



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

0055381

P.O. Box 450  
Richland, Washington 99352

01-ORP-104

JUL 31 2001

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EDMC

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Addressees:

SEMI-ANNUAL COMPLIANCE REPORT FOR THE WASTE TREATMENT PROGRAM  
FOR FEBRUARY 2001 THROUGH JULY 2001 FULFILLING HANFORD FEDERAL  
FACILITY AGREEMENT AND CONSENT ORDER INTERIM MILESTONE M-62-01

This letter transmits the attached U.S. Department of Energy (DOE), Office of River Protection (ORP) Semi-Annual Compliance Report M-62-01 for February 2001 through July 2001. ORP met with the State of Washington Department of Ecology (Ecology) staff on July 17, 2001, to review a draft of this report and the report was modified to address the concerns identified. The following information is required under this milestone:

- A concise description of project accomplishments and issues including those encountered during the previous year and those expected in the near term, identified in Section 3.
- When applicable, a description of any actions initiated or otherwise taken to recover any agreement schedule slippage, identified in Section 4.
- A budget and cost schedule which is included in the attachment, with a brief narrative identified in Section 5.
- A statement documenting whether or not DOE and DOE's contractors have completed sufficient work to allow achievement of agreement requirements. This information is provided for each milestone where appropriate (milestones identified with To Be Determined do not include this) in Section 8.
- Concise descriptions of any non-compliances included in Section 7.

In addition, Ecology had requested we provide them with critical path information for the M-62 Milestones. This critical path information is provided in the attached Gantt Chart. Specific

Addressees  
01-ORP-104

-2-

activities related to the M-62 Milestones and identified in the narrative section of this report have been highlighted in blue. We have met several times since February 2001, with Ecology going over the River Protection Project critical path information. If requested, we would be willing to meet with you again to discuss the critical path information.

If you have any questions, please contact Mary Beth Burandt, (509) 373-9160 or William J. Taylor, (509) 372-3864.

Sincerely,



Harry L. Boston  
Manager

AMPD:WJT

Attachment

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Administrative Record

**OFFICE OF RIVER PROTECTION (ORP)  
SEMI-ANNUAL PROJECT COMPLIANCE REPORT  
FOR THE WASTE TREATMENT PLANT  
FEBRUARY 1, 2001 – JULY 31, 2001**



**U.S. DEPARTMENT OF ENERGY  
OFFICE OF RIVER PROTECTION  
2440 Stevens Drive  
Richland Washington 99352**

**July 31, 2001**

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**RIVER PROTECTION PROJECT – WASTE TREATMENT PLANT  
SEMI-ANNUAL COMPLIANCE REPORT**

<b>1.</b>	<b>INTRODUCTION M-62-01C – RIVER PROTECTION PROJECT – WASTE TREATMENT PLANT PROJECT COMPLIANCE REPORT .....</b>	<b>3</b>
<b>2.</b>	<b>RPP-WTP COMPLEX DESCRIPTION .....</b>	<b>3</b>
<b>3.</b>	<b>PROJECT ACCOMPLISHMENTS AND ISSUES.....</b>	<b>4</b>
	A. PROGRESS TO DATE .....	4
	B. PROJECT PROGRESS THIS PERIOD .....	4
	C. CURRENT PROJECT ACTIVITIES.....	6
	i. ORP – Project Management .....	6
	ii. BNI – RPP-WTP Complex Design And Construction.....	6
	D. ISSUES THIS PERIOD .....	7
	i. ORP – Project Management .....	7
	ii. BNI – RPP-WTP Complex Design And Construction.....	7
	E. NEAR TERM ISSUES.....	8
	i. ORP – Project Management .....	8
	ii. BNI – RPP-WTP Complex Design And Construction.....	8
<b>4.</b>	<b>ACTIONS TAKEN OR INITIATED TO RECOVER ANY SCHEDULE SLIPPAGE .....</b>	<b>9</b>
<b>5.</b>	<b>BUDGET AND COST STATUS.....</b>	<b>9</b>
<b>6.</b>	<b>DOE/DOE CONTRACTOR COMPLIANCE.....</b>	<b>9</b>
<b>7.</b>	<b>AREAS OF NON-COMPLIANCE.....</b>	<b>9</b>
<b>8.</b>	<b>STATUS OF TRI-PARTY AGREEMENT MILESTONES .....</b>	<b>9</b>
	A. M-62-00 – COMPLETE PRETREATMENT PROCESSING AND VITRIFICATION OF HANFORD HIGH LEVEL (HLW) AND LOW ACTIVITY (LAW) TANK WASTES .....	9
	B. M-62-00A – COMPLETE PRETREATMENT, PROCESSING AND VITRIFICATION OF HANFORD HLW AND LAW PHASE I TANK WASTES.....	10
	C. M-62-01 – SUBMIT SEMI-ANNUAL PROJECT COMPLIANCE REPORT .....	10
	D. M-62-02 – SUBMITTAL OF HANFORD TANK WASTE ALTERNATIVES REPORT .....	10
	E. M-62-03 – SUBMIT DOE PETITION FOR RCRA DELISTING OF VITRIFIED HLW .....	10
	F. M-62-04T – READINESS TO PROCEED – SUPPORT TO PHASE I TREATMENT.....	11
	G. M-62-05 – ISSUANCE OF DOE AUTHORIZATION TO PROCEED – PHASE I TREATMENT .....	11
	H. M-62-06 – START OF CONSTRUCTION – PHASE I TREATMENT COMPLEX .....	11
	I. M-62-07 – CONSTRUCTION PROGRESS MILESTONES (2) – PHASE I TREATMENT COMPLEX.....	11
	J. M-62-08 – SUBMITTAL OF HANFORD TANK WASTE PHASE II TREATMENT ALTERNATIVES REPORT .....	12
	K. M-63-09 – START (HOT) COMMISSIONING – PHASE I TREATMENT COMPLEX .....	12
	L. M-62-10 – START COMMERCIAL OPERATIONS – PHASE I TREATMENT COMPLEX.....	12
	M. M-62-11 – SUBMITTAL OF HANFORD TANK WASTE TREATMENT PHASE II PLAN .....	12
	N. M-62-12 – ISSUANCE OF DOE AUTHORIZATION TO PROCEED – PHASE II TREATMENT.....	13
<b>9.</b>	<b>GANTT CHART OF MILESTONES.....</b>	<b>13</b>

