



U.S. Department of Energy  
**Office of River Protection**

0054427

P.O. Box 450  
Richland, Washington 99352

JAN 29 2001

01-AMPD-004

Mr. Michael A. Wilson, Program Manager  
Nuclear Waste Program  
State of Washington  
Department of Ecology  
P.O. Box 47600  
Olympia, Washington 98504

Mr. Douglas R. Sherwood  
Hanford Project Manager  
U.S. Environmental Protection Agency  
712 Swift Boulevard, Suite Five  
Richland, Washington 99352

RECEIVED  
FEB 13 2001  
EDMC

Addressees:

COMPLETION OF THE HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (TRI-PARTY AGREEMENT) INTERIM MILESTONES M-20-59, "SUBMIT DANGEROUS WASTE PERMIT APPLICATION FOR PHASE 1 TANK WASTE TREATMENT COMPLEX"; M-62-02, "SUBMITTAL OF HANFORD TANK WASTE TREATMENT ALTERNATIVES REPORT," AND TARGET MILESTONE M-62-04T, "READINESS TO PROCEED - SUPPORT TO PHASE 1 TREATMENT"

- References:
1. Ecology letter from C. Clarke to C. Huntoon, HQ, R. T. French, ORP, and K. Klein, RL, "Final Determination Pursuant to the Hanford Federal Facility Agreement and Consent Order (HFFACO) in the Matter of Hanford Site High-Level Radioactive Tank Waste Treatment Capacity Acquisition, Tank Waste Treatment and Associated Tank Waste Work Requirements," dated March 29, 2000.
  2. ORP letter from R. T. French to M. A. Wilson, Ecology, "Hanford Facility Dangerous Waste Permit Application Part A Forms 1 and 3, and Part B for the River Protection Project - Waste Treatment Plant," 00-OSS-299, dated April 26, 2000.
  3. ORP letter from G.H. Sanders to D. R. Sherwood, EPA and M. A. Wilson, Ecology, "Submittal of Hanford Tank Waste Treatment Alternatives Report", 00-ORP-012, dated March 1, 2000.

This letter notifies the State of Washington Department of Ecology and the U.S. Environmental Protection Agency of the completion of Tri-Party Agreement Milestones M-20-59 (Reference 2), M-62-02, and M-62-04T. It has come to our attention that a milestone completion letter was

Addressees  
01-AMPD-004

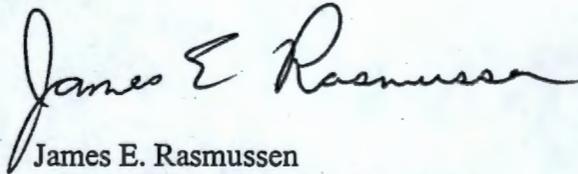
-2-

never submitted to your agencies that provided the necessary milestone reference for the completion of these Tri-Party Agreement Milestones. The attachment documentation illustrates the completion of these activities.

In one instance, Interim Milestone M-62-02 (Reference 3), had a scheduled completion date of March 1, 2000, which is earlier than the March 29, 2000, Director's Determination from Ecology (Reference 1). The U.S. Department of Energy, Office of River Protection (ORP) would appreciate your review of this material.

Please direct any questions to William J. Taylor, ORP, (509) 372-3864.

Sincerely,



James E. Rasmussen  
Environmental Policy Advisor  
Office of River Protection

AMPD:WJT

Attachment

cc w/attach:

J. H. Richards, CTUIR  
P. Sobotta, NPT  
R. Jim, YN  
W. T. Dixon, CHG  
C. C. Haass, CHG  
M. J. Riess, CHG  
S. J. Bensussen, CHG  
B. G. Erlandson, CHG  
R. D. Wojtasek, CHG  
S. L. Dahl, Ecology  
R. F. Stanley, Ecology  
M. Brown, Ecology  
J. S. Hertzell, FHI  
O. S. Kramer, FHI  
T. Martin, HAB  
M. B. Reeves, HAB  
M. L. Blazek, Oregon Energy  
C. E. Clark, RL  
H. M. Rodriguez, RL  
Administrative Record

United States Government

Department of Energy  
Office of River Protection**memorandum**

DATE: JUN 15 2000

REPLY TO  
ATTN OF: PGO:JAP 00-PGO-006

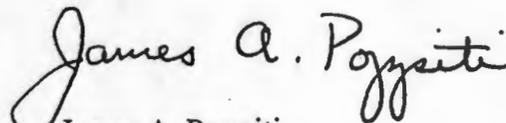
SUBJECT: DECLARATION OF READINESS TO PROCEED

TO: William J. Taylor  
Deputy Assistant Manager  
for Systems Acquisition

On April 24, 2000, the CH2M HILL Hanford Group, Inc. (CHG) formally certified their readiness to proceed with Phase I waste feed delivery, site infrastructure, and storage and disposal facilities necessary to manage the treated Phase I wastes. A team of federal staff, including myself, reviewed CHG's basis for their certification and concluded that CHG is indeed ready to proceed with their portion of Phase I.

We used the Criterion Requirements Analysis Documents (CRADs) developed in late 1999 and revised in early 2000, as the primary criteria for assessing CHG's readiness to proceed. A complete set of the CRADs applicable to CHG is attached to document our review and the basis of our conclusion.

While CHG is ready to proceed, two areas require attention. Specifically, these are programmatic baselines requiring unrealistic funding profiles, and quality assurance as it applies to construction activities. The recent External Independent Review concluded much the same. The U.S. Department of Energy, Office of River Protection and CHG have activities underway that should improve our performance in these areas. Nevertheless, the Office of the Assistant Manager for Systems Acquisition clearly has responsibility for these two areas and you need to ensure improved performance.

James A. Poppiti  
Program Office

Attachment

JUN 15 2000

William J. Taylor  
00-PGO-006

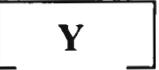
bcc: PGO OFF File  
PGO RDG File  
J. A. Poppiti, PGO

RECEIVED

JUN 15

Office >	PGO				DOE/OAS	
Surname >	POPPITI <i>Jap</i>					
Date >	<i>5/25/00</i>					

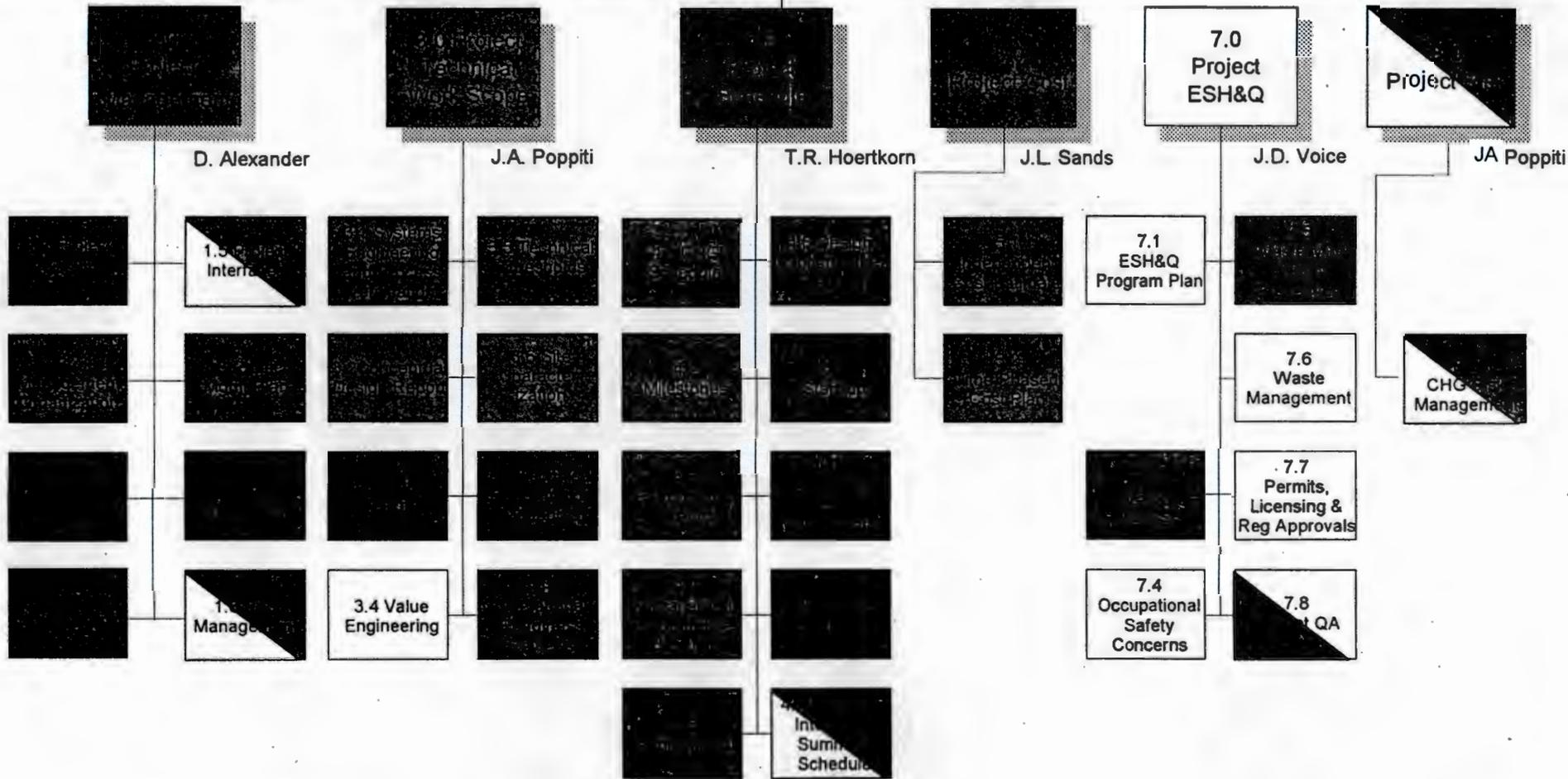
# CH2M HILL Hanford (CHG) – RTP Status

<u>Criteria</u>	<u>CHG</u>	<u>Remaining Issues</u>
1. Project Management		•Improve interface control, balance ICDs/IPTs
2. Project Mission		
3. Technical Work Scope		•Level Level 2 specs behind schedule
4. Project Schedule		
5. Project Cost		
6. Project Funding		
7. ESH&Q		<ul style="list-style-type: none"> <li>•Correct procurement QA issues</li> <li>•Update ISMS Program Plan</li> <li>•Complete QA Program Implementation</li> </ul>
8. Project Risk		<ul style="list-style-type: none"> <li>•Initiate lessons learned/feedback program</li> <li>•Assess critical risks over life-cycle</li> </ul>
9. Project Communications		

Legend:       
 Red Red/Yellow Yellow Yellow/Green Green



# Assessment of CRADs for CHG Readiness to Proceed



**Legend:**   
 Red Red/Yellow Yellow Yellow/Green Green Not Rated



## B-2 Decision Readiness to Proceed Self Assessment

<b>Criterion: 1.0 Project Management</b>		
<b>Subcriterion: 1.1 Project Work Scope: Do the appropriate project plans, systems and processes exist to describe, baseline and guide the project?</b>		
<b>Specific Considerations in Assessment:</b>		
1.1.1	Is the RPP work scope reflective of current/valid mission requirements? (CRAD Area 2.0 includes detailed considerations related to 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).	
1.1.3	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)	
<b>DOE Expectations:</b>		
1.1.1.1	The work scope planned for execution reflects current mission goals and objectives.	
1.1.1.2	There is process that ensures the work scope reflects current mission goals and objectives.	
1.1.2.1	The WBS structure is organized so the work scope can be described as a summation of subdivided elements.	
1.1.2.2	The WBS structure is organized so that cost and schedule performance can be effectively tracked.	
1.1.3.1	The RPP baseline includes scope, cost and schedule for all work by contractors and organizations	
<b>Rating Options</b>		
<b>Green:</b> Performance has given confidence that the ORP will be successful in meeting B-2 expectations.	<b>Yellow:</b> Corrective actions are needed to be confident that the ORP will be successful in meeting B-2 expectations.	<b>Red:</b> Performance has not given confidence that the ORP will be successful in meeting B-2 expectations.
<b>Assessment</b>		
<b>Expectations Met:</b>  1.1.1.1 The RPP FY 2000 Multi-Year Work Plan (MYWP), RPP-5044, documents the work scope planned for execution and how it relates to mission goals and objectives. This information can be found in the MYWP summary document section 1. Guidance for preparing annual work plans was found in LMH-MD-018, "FY 2000 Planning, Work Authorization, and Cost Collection Guidance", HNF-IP-0842, Volume VIII, section 1.3 REV 0b, "Baseline Planning and Control", and HNF-IP-0842, Volume X, section 3.8, REV 0a, "Integrated Planning Process". These procedures outline a process for the preparation and updating of the MYWP that ensures RPP work scope is connected to mission goals and objectives. The latter procedure provides a complete description of the integrated planning process within the RPP.	<b>Rating:</b>  Green	
1.1.1.2 The process that ensures the work scope is reflective of current mission goals and objectives is also outlined in implementing procedure HNF-IP-0842, Volume VIII, section 1.3 REV 0b, "Baseline Planning and Control". Section 5.4 "Baseline Management", indicates that ..."Scope impacts to the approved program technical, schedule, and cost baselines throughout the year are assessed and documented in a change request". Procedure HNF-IP-0842 Vol X, section 3.8 REV 0a paragraph 8.22 "Change Control of Integrated Baseline Documents", indicates all baseline defining documents (MYWP, TBRs, logic diagrams, etc.) ..."shall be placed under configuration and change control". This section points to the procedures to be used for changes to the RPP Baseline. These procedures provide the necessary processes for ensuring that work scope (MYWP) documents are maintained to reflect the RPP mission. Implementation of Change Control procedure completes this performance expectation.	Green	
1.1.2.1 Section 1 of the FY 2000 MYWP describes the organization of the RPP Work Breakdown Structure (WBS). Figure 1, "Fiscal Year 2000 Baseline Planning Matrix" describes the relationship between the various WBS levels and various other planning components like the logic, schedule, cost and scope. The first level of project organization is the Project Baseline Summaries (PBS) which is at the 3 <sup>rd</sup> WBS level, below the RPP and Hanford site WBS level. This matrix indicates that the MYWP plans to the 5 <sup>th</sup> level of the RPP WBS, followed by the	Green	

## B-2 Decision Readiness to Proceed Self Assessment

Technical Basis Review (TBR) process, which plans work to the 6<sup>th</sup> level of the WBS, or the work package level. The TBR process documents the description, requirements and enabling assumptions for the technical work scope, and also develops a resource loaded schedule documented with cost estimating input sheets (CEIS). This method of organization effectively describes the work scope as a summation of subdivided elements. The procedure for developing the WBS is RPP-PRO-518, rev 0.

Green

1.1.2.2 The current WBS allows the reporting and tracking of cost and schedule performance. A monthly status report by PBS on the performance of the CHG work scope is regularly generated. The report includes cost and schedule performance data, an analysis of the data (variation analysis), and a milestone achievement report. BNFL monthly performance is reported in the "BNFL Monthly Progress Report" which provides cost and schedule performance reports and analysis on their work scope they are performing.

Green

1.1.3.1 The RPP baseline as described in its FY 2000 MYWP includes the scope, cost, and schedule for all contractors.

**Basis for Assessment:**

RPP FY 2000 MYWP

LMH-MD-018, "FY 2000 Planning, Work Authorization, and Cost Collection Guidance"

CHG Implementing Procedure HNF-IP-0842, Volume VIII, section 1.3 REV 0b, "Baseline Planning and Control"

CHG Implementing Procedure HNF-IP-0842, Volume VIII, section 1.1, REV 0a, "RPP Baseline Change Control"

CHG Implementing Procedure HNF-IP-0842, Volume X, section 3.8, REV 0a, "Integrated Planning Process"

RPP-PRO-440, rev 0, "Engineering Document Change Control Requirements"

Management Directive LMH-MD-004 "RPP Change Control"

HNF-IP-842, Vol IV, Engineering, Sec 4.11, REV 1d, "Baseline Change Procedure"

RPP-PRO-518, rev 0, Work Breakdown Structure, Index, and Dictionary

Office of River Protection Monthly Performance Report -December 1999

BNFL Inc. Monthly Progress Report, November 1999

Interview with Don Lenseigne, CHG, 2/2/00

**Important Actions:**

1.1.2.2

- The RPP should have a single consolidated performance report for all its work scope being performed. (Larry Burdge, TBD)

### Signatures

Reviewers: *Donald M. ...*

Team Lead Approval

*James C. Poppiti*

Date: *5/25/2000*

Date: *5/25/2000*

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 1.0 Project Management

**Subcriterion 1.2 Performance Management:** Is there a performance management system in place to effectively improve performance of the project?

**Specific Considerations in Assessment:**

- 1.2.1 Are performance incentives defined so as to create quantifiable benefits to the project in terms of cost, time and risk reduction?
- 1.2.2 Are there systems, methods, and organizations to cause improved performance in terms of cost and schedule?

**DOE Expectations:**

- 1.2.1.1 ORP has established performance incentives for its contractors that reduce project cost, time and risk.
- 1.2.1.2 River Protection Project Incentives are structured to support and benefit from the PHMC Incentives.
- 1.2.2.1 The ORP contractors have an incentive to reduce costs and improve project performance.
- 1.2.2.2 ORP can capture improvements by changes to its planned schedule, cost, and scope.

#### Rating Options

**Green:** Performance has given confidence that RPP will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that RPP will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that RPP will be successful in meeting B-2 expectations.

#### Assessment

**Expectations Met:**

- 1.2.1.1 ORP has performance incentives that may reduce project cost, schedule and risk. Incentives were designed to require significant performance improvement over past years.
- 1.2.1.2 Performance Incentives were discussed between DOE-ORP and DOE-RL during their development for FY00. Each has access to the others' Performance Incentives.
- 1.2.2.1 The CHG contract and the BNFL draft contract contain significant incentives for reduced cost and improved performance. The BNFL contract is fixed price so the contractor has incentive to reduce costs to improve profit. The CHG contract contains Super Stretch incentives that reward the contractor for additional performance (up to 20% of cost) funded by cost reduction.
- 1.2.2.2 The Baseline Change Request system provides the opportunity for ORP to capture performance improvements in its baseline schedule and budget. BCR's involving performance incentives require approval by ORP.

**Expectations Not Met:**

**Rating:**

**GREEN**

**Basis for Assessment:**

- 1.2.1.1 Office of River Protection Incentive Fee Strategy, Performance Incentives Guidance
- 1.2.1.2 Interview Richard Johnston, Coordinator for Performance Incentives; Margo Voogd, RL Incentives Team FY00
- 1.2.2.1 BNFL – DE-AC06-96RL13308 Mod 010, Clause H.47, CHG – DOE AC06-99RL14047, Clause H.18 (outlines process), Appendix J (incorporates incentives in to contract)
- 1.2.2.2 Interview Susan Johnson, ORP Change Coordinator, Baseline Change Request Procedure draft HNF-IP-0842.

## B-2 Decision Readiness to Proceed Self Assessment

**Path Forward:**

All previously identified actions have been completed.

**Essential:**

**Improvements:**

### Signatures

Reviewers:

*Donald Alford*  
5/25/2000

Team Lead Approval:

*James A. Poppiti*  
5/25/2000

Date:

Date:

## B-2 Decision Readiness to Proceed Self Assessment

<b>Criterion: 1.0 Project Management</b>		
Subcriterion 1.3 Organization and Staffing: Can the Office of River Protection organize and staff to manage the River Protection Project during Phase I B-2?		
Specific Considerations in Assessment:		
1.3.1 Have staffing requirements for the ORP been defined and filled with skilled and experienced people?		
DOE Expectations:		
1.3.1.1 Present staff is sufficient to begin Phase 1B-2.		
1.3.1.2 The ORP staff is organized to manage the project.		
1.3.1.3 ORP can change its staff mix and skill as the needs of the project change.		
1.3.1.4 Key positions (i.e., RPP Project Manager, Deputy Administration, Deputy Manager Technical, Manager Operations, Manager Systems Acquisition, ESH&Q Manager, Project Integration Manager) have been defined and filled by qualified staff.		
<b>Rating Options</b>		
Green: Performance has given confidence that ORP will be successful in meeting B-2 expectations.	Yellow: Corrective actions are needed to be confident that ORP will be successful in meeting B-2 expectations.	Red: Performance has not given confidence that ORP will be successful in meeting B-2 expectations.
<b>Assessment</b>		
<b>Expectations Met:</b>  1.3.1.1 Present staff is sufficient to begin construction. 84 are on board, with 102 authorized. ORP supplements its staff with contractors, staff detailed from RL and other sites to meet peak demand. Staff from PNNL is working to assist ORP in the evaluation of the BNFL proposal. A task team has been organized with support of RL Human Resources to complete a staffing plan.  1.3.1.2 Draft staffing plan has been presented to DOE HQ. Task team has been organized to turn the draft plan into the final staffing plan.  1.3.1.3 Changes in staff through project life cycle can be met by recruitment and the ORP Work Scope Deliverables employee rating system. The WSD system focuses on assigning project work to each staff member, conducting training necessary to be successful in completing work, and measuring staff contribution to project completion. The senior staff will instruct their direct reports in the use of the system. It will be implemented completely in April 2000.		<b>Rating:</b>  Green
<b>Expectations Not Met:</b>  1.3.1.4 Key positions have been defined in the Draft ORP Organization Chart. Authority to hire Deputy Managers –Technical & PIO has been authorized. A manager for the Project Integration Organization has not been named (presently a member of CHG is filling this role). (ORP action).		
<b>Basis for Assessment:</b> 1.3.1.1 ORP Organization Chart 1.3.1.2 Draft Organization Chart January 2000 1.3.1.3 Work Scope Deliverables for River Protection Project 1.3.1.4 ORP Organization Chart		
CHG has implemented a Configuration Management Plan (HNF-1900) and a Change Control Procedure (RPP-PRO-518) which provide the necessary configuration control systems for the CHG work. These systems apply to all RPP Administrative Procedures (HNF-IP-0842). Formal training has been conducted on Change Control (Training Plan 79800-00-001).		
<b>Path Forward:</b>		
<b>Signatures</b>		

## B-2 Decision Readiness to Proceed Self Assessment

Reviewers: <i>Donald Dickson</i>	Team Lead Approval: <i>James L. Pappas</i>
Date: <i>5/25/2000</i>	Date: <i>5/25/2000</i>

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 1.0 Project Management

**Subcriterion 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?

**Specific Considerations in Assessment:**

- 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?
- 1.4.2 Does the process address scope, schedule, and cost changes to the Project baseline?
- 1.4.3 Does the process address performing contractor (i.e., BNFL, CHG) contract changes to the Project baseline?
- 1.4.4 Does the process link/integrate 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?
- 1.4.6 Have change control approval thresholds and authorities been established?
- 1.4.7 Have key Project staff been trained on the Change Control Plan or Procedure?
- 1.4.8 Is the change control process configured in a way that that promotes timely processing of changes to the Project baseline?
- 1.4.9 Have metrics been established for the monitoring and improvement of the performance of the change process?

**Expectations:**

- 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.
- 1.4.2.1 The change control process addresses scope, schedule, and cost changes to the Project's baseline.
- 1.4.3.1 The process addresses performing contractor (i.e., BNFL, CHG) contract changes to the Project baseline.
- 1.4.4.1 The process links/integrates scope, schedule, cost and contract changes.
- 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.
- 1.4.6.1 Change control approval thresholds and authorities have been established.
- 1.4.7.1 Key Project staff have been trained on the Change Control Plan or Procedure.
- 1.4.8.1 The change process is designed to promote timely processing of changes to the Project timely changes to the Project baseline.
- 1.4.9.1 Metrics for monitoring of the performance of the change process have been established and are being used to improve performance.

### Rating Options

**Green:** Performance has given confidence that the ORP will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that the ORP will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that the ORP will be successful in meeting B-2 expectations.

### Assessment

**Expectations Met:**

- 1.4.1.1 A well defined change control process has been developed for the River Protection Project. The process addresses the review, evaluation, approval, integration, and dispositioning of changes (across the Project, contractor organizations) to the Project baseline. The process has been developed using the Lockheed/CHG process/procedure and reflects a "seamless" ORP/CHG/BNFL process vs. a "stand-alone" project-level process. The process has been reviewed by ORP, CHG and BNFL staff. Implementation of Change Control Procedure completes this action.
- 1.4.2.1 The process addresses changes to the scope, schedule, and cost of components of the Project baseline.
- 1.4.3.1 The process addresses changes to the Project baseline driven by BNFL and CHG contract changes. The BNFL contract changes that are addressed are those relating to the Interface Control Documents (ICDs). CHG contract changes that are addressed are those relating to the MYWP. Implementation of the Change Control Procedure completes this action.

**Rating:**

**GREEN**

**GREEN**

**GREEN**

Final

Date: 5/15/00

## B-2 Decision Readiness to Proceed Self Assessment

1.4.4.1 The process links/integrates changes to the scope, schedule, cost components of the Project baseline, and changes driven by ICD and MYWP changes.	GREEN
1.4.5.1 A Change Control Procedure documenting the change process, including approval thresholds and authorities, has been developed for the Project. Implementation of the Change Control Procedure completes this action.	GREEN
1.4.6.1 Change control approval thresholds and authorities have been developed.	GREEN
1.4.7.1 A Training Plan for the Change Control Procedure has been developed. Implementation of the Change Control Procedure and training complete this action.	GREEN
1.4.8.1 The change control process incorporates features for timely processing of changes including: an "emergency" processing path allowing the change to be walked through the process. Changes are expected to be processed within 14-30 days, or sooner if the emergency path is exercised.	GREEN
1.4.9.1 Metrics to monitor and improve performance of the change control process have been established and are being used. These metrics focus on processing cycle time and quantity of changes.	GREEN
<b>Expectations Not Met:</b>	

**Basis for Assessment:**

1.4.1.1, 1.4.2.1, 1.4.8.1 and 1.4.9.1 - Management Summary of Change Control Process (PIO TBR 1.6), River Protection Project Management Plan (DRAFT)

1.4.3.1 and 1.4.4.1 - ORP Change Control Procedure (RPP Administration, HNF-IP-0842, Volume III)

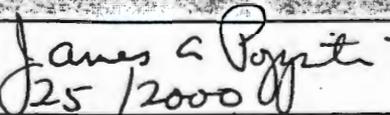
1.4.7.1 - Training Plan for Change Control Procedure (No. 79800-00-001)

All items - Interviews with Project Change Control Staff – Greg Hanson, CHG and Jim Thompson, ORP

Requirements are fully met. CHG has implemented a Configuration Management Plan (HNF-1900) and a Change Control Procedure (RPP-PRO-518) which provide the necessary configuration control systems for CHG work. These systems apply to all RPP Administrative Procedures (HNF-IP-0842). Formal training has been conducted on Change Control (Training Plan 79800-00-01).

**Recommended Path Forward:**

**Actions:**

Signatures	
Reviewers:  Date: 5/30/2000	Team Lead Approval:  Date: 5/25/2000

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 1.0 Project Management

**Subcriterion 1.5 Project Interfaces:** Has the Office of River Protection established the interfaces needed to successfully accomplish Phase I B-2 of the River Protection Project?

**Specific Considerations in Assessment:**

- 1.5.1 Have interface requirements been defined and interface commitments (i.e., ICDs, IMOUs) been executed between the parties?
- 1.5.2 Have interface points of contact and roles/responsibilities been established?
- 1.5.3 Have interfacing mechanisms/vehicles (e.g., IPTs) been established?
- 1.5.4 Have the interface plans/schedules been developed, integrated into the project schedule, and implemented (or under implementation)?

**DOE Expectations:**

- 1.5.1.1 The following key interfaces have been identified – stakeholder, regulator, DOE-RL, DOE-RU, DOE-HQ, OCRWM.
- 1.5.1.2 For each interface, interface requirements and commitments of the parties have been defined and documented in the interface agreement.
- 1.5.2.1 For each interface, interface points of contact have been established and documented in the interface agreement.
- 1.5.2.2 For each interface, interface roles/responsibilities have been defined and documented in the interface agreement.
- 1.5.2.3 For each interface, an interface agreement containing all necessary elements has been prepared and signed by all the parties.
- 1.5.3.1 For each interface, the mechanism(s)/vehicle(s) for interfacing has been established
- 1.5.3.2 For each interface, the mechanism(s)/vehicle(s) for interfacing are working.
- 1.5.4.1 For each interface, a plan/schedule of the interface requirements has been developed, documented in the interface agreement and incorporated into the project schedule.

### Rating Options

**Green:** Performance has given confidence that the RPP will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that the RPP will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that the RPP will be successful in meeting B-2 expectations.

### Assessment

	Rating:
<b>Expectations Met:</b>	
1.5.1.1 Organization interfaces have been identified for ORP (1). Major physical interfaces have been identified (2). Interfaces are reflected in the project "bridge" schedule, and points of contact established.	Green
1.5.1.2 & 1.5.2.1-3 For the ORP, CHG and BNFL Interfaces: Interface requirements, commitments of the parties have been defined and documented, interface points of contacts have been identified and an interface agreement has been signed. A bridge schedule identifying significant related activities across the interfaces has been established.	Green
<b>Expectations Not Met:</b>	
1.5.1.2 ORP, CHG and BNFL interface requirements are being evaluated to verify they are incorporated in the CHG baseline. Issue raised in entrance briefing.	Yellow
1.5.3.1 & 1.5.3.2 Issue raised in entrance briefing. Firm up role in ICD process and role of FDH.	Yellow
1.5.4.1 An Interface Management Plan is being developed. It is felt that such a plan is necessary to document how the different interfaces are to be managed including how the various interface management tools are to be used.	Yellow

## B-2 Decision Readiness to Proceed Self Assessment

### Basis for Assessment:

PIO Work Plan, Schedule, and TBRs.

Interviews, discussions with staff and observations of interface meetings.

ORP, CHG-BNFL ICD deliverable.

IPT leads and Technical Points of Contact.

TWRS-P Interface-Integrated Product/Process Team (I-IPT)

2) ORP Interfaces Summary (diagram C0001-04a-01-25-00.cv5)

1) RPP Major Facility Technical Interface Reference Key (diagram C990904a-1-25-00.CV5)

Processes have been defined to meet these requirements. Issues are not fully resolved, but are being worked. CHG has developed an Interface Control Management Plan (RPP-5993 V, Section 4) and an Interface Review Plan (RPP-5993 V, Section 3) which are being implemented to assure that appropriate interfaces are identified, implemented through appropriate mechanisms (e.g., Memorandum of Agreement) and adequately staffed.

### Recommended Path Forward:

#### Important Actions:

#### ALL Expectations:

1. Develop and issue interface agreements that include: interface requirements and commitments, POCs, and roles and responsibilities. (Kristofzski 9/30/00)
2. Ensure that the Interface plan/schedule of interface requirements have been incorporated into the project schedule. (Kristofzski 9/30/00)
3. Improve interface working mechanism(s)/vehicles by: (Kristofzski 9/30/00)
  - a. Improving the direct tie of issues to project schedule impact;
  - b. Improving the rigor of cost/benefit analysis of decisions;
  - c. Complete and implement the Interface Management Plan.

### Signatures

Reviewers:

*Donald Alexander*  
5/25/2000

Team Lead Approval:

*James A. Pizziti*  
5/25/2000

Date:

Date:

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 1.0 Project Management

**Subcriterion 1.6 Project Management Plan: Does ORP have a plan to describe, baseline, and guide the RPP?**

**Specific Considerations in Assessment:**

- 1.6.1 Does the ORP have a plan for managing the life-cycle mission and all components of the River Protection Project? (Interface with 2.0 CRAD)
- 1.6.2 Does the project plan indicate how the project scope, schedule and cost will be managed and controlled? (Interface with 3.0, 4.0, and 5.0)
- 1.6.3 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)
- 1.6.4 Does the plan describe how the project will be managed and organized and assign responsibilities for its key functions? (detailed in CRAD 1.3)
- 1.6.5 Does it describe how it will manage its internal and external interfaces? (detailed in CRAD 1.5)

**DOE Expectations:**

- 1.6.1.1 The plan is for the entire life cycle of the project mission, with an increased level of planning detail in the near term.
- 1.6.1.2 The plan is inclusive of the work by all project participants, including contractors and agencies.
- 1.6.2.1 The plan includes an integrated baseline for all project scope, schedule and cost for all the required work.
- 1.6.2.2 The project baseline schedule identifies significant logic ties and a critical path.
- 1.6.2.3 The baseline schedule identifies critical milestones and decision points important to the success of the project
- 1.6.2.4 A project work breakdown structure (WBS) is included, and is the basis for the schedule and performance reporting.
- 1.6.2.5 A project performance measurement/management system is described in the plan
- 1.6.2.6 Project budget request plans are supported by the project cost baseline.
- 1.6.3.1 The plan includes a strategy for obtaining necessary funds.
- 1.6.3.2 The plan includes a procurement strategy.
- 1.6.3.3 A permitting strategy is identified in the plan.
- 1.6.3.4 The process for managing quality, safety, risk, and communications is addressed in the plan.
- 1.6.4.1 The plan describes the project management approach.
- 1.6.4.2 The plan describes the organization and the critical roles and assigns responsibilities.
- 1.6.4.3 Project internal and external interfaces are identified in the plan.
- 1.6.5.1 An interface management process is described in the plan.

### Rating Options

**Green:** Performance has given confidence that RPP will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that RPP will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that RPP will be successful in meeting B-2 expectations.

### Assessment

**Expectations Met:**

- 1.6.1.1 The River Protection Project Management Plan is for the entire life cycle of the project mission. There is not so much an increased level of planning detail in the near term, but a description of the numerous and necessary plans being produced for this project from which the project will be managed and operated by over the life-cycle of this project. This is deemed appropriate.
- 1.6.1.2 The plan is inclusive of the work by all project participants, including contractors and agencies.
- 1.6.2.1 The plan includes an integrated baseline for all project scope, schedule and cost for all the required work.
- 1.6.2.2 The project baseline schedule identifies significant logic ties and a critical path.
- 1.6.2.3 The Baseline Schedule identifies critical milestones and decision points important to the success of the project.

