum. Desc.			
Level 0 Logics			
AGAs and Trade Studies			
MOAs			
ICDs			
IPs			
Acculturation and Contracting Plan, RPP-6113			
HNF PROs, MPs, RPP-6118			
ISMS Descriptions, RPP-M-003			
Project Executive Summary Document, RPP-5742 & 5836			
Functional System, HNF-SD-MP-SRID-001			
TWRs Major Facility Technical Interlace Ref. Ke			
Operations and Utilization Plan, RPP-SD-WM-SP-012			
Comments			

Table 3. Privatization Contractor Interface Control Documents
to CHG Deliverables Crosswalk. (20 Sheets)
ICD-03 (2 Sheets)

ICD No.	ICD Title	Number	Narrative	Comments
	ICD-03 RADIOACTIVE SOLID WASTES	11	DOE to accept failed melters that meet the requirements of the HSSWAC. Package size shall not exceed 5.1 m wide by 7.2 m long by 6.2 m high and with a mass of approximately less than 330 Mt.	CHG provides integration with Project Hanford
		12	DOE to provide waiver for Department of Transportation (DOT) requirements for drop test of failed melter packages by February 2005.	CHG provides integration with Project Hanford
		13	Negotiate special case waste disposal actions with BNFL, Inc. (e.g., failed HLW and LAW melters).	CHG provides integration with Project Hanford
Mission Analyses Report, DOE/DRP-2000-10				
	Waste Feed Delivery Plan, HNF-6017			
	LAW Disposal Task Plan, HNF-1517			
	AB Amendment Task Plan HNF-1881			
	HLW Storage Plan HNF-1882			
	Infrastructure Safety Plan HNF-1722			
	HR Staffing Plan, Vol. IV, Sec 2.6			
	Confidential Baseline Plan HNF-6114			
	Engineering Plan HNF-1947			
	Technical Baseline Plan HNF-1946			
	Level 0 Logics			
	AGAs and Trade Studies			
	MOAs			
	TRs			
	ICDs			
	IPTs			
	Acquisition and Contracting Plan, RPP-6113			
	Memorandum of RTF w/Phase 1, RPP-6118			
	HNF PROs, POLs, & MPS, RPP-6113			
	IMS Descriptions, RPP-MP-003			
	Final Executive Summary Document, RPP-5742 & -5836			
	Project Executive Summary Document, HNF-2077			
	Financial Analysis, HNF-SD-MP-SRID-001			
	PP Major Facility Utilization Plan, RPP-SD-WM-SP-012			
	Operations and Utilization Plan, RPP-SD-WM-SP-012			

Table 3. Privatization Contractor Interface Control Documents to CHG Deliverables Crosswalk. (20 Sheets)
ICD-05/ICD-06 (3 Sheets)

Table 3. Privatization Contractor Interface Control Documents to CHG Deliverables Crosswalk. (20 Sheets)
ICD-05/ICD-06 (3 Sheets)

Table 3. Privatization Contractor Interface Control Documents to CHG Deliverables Crosswalk. (20 Sheets) ICD-05/ICD-06 (3 Sheets)

Implementation Document			
Responsibility	ICD No.	ICD Title	Narrative
Mission Analysts Report, DOE/ORP-2000-10	9	RPP Admistrative Executive Plan, HNF-IP-0817	Provide specification by August 1999 to BNFL Inc. for interface hardware components.
Waste Feed Delivery Plan, HNF-IP-0842		LLW Disposal Task Plan HNF-1517	
AB Amendment Task Plan HNF-1517		Hazard and Safety Plan HNF-1722	
Infrastructure Plan HNF-1751		HLW Storage Plan HNF-1882	
DN Program Description, Vol. XI		QA Program Plan HNF-1751	
Sys. Eng. Mgmt Plan HNF-IP-0842, Vol. IV		HNF-IP-0842, Vol. XI	
HR Staffing Plan, Vol. IV, Sec 2.6		Configurations Plan HNF-6114	
Engineering Plan, HNF-IP-0842		Technical Baseline Plan HNF-1900	
Programmatic Baseline Summ. Desc.		HNF-1901	
Level 0 Logs		AGA's and Trade Studies	
AGA's and Trade Studies		RPP, FY2000 MYWP Summary, RPP-5044	
ICDs		MOAs	
IPTs		TBRs	
Acquisition and Contracting Plan, RPP-6113		HNF PRO's, MP's, RPP PRO's	
Memorandum of RTP W/Phase 1, RPP-6118		ISMS Description, RPP-MP-003	
ISMS Description, RPP-MP-003		Project Summary Diagram, RPP-5742 & -5836	
Financial System Management Plans		Project Analytical Studies, HNF-SD-MP-SRID-001	
TRWS/SRID, HNF-SD-MP-SRID-012		RPP Major Facility Technical Interlace Ref. Ke.	
Operations and Utilization Plan		CHG constructs the infrastructure, Project Hanford maintains it	
RPP-SD-WM-SP-012		CHG constructs the infrastructure, Project Hanford maintains it	

Table 3. Privatization Contractor Interface Control Documents to CHG Deliverables Crosswalk. (20 Sheets)
ICD-09 (1 Sheet)

Table 3. Privatization Contractor Interface Control Documents to CHG Deliverables Crosswalk. (20 Sheets)

Table 3. Privatization Contractor Interface Control Documents to CHG Deliverables Crosswalk. (20 Sheets)
ICD-11/ICD-12 (2 Sheets)

Table 3. Privatization Contractor Interface Control Documents
to CHG Deliverables Crosswalk. (20 Sheets)
ICD-11/ICD-12 (2 Sheets)

ICD-11		ICD-12		ICD No.	ICD Title	Number	Narrative	BNFL	CHG	Comments
Responsibility	Implementation Document	ICD No.	ICD Title							
2.0	Responsibilities	1	Provide road access between the BNFL Inc. site boundary and existing Hanford Site roads by June 5, 2000							CHG constructs the infrastructure, Project Hanford maintains it
		2	Provide permanent road by August 3, 2004.							CHG constructs the infrastructure, Project Hanford maintains it
		3	Maintain the existing paved roads in the vicinity of the BNFL Inc. facility that provide access to the BNFL site.							CHG constructs the infrastructure, Project Hanford maintains it
		4	Manage road closures outside the BNFL Inc. site boundary as necessary.							CHG constructs the infrastructure, Project Hanford maintains it
		5	Provide written notification to BNFL Inc. at least seven calendar days in advance of scheduled interruption of services.							CHG constructs the infrastructure, Project Hanford maintains it
		6	Coordinate with BNFL Inc. to accommodate loads that exceed site size or weight limits for transportation.							CHG constructs the infrastructure, Project Hanford maintains it