**U.S. DEPARTMENT OF ENERGY (DOE), OFFICE OF RIVER PROTECTION (ORP)  
RIVER PROTECTION PROJECT (RPP) – WASTE TREATMENT PLANT (WTP)  
SEMI-ANNUAL COMPLIANCE REPORT**

**1. INTRODUCTION M-62-01C – RIVER PROTECTION PROJECT WASTE TREATMENT PLANT PROJECT COMPLIANCE REPORT**

As required by the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-62-01C, this semi-annual ORP Waste Treatment Plant Project Compliance Report reflects issues, activities, and accomplishments for the ORP occurring during the reporting period of February 1, 2001 through July 31, 2001. As detailed in M-62-01, this report documents the ORP's compliance with Tri-Party Agreement milestone M-62-00 series requirements, and provides information regarding issues, activities, and progress relative to those milestones. The report includes information pertaining to the status of progress to date, progress made during the reporting period and activities expected in the foreseeable future as defined and required by M-62-01.

**2. RPP-WTP COMPLEX DESCRIPTION**

**Hanford Site Background:** Hanford tank waste consists of approximately 190 million curies in 54 million gallons of highly radioactive and mixed hazardous waste stored in underground storage tanks at the Hanford Site. The tank waste includes solids (sludge), liquids (supernatant), and salt cake (dried salts that will dissolve in water, forming supernatant). The tank waste will be remediated through treatment and immobilization to protect the environment and meet regulatory requirements.

The DOE determined through the *Tank Waste Remediation System Environmental Impact Statement Record of Decision* that the preferred alternative to remediate the Hanford tank waste is to:

- Pretreat the waste to prepare it for processing and vitrification;
- Immobilize the Low Activity Waste (LAW) for on-site disposal; and
- Immobilize the High Level Waste (HLW) for ultimate disposal in the national repository.<sup>1</sup>

**RPP-WTP Complex Description:** The RPP-WTP is a new treatment and storage complex being designed, constructed, and commissioned by Bechtel National, Inc. (BNI) as defined by specifications and requirements listed in DOE Contract No. DE-AC27-01RV14136. The RPP-WTP will be designed, constructed, and permitted to store and treat radioactively contaminated dangerous waste, called mixed waste, at the Hanford Site in Richland, Washington.

The RPP-WTP will receive waste from Hanford's Double-Shell Tank (DST) system unit, operated by CH2M HILL Hanford Group (CHG) in batches that are composed of either LAW or HLW feed. The LAW and HLW feed will be transferred by pipeline to the RPP-WTP for pretreatment and vitrification. The vitrification process will combine the pretreated tank waste with glass-forming materials and melt the mixture into a liquid that is poured into stainless steel containers. The hot glass cools and hardens and each container will be closed in preparation for storage and permanent disposal. The dangerous waste and radioactive constituents will be destroyed, removed, or immobilized in this durable glass matrix through the vitrification process.<sup>2</sup>

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<sup>1</sup> U.S. Department of Energy, *Contract No. DE-AC27-01RV14136, Section C.1*, December 2000

<sup>2</sup> BNFL-5193-RCRA-01, Rev. 2, *RPP-WTP Dangerous Waste Permit Application*, April 2000

### 3. PROJECT ACCOMPLISHMENTS AND ISSUES

#### A. PROGRESS TO DATE

The ORP has completed two of the twelve M-62-00 series milestones. M-62-02, *Submittal of Hanford Tank Waste Alternatives Report*, was completed March 1, 2000, and M-62-004T, *Readiness to Proceed – Support to Phase I Treatment*, was completed April 24, 2000, as scheduled. Additionally, pursuant to the amended Interim Stabilization Consent Decree, M-62-05, *Issuance of DOE Authorization to Proceed – Phase I Treatment*, has been removed from the TRI-PARTY AGREEMENT.

**RPP-WTP Design and Construction Activities:** Significant progress was made in reassigning and transitioning the RPP-WTP Design and Construct Contract from British Nuclear Fuels Limited (BNFL) through CHG to BNI during the early part of this reporting period. ORP awarded the RPP-WTP Design and Construction Contract to BNI December 11, 2000, ahead of the January 15, 2001 milestone as defined in the amended Interim Stabilization Consent Decree (No. CT-99-5076-EFS), and BNI successfully assumed responsibility for design and construct activities ahead of schedule on February 28, 2001.