**Rating:**

**Green**

## B-2 Decision Readiness to Proceed Self Assessment

<p>1.6.2.4 A project work breakdown structure (WBS) is included, and is the basis for the schedule and performance reporting.</p> <p>1.6.2.5 A project performance measurement/management system is described in the plan.</p> <p>1.6.2.6 Project budget request plans are supported by the project cost baseline.</p> <p>1.6.3.1 The plan includes a strategy for obtaining necessary funds by focusing on specific strategic elements of success and project execution with good business practices.</p> <p>1.6.3.2 The plan includes a two-phased procurement strategy for proof-of-concept at a lower level of risk, then a full-scale production phase with lessons learned.</p> <p>1.6.3.3 Various processes for managing quality, safety, risk and communications are addressed in the plan. These are separate plans. A permitting strategy will be included in the environmental chapter of the PMP.</p> <p>1.6.4.1 The plan describes the project management approach, covering the basic aspects of strategy, organization, responsibilities, definitions, WBS, integrated baseline, project controls, and regulatory issues.</p> <p>1.6.4.2 The plan describes the organization and the critical roles and assigns responsibilities. An organization chart is included.</p> <p>1.6.5.1 Management of internal and external interfaces is identified in the plan.</p> <p><b>Expectations Not Met:</b></p>	<p><b>Green</b></p>
--	---------------------

**Basis for Assessment:**  
 All: Draft PMP, issued 2/15/00.  
 TBR 800.100  
 S. Secmans' interview

Requirement is fully met. CHG has implemented a Project Execution Plan (HNF-6017) which is consistent with DOE/ORP's RPP Program Management Plan (DOE/ORP-2000-06) which is implemented through the Programmatic Baseline Summary (HNF-1946).

**Recommended Path Forward:**

Signatures	
Reviewers: Don Alexander <i>Don Alexander</i> Date: updated 5/15/00 <i>5/25/2000</i>	Team Lead Approval: <i>James A. Poynter</i> Date: 5/25/2000

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 1.0 Project Management

**Subcriterion 1.7: Contract Management** Has the Office of River Protection established the contract management plans, key personnel, and key procedures necessary to successfully manage the BNFL and CHG contracts under the River Protection Project?

**Specific Considerations in Assessment:**

- 1.7.1 Have Contract Management Plans for the CHG and BNFL contracts been developed?
- 1.7.2 Have 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.)?
- 1.7.3 Have key ORP/Fed contract management personnel been identified for each contract – Contracting Officers (CO), Contracting Officer's Representatives (CORs), and Contract Specialists (CS)?
- 1.7.4 Do the key personnel have the appropriate knowledge, experience, and qualifications to manage/administer 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?
- 1.7.6 Are mechanisms 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?
- 1.7.8 Have contract files been developed and are they co-located with the contracting personnel?

**DOE Expectations:**

- 1.7.1.1 Contract Management Plans for the CHG and BNFL contracts have been developed.
- 1.7.2.1 Key contract management procedures have been developed.
- 1.7.3.1 Key ORP/Fed contract management personnel have been identified for each contract.
- 1.7.4.1 Key personnel have the appropriate knowledge, experience, qualifications to manage the contracts.
- 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.
- 1.7.6.1 Mechanisms are in place for regular interfacing/communication between ORP and contractor contract management staff.
- 1.7.7.1 Mechanisms are in place for regular interfacing/communication between ORP contracting, technical, business/finance staff.
- 1.7.8.1 Contract files have been developed and are co-located with contracting personnel.

### Rating Options

**Green:** Performance has given confidence that ORP will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that ORP will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that ORP will be successful in meeting B-2 expectations.

### Assessment

Expectations Met:	Rating:
1.7.1.1 Contract Management/Administration Plans have been developed for both contracts.	GREEN
1.7.2.1 The contract contains clauses outlining key procedures.	GREEN
1.7.3.1 Key ORP/Fed contract management personnel have been identified for each contract. These personnel include the CO, the COR and the CS. The CO and the COR are reflected in the CO/COR/TM Table (attached). These personnel and the CS are reflected in the Organization Chart. In addition, two more contract administration staff are in the process of being hired.	GREEN
1.7.4.1 Key ORP/Fed contract management personnel have the necessary knowledge, experience, and qualifications as evidenced by their resumes and certifications.	GREEN
1.7.5.1 Key ORP/Fed contract management staff have been trained. Newly hired ORP/Fed project staff are oriented soon after arrival.	GREEN

## B-2 Decision Readiness to Proceed Self Assessment

<p>1.7.6.1 Key interfacing mechanisms are in place. ORP/Fed contracting personnel meet weekly with their contractor counterparts.</p>	GREEN
<p>1.7.8.1 Contract files for both contracts have been established and are located in the ORP/Fed contract specialist's office.</p>	GREEN
<b>Expectations Not Met:</b>	
<p>1.7.7.1 Communication mechanisms for ORP/Fed contracting, technical, business/finance staff are not well established. Periodic meetings or other means of regular communications between these parties are needed. (ORP issue).</p>	N/A to CHG

**Basis for Assessment:**

1.7.1.1 and 1.7.2.1: BNFL Contract (DE-AC06-96RL13308) and Contract Management Plan (10/99), CHG Contract (DE-AC06 97RL14047) and Contract Management Plan (same reference as Contract)

1.7.3.1: CO/COR/TM Table (11/5/99), AMPD Org Chart

1.7.4.1 and 1.7.5.1: Interviews with Mike Barrett (1/26/00), Clo Reid (1/28/00), Jeff Short (1/31/00); Resumes and Certificates (Located in 2440 Stevens, Rooms 2318 and 2321)

1.7.6.1 and 1.7.7.1: BNFL Deliverables Tracking List (2440 Stevens, Office 2321), Interviews with Mike Barrett, Clo Reid, Jeff Short

1.7.8.1: BNFL and CHG Contract Files (Offices 2321 and 2318, respectively)

DOE and CHG have fully staffed and qualified Contract office personnel who perform their duties in implementing work through DOE Contract with CHG (RPP DE-AC06-99RL 14047).

**Recommended Path Forward:**

**Important Actions:**

1.7.1.1 The CHG Contract Management Plan will most likely need revising once the B-2 decision is made and the CHG contract has been revised/negotiated. Revise the plan once negotiations are complete (by 9/30/00, Jeff Short, CHG Contract).

1.7.5.1 Once the B-2 decision is made, the CHG contracts will be revised/negotiated along with their respective Contract Management Plans. Key contract management personnel and other key project personnel will need training and orientation on the negotiated contract features and revised plans. Orient ORP/Fed contract management and other key ORP/Fed project personnel on key features of negotiated contracts and revised contract management plans (by 12/31/00, Jeff Short, CHG Contract).

### Signatures

<p><b>Reviewers:</b> <i>Ronald Alexander</i></p> <p><b>Date:</b> <i>5/25/2000</i></p>	<p><b>Team Lead Approval:</b> <i>James A. Pizzuti</i></p> <p><b>Date:</b> <i>5/25/2000</i></p>
---	--

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 1.0 Project Management

**Subcriterion: 1.8 Requirements Management – Is ORP ready to adequately manage the requirements of the River Protection Project (RPP)?**

**Specific Considerations in Assessment:**

- 1.8.1 Are project requirements defined and compiled/documentated?
- 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?
- 1.8.3 Are project requirements under a configuration management and change control plan? Is there a document hierarchy?
- 1.8.4 Are project requirements linked/traceable to the performing Contractors (i.e., BNFL and CHG)?

**DOE Expectations:**

- 1.8.1.1 Project Requirements are defined and documented.
- 1.8.1.2 Project Requirements are trackable, verifiable, and structured to allow for a determination of satisfactory completion.
- 1.8.2.1 A well-defined process for managing the requirements is in place that covers the variety of requirements for the RPP.
- 1.8.2.2 Methods are in place for integrating requirements across the design, construction, and operational aspects of the RPP.
- 1.8.3.1 Project requirements are under configuration management, i.e., contained within the Project Management Plan, and under Change Control via a prescribed Change Control procedure.
- 1.8.4.1 Project requirements are disseminated to the respective performing Contractors within their respective Contracts.

### Rating Options

**Green:** Performance has given confidence that the RPP will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that RPP will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that RPP will be successful in meeting B-2 expectations.

### Assessment

Expectations Met:	Rating:
1.8.1.1 Project Requirements are defined and documented. The technical requirements derived from the multiple source documents have been captured within the database tool and locked down. The requirements within the database will be changed only when a source document or requirement is officially changed.	<b>GREEN</b>
1.8.1.2 Project Requirements are trackable, verifiable, and structured to allow for a determination of satisfactory completion. The requirements contained within the database tool are fully traceable back to the source documents from which they were captured. This traceability can be verified. The structure of the database tool facilitates this traceability.	<b>GREEN</b>
<b>Expectations Not Met:</b>	
1.8.2.1 and 1.8.3.1 A requirements management procedure and an improvement plan have not been completed.	<b>YELLOW</b>
1.8.2.2 A duplication and integration review of the requirements within the database has not been completed.	<b>YELLOW</b>
1.8.4.1 Allocation of the requirements to their respective owners (e.g. ORP, CHG, BNFL, other) has not been completed.	<b>YELLOW</b>

**Basis for Assessment:**

- 1.8.1.1 TBR 800.210: HNF-5865, "Office of River Protection Project Integration Office Requirements Management System Requirements Specification."
- 1.8.1.2 TBR 800.210: HNF-5865.
- 1.8.2.1 TBR 800.210
- 1.8.2.2 TBR Status report: Interview with Scott Seiler.
- 1.8.3.1 TBR 800.210: HNF-5865; PMP
- 1.8.4.1 TBR 800.210: Interview with Scott Seiler and Jana Thompson.

Processes have been defined to meet these requirements; Issues are not fully resolved, but are being worked. CHG has implemented the

## B-2 Decision Readiness to Proceed Self Assessment

necessary administrative processes to fulfill this requirement and are ready to proceed. Primary systems include the System Engineering Management Plan (HNF-SD-WM-SEMP-002), the Configuration Management Plan (HNF-1900) and the RPP Administrative Procedures (HNF-IP-0842). Interface Controls between CHF and Fluor Daniel Hanford are currently being worked.

### Recommended Path Forward:

Essential.

None.

### Important:

1.8.2.1, 1.8.2.2 and 1.8.4.1: Issues raised in entrance briefing. Firm up role in ICD process and role of FDH.

### Beneficial:

None

### Signatures

Reviewers:

Date:

*Christoph Alexander*  
5/25/2000

Team Lead Approval:

Date:

*James A. Pizzuti*  
5/25/2000

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 3.0 Technical Work Scope

**Subcriterion: 3.1 Systems Engineering and Process Verification** – Is the contractor using a systems engineering approach for design of the feed delivery system? Is this approach effective?

**Specific Considerations in Assessment:**

- 3.1.1 Has CHG provided a systems engineered technical baseline including functional and operational requirements compatible with ORP's technical baseline?
- 3.1.2 Has CHG demonstrated the technical expertise to successfully execute the feed delivery scheme?
- 3.1.3 Has CHG identified activities, including science and technology activities that are necessary to support design, permitting, construction and operation of feed delivery systems?
- 3.1.4 Has CHG planned a viable feed delivery system consistent with ORP technical guidance and requirements?

**DOE Expectations:**

- 3.1.1.1 CHG has provided a technical baseline including functional and operational requirements based on ORP guidance and direction.
- 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 Known technical risks have been identified and mitigation plans appropriately developed for the waste feed delivery program.
- 3.1.3.2 CHG has defined technology insertion points in the MYWP.
- 3.1.3.3 Test and evaluation requirements are identified.
- 3.1.4.1 CHG has planned a feed delivery system that includes necessary and sufficient contingencies, redundancies, and preparedness for responding to credible failures and upset conditions in time for initial feed delivery of each envelope.

#### Rating Options

**Green:** Performance has given confidence that the RPP will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that the RPP will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that the RPP will be successful in meeting B-2 expectations.

#### Assessment

**Expectations Met:**

- 3.1.1.1 CHG has provided a task baseline based on ORP guidance and direction.
- 3.1.2.1 CHG has demonstrated a significant improvement in non-routine, technically complex operations (C-106, SY-101, saltwell pumping). The CHG planning process (TBR's, etc.) is robust.
- 3.1.3.1 Mitigation plans are built into the feed delivery sequence – backup tanks, float, etc.
- 3.1.3.2 CHG has worked to identify technology needs and technology insertion points (TIPs) in the project planning products.
- 3.1.3.3 CHG has identified test and evaluation requirements in the Waste Feed Delivery Test and Evaluation Plan.
- 3.1.4.1 The analysis performed to date (Waste Feed Delivery Technical Basis) is sufficient to justify technical decisions and demonstrate the viability of the system.

**Expectations Not Met:**

- 3.1.2.1 Many technical documents suffer from decreased utility due to poor readability. These documents should be developed to support the level of data available – not create information in the absence of data.

**Rating: GREEN**

**Basis for Assessment:** ALL: Discussions w/R. Powell, R. Wojtasek, J. Diedeker, M. O'Neill, CHG 12/17/99; *Tank Farm Contractor Operation and Utilization Plan* (TFCO&UP), HNF-SD-WM-SP-012, Revision 2, 04/00

**NOTE:** This is an intermediate update of this CRAD – comments are based on the first review and are current as of 05/08/00

- 3.1.1.1: *Programmatic Baseline Summary for Phase I Privatization for the Tank Farm Contractor*, HNF-1946, Revision 2, 04/00 (NOT REVIEWED AS OF 05/08/00)
- 3.1.2.1: Technical Basis Reports for TW-04, (see TWRSTBRDATA on AP0005) (UPDATED: HAVE NOT REVIEWED AS OF 05/08/00)
- 3.1.3.1: (included in TFC O&UP)

## B-2 Decision Readiness to Proceed Self Assessment

**Criterion: 3.0 Technical Work Scope**

**Subcriterion: 3.1 Systems Engineering and Process Verification** – Is the contractor using a systems engineering approach for design of the feed delivery system? Is this approach effective?

3.1.3.2: FY01 Needs (available on IPABS at: <http://www.em.doe.gov/ipabs/index.html>); *Programmatic Baseline Summary for Phase I Privatization for the Tank Farm Contractor*, HNF-1946, Revision 2, 04/00 (NOT REVIEWED AS OF 05/08/00)

3.1.3.3 *Waste Feed Delivery Test and Evaluation Plan*, HNF-4599, 8/9/99 (HAVE NOT RE-REVIEWED AS OF 05/08/00)

3.1.4.1 *Waste Feed Delivery Technical Basis (Volume I-IV)*, HNF-1939, Revision 0, (and future revisions); Mission Summary Diagrams; TWRSO&UP, Rev.1, 5/30/00. (HAVE NOT RE-REVIEWED AS OF 05/08/00)

**Recommended Path Forward**

**Beneficial:**

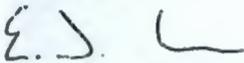
ORP's guidance needs improvement. Key areas for improvement include: providing key waste feed delivery (e.g., BNFL inputs) assumptions to CHG, establishing realistic budget targets for planning purposes, clearer communication of ORP priorities, and reducing the frequency of significant change. This may also require modifications to the BNFL contract (e.g., commitment to deliver only Envelopes A, B, or D for initial startup). (Project Integration Office Planning Basis Document 3/00, Cruz in subsequent Baseline Update Guidance, ~07/00)

The technical quality of documents needs improvement. Increased use of peer reviews and technical editors may help, but document authors need to improve their writing skills and keep the intended use of the document in mind. (CHG has committed to these improvements by the end of FY-2000) The TFC O&UP improved significantly from the last revision. Completing the review of the products submitted/referenced for the April RTP exercise will be sufficient to assess if CHG will meet the FY2000 goal.

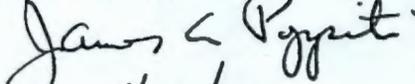
Science and technology needs are well defined based on the available information, for the majority of Phase 1 waste feed delivery. However, CHG should explore additional opportunities for process improvements via the EM technology development programs. S&T is a much more significant component of the SST retrieval program, most of which is outside the scope of the FY2000 RTP assessment.

**Signatures**

Reviewers: E.J. Cruz

Date:   
5/17/00

Team Lead Approval: J. Poppiti

Date:   
5/18/2000

## B-2 Decision Readiness to Proceed Self Assessment

<b>Criterion: 3.0 Technical Work Scope</b>		
<b>Subcriterion 3.2: Conceptual Design</b> – For line 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?		
<b>Specific Considerations in Assessment:</b>		
3.2.1	Has CHG completed the Conceptual design and defined the project work scope?	
3.2.2	Has CHG identified long lead items requiring early procurement and established plans to acquire those materials?	
3.2.3	Has CHG developed a procurement and subcontracting strategy and plan consistent with the baseline schedule?	
3.2.4	Has CHG established plans for mobilization of the construction work force?	
3.2.5	Has CHG completed construction reviews of the design that demonstrate constructability of the design?	
3.2.6	Has CHG provided a conceptual feed delivery design that is flexible enough to respond to changing feed needs (i.e. changes in tank sequence and envelopes)?	
<b>DOE Expectations:</b>		
3.2.1.1	CHG has completed the Conceptual Design including construction planning requirements and has defined the project work scope.	
3.2.2.1	CHG has identified the procurement items requiring special lead time (or other special procurement issues) and has established the mechanism to acquire those materials.	
3.2.3.1	CHG has developed a procurement and subcontracted services strategy.	
3.2.4.1	CHG has established a realistic construction plan and construction mobilization plan.	
3.2.5.1	CHG has completed and documented constructability reviews of the facility design.	
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.	
<b>Rating Options</b>		
<b>Green:</b> Performance has given confidence that the RPP will be successful in meeting B-2 expectations.	<b>Yellow:</b> Corrective actions are needed to be confident that the RPP will be successful in meeting B-2 expectations.	<b>Red:</b> Performance has not given confidence that the RPP will be successful in meeting B-2 expectations.
<b>Assessment</b>		
<b>Expectations Met:</b>		<b>Rating:</b>
3.2.1.1	The contractor has completed conceptual designs for Projects W-211, W-314 and W-519 and these projects are proceeding with definitive design and construction. These projects have established the preferred alternative and the work scope that meet the requirements of the Design Requirements Documents. The conceptual design for Projects 521 and 464 is in progress and the contractor has plans to complete conceptual design in that time that they are required for remaining activities.	<b>GREEN</b>
3.2.2.1	The contractor has identified special items requiring long lead times to procure; specifically, mixer pumps and transfer pumps. Planning for long lead procurement was completed during preliminary design and is documented in Preliminary Design Reports. Key Decision 2 (as required) provided the required approval for the long lead procurement. For Project W-464, items which require advanced procurement have been identified and planning for procurement is in progress.	
3.2.3.1	The contractor has a procurement and subcontracting strategy for obtaining Detail Design and Construction services. The initial planning were developed as part of conceptual design and documented in the Conceptual Design Report. The planning for construction services is further developed during Detailed Design and executed prior to construction.	
3.2.4.1	The contractor has prepared design and construction plans and has developed resourced loaded P3 schedule baselines for the construction projects. From these resource loaded schedules, feed delivery/storage construction staffing needs were determined. The feed delivery/storage construction staffing needs were combined with the staffing needs of	

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 3.0 Technical Work Scope

**Subcriterion 3.2: Conceptual Design** – For line 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?

- |         |  |
|---------|--|
| 3.2.5.1 | <p>Flour Hanford, Inc. and the Privatization and a staffing requirement analysis was performed and documented in the contractor's Human Resources Staffing Plan for the Tank Contractor. The plan demonstrated that the contractor can successfully recruit and hire the personnel required to execute and complete the feed delivery/storage construction projects.</p> <p>The contractor has completed and documented constructability, maintainability and operability reviews for projects that have completed conceptual design. The reviews were performed per existing contractor construction project procedures and are documented in Review Comment Records. Update reviews are performed as the projects progress from the different phases of the project. Testability reviews are also performed to ensure that products can be safely and efficiently tested during startup. DOE participates during the review.</p> |
| 3.2.6.1 | <p>The conceptual design provides the necessary scope which includes the infrastructure, facilities and equipment, such as transfer piping, pumps, instrumentation, etc., to support the privatization contract. The design meets the requirements of the Design Requirements Documents and the DOE/BNFL Interface Control Documents (ICDs). Any changes to the scope are controlled through formal Change Control Process. The design meets the requirements of providing feed from the four envelopes within 30 days after notification after April 2006.</p>  |

**Expectations Not Met:**

None

**Basis for Assessment:**

1. Conceptual Design Reports (Expectations 3.2.1.1, 3.2.2.1, 3.2.3.1, 3.2.4.1, 3.2.5.1, 3.2.6.1)
  - SD-W211-CDR-001: Conceptual Design Report for ITRS, Project W-211
  - SD-W314-CDR-001: Conceptual Design Report for Tank Farm Restoration & Safe Operations, Project W-314
  - HNF-1938: Summary Conceptual Design Report for TWRS Privatization Phase I Infrastructure Support, Project W-519
  - HNF-SD-W503-CDR-001: Conceptual Design Report for TWRS Privatization Phase I Electrical Infrastructure Support, Project W-519
  - HNF-SD-W504-CDR-001: Conceptual Design Report for TWRS Privatization Phase I Water Infrastructure Support, Project W-519
  - HNF-SD-W505-CDR-001: Conceptual Design Report for TWRS Privatization Phase I Electrical Site and Roads Support, Project W-519
  - HNF-SD-W506-CDR-001: Conceptual Design Report for TWRS Privatization Phase I Liquid Effluent Infrastructure Support, Project W-519
2. Advanced Procurement (Expectation 3.2.2.1)
  - Key Decision 2B, Initiation of Title II Design and Advanced Procurement for Project W-211, Initial Tank Retrieval Systems.
  - HNF-2298, Immobilized High Level Waste Interim Storage, Project W-464.
3. HNF-1946, Revision 2; Programmatic Baseline Summary for Phase 1 Privatization for the Tank Farm Contractor (Expectations 3.2.4.1 and 3.2.5.1)
4. BNFL ICD BNFL-5193-ID-01 thru 26 (Expectations 3.2.6.1)
5. Procedure HNF-PRO-1999, Construction Program Conceptual Phase (Expectation 3.2.5.1)
6. Procedure HNF-PRO-2000, Construction Program Execution Phase (Expectation 3.2.5.1)
7. Letter 99-OPD-012, Completion of Title II Design for Tank AN-105 (Expectation 3.2.5.1 & 3.2.6.1)
8. RPP-6114, Revision 0, Human Resources Staffing Plan for the Tank Farm Contractor (Expectation 3.2.4.1)

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 3.0 Technical Work Scope

Subcriterion 3.2: Conceptual Design – For line 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?

Recommended Path Forward:

None

#### Signatures

Reviewers:

Team Lead Approval:

Date: *Gil Ramin 5/18/2000*

Date: *5/18/2000* *James C. Poynter*

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 3.0 Technical Work Scope

**Subcriterion 3.3: Detail Design** – Has Detailed Design produced the final technical products that are required to support the physical construction?

#### Specific Considerations in Assessment:

- 3.3.1 Have construction packages and bid documents been prepared and coordinated with all parties affected by the project?
- 3.3.2 Are the construction packages prepared to include an adequate work scope for execution?
- 3.3.3 Does the construction packages demonstrate flexibility, robustness and efficiency in the design concepts chosen?
- 3.3.4 Will the construction packages support procurement and schedule constraints?
- 3.3.5 Will the construction packages support environmental permitting requirements?
- 3.3.6 Has CHG defined construction work packages, which will allow timely initiation of construction?

#### DOE Expectations:

- 3.3.1.1 The construction packages which include certified drawings and procurement specifications, and bid documents complies with requirements of contracts (including CHG and BNFL contracts)
- 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.
- 3.3.3.1 Consistent alternative evaluations and decision making structure is maintained through the life cycle of the project.
- 3.3.3.2 The construction packages supports delivery of four feed envelops within 30 days of BNFL's notification after May 30, 2006.
- 3.3.4.1 The level of construction packages development is sufficient to support procurement in support of construction.
- 3.3.5.1 The construction packages are compliant with environmental regulations and permitting conditions
- 3.3.6.1 CHG is on schedule to complete all necessary documentation and permits to initiate site preparation and construction.
- 3.3.6.2 CHG has prepared construction work package for initial items requiring procurement.

#### Rating Options

<b>Green:</b> Performance has given confidence that the RPP will be successful in meeting B-2 expectations.	<b>Yellow:</b> Corrective actions are needed to be confident that the RPP will be successful in meeting B-2 expectations.	<b>Red:</b> Performance has not given confidence that the RPP will be successful in meeting B-2 expectations.
---	---	---

#### Assessment

<b>Expectations Met:</b> 3.3.1.1 The project design and construction requirements are documented in the projects Design Requirement Documents (DRD). The DRD reflects the design requirements to accomplish the functions and requirements of the RPP mission and the contract requirements which include CHG and BNFL. The construction projects comply with the DRD. In addition, the construction projects (DOE-ORP, DOE-HQ, and Contractor), perform an extensive design review as a requirement of the Critical Decision Process. Together with the Interface Control Documents, these requirements have been coordinated with all parties affected by the project.  3.3.2.1. In addition to the Design and Requirements Documents, a complete scope of services is also prepared to define the complete scope of work. Example of these services include certified drawings, specifications, startup testing plans, schedule, cost estimate, environmental compliance documents, procurement, etc. The physical and functional description of the facilities and the scope of services form the complete scope of work of the project.  3.3.3.1 During Pre-Conceptual Design, the preferred alternative was established thru the Alternative Generation Analysis and decision process (AGA) and an initial scope was defined to bound the initial and end-state of the project mission. As required, additional AGAs were performed during conceptual design to establish the project scope of work which is used as the basis for developing the project's cost and schedule baselines. The requirements to perform AGA and decision process are applied consistently to the project and the process is documented as part of the System Engineering Management	<b>Rating:</b>  <b>GREEN</b>
---	------------------------------------

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 3.0 Technical Work Scope

**Subriterion 3.3: Detail Design – Has Detailed Design produced the final technical products that are required to support the physical construction?**

- |          |   |
|----------|---|
| 3.3.3.2. | Plan and the Project Execution Plan.<br>The current facility design provides the necessary infrastructure, facilities and equipment such as transfer piping, pumps, instrumentation etc., to support the privatization contract, and meets the requirements of the DOE/BNFL Interface Control Documents. This design meets the requirements of providing feed envelopes a, b, c and d within 30 days of notification beginning on April 1, 2006.  |
| 3.3.4.1. | Long lead procurements have already begun for items such as mixer pumps and transfer pumps. For the remaining scope, construction packages for the procurement of construction services are prepared and completed during detail design. Prior to award, contractor reviews and DOE independent reviews are performed to ensure that the construction packages support procurement and schedule constraints and that the construction packages development is sufficient to support procurement for construction. For Project W-464, items which require advanced procurement have been identified and planning for procurement is in progress. |
| 3.3.5.1  | Environmental regulations and permitting requirements are included as part of the projects Design Requirements Documents (DRD). Since the DRD is the technical baseline of the project, the design complies with all currently known environmental regulations and permitting conditions. Environmental compliance and permitting are completed prior to detailed design and documented in the Conceptual Design Reports. Permits are obtained during detailed design.  |
| 3.3.6.1  | As part of the conceptual design, Environmental Permits and Approval plan are prepared and included as part of the Conceptual Design Report. The baseline construction schedule includes time to complete all necessary documentation and obtaining necessary permits to initiate construction.   |
| 3.3.6.2. | Projects W-314, W-211 and W-519 have completed Detail Design and have started construction. The contractor has prepared construction work packages for these projects to procure construction services. These services will be phased over the next several years. The conceptual designs for Project 521 and 464 are in progress and the contractor has plans to complete design and construction in that time that they are required for remaining activities.  |

**Expectations Not Met:**

None

**Basis for Assessment:**

1. Design Requirements Documents (DOE Expectation 3.3.1.1)
  - WHC-SD-WM-DRD-011: Design Requirement Documents for TWRS Privatization Phase I Electrical Infrastructure Support, Project W-519
  - WHC-SD-WM-DRD-013: Design Requirement Documents for TWRS Privatization Phase I Support, Site Development, Project W-519
  - WHC-SD-WM-DRD-014: Design Requirement Documents for TWRS Privatization Phase I Liquid Effluent Infrastructure Support, Project W-519
  - WHC-SD-WM-DRD-015: Design Requirement Documents for TWRS Privatization Phase I Raw and Potable Water Infrastructure Support, Project W-519
  - SD-W314-DRD-001: Design Requirements Documents for Project W-314 Tank Farm Operations and Safe Operations
  - SD-WM-DRD-012: Design Requirements Documents for the Interim Store Phase 1 Solidified HLW Function 4.2.4.1.2, Project W-464
  - WHC-SD-W211-FDC-001, Functional Design Criteria, Initial Tank Retrieval, Project W-211
2. Design Reviews (Expectation 3.3.1.1 & 3.3.2.1)
  - Independent Review and Assessment of the Environmental Management, Privatization Phase 1, Infrastructure Projects (RL TW08), by the Jupiter Corporation
  - Independent Design Review: TWRS Privatization Phase 1, W-519, Infrastructure Project, by the IT Group
  - Letter 99-OPD-012, Completion of Title II Design for Tank AN-105

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 3.0 Technical Work Scope

**Subcriterion 3.3: Detail Design – Has Detailed Design produced the final technical products that are required to support the physical construction?**

3. Interface Control Documents (Expectation 3.3.1.1)
  - BNFL ICD BNFL-5193-ID-01 thru 26
  - HNF-2588, Interface Control Documents between Project W-314, W-519 and W-211
4. Critical Decision 3, Start of Construction (Expectation 3.3.2.1)
  - TRH/99-OPD-064, Approval of Critical Decision 3B for Project W-314, Start Construction in the AY Tank Farm
5. Project Execution Plans (Expectation 3.3.3.1)
  - WHC-SD-W-314-PMP-001, Project Execution Plan, Tank Farm Restoration and Safe Operation, Project W-314
  - HNF-3333, Project Management Plan, Initial Tank Retrieval System, Project W-211
  - RPP-6017, Rev. 0, Draft Project Execution Plan for the Tank Farm Contractor
6. BNFL ICD BNFL-5193-ID-19 & 20 (Expectation 3.3.3.2)
7. Advanced Procurement (Expectation 3.3.4.1)
  - Key Decision 2B, Initiation of Title II Design and Advanced Procurement for Project W-211, Initial Tank Retrieval Systems
  - HNF-2298, Immobilized High Level Waste Interim Storage, Project W-464
8. Environmental Permits (Expectation 3.3.5.1 & 3.3.6.1)
  - Project W-314 Phase 1 Environmental Permits and Approvals Plan
  - DOE/ORP-99-09, Radioactive Air Emissions Notice of Construction for the Installation and Operation of a Waste Retrieval System in Tanks 241-AP-102 and 241-AP-104, Project W-211
9. Monthly Performance Review, Life Cycle Projects, February 2000 (Expectation 3.3.6.2)

**Recommended Path Forward:**

None required

#### Signatures

Reviewers:

Team Lead Approval:

Date:

*Ceil Ramin* 5/18/2000

Date:

*James A. Poynter*  
5/18/2000

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 3.0 Technical Work Scope

**Subcriterion: 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?

**Specific Considerations in Assessment:**

3.4.1 Is CHG identifying and conducting value engineering (e.g., Alternative Generation Analysis (AGA) and Trade Studies) which support the development of a viable feed delivery system?

**DOE Expectations:**

3.4.1.1 Has value engineering provided sufficient information to adequately support the required decisions?

3.4.1.2 Have the completed studies adequately addressed optimization of the entire system (waste feed delivery, immobilization, and disposal)?

3.4.1.3 Have the value engineering studies specific to the waste feed delivery system optimized the feed delivery system?

#### Rating Options

**Green:** Performance has given confidence that the RPP will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that the RPP will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that the RPP will be successful in meeting B-2 expectations.

#### Assessment

**Expectations Met:**

3.4.1.1 The AGAs and Trade Studies completed to date provided sufficient information to adequately support the required decisions. AGAs and Trade studies are planned to meet schedules for required decisions.

3.4.1.3 AGAs and Trade Studies specific to the waste feed delivery system have optimized the feed delivery system.

**Expectations Not Met:**

3.4.1.2 Many of the AGAs have not adequately addressed optimization of the entire system.

**Rating:**

**YELLOW**

**Basis for Assessment:**

ALL: Discussions w/R. Powell, R. Wojtasek, J. Diedeker, M. O'Neill, CHG 12/17/99; Waste Feed Delivery Technical Basis (Volume I-IV), HNF-1939, Rev 0 (and future revisions); AGA for Phase I HLW Feed Tanks Selection, HNF-4219, 5/24/99; AGA for DST Primary Ventilation Systems Emissions Control and Monitoring, HNF-4245, 9/30/99; Project W-523 Alternatives Generation Analysis C104 SST Waste Feed Delivery, TWR-4454, 7/26/99; Reanalysis Of Alternatives For Immobilized Low Activity Waste Disposal, HNF-4003, 03/24/99; Immobilized Hlw Interim Storage Alternatives Generation & Analysis & Decision Report, HNF-3899, 03/23/1999; Trade Studies.

**Recommended Path Forward**

**Beneficial:**

3.4.1.1 The value engineering studies provided to-date provide more information and detail necessary to support the associated decisions. Future products should be focused to provide a more effective use of resources.. (Cruz in subsequent Baseline Update Guidance, ~07/00)

3.4.1.2 AGAs and Trade Studies that address the entire system will benefit from an improved understanding and definition of the entire system. Key technical inputs about the BNFL process have not been available to CHG. DOE/ORP must continue to take a more active role in facilitating the exchange of information. (Continued participation in Technical IPT by DOE and contractor; attend IP/PT training)

3.4.1.3 ORP needs to better understand the amount and cost of conservatism available during the course of the project to support decision processes. (Cruz in subsequent direction to CHG, ~05/00).

#### Signatures

Reviewers: E.J. Cruz

Date:

*E.J. Cruz*  
5/17/00

Team Lead Approval:

Date:

*James A. Poyzanti*  
5/18/2000

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 3.0 Technical Work Scope

**Subriterion 3.5 Technical Thresholds:** – Do technical performance thresholds (specifications) tied to desired end-dates exist for systems, structures, and components?

**Specific Considerations in Assessment:**

- 3.5.1 Have technical specifications been set for systems, subsystems, and components and these specifications are tied to safety requirements and desired end states?
- 3.5.2 Have technical specifications been reviewed and revised as necessary?
- 3.5.3 Are established technical specifications being controlled through formal change control procedures?