Table 3. Privatization Contractor Interface Control Documents
to CHG Deliverables Crosswalk. (20 Sheets)
ICD-14 (2 Sheets)

Implementation Document	Responsibility	Narrative	Comments
ICD-14 IMMOBILIZED HIGH- LEVEL WASTE	ICD No.	ICD Title	Number
ICD-14 ICD-14: Immobilized High-Level Waste	2.0 Responsibilities	<p>1 Provide clean, approved shipping containers (casks) delivered to the Contractor-designated transfer facility. Shipping containers (cask) will be provided in accordance with the following:</p> <ul style="list-style-type: none"> a) Smearable contamination on shipping container (cask) (internal and external): < 367 Bq/m² alpha, and < 3,670 Bq/m² gamma/beta. b) Radiation level (when loaded): < 200 mR/hr for shipping container (cask) outer surface < 10 mR/hr at a distance of two meters from the vertical surface of the shipping container (cask). <p>2 Accept the IHLW product in accordance with Contract specifications, requirements, and procedures.</p> <p>3 Notify BNFL Inc. that DOE accepts the IHLW, or that DOE has identified a nonconformity.</p> <p>4 Accept nonconforming IHLW in accordance with Section E, Inspection and Acceptance, of the Contract.</p> <p>5 Pickup the loaded shipping container (cask) from the Contractor- designated transfer facility (at the parking area adjacent to the loading bay located at the BNFL Inc. HLW vitrification facility)</p> <p>6 Transport shipping containers (casks): a) Empty - to Contractor's loading facility b) Full - from Contractor's loading facility</p> <p>7 Provide the transport vehicle.</p> <p>8 Notify the Contractor in advance of scheduled interruption of services.</p>	<p>Project specifications</p> <p>440.010 440.020 440.115 450.030</p> <p>440.010 440.020 440.115 450.030</p> <p>440.010 440.020 440.115 450.030</p> <p>440.010 440.020 440.115 450.030</p> <p>440.010 440.020 440.115 450.030</p> <p>440.010 440.020 440.115 450.030</p> <p>440.010 440.020 440.115 450.030</p> <p>440.010 440.020 440.115 450.030</p>

Table 3. Privatization Contractor Interface Control Documents
to CHG Deliverables Crosswalk. (20 Sheets)
ICD-14 (2 Sheets)

Table 3. Privatization Contractor Interface Control Documents
to CHG Deliverables Crosswalk (20 Sheets)
ICD-15 (2 Sheets)

Implementation Document		ICD No.	ICD Title	Number	Narrative	Comments
Responsibility	ICD-15					
	IMMOBILIZED LOW- ACTIVITY WASTE	2.0	Responsibilities		Provide clean, approved shipping containers delivered to the Contractor-designated transfer facility. Shipping containers will be provided in accordance with the following:	Project specifications
					a) Smearable contamination on shipping container (internal and external): < 367 Bq/m ² alpha, and < 3,670 Bq/m ² gamma/beta.	
					b) Radiation level (when loaded): < 200 mRem/hr for shipping container from the outer surface, and < 10 mRem/hr at a distance of two meters from the vertical surface of the shipping container.	
					2 Accept the ILAW product in accordance with contract specifications, requirements, and procedures.	Project specifications
					3 Notify BNFL Inc. that DOE accepts the ILAW container, or that DOE has identified a nonconformity.	ORP Responsibility
					4 Accept nonconforming ILAW container in accordance with Section E, Inspection and Acceptance, of the contract.	ORP Responsibility
					5 Pickup the loaded shipping container from the Contractor-designated facility (at the parking area adjacent to the ILAW vitrification facility loading bay.)	Operational plans Technical specifications
					6 Transport shipping containers (casks): a) Empty - to the Contractor's loading facility b) Full - from the Contractor's loading facility	Operational plans Technical specifications
					7 Provide the transport vehicle.	Operational plans Technical specifications
					8 Provide BNFL, Inc. updated technical information by (TBD) for transport vehicle and design requirements for loading the shipping container.	Technical specifications

Table 3. Privatization Contractor Interface Control Documents to CHG Deliverables Crosswalk. (20 Sheets) ICD-15 (2 Sheets)

Table 3. Privatization Contractor Interface Control Documents to CHG Deliverables Crosswalk. (20 Sheets)

Table 3. Privatization Contractor Interface Control Documents to CHG Deliverables Crosswalk. (20 Sheets)

Table 3. Privatization Contractor Interface Control Documents to CHG Deliverables Crosswalk. (20 Sheets)

Table 3. Privatization Contractor Interface Control Documents to CHG Deliverables Crosswalk. (20 Sheets) ICD-22/ICD-25/ICD-26 (2 Sheets)

Implementation Document							
Responsibility		Comments					
ICD-22	AIR EMISSIONS	ICD-25	EMERGENCY RESPONSE	ICD-26	PERMITS	ICD No.	ICD Title
2.0	Responsibilities						
		1	Maintain site-wide Air Air Operating Permit (AOP) and Treatment, Storage, and Disposal Unit (TSU) permits.				
		2	Provide access to existing site air quality and meteorological data for Contractor use in preparing the NOC or other compliance documents.				
		3	Review and concur on the NOC.				
		4	Seek modifications to site-wide Air Operating Permit based on modification requests provided by Contractor, when approved by DOE.				
		5	Use existing monitoring network to collect air samples required by DOE and not collected by the Contractor in the proximity of the Contractor facility during construction and operation.				
		6	Allocate 1.5 trillion per year exposure to the MEI to the Contractor facility. Review and adjust allocation following completion of the permitting activities (NOC approval) and/or following collection of at least one year of sampling and/or monitoring data.				
		7	Allocate 0.375 tons per year organic emissions to the Contractor facility. Review and adjust allocation following completion of the permitting activities and/or following collection of at least one year of monitoring data.				
		8	Pay regulatory agency fees associated with routine regulatory permitting and agency oversight. Fees do not include fines, penalties or other such costs due to non-compliance by BNFL Inc.				
ICD-25: Emergency Response	Responsibilities						
2.0		1	Maintain and implement the Hanford Site Emergency Response Plan and procedures.				
		2	Provide access to site-wide emergency notification system.				
		3	Update, as appropriate, Hanford site emergency response implementing procedures to incorporate BNFL Inc. notifications.				
		4	Consider BNFL Inc. requests for Hanford Site emergency planning, preparedness, and response resources.				

Table 3. Privatization Contractor Interface Control Documents
to CHG Deliverables Crosswalk. (20 Sheets)
ICD-22/ICD-25/ICD-26 (2 Sheets)

Implementation Document		Responsibility	Narrative	Comments
ICD-22	AIR EMISSIONS			
ICD-25	EMERGENCY RESPONSE			
ICD-26	PERMITS			
ICD No.	ICD Title	Number		
2.0	Responsibilities			
		1	Review and comment on treatment facility permit application(s)	
		2	Provide Hanford Site Information for use in permit application/modification preparation.	
		3	Provide support to Contractor-led permitting activities.	
		4	Request modifications of Hanford Site Permits, as appropriate, to incorporate contractor activities.	