#### B. PROJECT PROGRESS THIS PERIOD

The ORP awarded the RPP-WTP contract to BNI on December 11, 2000, and project transition activities between CHG and BNI were completed ahead of schedule on February 28, 2001. BNI has successfully completed activities to ensure that Important-to-Safety (ITS) Work Project personnel are properly trained and qualified to resume ITS work, and is actively working to retain and recruit personnel to the Project. Highlights of BNI accomplishments for the reporting period of February 1, 2001, through July 31, 2001, are noted below:

- BNI effectively rolled over all required Project staff augmentation subcontractors, and also hired several CHG personnel necessary for project continuity. BNI met its initial transition staffing goals of 700 personnel supporting the Project in March 2001 with 827 personnel on the Project roster at the end of March 2001; the Project currently has 1,198 personnel on the Project roster.
- BNI received authorization from ORP to proceed with ITS work on March 22, 2001, ahead of the April 9, 2001 schedule date proposed in the BNI proposal. The Project has completed ITS requirements (training and procedures) and assumed design authority on March 22, 2001.
- The Optimization Studies Plan was submitted to ORP on April 13, 2001, to support the 15 proposed optimization studies comprising Contract Deliverable 3.8. The Project conducted a formal presentation of the top six priority studies plus an overview of the other plans. The ORP has concurred with eight of the proposed studies and determined the remaining seven to be appropriate as internal engineering studies. The ORP also added two Optimization Studies for completion.
- BNI submitted the Project Baseline Plan, the corresponding Project Execution Plan, and the Project Controls System Description on April 16, 2001, as required by the Contract. BNI is working with the ORP to address their comments on the Project Baseline, however, on July 3, 2001, ORP agreed that the significant issues dealing with Target Cost, Section F Schedule Requirements and annual funding limitations were consistent with the Contract and concurred with establishing the performance measurement baseline as submitted. This baseline will be updated annually to reflect the best available information on the current cost and schedule required to complete the Project.

- DOE Headquarters (HQ) EM-5 conducted a Quality Assurance Program review. The review team determined that the Project Quality Assurance Program was satisfactory and the Project was given an overall "green" rating.
- A compliance strategy for demonstrating that the HLW glass product will meet the Waste Acceptance Product Specifications was developed. This strategy was developed in conjunction with a team of experts from Savannah River Technology Center. A document detailing the strategy was sent out for review. The strategy was also presented to the DOE and the Technical Review Group. The revision of the Waste Compliance Plan is a Contract Deliverable due on July 15, 2001. This revision will incorporate the developed compliance strategy.

#### RPP-WTP Progress Against Contract Deliverable Milestones

Contract Deliverable	Description	Contract Milestone Date	Actual Delivery Date
C.5.1	Select Commissioning Contractor	4/15/01	6/26/01
H.2	Litigation Management Plan	4/15/01	4/16/01
H.34.1	Partnering Workshop	2/15/01	2/15/01
1.1	Plan for Transition	2/15/01	2/14/01
1.2	Project Execution Plan	4/15/01	4/16/01
1.3	Project Control System Description	4/15/01	4/16/01
1.5	WTP Project Baseline	4/15/01	4/16/01
1.6	WTP Risk Assessment	7/1/01	4/16/01
2.1	Updated Research and Technology Program Plan	4/15/01	4/16/01
3.1	Design Process	2/15/01	2/13/01
3.2	Functional Specification	5/15/01	8/20/01 (forecasted)
3.3	Basis of Design/Design Criteria Database	5/15/01	8/20/01 (forecasted)
3.4	Operations Requirements Document	7/15/01	8/20/01 (forecasted)
3.7	Site Layout Drawings	4/15/01	4/16/01
3.8	Optimization Study	3/15/01	3/15/01
6.1	Products and Secondary Waste Plan	4/15/01	4/16/01
6.1.1	QA Provisions Document	3/1/01	3/1/01
7.2	Quality Assurance	4/15/01	4/16/01
7.3	Environmental Plan	3/15/01	3/7/01
7.4	Dangerous Waste Permit Application (DWPA) Implementation Plan	3/15/01	3/12/01

## C. CURRENT PROJECT ACTIVITIES

### i. ORP – Project Management

The ORP has focused its attention in the past six months in developing the specific elements of the Project Management Plan. The elements of the plan are being created and implemented incrementally as progress in adequately staffing ORP materializes. The following elements of the program have been developed and implemented since the last report:

- **Contract Management Plan** – A Contract Management Plan was issued and updated in February 2001 to provide guidance to ORP employees involved with the management and administration of the BNI Contract. The Plan highlights the special aspects of the Contract with BNI and defines the roles and responsibilities for each organization in ORP relative to the administration of the BNI Contract sections and, more specifically, the Contract deliverables.
- **Staffing Plan** – Significant effort has been expended identifying the Federal employee role in managing the work being performed by BNI. To accomplish this, a Federal baseline has been established and integrated into the overall RPP baseline such that the Federal role is defined as a direct constraint on work being performed by the contractor. Once defined, a resource loaded schedule identified the numbers of staff required. The ORP Manager, put a staffing justification package together, had it approved by the Office of Personnel Management, and initiated hiring critical staff to fulfill the approved staffing plan. The ORP has moved from a staff level of 90 to 124 during this period and expects to be at 144 personnel by the end of the Fiscal Year 2001.
- **ORP Baseline** – The ORP is actively establishing its own baseline. Current activities include the development of a Work Breakdown Structure (WBS) and attendant dictionary sheets. This process will enable ORP to establish internal earned value measurement of its own performance along with the role as managers of the contractor's performance measurement.
- **Risk Management** – A Risk Management Plan has been established and a Critical Risk Management process established. The plan defines how risks are identified within the integrated baseline, how they are managed, and how the individual risk impacts are mitigated through implementation of risk action plans. ORP managers as well as BNI managers conduct integrated Critical Risk Management List meetings on a monthly basis.