**DOE Expectations:**

- 3.5.1.1 CHG planning and analysis demonstrates their ability to identify specific requirements and meet the requirements for the waste feed delivery and immobilized waste product storage and disposal systems.
- 3.5.2.1 CHG has reviewed and revised the technical performance specifications to reflect Alternatives Generation Analyses (AGA's), Trade Studies, changes in ORP technical guidance or requirements, and information from other sources.
- 3.5.3.1 A formal change control process for the technical performance specifications is in place and functioning.

#### Rating Options

**Green:** Performance has given confidence that the RPP will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that the RPP will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that the RPP will be successful in meeting B-2 expectations.

#### Assessment

**Expectations Met:**

- 3.5.1.1 CHG has developed specific design requirements and these requirements are incorporated into detailed design documents for the feed delivery and immobilized waste product storage and disposal systems.
- 3.5.2.1 Performance specifications are updated to include results of AGAs, trade studies, and guidance.
- 3.5.3.1 Performance specifications are under the existing site/CHG change control system. Project managers are responsible for maintaining project specifications.

**Expectations Not Met:**

**Rating:**

**GREEN**

**Basis for Assessment:**

ALL: Discussions w/R. Powell, R. Wojtasek, J. Diedeker, M. O'Neill, CHG 12/17/99; Alternative Generations Analyses (AGAs); FDC Project W-211 ITRS [Also 241SY], SD-W211-FDC-001, 08/26/1997; Preliminary Design Requirements Document For Project W-314 Tank Farm Restoration & Safe Operations, SD-W314-DRD-001, 05/21/1996; Project Definition Criteria For Project W-521 Waste Feed Delivery Sys [Also 241SY], HNF-4408, 08/24/1999; System Specification for the DST System, HNF-SD-WM-TRD-007, 9/30/98; Functional Analysis for DST subsystems, HNF-5136, 1/12/00; Waste Feed Delivery System Level 2 Specifications (varying degrees of completion); Interface Control Documents – ICD-19 and ICD-20, current and future revisions.

## B-2 Decision Readiness to Proceed Self Assessment

### Recommended Path Forward

#### Beneficial:

The Level 2 (component/subsystem) specifications must be completed to support Project W-521 during FY-00. Further delay in the completion of these specifications will erode their value to the program. Projects W-211 and W-314 have existing specifications and any potential changes resulting from the Level 2 specifications must be made on a case-by-case basis. If appropriate specifications are not available to support W-521, this rating will be changed to YELLOW. (STATUS AS OF 05/08/00: Many of the Level 2 specifications have been issued, but there are a significant amount of "To Be Determined" and "To Be Revised" statements. A more detailed review may warrant a downgrading of this CRAD to yellow if CHG cannot establish a credible path forward.)

#### Signatures

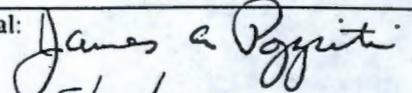
Reviewers: E.J. Cruz



5/17/00

Date: ~~5/17/00~~

Team Lead Approval:



Date:

5/18/2000

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 3.0 Technical Work Scope

**Subcriterion: 3.6 Site Characterization** Is characterization sufficient to provide for the establishment of a reasonable feed delivery system and a high-confidence schedule for delivery of the feed within contract specifications? Is it sufficient to supply BNFL with enough characterization samples and data to ensure that its characterization needs are met?

**Specific Considerations in Assessment:**

- 3.6.1 Has CHG sufficiently characterized feed tanks? Do these tanks have a high probability of providing feed within contract specifications?
- 3.6.2 Has ICD-23 (Waste treatability samples) been updated by BNFL, and does CHG have the scope to accomplish the necessary work?
- 3.6.3 Have ICDs 19 & 20 been updated and does CHG have the planning in place to characterize waste feed for certification?
- 3.6.4 Does CHG have a plan to provide characterization as needed for interfaces and for its own needs?

**DOE Expectations:**

- 3.6.1 CHG has sufficiently characterized feed tanks. These tanks have a high probability of providing feed within contract specifications.
- 3.6.2 ICD-23 (Waste treatability samples) has been updated by BNFL, and CHG has the scope to accomplish the necessary work.
- 3.6.3 ICDs 19 & 20 have been updated and CHG has the planning in place to characterize waste feed for certification
- 3.6.4 CHG has the planning in place to characterize for its own needs, including operations and retrieval.

#### Rating Options

**Green:** Performance has given confidence that RPP will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that RPP will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that RPP will be successful in meeting B-2 expectations.

#### Assessment

**Expectations Exceeded:**

- 3.6.1 Envelope specifications have been closely evaluated by WIT and CHG waste feed delivery.
- 3.6.2 CHG is responding promptly to BNFL's sample requests, changes to the requests, and to some requests for specific analytical data. Cooperation among CHG, DOE-ORP and BNFL is excellent. All Part B-1 sample requests from BNFL, as defined in ICD-23, Rev. 3, as modified by BNFL letter CCN 008705 dated December 1, 1999, have been delivered to BNFL as of 2/8/00.
- 3.6.3 No expectations were exceeded
- 3.6.4 No expectations were exceeded

**Expectations Met:**

- 3.6.1. Yes, CHG has sufficiently characterized candidate feed tanks. These tanks have a high probability of delivering feed within contract specifications. Several issues are outside of CHG's purview; they are: Sulfate is too high in the LAW feed – this could affect waste loading. Many specifications not met in liquid fraction of HLW feed – this means contract may need to be modified, however no significant HLW processing impacts have been noted.
- 3.6.2 Yes, CHG and BNFL have successfully negotiated all the characterization interface needs for regulatory and process testing work in ICD-23. Although the current (Rev. 3) version of the ICD does not adequately define these needs, the ICD-23 is to be revised by 3/24/00 to reflect all the needs. CHG has committed to providing a BCR to provide workscope for samples based on the new revision as soon as possible. BNFL has committed to providing sample residue return schedules every year on June 30 so that the workscope can be placed in the MYWP.
- 3.6.3 ICDs 19 & 20 define the waste feed delivery process, including characterization, adequately.
- 3.6.4 CHG has provided baseline documentation clearly defining operations and retrieval characterization needs; the work is properly scoped and funded in the MYWP.

**Expectations Not Met:**

- 3.6.1 All expectations were met.
- 3.6.2 Some sample requests made by BNFL may not be physically achievable. This is not a CHG

**Rating:**

**GREEN**

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 3.0 Technical Work Scope

**Subcriterion: 3.6 Site Characterization** Is characterization sufficient to provide for the establishment of a reasonable feed delivery system and a high-confidence schedule for delivery of the feed within contract specifications? Is it sufficient to supply BNFL with enough characterization samples and data to ensure that its characterization needs are met?

issue, but a DOE/BNFL issue. ICD23 does not adequately define sample residue returns schedules. Funding is not available for all expected returns.

3.6.3 There is no scope or funding for technology development to meet feed certification needs described in ICDs 19 and 20. The ICDs 19 & 20 are not sufficiently detailed to be sure that CHG-characterization can meet all the requirements. The Feed Certification Data Quality Objectives documents are not yet written – therefore work may not be planned/scoped for this effort in a timely fashion. ICD 20 requires CHG to provide solids to BNFL during the feed certification process. It may not be possible to provide the amount of solids requested. These issues can be resolved within the time frame allowed since the feed certification strategy will not be used until about five years from now.

3.6.4 All expectations are met.

**Basis for Assessment:**

3.6.1 Assess data from following sources to determine if candidate waste feed is within contractual envelope limits:

- (1) Letter report WIT-00-002, dated October 7, 1999, from George Mellinger, PNNL, to Neil Brown, DOE-ORP, "Envelope Validation Charts for DST Waste and Selected SST Waste," as amended (see for example WIT-00-005 dated October 26, 1999)
- (2) Best Basis Inventory, as posted on the TWINS Internet site (<http://twins.pnl.gov/twins3/twins.htm>)
- (3) Tank Waste Remediation System Operation & Utilization Plan, latest version (currently the May 1999 revision 1), HNF-SD-WM-SP-012.

3.6.2 Assess the following sources to determine if all characterization interfaces are successfully defined, and the work is scoped:

- (1) Multi-Year Work Plan for Fiscal Year 2000 (FY2000 MYWP)
- (2) "Interface Control Document for Waste Treatability Samples," BNFL-5193-ID-23, latest revision (currently the April 23, 1999 revision 3) [also known as ICD-23]

3.6.3 Assess the following documents to determine if planning is in place for necessary characterization work to support B-2

- (1) Multi-Year Work Plan for Fiscal Year 2000 (FY2000 MYWP)
- (2) "Interface Control Document for Low Activity Waste Feed," BNFL-5193-ID-19, latest revision (currently the October 8, 1999 revision 4) [also known as ICD-19]
- (3) "Interface Control Document for High-Level Waste Feed," BNFL-5193-ID-20, latest revision (currently the October 8, 1999 revision 4) [also known as ICD-20]

3.6.4 Assess the following documents to determine if all characterization needs for other programs are successfully defined, and the work is scoped:

- (1) Multi-Year Work Plan for Fiscal Year 2000 (FY2000 MYWP)
- (2) "Fiscal Year 2000 Tank Characterization Technical Sampling Basis and Waste Information Requirements Document," HNF-4048, dated 8/4/99.

**Recommended Path Forward:** No change since March review.

**Important:**

The only area of concern for CHG is that of feed certification needs. As noted, the feed certification characterization strategy is not fully matured or scoped. However, CHG has nearly five years before it is scheduled to certify feed. The issues can be worked through in that amount of time, therefore this area of concern does not impact the "green" rating for RTP. The path forward is to negotiate a feed certification strategy that is practicable, document it in the ICDs 19 & 20, and to place the workscope in the appropriate MYWP.

#### Signatures

Reviewers: Nancy Welliver

N/A

Team Lead Approval: James A. Poppiti

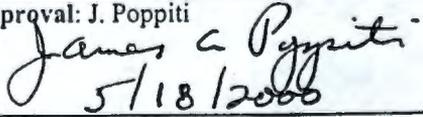
*James A. Poppiti*

Date:

Date:

5/18/2000

## B-2 Decision Readiness to Proceed Self Assessment

<b>Criterion: 3.0 Technical Work Scope</b>		
<b>Subcriterion: 3.7 Technical Performance Measures – Have technical performance measures been developed to assess progress against approved technical baselines?</b>		
<b>Specific Considerations in Assessment:</b>		
3.7.1 Has CHG developed performance objectives that assess their technical performance in meeting mission requirements?		
<b>DOE Expectations:</b>		
3.7.1.1 CHG has identified the key technical performance objectives.		
3.7.1.2 CHG can relate program activities to the performance objectives.		
<b>Rating Options</b>		
<b>Green:</b> Performance has given confidence that the RPP will be successful in meeting B-2 expectations.	<b>Yellow:</b> Corrective actions are needed to be confident that the RPP will be successful in meeting B-2 expectations.	<b>Red:</b> Performance has not given confidence that the RPP will be successful in meeting B-2 expectations.
<b>Assessment</b>		
<b>Expectations Met:</b>		<b>Rating: GREEN</b>
<p>3.7.1.1 CHG has identified key technical objectives necessary to assess progress against the approved technical baselines. The objectives (key measures) are traceable to the DST system performance requirements. These are presented in the Waste Feed Delivery Program Technical Performance Measurement Assessment Plan (HNF-3943 Rev. 0).</p> <p>3.7.1.2 CHG can relate program activities to the identified key technical objectives. This is done by relating the activities in TBRs to the level 1 logic (which are arranged by tank) to the mission summary diagram. The latter communicates the on-time, quantity and quality objectives. HNF-3943 describes the plan in FY00 to develop specific performance planned profiles relating activities, performance expectations, and objectives.</p>		
<b>Expectations Not Met:</b>		
<b>Basis for Assessment:</b>		
ALL: Discussions w/R. Powell, R. Wojtasek, J. Diedeker, M. O'Neill, CHG 12/17/99; HNF-IP-0842, Vol. 4, Section 2.4; HNF-3943 Waste Feed Delivery Program Technical Performance Measures Assessment Plan, 08/09/99; River Protection Project FY2000 Multi-Year Work Plan Summary, RPP-5044; 8/27/99; TBRs for TW-04.		
<b>Recommended Path Forward:</b>		
<b>Essential:</b> No actions noted; No change since April assessment.		
<b>Important:</b> Develop the specific performance planned profiles defined by HNF-3943.		
<b>Beneficial:</b> While these activities have been identified, ORP/CHG must continue to emphasize the importance of these activities to ensure they are completed. An important example is the AZ-101 Process Test (Cruz in subsequent Baseline Update Guidance, ~07/00).		
<b>Signatures</b>		
<b>Reviewers:</b> E.J. Cruz	<b>Team Lead Approval:</b> J. Poppiti	
 Date: 5/17/00	 Date: 5/18/2000	

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 3.0 Work Scope/Technical

**Subcriterion: 3.8 Operational Readiness.- Ensuring Readiness of Construction Projects for Transition from Construction to Operations**

**Specific Considerations in Assessment:**

- 3.8.1 DOE must identify all construction projects with completion dates.
  - 3.8.2 DOE must assess themselves and the contractor for readiness per the established program.
  - 3.8.3 CHG must have a program in place in compliance with applicable Orders and Directives to ensure readiness.
  - 3.8.4 DOE and CHG should incorporate Lessons Learned from previous readiness reviews.
- NOTE:** These considerations were evaluated during the Readiness Assessments conducted on various projects. See item #4 of RMIS D8199318

**DOE Expectations:**

- 3.8.1.1 - CHG will follow applicable DOE startup/restart requirements.
  - 3.8.2.1 - Roles and responsibilities defined per ISMS Guiding Principles
  - 3.8.3.1 - DOE line management will follow applicable DOE startup/restart requirements.
  - 3.8.4.1 - DOE will conduct an independent assessment of the startup/restart process.
- NOTE:** The RMIS referenced under Basis for Assessment addresses these four expectations

#### Rating Options

: Performance has given confidence that the Contractor will be successful in meeting B-2 expectations.	<b>Yellow:</b> Corrective actions are needed to be confident that the Contractor will be successful in meeting B-2 expectations.	<b>Red:</b> Performance has not given confidence that the Contractor will be successful in meeting B-2 expectations.
--	--	--

#### Assessment

**:Expectations Met:**

- 3.8.1.1 - DOE has identified all construction projects with their completion dates. The assessments we are planning for readiness assessments and operational readiness reviews to coincide with the completion dates. DOE staffing is appropriate to meet these requirements.
- 3.8.2.1 - DOE has performed a self-assessment and an assessment of the contractor regarding their readiness assessment program.
- 3.8.3.1 - The contractor has a program in place which complies with applicable orders and directives associated with readiness assessment and readiness reviews.
- 3.8.4.1 - DOE and the contractor have incorporated lessons learned from previous reviews.

**Rating: GREEN**

**Basis for Assessment:** DOE Order 425.1A; See RMIS D8199318 (CRAD 3.8 Operational Readiness for B-2) . This document includes DOE Expectations 3.8.1.1 through 3.8.4.1

This RMIS document provides the various elements required per DOE order, including specific examples.

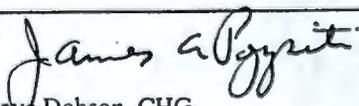
**NOTE:** Even though ORP has successfully demonstrated the effective implementation of the DOE Order requirements, continuous improvements items identified will further enhance the ORP program. The due date for completing these actions is the second quarter of calendar year 2000.

**Responsible Manager:** Ami B. Sidpara

**Recommended Path Forward:**

None Required; No change since March review.

#### Signatures

Reviewers: R. C. Sorensen  Date: 5/30/00	Team Lead Approval: J. A. Poppiti  Debriefed with (Point of Contact): Dave Dobson, CHG Date: 5/18/2000
--	--

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 4.0 Schedule

**Subcriterion: 4.1 Master Schedule** – Has the master schedule been updated to define the work sequence and significant task interdependencies, including critical path and contingencies for the construction phase?

**Specific Considerations in Assessment:**

- 4.1.1 Has CHG updated the master, intermediate and detailed schedules to depict the tasks needed to meet the construction and follow-on milestone dates?
- 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?
- 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?
- 4.1.4 Are the activities and logic identified for interfaces between CHG and PHMC sub-contractors?
- 4.1.5 Do schedules contain appropriate contingency?

**DOE Expectations:**

- 4.1.1.1 CHG has updated the master, intermediate and detail schedules to depict the tasks needed to meet the construction and follow-on milestone dates.
- 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.
- 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.
- 4.1.2.2 The CHG schedule is consistent with the DOE planning guidance (June 1999) and any subsequent DOE directed changes.
- 4.1.3 Activities are logically driven to determine critical path.
- 4.1.4.1 Interfaces between CHG and PHMC subcontractors are clearly identified.
- 4.1.4.2 PHMC's subcontractors (if any) have prepared logic driven schedules and allocated appropriate resources to support the agreed to milestone with CHG.
- 4.1.5 Schedules are prepared at 80% confidence.

### Rating Options

**Green:** Performance has given confidence that the Contractor will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that the Contractor will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that the Contractor will be successful in meeting B-2 expectations.

### Assessment

**Expectations Met/Not Met:**

4.1.1.1 CHG has updated the master, intermediate and detail schedules to depict the tasks needed to meet the construction and follow-on milestone dates.

*Research*

Ray Moller of CHG was contacted to discuss the development of the Master Baseline Schedule RPOA in respect to the Multi-Year Work Plan (MYWP). Ray stated that this schedule contained all items covered in the MYWP and had incorporated all comments from the Baseline Update Guidance (BUG) FY-2000. The Master Baseline Schedule followed the logic established in the TBR's and activities within RPOA were also coded to match the TBR activity. The Master Baseline Schedule currently meets the milestone dates established for waste feed to BNFL. However the current Master Baseline Schedule was developed with unconstrained funding parameters so that the future FY funding needs exceed the projected funding levels that will be authorized.

**Rating:**  
**Green**

## B-2 Decision Readiness to Proceed Self Assessment

### *Analysis*

Several elements from the TBR's were selected at random to verify that these elements were included in the Master Baseline Schedule RPOA. These TBR elements were:

- 330.E40 Construct 242-A Evaporator Life-Extension Upgrades
- 730.200 Startup and Test HLW & LAW Pretreatment/Immobilization Facility
- 270.630 Assess Tank Conditions
- 120.B30 Provide Retrieval Program Direction to Project W-211 for AP-102 & AP-104
- 130.B45 Prepare for Sampling During LAW Feed Staging

A selection filter was set in P3 using the mid level logic code field established by CHG to select each of these TBR elements. The Master Baseline Schedule contained one or more schedule activities logically linked for each of these TBR elements. These elements are also listed in CHG's TBR Composite Index spreadsheet and have been hi-lighted in light green. It appears from this search that CHG has included all elements from the MYWP and the BUG FY-2000 to accomplish the milestone dates for LAW and HLW waste feed.

Some of the TBR elements that include construction work typically have long durations and have large budget numbers associated with them, such as element 330.E40 which has a construction activity duration of 253 workdays and a budget of \$3,476,520.00. CHG is currently in the process of combining detail construction schedules at a lower level of detail than the Master Baseline Schedule. These detail schedules will breakdown the long duration construction activities into smaller activities. This low level integrated construction schedule was being reviewed by CHG and will be formally issued in March 2000. This schedule was not available for review at this time. However, Mui Lee of CHG demonstrated that these schedules do exist and are being used in CHG's planning effort.

### *Conclusion*

CHG has included all WBS elements from the TBR's in their Master Baseline Schedule RPOA. The number of activities varies for each element of the TBR, but there is at least one (1) schedule activity with associated logic for each TBR element. Lower level construction schedules are being developed and used as part of CHG's planning and schedule effort.

As stated above, the current Master Baseline Schedule shows an unconstrained funding case where projects support the introduction of LAW and HLW waste streams to BNFL per privatization milestone dates. However, this schedule exceeds the target funding constraints for FY 2002 to FY 2006 as established by BUG FY 2000. CHG has stated in the FY 2000 MYWP Summary that constraining the schedule to \$382M funding constraint in FY 2001 rather than the target of \$446 would impact the scheduled privatization start-up dates. Other than this broad statement no specifics have been mentioned. Currently the Master Baseline Schedule still reflects the unconstrained funding scenario. If the funding limits established in the BUG FY-2000 are realistic, then the schedule will need to be revised to reflect these funding constraints to mitigate any impacts that CHG has predicted.

- 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.*

### *Research*

LMHC procedure LMH-PRO-533 was referenced as document for basis of assessment. This change procedure is the vehicle to make changes to the Master Baseline Schedule whenever a contract change is approved. It was assumed that the functions listed as FDH in the procedure are now performed by CHG. While this procedure provides a road map for the evolution of a contract change, it does not describe how the lower level schedules under the Master Baseline Schedule are updated.

Ray Moller of CHG was asked about this process. Ray stated that when a contract change has been approved, an Operations Directive is written by CHG Contracts Group to implement change. This directive is sent to the Program Managers for implementation. Program Managers direct schedulers to implement change in schedule. After the change has been incorporated into schedules, the Program Manager formally notifies Contracts Group that change has been implemented.

## B-2 Decision Readiness to Proceed Self Assessment

Ray also stated that the lower level schedules are usually the origin of a contract change. When CHG requests a change, the lower level schedules are used to produce the "what if" scenarios and impacts to the RPP. Also, the scheduler is intimately involved in the preparation of the change request at the beginning, so when the change is approved and the Operations Directive is received from the Contracts Group there is no confusion over what is involved. Ray stated that Mark Rosenberry of CHG was responsible for the change module kept by CHG.

Mark Rosenberry of CHG was contacted about the change process and how schedule changes were incorporated into lower level schedules. Mark stated that change procedure LMH-PRO-533 was currently being revised to streamline the procedure and address concerns that CHG had with this previous procedure. A draft copy of this procedure and revised Baseline Change Request (BCR) form is attached for review. Mark provided a printout of the current change log that listed the status of changes as either approved or pending. These changes are tracked by Mark to ensure that the change elements are incorporated into the MYWP and that any schedule changes are incorporated into the lower level schedules. Mark also verified that typically schedule changes originate from the lower level schedules where the "what-if" analysis is performed and attached to the change request as justification for the change. Mark stated that Dick Foley of CHG would have examples of BCR's with the supporting documentation.

Dick Foley of CHG was contacted by providing the back-up information and P3 schedule that supports an approved BCR. Dick also verified that the lower level schedules typically are the vehicle that initiate the generation of a BCR when a schedule change is required or requested. Dick will forward a copy of BCR RRP-00-017 for review.

### *Analysis*

BCR RPP-00-017 was reviewed to verify that this change contained the appropriate schedule back-up and documentation. A copy of this change is attached for review. Also BCR RPP-00-014 was reviewed to verify schedule back-up to the change. A copy of this change is included as well.

### *Conclusion*

From the investigation of the Baseline Change Requests, it all schedule changes were made to the lower level detail schedules when the BCR was approved. CHG is currently working on a new contract change procedure that will streamline this procedure and make it more aligned with the RPP mission.

- 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.*

### *Research*

Ray Moller of CHG provided schedule RCOA, which was the updated version of the Master Baseline Schedule. This P3 schedule had a data date of December 27, 1999.

### *Analysis*

To verify that the schedule had been updated, a search within P3 was done to determine how many activities had progress with an actual start, actual finish, and remaining duration different than original duration. A filter was set-up in P3 to select the activities with progress. Of the 18,844 total activities in the schedule, 1,457 had progress, and of these 1,457 activities with progress, 727 activities were not Level of Effort (LOE) activities. Of the 1,457 activities that had progress, 273 activities were completed.

### *Conclusion*

The Master Baseline Schedule is being updated on a regular basis. The updated schedule provided by CHG had activities with progress, which showed new critical items so that the critical path visibility was apparent and so that progress was depicted against the schedule baseline.

## B-2 Decision Readiness to Proceed Self Assessment

4.1.2.2 *The CHG schedule is consistent with the DOE planning guidance (June 1999) and any subsequent DOE directed changes.*

### *Conclusion*

This expectation has been covered in previously reviewed criteria. Please refer to CRAD 4.3.2 and 4.2.1.

4.1.3 *Activities are logically driven to determine critical path.*

### *Analysis*

To verify that the schedule Master Baseline Schedule is logically driven, the schedule was reviewed to see if there are logic ties between each activity rather than having the activities constrained mainly by dates. The P3 schedule RPOA was reviewed for the number of constraint dates and the number of open-end activities, which have no predecessor or successor. The results of this review showed that RPOA had 3,375 early date constraints, 15 late date constraints, 6 mandatory constraints, and over 4,300 activities without a predecessor or successor logic link. Most of the activities with the date constraints and without preceding and succeeding logic ties are level of effort activities. A list of these activities is included in the electronic file "RPOA Schedule Report" which is included with this CRAD.

The activities in the schedule were filtered so that only critical path activities, those with Total Float (TF) less than or equal to zero, were listed. There were 553 activities with zero or less TF and of these 43 activities had this imposed by a zero float constraint. See attached graph for distribution of TF by project. You would expect that the majority of critical activities would fall into the waste retrieval and privatization projects TW04 and TW08 and see very little in the tank operations and support projects TW02 and TW03 since these projects typically have Level of Effort (LOE) activities.

The critical activities in the near term were investigated as well. P3 was filtered so that activities occurring in the next two (2) years were listed. A printout of these activities is attached to this CRAD. This filter shows that the majority of critical activities occur in TW-03 Tank Farm Operations, and that the retrieval and waster privatization projects have very little critical activities in the next two years. A graph showing this distribution is attached for review. Once again this is counter intuitive since the TW-03 project is an ongoing maintenance project. It was thought that there might be near critical activities that would show up if the sensitivity of the TF filter was increased. The filter was redone to increase the amount of TF from 0 to 65 days or three months. The number of TW-03 Tank Farm Operations greatly increased while the critical or near critical activities numbers for the TW-04 and TW-08 projects increased very slightly. A graph showing this distribution is attached for review.

### *Conclusion*

The critical activity list, those with Total Float near zero, is intended to be a prominent tool used to judge the overall schedule performance of the project. This tool is used to focus everyone's attention on the activities that need to be accomplished in order to support the goal of waste feed to BNFL. From the information reviewed on the Master Baseline Schedule RPOA, there are some serious problems with determining which activities are critical to support this waste feed goal. Not only are there a significant number of imposed constraint dates, but there are a lot of activities that do not have any logic associated with them all. Also, the activities that should not show up as critical are the majority of the critical activities. The sub-schedules making up the Master Baseline Schedule combine both LOE projects and goal driven projects, and when they are combined into one it becomes very confusing to see which activities are truly driving the project goal. **The current Master Baseline Schedule does not clearly define the critical path for the project.** The intent of the Master Baseline Schedule is combine all elements of CHG's work in one common area or schedule, and have this schedule as the main reporting vehicle for the project. When these two different types of schedule are combined together, the resultant master schedule does not provide any additional information value to the project, in fact it lessens this value due to the confusion. The individual project schedules still provide a critical path that is relevant to that project, and a means for management to assess that individual project's overall schedule status.

## B-2 Decision Readiness to Proceed Self Assessment

### 4.1.4.1 Interfaces between CHG and PHMC subcontractors are clearly identified.

#### Research

Mike Lewis of CHG was contacted to review the interfaces between PHMC and CHG. Mike stated that the interfaces were defined in the Hanford Site Technical Database or HSTD. CHG and the PHMC meet on a yearly basis to discuss these interface points just prior to preparation or updating of the MYWP. At this time, both the PHMC and CHG agree on what waste transfer or work is taking place and this is just to verify that CHG can take the waste or not. There are a small number of these interface points and the majority of these are beyond FY-2006 when the vitrification facility is up and operating. All interface points are kept in lower level schedules and are not shown in the more summary schedules. Other than these few points of interface, coordination between CHG and the PHMC are minimal.

#### Analysis

The Master Baseline Schedule RPOA was reviewed for these interface points. One critical interface is the 242A Evaporator and the work that will be done to extend the life of the evaporator. A sequence of activities is shown in the schedule running from 10/01/99 to 01/31/05. A copy of these activities is included for review.

#### Conclusion

The interfaces between the PHMC and CHG are shown in the Master Baseline Schedule. Since the majority of these interfaces are the acknowledgement that waste can be transferred some time in the distant future, they are not yet scheduled for a specific date. The review of the interface points on a yearly basis provides CHG with the opportunity to include the specifics about each interface in their MYWP well in advance of the actual interface taking place. This process is currently working as planned.

### 4.1.4.2 PHMC's subcontractors (if any) have prepared logic driven schedules and allocated appropriate resources to support the agreed to milestone with CHG.

#### Conclusion

See 4.1.4.2 above.

### 4.1.5 Schedules are prepared at 80% confidence level.

#### Research

Amy Basche of CHG was contacted about the risk analysis that CHG has done for the Master Baseline Schedule. Amy stated that the last formal risk analysis that CHG has performed was two (2) years ago for the MYWP, and that risk analysis was only a financial analysis and did not involve the schedule. CHG currently does not have a formal risk analysis for the schedule risk or the financial risk. CHG does have two people working to produce these risk analyses for the RTP date in April 2000, and these analyses will not be complete until that time. Amy stated that CHG has performed several schedule risk analyses for their projects, but these have never been formally issued to ORP. The risk analysis will be performed in line with the PIO risk analysis so that they are complimentary. Amy stated that CHG will use P3's Monte Carlo risk simulation module when doing their schedule risk analysis. Also, this risk analysis will concentrate on the waste delivery and privatization project schedules and their associated critical paths rather than all activities in the Master Baseline Schedule. The framework of the risk analysis is in place to begin after all research is complete. A copy of the risk analysis previously performed by CHG is attached for reference.

#### Conclusion

The risk analysis for the 80% confidence has not been completed and issued by CHG to date. The last risk analysis done was two years ago and this was a financial analysis only. The research and background information is currently being gathered by CHG and will be compiled into a formal report by the April 2000 RTP date. The risk analysis method proposed by CHG is inline with the PIO method and should compliment the PIO effort when completed and issued.

## B-2 Decision Readiness to Proceed Self Assessment

### Basis for Assessment:

- 4.1.1.1 RPP-5044, *River Protection Project FY 2000 MYWP Summary* contains master (WBS level 3) and intermediate (PMBS) schedules. Detailed schedules in P3 on 100-MB zip disk (4.3 CRAD file in library). Conversation with Ray Moller of CHG on 01/24/00. CHG's TBR Composite Index spreadsheet on 1.44-MB disk.
- 4.1.1.2 LMH-PRO-533, *Change Control*, Rev. 0 and TBR's. Interview with Ray Moller of CHG on 02/03/00 and telephone conversation on 02/16/00. Conversation with Mark Rosenberry of CHG on 02/16/00. Draft copy of change procedure HNF-IP-0842 and draft copy of Baseline Change Request (BCR) form. Telephone conversation with Dick Foley of CHG on 02/16/00. Copy of BCR RPP-00-017 and RPP-00-014.
- 4.1.2.1 Updated Master Baseline Schedule RC0A dated December 27, 1999 in P3 format on 100-MB zip disk (4.3 CRAD file in library).
- 4.1.2.2 See CRAD 4.3.2 and 4.2.1.
- 4.1.3 Master Baseline Schedule RP0A in P3 format on 100-MB zip disk (4.3 CRAD file in library).
- 4.1.4.1 Interview with Mike Lewis of CHG on 02/17/00.
- 4.1.4.2 Interview with Mike Lewis of CHG on 02/17/00.
- 4.1.5 Interview with Amy Basche of CHG on 02/17/00. Previous Risk Analysis performed by CHG (attached).

### Recommended Path Forward:

#### *Essential Actions*

None

#### *Important Actions*

None

#### *Beneficial Actions*

1. The current Master Baseline Schedule reflects an unconstrained funding case. If the funding limits defined in the BUG FY-2000 are realistic, then the Master Baseline Schedule will need to be revised to reflect these funding constraints.
2. There is no clear critical path for completion of the RPP project goal. The current Master Baseline Schedule has many critical activities, but these do not show a clear path from the beginning of the project to the end. The schedules making up the Master Baseline Schedule will need to be revised or a different means for developing this critical path will need to be devised such as showing the critical path in the IPO schedule.
3. CHG has not yet performed an 80% confidence level risk assessment of the Master Baseline Schedule. They currently have people working on this risk analysis and will issue it prior to the RTP date in April 2000. This analysis will need to be complete prior to the RTP in enough time for ORP and PIO to review its findings.

### Updates:

- 4.1.1.1 CHG's Master Baseline Schedule shows an unconstrained funding case where projects support the introduction of LAW and HLW waste streams to BNFL per the privatization milestones for FY 2002 to FY 2006. CHG has also revised the schedule so that FY 2001 stays within the \$382M limit established by ORP.
- 4.1.3 CHG has established the critical path for each tank feed batch by imposing a "zero total float constraint" on the "Provide Approval to Transfer" activity end point for each feed batch. This approach does show a critical path to accomplish the project work, since it removes all schedule contingency or total float from the logic chain. The logic sheets for the project are shown in Appendix C - Integrated Resource Loaded Schedule document HNF-1946 Revision 2.
- 4.1.5 CHG performed a risk analysis on the Master Baseline Schedule in order to provide an 80% confidence level that CHG would be able to support the privatization effort of BNFL. This analysis is included in document HNF-2017 Revision 2. This document currently states that all schedules meet the 80% confidence level required by ORP. No back-up information was provided on the schedules or the individual risk elements that were identified and analyzed.