Table 4. External Independent Review Team Line of Inquiry to CHG Deliverables Crosswalk. (18 Sheets)
Project Management (2 Sheets)

Table 4. External Independent Review Team Line of Inquiry to CHG Deliverables Crosswalk. (18 Sheets)
Project Management (2 Sheets)

Project Management		Criteria	LOI #	Lines of Inquiry	CR/ACR	Comments
Level	Is the regulatory compliance program adequate to avoid schedule/cost impacts?					
Integrated Safety Management	Does an effective ISM program exist?	PM20	Have all regulatory compliance issues been addressed, including those outside the Regulatory Unit?	7.7 7.3 7.3		
Project Management Plan	Is the Project Management Plan completed and available?	PM21	Has the ISM plan been validated by independent review and accepted by DOE?	7.1.2 7.4.1		
Integrated Master Plan	Is the integrated Master Plan completed and available?	PM22	Has DOE approved the Safeguards and Security Plan for RPP? Was the approval conditional, and if so, what are the action items?	7.3 7.3		
Operational Readiness	Does an adequate safeguards and security program exist?	PM23	What are the key uncertainties in the Project Management Plan? How are these uncertainties being dealt with?	1.2 1.6.3 6.2 B.1		
Program Management	Does an integrated master plan exist that defines all key interfaces for RPP? Do the people responsible for each interface acknowledge this responsibility and have the necessary resources?	PM24	Does an integrated master plan exist that defines all key interfaces for RPP? Do the people responsible for each interface acknowledge this responsibility and have the necessary resources?	1.5 1.6 4.10		RPP Program Management Plan

Table 4. External Independent Review Team Line of Inquiry to CHG Deliverables Crosswalk. (8 Sheets)
Nuclear Regulatory Requirements (3 Sheets)

Table 4. External Independent Review Team Line of Inquiry
to CHG Deliverables Crosswalk. (18 Sheets)
Nuclear Regulatory Requirements (3 Sheets)

Implementation Document		
Level	Line #	Line of Inquiry
Nuclear Regulatory Requirements	NR15	Compare the plan and procedures for regulatory oversight of RPP privatization against the Corrective Action/Enforcement Action Program RUE-RG-98-06.
	NR16	Review mechanisms to handle deficiencies and non-compliance.
	NR17	Review MOA and MOU for Regulatory Unit and BNFL contractual requirements.
	NR18	Review Regulatory Unit governing documentation.
	NR19	The RIU is unique in DOE. Why?
	NR20	Does RIU have sufficient authority? What are the lines of authority? What is the resolution process for disputes between DOE and BNFL? Between Operations Offices? Between DOE Departments?
	NR21	How is DOE ORP strengthening RIU's interface with other regulatory agencies?
	NR22	How is DOE RIU strengthening RIU's interface with other regulatory agencies?
	NR23	How is DOE-DOE strengthening/supporting RIU's interface with other regulatory agencies?
	NR24	What does the Memorandum of Agreement between DOE EH and DOE EM cover?
	NR25	What does the Memorandum of Understanding cover?
	NR26	The original contractual language between DOE and BNFL did not precisely describe regulatory needs. Does it work for the RIU to use Position Papers to provide clear guidance and expand on the expectations where contractual language was felt to be inadequate?
	NR27	What has been incorporated into the contract, e.g., papers on Backfit and authorization?
	NR28	How is the RIU turning around the impression that DOE is inauthentic to its responsibilities and blames the contractor?
	NR29	Are there enough people in the RIU for the upcoming reviews, given that the reviews have fixed deadlines?
	NR30	Pressure to meet the schedule may force bad decisions. How will RIU reviews catch these?
	NR31	What actions does the RIU take to correct an issue/finding? (Choose an issue and walk through the steps taken until it was resolved.)
	NR32	If other RIU brings in outside specialists or expertise, how can they be easily integrated into the RIU team?
	NR33	Explore exposure guidelines and dose to worker. Provide additional details.
	NR34	How are RIU responsibilities assigned BNFL with regards to the Authorization Basis?
	NR35	What aspects of design are detailed in the Authorization Basis?
	NR36	Is the BNFL Authorization Basis up-to-date? Are appropriate standards incorporated? How can they verify this?
	NR37	Does BNFL Authorization Basis meet with RIU approval?
	NR38	How many tasks are currently being considered?
	NR39	Which are being used by BNFL in the worst case scenarios for radiation doses engineering design control/mitigation?
	NR40	How do they determine BNFL's readiness to handle emergencies?
	NR41	How do they determine ORP's readiness to handle emergencies?
	NR42	How do they determine BNFL's readiness to address emergencies?
	NR43	How do they determine CHG's ability to address emergencies?

Table 4. External Independent Review Team Line of Inquiry
to CHG Deliverables Crosswalk. (18 Sheets)
Nuclear Regulatory Requirements (3 Sheets)

Nuclear Regulatory Requirements		Level	LOI #	Lines of Inquiry	CRAD(s)	Comments
			NR44	Does BNFL's processes address the handling of land responding to emergencies? How do they verify this?	N/A	
			NR45	Does CHG have an ability to address explosive gas generation/collection in pipelines? How do they verify this?	N/A	CHG has documents to control, but this is unrelated to RU
			NR46	How is BNFL addressing any process changes if found after B-2 decision to proceed?	N/A	
			NR47	How is RU gearing up to review these documents?	N/A	
			NR48	Who in ORP will review the HAR and how long will it take?	N/A	
			NR49	If Dr. Clark Gibbs left the RU, who would become its champion?	N/A	
			NR50	Who is BNFL's regulatory champion?	N/A	
			NR51	Who is CHG's regulatory champion?	N/A	CHG documents apply, but this is unrelated to RU.
			NR52	What is the public response to the RU? How is this measured?	N/A	
Vol. 1				Spec 3		

Table 4. External Independent Review Team Line of Inquiry
to CHG Deliverables Crosswalk. (18 Sheets)
Technical Processes (Vitrification) (2 Sheets)

