



U.S. Department of Energy
Office of River Protection

0055446

P.O. Box 450
Richland, Washington 99352

OCT 01 2001

01-ORP-116

Mr. Tom C Fitzsimmons, Director
State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504

RECEIVED
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EDMC

Dear Mr. Fitzsimmons:

U.S. DEPARTMENT OF ENERGY (DOE) RECOVERY PLAN SUBMITTAL AS REQUIRED BY FINAL DETERMINATION PURSUANT TO HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER DATED JULY 26, 2001.

- Reference:
1. Letter from T. Fitzsimmons, Ecology, and C. E. Findley, EPA, to Harry L Boston, ORP, "Final Determination Pursuant to Hanford Federal Facility Agreement and Consent Order (HFFACO, aka Tri-Party Agreement), Disapproving the Department of Energy's Change Control Form M-62-01-02," 0102738, dated July 26, 2001.
 2. Notice of Penalty Incurred and Due No. 01NWPHQ-3131, August 1, 2001.

Attached please find the Office of River Protection's recovery plan that I am hereby submitting in accordance with the terms of References 1 and 2. As you will see, this plan documents the actions and associated schedules we are proposing to start construction, establishes the two construction progress milestones described in milestone M-62-07, and demonstrates that the 2007 deadline for beginning waste treatment at the vitrification complex will be met.

This plan does not, however, contain the demonstration you required in References 1 and 2, "that USDOE [have] in place FY-2002 funds and the necessary spending authority . . . to fully support implementing the recovery plan". As you know, the FY 02 budget has not been approved and we are currently subject to a continuing budget resolution. Our recovery plan does, however, include a table comparing baseline funding requirements with contract specified funding and fiscal year carryover. In light of the impossibility to comply fully with the funding requirements of References 1 and 2 quoted above by October 1, we respectfully request that you extend the period for submission of this information to a date, e.g., within 7 days of the date on which the FY 02 budget is finalized.

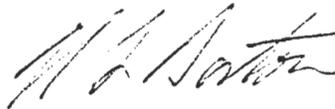
We are submitting this plan for your review and, hopefully, ultimate approval in accordance with the above. We look forward to continuing the preliminary dialogue our respective staffs have undertaken to this point on this recovery plan. We recognize, however, the complex nature of the plan and its supporting documentation and will contact your staff in the near future to set up meetings to provide additional explanation, clarification, and responses to any questions.

Mr. Tom C. Fitzsimmons
01-ORP-116

-2-

Finally, we also look forward to discussing the means by which we may jointly submit and discuss this plan with the Hanford Advisory Board, as you recently proposed. If you have any questions or comments, please don't hesitate to let me know at (509) 376-6677.

Sincerely,



Harry L. Boston
Manager

AMPD:WJT

Attachment

cc w/attach:

R Gay, CTUIR

P. Sobotta, NPT

R. Jim, YN

E. Savage, BNI

M. J. Riess, CHG

M. A. Wilson, Ecology

R. F. Stanley, Ecology

D. R. Sherwood, EPA

D. Bartus, Ecology

J. S. Hertzal, FHI

O. S. Kramer, FHI

T. Martin, HAB

K. Niles, Oregon Energy

K. A. Klein, RL

J. B. Hebdon, RL

A. A. Fitz, WA Atty General's Office

TPA Administrative Record

U.S. Department of Energy Recovery Plan

Introduction

This plan is being submitted in response to the Director of Ecology's July 26, 2001 Final Determination that the Department of Energy submit "a Recovery Plan documenting actions and associated schedules that USDOE proposes to implement to assure compliance with Hanford Federal Facility Agreement and Consent Order (HFFACO) requirements." This plan includes the date by which DOE proposes to initiate construction (Tri-Party Agreement - TPA Milestone M-62-06). This plan also includes DOE's proposal for establishing the two construction progress milestones described in TPA Milestone M-62-07 (the proposed Milestones are identified in the plan as M-62-07A and M-62-07B). The plan demonstrates that TPA Milestone M-62-09, the 2007 deadline for beginning waste treatment at the vitrification complex, will be met. It should be noted that DOE's ability to meet these, as well as the other milestones in the TPA, is subject to the availability of appropriated funds.