### ii. BNI – RPP-WTP Complex Design And Construction

BNI is fully engaged in all activities required to design and permit the RPP-WTP complex, and is on schedule in meeting contract deliverable milestones. Specific activities underway at the Project are highlighted below:

- **Project Baseline** –ORP and BNI mutually agreed to a performance measurement baseline on July 3, 2001. The project target cost is established at the contract value of \$3.965 billion with an estimate at completion currently being tracked at \$4.375 billion, with plans to drive final cost to the 3.9 Billion target. BNI has committed to meeting the milestones established in the Contract in Section F and has established an annual spend curve that meets the contract provision of capping annual budget authority at \$690 million. Other contract requirements and ORP expectations defined in the initial review of the baseline deliverable are being discussed and resolved in intensive weekly meetings.

- **Environmental Permits** - Project personnel are actively working with the ORP, Washington State, and Federal regulators to develop the necessary applications and analyses required to obtain the required environmental permits and licenses needed to construct and commission the RPP-WTP complex. Discussions continue with the ORP and regulatory agencies regarding alternatives for maintaining accelerated permit schedules, including early opportunities to review draft permit documentation. The content and schedule for the submission of design information to the regulatory agencies for early permit applications is being developed.
- **Limited Construction Authorization Request Activities** – BNI continues to work with the ORP Office of Safety Regulation (OSR) to evaluate the possibility of a “partial construction authorization.” This will allow construction to progress on the HLW and LAW vitrification facilities foundations and walls up to nominal plant grade elevation. This will involve submittal of supporting documentation by November 1, 2001. Project personnel are determining the extent of technical detail that can be supplied by November 1, 2001, to ensure that the OSR’s review requirements are met. Project environmental staff met with the U. S. Environmental Protection Agency (EPA) and the Washington State Department of Ecology to determine whether these regulatory agencies can support this accelerated start of construction.
- **Construction Procurement Activities** – Early procurement activities continue with focus on the site development and utilities subcontracts, concrete materials supply, temporary facilities design and build subcontract and miscellaneous construction equipment purchases (e.g., tower and crawler cranes, vehicles, etc). Twenty-one major requisitions are in process or are planned within the next 90 days. Of these, six have been released for procurement packaging and seven are currently in process.

#### **D. ISSUES THIS PERIOD**

##### **i. ORP – Project Management**

**M-62-06, Start of Construction – Phase I Treatment Complex**

**Due Date 07/31/01**

ORP has stated that the Start of Construction date will be missed. Two TRI-PARTY AGREEMENT change requests were submitted to Ecology by DOE on May 2, and May 21, 2001, respectively. Both change requests were rejected by Ecology and DOE initiated dispute on May 23, 2001. Ecology issued a Final Determination on July 26, 2001. The current schedule for this milestone shows it should commence December 2002. See Section IV, “Actions Taken or Initiated to Recover any Schedule Slip”. It is ORP’s goal to initiate actions with its contractors to mitigate the schedule loss caused from going from a privatized approach to a cost reimbursable approach in performance of the WTP work. As defined above, the innovation demonstrated by BNI in preparing an LCAR approach and possibly a Partial Construction Authorization Request (PCAR) with the sole purpose of initiating meaningful construction at the earliest possible date accents ORP’s determination in meeting all reasonable TRI-PARTY AGREEMENT commitments.

##### **ii. BNI – RPP-WTP Complex Design And Construction**

- **Permitting and Preliminary Safety Analysis Report (PSAR) Schedules** - Due diligence activities in Environmental, Safety, and Health (ES&H) have uncovered two critical items to date. Based on the state of current design, the environmental permitting schedule and the PSAR schedule are aggressive and on the critical path to support the proposed December 2002 Start of

Construction date. Achievement of those schedules will require significant negotiation and compressions by external regulators.

- **Facility Design** - Both the due diligence and the optimization efforts have identified significant opportunities for improvement in the layout of the pre-treatment building. BNI is proposing design changes to address these issues. Resolution of these issues may require additional studies prior to commencing detailed design and procurement activities, which could delay the construction of the pre-treatment building.

## **E. NEAR TERM ISSUES**

### **i. ORP – Project Management**

Project Management issues are well defined with action managers assigned to each issue. The Issues Action Tracking list is being prepared by the assigned Issues Managers from both BNI and ORP and will contain a summary of the action and target date for closure.

### **ii. BNI - RPP-WTP Complex Design And Construction**

- **Issue 1** – A new rule change to 10 CFR 830.206 went into effect on April 10, 2001, which requires DOE contractors to obtain DOE authorization for limited procurement and construction activities prior to approval of a preliminary documented safety analysis. The ORP is currently working with DOE-HQ to obtain clearer guidance on the process. This requirement has the potential to impact the schedule for procurement of ITS materials and components.

*Planned Mitigation* – BNI will continue to work with the ORP to better define impacts associated with implementation of the rule change.