## B-2 Decision Readiness to Proceed Self Assessment

### Signatures

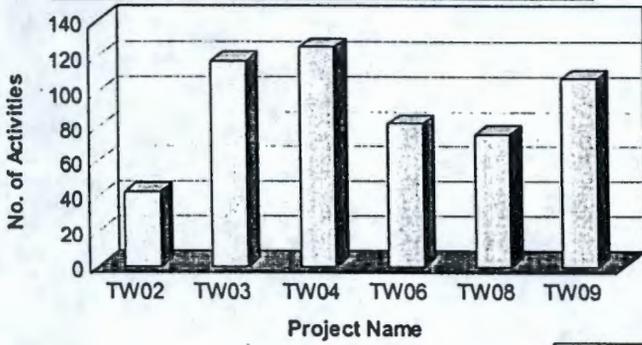
Reviewers: *Wade D. [Signature]*

Team Lead Approval: *[Signature]*

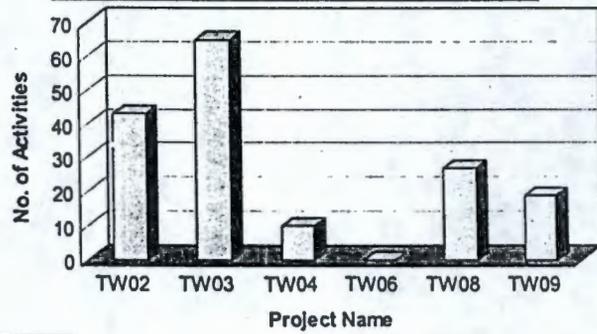
Date: *5-18-00*

Date: *5/18/00*

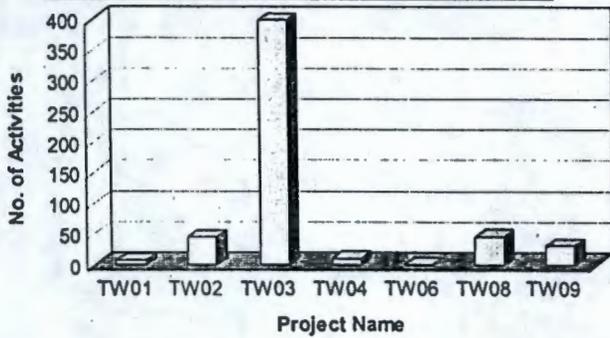
**Distribution of Activities with TF=>0 for Total RPP**



**Distribution of Activities with TF=>0 ES<FY2002**



**Distribution of Activities with TF=>65 ES<FY2002**



## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 4.0 Schedule

**Subcriterion: 4.2 Milestones – Key project milestones for completing the design and construction phase have been defined and execution milestones have been scheduled.**

**Specific Considerations in Assessment:**

4.2.1 Has CHG developed a proposed baseline milestone 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?

**DOE Expectations:**

4.2.1 CHG has developed a proposed baseline milestone 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.

### Rating Options

**Green:** Performance has given confidence that the Contractor will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that the Contractor will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that the Contractor will be successful in meeting B-2 expectations.

### Assessment

**Expectations Met:**

4.2.1 *CHG has developed a proposed baseline milestone 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.*

**Rating:**

**Green**

*Research*

Ray Moller of CHG was contacted to determine location of baseline milestone schedule. Ray stated that no baseline milestone schedule exists in P3 or CPM format other than milestones listed in Master Baseline Schedule. Ray was also questioned about the Central Milestone Module (CMM) which was referenced in the Baseline Update Guidance (BUG) FY 2000. I was referred to Diane Martin of CHG who was responsible for the maintenance of the CMM.

Diane Martin of CHG was contacted about the CMM. Diane is responsible for updating and maintenance of the CMM. All the agreed to milestones for the RPP are kept in the CMM. These milestones come from DOE-HQ, DOE-RL, and ORP. The CMM is an application that can be downloaded onto your computer from the Hanford LAN. Diane is the only one with write authority for this application. All others using the application have read only authority. A copy of the Baseline Control Log from the CMM system is attached for reference. Diane receives updates from the CHG project schedulers on a monthly basis. These updates are then transferred to the CMM. Diane stated that a report from the CMM is not formally issued to anyone within the ORP or DOE-RL. However, the information from the CMM is reported in the Monthly Performance Review issued by CHG. A copy of the December 1999 report is attached for reference (see pages 22 to 26).

*Analysis*

To verify that the milestones listed in the CMM existed in the Master Baseline Schedule, 10 milestones were selected at random. These were as follows:

- HQ T01-00-104* M-44-14D Submit Final TSB-WIRD for FY 2001
- RL T01-03-300* Completion of Core Sampling of All Tanks (5.6.3.1.J)
- ORP T03-00-751* Start Interim Stabilization of 3 SST's (3.1.1)
- HQ T03-01-104* M-46-01G Concurrence of Additional Tank Acquisition
- ORP T03-05-300* TIP – Assess need for DST Replacement

## B-2 Decision Readiness to Proceed Self Assessment

HQ T04-00-241 Submit Annual Update of SST Retrieval Sequence Document

ORP T04-03-W20 Submit a Field Investigation Report for T, TX-TY

ORP T04-07-U10 TIP: Decision on IMUST Retrieval

ORP T04-14-1B1 Initiate Tank Waste Retrieval from 17 additional SST's

HQ T04-49-W25 M-45-56 Complete Implementation of Agreed to Interim Measures

The Master Baseline Schedule RPOA was reviewed for these milestones. The selection filter in P3 was set to select activities by the Milestone Number code field. All 10 milestones were found to exist in the Master Baseline Schedule. All 10 milestones had the same baseline date listed in the CMM and the Master Baseline Schedule. A copy of a P3 report is attached for reference.

After reviewing the milestone list and noticing the number of milestones that were achieved in September 2000 (see attached chart Suggested Format for Monthly Performance Review Report), it was decided to perform a distribution analysis of these milestones. From this chart it can be seen that over half of the milestones for FY 2000 fall into September 2000. This would again suggest that over half of the milestones are tied to Level of Effort (LOE) activities.

It was also noticed when investigating the milestones, that a majority of the milestones had large amounts of Total Float and a significant number had a date constraint in the P3 schedule. A distribution of the Total Float and date constrained milestones was prepared (see attached chart). It can be seen from the Total Float distribution graph that all but 21 of the 219 milestones had Total Float in excess of 10 years. This would suggest that the majority of milestones selected are associated with LOF activities and have no successor activities. The distributions of milestones with a date constraint were plotted as well. These distributions show that approximately half of the milestones have a date constraint. This distribution is also valid for the milestones with zero Total Float as well.

The milestones that had a date constraint and Total Float less than one year were further reviewed. There are five milestones with a Mandatory Finish constraint and four that had an Early Finish constraint. All these milestones were reviewed to see what the Total Float was for their preceding activities. Of these nine milestones, three had activities with negative Total Float, five had positive Total Float, and only one had activities with zero Total Float preceding it. A table containing this information is attached for reference.

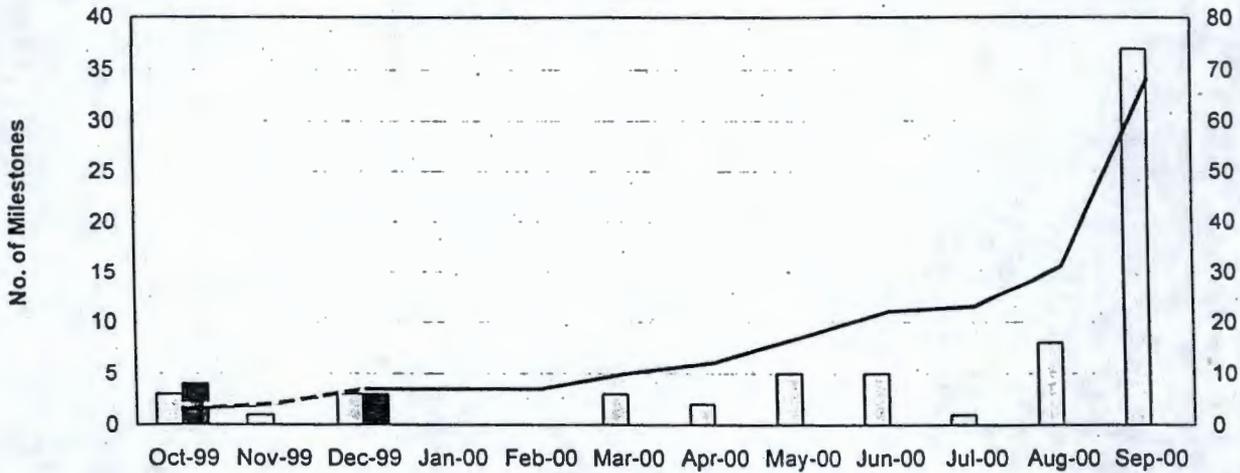
### *Conclusion:*

A separate baseline milestone schedule does not exist, however the Central Milestone Module (CMM) tracks each of the agreed to milestones. The CMM performs the same functions as a baseline milestone schedule. Actual performance of the project milestones can be compared to the planned baseline and forecasts can be made. The status of these milestones is reported monthly in the Monthly Performance Review issued by CHG.

The majority of the milestones contained in the CMM are related to LOE activities. While it is important to achieve these LOE milestones or goals, they are not the best indicator of how the RPP is progressing towards its ultimate goal of remediation and closure. Also, these LOE milestones are not really affected by the schedule logic as evidenced the amount of Total Float associated with most of them. Of the milestones selected for use in the CMM, only 14 are critical to accomplishing the RPP's ultimate goal and these 14 should receive the highest priority. A better method for judging the status of the RPP project would be to separate the LOE milestone activities from the project milestones and report the project and critical milestones differently than the LOE milestones. See *Improvements* in the Recommended Path Forward section.

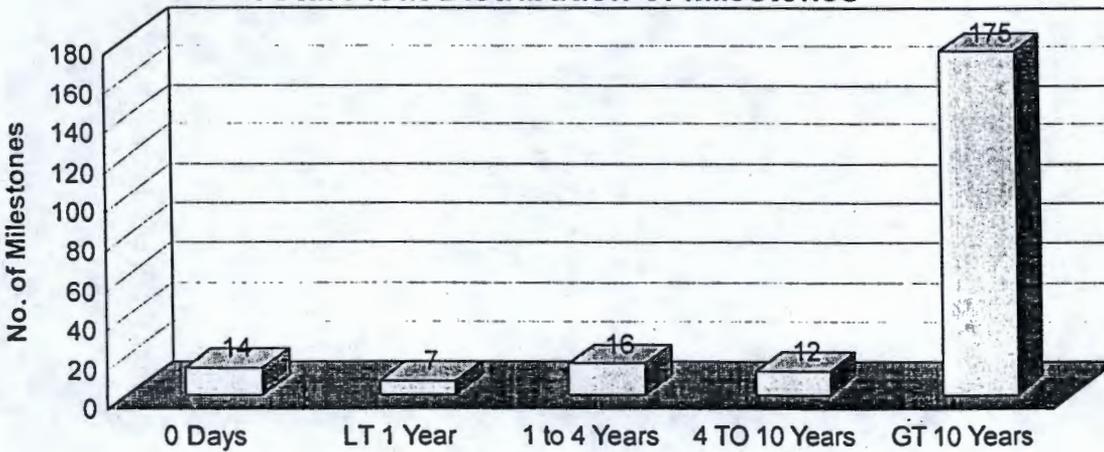
## B-2 Decision Readiness to Proceed Self Assessment

### MILESTONE ACHIEVEMENT FY 2000

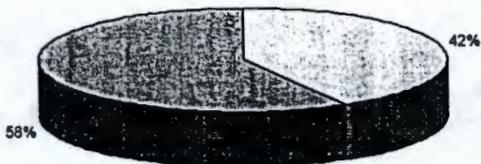


	Oct-99	Nov-99	Dec-99	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	Jul-00	Aug-00	Sep-00
Planned	3	1	3	0	0	3	2	5	5	1	8	37
Actual	4	0	3									
Planned Progress	3	4	7	7	7	10	12	17	22	23	31	68
Actual Progress	4	4	7									

### Total Float Distribution of Milestones

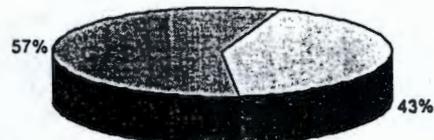


**Distribution of All Milestones with Date Constraints**



□ With Constraint □ W/O Constraint

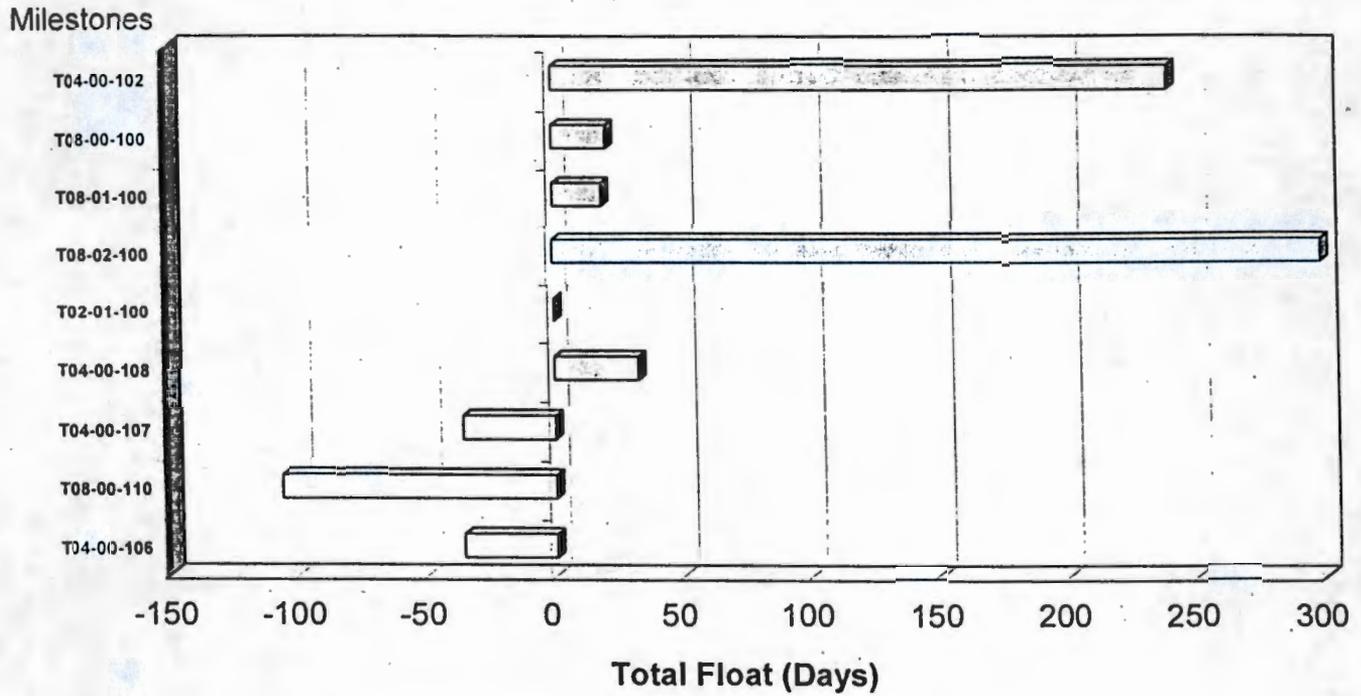
**Distribution of Critical Milestones Date Constraints**



□ With Constraint □ W/O Constraint

## B-2 Decision Readiness to Proceed Self Assessment

### Critical Milestone Buffer Report



## B-2 Decision Readiness to Proceed Self Assessment

### Basis for Assessment:

- 4.2.1.1 Telephone conversation with Ray Moller of CHG on Wednesday February 2, 2000.
- 4.2.1.2 DOE Baseline Update Guidance (BUG) FY 2000 (See File 4.3 for copy of BUG FY 2000).
- 4.2.1.3 Conversation with Diane Martin of CHG on Wednesday February 2, 2000.
- 4.2.1.4 Baseline Control Log report from Central Milestone Module dated 02/02/2000 (attached).
- 4.2.1.5 Monthly Performance Review RPP December 1999 (attached).
- 4.2.1.6 Master Baseline Schedule RPOA dated 01OCT99 (see 100-MB zip disk in file CRAD 4.3).

### Recommended Path Forward:

#### *Essential Actions*

None

#### *Important Actions*

None

#### *Beneficial Actions*

The following suggestions are offered for long term improvement of the CHG schedule control process.

1. The Current Projected Date shown in the CMM does not contain any information. This date field should be updated monthly with the latest forecast start or completion for each of the milestones. This information is available from the early start or finish dates in the master schedule. Also, a field showing the difference in days between the Current Projected Date and either the Baseline Date or the Revision Date would be helpful to quickly assess the status of a particular milestone.
2. The Forecast Date shown for the milestones listed in the Monthly Performance Review does not contain any information. This date field should be updated monthly with the latest forecast start or completion for each of the milestones. This information is available from the early start or finish dates in the master schedule. Also, a field showing the difference in days between the Forecast Date and Schedule Date would be helpful to quickly assess the status of a particular milestone.
3. The LOE milestones selected as key progress or performance indicators are largely skewed to the final month of FY 2000. Typically the milestones selected for this month are an aggregation of previous work that is taking place throughout the year such as milestone T01-00-108 Complete 12 Grab Samples or milestone T01-00-107 Complete 12 Core Samples. When over half the milestones are pushed into this final month, you did not get a representative sample of how the project is really performing. It would be better to break these cumulative types of milestones down into smaller milestones such as Complete 1 Grab Sample and show one for each month. This would provide a better evaluation of CHG's performance and would also be fairer to them since for example they could make 11 Grab Samples leading up to September 2000, but not make the 12<sup>th</sup> one until after the FY was complete.
4. While the Milestone Achievement table for FY 2000 list in the Monthly Performance Review is informative, displaying it with a histogram and progress curve could enhance value of this information. The graphical approach would provide an overall trend of how well the milestones were being attained, and would also show how many milestones were coming up in the next several months. All the information necessary to use the graphical display is currently available. The attached chart shows this same information, but by period. (Please note, the total number of milestones shown in monthly report is incorrect.)
5. The project and critical milestones will need a different method to show their status than the method used in the Monthly Performance Review. Once the milestone baseline date has been established, all date constraints should be removed and the milestone will move with the latest schedule update. A graph or chart showing the relative status of these milestones could then be used to better demonstrate if these milestones are being impacted and will be completed as planned. An example of this type of report is attached for review.

### Signatures

Reviewers: Wade Divil

Date: 5-18-00

Debriefed with (Point of Contact): TEAM LEAD

Date: 5/18/00

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 4.0 Schedule

**Subcriterion: 4.3 Performance/Trends in Schedule – Has CHG demonstrated the capability to establish and control their schedule?**

**Specific Considerations in Assessment:**

- 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 out year scope?
- 4.3.2 Has CHG incorporated ORP guidance into schedule and is this traceable to MYWP?

**DOE Expectations:**

- 4.3.1 Schedules have been established with a “rolling wave” concept with less schedule detail required for out year scope.
- 4.3.2 ORP guidance is traceable to the MYWP schedule.

### Rating Options

**Green:** Performance has given confidence that the Contractor will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that the Contractor will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that the Contractor will be successful in meeting B-2 expectations.

### Assessment

**Expectations Met:**

- 4.3.1 *Schedules have been established with a “rolling wave” concept with less schedule detail required for out of year scope.*

The Master Baseline Schedule developed by CHG was reviewed for the “rolling wave” concept. The schedule reviewed was named RP0A and had a data date of 01OCT99. To verify that the “rolling wave” concept was used in the development of this schedule, a distribution of activity Early Start (ES) dates was developed. This distribution was developed by modifying the filter in the P3 Software so that an activity would be selected when that activity’s ES date fell within the selected FY. This distribution was plotted for the FY 2000 through 2009. This plot clearly shows FY 2000 has the most activities with a continual drop-off in the number of activities in each succeeding year. The total number of activities in the Baseline Master Schedule is 18,776. FY 2008 and FY 2009 show approximately 1/10<sup>th</sup> the number of activities as FY 2000 (See chart below).

To verify that the “rolling wave” concept was used in the development of the lower level schedules, a distribution of activity Early Start (ES) dates was developed for one of the randomly selected sub-projects. The selected sub-project was named T40B (an electronic copy of both these schedules is contained on a 100-MB ZIP disk in the project library) and had a data date of 01OCT99. This distribution was developed in the same way as the Master Baseline Schedule distribution, which was by modifying the filter in the P3 Software so that an activity would be selected when that activity’s ES date fell within the selected FY. This distribution was plotted for the FY 2000 through 2009. Once again, this plot clearly shows FY 2000 has the most activities with a continual drop-off in the number of activities in each succeeding year. The drop-off is not as pronounced as in the Master Baseline Schedule, however, the trend is similar with FY 2008 and FY 2009 show approximately 1/3<sup>rd</sup> the number of activities as FY 2000 (See chart below).

Due to the unusually large number of schedule activities starting after FY 2006 and as a further check on the “rolling wave” concept, a further breakdown analysis of the schedule activities was performed. This analysis looked at the distribution of the activities’ duration for a selected number of fiscal years. The Master Baseline Schedule RP0A and the sub-project schedule T40B were once again reviewed. The breakdown distribution by duration was performed in P3 by once again modifying the filter to first select the activities, which had an ES date within the selected fiscal year, and then further selecting activities which had a duration falling within the specified bandwidth. This information was then plotted in a histogram for easy comparison and is attached for review.

This additional breakdown analysis provided some interesting results. It showed that the greatest percentage of schedule activity durations for each period tested fell into the bandwidth of greater than 200 days. Also, even though the “rolling wave” concept was apparent at the summary level,

**Rating:**

**Green**

## B-2 Decision Readiness to Proceed Self Assessment

within each FY this rolling wave did not appear that evident.

Looking at the FY 2000 graph for the Master Baseline Schedule, it would be expected to see the majority of the activity durations falling in the left part of the graph so that the distribution would be skewed toward shorter duration activities. The distribution in reality is neutral as evidenced by the lighter colored bar, which shows the approximate center of the distribution. This skew towards the right is due to the large number of activities in the >200 range. As you progress in time from FY 2000 on, you would expect to see the distribution move continually from the left to the right, going from short planned durations to longer durations. There is a slight migration to the right for FY 2001 to FY 2006, however, as you progress beyond FY2006, the distribution reverses and moves toward the left to the neutral position. This type of distribution is counter intuitive since you would expect fewer and fewer activities with short durations as you got progressed further and further into the future. This effect is even more pronounced in sub-project T40B.

Due to the unusually large number of activities with durations greater than 200 days that kept appearing, a filter was run just for these activities. This type of activity accounts for approximately 1/3<sup>rd</sup> of the activities in the Master Baseline Schedule. Upon further review of the activities' detail information, it was determined that the majority of these activities ran for a specific FY and started at the beginning of that year and ended at the last day of that FY.

The large number of short duration activities for FY 2007 and forward into the future was investigated as well. It would be expected that there would be some short duration activities in these future years for milestones or interface points for the other contractors. However, short duration activities account for approximately 1/3<sup>rd</sup> of these future activities. A detailed review of these short duration activities revealed that some of the continuing maintenance work is planned in as much detail for the distant future years as the current year work plan.

Ray Moller of CHG was questioned about the activities with durations >200 and the short duration activities in the future. Ray stated that the majority of the >200 duration activities are "level of effort" activities associated with management and continuing operations. There are a large number of these activities due to the way the CHG cost system works. A schedule activity is created for each element of the WBS coming from the TBR's. This activity is cost and resource loaded. P3 is used to generate schedule dates and resource loading for each of the schedule activities. This information is then electronically passed to their HANDI cost system. Also, as the fiscal year progresses, these schedule activities are updated within P3, and this progress information is once again passed to the HANDI system.

Ray stated that there are numerous short duration activities in the future due to the way that the work was estimated from the TBR's. The work associated with each TBR was broken down into a sequence of schedule activities. Similar types of tank work used similar sequences even though some of this tank work was in the distant future. The future work was not carried at a more summary level.

### *Conclusion:*

The Master Baseline Schedule provided by CHG has incorporated the "rolling wave" concept in schedule development as evidenced by the decreasing activities as you progress forward in time. Due to the incongruities shown in the further analysis of the schedule, it appears that the schedule development and reporting process could be optimized to provide added value to the management of the River Protection Project. Recommendations for this optimization are included in the Recommended Path Forward *Improvements* section.

### 4.3.2 *ORP guidance is traceable to the MYWP schedule.*

To determine if CHG has the ability to establish and control their schedule in line with guidance from ORP, the DOE's Baseline Update Guidance (BUG) FY 2000 was reviewed for schedule guidance. From the BUG FY 2000, seven (7) specific directives were randomly selected for review. The Master Baseline Schedule developed by CHG was then reviewed to see if the guidance had been implemented.

1. *Guidance:* I.B.1 Site Summary Level Schedule Data by Mission Area – Graphical display of mission area elements included on the Site Summary Level Schedule. This includes

## B-2 Decision Readiness to Proceed Self Assessment

key TPA, HQ major, and Critical Closure Path milestones.

*Findings:* There was not a separate Site Summary Level Schedule that had been issued to date. Ray Moller of CHG was questioned about this summary schedule, but he stated that CHG had not developed one in P3. The Master Baseline Schedule is currently the only means of displaying this summary information. There were no P3 schedules associated with the Summary Level Schedule. See *Improvements* in Path Forward Section.

2. *Guidance:* II.C.1 Project Master Baseline Schedule – Includes a resource loaded life-cycle schedule.

*Findings:* The Master Baseline Schedule RP0A was checked for resource loading. This schedule contains resource and cost loading for the majority of activities included in the schedule. Refer to schedule RP0A contained on a 100-MB zip disk in the project library.

3. *Guidance:* B.2.2 Baseline Schedule – At the PBS level, the degree of detail presented must provide sufficient visibility to serve as a basis to assess schedule progress and impacts (e.g., schedule logic must be shown). Back-up information, such as lower-tier schedules, must be described and its location identified to document the basis of schedule estimate.

*Findings:* The Master Baseline Schedule is at the PBS level. This schedule does show sufficient detail and visibility to serve as a basis to assess schedule progress and impacts. Activities are logically linked with preceding and succeeding activities if they are not “Level of Effort” type activities. The “Level of Effort” activities are sometimes not linked, but this does not materially affect the validity of the schedule. See *Improvements* in Path Forward Section.

4. *Guidance:* C.2.1.1.4.2 DST and SST Waste Feed Delivery – Update the TWRS Operations and Utilization Plan to be consistent with the privatization contract and, using the latest results of the Best Basis Inventory Assessment, establish a Phase I plan for waste retrieval and feed staging.

*Findings:* Master Baseline Schedule RP0A was reviewed for activities associated with this work. These activities are part of TBR 150.B22. Activities were filtered in P3 to match mid level logic equal to “150.B22”. There were 43 activities selected with this filter. These activities show the work associated with waste retrieval and feed staging.

5. *Guidance:* C.2.1.1.4.2 DST and SST Waste Feed Delivery – Define retrieval equipment requirements, infrastructure requirements, and schedule and recommend a preferred alternative consistent with the assumptions in this guidance.

*Findings:* The TBR’s related to this guidance are the 120 series. These TBR’s layout the activities involved in defining equipment requirements and infrastructure requirements. A search in Master Baseline Schedule RP0A showed that there were 895 activities associated with this guidance. The TBR Composite Index dated October 26, 1999 is included with the P3 schedules on 100-MB zip disk in the project library.

6. *Guidance:* C.2.1.1.4.2.1 RPP Vadose Zone Program – Complete development of spectral gamma logging baseline for SST farms, including issuance of tank farm reports for all SST’s (M-45-50-T03, March 2000 and M-45-50, September 2000).

*Findings:* The TBR related to this guidance is “650.005”. This TBR involves support for Vadose Zone investigations. A search in Master Baseline Schedule RP0A showed that there were 126 activities associated with this guidance. Activities T465005G01 and T465005H01 relate to the spectral gamma logging baseline for the SST farms.

7. *Guidance:* C.2.1.1.8 Privatization Infrastructure – Project W-519 will expand site utilities and selected site services. The description and cost for these services will be included in the utilities (Site Engineering Division) annual work plan.

*Findings:* The privatization infrastructure work is included in sub-project T80A of the Master Baseline Schedule. This P3 schedule has infrastructure support activities prior to and during the BNFL construction. These activities are resource and cost loaded, and are logically linked in the schedule.

## B-2 Decision Readiness to Proceed Self Assessment

**Basis for Assessment:**

- 4.3.1.1 Master Baseline Schedule RPOA dated October 1, 1999 (P3 files contained on 100-MB zip disk in project library files).
- 4.3.1.2 Sub-Project Schedule T40B dated October 1, 1999 (P3 files contained on 100-MB zip disk in project library files).
- 4.3.1.3 Telephone interview with Mr. Ray Moller of CHG on January 26 & 27, 2000.
- 4.3.2.1 DOE Baseline Update Guidance FY 2000 (attached).
- 4.3.2.2 Master Baseline Schedule RPOA dated October 1, 1999 (P3 files contained on 100-MB zip disk in project library files).
- 4.3.2.3 TBR's (see TBR Composite Index Oct 26.xls on 100-MB zip disk in project library files).
- 4.3.2.4 Sub-Project Schedule T80A dated October 1, 1999 (P3 files contained on 100-MB zip disk in project library files).

**Recommended Path Forward:**

*Corrective Actions*

None

*Improvements:*

The following suggestions are offered for long term improvement of the CHG schedule control process.

1. Remove activities that do not require planning, such as "Level of Effort" activities that start and finish with the fiscal year. These activities do not enhance the value of the schedule, and actually slow down the maintenance and operation of the Master Baseline Schedule. These activities are included in the schedule because of the method that CHG project controls systems handle the resource planning and reporting. If possible, revise or implement new project controls system or process to handle planning and reporting on the "Level of Effort" activities.
2. The process currently used to create, update and revise the Master Baseline Schedule is workable, however this process could be improved to reduce cost of updating and maintaining the schedule and to quickly respond to change requests from ORP. The current Master Baseline Schedule has its planning levels intermingled with both summary and detail schedule activities. These levels should be separated to improve the performance of each type of schedule.
 

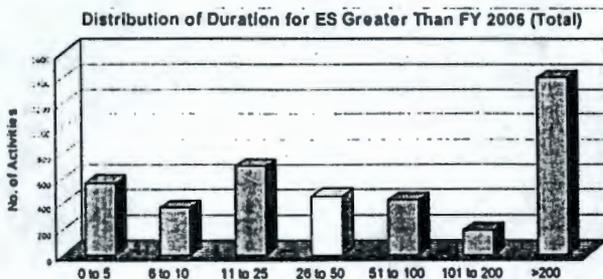
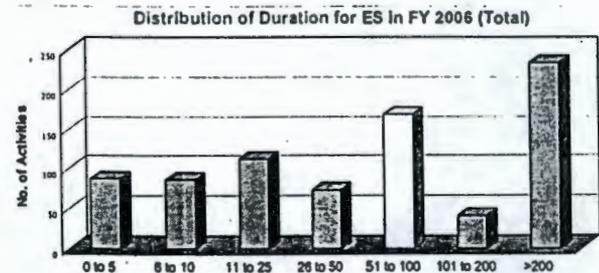
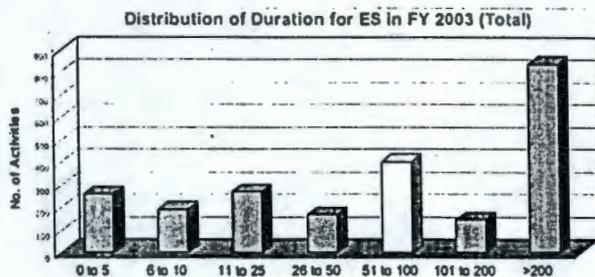
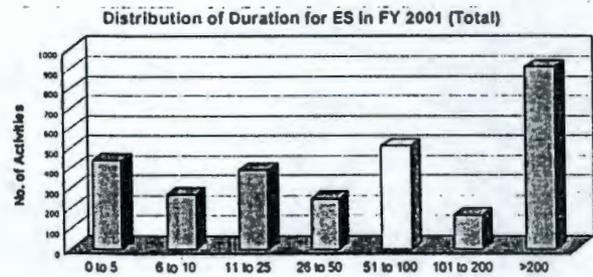
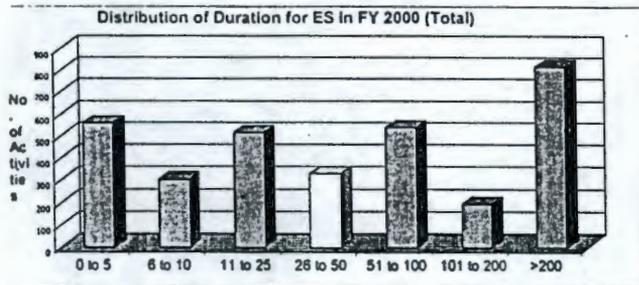
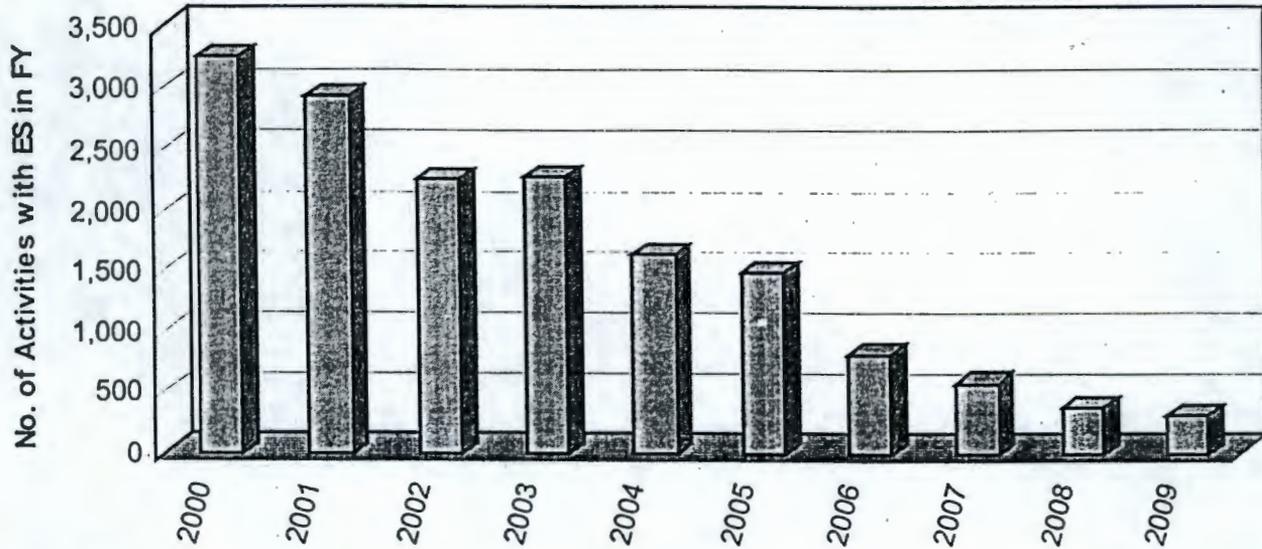
The short term or "control" schedule should have detail activities and plan work only in the near future, say with an event horizon of 2 to 4 years. The "control" schedule should be used as a tactical tool to control the current year work plan. This schedule will provide more accurate dates when activities will be taking place along with the changes as they happen. The "control" schedule would be updated on a monthly basis to reflect the current status of the project. This schedule would probably have no more than 2,000 to 3,000 activities at any one time. As the current work year moves to 2001, completed activities could be removed from the schedule.