It will be noted that, in addition to addressing the Milestones M-62-06, M-62-07 and M-62-08, changes to other M-62 milestones as well as specific M-45, M-90, and M-92 milestones are also proposed. This resulted from DOE's evaluation of the River Protection Project Integrated Baseline. With the exception of milestone M-45-00C, which was actually tied to the July 31, 2001 Start of Construction and the two Construction Progress Milestones which were identified previously within the Tri-Party Agreement as "To Be Determined", the majority of these milestone changes were driven by changes in the schedule after December 31, 2007. A summary of specific work scope associated with the milestones is identified in this plan.

As discussed in this Recovery Plan, in some cases, depending on the amount of information required by the milestone, between 30 and 60 days has been added to contractor completion dates to arrive at proposed TPA milestone dates; this has been done to allow DOE time to evaluate the information submitted by the contractor, confirm completion of the milestone and submit the appropriate documentation to Ecology to support achieving the milestones. In the case of M-62-10, the baseline shows an acceleration of the completion of hot commissioning to May 2010. The Bechtel National, Inc. (BNI) contract requirement date is January 2011. Due to the complexity associated with this portion of the project and the ten years before it occurs, the TPA milestone reflects the BNI contract date and not the accelerated effort.

Background

In 1994, the Department of Energy (DOE) decided to pursue privatization for Hanford tank waste treatment and immobilization services. The strategy was to award two competitive demonstration scale contracts for processing an initial amount of waste followed by one contract for the balance of the mission in a larger facility. As this effort progressed, it was determined that the cost of remotely-operated facilities for high-level radioactive waste would cost much more than initially thought and that it was more cost-effective to build these plants for a longer operating period rather than abandoning them

after the demonstration phase. The approach evolved to building one initial Waste Treatment and Immobilization Plant (WTP) rather than two and to design it for a 40-year operating life. A single contract was awarded to BNFL Inc. (BNFL) to proceed with the WTP design and to provide a price for their privatized waste treatment and immobilization services. In May 2000, their contract was terminated because the price was too high and because of other technical performance concerns. DOE then decided to acquire the WTP with a cost-plus-incentive fee contract.

DOE awarded the WTP contract to BNI in December 2000. In the interim period between terminating the BNFL contract and award of the BNI contract, a transition contract was implemented with the existing Tank Farm Operations Contractor, CH2M HILL Hanford Group (CHG). This was done in order to maintain momentum in the WTP effort and to provide for a smoother transition to the WTP Contractor. These efforts, though successful in some areas, could not alleviate the seven-month loss of design time and could not prevent a delay in the start of construction. Current BNI planning indicates start of construction in November 2002 compared with the original BNFL date of July 2001. However, the delay in start of construction does not impact the current TPA milestone date for the commencement of hot commissioning, which remains December 31, 2007. The date for completion of hot commissioning will be delayed, however. The contractual date for completion of this activity is January 31, 2011. BNI has accelerated this milestone in their baseline to May 2010; however, due to the complexity of hot commissioning all portions of the WTP and the 10 year time-frame, we are proposing the contractual date as the completion date for M-62-10.

Recovery

The activities and plans DOE currently has in place to be assured that HFFACO requirements will be met with respect to the Waste Treatment Complex are captured in the RPP baseline. This baseline is consistent with the contractual milestone due dates specified in the WTP contract. The fundamental action that is being taken to maintain the December 2007 deadline for the Start of Hot Commissioning while delaying the start of construction from July 2001 to December 2002 is to close-couple design and construction activities by incorporating an appropriate level of parallel (as opposed to sequential) design and construction activities in the WTP portion of the RPP project schedule.