- **Issue 2** – The Pretreatment (PT) Building baseline design has potential optimization opportunities that must be evaluated before detailed design can proceed. BNI management has decided to suspend detailed design pending the outcome of an eight week study of operability and maintainability issues. Additionally, the ORP's proposed Optimization Study No. 17 and tank utilization study must be addressed.

*Planned Mitigation* – The PT Building layout study was completed in June 2001. Cost and schedule impacts will be prepared and submitted to ORP. It is projected that a revised PT Building layout will cause some previously completed design activities to be redone, and will delay the PT Building schedule and could impact the cost of the facility.

- **Issue 3** - In light of the optimization/improvement studies underway for the PT Building, there has been a limited amount of ES&H work performed for PT activities. Activities such as Preliminary Fire Hazards Analyses, Seismic Preliminary Risk Assessment (PRA), hazard analyses and accident analyses, are required to support the PSAR submittal.

*Planned Mitigation* – Not including the PT facility in the December 31, 2001, PSAR submittal will still support the target dates for the vitrification facilities. This phased PSAR approach, which is allowed by the contract, will be discussed in detail with the OSR.

#### 4. ACTIONS TAKEN OR INITIATED TO RECOVER ANY SCHEDULE SLIPPAGE

ORP has stated that we could not recover the Start of Construction (July 31, 2001) after the BNFL Inc. contract was terminated. BNI was hired and ORP is moving ahead with a baseline, which is technically feasible and is performing construction start optimization approaches such as the LCAR and PCAR (discussed previously) to mitigate the proposed December 2002 construction date.

In Ecology's Final Determination dated July 26, 2001 a recover plan to address Start of Construction and the two process milestones was requested by October 1, 2001. ORP will set up meetings to discuss proposed milestones in time to meet the October 1, 2001 date.

#### 5. BUDGET AND COST STATUS

The current budget and cost information for the performance through May is shown in Attachment 1. It reflects costs for the CHG transition and BNI costs from December through May. FY 2002 funding is still unresolved and ORP is working with Congress, DOE-HQ, regulators and other stakeholders.

#### 6. DOE/DOE CONTRACTOR COMPLIANCE

ORP has stated that we are still on schedule to compete Hot Commissioning by December 31, 2007, and treatment of no less than 10% of the waste by mass and 25% of the tank waste activity by December 2018. These milestones reflect critical commitments that are technically achievable and defensible, consistent with mission requirements. In addition ORP, has been working with Ecology and other regulators to address the permitting needs of all parties on the compressed timeframe to support Start of Construction December 2002.

#### 7. AREAS OF NON-COMPLIANCE

ORP has stated that we will miss the Start of Construction – July 31, 2001. See Section 4.

#### 8. STATUS OF TRI-PARTY AGREEMENT MILESTONES

##### A. M-62-00 – Complete Pretreatment Processing and Vitrification of Hanford High Level (HLW) and Low Activity (LAW) Tank Wastes

**Milestone Date:** December 28, 2028

**Description:** *“Compliance with the work schedules set forth in this M-62 series is defined as the performance of sufficient work to assure with reasonable certainty that DOE will accomplish series M-62 major and interim milestone requirements.”*

**Status:** On Schedule. DOE and its contractors are doing sufficient work to ensure with reasonable certainty that this milestone will be attained as currently defined in the TRI-PARTY AGREEMENT. With a milestone 27 years in the future there are key assumptions with respect to funding and technical achievability with respect to single shell tanks retrieval, which could impact this date. As more information

is available about retrieval and a WTP is constructed, the status of this milestone will be evaluated based on those fundamental assumptions.

**B. M-62-00A – Complete Pretreatment, Processing And Vitrification Of Hanford HLW And LAW Phase I Tank Wastes**

**Milestone Date:** February 28, 2018

**Description:** *“Phase I tank waste processing shall pretreat and vitrify no less than 10% of Hanford’s tank waste by mass<sup>3</sup> and 25% by activity.”*

**Status:** On schedule. As committed to in the BNI contract and explained in Section 6 of this report, DOE is on a schedule to complete the first 10% of waste processing measured by mass and 25% of waste processing measured by radioactivity by February 28, 2018.

**C. M-62-01 – Submit Semi-Annual Project Compliance Report**

**Milestone Date:** Semi-Annual Beginning July 31, 2000

**Description:** *“DOE’s Manager, Office of River Protection (ORP), will submit a “Project Compliance Report” to Ecology semi-annually (a copy of this report will also be provided to EPA’s Region 10 Office of Waste and Chemicals Management). This report will document DOE compliance with agreement requirements and shall be sequentially updated by information documenting work performed and issues encountered during the previous report period. The ORP Project Compliance Report will be provided as part of the parties’ Inter Agency Management Integration Team (IAMIT) meetings, and shall document the status of progress to date, progress made during the report period, and activities expected in the foreseeable future.”*

**Status:** This report was submitted on schedule.

**D. M-62-02 – Submittal of Hanford Tank Waste Alternatives Report**

**Milestone Date:** March 1, 2000

**Description:** *“DOE will submit a report that describes the alternatives (technical, financial, and contractual) to treat Hanford tank waste. The report will 1.) identify and describe credible alternatives to the current privatization approach that meets DOE commitments to achieve hot operations by December 2007, and to treat no less than 10% of the tank waste by mass and 25% of the tank waste by activity by February 2018; 2.) serve as a basis to amend the fiscal year 2001 budget request for authority to implement a contingency option (authority to use privatization set-aside funds); and 3.) be released concurrently to Ecology, EPA, and the public.”*

**Status:** Completed.

**E. M-62-03 – Submit DOE petition for RCRA delisting of vitrified HLW**

**Milestone Date:** December 31, 2006

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<sup>3</sup> In meeting this requirement DOE will pretreat and vitrify no less than 6000 metric tons of sodium (in the instance of LAW feed) and 800 metric tons of waste oxides (in the instance of HLW feed). Source Washington Department of Ecology Director’s Determination, 3/29/2000.