The long term or "planning" schedule should have all the activities (excluding "Level of Effort" activities) necessary to complete the RPP, including already completed activities. The "planning" schedule should be used as a strategic tool to plan for changes that have a long-term impact on the RPP project. The "planning" schedule will have only activities with longer durations and major project milestones. This schedule would only be updated 2 to 4 times a year or when there is a major change in the RPP project. This schedule could be used to quickly evaluate changes, "what if," scenarios to the project. This schedule would have 1,000 or fewer activities.
3. Schedule activities are currently resource and cost loaded and this information is used in CHG's project controls system to produce resource and cost loading reports. If the schedule activities are only resource loaded to produce these reports or if resource leveling is not used within the P3 program, then other methods could be employed to reduce the schedule maintenance process as suggested in above Improvement No. 1. For example, if cost and progress information is stored in Dbase or Access files, an algorithm can be created to spread the resource and cost information over time. This would keep all the cost and progress information in one common database, and would eliminate any manual manipulation when transferring this information between management systems. All graphics could then be done using commercial software applications.

Signatures	
Reviewers: <i>(Wade D...)</i> Date: <i>5-18-00</i>	Team Lead Approval: <i>[Signature]</i> Date: <i>5/18/00</i>

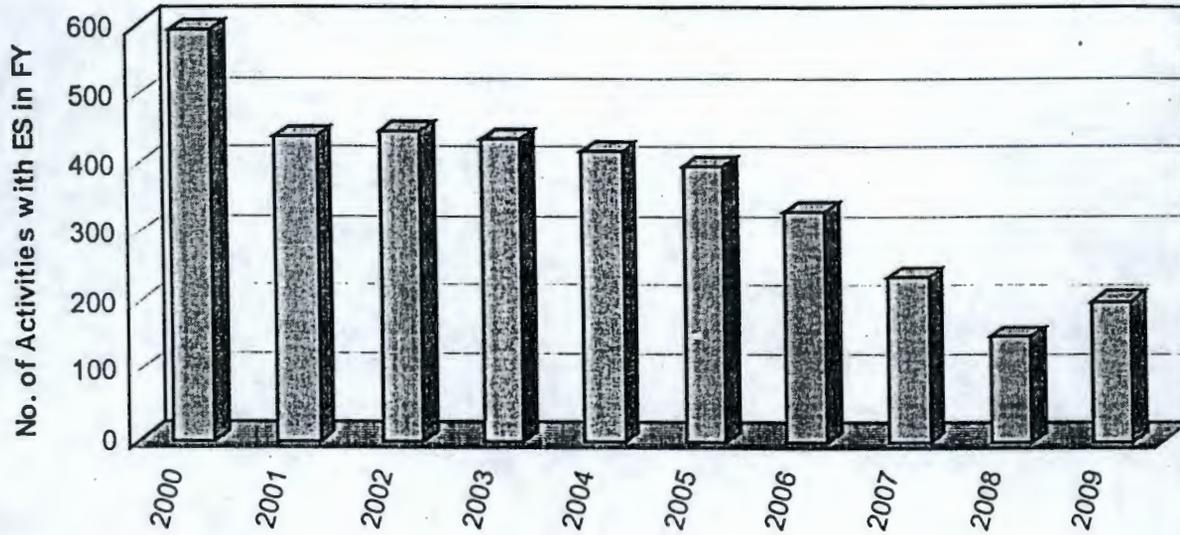
## B-2 Decision Readiness to Proceed Self Assessment

### Distribution of Activity Early Starts for Master Baseline Schedule

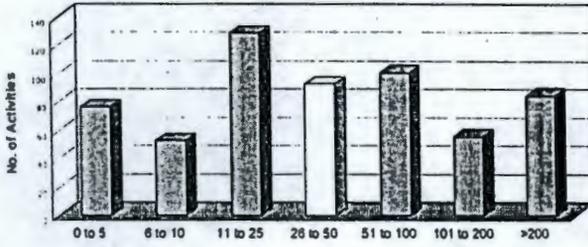


## B-2 Decision Readiness to Proceed Self Assessment

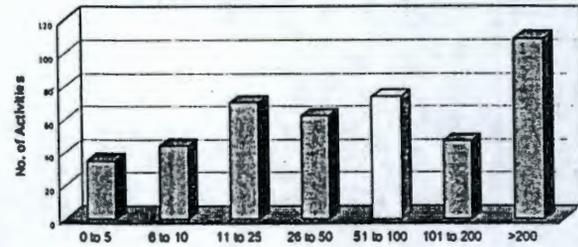
### Distribution of Activity Early Starts for Schedule T40B



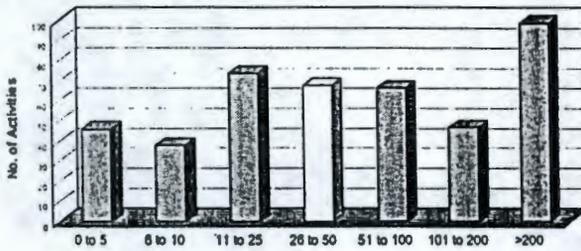
Distribution of Duration for ES in FY 2000 T40B



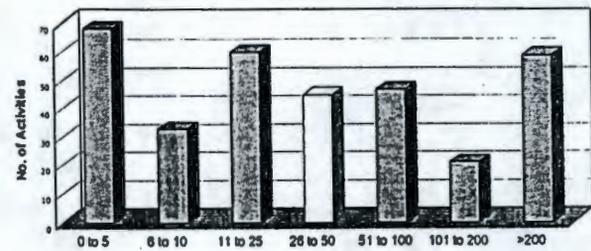
Distribution of Duration for ES in FY 2001 T40B



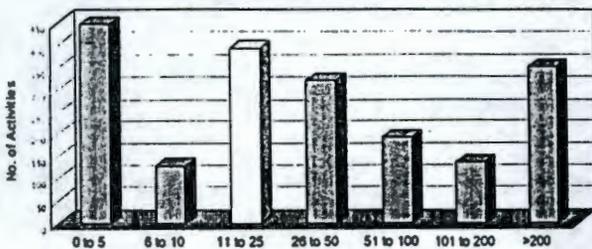
Distribution of Duration for ES in FY 2003 T40B



Distribution of Duration for ES in FY 2006 T40B



Distribution of Duration for ES Greater Than FY 2006 T40B



## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 4.0 Cost and Schedule

**Subcriterion: 4.4 Management of Schedule Baseline - Has CHG developed and demonstrated a schedule control process to assure timely completion of the project?**

**Specific Considerations in Assessment:**

- 4.4.1 Is the schedule control process clearly defined?
- 4.4.2 Is the implemented schedule control process efficient and effective?
- 4.4.3 Have critical paths been determined?

**DOE Expectations:**

- 4.4.1 Changes to the schedules are processed through change control plans in line with approved quality assurance requirements.
- 4.4.2 Project performance is being reported regularly and corrective measures identified in accordance with approved CHG project control procedures and tracked to closure.
- 4.4.3.1 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.

### Rating Options

**Green:** Performance has given confidence that the Contractor will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that the Contractor will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that the Contractor will be successful in meeting B-2 expectations.

### Assessment

**Expectations Met/Not Met:**

- 4.4.1 *Changes to the schedules are processed through change control plans in line with approved quality assurance requirements.*
- Research*
- LMHC procedure LMH-PRO-533 was referenced as document for basis of assessment. This change procedure is the vehicle to make changes to the Master Baseline Schedule whenever a contract change is approved. It was assumed that the functions listed as FDH in the procedure are now performed by CHG.
- Ray Moller of CHG was asked about this process. Ray stated that when a contract change has been approved, an Operations Directive is written by CHG Contracts Group to implement change. This directive is sent to the Program Managers for implementation. Program Managers direct schedulers to implement change in schedule. After the change has been incorporated into schedules, the Program Manager formally notifies Contracts Group that change has been implemented.
- Mark Rosenberry of CHG was contacted about the change process. Mark stated that change procedure LMH-PRO-533 was currently being revised to streamline the procedure and address concerns that CHG had with this previous procedure. A draft copy of this procedure and revised Baseline Change Request (BCR) form is included in CRAD 4.1 documentation. Mark provided a printout of the current change log that listed the status of changes as either approved or pending.

**Rating:  
Green**

## B-2 Decision Readiness to Proceed Self Assessment

These changes are tracked by Mark to ensure that the change elements are incorporated into the MYWP and that any schedule changes are incorporated into the lower level schedules. Mark verified that "what-if" analysis is performed and attached to the change request as justification for the change. Mark stated that Dick Foley of CHG would have examples of BCR's with the supporting documentation.

Dick Foley of CHG was contacted about providing the back-up information and P3 schedule that supports an approved BCR. Dick forwarded a copy of BCR RRP-00-017 for review. This BCR is included in CRAD 4.1 documentation.

### *Analysis*

BCR RPP-00-017 was reviewed to verify that this change contained the appropriate schedule back-up and documentation. BCR RPP-00-014 was also reviewed to verify schedule back-up to the change.

### *Conclusion*

From the investigation of the Baseline Change Requests, it can be determined that schedule changes are made in accordance with the appropriate procedure. CHG is currently working on a new contract change procedure that will streamline this procedure and make it more aligned with the RPP mission.

4.4.2 *Project performance is being reported regularly and corrective measures identified in accordance with approved CHG project control procedures and tracked to closure.*

### *Research*

Ray Moller of CHG contacted about project performance reporting and the corrective actions tracking done by CHG. Ray stated that project progress was reported in the Monthly Performance Report issued for the project. Corrective actions to cost and schedule variances were listed in the monthly report, however, Ray did not know of any procedure for tracking these items to closure. Ray suggested that Mike Wells or Don Lenseigne of CHG be contacted to get further information.

Don Lenseigne of CHG was contacted about monthly report issued by CHG. Don stated that the corrective actions listed in the monthly reports were not tracked to closure and either were resolved or were repeated in the next monthly report. Don also explained how CHG calculated BCWS, BCWP and ACWP for the project.

### *Analysis*

The Monthly Performance Reports for October 1999 to December 1999 were reviewed for progress reporting content and corrective actions. Overall cost and schedule progress was reported along with the schedule and cost index. Each of the ten projects were listed with their individual cost and schedule variances. For each negative variance a corrective action was listed in the report.

The overall cost performance showed a continuing positive trend for the project during the three-month period reviewed. The cost variance is still positive, but has been reduced each succeeding month for the three-month period.

The overall schedule performance showed a slight negative variance for the three-month period reviewed. When the schedule performance was reviewed for the individual projects it was discovered that some of the projects actually had a continuing negative trend that was worsening. Project TW04 was reviewed for schedule performance. The schedule performance for TW04 was put into a graph. This graph showed a negative variance that was worsening in each successive reporting period. Project TW04 is critical to supporting the overall RPP goal since waste retrieval and supply to BNFL is one of the major milestones for the project.

## B-2 Decision Readiness to Proceed Self Assessment

In each reporting period, every project listed its schedule and cost variances. If a variance was negative, a Corrective Action was listed to reduce or eliminate the negative variance. If a Corrective Action was listed, the succeeding Monthly Performance Report never mentioned this Corrective Action and whether it had been implemented and if the variance had been improved or eliminated. Sometimes the same corrective action was listed again. No Corrective Action items listed were ever reported as being closed.

### *Conclusion*

The overall RPP project schedule and cost performances are formally reported on a monthly basis in the Monthly Performance Report. The overall schedule and cost performances give the overall direction of the project, but do not highlight any specific project where there are adverse negative trends such as TW04. Corrective Actions are listed for each negative cost or schedule variance, but they are only listed once and not tracked to closure. There is no formal project controls procedure in place to track the corrective actions once they are listed.

- 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.*

See CRAD 4.1.3 on critical path activities in each project.

- 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.*

See CRAD 4.1.3.

- 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.*

### *Analysis*

CHG currently performs these types of activities when they prepare detail schedules for BCR's back-up used to revise the baseline schedule. CHG also demonstrates this ability when they produce the low level integrated schedule requested by ORP. These schedules require CHG to review and revise activity duration, review and coordinate work in the same time frame, and identify critical items and the impact a revised schedule would have on them.

### *Conclusion*

CHG currently possesses the capability to estimate the impact of compressed time frames, concurrent activities, potential conflicts and other time critical schedule elements.

### **Basis for Assessment:**

- 4.4.1 LMH-PRO-533, *Change Control*, Rev. 0 and TBR's. Interview with Ray Moller of CHG on 02/03/00 and telephone conversation on 02/16/00. Draft copy of change procedure HNF-IP-0842 and draft copy of Baseline Change Request (BCR) form. Copy of BCR RPP-00-017 and RPP-00-014 (See CRAD 4.1.1.2).
- 4.4.2 DOE/ORP-99-05 Revisions 0, 1, & 2 Office of River Protection Monthly Performance Reports.
- 4.4.3.1 See CRAD 4.1.3.
- 4.4.3.2 See CRAD 4.1.3.
- 4.4.3.3 See CRAD 4.1.1.2.

## B-2 Decision Readiness to Proceed Self Assessment

**Recommended Path Forward:**

*Essential Actions*

None

*Important Actions*

None

*Beneficial Actions*

1. The monthly report is currently produced in hard copy and in electronic format. It would be beneficial to develop an interface to the progress and cost database so that more detailed report queries could be developed and answered by the ORP rather than having CHG produce this information in the monthly report. CHG has current information in PeopleSoft and HANDI systems so that interface could be developed rather easily. This would allow the CHG people to continue in their management roles and rather than in doing historical searches of the information.
2. There is no clear critical path for completion of the RPP project goal. The current Master Baseline Schedule has many critical activities, but these do not show a clear path from the beginning of the project to the end. The project schedules making up the Master Baseline Schedule will need to be revised or a different means for developing and reporting this critical path will need to be devised.
3. Corrective actions are listed for schedule and cost variances every month in the Monthly Performance Report. However, it is not known whether these corrective actions are ever implemented since no tracking report or mechanism is in place to follow up on these items. A status report needs to be instituted to verify that corrective actions were actually done or if no action was taken.

**Updates:**

- 4.4.3.1 Expectation that critical paths for each individual project have been determined and is used to focus management attention and resources on specific activities to maintain each project's schedule was not previously met. CHG has revised the master baseline schedule so that the critical path for each tank feed batch was established by imposing a "zero total float constraint" on the "Provide Approval to Transfer" activity end point for each feed batch. This approach does show a critical path to accomplish the individual project work, since it removes all schedule contingency or total float from the logic chain. The logic sheets for the project are shown in Appendix C – Integrated Resource Loaded Schedule document HNF-1946 Revision 2.

**Signatures**

Reviewers:

*(John Ditt)*

Debriefed with (Point of Contact):

*TEAM LEAD*

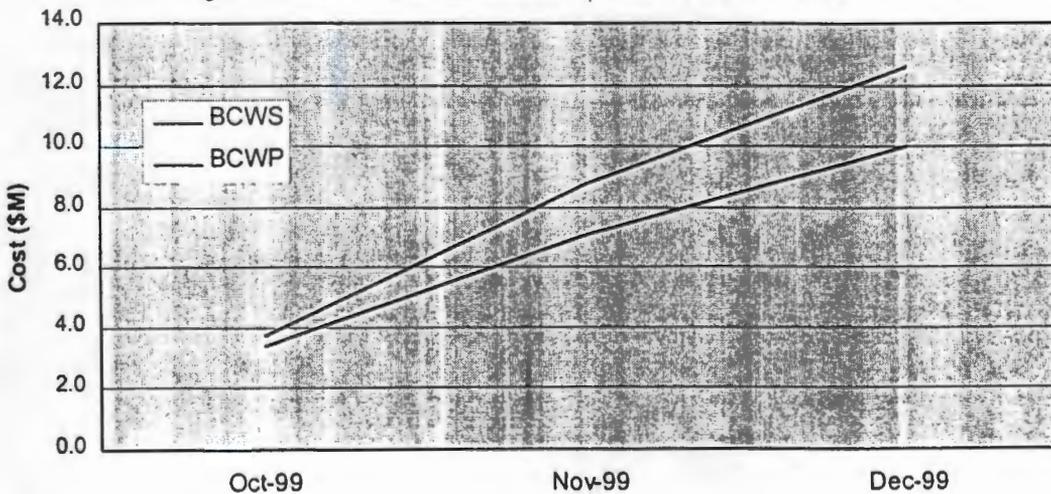
Date:

*5-18-00*

Date:

*5/18/00*

**Project TW04 Waste Retrieval Schedule Performance**



## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 4.0 Cost and Schedule

**Subcriterion: 4.5 Achievability of Schedule<sup>1</sup> - Is there a high likelihood that the CHG schedule can be met?**

**Specific Considerations in Assessment:**

- 4.5.1 Are the schedule activities tied to associated cost and scope?
- 4.5.2 Are the activities and logic identified for interfaces with PHMC sub-contractors?
- 4.5.3 Is the quantity of resources assigned to the scheduled activities reasonable for the timeframe (duration) allotted to the activity?
- 4.5.4 Are risks associated with meeting the schedule managed per the CHG Risk Management Procedure?

**DOE Expectations:**

- 4.5.1 A well-defined and logical WBS ties activities in the schedule.
- 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 Resource loading is comparable to that used by other contractors for projects of similar size and technical complexity.
- 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.

### Rating Options

**Green:** Performance has given confidence that the Contractor will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that the Contractor will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that the Contractor will be successful in meeting B-2 expectations.

### Assessment

**Expectations Met/Not Met:**

4.5.1 *A well-defined and logical WBS ties activities in the schedule.*

*Analysis*

The WBS is well defined for the RPP. The levels of the WBS are shown in the FY-2000 MYWP Summary for the RPP. The Master Baseline Schedule is typically at the same level as the TBR elements. The TBR's are referenced to a particular schedule activity in the Master Baseline Schedule in the TBR Composite Index. This interface happens at Level 7 of the WBS. A listing of all TBR's and the TBR Composite Index are located on the Hanford LAN. In CRAD 4.3.2, a detailed comparison was made between the BUG FY-2000, the Master Baseline Schedule, and the TBR Composite Index to verify that elements included in the BUG FY-2000 were included in the Master Baseline Schedule and the TBR Composite Index. This showed that all elements were accounted for and cross-referenced to each other.

*Conclusion*

The WBS for the RPP is well defined and ties activities in the Master Baseline Schedule to the TBR elements of the WBS.

**Rating:**

**Green**

<sup>1</sup> See Sub-criteria 4.6, 4.7, 4.8, and 4.9 for further definition and clarification for the achievability of the schedule for the various life-cycle phases of the project.

## B-2 Decision Readiness to Proceed Self Assessment

### 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.*

#### *Research*

Mike Lewis of CHG was contacted to review the interfaces between PHMC and CHG. Mike stated that the interfaces were defined in the Hanford Site Technical Database or HSTD. CHG and the PHMC meet at least once a year to discuss the interface points just prior to preparation or updating of the MYWP. At this time, both the PHMC and CHG agree on what waste transfer is taking place and to verify that CHG can take the waste. There are a small number of these interface points and the majority of these are beyond FY-2006 when the vitrification facility is up and operating. Other than these few points of interface, coordination between CHG and the PHMC are minimal. Mike stated that this was not a formal process where meeting minutes were kept and a memorandum of understanding was not issued following the meeting. The interface document was the only document issued after the meeting. Mike also stated that this was a concern of CHG and they were currently revising the ICD procedure to incorporate the interface points from the HSTD. This procedure is not yet published and is still under review. Mike Lewis suggested that Bob Bracket of Fluor Federal Services be contacted since he was the one who kept the database.

Bob Bracket of Fluor Federal Services was contacted about the HSTD. Bob stated that CHG and FFS met at least once a year to discuss the interface points. FFS keeps the HSTD and in this particular case, it is a large Excel spreadsheet. At the meeting, FFS and CHG managers review the interface points and decide if CHG can support the waste feed from FFS. The spreadsheet is set up to list the Activity ID that identifies this interface for both the FFS and CHG schedules. After the meeting, the HSTD spreadsheet is kept by FFS.

#### *Analysis*

The HSTD spreadsheet was reviewed for content. The Activity ID's for CHG's P3 schedule were listed in the spreadsheet. Interface points were selected at random to check if the P3 Activity ID listed in the HSTD was an activity ID in the PMBS schedule issued by CHG.

1. HST01.T3 WMSW4C1 from Solid Waste Treatment
2. HST02.T3 WMLWA40 from Liquid Effluents
3. HST10.T3 WMLWA35 from LWPF
4. HST09.T3 AR1B1472 from FFTF
5. HST11.T3 WMAS690 from 222-S Lab to 204-AR

All interface points were listed in the PBMS schedule dated October 1, 1999 issued by CHG. Bob Bracket of FFS stated that the milestone could not be found in the latest schedule issued by CHG to FFS. Mike Lewis of CHG stated CHG had problems with their last update of the PBMS schedule and that a lot of information was inadvertently deleted from this schedule when it was issued. This problem will be corrected with the next update of the PBMS schedule.

#### *Conclusion*

The process for setting interface points requires buy-in from both PHMC and CHG prior to the interface point being accepted. This process is currently taking place at least once a year prior to issuing the MYWP. At this meeting, CHG and FFS have both the project managers and the project schedulers for all projects present so that each interface can be reviewed in depth and either accepted or rejected at this meeting. Once accepted, these interface points are clearly understood by all organizations. CHG has incorporated these interface points in their schedules.

However, other than updating the HSTD spreadsheet containing these interface points, no formal meeting minutes or memorandums of understanding are issued to all the meetings participants.

### 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.*

See CRAD 4.5.2.1 and CRAD 4.1.4.1.

## B-2 Decision Readiness to Proceed Self Assessment

- 4.5.3 *Resource loading is comparable to that used by other contractors for projects of similar size and technical complexity.*

*Analysis*

The resource loading for RPP schedule activities is more closely related to the WBS definition and the estimate of the work rather than the schedule. That is, the WBS definition is completed for the entire project scope, and then the WBS elements will be incorporated into the schedule as schedule activities. A cost and resource estimate will be developed for each WBS element scope of work. The completeness of the estimate will determine if all the resource needs are incorporated into the schedule.

The resource loading in the schedule is just the cost estimate spread over time for each WBS element. If the WBS is not entirely defined or there are gaps in the scopes of work, then the resource profiles will be under estimated for the actual work. Likewise if the estimate is not complete, then the resource profiles will be under estimated as well.

*Conclusion*

The resource loading for the schedule is more closely linked to the WBS definition and the cost estimate rather than the schedule itself. The WBS and the cost estimate are handled under different CRAD's.

- 4.5.4.1 *The expectation that CHG has a risk management list for each project where schedule risks are maintained and mitigating actions are identified and implemented was not previously met.*

CHG submitted document HNF-2017 Revision 2 – Financial Analysis for Phase I Privatization for the Tank Farm Contractor as part their submittal for the Programmatic Baseline Summary for Phase I Privatization for the Tank Farm Contractor. This document discusses the financial and schedule risk analysis performed for the major projects supporting the RPP Phase I objectives. These risk analyses determined the 80% confidence level for achieving the RPP schedule goals and whether there was any cost associated with this level of confidence. Currently all major project milestones are within the 80% confidence parameter.

- 4.5.4.2 *The expectation that 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 was not previously met.*

As part of the process in developing an 80% confidence level for the schedule, CHG was required to establish a list of critical schedule risks and the actions required to mitigate these risks. This risk management process has been defined by CHG documents RPP-6126 U.S. Department of Energy River Protection Project Programmatic Risk Management Policy dated April 15, 2000 and document RPP-6127 River Protection Project Programmatic Risk Management Plan Revision 1 dated April 14, 2000. These documents discuss the process whereby a list of critical risks is maintained and the actions that will be taken to eliminate or mitigate the impact of the risk.

**Basis for Assessment:**

- 4.5.1 DOE Baseline Update Guidance FY 2000 (see CRAD 4.3). Master Baseline Schedule RP0A dated October 1, 1999 (P3 files contained on 100-MB zip disk in project library files for CRAD 4.3). TBR Composite Index Oct 26.xls (on 100-MB zip disk in project library files). Sub-Project Schedule T80A dated October 1, 1999 (P3 files contained on 100-MB zip disk in project library files).
- 4.5.2.1 Hanford Site Technical Database (attached Excel spreadsheet). Interview with Mike Lewis of CHG on 02/25/00. Interview of Bob Bracket of Fluor Federal Services on 02/25/00. PBMS Schedule dated October 1, 1999 (see attached report from schedule). See CRAD 4.1.4.1.
- 4.5.2.2 See CRAD 4.5.2.1 and 4.1.1.4.
- 4.5.3 See CRAD 3.0 and 5.0.
- 4.5.4.1 Financial Analysis for Phase I Privatization for the Tank Farm Contractor, HNF-2017 Rev. 2, April 2000.
- 4.5.4.2 Financial Analysis for Phase I Privatization for the Tank Farm Contractor, HNF-2017 Rev. 2, April 2000.

## B-2 Decision Readiness to Proceed Self Assessment

**Recommended Path Forward:**

*Essential*

None

*Important*

None

*Beneficial*

None

**Signatures**

Reviewers: W. Diehl  
*W. Diehl*

Date: 5-15-2000

*5-18-00*

Team Lead Approval: T. Hoertkorn



Date: 5-15-2000

*5/18/00*

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 4.0 Schedule

**Subcriterion: 4.6 Design/Construction Planning** – Is the CHG schedule for construction of the project effective in meeting the schedule requirements with minimal risk of cost/schedule overrun and ensuring project success?

**Specific Considerations in Assessment:**

- 4.6.1 Has CHG generated the information necessary to proceed with detailed design and initiate construction?
- 4.6.2 Has CHG identified “long-lead” items requiring early procurement and established plans to acquire those materials (e.g., exotic materials, uniquely designed and limited supply items)?
- 4.6.3 Has CHG developed procurement and subcontracting strategy and plan consistent with the baseline schedule?
- 4.6.4 Has CHG identified labor resource needs and assessed their availability?
- 4.6.5 Has CHG established plans for mobilization of the construction work force?
- 4.6.6 Has CHG completed construction reviews of the design that demonstrate construct-ability of the design?
- 4.6.7 Has CHG defined construction work packages that will allow timely initiation of construction?
- 4.6.8 Has CHG provided a sufficiently detailed construction plan to assess the feasibility of the overall construction schedule?

**DOE Expectations:**

- 4.6.1 CHG has completed all construction-planning requirements defined in FY-2000 MYWP.
- 4.6.2 CHG has identified the long-lead procurement items and has established the procurement mechanism to acquire those materials.
- 4.6.3 CHG has developed a procurement and subcontracted services strategy and plan to support the baseline construction schedule.
- 4.6.4 CHG has estimated time phased requirements for construction labor and assessed the availability of required labor sources.
- 4.6.5 CHG has established a realistic construction plan and construction mobilization plan.
- 4.6.6 CHG has completed and documented construct-ability reviews of the facility design.
- 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 The construction schedule is integrated with procurement, design, and permitting.

### Rating Options

**Green:** Performance has given confidence that the Contractor will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that the Contractor will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that the Contractor will be successful in meeting B-2 expectations.

### Assessment

**Expectations Met/Not Met:**

4.6.1 *CHG has completed all construction-planning requirements defined in FY-2000 MYWP.*

*Research*

The FY-2000 MYWP and the FY-2000 BUG were reviewed for specific actions as related to construction planning requirements. The construction planning requirements were not listed as a separate issue, but were included within specific guidance to each project area such as shown in Attachment C of FY-2000 BUG. Specific actions of the MYWP and BUG were reviewed under CRAD 4.3.2.

*Conclusion*

CHG has completed all construction-planning requirements defined in MYWP and BUG for FY-2000.

**Rating:**

**Green**

## B-2 Decision Readiness to Proceed Self Assessment

- 4.6.2 *CHG has identified the long-lead procurement items and has established the procurement mechanism to acquire those materials.*

### *Research*

CHG Procurement Manager John Van Beek was contacted to discuss procurement of long-lead equipment and material. John stated that the long-lead procurement items were listed in CHG's project execution plans for the different projects that CHG was performing. CHG had recently completed the Project Execution Plan for Project W-211 Initial Tank Retrieval Systems, which contained procurement activities specific for this particular project.

### *Analysis*

Since Project W-211 is happening in the near term, the Project Execution Plan for Project W-211 was reviewed to determine if the long-lead procurement items were listed in the plan. Section 4.0 Procurement and Contracting Approach contained a list of equipment and systems that were considered long-lead items, which would be procured by CHG rather than the construction contractor.

### *Conclusion*

CHG has identified the long-lead procurement items and has defined the method in which these items will be procured.

- 4.6.3 *CHG has developed a procurement and subcontracted services strategy and plan to support the baseline construction schedule.*

### *Research*

CHG Procurement Manager John Van Beek was contacted to discuss the procurement plan. John stated that procurement and subcontract strategy items were listed in CHG's project execution plans for the different projects that CHG was performing. CHG had recently completed the Project Execution Plan for Project W-211 Initial Tank Retrieval Systems.

### *Analysis*

The Project Execution Plan for Project W-211 was reviewed for the procurement and subcontract strategy, which was listed in section 4.0 Procurement and Contracting Approach. This section depicted how CHG was going to procure material and subcontract services for the various components of this project.

### *Conclusion*

CHG has developed procurement and subcontracted services strategy to support the baseline construction schedule via their Project Execution Plans for each of the major projects.

- 4.6.4 *CHG has estimated time phased requirements for construction labor and assessed the availability of required labor sources.*

See CARD 4.8.

- 4.6.5 *CHG has established a realistic construction plan and construction mobilization plan.*

### *Research*

Ray Moller of CHG was contacted to discuss construction plan. Ray Moller stated that these items were in place for the near term projects and would be defined for future work, as those projects became closer in time. Ray stated that Project W-211, W-521 and the infrastructure privatization project W-519 would be good examples of this plan. Ray stated that the Master Baseline Schedule RPOA contained this information. Ray also referred to the Project Execution Plans, where the overall management strategy including construction would be listed.

### *Analysis*

The Master Baseline Schedule RPOA was reviewed for Project W-211, W521 and W-519 the infrastructure privatization project along with the Project Execution Plan for Project W-211.

## B-2 Decision Readiness to Proceed Self Assessment

The schedules showed construction planning and mobilization activities taking place before the actual construction work itself. Also the Project Execution Plan for Project W-211 referenced the Master Baseline Schedule for the construction activities along with methods for schedule baseline and cost control.

### Conclusion

CHG has developed a realistic construction plan and construction mobilization plan for working taking place in the near term as demonstrated by projects W-211, W-521 and the privatization infrastructure projects.

- 4.6.6 *CHG has completed and documented construct-ability reviews of the facility design.*

### Research

Bob Parazin of CHG was contacted to discuss construct-ability reviews. Construct-ability reviews had just been completed for Project W-519 Privatization Infrastructure. This project is currently under construction and provides a recent example of these reviews.

### Analysis

The construct-ability documents were reviewed for Project W-519 Privatization Infrastructure. These documents showed that a construct-ability review had taken place and that the results of this review had been recorded and forwarded to the design group.

### Conclusion

CHG is currently performing construct-ability reviews for projects as they are being designed.

- 4.6.7.1 *CHG is on schedule to complete all necessary documentation and permits to initiate site preparation and construction.*

### Analysis

The December 27, 1999 update to the Master Baseline Schedule was reviewed. This P3 schedule had a file name of RC0A. The schedule activities for documentation and permits were reviewed for Project 519 Privatization Infrastructure. This updated schedule showed that some of the permitting activities were critical, but they were still supporting the site preparation and construction.

### Conclusion

CHG was on schedule to support the site preparation and construction efforts as of the December 27, 1999 schedule update.

- 4.6.7.2 *CHG has prepared construction work packages for initial items requiring procurement.*

### Analysis

The Master Baseline Schedule RP0A was reviewed for construction work packages for procurement items specifically in regards to Projects W-211, W-519 and W-521 since these projects will be worked in the near term. These schedules showed procurement activities prior to the construction activities for all major construction work.

### Conclusion

CHG has prepared construction work packages for initial items requiring procurement for the near term projects W-211, W-519 and W-521.

- 4.6.8 *The construction schedule is integrated with procurement, design, and permitting.*

### Analysis

The Master Baseline Schedule RP0A was reviewed for a logic sequence of activities from design, procurement, construction and permitting. Activities associated with projects W-211, W-521 and the privatization infrastructure were reviewed (a Gantt chart with logic links is attached for review). These schedule fragments show that the work progresses from design, to procurement, to construction, and finally start-up, turnover and permitting.