Technical Processes (Vitrification)		Line of Inquiry	CRAD(s)	CHG DOE/ ORP	Comments
T1	Documentation	Are the Process Verification Testing and Product Qualification deliverables completed and available?	TP1 Does the Process Verification Testing Program cover the appropriate range of activities? TP2 Does the Product Qualification testing meet the testing requirements of the 4 feed envelopes?	N/A	RPP-S-SD-MM-SP-012 Operations and Utilization Plan, RPP-613
T2		Have the functional requirements for the processing facility been defined?	TP3 Are these programs linked to the overall schedule in sufficient detail to permit good analysis of program requirements? TP4 Have the appropriate QA checks been incorporated to assure traceable documentation?	N/A	RPP Major Facility Technical Metrics Rel. Key
T3		Are all the codes and standards to be utilized in the facility design established?	TP5 Are the functional requirements applicable to the appropriate design areas? TP6 Review functional requirements for a selected portion of the process.	N/A	TWR-S System Engineering Documents
T4		Is the Engineering and Design Standards Requirements Document completed and available?	TP7 Are the codes and standards for all design disciplines included?	N/A	Final System Architecture, HNF-2017
T5		Are the Functional Specifications completed and available?	TP8 Are all of the disciplines covered in the Standards Document? TP9 Are the documents readily available to the using personnel?	N/A	Project Summary, RPP-504
T6		Is the Waste Form Compliance Plan (WCP) Final H.L.W completed and available?	TP10 Are the Functional specifications sufficiently detailed to assure good design direction? TP11 Are the documents readily available to the using personnel?	N/A	Project Description, RPP-513
T6A		Is there a formal Configuration Control Program	TP12 Is the document approved? TP13 Does the document cover all the Waste Acceptance Product Specification requirements? TP14 Has implementation logic been developed that defines tasks and responsibilities?	N/A	Configuration Plan HNF-1900
T7	Waste Processing	Has the expected performance for processing the four (4) waste envelopes been defined?	TP15 Are the 3 LAW material balances integrated with the HAW material balance? TP16 Are the R & D programs associated with the difficult process steps?	N/A	Waste Management Plan HNF-1947
T8		Is there a formalized technical logic outlining the approach to deal with the critical issues associated with technical processing (vitrification) of the TWRs wastes?	TP17 Does a knowledge profile exist for each process step showing current base line and development needs?	N/A	Waste Disposal Plan HNF-1882
T9		Is a complete process flow sheet available for technical processes (vitrification)?	TP18 Does an integrated material balance exist including recycle streams? TP19 Do the dispositions appear appropriate for the concern?	N/A	Waste Treatment and Safety Plan HNF-1722
T10		Have other major internal and external technical reviews been conducted to date on the BNFL technical processes? Are summaries of the findings available? Is there a formalized system to track and respond to comments and recommendations?	TP20 Does the program follow the recommendations through the implementation actions?	N/A	Waste Disposal Plan HNF-1881
T11		Have the key process vulnerabilities been analyzed, and have options to work around problems been identified?	TP21 Review actions taken as a result of earlier independent reviews and operating experience from other DOE sites.	N/A	Waste Disposal Plan HNF-1882
			TP22 Has a formal risk assessment been made for each process step?	N/A	Waste Disposal Plan HNF-1883
			TP23 Have alternative systems/approaches been evaluated for high risk technology? What is status of alternatives?	N/A	Waste Disposal Plan HNF-1884

Table 4. External Independent Review Team Line of Inquiry
to CHG Deliverables Crosswalk. (18 Sheets)
Technical Processes (Vitrification) (2 Sheets)

Technical Processes (Vitrification)		Level	Documentation	LOI #	Line of Inquiry	CHG	DOE/ ORP	Comments
	Program Management				TP24 At what point in the design is RAMI implemented?	N/A		
T12	Has integration of design/operation/support been established?				TP25 What is the frequency of reviews? Are formal minutes kept?	N/A		
					TP26 Is a list of open items kept and dispositioned?	N/A		
					TP27 How are they integrated into the design needs?			
T13	Is there an integrated program schedule which indicates the key activities of all the organizations involved in the ORP technical processes?				TP28 How are they integrated into the overall schedule?	N/A		
					TP29 Are there any significant open items/technical issues unresolved?	N/A		
					TP30 Have the responsibilities for each organization been delineated?	N/A		
					TP31 Are the authority/responsibility relationships appropriate for prompt resolution of problems?	N/A		
T15	Are clear lines of authority/responsibility for each organization/entity established and documented?				TP32 At what level of the organization are team coordinations formalized?	N/A		
					TP33 Are procedures formalized to ensure proper involvement at all steps of R&D?	N/A		
					TP34 Are R&D sub contractors controlled through formalized N/A			
					TP35 Scopes of work?			
					TP36 Is there a formalized interface agreement between all N/A			
					TP37 Are cross-cut teams appointed to process areas to minimize rework?	N/A		
T16	Are detailed interface agreements between the various entities involved in the technical processes defined and documented?				TP38 What are staffing plans as the project progresses?	N/A		
					TP39 Are the organizations self supporting in their needs?	N/A		
					TP40 What is the manager to supervisor ratio?	N/A		
					TP41 What is the supervisor to worker ratio?	N/A		
T17	Are current projected levels of staff adequate to fulfill the requirements of the BNFL program for technical processes?				TP42 What is the technician/draftsman support level?	N/A		
					TP43 What is the administrative support percentage?	N/A		
T18	Are the staff appropriately trained and educated to fulfill project requirements?				TP44 Are there formalized training programs for the respective functions?	N/A		
					TP45 What is the QA staffing and experience?	N/A		

Table 4. External Independent Review Team Line of Inquiry
to CHG Deliverables Crosswalk. (18 Sheets)
Environmental (1 Sheet)