**Description:** "DOE will submit its petition for delisting of the immobilized high-level waste (HLW) from the Phase I waste treatment plant from RCRA and the Washington State HWMA (delisting petition) in accordance with 40 CFR 260.22 and WAC 173-303-072."

**Status:** On schedule. The LDR and delisting DQO is on-going and we are working with EPA and Ecology. The DQO is scheduled to be completed near the end of Fiscal Year 2001 with research and technology work to follow. The overall project is on schedule to be completed December 31, 2006.

**F. M-62-04T – Readiness to Proceed – Support to Phase I Treatment**

**Milestone Date:** May 1, 2000

**Description:** "DOE and its Hanford tank farm operations contractor will complete all necessary work and achieve readiness to proceed in support of Part B-2, Phase I."

**Status:** Completed

**G. M-62-05 – Issuance of DOE Authorization to Proceed – Phase I Treatment**

**Milestone Date:** August 31, 2000

**Description:** "DOE will authorize Part B-2, Phase I of Contract DE-AC06-96RL13308 (the contract phase to design, construct, commission, and provide services for Hanford tank waste pretreatment, low-activity waste vitrification, and high-level waste vitrification). The parties will revise or confirm start of construction and construction progress milestone due dates (see milestones M-62-06 and M-62-07) within six (6) months of authorization to proceed. Revision, if necessary, shall be consistent with hot commissioning by December 2007, commercial operations by December 2009, and completion of Phase I treatment by February 2018."

**Status:** M-62-05 has been removed from the TRI-PARTY AGREEMENT and will no longer be reported.

**H. M-62-06 – Start of Construction – Phase I Treatment Complex**

**Milestone Date:** July 31, 2001

**Description:** "First placement of structural concrete at one of the treatment complex principle facilities (i.e. Pretreatment, Low-Activity Waste Vitrification, or High-Level Waste Vitrification facilities)."

**Status:** ORP has stated that the Start of Construction date will be missed. Two TRI-PARTY AGREEMENT change requests were submitted to Ecology by DOE on May 2 and May 21, 2001, respectively. Both change requests were rejected by Ecology and DOE initiated dispute on May 23, 2001. On July 26, 2001, Ecology issued a Final Determination requesting a recovery plan be submitted on October 1, 2001. ORP plans on meeting that date. As indicated under "Current Project Activities and Issues this Period" permitting and PSAR schedules are aggressive and will require significant work on behalf of the contractors, DOE and regulators.

**I. M-62-07 – Construction Progress Milestones (2) – Phase I Treatment Complex.**

**Milestone Date:** To Be Determined

**Description:** "DOE shall complete two construction progress milestones during the period between start of construction and start of commercial operations; these milestones will be established within 60 days of issuance of the DOE authorization to proceed with Phase I treatment."

**Status:** As requested by the Final Determination issued by Ecology on July 26, 2001, ORP plans on submitting two proposed milestones by October 1, 2001. ORP will set up meetings with Ecology prior to October 1, 2001 to discuss the milestones.

**J. M-62-08 – Submittal of Hanford Tank Waste Phase II Treatment Alternatives Report**

**Milestone Date:** July 31, 2005

**Description:** *“DOE will submit a preliminary report that describes the technical, financial, and contractual alternatives to treat the tank wastes remaining after completion of Phase I treatment. The report will identify credible alternatives to complete treatment of the remaining wastes by 2028, and aid in budget planning for future budget authority submittal. The report will be updated every two years until the tank waste treatment phase II plan is finalized.”*

**Status:** On schedule. The Strategic Planning Group within the ORP Office of the Assistant Manager for Integration and Control has initiated long-range planning for the remainder of the Hanford waste immobilization. Efforts include proposed research and development (R&D) needs, tank waste inventory projections and plant sizing options. Initial submittal is scheduled for July 31, 2005.

**K. M-63-09 – Start (Hot) Commissioning – Phase I Treatment Complex**

**Milestone Date:** December 31, 2007

**Description:** *“DOE will start hot commissioning of its tank waste treatment complex (defined as first principal facility receipt of radioactive tank waste for treatment).”*

**Status:** On schedule. The ORP has in change requests and previous correspondence that the ORP is committed to meeting this milestone.

**L. M-62-10 – Start Commercial Operations – Phase I Treatment Complex**

**Milestone Date:** December 31, 2009

**Description:** *“DOE will achieve sustained throughput of pretreatment, low-activity waste vitrification and high-level waste vitrification processes, and demonstrated treatment complex availability to complete treatment of no less than 10% of the tank waste by mass and 25% of the tank waste by activity by December 2018.”*

**Status:** DOE and its Contractors are not doing sufficient work to ensure with reasonable certainty that this milestone will be attained as currently defined in the TRI-PARTY AGREEMENT. The concept of “Commercial Operation” has been removed from the new contract approach. ORP tried to align this milestone with the contract. ORP will be addressing this in our recovery plan.