## B-2 Decision Readiness to Proceed Self Assessment

<p><i>Conclusion</i></p> <p>CHG has developed an integrated schedule for near term projects showing the logic flow of work for design, procurement, construction and permitting.</p>	
<p><b>Basis for Assessment:</b></p> <p>4.6.1 DOE Baseline Update Guidance FY-2000 (See CRAD 4.3). DOE Multi-Year Work Plan for River Protection Project Document No. RPP-5044 (see CRAD 4.3).</p> <p>4.6.2 Interview with John Van Beek of CHG Procurement on 02/29/00. CHG Project Execution Plan for Project W-211 "Initial Tank Retrieval System" Document No. HNF-3333, Rev. 2 (attached).</p> <p>4.6.3 Interview with John Van Beek of CHG Procurement on 02/29/00. CHG Project Execution Plan for Project W-211 "Initial Tank Retrieval System" Document No. HNF-3333, Rev. 2 (attached).</p> <p>4.6.4 See CARD 4.8.</p> <p>4.6.5 Interview with Ray Moller of CHG on 02/29/00. Master Baseline Schedule RP0A dated October 1, 1999 (P3 files contained on 100-MB zip disk in project library files). CHG Project Execution Plan for Project W-211 "Initial Tank Retrieval System" Document No. HNF-3333, Rev. 2 (attached).</p> <p>4.6.6 Construct-ability review of Project W-519 Privatization Infrastructure (attached).</p> <p>4.6.7.1 Master Baseline Schedule Update RC0A dated December 27, 1999 (P3 files contained on 100-MB zip disk in project library files).</p> <p>4.6.7.2 Master Baseline Schedule RP0A dated October 1, 1999 (P3 files contained on 100-MB zip disk in project library files).</p> <p>4.6.8 Master Baseline Schedule RP0A dated October 1, 1999 (P3 files contained on 100-MB zip disk in project library files).</p>	
<p><b>Recommended Path Forward:</b></p> <p><i>Essential</i></p> <p>None</p> <p><i>Important</i></p> <p>None</p> <p><i>Beneficial</i></p> <p>1. The Master Baseline Schedule should include coding for major types of activities such as procurement, design, start-up, construction, and commissioning so that these activities can be filtered or sorted in the schedule.</p>	
<p><b>Signatures</b></p>	
<p>Reviewers: <i>W. d. D. [Signature]</i></p> <p>Date: <i>5-18-00</i></p>	<p>Team Leader Approval: <i>[Signature]</i></p> <p>Date: <i>5/18/00</i></p>

## B-2 Decision Readiness to Proceed Self Assessment

<b>Criterion: 4.0 Schedule</b>		
<b>Subcriterion: 4.7 Start-Up</b> – Are start-up plans sufficient to support construction turnover to start-up, start-up to operations, staff training, and permitting of the CHG projects that will achieve proposed B-2 schedule requirements?		
<b>Specific Considerations in Assessment:</b>		
4.7.1	Has 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?	
4.7.2	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., TPA milestones, ICD's, etc.?	
<b>DOE Expectations:</b>		
4.7.1.1	CHG has established a start-up schedule that integrates construction turnover/interface start-up, start-up to operations, facility acceptance, staff training, preliminary waste products qualification/verification, 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 has developed a schedule and plan to perform the Operational Readiness Review activities prior to radioactive operations. Level of detail in plans reflects maturity of project development.	
4.7.2	CHG has established a start-up schedule that integrates BNFL waste feed staging and product acceptance activities and completes final permitting and compliance actions.	
<b>Rating Options</b>		
<b>Green:</b> Performance has given confidence that the Contractor will be successful in meeting B-2 expectations.	<b>Yellow:</b> Corrective actions are needed to be confident that the Contractor will be successful in meeting B-2 expectations.	<b>Red:</b> Performance has not given confidence that the Contractor will be successful in meeting B-2 expectations.
<b>Assessment</b>		
<b>Expectations Met/Not Met:</b>  4.7.1.1 <i>CHG has established a start-up schedule that integrates construction turnover/interface start-up, start-up to operations, facility acceptance, staff training, preliminary waste products qualification/verification, and completes necessary permitting activities (e.g. RAWP).</i>  <i>Research</i>  Ray Moller of CHG was contacted to determine if a start-up schedule had been established. Ray stated that start-up and commissioning activities were added for the projects under CHG control. These activities will vary in detail depending on time sequence. That is activities in the near term future will have more detail and activities in the distant future.  <i>Analysis</i>  The activities for projects W-211, W-521, and W-519 in the Master Baseline Schedule RPOA were reviewed for the integration of construction turnover and interface start-up. The activities listed in the Master Baseline Schedule RPOA did show start-up, training, commissioning, and turnover to operations, facility acceptance and permitting for the work in the major projects. The detail varied widely for each of these activities.  <i>Conclusion</i>  CHG has included start-up activities in the Master Baseline Schedule, which provide information on construction turnover/interface start-up, commissioning, facility acceptance, training and permitting. These activities will need further definition as the work progresses towards completion. Current schedule activities currently provide time sequence for these start-up tasks.	<b>Rating:</b>  <h2 style="text-align: center; margin: 0;">Green</h2>	

## B-2 Decision Readiness to Proceed Self Assessment

### 4.7.1.2 CHG has provided an acceptable start-up schedule to DOE.

#### *Conclusion*

CHG has added schedule activities to Master Baseline Schedule RPOA as previously discussed in CRAD 4.7.1.1. The level of detail of these activities does not provide detail tasks or sequences for start-up. The current schedule activities only provide time sequence when these detail start-up activities will take place. Further development of a start-up schedule will need to be accomplished prior to approval by 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.

#### *Research*

Ray Moller of CHG was contacted to determine if transition between construction and operational acceptance was depicted in the schedule. Ray stated that milestones were added to the schedule to show significant transition events such as facility acceptance. These milestones will vary between projects since some of the project work would be operated by CHG itself.

#### *Analysis*

The activities for projects W-211, W-521, and W-519 in the Master Baseline Schedule RPOA were reviewed for the transition milestones. These milestone activities were included in the schedule in varying degrees of detail. Several of these transition milestones are also the Interface Construction Document milestones as reviewed in CRAD 4.9.

#### *Conclusion*

CHG has planned for the transition between construction and operational acceptance of the facility in the near term projects by including transition milestones in their Master Baseline Schedule RPOA. Acceptance criteria for each of these transition milestones will need to be determined as part of this transition process.

### 4.7.1.4 CHG has developed a schedule and plan to perform the Operational Readiness Review activities prior to radioactive operations. The level of detail in the plans reflects maturity of project development.

#### *Research*

Ray Moller of CHG was contacted to determine if CHG had included the Operational Readiness Review activities in the Master Baseline Schedule. Ray stated that these activities were included in the Master Baseline Schedule. Ray suggested looking at the projects coming up in the near term such as W-211 and W-521 where these Operational Readiness Review activities would be listed.

#### *Analysis*

The activities for projects W-211 and W-521 in the Master Baseline Schedule RPOA were reviewed for the Operational Readiness Review activities. These activities were included in the schedule in varying degrees of detail. These activities will be fleshed-out as the work gets nearer in time.

#### *Conclusion*

CHG has included in the Master Baseline Schedule RPOA activities for Operational Readiness Review. These activities are not in a lot of detail and will require further definition, as the work becomes closer in time.

## B-2 Decision Readiness to Proceed Self Assessment

4.7.2 CHG has established a start-up schedule that integrates BNFL waste feed staging and product acceptance activities and completes final permitting and compliance actions.

*Research*

Ray Moller of CHG was contacted to determine if CHG integrated the start-up activities with the BNFL waste feed and product acceptance activities were included in the Master Baseline Schedule. Ray stated that the BNFL activities were summary level in nature, but provided for a means to sequence waste feed activities with the BNFL work. Ray suggested looking at the projects in area TW-06 and TW-07, which included privatization support for BNFL.

*Analysis*

The activities for project area TW-06 and TW-07 in the Master Baseline Schedule RPOA were reviewed for the integration of BNFL waste feed staging and product acceptance activities. These activities were included in the schedule with the majority of them in the distant future.

*Conclusion*

CHG has included in the Master Baseline Schedule RPOA activities for BNFL waste feed staging and product acceptance per the intent of the CRAD.

**Basis for Assessment:**

- 4.7.1.1 Interview with Ray Moller of CHG on 02/29/00. Master Baseline Schedule RPOA (in P3 format on 100MB zip disk in library).
- 4.7.1.2 Interview with Ray Moller of CHG on 02/29/00. Master Baseline Schedule RPOA (in P3 format on 100MB zip disk in library).
- 4.7.1.3 Interview with Ray Moller of CHG on 02/29/00. Master Baseline Schedule RPOA (in P3 format on 100MB zip disk in library).
- 4.7.1.4 Interview with Ray Moller of CHG on 02/29/00. Master Baseline Schedule RPOA (in P3 format on 100MB zip disk in library).
- 4.7.2 Interview with Ray Moller of CHG on 02/29/00. Master Baseline Schedule RPOA (in P3 format on 100MB zip disk in library).

**Recommended Path Forward:**

*Essential*

None

*Important*

None

*Beneficial*

None

**Signatures**

Reviewers:

*Wade Ditt*

Team Lead Approval:

*[Signature]*

Date: 5-18-00

Date: 5/18/00

## B-2 Decision Readiness to Proceed Self Assessment

<b>Criterion: 4.0 Schedule</b>		
Subcriterion: <b>4.8 Operations and Maintenance</b> – Is planning to support operations and maintenance sufficient to achieve the schedule?		
Specific Considerations in Assessment:		
4.8.1 Has CHG defined supporting operations and maintenance activities in the schedule?		
DOE Expectations:		
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, preventative maintenance plan, consumable materials usage plan and spare parts equipment requirements plan.		
<b>Rating Options</b>		
<b>Green:</b> Performance has given confidence that the Contractor will be successful in meeting B-2 expectations.	<b>Yellow:</b> Corrective actions are needed to be confident that the Contractor will be successful in meeting B-2 expectations.	<b>Red:</b> Performance has not given confidence that the Contractor will be successful in meeting B-2 expectations.
<b>Assessment</b>		
<b>Expectations Met:</b> 4.8.1.1 <i>The expectation that CHG had estimated the required resources to execute the project and then developed and implemented a staffing plan to acquire these resources was not previously met.</i>  CHG submitted document RPP-6114 Revision 0 – Human Resources Staffing Plan for the Tank Farm Contractor as part their submittal for the Programmatic Baseline Summary for Phase I Privatization for the Tank Farm Contractor. This document discussed the staffing needs, provided an analysis of the staffing requirements, identified the key staffing needs, and the strategy to acquire the resources to meet these needs. The staffing plan provided by CHG addresses the areas of concern contained in the CRAD criteria.  ORP may want to investigate further certain key assumptions made by CHG in the preparation of their staffing plan. These include the following:		<b>Rating:</b> <b>Green</b>
1. CHG has established a threshold of a 10% increase or more, or an increase of greater than 12 FTE in excess of normal attrition to identify key staffing requirements. ORP should investigate the rationale behind a 10% increase in 12 FTE thresholds due to the extraordinary low level of unemployment currently being experienced throughout the U.S. The large majority of staff required to execute the RPP are either skilled craft such as pipe fitters and electricians or knowledge workers such as scientists and engineers, which are in greater demand than unskilled labor. CHG will not be affected as severely as the privatization contractor since the increase in their total staffing requirement is significantly less.		
2. CHG has stated that there is approximately \$125M in contingency money, which has not been converted to staff costs in their analysis. Since contingency money is included in budgets to handle unknown circumstances, this money will most likely be spent. If this is the case, a significant portion of this money will be spent for staff, which will increase the staffing requirements above the current planned levels. ORP should investigate how this possible addition of staff will affect CHG's analysis and plans for requirement. This problem will be greatly magnified with the privatization contractor due to the larger amounts contingency contained in their budget.		
3. CHG has established a planned level of staff for FY-2000. It should be determined whether this level has been or can be achieved. If it can not be achieved, it must be determined what classifications were understaffed, and whether this will cause an impact to out year staffing.		
4. The staffing plan references preliminary analysis by both Fluor Federal Services and Bechtel Hanford, Inc. No back up documentation was included in the staffing plan or can be found for these analyses. The construction craft is the single type of resource, which will require the most increase in order to meet the staffing needs of the RPP. However, no formal type of		

## B-2 Decision Readiness to Proceed Self Assessment

analysis has been done and published for review by ORP. Most of the analysis has been informal meetings with the labor unions with just their assurances that the RPP staffing needs can be met. With the current tight labor market and the continuing increase in total construction market, it is recommended that a more detailed and rigorous analysis of the construction craft be performed.

5. CHG mentions several metric that it is planning to track in order to track its performance in recruiting and acquiring staff. These metrics include but are not limited to cost per hire, offers per hire, applicants per hire, and applicant acceptance rate. A regular formalized review of these metrics should be undertaken as soon as possible in order that CHG can determine the exact extent of applicants needed to fill the staffing requirements. In addition to the above metrics, a metric for attrition should be established so the overall net affect of the recruiting effort can be determined. For example, if CHG is able to hire at the planned rate they may also be losing people at the same rate so the overall net effect on staffing is zero. This type of scenario would require a twofold increase in the recruiting effort.
6. In section 5.1.1 Crafts, CHG does not put forward a strategy for recruiting crafts since they state this is not their contractual responsibility. CHG state that they have requested that ORP resolve the issue who is responsible for hiring and training the staff for these positions. This issue should be addressed immediately and responsibility assigned so that a formal recruiting plan can be developed.

### Basis for Assessment:

Overall basis in RPP-6114, Rev "Human Resources Staffing Plan for the Tank Farm Contractor", April 2000.

- 4.8.1 Telephone conversation with Ray Moller of CHG on 02/09/00 and 02/14/00.
- 4.8.2 Telephone conversation with Bill Dalton of CHG on 02/09/00.
- 4.8.3 Conversation with Mike Wells of CHG on 02/09/00.
- 4.8.4 Conversation with Miu Lee of CHG on 02/14/00.
- 4.8.5 Telephone conversation with Monty Hines of Fluor Federal Services on 02/14/00.
- 4.8.6 CHG Master Baseline Schedule RPOA (included on 100-MB zip disk with CRAD 4.3).

### Recommended Path Forward:

#### *Essential Actions*

None

#### *Important Actions*

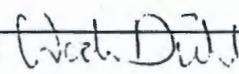
1. Compare the current year actuals with staff projections provided in the staffing plan. Provide table with the differences.

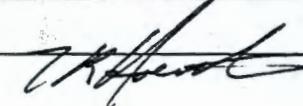
#### *Beneficial Actions*

The following suggestions are offered for long-term improvement of the CHG schedule control process.

1. The staffing and recruiting efforts for both CHG and the subcontracted work needs to be a collaborative effort between all the major contractors working at Hanford since they are all competing for the same resources. A monthly meeting is suggested where the Human Resource and Industrial Relations managers should meet to discuss their current and near term staffing shortages. Resources should be shared wherever possible since DOE is the client for all contractors working at Hanford.
2. A single recruiting office and program should be established for all contractors working at the site. All the major contractors should fund this office equally since it will provide the same service for all of them and will eliminate duplication of the recruiting effort. Since the DOE is the ultimate customer for all work, they should receive cost savings for this combined effort.

### Signatures

Reviewers: W. Deihl 

Team Lead Approval: T. Hoertkron 

Date: 5-15-2000 5-16-00

Date: 5-15-2000 5/18/00

## B-2 Decision Readiness to Proceed Self Assessment

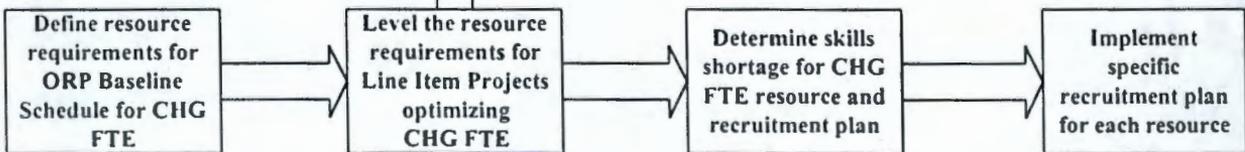
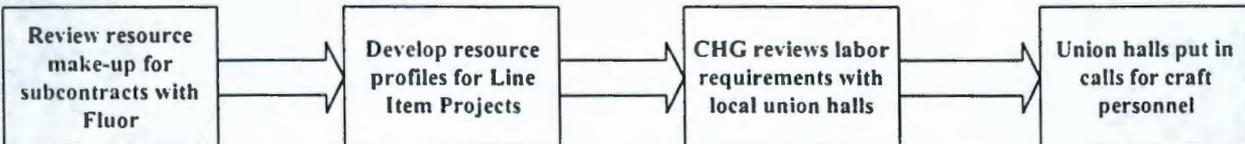
### subcontract RECRUITMENT

CHG will develop equivalent annual FTE's by skill mix for contracts / AE firms (i.e. Fluor Federal Services) by year tied to design / construction / contingency. AE firms will be consulted as to construction needs. This will tie to current MYWP.

Contractor/AE firms FTE requirements will then be optimized from an execution standpoint by fiscal year to assure project completion which will result in annual shifts in resource timing.

Labor requirements are discussed with local labor officials, Architectural/ Engineering firms, and local Vendors to determine the availability of non-CHG personnel.

Union halls and A/E firms, recruit labor from local halls, nearby locals, professional engineering firms, and at national level.



Resource requirements assigned to individual activities in P3 schedule by COCS.

Leveling done by Project Managers.

MYWP Master Baseline Schedule adjusted for resource limitations.

Resource shortage per leveled COCS occupational needs as compared to on-board actuals.

HR implements recruitment plan to attract needed resources

Recruitment plan developed through HR that is tailored for each specific resource:

- Training courses
- Wage incentives
- Recruiting approach

### CHG RECRUITMENT

MYWP may have to be revised for future years if additional funds are required for recruitment.

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 4.0 Schedule

**Subcriterion: 4.9 Interface Definition (ICD's)** – Are the DOE/PHMC/BNFL interfaces sufficiently defined to determine the needed project schedule?

**Specific Considerations in Assessment:**

4.9 Does the CHG project schedule contain the necessary CHG planning, design, construction, operations, and deactivation activities that support interfacing BNFL activities?

**DOE Expectations:**

- 4.9.1 There is a process to identify and agree upon interface points.
- 4.9.2 Identified interfaces are in the CHG schedule.
- 4.9.3 Interface activities and milestones are logically driven. All interface milestones have either a predecessor or a successor.
- 4.9.4 Details include information necessary to determine a schedule for the planning, design, construction, and operation of the interface.
- 4.9.5 The BNFL/DOE approved ICD's reflect consensus among the appropriate parties.

### Rating Options

**Green:** Performance has given confidence that the Contractor will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that the Contractor will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that the Contractor will be successful in meeting B-2 expectations.

### Assessment

**Expectations Met/Not Met:**

Under Review

4.9.1 *There is a process to identify and agree upon interface points.*

*Research*

Jeff Voogd of CHG was contacted to review process for identifying interface points. Jeff stated that currently CHG and BNFL were using an Integrated Product and Process Development (IPPD) process to identify and agree upon interface points. This process was developed by CHG in response to the contract requirements of Modification 6 of the BNFL contract. BNFL was required to provide the definition and criteria defining the interface. The IPPD process developed by CHG is contained in their IPPD Training Manual, which outlines the steps, roles and guidelines used to develop the Interface Construction Documents (ICD). The current IPPD Training Manual is not a formal procedure issued by CHG.

*Conclusion*

There is a process to identify and agree upon interface points or ICD's. This process is not a formal procedure at this time, however it has been used successfully to agree to the current set of ICD's. This process allows input and feedback from the various project participants. All interface points have been agreed upon to date.

4.9.2 *Identified interfaces are in the CHG schedule.*

*Analysis*

The Master Baseline Schedule RPOA was reviewed for the ICD's milestones. There are currently 21 milestones identified by the IPPD process. The schedule activities are not coded to easily select all the ICD milestones. A complete listing of milestones was selected. The ICD description was compared against this list of milestones. The ICD milestones in the schedule are not easily identified in the Master Baseline Schedule RPOA.

**Rating:**

**Green**

## B-2 Decision Readiness to Proceed Self Assessment

### *Conclusion*

The interfaces or ICD's are included in the baseline schedule, but these activities could be coded for easier selection and the descriptions could be improved so that it is easily recognizable as an ICD milestone activity.

- 4.9.3 *Interface activities and milestones are logically driven. All interface milestones have either a predecessor or a successor.*

### *Analysis*

The Master Baseline Schedule RPOA was reviewed for milestones and interface points. The schedule activities are not coded to easily select all the ICD milestones. The seven ICD milestones in the TW-08 project area were reviewed. Of these seven, there were three milestones with a predecessor but no successor activity.

### *Conclusion*

The Master Baseline Schedule had interface points listed in the schedule. There was no easy way to filter or select just the ICD milestones listed in the schedule. All the milestones found had either a predecessor or successor activity, and only three activities did not have both.

- 4.9.4 *Details include information necessary to determine a schedule for the planning, design, construction, and operation of the interface.*

### *Research*

Jeff Voogd of CHG was contacted to review process for developing description of interface points. The ICD provides a detail description of the criteria necessary for it to be accepted by BNFL. These criteria typically list all the preceding work that must be accomplished prior to acceptance of the milestone activity along with any anticipated production work that follows acceptance of the milestone.

### *Conclusion*

The detail acceptance criteria for each ICD contains enough information so that a schedule can be developed which shows the design, construction, and operation of the facility for work associated with the interface.

- 4.9.5 *The BNFL/DOE approved ICD's reflect consensus among the appropriate parties.*

### *Research*

Jeff Voogd of CHG was contacted to review process for developing interface points and for agreeing to these interface points. Currently the process calls for BNFL and ORP to define 26 interface points for the RPP. The number of interface points is set by the contract between BNFL and ORP. Currently, BNFL and ORP have defined 21 interface points with 5 of these left as reserves. BNFL and ORP sign approved ICD's and CHG checks the completed document. CHG and BNFL have started an initiative to have CHG be one of the signatory parties since they will be providing the interface for BNFL and ORP will change their acceptance to an acknowledgement of the agreement between CHG and BNFL.

### *Conclusion*

Current IPPD process has requirements for signatory approval by both BNFL and ORP for any ICD issued. Currently both parties have approved and agreed to the 21 ICD's issued to date. The proposed inclusion of CHG in this approval and agreement process would further enhance the consensus of all affected parties.

## B-2 Decision Readiness to Proceed Self Assessment

### Basis for Assessment:

- 4.9.1 Interview with Jeff Voogd of CHG on 02/29/00. Integrated Product and Process Development Training Manual developed by CHG (manual not formally issued and is controlled by CHG).
- 4.9.2 Master Baseline Schedule Update RC0A dated December 27, 1999 (P3 files contained on 100-MB zip disk in project library files). List of ICD's currently agreed to with BNFL and ORP (attached).
- 4.9.3 Master Baseline Schedule Update RC0A dated December 27, 1999 (P3 files contained on 100-MB zip disk in project library files). List of ICD's currently agreed to with BNFL and ORP (attached)
- 4.9.4 Interview with Jeff Voogd of CHG on 02/29/00. Integrated Product and Process Development Training Manual developed by CHG (manual not formally issued and is controlled by CHG).
- 4.9.5 Interview with Jeff Voogd of CHG on 02/29/00. Integrated Product and Process Development Training Manual developed by CHG (manual not formally issued and is controlled by CHG).

### Recommended Path Forward:

#### *Essential*

None

#### *Important*

None

#### *Beneficial*

1. The ICD milestones should have a unique code or identifier in the Activity ID so that these milestones can be quickly filtered in the Master Baseline Schedule.
2. CHG should become signatory to the ICD's so that a complete consensus is reached by all major participants of the RPP.

### Signatures

Reviewers: (Jack Dick)

Team Leader Approval: 

Date: 5-18-00

Date: 5/18/00

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 4.0 Schedule

**Subcriterion: 4.10 RPP Schedule** – Has DOE integrated the RPP schedules which include the activities of CHG, BNFL, DOE ORP, DOE RI, and other RPP participants?

**Specific Considerations in Assessment:**

- 4.10.1 Integrated Planning Process – Is there a process in place for integrating the activities of CHG, BNFL, DOE ORP, DOE RI and other RPP participants?
- 4.10.2 Schedule Basis – Are schedule bases such as planning guidance, scope of work, work breakdown structure used in the preparation of the RPP Schedule documented?
- 4.10.3 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?
- 4.10.4 Critical Path Schedule – Is the RPP critical path identified?
- 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?
- 4.10.6 Milestone Trace-ability – Is a method, procedure or system established to allow trace-ability of milestones to the next upper or lower level schedule?
- 4.10.7 Milestone Completion – Is each milestone provided with a clear definition of completion?
- 4.10.8 Assumption Identification – Are key assumptions used in the preparation of the RPP schedule identified and documented?
- 4.10.9 Schedule Risk – Are appropriate activities and resources identified for mitigating schedule risk?
- 4.10.10 Reporting – Is a reporting system in place?
- 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?

**DOE Expectations:**

- 4.10.1.1 Consistent scheduling system standards, specifications and guidance are used in the preparation and maintenance of the RPP schedule.
- 4.10.1.2 RPP participants are aware of their roles in schedule preparation and updates, 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 schedule guidance, development and updates of the RPP schedule are in place.
- 4.10.2.1 All schedule bases such as planning guidance, scope of work, work breakdown structure are documented and traceable to the development of the RPP schedule.
- 4.10.2.2 There is trace-ability between the RPP schedule and the Integrated Priority List.
- 4.10.3.1 The RPP schedule was developed based on the RPP Work Breakdown Structure.
- 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 lower-level logic rolls-up properly to higher-level logic.
- 4.10.4.1 The critical path is identified and float has been calculated.
- 4.10.4.2 The rationale used for identifying the critical path is documented.
- 4.10.5.1 The RPP schedules contain all Tri-Party Agreement milestones applicable to the vitrification of Hanford tank waste.
- 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.

## B-2 Decision Readiness to Proceed Self Assessment

- 4.10.6.1 Milestone trace-ability 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.
- 4.10.6.2 Milestones are identified by Owner who has responsibility for control and completion of the milestones.
- 4.10.7 Milestone Description documents, which identifies the information and criteria for completion, is provided for baseline milestones.
- 4.10.8.1 Enabling assumptions have been formally documented.
- 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.
- 4.10.9.1 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 Management systems in place to track and report schedule performance and take appropriate corrective actions.
- 4.10.11.1A procedure is in place, which defines change control requirements for the RPP schedules.
- 4.10.11.2Changes to the RPP schedules are only implemented after change documents have been reviewed and approved by the proper approval authority.
- 4.10.11.3Schedules are not re-baselined to remove a negative schedule variance (behind schedule).

### Rating Options

**Green:** Performance has given confidence that DOE-ORP-PIO will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that DOE-ORP-PIO will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that DOE-ORP-PIO will be successful in meeting B-2 expectations.

### Assessment

**Expectations Met/Not Met:**

- 4.10.1.1 *Consistent scheduling system standards, specifications and guidance are used in the preparation and maintenance of the RPP schedule.*  
  
PIO has developed a schedule specification to ensure consistency in the preparation and maintenance of the PIO schedule. This specification has received concurrence from Office of River Protection, Project Integration Office, CHG, and BNFL.
- 4.10.1.2 *RPP participants are aware of their roles in schedule preparation and updates, and a communication system between RPP participants has been established.*  
  
PIO schedule specification has received concurrence from ORP, PIO, CHG and BNFL. This specification details how information will flow from the schedule to PIO. The PIO organization chart is also attached which shows breakdown of duties between members of the PIO.
- 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.*  
  
PIO Master Schedule Integration Specification has outlined that schedule updates will be done on monthly basis. This update will be done from a bottom up approach. Current schedule is top down, but will be revised to bottom up with issue of update on 04/15/00. Reports will be generated from the schedule on a monthly basis which will include major deliverables completed, float analysis, critical path, problems with corrective actions, and a 90 day look ahead punch list.
- 4.10.1.4 *DOE Procedure and documents for preparing schedule guidance, development and updates of the RPP schedule are in place.*  
  
PIO Master Schedule Integration Specification has incorporated DOE procedures and documents for preparing and updating the RPP overall schedule.

**Rating:**

**Green/Yellow**

## B-2 Decision Readiness to Proceed Self Assessment

*4.10.2.1 All schedule bases such as planning guidance, scope of work, work breakdown structure are documented and traceable to the development of the RPP schedule.*

It is the intent of the PIO to provide trace-ability evidence of planning guide, scope of work and work breakdown structure for bottom up schedules developed from CHG and BNFL. This information will be provided on 06/15/00.

*4.10.2.2 There is trace-ability between the RPP schedule and the Integrated Priority List.*

PIO felt this link was provided through Change procedure, however they also felt that Priority List would lose significance as RPP moved from funds management approach to baseline management approach as depicted in the PIO Master Schedule Integration Specification.

*4.10.3.1 The RPP schedule was developed based on the RPP Work Breakdown Structure.*

The RPP schedule is based on roll-up of CHG and BNFL detail schedules, which in turn are based on RPP WBS structure. The RPP schedule is just a roll-up of the detail WBS structure.

*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.*

RPP schedule will be based on bottom up approach. The detail schedules include these milestones. Also, PIO will use an Inter-Project-Relationship-Manager tool with the P3 software. This tool will allow logic ties between the projects so that updates from one schedule can be reflected in the other.

*4.10.3.3 Technical logic is complete at all levels, and lower-level logic rolls-up properly to higher-level logic.*

Current RPP summary schedule is made from top down approach. Current schedule includes logic ties at the summary level. This schedule will be updated with bottom up approach by 04/15/00 as directed by the schedule specification.

*4.10.4.1 The critical path is identified and float has been calculated.*

Current RPP summary schedule does not have total float calculated. This will take place on 06/15/00 when new schedule is issued.

*4.10.4.2 The rationale used for identifying the critical path is documented.*

The PIO Master Schedule Integration Specification outlines the rationale used for identifying the critical path.

*4.10.5.1 The RPP schedules contain all Tri-Party Agreement milestones applicable to the vitrification of Hanford tank waste.*

All Tri-Party Agreement milestones applicable to vitrification of the Hanford tank waste have been included in the RPP master schedule.

*4.10.5.2 The RPP schedules contain all DNFSB milestones applicable to the vitrification of Hanford tank waste.*

All DNFSB milestones have been included. Jim Thompson to verify this by 02/29/00.

*4.10.5.3 The RPP schedules contain milestones to control, monitor and measure performance of critical activities at various phase of the project.*

The schedule does contain milestones to control, monitor and measure performance. Also, monthly reports will be issued that track critical activities.

*4.10.6.1 Milestone trace-ability is provided by using a unique milestone identification number.*

The RPP Master Summary Schedule will be kept as a P3 schedule. P3 requires that schedule activities all have a unique activity ID number, which in turn will provide the trace-ability.

## B-2 Decision Readiness to Proceed Self Assessment

- 4.10.6.2 *Milestones are identified by Owner who has responsibility for control and completion of the milestones.*
- Milestone owners are currently defined in the CHG Multi-Year Work Plan (MYWP) and the BNFL Integrated Master Plan (IMP).
- 4.10.7 *Milestone Description documents, which identifies the information and criteria for completion, is provided for Baseline milestones.*
- Milestones and their completion criteria are documented in the CHG MYWP, Technical Basis Review Documents, and Milestone Description Sheets. For BNFL the milestones are defined in their contract. PIO is constructing a milestone sequence chart that will capture all project milestones and milestone owners. The initial chart will be completed on 04/15/00, and will be updated on 06/05/00 and 08/04/00.
- 4.10.8.1 *Enabling assumptions have been formally documented.*
- The enabling assumptions are being formally documented in PIO's Key Planning Assumptions. The planning assumptions are under development and will be issued by 03/31/00.
- 4.10.8.2 *The criteria for designating an enabling assumption is well documented.*
- The Project Management Plan scheduled for release by 04/17/00 will provide a description of the methodology used in establishing enabling assumptions.
- 4.10.8.3 *The basis for the assumptions, document source, are identified.*
- The enabling assumptions are traceable to the Strategic Plan and the Mission Analysis Report.
- 4.10.9.1 *Schedule risk has been identified and is being managed.*
- Currently, schedule risk is being managed at lower level with CHG and BNFL performing risk analysis on schedule activities. This risk management is taking place on a continuing basis. PIO will do an overall schedule risk assessment with the integrated schedule.
- 4.10.9.2 *Mitigating actions have been developed and responsible parties identified for each risk.*
- The current risk plan includes mitigating actions and the responsible party. PIO will perform this function for total project and will report risk plan results on a monthly basis.
- 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.*
- PIO currently planning to have summary schedule activities resource loaded so that resource leveling of an integrated schedule can be done. This resource loading will be complete by 06/15/00 updated.
- 4.10.10 *Management systems in place to track and report schedule performance and take appropriate corrective actions.*
- PIO currently putting management systems in place to track and report schedule performance. This system will include reports as outlined in the PIO Master Schedule Integration Specification.
- 4.10.11.1 *A procedure is in place, which defines change control requirements for the RPP schedules.*
- PIO using change procedure HNF-IP0842 to control changes to the RPP schedule. This procedure outlines how changes are to be reviewed and approved.
- 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.*
- This procedure of review and approval by the proper authority are already included in the change procedure HNF-IP0842.
- 4.10.11.3 *Schedules are not re-baselined to remove a negative schedule variance (behind schedule).*
- The PIO Master Schedule Integration Specification requires that the schedule will not be re-baselined just to remove a negative schedule variance.

## B-2 Decision Readiness to Proceed Self Assessment

### Basis for Assessment:

Interview with Jim Thompson and Lina Pacheco of PIO on 02/28/00. PIO Master Schedule Integration Specification dated 02/15/00 (attached). PIO Organization chart dated 12/03/99 (attached).

### Recommended Path Forward:

#### *Essential Actions*

None

#### *Important Actions*

None

#### *Beneficial Actions*

Current approach is to do a bottom up roll-up of activities for the Master Summary Schedule. It is recommended that the summary schedule use the top down approach rather than the bottom up approach. By using the top down approach, the schedule could be quickly updated manually rather than having it pass through several iterations between BNFL and CHG. The information from either approach will be the same, but the top down approach allows for a quicker turnaround of information and is not a labor intensive as the bottom up approach.

### Updates:

4.10 CRAD 4.10 was reviewed again due to its Green/Yellow status. Significant actions for this CRAD will not be completed until 06/15/00. No changes were made to the review at this time.

### Signatures

Reviewers: *Wade D. White*

Team Lead Approval: *J. H. Hunt*

Date: *5-18-00*

Date: *5/18/00*

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 5.0 COST

**Subcriterion: 5.1 Cost Validation – Has the Life Cycle Cost (LCC) been reviewed and reconciled?**

**Specific Considerations in Assessment:**

- 5.1.1 Has an Independent Estimate Review been conducted on the CHG portion of the LCC?
- 5.1.2 Have differences between the Independent Estimate Review and the LCC been reconciled?

**DOE Expectations:**

- 5.1.1.1 An Independent Estimate Review has been conducted on the CHG portion of the LCC.
- 5.1.2.1 Differences between the Independent Estimate Review and the LCC have been reconciled.