Implementation Document		LOI #	Lines of Inquiry	CRD(s)	RPP / DOE / ORP	Comments
Level	NEPA documentation					
E1	Are there any Findings of No Significant Impact?	EL1	Verify item is satisfied	N/A	7.2	
E2	Are there any Environmental Impact Statements?	EL2	Verify item is satisfied	N/A	7.2	
E3	Are there any Environmental Impact Statements?	EL3	Verify item is satisfied	N/A	7.2	
For Tanks		EL4	Verify item is satisfied	N/A	7.2	
For Cradle-to-Site Pipeline		EL5	Verify item is satisfied	N/A	7.2	
For the Offshore Boxes		EL6	Verify item is satisfied	N/A	7.2	
E4	Is NEPA documentation in place for all tasks, subprojects and line item projects under the ORP (TWRS)?	EL7	Determine if compliance is achieved	7.2	7.2	
E5	Is NEPA documentation to be completed prior to final commitment to an alternative?	EL8	Determine if compliance is achieved	7.2	7.2	
E6	Have training requirements been met?	EL9	Determine if compliance is achieved	7.2	7.2	
E7	OSHA	EL10	Determine if compliance is achieved or if items/issues appear to repeat	7.4	7.4	
		EL11	CHG is required to provide annual ES&H safety training for their subcontractors. Do records exist? Are the health and safety plans complete?	7.4	7.4	
RCRA	Have compliance requirements been identified?	EL12	Determine if compliance is achieved or if items/issues appear to repeat	7.6	7.6	
E8		EL13	Determine if RCRA TSD permit	7.6	7.6	
		EL14	Determine status of high level waste de-listing. How will the product be characterized to support this de-listing?	N/A	7.7	
TSCA		EL15	Determine if TSCA constituents are present in tank waste, and require a treatment. If so, what impact will this have on the project?	7.7	7.7	
	Compliance Tracking	EL16	Determine if compliance is achieved or if items/issues appear to repeat	7.1.3	7.1.4	
E9	Is there a tracking system for current and historical compliance issues					
Quality Assurance	Has the waste in the tanks been characterized completely?	EL17	Determine if personnel are knowledgeable in 'Tank' Farm Waste Transfer Compatibility Program	3.6	7.8	
E10		EL18	Determine if personnel are knowledgeable in GARD requirements	7.8	7.8	
	Health and Safety plans	EL19	Determine if exists in BNFL 4/24 deliverable	N/A		
E11	Is there quality assurance plan for transfer of wastes to/from the appropriate tanks?	EL20	Determine if exists in BNFL 4/24 deliverable	N/A		
E12	Have Health and Safety plans been developed?					
E13	Are your Emergency Response requirements identified?					
Permitting	Are there 'Road Maps' for permitting? Provide	EL21	For RPP, what permits are required and are in place for DOE/CHG/GMFL? Determine if process in place to achieve compliance. How do they verify this?	7.7		
E14		EL22	Have noise levels been established for pumping the waste? Is this a problem?	7.4.1		
E15	Noise level					
	Have noise levels been established for pumping the waste?					
E16	Process Hazards	EL23	Determine compliance	8.1		
	Have process hazards been identified?					

Table 4. External Independent Review Team Line of Inquiry
to CHG Deliverables Crosswalk. (18 Sheets)
Facilities and Construction (5 Sheets)

Implementation Document					
Level	Documentation	LOI #	Lines of Inquiry	CHG	DOE/ ORP
	DOE HQ (EM, EN, PC, CI)				
FC1	Management plans developed to accomplish required reviews?	F1	Are DOE-HQ Readiness to Proceed Criteria and Evaluation in a HQ management Plan or documented? (to assure appropriate criteria and readiness)	N/A	
FC2	Are required review organizations identified?	F2	Are HQ personnel personally reviewing the BNFL deliverables? (to assure deliverable copies and/or travel arrangements and facilities needed to support scheduled reviews, concurrence, approvals have been incorporated in HQ planning)	N/A	
FC3	Are responsibilities and authorities identified?	F3	Does HQ support the B-2 Summary Level Flow Path 2000? (to assess HQ leadership/champions; personnel buy-in and commitment; understanding of responsibilities; resource requirements to support schedule; and the impact if an Acquisition Advisory Board is convened)	N/A	
FC4	Have resource requirements been identified?	F4	Do the HQ, ORP & RL communication Plans support the schedule and review requirements? (to assure offices having cognizance over facilities and construction have adequate pre-knowledge of required information thus supporting expedited review and approval schedules)	N/A	
	DOE-RUEFDH				
	Scope of Work				
FC5	Are deliverables defined to support the program? Are standards and performance criteria defined?	F5	Are cost and schedules baseline, updated and monitored? Are critical paths identified and monitored? (to assure baseline cost estimates and schedules exist and are updated; critical path(s) have been determined; costs and schedules are monitored and tracked; funding requirements/sources have been defined and committed; WBS is used, required infrastructure and support services are timely to support RPP mission; contingencies are incorporated)	N/A	
FC6	Are baseline cost estimates developed and funding sources identified?	F6	Is funding adequate and committed to support the mission? ...	N/A	
FC7	Are interfaces with other facilities and contractors established?	F7	Do all the documents that define interface/infrastructure support requirements exist? If so, where? (to assure infrastructure support requirements and standards are adequately defined and scheduled)	N/A	
FC8	Has a WBS been developed?	F8	Are the documents defining WBS? (to assure compatibility with integrated WBS)	N/A	
FC9	Management	F9	Are RUEFDH Management controls and standards appropriate to support RPP? (to assess management plans and procedures support of RPP; consistency and implementation of engineering, design and construction standards throughout RUEFDH applicable projects and across interfaces; incorporation and adequacy of change control and configuration management and their integration with other elements of the program)	N/A	
FC10	Has a management plan been developed to accompany the required work?	F10	Have Corrective Action Programs addressed previous review and audit findings? (to assess implementation and close-out of findings/recommendations from previous other reviews (including self-assessments) and how these items are addressed in a lessons-learned environment to help minimize and/or highlight repeat items; evaluate root cause analyses, if any are appropriate)	N/A	
FC11					
FC12					
FC13	Is there a formal process for change control?				
FC14	Is there a corrective action tracking/close-out program?				
FC15	Are organization responsibilities and authorities established?				
FC16					

Table 4. External Independent Review Team Line of Inquiry
to CHG Deliverables Crosswalk, (18 Sheets)
Facilities and Construction (5 Sheets)

Implementation Document		CRD(s)	
		Line of Inquiry	Comments
Facilities and Construction		TO1 #	
FC17	Is there a risk management program?	F11	Are risk management results being used? (to assess incorporation of risk management as an element of project management, facility design and construction management and its roll-up of the RPP/HID program to the RPP integrated risk management)
FC18	Have RPP criteria been established/evaluated?	F12	Was RPP/HID Readiness to Proceed Criteria and Evaluation adequate? (to assure appropriate criteria and readiness)
Personnel	Are personnel trained and qualified?	F13	Is there an established training program that ensures a qualified/continued resource of personnel? (to assess background, qualifications, and training of personnel core competencies; continuity of direction and "corporate memory" to contribute to program success)
FC19		F14	Have resource studies been completed to assure required support staff? (to assess resource staffing studies and plans assuring adequate support; critical skills and contingency planning; integration of resource needs planning with other parts of RPP)
FC20	Are resource requirements identified?		
Integration	See ORP?		
ORP			
FC21	Scope of Work Are contractor/ORP deliverables defined to support the program?		N/A
FC22	Are contractor/ORP standards and performance criteria defined?		
FC23	Are contractor/ORP baseline schedules and critical paths identified?		N/A
FC24	Are contractor/ORP baseline cost estimates developed and funding sources identified?		N/A
FC25	Are contractor/ORP interfaces defined?		N/A
FC26	Has a contractor/ORP WBS been developed?	F15	Are there documents defining WBS? (to assure compatibility with integrated WBS)
Management			
FC27	Has a management plan been developed to accomplish the required work?		N/A
FC28	Is there a formal process for change control?		N/A
FC29	Is there a corrective action/tracking/close-out program?	F16	Have Corrective Action Programs addressed previous review and audit findings? (to assess implementation and close-out of findings/recommendations from previous/other review(s) [including self-assessments] and how these items are addressed in a lessons-learned environment to help minimize and/or highlight repeat items; evaluate root cause analyses, if any are appropriate)
FC30	Is there a structured organization?		N/A
FC31	Are organization responsibilities and authorities established?		N/A
FC32	Is there a risk management program?		N/A
FC33	Does organization support oversight/monitoring role?		N/A
Personnel	Have RPP criteria been established/evaluated	F17	Was RPP/HID Readiness to Proceed Criteria and Evaluation adequate? (to assure appropriate criteria and readiness)
FC34	Are personnel trained and qualified?	F18	Is there an established training program that ensures a qualified/continued resource of personnel? (to assess background, qualifications, and training of personnel core competencies; continuity of direction and "corporate memory" to contribute to program success)
FC35			
FC36	Are resource requirements identified?	F19	How will future personnel resource requirements be handled?