**M. M-62-11 – Submittal of Hanford Tank Waste Treatment Phase II Plan**

**Milestone Date:** 3 years after start of Commercial Operations (See M-62-10)

**Description:** *DOE will submit to Ecology a detailed plan and proposal for the processing of the remainder of DOE’s LAW and HLW wastes (Phase II wastes). This plan and proposal will be accompanied by a draft negotiation agreement in principle (AIP), and draft agreement change request containing sufficient enforceable milestones and associated agreement requirements to effectively drive Phase II work to completion in accordance with agreement requirements. Phase II agreement negotiations will be completed within six (6) months of AIP finalization.”*

**Status:** On schedule. This will address Phase II of the treatment process.

**N. M-62-12 – Issuance of DOE Authorization to Proceed – Phase II Treatment**

**Milestone Date:** TBD (by negotiations provided for at M-62-11)

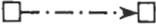
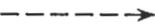
**Description:** *DOE will authorize the contract phase to design, construct, commission, and provide services for Hanford tank waste pretreatment, low-activity waste vitrification, and high-level waste vitrification of all remaining Hanford tank waste, consistent with completion of treatment by December 2028.*

**Status:** TBD This milestone will be negotiated in the 2014 timeframe.

**9. GANTT CHART OF MILESTONES**

The WTP baseline was approved on July 3, 2001, by ORP. Efforts are underway to identify gaps between the BNI baseline and the CHG baseline submittal on May 2001. A RPP Integrated Baseline addressing the CHG and BNI interfaces will be completed in September 2001 for full implementation by October 1, 2001. The Gantt chart provided highlights in blue with respect to permitting requirements to support construction, M-62 WTP milestones as well as the LAW and HLW critical path information. These highlighted areas in blue reflect key elements with respect to the M-62 milestone on the Integrated Baseline. DOE has met with Ecology several times in the last six months discussing various aspects of this information.

## EMSS Symbol Key Explanation

	Site External Constraints	Milestones impacting the RPP that are outside of the direct control of the ORP Manager, usually responsibility of DOE-HQ, State or Regulatory Agency
	Major Milestones	Defined as a milestone that is a Major progress point in the RPP Life Cycle, Shown on the spine of the Milestone Sequence Chart
	Key Milestones	Defined as a supporting milestone to a Major progress point in the RPP Life Cycle, Shown on a branch of the Milestone Sequence Chart
	Other Milestones	Progress Milestones
	Activity	Solid arrows between nodes represent scheduled activities
	Transfer/Feed	Shows transfer of Feed & Pretreated Waste
	Funding Gap or Float	Dashed lines reflect schedule float
	Critical Path (Site)	Red Lines portray the critical path thru the schedule defined as path with less than 60 working days of total float
	Path(s) of Concern	Orange Lines portray the Path(s) of Concern thru the schedule; defined as the path(s) with less than 6 Months of total float
	Completed or Started Activities	Filled in Nodes or Milestones signify completion, A filled in node at the start of an activity indicates the activity is started, a filled in node at the end of an activity indicates the activity is complete
	Status Line	Shading on an activity bar indicates status along the time line of the activity
	Schedule Slip (Late Start/Finish)	Milestones, activity starts or activity finishes expected later than planned are indicated with open diamonds and connecting arrows, actual dates are indicated with solid diamonds
	Schedule Improvement (Early Start/Finish)	Milestones, activity starts or activity finishes expected earlier than planned are indicated with open diamonds and connecting arrows, actual dates are indicated with solid diamonds
	Progress Status Points	Used to denote subactivity on critical path
	TWRS EIS ROD DOE Re-Evaluation Points for RPP Prior to Phase 1 Hot Operations	The TWRS EIS ROD requires a formal re-evaluation prior to authorization of Phase 1 Hot Operations, this point is shown on the EMSS as a star with a 2 inside
	TWRS EIS ROD DOE Re-Evaluation Points for RPP Prior to Decision to Proceed with Phase 2	The TWRS EIS ROD requires a formal re-evaluation prior to proceeding with TWRS Phase 2 plans, this point is shown on the EMSS as a star with a 3 inside

**MONTHLY PROJECT REPORT  
TOTAL RIVER PROTECTION PROJECT**

**PERFORMANCE MEASUREMENT - FYTD - ALL FUND TYPES\*\***

DOLLARS IN THOUSANDS

1. TITLE: River Protection Project		2. REPORTING PERIOD: TO: 23-Apr-01 27-May-01		3. HQ NUMBER:	
4. PARTICIPANT NAME AND ADDRESS: CH2M HILL Hanford Group P. O. Box 1500 Richland, Washington 99352-1505		5. COST PLAN DATE: 20-Jun-01		6. START DATE: 01-Oct-00	
				7. FINISH DATE: 30-Sep-46	