Adequate detailed reflection of the baseline is depicted in the RPP Milestone Sequence Chart and the RPP Expanded Management Summary Schedule Charts provided in Attachment 1. These charts will be referred to in the discussion section of this plan.

The RPP Milestone Sequence Chart (MSC) identifies RPP major milestones that encompass the work required to meet the Office of River Protection (ORP) mission which is to: "Build and Operate the Waste Treatment Complex to Complete the Cleanup of Hanford's Highly Radioactive Tank Waste". The key activities and milestones identified on the MSC are planned, integrated, and scheduled on the RPP Expanded Management Summary Schedule (EMSS). There are four sheets to the EMSS that will

be referred to. Letter designations (in bold black) are associated with RPP major milestones and activities (yellow).

Discussion

Callout A, sheets 3 & 4

Related Milestone: **M-62-06** Start of Construction Phase 1 Treatment Complex

Proposed TPA date of completion: **12/31/02**

Major Performer: WTP Contractor (BNI)

This TPA Milestone is associated with RPP major milestone #13, WTP Start Construction (BNI-M1). Key milestones that must be accomplished in order to meet this major milestone that are shown in black on the MSC represent work or activities already accomplished and those shown in color represent work yet to be done. Major milestones, key milestones, and other necessary work or activities required to meet the major milestones are represented and appropriately scheduled on the EMSS, sheets 3 and 4.

Start of construction of the Waste Treatment Plant (WTP) was originally scheduled for July 31, 2001 when the Privatization planning was underway with BNFL as the performing contractor. As a result of excessive costs, Privatization was replaced with a new close-coupled approach utilizing BNI as the performing contractor. This change resulted in moving the start of construction date to December 31, 2002.

As is apparent from the MSC and the EMSS, DOE must ensure necessary permits are in place, appropriate safety documentation and requirements are established, and necessary utilities are provided before a Construction Authorization (CA) can be issued. These elements had to be accelerated in order to support this Start of Construction date. The ability of the regulatory community to commit to accelerating the permitting process and interactively working with DOE and BNI is the key to meeting Start of Construction.

BNI has accelerated their schedule to commence first structural concrete pours on the Pretreatment (PT) facility, as well as on the LAW facility, and the HLW facility. This assumes that all issues on the critical path can be resolved in a rapid and timely fashion.

Callout B, sheet 3

Related Milestone: **M-62-07A** Initial Erection of Structural Steel in the Low Activity Waste Facility above Elevation Minus 21

Proposed TPA date of completion: **10/30/03**

Major Performer: WTP Contractor (BNI)

This is a proposed intermediate construction Milestone to meet TPA Milestone M-62-07, Construction Progress Milestones (2) – Phase I Treatment Complex. This Milestone demonstrates that significant design and procurement has been accomplished such that construction can get underway with installation of structural steel in the LAW facility.

As shown on sheet #3 of the EMSS, this Milestone is planned and scheduled in the BNI baseline construction work and is forecasted to be complete in advance of the TPA milestone date.

Callout C, sheet 3

Related Milestone: **M-62-07B** Low Activity Melter #1 Staged and Ready for Refractory

Proposed TPA date of completion: **11/30/05**

Major Performer: WTP Contractor (BNI)

This is a proposed intermediate construction milestone to meet TPA Milestone M-62-07, Construction Progress Milestones (2) – Phase I Treatment Complex. This Milestone demonstrates significant design, procurement, and fabrication has been accomplished such that main plant components can be made ready to install in the LAW facility. Refractory brick will not be installed at the point of construction since the brick must be installed just prior to melter heat-up.

As shown on sheet #3 of the EMSS, this Milestone is planned and scheduled in the BNI baseline construction work and is forecasted to be complete in advance of the TPA milestone date.