Table 4. External Independent Review Team Line of Inquiry
to CHG Deliverables Crosswalk. (18 Sheets)
Facilities and Construction (5 Sheets)

Implementation Document			
Level	LOI #	Line of Inquiry	CR/Adv.
Facilities and Construction			
Integration	FC27	Has an integrated management plan been developed?	N/A
	F20	Are the PIQ efforts proceeding as scheduled? (to assess the schedule/metrics/success in integrating management plan, change controls, cost estimates, schedules, monitoring and trending, contingency planning, WBS use, standards requirements, configuration management, resource studies and planning; assure that efforts are timely and beneficial to ensuring the mutual success of all parties and accomplishment of the RPP overall mission)	N/A
	FC28	Has an integrated schedule and critical path been developed?	N/A
	F21	Are integrated cost and schedules baseline, updated and maintained? Are integrated critical paths identified and monitored? (to assure baseline cost estimates and schedules, specifically supporting ORP, exist and are updated; critical path(s) have been determined; costs and schedules are monitored and trending; funding requirements/sources have been defined and committed; WBS is used; contingencies are incorporated)	N/A
	FC29	Has program integrated risk management been developed?	N/A
	F22	Has risk management integration been completed?	N/A
	FC30	Are required interfaces identified and appropriate controlling documents (ICs, MOLs) established?	N/A
	F23	Does the ORP Communication plans support schedule and review requirements? (to assure all parties participating, in, and necessary for the success of the RPP have established lines of communication; integrated RPP, as well as individual participant, critical paths and priorities are communicated and understood; integrated RPP vision and goals, as well as individual participant visions and goals are communicated to all levels; and all personnel are working to assure the mutual success of all parties and the overall success of the RPP)	N/A
	FC31	Are integrated resource/resource needs established?	N/A
	FC32	Does the ORP Communication plans support schedule and review requirements? (to assure all parties participating, in, and necessary for the success of the RPP have established lines of communication; integrated RPP, as well as individual participant, critical paths and priorities are communicated and understood; integrated RPP vision and goals, as well as individual participant visions and goals are communicated to all levels; and all personnel are working to assure the mutual success of all parties and the overall success of the RPP)	N/A
	FC33	Are interfaces with other facilities and contractors established?	N/A
	FC34	Has a WBS been developed?	N/A
	F25	Are there documents defining WBS? (to assure compatibility with integrated WBS)	N/A
	FC35	Are standards and performance criteria defined?	N/A
	FC36	Are baseline schedules and critical paths identified?	N/A
	FC37	Are baseline cost estimates developed and funding requirements identified?	N/A
	FC38	Are interfaces with other facilities and contractors established?	N/A
	FC39	Has a management plan been developed to accomplish the required work?	N/A
	F26	Are there management processes, procedures, controls and standards, supplementary to the deliverables supporting of a quality facility design and construction? (to assess processes, procedures, controls, standards, review/wall-assessments, change control and configuration management; assuring quality facility design, engineering and construction planning)	N/A
	FC40	Is there a formal process for change control?	N/A
	FC41	Is there a corrective action/fixing/fixes-out program?	N/A
	FC42	Are deliverables defined to support the program?	N/A
	F24	We will review selected BNFL deliverables. (to assess management, controls, construction engineering and design, schedules, construction planning, and interfaces meeting mission needs and requirements)	N/A
	FC43	Are standards and performance criteria defined?	N/A
	FC44	Are baseline schedules and critical paths identified?	N/A
	FC45	Are baseline cost estimates developed and funding requirements identified?	N/A
	FC46	Are interfaces with other facilities and contractors established?	N/A
	FC47	Has a management plan been developed to accomplish the required work?	N/A
	FC48	Is there a formal process for change control?	N/A
	FC49	Is there a corrective action/fixing/fixes-out program?	N/A
	FC50	Have Corrective Action Programs addressed previous review and audit findings? (to assess implementation and close-out findings/recommendations from previous/other reviews (including QA audits and self-assessments) and how these items are addressed in a lessons-learned environment to help minimize and/or highlight repeat items; evaluate root cause analyses, if any, are appropriate)	N/A
	FC51	Is there a structured organization?	N/A
	FC52	Are organization responsibilities and authorities established?	N/A

Table 4. External Independent Review Team Line of Inquiry
to CHG Deliverables Crosswalk. (18 Sheets)
Facilities and Construction (5 Sheets)