PBS / TITLE	CURRENT PERIOD						CUMULATIVE FISCAL YEAR TO DATE					ESTIMATE AT COMPLETION (EAC)*	BUDGET AT COMPLETION (BAC)
	Budgeted Cost		Actual Cost	Variance		Budgeted Cost		Actual Cost	Variance				
	Work Scheduled	Work Performed	Work Performed	Schedule	Cost	Work Scheduled	Work Performed	Work Performed	Schedule	Cost			
TW01 TANK WASTE CHARACTERIZATION	2,637.5	2,435.0	2,590.9	(202.5)	(155.9)	18,017.7	15,293.4	16,104.1	(2,724.3)	(810.7)	25,046.0	26,247.3	
TW02 TANK SAFETY ISSUE RESOLUTION	1,749.7	1,551.5	1,258.1	(198.2)	293.4	12,315.2	11,903.0	9,254.7	(412.2)	2,648.3	19,263.0	20,489.8	
TW03 TANK FARM OPERATIONS	13,488.7	13,871.3	12,312.8	382.6	1,558.5	83,239.5	79,646.7	78,993.1	(3,592.8)	653.6	130,685.0	127,024.7	
W-314 - TF Rest'n - LI	4,188.6	4,623.1	5,780.8	434.5	(1,157.7)	19,774.0	18,972.6	24,532.3	(801.4)	(5,559.7)	40,954.0	42,898.8	
TOTAL OPS	17,677.3	18,494.4	18,093.6	817.1	400.8	103,013.5	98,619.3	103,525.4	(4,394.2)	(4,906.1)	171,639.0	169,923.5	
TW04 RETRIEVAL	5,639.7	5,750.7	4,054.3	111.0	1,696.4	35,405.2	28,411.4	20,660.7	(6,993.8)	7,750.7	45,297.0	54,351.3	
W-211 - Init Tank Ret'vl Sys-LI	673.3	1,296.5	503.1	623.2	793.4	3,375.2	3,458.0	3,617.5	82.8	(159.5)	5,586.0	5,714.5	
W-521 - Waste Feed Del Sys	(1,741.3)	1,588.7	261.3	3,330.0	1,327.4	3,904.1	3,905.6	1,257.8	1.5	2,647.8	2,595.0	6,862.1	
TOTAL RETRIEVAL	4,571.7	8,635.9	4,818.7	4,064.2	3,817.2	42,684.5	35,775.0	25,536.0	(6,909.5)	10,239.0	53,478.0	66,927.9	
TW05 PROCESS WASTE SUPPT	81.8	77.0	128.3	(4.8)	(51.3)	786.8	559.9	627.5	(226.9)	(67.6)	723.0	1,071.3	
TW08 PRIV'ZN INFRASTRUCTURE	349.4	252.8	128.4	(96.6)	124.4	2,012.1	1,867.2	1,206.6	(144.9)	660.6	2,467.0	3,238.4	
W-519 - Priv'zn Infrast -LI	1,098.5	378.0	366.7	(720.5)	11.3	7,820.2	10,296.8	8,520.7	2,476.6	1,776.1	9,975.0	12,129.3	
TOTAL PRIV'ZN INFRASTR	1,447.9	630.8	495.1	(817.1)	135.7	9,832.3	12,164.0	9,727.3	2,331.7	2,436.7	12,442.0	15,367.7	
TW09 IMMOBILIZED WASTE STG & DISP'S	780.5	891.7	577.6	111.2	314.1	5,624.5	5,577.1	4,463.0	(47.4)	1,114.1	7,704.0	8,356.4	
W-464 - IHLW INTERIM STG FAC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,275.0	1,274.7	
TOTAL IMMOBIL'ZD WASTE STG &	780.5	891.7	577.6	111.2	314.1	5,624.5	5,577.1	4,463.0	(47.4)	1,114.1	8,979.0	9,631.1	
TW10 RPP MANAGEMENT SUPPORT PRO	8,621.9	8,701.2	3,691.0	79.3	5,010.2	54,040.6	53,135.5	41,179.7	(905.1)	11,955.8	76,486.0	85,311.1	
RPP TOTAL EXPENSE/CENRTC WITHOUT TW	33,349.2	33,531.2	24,741.4	182.0	8,789.8	211,441.6	196,394.2	172,489.4	(15,047.4)	23,904.8	307,671.0	326,090.3	
RPP TOTAL LINE ITEM WITHOUT TW06	4,219.1	7,886.3	6,911.9	3,667.2	974.4	34,873.5	36,633.0	37,928.3	1,759.5	(1,295.3)	60,385.0	68,879.4	
RPP TOTAL - WITHOUT TW06	37,568.3	41,417.5	31,653.3	3,849.2	9,764.2	246,315.1	233,027.2	210,417.7	(13,287.9)	22,609.5	368,056.0	394,969.7	
TW06 PRIVATIZATION PHASE I	(696.7)	(2,703.2)	514.5	(2,006.5)	(3,217.7)	65,691.5	62,988.6	61,218.9	(2,702.9)	1,769.7	63,659.0	65,691.6	
RPP TOTAL EXPENSE/CENRTC WITH TW06	33,349.2	33,531.2	24,741.4	182.0	8,789.8	211,441.6	196,394.2	172,489.4	(15,047.4)	23,904.8	307,671.0	326,090.3	
RPP TOTAL LINE ITEM WITH TW06	3,522.4	5,183.1	7,426.4	1,660.7	(2,243.3)	100,565.0	99,621.6	99,147.2	(943.4)	474.4	124,044.0	134,571.0	
RPP TOTAL - WITH TW06	36,871.6	38,714.3	32,167.8	1,842.7	6,546.5	312,006.6	296,015.8	271,636.6	(15,990.8)	24,379.2	431,715.0	460,661.3	

\*NOTE: ORP EAC values are equal to BAC

\*\* All values include CHG, ORP and PNNL.