### Rating Options

<b>Green:</b> Performance has given confidence that the RPP will be successful in meeting B-2 expectations.	<b>Yellow:</b> Corrective actions are needed to be confident that RPP will be successful in meeting B-2 expectations.	<b>Red:</b> Performance has not given confidence that RPP will be successful in meeting B-2 expectations.
---	---	---

### Assessment

<p><b>Expectations Met:</b></p> <ul style="list-style-type: none"> <li>5.1.1.1 Project, Time, and Cost (PT&amp;C) is in the process of finalizing a review of the Life Cycle Cost estimate contained in the Multi-Year Work Plan. A detailed cost review is not planned for the RTP submittal. Judgements on the cost estimate will be based on the PT&amp;C review of the MYWP.</li> <li>5.1.2.1 Any findings issued by PT&amp;C will be reviewed by ORP, and if agreed with, direction will be provided to CHG to modify the estimate. It is intended that if specific items are identified which need immediate correction ORP will not wait for the end of the review in May, but will provide direction to CHG to modify the estimate.</li> </ul> <p><b>Expectations Not Met:</b></p>	<p><b>Rating:</b></p> <p style="text-align: center; font-weight: bold; font-size: 1.2em;">GREEN</p>
--	---

<p><b>Basis for Assessment:</b></p> <ul style="list-style-type: none"> <li>5.1.1.1 Directly responsible for and knowledgeable of the PT&amp;C review.</li> <li>5.1.2.1 Directly responsible for and knowledgeable of the PT&amp;C review.</li> </ul>
--

**Recommended Path Forward:** Follow the PT&C review to monitor the schedule and review PT&C deliverables to determine the adequacy of the review.

### Signatures

<p><b>Reviewers:</b> </p> <p><b>Date:</b> 5/22/08</p>	<p><b>Team Lead Approval:</b> </p> <p><b>Date:</b> 5/22/08</p>
---	--

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 5.0 COST

**Subriterion: 5.2 Time Phased Cost Plan** – Has a time phased cost plan been developed by CHG consistent with the most recent scope and schedule and in compliance with contractual requirements.

**Specific Considerations in Assessment:**

- 5.2.1 Has the LCC for the CHG been defined?
- 5.2.2 Were the approved assumptions used in developing the LCC?
- 5.2.3 Is the LCC based on the most current and approved project scope and schedule?
- 5.2.4 Is the LCC estimate used as a basis to obtain funding?
- 5.2.5 Does the LCC include the costs for all the contractors?
- 5.2.6 Does the LCC include 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?
- 5.2.8 Is there a documented process tracking changes to scope, cost, schedule, and funding and its impact on the LCC?
- 5.2.9 Have the recommendations from audits/reviews conducted over the last 2 years been incorporated, as appropriate, into the development of the LCC?

**DOE Expectations:**

- 5.2.1.1 The LCC for the RPP has been defined.
- 5.2.2.1 The approved assumptions were used in the development of the LCC.
- 5.2.3.1 The LCC is based on the most current, approved project scope and schedule.
- 5.2.4.1 The LCC is the estimate used to formulate the budget.
- 5.2.5.1 The LCC includes all costs for all the contractors and DOE related to the RPP.
- 5.2.6.1 The LCC includes incurred costs, estimate to complete, escalation, and contingency appropriate to the project risk.
- 5.2.7.1 The LCC allows for the comparison of actual versus forecast costs with available funds and obligations.
- 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 development of the LCC.

### Rating Options

**Green:** Performance has given confidence that RPP will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that RPP will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that RPP will be successful in meeting B-2 expectations.

### Assessment

**Expectations Met:**

- 5.2.1.1. CHG identified a revised LCC in their April 24, 2000, Readiness to Proceed submittal.
- 5.2.2.1 CHG complied with the approved cost assumptions as provided by ORP in the Mission Planning Guidance for FY 2002 (Letter number 00-MSO-007).
- 5.2.3.1. The RTP LCC is based on the most recent scope and schedule developed by the CHG RTP submittal. The submittal is based on ORP's guidance to CHG in the Mission Planning Guidance and the Key Enabling Assumptions.
- 5.2.4.1 The LCC in the RTP was not the basis for preparation of the budget request. During ORP's review of the preliminary RTP submittals, a revision was developed for the budget submittal, which significantly lowered the funds required in FY 2002. The intent is to modify the current baseline with the revised budget submittal once a path forward following the RTP submittals by both BNFL and CHG is identified

**Rating: Green**

## B-2 Decision Readiness to Proceed Self Assessment

- 5.2.5.1 The CHG RTP LCC includes all the costs for CHG and their subcontracts, including PNNL and assessments from FDH. Each TBR is broken down by performing company. What is not included are costs for federal staff. In addition, as the analysis occurs regarding landlord and site costs and ensuring they are integrated with the RPP, there may be some additional items identified that will need to be added to/subtracted from the LCC.
- 5.2.6.1 The LCC includes incurred costs, an estimate to complete, and escalation. CHG modified the estimate upward slightly as a result of the financial analysis to ensure an 80% confidence level that the proposed baseline could be accomplished.
- 5.2.7.1 The LCC does allow for the comparison of actual versus forecast costs with available funds and obligations once it becomes an official baseline through change control. This is demonstrated through monthly reports and briefings that capture BCWS, BCWP, and ACWP and identify cost and schedule variances. In addition, this will also be captured in the Integrated Project Accounting, and Budgeting System.
- 5.2.8.1 Refer to CRAD 1.4 "Project Change Control".
- 5.2.9.1 CHG identified a list of issues, deficiencies and corrective actions, which had arisen during the ORP review, the External Independent Review, and their own critical risk list. Recommended paths forward to resolve each item were identified.

### Basis for Assessment:

- 5.2.1.1 Reviewed the CHG RTP submittal dated April 24, 2000
- 5.2.2.1 Reviewed the FY 2002 Mission Planning and the CHG RTP submittal.
- 5.2.3.1 Reviewed the CHG RTP Submittal vs. the Key Enabling Assumptions (primarily key schedule dates) and the Mission Planning Guidance.
- 5.2.4.1 Directly responsible for reviewing the RTP and making modification for the budget submittal. Involved in a number of meetings with CHG and ORP staff to discuss the RTP submittal and changes required to support the FY 2002 budget submittal.
- 5.2.5.1 Have previously reviewed the MYWP. PT&C has reviewed 80% of the dollars and having the major PBSs reviewed by an independent technical expert to ensure appropriate scope was not forgotten. No detailed review of the RTP cost estimate has been performed, assessment determination was based off of current knowledge of the current baseline and understanding changes made by CHG for this submittal.
- 5.2.6.1 Reviewed the RTP Submittal.
- 5.2.7.1 Reviewed November monthly report, attended IPABS training.
- 5.2.8.1 Refer to CRAD 1.4 "Project Change Control".
- 5.2.9.1 Reviewed the RTP Submittal.

## B-2 Decision Readiness to Proceed Self Assessment

**Improvements:**

**Beneficial:**

Related to 5.2.5 – The budget submittal could be improved to be solely based on the baseline. Part of the reasons for the continual disconnect is the continual changes to the program. Once the baseline/program is solidified, the program should attempt to maintain an up-to-date baseline, which can be used exclusively for funding requests without having to include “current knowledge”.

**Signatures**

Reviewers:

*Jennifer Sands*  
5/20/00

Team Lead Approval:

*Jennifer Sands*  
5/22/00

Date:

Date:

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 7.0 ES&H

**Subcriterion: 7.1A ES&H Program Plan—A detailed ES&H program plan has been completed (Contractor)**

**Specific Considerations in Assessment:**

- 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.2 Is the ES&H Program Plan or equivalent documentation effectively implemented?
- 7.1A.3 Does the Contractor effectively assess their implementation of their ES&H Program Plan or equivalent documentation?
- 7.1A.4 Does the Contractor monitor their ES&H performance to established performance goals?

**DOE Expectations:**

- 7.1A.1.1 The Contractor has an ES&H program which complies with the requirements of DOE rules, orders, and policies and is effectively implemented.
- 7.1A.2.1 The Contractor has developed an integrated safety management system (ISMS) per DEAR Clause 970.5204-2 and has demonstrated effective ISMS implementation.
- 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 DEAR 970.5204-78.
- 7.1A.3.1 The Contractor has demonstrated effective implementation of the DOE approved set of requirements for the River Protection Project.
- 7.1A.3.2 The Contractor has presented a detailed schedule (with milestones) to fulfill the remaining (after RTP) ES&H gaps.
- 7.1A.4.1 The Contractor has established applicable ES&H performance measures and evaluated ES&H performance per DEAR Clauses 970.5204-2 and 970.5204-86.

### Rating Options

<b>Green:</b> Performance has given confidence that the ORP will be successful in meeting B-2 expectations.	<b>Yellow:</b> Corrective actions are needed to be confident that the ORP will be successful in meeting B-2 expectations.	<b>Red:</b> Performance has not given confidence that the ORP will be successful in meeting B-2 expectations.
---	---	---

### Assessment

<p><b>Expectations Met:</b></p> <ul style="list-style-type: none"> <li>7.1A.1.1 Contractor has an ES&amp;H Program. An assessment is underway as described under expectations not yet met.</li> <li>7.1A.2.1 LMHC/CHG, as a subcontractor to FDH, has demonstrated ISMS implementation under the FDH Integrated Environment Safety and Health Management System Plan (HNF-MA-003) and under FDH's plan and ISM system description have completed both Phase I and II ISMS Verifications. Several open items exist and are discussed under expectations not yet met.</li> <li>7.1A.2.2 The 1999 update to the TWRS Standards/Requirements Identification Document was approved by DOE on September 14, 1999.</li> <li>7.1A.3.1 The Phase I assessment for the TWRS S/RID 1999 update was completed to DOE on September 27, 1999. The S/RID process is a DOE approved process and is consistent with the requirements of DEAR 970.5204-78.</li> </ul> <p><b>Expectations Not Met:</b></p> <ul style="list-style-type: none"> <li>7.1A.1.1 Assessment not completed. Will be completed 5/31/00. CHG S&amp;H program documentation (HNF-IP-0842, Section IX, <i>Safety</i>, April 21, 2000) was reviewed and comments submitted to J. Poppiti on 5-8-2000. Assessment of the S&amp;H program will be incorporated into the CHG ISMS Management Assessment scheduled for May 17-25, 2000.</li> <li>7.1A.2.1 DOE ORP recognizes that LMHC/CHG, as a subcontractor to FDH, has demonstrated ISMS implementation under the FDH Integrated Environment Safety and Health Management System Plan (HNF-MA-003) and under FDH's plan and ISM system description have completed both Phase I and II ISMS Verifications. Now that CHG is a separate prime contractor to ORP, the following actions need to be completed:                     <ol style="list-style-type: none"> <li>1) CHG submitted their ISMS System Description on April 27, 2000. DOE has minor comments and a letter of approval is being circulated for management signature (target approval date is May 16, 2000).</li> <li>2) CHG submitted a proposed set of ES&amp;H performance requirements on April 25, 2000. ORP review is pending on completion of the ISMS Management Assessment.</li> </ol> </li> </ul>	<p><b>Rating: Yellow</b></p>
---	------------------------------

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 7.0 ES&H

3) CHG and ORP are working cooperatively the revision to the Authorization Agreement. Signature from both parties is targeted for May 31, 2000.

7.1A.3.1 Complete the Phase II assessments for the new requirements added to the DOE approved TWRS S/RID 1999 update by September 30, 2000.

7.1A.3.2 CHG S&H program documentation (HNF-IP-0842, Section IX, *Safety*, April 21, 2000) was reviewed and comments submitted to J. Poppiti on 5-8-2000. Assessment of the S&H program will be incorporated into the CHG ISMS Management Assessment scheduled for May 17-25, 2000.

7.1A.4.1 CHG S&H program documentation (HNF-IP-0842, Section IX, *Safety*, April 21, 2000) was reviewed and comments submitted to J. Poppiti on 5-8-2000. Assessment of the S&H program will be incorporated into the CHG ISMS Management Assessment scheduled for May 17-25, 2000.

**Basis for Assessment:**

7.1A.1.1 FDH Integrated Environmental Safety and Health Management System Plan, HNF-MA-003.

7.1A.2.1 FDH Integrated Environmental Safety and Health Management System Plan, HNF-MA-003. CHG Integrated Safety Management System Description, HNF-SD-WM-PNL-114, Rev 4.

7.1A.2.2 "Standards/Requirements Identification Document," HNF-SD-MP-SRID-001, Revision 2. DOE Approval Letter 99-TSD-077, Approval of Tank Waste Remediation System Standards/Requirements Identification Document (S/RID).

7.1A.3.1 "Standards/Requirements Identification Document," HNF-SD-MP-SRID-001, Revision 2

7.1A.3.2 CHG Integrated Safety Management System Description, HNF-SD-WM-PNL-114, Rev 4.

7.1A.4.1 Attachment 2 on Performance Indicators in CHG Integrated Safety Management System Description, HNF-SD-WM-PLN-114, Rev 4.

**Recommended Path Forward:**

No Essential path forward actions were identified.

The following **Important** path forward actions were identified to address expectations not yet met:

7.1A.1.1 Complete assessment of contractor ES&H program by 5/31/00. ORP TSD (I)

7.1A.2.1 Complete assessment of contractor ISMS implementation to the CHG ISMS System Description by May 2000. Contractor and ORP TSD (I)

7.1A.3.1 Complete the Phase II assessments for the new requirements added to the DOE approved TWRS S/RID 1999 update by September 30, 2000. Contractor (I)

7.1A.3.2 Develop a CHG ISMS corrective actions/implementation plan for by 4/28/00. Contractor (I)

7.1A.4.1 Review, revise, approve Contractor ES&H performance measures by 3/31/00. Contractor and ORP TSD (I)

### Signatures

Reviewers:

*Heidi L. Clark*

Team Lead Approval:

Date:

*June 9, 2000*

Date:

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 7.0 ES&H

**Subcriterion: 7.1B ES&H Program Plan—A detailed ES&H program plan has been completed (DOE-ORP)**

**Specific Considerations in Assessment:**

- 7.1B.1 Does the ES&H Program Plan or equivalent documentation meet DOE requirements as established in the DOE FRAM and related DOE Policies and Directives?
- 7.1B.2 Is the ES&H Program Plan or equivalent documentation effectively implemented?
- 7.1B.3 Does DOE effectively assess implementation of the established DOE ES&H Program Plan or equivalent documentation?
- 7.1B.4 Does DOE effectively assess contractor ES&H performance per the established contract ES&H requirements and DEAR Clauses?

**DOE Expectations:**

- 7.1B.1.1 ORP has developed and implemented an integrated safety management system (ISMS) per DOE P 450.4.
- 7.1B.1.2 ORP has established and implemented a FRAM per DOE P 411.1.
- 7.1B.2.1 ORP has established an effective ES&H oversight program of Contractor activities per DOE P 450.5.
- 7.1B.3.1 ORP oversees Contractor compliance with the requirements of DOE rules, orders, and policies.
- 7.1B.4.1 ORP has established an effective self-assessment program per DOE P 450.5.

**Green:** Performance has given confidence that the ORP will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that the ORP will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that the ORP will be successful in meeting B-2 expectations.

### Assessment

**Expectations Met:**

- 7.1B.1.1 ORP has developed an ORP Integrated Safety Management System Description, DOE/RL-98-69, Revision 1, dated August 9, 1999. This document was reviewed in both the DOE TWRS ISMS Phase I and Phase II verifications. The ORP ISM System Description will be incorporated into the ORP Project Management Plan to reflect the enhancements of the ORP business management processes.
- 7.1B.1.2 ORP has completed the development of the ORP FRAM. The completion date was 2/29/00.
- 7.1B.2.1 The ORP Facility Representative Program provides the day-to-day oversight of the Contractor's operations and activities. A formal, documented Facility Representative program is in place, which defines the processes, used to perform this oversight function. ORP line management conducts formal ES&H oversight of the Contractor through project readiness assessments, management assessments and performance evaluations. The ORP Safety Division also provides oversight of specific ES&H program functional areas through management assessments, program reviews, and performance evaluations.

**Expectations Not Met:**

- 7.1B.1.1 The following actions need to be closed to demonstrate implementation of ISMS by ORP:
  - a. close the corrective actions identified in the ORP ISMS Phase II Verification Corrective Action Plan, (last action dated September 30, 2000).
  - b. Incorporate the ORP ISM system description into the ORP Project Management Plan.
  - c. Address the seven criteria established by DOE to demonstrate ISMS implementation and submit to DOE-HQ, before September 30, 2000.
  - d. Participate or conduct a management assessment of ORP ISMS implementation by May 30, 2000.
- 7.1B.2.2 The following actions need to be addressed to demonstrate an effective ES&H oversight program of Contractor activities:
  - a. The ORP Management Walkthrough Program is not being fully implemented. A process needs to be developed to upgrade and implement the ORP Management Walkthrough Program for ORP management to use in conducting RPP field walkthroughs by 4/15/00.
  - b. The contractor is in the process of implementing a deficiency tracking system to track and trend actions related to internal and external findings, issues and occurrences. ORP has requested that the Contractor also include tracking and trending of ORP targeted issues. This system is not fully implemented for both Contractor and ORP issues.

**Rating: Yellow**

## B-2 Decision Readiness to Proceed Self Assessment

- |   |  |
|---|--|
| <p>7.1B.3.1 This assessment is not complete. The scheduled completion date is 3/31/00.</p> <p>7.1B.4.1 ORP is in the process of developing an ORP wide self-assessment program. The formal ORP Manager's Notice for this program is scheduled to be completed by January 28, 2000. Implementation of this program is expected to be initiated in FY 2000 with all ORP divisions having completed one self-assessment review by September 1, 2000.</p> |  |
|---|--|

**Basis for Assessment:**

- 7.1B.1.1 ORP Integrated Safety Management System Description, DOE-RL-98-69, Revision 1, August 9, 1999.
- 7.1B.1.2 ORP Functions Responsibilities and Authorities Manual, February 29, 2000.
- 7.1B.2.1 ORP Facility Representative Program. Consistent with Facility Representative Program RLID 1300.1D.
- 7.1B.3.1 Assessment Underway
- 7.1B.4.1 ORP Self Assessment Program being developed.

**Recommended Path Forward:**

No Essential path forward actions were identified.

The following **Important** path forward actions were identified to address expectations not yet met:

- 7.1B.1.1 Conduct a management assessment of ORP ISMS implementation by May 30, 2000. ORP TSD (I)
- 7.1B.2.1 Implement the ORP Management Walkthrough Program by 4/15/00. ORP TSD (I)
- 7.1B.3.1 Complete assessment of contractor ES&H Program by 3/31/00. ORP TSD (I)
- 7.1B.4.1 Develop ORP wide self-assessment program. Initiate this program in FY 2000 and complete self-assessment review by 9/1/00. ORP (I)

**Signatures**

Reviewers: *Marianne L. Clark*  
 Date: *June 9, 2000*

Team Lead Approval:  
 Date:

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 7.0 ES&H

#### Subcriterion: 7.3 Safety Analysis – A Safety Analysis Report (SAR)

##### Specific Considerations in Assessment:

- 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 SAR in a timely manner?
- 7.3.9 Does CHG have an adequate AB management structure in place e.g., AB docket, AB library, document management systems, configuration controls 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?

##### DOE Expectations:

- 7.3.1.1 CHG has completed FSAR AB transition.
- 7.3.2.1 CHG has effectively completed implementation of all FSAR Phase I implementation open items and agreed on the disposition of the FSAR Phase II and Phase III items including its schedule and cost.
- 7.3.3.1 CHG has a detailed plan and licensing strategy in place to amend the AB to support waste feed delivery and associated projects.
- 7.3.4.1 CHG has an adequate USQ process implemented to comply with DOE Order 5480.21 requirements.
- 7.3.5.1 CHG has AB document review procedures in place.
- 7.3.6.1 CHG has a process in place to have an independent review of the safety analysis documents.
- 7.3.7.1 CHG management has processes and procedural guidance necessary to review the FSAR and all AB documentation.
- 7.3.8.1 CHG has adequate staff with appropriate skills to provide for review and approval of the FSAR in a timely manner.
- 7.3.9.1 CHG has an adequate AB management structure in place (AB docket, AB library, document management systems, configuration control systems, etc.).
- 7.3.10.1 ORP has management infrastructure (e.g. processes, procedures, staff) adequate for providing timely review and approval of documents.

### Rating Options

**Green:** Performance has given confidence that the ORP will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that the ORP will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that the ORP will be successful in meeting B-2 expectations.

### Assessment

#### Expectations Met:

- 7.3.1.1 CHG is currently performing waste transfer and waste storage activities using the ORP approved Final Safety Analysis Report (HNF-SD-WM-SAR-067) and Technical Safety Requirements (HNF-SD-WM-TSR-006). The Contractor has the AB under configuration management, with procedure driven internal and ORP revision processes.
- 7.3.2.1 CHG successfully transitioned from the ORP approved Basis for Interim Operation to the Final Safety Analysis Report (HNF-SD-WM-SAR-067) and Technical Safety Requirements (HNF-SD-WM-TSR-006) on October 18, 1999. ORP has approved full transition using a three- phase process, with completion by 9/30/00. All transition issues required to ensure the safety of the facility, worker, and the environment were implemented on October 18th.
- 7.3.3.1 CHG is currently performing planning activities, assigning personnel responsibilities, and defining required activities to be prepared to handle waste feed delivery and associated projects (HNF-1722, *RPP Double-Shell Tank Waste Retrieval AB Amendment Task Plan*). At a minimum when preparing a licensing strategy and AB amendment CHG will use the Final Safety Analysis Report (HNF-SD-WM-SAR-067) and Technical Safety Requirements (HNF-SD-WM-TSR-006) are used by the Contractor, along with HNF-IP-0842, Volume IV Engineering, Section 5.10, *Authorization Basis Document Process*; HNF-IP-0842, Volume IV Engineering, Section 5.14 *Tier I Review of Authorization Basis Documents*; and HNF-IP-0842, Volume IV Engineering, Section 5.4 *Unreviewed Safety Questions*.
- 7.3.4.1 CHG uses HNF-IP-0842, Volume IV Engineering, Section 5.4 *Unreviewed Safety Questions*, as procedural guidance. Corrective Action and Occurrence Reporting procedural processes also exist. CHG has a USQ Self Assessment Program in place, contractors and independent contractor to review the USQ process, and transmits an annual USQ review report to ORP.

**Rating: Green**

## B-2 Decision Readiness to Proceed Self Assessment

- |  |  |
|--|--|
| <p>7.3.5.1</p> <p>7.3.6.1</p> <p>7.3.7.1</p> <p>7.3.7.2</p> <p>7.3.9.1</p> <p>7.3.10.1</p> | <p>CHG has procedural processes in place to ensure that adequate evaluation occurs when AB documents are revised, added, and deleted. Primary procedures include, HNF-IP-0842, Volume IV Engineering, Section 5.10, <i>Authorization Basis Document Process</i>, HNF-IP-0842, Volume IV Engineering, Section 5.14 <i>Tier 1 Review of Authorization Basis Documents</i> and HNF-IP-0842, Volume IV Engineering, Section 5.4 <i>Unreviewed Safety Questions</i>. All changes to the AB document list by the Contractor requires approval by ORP. CHG uses DOE Orders 5480.21, 5480.22, and 5480.23 procedural processes when developing or reviewing AB documents.</p> <p>CHG uses a formal documented review process of AB documents. All affected organizations (tank farms operations, ES&amp;H, engineering, etc.) participate in an extensive review of AB documents. CHG has adequate procedures in place to perform review activities. ORP will continue to perform document review and oversight of CHG safety documents.</p> <p>CHG has procedural processes in place that define the review and approval process of a SAR, which include Section 5.10, <i>Authorization Basis Document Process</i>, HNF-IP-0842, Volume IV Engineering, Section 5.14 <i>Tier 1 Review of Authorization Basis Documents</i>.</p> <p>Responsibilities and authorities are documented, position description requirements exist for each position, and CHG staff are trained, tested, and retrained commensurate with their position. Contracted personnel hired to support AB work are required to fulfill training requirements to ensure a consistent base of understanding exists of responsibilities and authority across all staff members. CHG is currently staffed with the appropriate type of personnel for providing reviews and approval of contractor documents and work. However, several personnel have recently left nuclear safety, creating the potential for inadequate staff to meet current and future AB requirements if the vacancies are not quickly filled.</p> <p>CHG has an adequate AB management structure in place (AB docket, AB library, document management systems, configuration control processes, etc.), to ensure adequate management of the AB, and of the AB amendment process.</p> <p>Responsibilities and authorities are documented, and understood by the current ORP staff and will be clearly documented in the Functional Responsibilities and Authorities Manual (FRAM). The FRAM is currently being written. ORP staffing is currently not at the staffing level that is required to perform the required work activities. In addition funding for hiring and support personnel has been reallocated. A freeze on hiring ORP federal employees also currently exists. Non-federal employees will be contracted to support ORP through the national labs, general support services contract (GSSC), and independent experts in specific areas of safety and health.</p> |
|--|--|

**Basis for Assessment:**

- |  |  |
|--|--|
| <p>7.3.1.1</p> <p>7.3.2.1</p> <p>7.3.3.1</p> <p>7.3.4.1</p> <p>7.3.5.1</p> <p>7.3.6.1</p> <p>7.3.7.1</p> <p>7.3.8.1</p> <p>7.3.9.1</p> <p>7.3.10.1</p> | <p>TWRs Final Safety Analysis Report, HNF-SD-WM-SAR-067 and HNF-SD-WM-TSR-006, Technical Safety Requirements.</p> <p>TWRs Final Safety Analysis Report, HNF-SD-WM-SAR-067 and HNF-SD-WM-TSR-006, Technical Safety Requirements.</p> <p>RPP Double Shell Tank Waste Retrieval AB Amendment Task Plan, HNF-1722; HNF-SD-WM-SAR-067, TWRs Final Safety Analysis Report; HNF-SD-WM-TSR-006, Technical Safety Requirements; HNF-IP-0842, Volume IV Engineering, Section 5.10, <i>Authorization Basis Document Process</i>; HNF-IP-0842, Volume IV Engineering, Section 5.14 <i>Tier 1 Review of Authorization Basis Documents</i>; HNF-IP-0842 Volume IV Engineering, Section 5.4 <i>Unreviewed Safety Questions</i>; HNF-SD-WM-SAR-067, TWRs Final Safety Analysis Report; TBRs 150.B16, 150.B17, 270.105, 270-110, 270-C16; HNF-SD-WM-TSR-006, Technical Safety Requirements; RPP-MP-003, ISMS Description.</p> <p>HNF-IP-0842, Volume IV Engineering, Section 5.4 <i>Unreviewed Safety Questions</i>; HNF-SD-WM-SAR-067, TWRs Final Safety Analysis Report; HNF-SD-WM-TSR-006, Technical Safety Requirements; and RPP-MP-003, ISMS Description.</p> <p>HNF-IP-0842, Volume IV Engineering, Section 5.10, <i>Authorization Basis Document Process</i>; HNF-IP-0842, Volume IV Engineering, Section 5.14 <i>Tier 1 Review of Authorization Basis Documents</i>; HNF-IP-0842 Volume IV Engineering, Section 5.4 <i>Unreviewed Safety Questions</i>; HNF-SD-WM-SAR-067, TWRs Final Safety Analysis Report; HNF-SD-WM-TSR-006, Technical Safety Requirements; and RPP-MP-003, ISMS Description.</p> <p>HNF-IP-0842, Volume IV Engineering, Section 5.14 <i>Tier 1 Review of Authorization Basis Documents</i>; HNF-SD-WM-SAR-067, TWRs Final Safety Analysis Report; HNF-SD-WM-TSR-006, Technical Safety Requirements; and RPP-MP-003, ISMS Description.</p> <p>HNF-IP-0842, Volume IV Engineering, Section 5.10, <i>Authorization Basis Document Process</i>; HNF-IP-0842, Volume IV Engineering, Section 5.14 <i>Tier 1 review of Authorization Basis Documents</i>; HNF-SD-WM-SAR-067, TWRs Final Safety Analysis Report; HNF-SD-WM-TSR-006, Technical Safety Requirements; and RPP-MP-003, ISMS Description.</p> <p>HNF-IP-0842, Volume IV Engineering, Section 5.14 <i>Tier 1 Review of Authorization Basis Documents</i>; HNF-SD-WM-SAR-067, TWRs Final Safety Analysis Report; HNF-SD-WM-TSR-006, Technical Safety Requirements; and RPP-MP-003, ISMS Description.</p> <p>HNF-IP-0842, Volume IV Engineering, Section 5.10, <i>Authorization Basis Document Process</i>; HNF-SD-WM-SAR-067, TWRs Final Safety Analysis Report; HNF-SD-WM-TSR-006, Technical Safety Requirements; and RPP-MP-003, ISMS Description.</p> <p>ORP Functions Responsibilities and Authorities Manual.</p> |
|--|--|

**Recommended Path Forward:**

DOE expectations have been met.

## B-2 Decision Readiness to Proceed Self Assessment

### Signatures

Reviewers: *James W. Kirby*  
Date: *5/30/00*

Team Lead Approval:  
Date:

## B-2 Decision Readiness to Proceed Self Assessment

<b>Criterion: 7.0 ES&amp;H</b>		
<b>Subcriterion: 7.4 Occupational Safety Concerns— Has the detailed compliance plan been reviewed and revised as appropriate, and has it been implemented?</b>		
<b>Specific Considerations in Assessment:</b>		
7.4.1	Does the occupational health and safety program effectively implement DOE rules, orders, and policies?	
7.4.2	Are assessments and audits performed to evaluate the occupational safety program and the adequacy of qualified safety and health professionals for implementing the program?	
7.4.3	Does ORP have processes to place to manage occupational safety concerns tasks.	
<b>DOE Expectations:</b>		
7.4.1.1	DOE expectations include full implementation of the DOE rules, orders, and policies as related to occupational safety issues associated with operations and activities in the tank farms.	
7.4.1.2	DOE expectations also include the plan to remediate any new occupational safety hazards that may impact specific work activities or tasks in the tank farms.	
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.	
7.4.3.1	ORP must be ready to effectively manage occupational safety concerns within ORP itself as well as oversee contractor work.	
7.4.3.2	ORP must implement an adequate occupational safety employee concerns program.	
<b>Rating Options</b>		
<b>Green:</b> Performance has given confidence that the ORP will be successful in meeting B-2 expectations.	<b>Yellow:</b> Corrective actions are needed to be confident that the ORP will be successful in meeting B-2 expectations.	<b>Red:</b> Performance has not given confidence that the ORP will be successful in meeting B-2 expectations.
<b>Assessment</b>		
<b>Expectations Met:</b> 7.4.1.1 The ORP Safety group has developed methods and processes that meet the OSHA Standards and ACGIH guidelines for evaluating the contractor occupational safety and health programs. The documents supporting the oversight management of the contractor occupational safety and health programs process include but are not limited to the following: <ul style="list-style-type: none"> <li>• Occupational Safety and Health Performance Assessment Guides.</li> <li>• Implementation and compliance with DOE Order 5480.4, "Environment, Safety, and Health Protection Standards."</li> <li>• Implementation and compliance with the provision of the DOE Order 5480.10, "Contractor Industrial Hygiene Program."</li> <li>• Implementation and compliance with DOE Order 440.1A, "Worker Protection Management for DOE Federal and Contractor Employee."</li> </ul> HNF-IP-0842 describes the specific CHG occupational safety programs. These include the RPP Safety Services Program Plan, The Industrial Hygiene Personal Monitoring Program Plan, The Comprehensive Ergonomics Program Plan, Respiratory Protection Controls, and Subcontractor Safety Oversight. This guidance is supplemented by specific Occupational Safety and Health Procedures provided in HNF-PRO Documents addressing a wide range of occupational safety and health issues such as confined space, electrical safety, job hazard analysis, office safety, safety inspections, transportation safety, and worksite first aid.	<b>Rating: Yellow</b>	
7.4.1.2 Procedures and processes exist to identify and evaluate new occupational safety hazards. Hazards analysis and identification processes are used to ensure that operations are conducted in a safe manner as required by the RPP Safety Services Program Plan, Volume IX, Safety, HNF-IP-0842.		
7.4.2.1 ORP conducts oversight of the Contractor's ES&H program with existing resources through the Facility Representative program, program management assessments and project readiness assessments and reviews. ORP also has an external review panel of world-renowned safety experts, "Worker Health and Safety Tank Advisory Panel (SubTAP)," that meets regularly to evaluate and provide recommendations to ORP in the field of occupational safety and health.		
7.4.3.2 ORP uses DOE-RL for the implementation of its employee concerns program. ORP provides technical support.		
<b>Expectations Not Met:</b>		
7.4.2.1 ORP does not have the appropriate staff mix for ES&H oversight of the River Protection Project based on the current project hazard profile. Resources are needed in the following ES&H functional areas: radiation protection, industrial safety, electrical safety, fire protection and natural phenomenon.		

## B-2 Decision Readiness to Proceed Self Assessment

<p>7.4.3.1 ORP has initiated a program to address Federal Occupational Safety and Health (FEOSH) Program. The FEOSH program allows ORP to identify specific areas of safety hazards through safety inspections, audits, and assessment of workstation designs and to provide controls for hazards that maybe identified. Implementation is in progress.</p>	
---	--

- Basis for Assessment:**
- 7.4.1.1 HNF-IP-0842, Volume IX Safety, Section 1.1, Safety Services Program Plan. HNF-IP-0842, Volume IX Safety, Section 4.4, Industrial Hygiene Personal Monitoring Program Plan. HNF-IP-0842, Volume IX Safety, Section 4.3, Comprehensive Ergonomics Program Plan. HNF-IP-0842, Volume IX Safety, Section 4.2, Respiratory Protection Controls. HNF-IP-0842, Volume IX Safety, Section 2.3, Subcontractor Safety Oversight. HNF-PRO Occupational Safety and Health Procedures.
  - 7.4.1.2 HNF-IP-0842, Volume IX Safety, Section 1.1, Safety Services Program Plan.
  - 7.4.2.1 ORP Facility Representative Program. As consistent with RLID 1300.1D Facility Representative Program.
  - 7.4.3.1 The Federal Employee Occupational Safety and Health (FEOSH) Program at Hanford, HFID 440.1.
  - 7.4.3.2 Department of Energy Employee Concerns Program DOE Order 442.1.