Facilities and Construction		Level	LOI #	Line(s) of Inquiry	CRLC(s)	Implementation Document	
						Comments	Comments
		F-53	Is there a risk management program?	F-28	Are the risk management results being used? (to assess incorporation of risk management as an element of project management, facility design, engineering and construction management and the roll-up of the RPP, program to the RPP, integrated risk management)	N/A	
		F-54	Have RTP criteria been established/evaluated?	F-29	Was the Readiness to Proceed Criteria and Evaluation adequate? (to assure appropriate criteria and readiness)	N/A	
	Personnel	F-55	Are personnel trained and qualified?	F-30	Is there an established training program that ensures a qualified-confirmed resource of personnel? (to assess background, qualifications, and training of personnel, core competencies, continuity of direction and corporate memory, to contribute to program success)	N/A	
		F-56	Are resource requirements identified?	F-31	Have resource studies been completed to assure required support staff? (to assess resource staffing studies and plans, assuming adequate support, critical skills and contingency planning, integration of resource needs planning with other parts of RPP)	N/A	
			Integration See CHG				
		F-57	Scope of Work Are deliverables defined to support the program?		3.1 1.1.1		
		F-58	Are standards and performance criteria defined?	F-32	Where are the standards and performance criteria defined for the tank waste characterization and control, and facility safety? (to assess the program for waste characterization including qualification, addition, deletion, and control of tanks and wastes in the baseline program; program process to ensure continued confidence in knowledge of characterization if there are waste additions; open issues affecting the tanks and facilities to support the RPP; status/disposition, if any, of any NCS concerns)	3.1 3.7 1.2 3.0 4.1 4.4 4.10	
		F-59	Are baseline schedules and critical paths identified?	F-33	Are the baseline schedules and critical paths identified so that the cost estimates and schedules are monitored and tracked? (to assure baseline cost estimates and schedules exist and are updated; critical path(s) in particular for line item projects, have been determined; cost and schedule monitoring and trending, funding requirements sources have been defined and committed; WBS is used; required waste delivery capabilities, infrastructure and support services are timely to support RPP mission; contingencies are incorporated).	4.1 4.4 4.10	
					Are the any unique materials or equipment required? (to assure adequate consideration of lead-times necessary for materials and equipment; and the ability to provide equipment and deliver wastes to meet interface and infrastructure requirements and support the overall success of the RPP)	5.1 5.2 6.1	
		F-60	Are baseline cost estimates developed and funding sources identified?	F-34	Are there any unique materials or equipment required? (to assure adequate consideration of lead-times necessary for materials and equipment; and the ability to provide equipment and deliver wastes to meet interface and infrastructure requirements and support the overall success of the RPP)	4.9	
		F-61	Are interfaces with other facilities and contractors established?	F-35	Is funding adequate and committed to support the mission?	1.5	
				F-36	Where are the documents that define waste delivery, interface and infrastructure support requirements? (to assure waste delivery and other support requirements and standards are adequately defined and scheduled.)	4.9	

Table 4. External Independent Review Team Line of Inquiry
to CHG Deliverables Crosswalk. (18 Sheets)
Facilities and Construction (5 Sheets)

Implementation Document									
Level	Facilities and Construction	LoI #	Line of Inquiry	CRAD(s)	Comments	Comments	Comments	Comments	Comments
F052	Has a WBS been developed?			1.1.2 1.6.2					
F053	Management Has a management plan been developed to accomplish the required work?	F37	Are the CHG management controls, design, engineering and construction standards appropriate to support the RPP? (to assess management plans and procedures necessary to support the RPP; consistency and implementation of engineering, design and construction standards; use of value engineering concepts; interfaces; incorporation and adequacy of change control and configuration management and their integration with other elements of the program)	1.6					
F054	Is there a formal process for change control?			1.4					
F055	Is there a corrective action/tracking/closes-out program?	F38	Have Corrective Action Programs addressed previous review and audit findings? (to assess implementation and close-out of findings/recommendations from previous/other reviews [including self-assessments] and how these items are addressed in a lessons-learned environment to help minimize and/or highlight repeat items; evaluate root cause analyses, if any are appropriate)	7.8A.4					
F056	Is there a structured organization?			1.3					
F057	Are organization responsibilities and authorities established?			1.3					
F058	Is there a risk management program?	F39	Are risk management results being used? (to assess incorporation of risk management as an element of project management, facility design, engineering and construction to the RPP integrated risk management program)	8.1 8.2					
F059	Have RTP criteria been established/evaluated?	F40	Are Readiness to Proceed Criteria and Evaluation adequate? (to assure appropriate criteria and readiness)	1.1.9.2					
F060	Personnel Are personnel trained and qualified?	F41	Is there an established training program that insures a qualified/continued resource of personnel? (to assess backgrounds, qualifications and training of personnel core competencies; continuity of direction and "corporate memory" to contribute to program success)	4.8 1.3 7.1					
F061	Are resource requirements identified?	F42	Have resource studies been completed to assure required support staff? (to assess resource/staffing studies and plans assuring adequate support critical skills and contingency planning; integration of resource needs planning with other parts of RPP)	4.8					
F062									

Table 4. External Independent Review Team Line of Inquiry to CHG Deliverables Crosswalk. (18 Sheets)
Business and Finance (2 Sheets)

Table 4. External Independent Review Team Line of Inquiry
to CHG Deliverables Crosswalk. (18 Sheets)
Business and Finance (2 Sheets)

Implementation Document			
Level	Criteria	LoI #	Line of Inquiry
Business & Finance		BF33	Has the Contractor Risk been analyzed?
		BF34	Has the DOE Risk been analyzed?
		BF35	Has the Appropriation risk been analyzed?
		BF36	Has the Default risk and its impact been analyzed?
	Contracting	BF37	Is there documentation supporting the contractual method and is it compliant with the Congressional directive?
		BF38	Who approves or reviews the input for the Monte Carlo analysis?
		BF39	What measures have been considered to mitigate risk?
		BF40	How do other areas input into the contracting negotiations?
		BF41	Are there elements which are not negotiable?
		BF42	Is there a schedule to keep personnel up to date during contract negotiations?
		BF43	Is DOE legal involved in all aspects of the contract, including contract negotiations?
		BF44	Have DOE-HQ and ORP considered the type and form of Contractor Debt Credit Support?
		BF45	Who will draft the "Opinion letter?"
		BF46	Who will sign the "Opinion letter?"
		BF47	Will the "DOE Undertaking" be available for financial institutions that provide credit support to any short-term debt issues?
		BF48	Will the "DOE Undertaking" be available for financial institutions that provide credit support to any financial hedging products?
		BF49	Is DOE using outside counsel? If so please identify.
		BF50	What is DOE Legal's involvement with respect to other commitments being made, i.e. environmental, regulatory, etc.?
	Staffing	BF51	Have you located personnel with the necessary skills for financing evaluation?
		BF52	Is there back-up identified and in place for key positions?
		BF53	Have outside professional services been considered in all key areas such as legal, finance, etc.?
		BF54	Most major transactions have an "all hands" listing that contains all names, contact addresses and phone numbers for the team(s). Where is such a list for this project?
		BF55	Is there a budget for additional or external resources?
	Management	BF56	Is there a work breakdown structure defining clear lines of authority?
		BF57	Who establishes negotiation position on key issues?
		BF58	Most major projects have a detailed (closing schedule) timeline from conception to closing. Where is the timeline for this project?
		BF59	Hamford has a traditional or functional organization chart, but the project appears to operate on a "matrix management" chart. Where is the "matrix management" chart?
		BF60	Has the Office of River Protection (ORP) developed a Project Tracking System?
		BF61	Is there a Change Control Process?