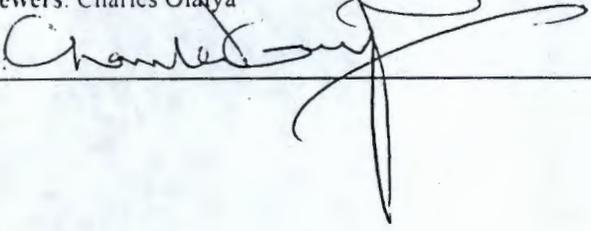
In addition to the above bases, the following high-level requirements were reviewed to support this assessment:

- 29 CFR 1910, Occupational Safety and Health Standards.
- 29 CFR 1926, Safety and Health Regulations for Construction.
- DOE Order 5480.4, Environment, Safety, and Health Protection Standards
- DOE Order 5480.10, Contractor Industrial Hygiene Program
- DOE Order 5480.11/1-3, Radiation Protection for Occupational Workers.
- DOE Order 5484.1, Environmental Protection, Safety, and Health Protection Information Reporting Requirements Information
- DOE Order 440.1A, Worker Protection Management for DOE Federal and Contractor Employee.

**Recommended Path Forward:** No essential path forward actions were identified. The following important path forward actions were identified to address expectations not yet met:

- 7.4.2.1 It is recommended that ORP management develop a human resource plan to identify and implement alternatives to fill staff needs in such areas as radiation protection, industrial safety , electrical safety and fire safety. Date to be determined. ORP Management (I)
- 7.4.3.1 Complete the implementation of the FEOSH Program. Date to be determined. ORP Management. (I)

### Signatures

<p>Reviewers: Charles Olaiya</p> <p>Date: </p>	<p>Team Lead Approval:</p> <p>Date: 5/22/2000</p>
--	---

## B-2 Decision Readiness to Proceed Self Assessment

<b>Criterion: 7.0 ES&amp;H</b>		
Subcriterion: 7.5 Waste minimization and Pollution Prevention – Has a detailed waste minimization/pollution prevention plan been reviewed and revised as appropriate for implementation during operations?		
Specific Considerations in Assessment:		
7.5.1 Has a detailed waste minimization/pollution prevention plan been reviewed/developed and revised as appropriate by RPP for implementation during operations?		
DOE Expectations:		
7.5.1.1 A Pollution Prevention/Minimization plan has been written by/including RPP which applies to waste feed delivery and associated operations		
7.5.1.2 The plan is acceptable to DOE-ORP		
7.5.1.3 The plan is being implemented and adhered to		
<b>Rating Options</b>		
Green: Performance has given confidence that the ORP will be successful in meeting B-2 expectations.	Yellow: Corrective actions are needed to be confident that the ORP will be successful in meeting B-2 expectations.	Red: Performance has not given confidence that the ORP will be successful in meeting B-2 expectations.
<b>Assessment</b>		
Expectations Met:		Rating:
7.5.1.1 The Hanford Site Plan (HNF-EP-0496, Rev 3) is being used by CHG to address Waste Minimization and Pollution Prevention.		Green
7.5.1.2 The plan has been accepted by ORP as part of the CHG transition policy.		
7.5.1.3 The plan and its implementation has been reviewed to ensure waste minimization assessments are performed; the contractor performs pollution prevention reporting; and the contractor has waste minimization certification.		
Basis for Assessment:		
7.5.1.1 Hanford Site Plan (HNF-EP-0496)		
7.5.1.2 Hanford Site Plan (HNF-EP-0496). ORP/CHG transition agreements.		
7.5.1.3 Hanford Site Plan (HNF-EP-0496)		
Recommended Path Forward: DOE expectations have been met. Continue ongoing planned assessments and reporting.		
<b>Signatures</b>		
Reviewers: <i>Dennis Bowen</i>	Team Lead Approval: <i>Ann B. Sidpa</i>	
Date: <i>6-15-00</i>	Date: <i>6-15-00</i>	<i>for Joe Bavelacqua</i>

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 7.0 ES&H

**Subcriterion: 7.6 Waste management – The detailed waste management plan has been reviewed and revised as appropriate.**

**Specific Considerations in Assessment:**

- 7.6.1 Does the waste management plan identify and confirm the types and quantities of waste expected during construction, start-up, and operation of facilities, systems structures, or components?
- 7.6.2 Does the waste management plan provide documentation of reviews and approvals?
- 7.6.3 Does the waste management plan integrate waste production and disposal with:
  - British Nuclear Fuels Limited
  - Ch2M Hill
  - Hanford Site Waste Management
  - Department of Energy Richland Operations Office and Office of River Protection
- 7.6.4 Does the waste management plan include:
  - an implementation schedule;
  - measures and practices that will be used to manage, treat, and dispose of wastes?

**DOE Expectations:**

- 7.6.1.1 The waste management plan identifies and confirms the types and quantities of waste expected during construction, start-up, and operation of facilities, systems, structures, or components?
- 7.6.2.1 A process is implemented to document reviews, changes, and approvals of the waste management plan.
- 7.6.3.1 The waste management plan integrates waste production and disposal with:
  - British Nuclear Fuels Limited
  - Ch2M Hill
  - Hanford Site Waste Management
  - Department of Energy Richland Operations Office and Office of River Protection
- 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?

### Rating Options

<p><b>Green:</b> Performance has given confidence that the ORP will be successful in meeting B-2 expectations.</p>	<p><b>Yellow:</b> Corrective actions are needed to be confident that the ORP will be successful in meeting B-2 expectations.</p>	<p><b>Red:</b> Performance has not given confidence that the ORP will be successful in meeting B-2 expectations.</p>
--	--	--

### Assessment

<p><b>Expectations Met:</b></p> <p>7.6.1.1 LMHC/CHG has a Waste Generating Plan, HNF-IP-0842, VI, Environmental, 4.1, Rev. 3b. This document provides a plan for handling waste before it is generated and applies to all RPP activities and all waste types. The plan identifies 15 specific waste streams that result from routine maintenance and operations activities. The plan also provides a process for managing non-routine waste streams. The plan does not discuss quantities of waste produced, however, a waste volume projection is developed, independent of this plan, on an annual basis. The plan is not integrated with a site wide waste management plan.</p> <p>7.6.2.1 The interface definition and DOE and Contractor responsibilities are included as part of the interface description. For each of the interface descriptions, Interface Control Documents (ICDs) have been developed to define the administrative and physical interface requirements for each interface description. Interface details include physical point of transfer, composition/volume projections, administrative procedures, open issues, and details of the physical interface, dependent on the nature of the interface. The level of detail varies with the level of information available to include in the ICD. The interface control documents are living documents and are updated on a regular basis. The interface control documents are managed in accordance with the contract provision, and are under change control. Working groups have been established to develop and revise the ICDs, and these include membership from DOE ORP/RL, PHMC team, LMHC/CHG, and PNNL as is appropriate for the specific interface. For this review, it is assumed that the ICD process or something similar, will be used in the future with the next waste processing contractor.</p> <p>The waste generating plan requires documentation of reviews and approvals. The plan identifies specific responsibilities for management, staff and subcontractors, including, verification and oversight of the waste management process. A waste planning checklist provides a means to document solid waste generation and the method by which the waste will be disposed. The checklist is part of each work package and is integral to planning of any work activity. The</p>	<p><b>Rating: Yellow</b></p>
--	------------------------------

## B-2 Decision Readiness to Proceed Self Assessment

checklist is approved in accordance with the generating plan. The waste generating plan is supported by two primary tank farm operating procedures. "Perform Waste Generation, Segregation, and Accumulation," (TO-100-052) and "Perform Inspections of Active Containers and Satellite Accumulation Areas," (TO-100-045). The -052 procedure provides guidance on planning for and effectively managing tank farms solid waste. It covers planning, segregation, packaging and inventory of solid wastes generated within tank farm facilities. The -052 procedure requires additional waste management documentation, including, container request forms, waste inventory sheets and generator certifications. The -045 procedure provides instructions for the inspection of Satellite Accumulation Containers and other active waste containers and requires documentation in the form of active container inspection data sheets.

Waste received into double shell tanks is governed by the "Double Shell Tank Waste Analysis Plan," (DOE/RL-90-39). Waste received into DSTs must meet specific environmental, operational and safety parameters.

7.6.3.1 The waste generating plan and DST Waste Analysis Plan address waste handling by LMHC (CH2M Hill), contractors in the tank farms, generators of waste outside the farm (other contractors) and waste service providers (i.e., Waste Management Hanford). Neither the Waste Generating Plan or the DST Waste Analysis Plans address waste volume directly. A number of other documents address waste streams, waste stream volume and disposal pathways, including, waste volume projections, RPP/WTP Integrated Master Plan (PL-W375-G00002, Rev.1, October 29, 1999) and interface control documents.

7.6.4.1 A schedule is not used or required to manage day to day tank farm waste generation activities. Wastes are managed using the documents and procedures described above. Additional waste acceptance documentation or criteria may be required for secondary wastes being returned from waste processing, but until the secondary waste plan is issued these criteria can not be developed. It is not known if the plan will include a schedule or a description of measures and practices to be used in disposing of the secondary wastes returned to LMHC/CHG. The primary waste products are being addressed by the IHLW storage and LAW disposal projects.

**Expectations Not Met:**

7.6.3.1 A site wide integrated waste management plan does not exist. There is a draft gap analysis for the new DOE Order 435.1, Radioactive Waste Management in process. The Gap analysis was to be submitted to RL by Jan 15, 2000. CH2M Hill was also scheduled to submit their gap to ORP.

**Basis for Assessment:**

- 7.6.1.1 Hanford Site Solid Waste Acceptance Criteria (HSSWAC). DOE Order 435.1. HNF-IP-0842, VI, Environmental, 4.1, Rev. 3b.
- 7.6.2.1 HNF-IP-0842, VI, Environmental, 4.1, Rev. 3b. Tank Farm Operating Procedures TO-100-052 and TO- 045. Double Shell Tank Waste Analysis Plan, DOE/RL-90-39.
- 7.6.3.1 HNF-IP-0842, VI, Environmental, 4.1, Rev. 3b. Double Shell Tank Waste Analysis Plan, DOE/RL-90-39. RPP/WTP Integrated Master Plan PL-W375-G00002, Rev 1, October 1999. DOE Order 435.1.
- 7.6.4.1 HNF-IP-0842, VI, Environmental, 4.1, Rev. 3b.

**Recommended Path Forward:**

No essential path forward actions were identified. The following important path forward action was identified to address expectations not yet met for 7.6.3.1. Develop a site integrated Waste Management plan in accordance with DOE Order 435.1. Perform assessments to assure DOE Order 435.1 is implemented. The completion date for this action is to be determined.

**Signatures**

Reviewers: M. J. Royack

Team Lead Approval:

Date:

2/22/00

Date:

## B-2 Decision Readiness to Proceed Self Assessment

Criterion: 7.0 ES&H		
Subcriterion: 7.7 Permits, Licenses and Regulatory Approval – Have applicable permits, licenses, and regulatory approvals been obtained and have milestone dates for pending and new application been reviewed and revised as appropriate?		
Specific Considerations in Assessment:		
7.7.1	Does the RPP operate under a DOE approved S/RID? Are applicable environmental requirements in Sections 16 and 20?	
7.7.2	Does the RPP permitting program identify and schedule all permits needed to support feed delivery?	
7.7.3	Are sufficient funds 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?	
7.7.5	Does the RPP Authorization Envelope contain all approved environmental permits? Is a listing of such routinely generated?	
7.7.6	Does BNFL and RPP have sufficient interface control agreements to ensure waste feed delivery on time and within cost?	
7.7.7	Does RPP have procedures to ensure that permit approval conditions are implemented in the field?	
DOE Expectations:		
7.7.1.1	The RPP does operate under a DOE approved S/RID. Applicable environmental requirements are in Sections 16 and 20.	
7.7.2.1	The RPP permitting program does identify and schedule all permits needed to support feed delivery.	
7.7.3.1	Sufficient funds are allocated in the annual planning schedule to prepare planned permits within cost and on schedule.	
7.7.4.1	Out year planning to identify needed permits is done so these are assured to be in the RPP annual planning process.	
7.7.5.1	The RPP Authorization Envelope does contain all approved environmental permits. A listing of such is routinely generated.	
7.7.6.1	BNFL and RPP do have sufficient interface control agreements to ensure waste feed delivery on time and within cost.	
7.7.7.1	RPP does have procedures to ensure that permit approval conditions are implemented in the field.	
Rating Options		
Green: Performance has given confidence that ORP will be successful in meeting B-2 expectations.	Yellow: Corrective actions are needed to be confident that ORP will be successful in meeting B-2 expectations.	Red: Performance has not given confidence that ORP will be successful in meeting B-2 expectations.
Assessment		
Expectations Met:		Rating: Yellow
7.7.1.1	Sections 16 and 20 of RPP's S/RIDs were reviewed and applicable environmental requirements are addressed.	
7.7.2.1	RPP's Permitting At-A-Glance Charts and Historical Permit Approval Charts identify and schedule permits needed to support feed delivery.	
7.7.3.1	A review of the current environmental RPP TBRs indicates that sufficient funds are allocated to prepare planned permits.	
7.7.4.1	Selected Permitting Plans were reviewed to verify out year planning.	
7.7.5.1	A list of environmental permits is provided in HNF-4474, RPP Environmental Permits and Related Documents.	
7.7.6.1	Interface Control Documents were reviewed. Some issues in ICD-22 (3 issues) and ICD-26 (5 issues) have been identified and are being worked out and targeted for late April resolution. TSCA PCB issues of tank waste and NEPA, RCRA issues involved in Remote Trenching of ILAW are being addressed.	
7.7.7.1	HNF-IP-0842 provides field implementation procedures.	
Basis for Assessment:		
7.7.1.1	Evaluate against Sections 16 and 20 of RPP's S/RIDs	
7.7.2.1	RPP's Permitting At-a-Glance charts and Historical Permit Approval Charts	
7.7.3.1	Current Environmental RPP TBRs	
7.7.4.1	Permitting Plans	
7.7.5.1	HNF-4474, "RPP Environmental Permits and Related Documents"	
7.7.6.1	List of all Interface Control Documents and ICD-22, "Air Emissions" and ICD-26, "Permits"	
7.7.7.1	Field implementation procedure out of HNF-IP-0842	
Recommended Path Forward: DOE expectations have been met.		
Important Actions:		
<ul style="list-style-type: none"> <li>• RPP continuing accelerated schedule of permit writing and regulatory decision-making.</li> <li>• Continuing to team with the regulators to fast track our permitting strategy. Corrective actions not necessary at this time.</li> <li>• Issues in ICD-22 (3 issues) and ICD-26 (5 issues) are being worked and targeted for late April conclusion.</li> <li>• TSCA PCB issues of tank waste and NEPA, RCRA issues involved in Remote Trenching of ILAW are also ongoing.</li> </ul> Yellow rating determination is due to the amount of permit and regulatory approvals and decisions needed by April.		
Signatures		
Reviewers: <i>Dennis Bowser</i>	Team Lead Approval: <i>Ann B. Sidjare</i>	
Date: <i>6-15-00</i>	Date: <i>6.15.00</i> <i>for Joe Bevelacqua</i>	

U.S. Department of Energy  
**Office of River Protection**

P.O. Box 450  
Richland, Washington 99352

00-ESHQ-021

JUN 15 2000

Ms. M. P. DeLozier, President  
and General Manager  
CH2M HILL Hanford Group, Inc.  
Richland, Washington 99352

Dear Ms. DeLozier:

CONTRACT NO. DE-AC06-99RL14047 – B-2 DECISION READINESS TO PROCEED  
CONDITIONAL ACCEPTANCE OF SUBCRITERION 7.8A QUALITY ASSURANCE (QA)  
PROGRAM

The U.S. Department of Energy, Office of River Protection (ORP) has conditionally accepted your QA Program as described in the following documents: 1. RPP-MP-600, Rev 0, "Quality Assurance Program Description (QAPD) for the Tank Farm Contractor;" 2. RPP-MP-601, Rev 0, "Quality Assurance Manual and Implementation of the Quality Assurance Program System for the Tank Farm Contractor;" 3. RPP-MP-602, Rev 0, "Quality Assurance Requirements Matrix (QARM) for the Tank Farm Contractor;" and 4. CH2M HILL Hanford Group, Inc. (CHG) interoffice memo from QA to S. H. Gilmore, "QA Program Elements," 7B400-DW-00-001, dated June 1, 2000.

ORP's conditional acceptance of the CHG program is based on: 1. dynamics associated with the potential modifications of the CHG contract to expand the statement of work; and 2. CHGs commitment to provide an acceptable revision of the above mentioned documents to ORP by August 18, 2000. ORP, under a separate letter, will provide CHG with detailed comments to the documents for consideration when making the revisions.

If you have any questions regarding the acceptance of your program and the conditions under which it is being accepted please contact John Clark, on (509) 376-2246.

Sincerely,



Cloette B. Reid  
Contracting Officer

ESHQ:JES

cc: J. B. Hebdon, CHG  
D. A. Waite, CHG

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 7.0 ES&H

#### Subcriterion: 7.8A Quality Assurance Program – Contractor

##### Specific Considerations in Assessment:

- 7.8A.1 Do we have an adequate Quality Assurance Program (QAP) for waste storage and transfer?
- 7.8A.2 Is the QAP adequately implemented?
- 7.8A.3 Are plans in place to update the QAP as needed to support waste feed delivery and associated projects?
- 7.8A.4 Are procedures in place for surveillance and audits of the implementation of the contractor QA programs?
- 7.8A.5 Are appropriate Price Anderson Amendment Act coordination and program oversight functions established?

##### DOE Expectations:

- 7.8A.1.1 CHG has completed the QAP for waste storage and transfer.
- 7.8A.2.1 CHG has effectively implemented all QAP requirements into auditable QA programs and procedures.
- 7.8A.3.1 CHG has a detailed plan in place to amend the QAP to support waste feed delivery and associated projects.
- 7.8A.4.1 CHG has an adequate audit and surveillance program to assure compliance with the requirements of the QAP.
- 7.8A.5.1 CHG will have appropriate and effective interfaces necessary to execute Price Anderson Amendment Act activities.

### Rating Options

**Green:** Performance has given confidence that the ORP will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that the ORP will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that the ORP will be successful in meeting B-2 expectations.

### Assessment

##### Expectations Met:

7.8A.1.1 HNF-IP-0842, Volume XI, Section 1.1, Quality Assurance addressed waste storage and transfer. CHG is operating under a transition QAP and is developing a CHG QA Program Description Document scheduled for the end of March 2000. The QA Program description was not delivered in March as originally planned. It was agreed that CHG could deliver their Program Description on April 24, 2000 with the rest of the B-2 deliverables.

CHG delivered their QA Program Description (RPP-MP-600, Rev. 0) on April 24, 2000. ORP review indicated the need to review some portions of this document. It was also noted that CHG did not have a prime contractors QA program that was compliant with 10 CFR 830.120 at that time.

DOE met with CHG on May 3, 2000 to discuss these issues. CHG subsequently revised the QA Program Description and transmitted RPP-MP-600, Rev. 1 on May 4, 2000, which resolved the issues associated with this document.

It was noted in the May 4<sup>th</sup> transmittal that additional documentation was necessary to fully describe and document CHG's QA Program. These additional documents were the QA Requirements Matrix and the QA Manual. The QA Requirement Matrix was delivered to ORP on May 11, 2000. At this time (May 17, 2000) the QA Manual has not been provided to ORP.

Therefore, ORP concludes that CHG's QA Program is incomplete, i.e. failing these criteria, and was rated red. The QA Manual was delivered to ORP at the end of May, which caused an upgrade from red to yellow.

*Refer to note below  
signature block, page 2.*

- 7.8A.3.1 The current QAP covers waste feed delivery and associated projects.
- 7.8A.5.1 CHG has designated a PAA compliance officer.

**Rating: YELLOW**

##### Expectations Not Met:

- 7.8A.2.1 CHG has encountered recent QA problems that indicate problems with implementing QA requirements and procedures. A specific example is problems with the W-314 Project involving unacceptable welding of piping. This issue is addressed in CRAD 3.2.3.1 in more detail but indicates problems with QA Program implementation.
- 7.8A.4.1 CHG has assumed the audit and assessment function from the PHMC. The recent problems with the W-314 Project piping indicate a need for improvement in this area.

## B-2 Decision Readiness to Proceed Self Assessment

### Basis for Assessment:

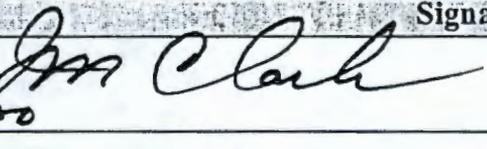
- 7.8A.1.1 HNF-IP-0842, Volume IX, Section 1.1, Quality Assurance. Letter LMHC-9957054 Dated 9/29/99 "River Protection Project Transition Quality Assurance Program. RPP-MP-600, Rev. 0, April 24, 2000; RPP-MP-600, Rev. 1, May 4, 2000; HNF-IP-0482 Vol. IX, Sect. 1.1, Rev. 3; CHG-9957401 R4.
- 7.8A.2.1 See CRAD 3.2.3.1. Discussions with ORP QA personnel.
- 7.8A.3.1 HNF-IP-0842, Volume IX, Section 1.1, Quality Assurance.
- 7.8A.4.1 See CRAD 3.2.3.1. Discussions with ORP QA personnel.
- 7.8A.5.1 CHG QA Organization.

### Recommended Path Forward:

- 7.8A.2.1 and 7.8A.4.1 Complete the corrective action plan for the W-314 piping weld defect incident. Factor in the results of this incident into the CHG QA Program Description Document originally scheduled for the end of March 2000. New date may have to be negotiated. Contractor. (I)

### Signatures

Reviewers: J. Clark

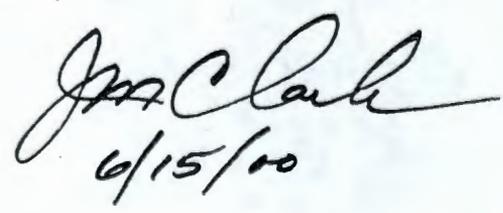


Lead Approval: J. Voice

Date: 6/15/00

Date:

after meeting with the Contractor on June 6, 2000, and after receiving additional documentation on June 7, 2000, ORP determined on June 7 that the QA Package was acceptable for near term use. Refer to attached ORP letter 00-ESHQ-021 dated June 15, 2000.



6/15/00

## B-2 Decision Readiness to Proceed Self Assessment

### Criterion: 8.0 Project Risk

**Subcriterion: 8.2 CHG Risk Management** – Does CHG have a risk management program in place necessary for successful management of the lifecycle of this project?

**Specific Considerations in Assessment:**

- 8.2.1 Is it clear who in CHG is responsible for managing risk?
- 8.2.2 Does CHG have a risk management plan/procedure for evaluating and managing risk?
- 8.2.3 Does CHG assume the role of risk manager as appropriate?
- 8.2.4 Has CHG identified project risks?
- 8.2.5 Does CHG's Phase 1B-1 risk management performance demonstrate their ability to successfully establish and execute the risk management program for Phase 1B-2?
- 8.2.6 Is there a single risk management process for the project?
- 8.2.7 Is it clear what risk is inherent in decisions made by DOE?

**DOE Expectations:**

- 8.2.1.1 Clear roles and responsibility are defined for risk management at all levels within CHG.
- 8.2.2.1 Appropriate CHG staff & management have been trained on the risk management procedure.
- 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.
- 8.2.3.1 CHG clearly identifies risk managers and holds them accountable for actions according to a defined schedule.
- 8.2.3.2 CHG has identified project risks, using a systematic methodology.
- 8.2.3.3 Risks identified can be tied to the project baseline through a project WBS.
- 8.2.3.4 Critical risks within the life cycle of the project have been identified.
- 8.2.3.5 CHG has taken an integrated approach to risk management.
- 8.2.4.1 The assessment of the risk potential of baseline change requests is routinely performed by CHG.
- 8.2.4.2 CHG has evaluated risk that is inherent in the project baseline.
- 8.2.5.1 An active risk management program was in place during Phase 1B-1 (i.e., focused management and staff attention on significant potential problems and to aid in communications) which will be used in Phase 1B-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 CHG has identified metrics to assess the effectiveness of the risk management process.
- 8.2.5.4 CHG uses the results from metric assessments to continually improve their risk management approach.
- 8.2.6.1 CHG is integrated into a single risk management process for the project.
- 8.2.6.2 A risk allowance is maintained and allocated as appropriate.
- 8.2.7.1 For significant risks to the project, the decision to which they are tied is identified.

### Rating Options

**Green:** Performance has given confidence that CHG will be successful in meeting B-2 expectations.

**Yellow:** Corrective actions are needed to be confident that CHG will be successful in meeting B-2 expectations.

**Red:** Performance has not given confidence that CHG will be successful in meeting B-2 expectations.

### Assessment

**Expectations Met:**

**8.2 Overall Rating:**  
Yellow/Green

**Expectations Met:**

- 8.2.1.1 Clear roles and responsibility are defined for risk management at all levels within CHG. - Roles & Responsibilities in general are called out in the CHG Risk Management Implementing Procedure. Responsibilities for each risk and critical risk are identified on the respective risk lists.
- 8.2.2.1 Appropriate CHG staff & management have been trained on the risk management procedure. - CHG has trained their staff & management on program planning and uncertainty management. A significant portion of this training covered risk identification and management. Reviewing the CHG training matrix shows that all those identified for the training have received it.
- 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. - The CHG "Risk Management" Implementing Procedure was updated on 12/22/99. From the information reviewed on the CHG process, it appears that the process is being followed at least for critical risks. It is not clear if this procedure is followed, or should be

Rating:  
Green  
  
Green  
  
Green

## B-2 Decision Readiness to Proceed Self Assessment

<p>followed, at all levels within the organization. It is suggested that a graded approach be utilized by the contractor to suit the needs of each aspect of the project.</p> <p>8.2.3.2 CHG has identified project risks, using a systematic methodology. - The logic based planning &amp; execution process is logical and systematic. However, it is not clear if such formality is required at the level of detail to which the contractor is attempting to reach.</p> <p>8.2.3.3 Risks identified can be tied to the project baseline through a project WBS. - The TBRs &amp; CEIS are linked to the project WBS.</p> <p>8.2.3.5 CHG has taken an integrated approach to risk management. - CHG has an integrated risk management system that can be traced from the level "0" logic down to the TBRs.</p> <p>8.2.4.1 The assessment of the risk potential of baseline change requests is routinely performed by CHG. - An evaluation of risk impacts is included in section 8.0 of the TBRs. TBR changes are included in BCRs.</p> <p>8.2.4.2 CHG has evaluated risk that is inherent in the project baseline. - CHG has evaluated the risk inherent in their part of the project baseline. (Note: CHG must assist PIO in the assessment of risk in the project baseline. This is a PIO issue and not solely a CHG issue.)</p> <p>8.2.5.1 An active risk management program was in place during Phase 1B-1 (i.e., focused management and staff attention on significant potential problems and to aid in communications) which will be used in Phase 1 B-2. - A risk management program is in place and being used during phase B-1. It is expected that this system, or a more mature version of it will be in-place during Phase B-2.</p> <p>8.2.5.4 CHG uses the results from metric assessments to continually improve their risk management approach. - The risk management metrics approach is in its initial stages of development. However, the drafted approach shows promise of both demonstrating the value of having a risk management program and helping to improve the risk management program.</p> <p>8.2.6.1 CHG is integrated into a single risk management process for the project. - CHG has within itself developed an integrated risk management process. (Note: CHG is not part of an integrated RPP risk management process. Although the action to integrate the RPP risk management process does not belong to CHG, CHG must participate in its development.)</p> <p>8.2.6.2 A risk allowance is maintained and allocated as appropriate. - A risk allowance is calculated by CHG, included in the budget request transmitted to DOE and distributed by CHG appropriately as risk mitigating actions are needed. (Note: Until an integrated risk management process is attained across the RPP, effective utilization of the risk allowance cannot be achieved. Although the action to integrate the RPP risk management process does not belong to CHG, CHG must participate in its development.)</p>	<p>Green</p>
<p><b>Expectations Not Met:</b></p> <p>8.2.3.1 CHG clearly identifies risk managers and holds them accountable for actions according to a defined schedule. - Handlers are identified for each risk. The risk handlers identify actions to be taken to address each risk. In the case of critical risks, risk handling action plans are actually developed. These actions and action plans are reviewed by management generally on a regular basis. It is not clear what the schedule is for risk mitigation actions, since dates are not called out on critical risk lists. Therefore it is not possible at this time to evaluate whether or not risk owners are held to a schedule for addressing risks.</p> <p>8.2.3.4 <i>Assess critical risks (e.g. risks associated with tank farm turn-over and its decommissioning) over the life cycle of the RPP</i> Steve Schaus of CHG was contacted to review this criterion. Steve stated that CHG had assessed critical risks for Phase 1, but in order to complete this for Phase 2 CHG needed ORP to define the balance of the mission for Phase 2. Steve stated that there was still no clear direction on what was the plan for Phase 2.</p> <p>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. - Although CHG has a lessons learned program, that program does not appear to be connected to the risk management program. As a result, there are major tools (i.e. the lessons learned effort, risk management effort) which should be part of a project management program that appear to be under-utilized.</p> <p>8.2.5.3 CHG has identified metrics to assess the effectiveness of the risk management process. - A performance assessment is part of the logic based planning &amp; execution process. This is a relatively new activity in the overall process and has not been fully developed.</p>	<p><b>Rating:</b></p> <p>Yellow/Green</p> <p>Yellow</p> <p>Yellow</p> <p>Yellow/Green</p> <p>Yellow/Green</p>

## B-2 Decision Readiness to Proceed Self Assessment

<p>8.2.7.1 <i>Link the critical risks with their related decisions.</i>          Steve Schaus of CHG was contacted to review this criterion. Steve stated that CHG had made the first pass at completing this task. CHG has developed a document called the Decision Assumption Risk Matrix (DARM), which links the decision, assumption and risk elements together. This document is not currently under configuration control and has been issued only in a preliminary form. A copy of this document is attached for reference.</p>	Yellow/Green
--	--------------

**Basis for Assessment:**

The following two documents apply to most of the criteria and were used extensively in this evaluation:

- Draft Project Execution Plan, HNF-6017, RPP-6017, Rev. 0, April 2000.
- Risk management Procedure, HNF-IP-0842, Vol. IV.

- 8.2.1.1 Clear roles and responsibility are defined for risk management at all levels within CHG. - HNF-IP-0842, Section IV, Engineering 2.6, Rev. 1a, dated 12/22/99 "Risk Management" Implementing Procedure. Sampling of Risk & Critical risk lists.
- 8.2.2.1 Appropriate CHG staff & management have been trained on the risk management procedure. CHG actively manages risks as appropriate. - RTP2 Training Matrix and associated Training material - "Program Planning and Uncertainty Management"
- 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. - HNF-IP-0842, Section IV, Engineering 2.6, Rev. 1a, dated 12/22/99 "Risk Management" Implementing Procedure
- 8.2.3.1 CHG clearly identifies risk managers and holds them accountable for actions according to a defined schedule. - CHG Risk & Critical Risk Lists, CHG Risk Handling list, 2/8/00
- 8.2.3.2 CHG has identified project risks, using a systematic methodology. - example TBRs (120.25, 280.23), interview with Steve Schaus, FY2000 Multi Year Work Plan Budget & Schedule Risk Analysis for Tank Waste Retrieval & Disposal Division, 11/99, RPP-5410, Rev. 0
- 8.2.3.3 Risks identified can be tied to the project baseline through a project WBS. - example TBRs (120.25, 280.23), associated Cost Estimating Input Sheet, the RPP CHG critical risk list.
- 8.2.3.4 Critical risks within the life cycle of the project have been identified. - CHG Critical Risk Lists
- 8.2.3.5 CHG has taken an integrated approach to risk management. - CHG Risk & Critical Risk Lists, interview with Steve Schaus, Mark Bishop & Jim Schaeffer.
- 8.2.4.1 The assessment of the risk potential of baseline change requests is routinely performed by CHG. - Review of example BCRs & interviews with Steve Schaus & Susan Johnson (DOE).
- 8.2.4.2 CHG has evaluated risk inherent in the project baseline. - Interviews with Steve Schaus.
- 8.2.5.1 An active risk management program was in place during Phase 1B-1 (i.e., focused management and staff attention on significant potential problems and to aid in communications) which will be used in Phase 1B-2. - HNF-IP-0842, Section IV, Engineering 2.6, Rev. 1a, dated 12/22/99 "Risk Management" Implementing Procedure, interviews with M.Robershotte (PNNL), & Steve Schaus (CHG).
- 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. - Interviews with Steve Schaus & Jim Schaeffer.
- 8.2.5.3 CHG has identified metrics to assess the effectiveness of the risk management process. - Interview with Steve Schaus, Draft Risk Management Metrics Approach, 7/12/99
- 8.2.5.4 CHG uses the results from metric assessments to continually improve their risk management approach. - Interviews with Steve Schaus, Mark Bishop & Jim Schaeffer, TWRD Risk Metrics Report, 9/99
- 8.2.6.1 CHG is integrated into a single risk management process for the project. - Interviews with Steve Schaus.
- 8.2.6.2 A risk allowances is maintained and allocated as appropriate. - Interview with Steve Schaus (CHG) & Patty Morehouse (DOE).
- 8.2.7.1 For significant risks to the project, the decision to which they are tied is identified. - Interviews with Steve Schaus & Jim Schaeffer.

**Recommended Path Forward:**

**Essential Actions:**

None

**Important Actions:**

- 8.2.3.4 Assess critical risks (e.g. risks associated with tank farm turn-over and its decommissioning) over the life cycle of the RPP. - Steve Schaus, 8/24/00
- 8.2.7.1 Link the critical risks with their related decisions. - Steve Schaus, 8/24/00

## B-2 Decision Readiness to Proceed Self Assessment

### Beneficial Actions:

- 8.2.3.1 Identify the mitigating action schedule on the critical risk list. Provide a copy of the revised CRL as evidence of action completion. - Steve Schaus, 8/24/00
- 8.2.5.2 Link the risk management program with the lessons learned program. (Note: Also, given the magnitude and exposure of the privatization project, a lessons learned program at the PIO level should be considered to assist future privatization efforts.) - Steve Schaus, 8/24/00
- 8.2.5.4 Officially release the Risk Management Metrics Approach and continue its implementation - Steve Schaus, 8/24/00

### Signatures

Reviewers: W. Diehl

Date:

N/A

Team Lead Approval: J. Poppiti

Date:

5/25/2000

*James C. Poppiti*