Table 4. External Independent Review Team Line of Inquiry
to CHG Deliverables Crosswalk. (18 Sheets)
Waste Processing (3 Sheets)

Implementation Document									
Level	Documentation	LOI #	Line of Inquiry	CHAD(s)	DOE/CRP	Comments	Waste Processing	Waste Processing	Waste Processing
W1	Are the Process Verification Testing and Product Qualification deliverables compiled and available?	NW1	Does the Process Verification Testing Program cover the appropriate range of activities?	3.6					
			NW2 Does the Product Qualification testing meet the testing requirements of the 4 lead envelopes?	3.6					
			NW3 Are the programs related to the overall schedule in sufficient detail to permit good analysis of program requirements?	4.10					
			NW4 Have the appropriate OA checks been incorporated to assure traceable documentation?	7.8					
			NW5 Have the functional requirements applicable to the appropriate design areas?	3.1.1					
			NW6 Review functional requirements for a selected portion of the process.	3.1.1					
			NW7 Are the codes and standards for all design disciplines included?						
			NW8 Are all of the disciplines covered in the Standards Document?						
			NW9 Are the documents readily available to the using personnel?						
			NW10 Are the Functional specifications sufficiently detailed to assure good design direction?	3.1.1					
			NW11 Are the documents readily available to the using personnel?	3.2.1					
			NW12 Is the document approved?	3.7					
			NW13 Does the document cover all the segments of the waste disposal site requirements?	3.7					
			NW14 Has implementation logic been developed that defines tasks and responsibilities?	3.7					
			NW15 Does the process cover all project aspects						
			NW16 Does it include a safety review						
			Delivery of Waste						
W7	Is the level of funding for CHG adequate to support TWRS waste processing?	NW15	Does the cost profile appear consistent with the scheduled activities?	6.1					
W8	Are the staffing/resource levels projected adequate to support the TWRS waste processing?	NW16	Does the split of disciplines appear appropriate?	7.6.3					

Table 4. External Independent Review Team Line of Inquiry
to CHG Delivers Crosswalk. (18 Sheets)
Waste Processing (3 Sheets)

Waste Processing		Level	LOI #	Line of Inquiry	CRAs/As	Comments
		W9	NW17	What level of site staff support (F7) is required?	N/A	
			NW18	Is the four (4) waste envelopes been qualified for waste processing?	3.6 4.1 X	NOAs define scope of work F7: 2000 Tank Characterization, Technical Sampling, Waste and Waste Information Requirements Document, HNF-4048
		W10	NW19	Is the waste feed delivery system (pipeline feed) design complete?	3.6 X	RPP-SD-WM-SP-012 Operational Readiness and Utilization Plan, Key
			NW20	Do pipelines exist for the early tanks complete? Does the schedule for the other tanks appear appropriate?	3.3 X	FY 2000 Tank Characterization, Technical Sampling, Waste and Waste Information Requirements Document, HNF-4048
		W11	NW21	Have samples been taken and waste forms prepared from the candidate tanks?	3.6 X	
			NW22	Do pipelines exist for the early tanks complete? If not, are they scheduled for completion?	3.3 X	
		W12	NW23	Are the technical programs scheduled to resolve deficiencies in line with the system requirements?	1.1 X	RPP-RTF-2 Internal Review Team Report, HNF-5835
			NW24	Do the rest of the facility requirements appear to be in line with the user requirements?	X	RPP-RTF-2 Internal Review Team Report, HNF-5835
		W13	NW25	Are the technical programs scheduled to resolve deficiencies in line with the system requirements?	3.1.3 X	RPP-RTF-2 Internal Review Team Report, HNF-5835
			NW26	Does the technical programs include an integrated material balance and including recycle streams?	X	RPP-RTF-2 Internal Review Team Report, HNF-5835
		W14	NW27	Are critical process data available for process control?	X	RPP-RTF-2 Internal Review Team Report, HNF-5835
			NW28	Do the depositions appear appropriate for the concern?	X	RPP-RTF-2 Internal Review Team Report, HNF-5835
		W15	NW29	Does the program follow the recommendations through to implementation actions?	X	RPP-RTF-2 Internal Review Team Report, HNF-5835
			NW30	Review actions taken as a result of earlier independent reviews and operating experience from other DOE sites.	X	RPP-RTF-2 Internal Review Team Report, HNF-5835
		W16	NW31	Is the schedule strong and consistent with the integrated schedule?	X	RPP-RTF-2 Internal Review Team Report, HNF-5835
			NW32	Is the criteria in line with the Performance Assessment requirements?	7.7 X	RPP-RTF-2 Internal Review Team Report, HNF-5835
		W17	NW33	Is the schedule strong and consistent with the integrated schedule?	4.10 X	RPP-RTF-2 Internal Review Team Report, HNF-5835
			NW34	Is there a schedule for permitting of all new facilities and facilities which require permit modification?	4.10 7.7 X	RPP-RTF-2 Internal Review Team Report, HNF-5835
		W18	NW35	At what point in the design is FLMU implemented?	7.6.3 X	RPP-PRO-1989, Construction Program, Conceptual Phase
			NW36	What are frequency of reviews? Are formal minutes kept?	7.6.2 X	
		W19	NW37	Is a list of open items kept and dispositioned?	7.6.3 X	
			NW38	How are they integrated into the design needs?	7.6.3 X	
						Is there an integrated program schedule which indicates the key activities of all the organizations involved in the CRP waste processing program?

Table 4. External Independent Review Team Line of Inquiry
to CHG Deliverables Crosswalk. (18 Sheets)
Waste Processing (3 Sheets)

Waste Processing		Level	LOI #	Lines of Inquiry	CR/DA	Comments	Implementation Document	
				NW39	How are they integrated into the overall schedule?	4.10		
				NW40	Are there any significant open items/technical issues unresolved?	7.6		
		W20		NW41	Have the responsibilities for each organization been delineated?	1.3		
				NW42	Are the authority/responsibility relationships appropriate for prompt resolution of problems?	1.3 7.6.3		
				NW43	At what level of the organization are team coordinations formalized?	7.6.3		
				NW44	Are procedures formalized to ensure proper involvement at all steps of R&D?	1.5 3.1.3 4.9		
				NW45	Are R&D sub contractors controlled through formalized scopes of work?	2.2.1 3.1.3		
				NW46	Is there a formalized interface agreement between all disciplines?	1.5		
				NW47	Do cross-cut teams report to process areas to minimize rework?	1.5 4.9		
				NW48	What are staffing plans as project progresses?	4.8.1		
				NW49	Does a resource loaded schedule exist? Does it meet project decision point requirements?	4.5.3 4.8.1		
				NW50	Are the organizations staff supporting in their needs?	4.8.1		
				NW51	What is the manager to supervisor ratio?	4.8.1		
				NW52	What is the supervisor to worker ratio?	4.8.1		
				NW53	What is the technician/rateman support level?	4.8.1		
				NW54	What is the administrative support percentage?	4.8.1		
				NW55	Are there formalized training programs for the respective functions?	4.8.1		