Callout D, sheets 1 & 2

Related Milestone: **M-47-05A** Complete Startup and Turnover for Waste Retrieval and Mobilization System for Initial LAW Feed Tank

TPA date of completion: **4/30/06** (No change in current TPA date.)

Related Milestone: **M-47-03A** Complete Startup and Turnover for Waste Retrieval and Mobilization System for Initial HLW Feed Tank

Proposed TPA date of completion: **2/28/07** (No change in current TPA date.)

Major Performer: Tank Farm Contractor (CHG)

These TPA Milestones have not changed. They are associated with RPP major milestone #15, Complete First AP-101 and AZ-101 Waste Transfers. As shown in the MSC, there are 26 key milestones that must be accomplished in order to meet major milestone #15. These are identified and scheduled with the necessary support activities on sheets 1 and 2

of the EMSS. Four of the key milestones have been completed and are shown in black on the MSC.

Callout E, sheet 3

Related Milestone: **M-62-09** Start Hot Commissioning – Phase I Treatment Complex

TPA date of completion: **12/31/07** (no change in current TPA date)

Major Performer: WTP Contractor (BNI)

This TPA Milestone is associated with the RPP major milestone, #17, PT Complete Integrated Hot Commissioning. Accomplishing the work connected with this milestone is essential to a successful performance of the BNI contract. Large contract incentives are in place for BNI to meet the TPA date for start of hot commissioning by December 2007. BNI is also contracted with incentives to start cold commissioning by the end of 2006. The current schedule date for start of cold commissioning, as shown on the EMSS, is November 2006.

As shown on the MSC, there are numerous activities that must be accomplished in order to complete major milestone #17. These have been planned, integrated, and scheduled as shown in sheet 3 of the EMSS. **It should be noted that start of hot commissioning by December 2007 is not in jeopardy of being missed.** All necessary work to accomplish the milestone has been identified and planned for.

Callout F, sheet 2

Related Milestone: **M-90-08** Initiate ILAW Disposal Facility Construction

Proposed TPA date of completion: **6/30/05**

Related Milestone: **M-90-09-T01** Complete ILAW disposal Facility Detailed Design

Proposed TPA date of completion: **2/28/05**

Related Milestone: **M-90-10** Initiate Placement of ILAW Waste Canisters in ILAW Disposal Facility (Low Activity Waste Packages Placed Within These Facilities will be Retrievable)

Proposed TPA date of completion: **8/31/08**

Major Performer: Tank Farm Contractor (CHG)

These TPA Milestones are associated with RPP major milestone #19, ILAW Disposal Capability Available. The key activities to ensure this milestone is completed are identified on the MSC and planned and scheduled on sheet 2 of the EMSS. Most of the

activities are associated with developing project W-520. Completing all the work associated with major milestone #19 by 6/30/08 also completes the TPA Milestone. LAW hot commissioning will be in the preparation stage and will not have yet commenced to produce glass when ILAW disposal capability becomes available.

Callout G, sheet 3

This callout highlights completion of hot commissioning of the LAW and HLW facilities. These activities are an essential part of the hot commissioning work scope.

Major Performer: WTP Contractor (BNI)

Callout G is connected with RPP major milestones #21, LAW - Complete Integrated Hot Commissioning, and #25 HLW - Complete Integrated Hot Commissioning. All the activities required to accomplish these milestones are planned and scheduled on sheet 3 of the EMSS.

Callout H, sheet 2

Related milestone: **M-90-11** Complete Canister Storage Facility Construction (W-464)

Proposed TPA date of completion: 6/30/09

Major Performer: Tank Farm Contractor (CHG)

This Milestone is associated with RPP major milestone #23, IHLW Storage Capability Available. The key activities to ensure this milestone is completed are identified on the MSC and planned and scheduled on sheet 3 of the EMSS. Most of the activities are associated with completing project W-464, upgrades to the canister storage facility and turnover for hot operations. HLW hot commissioning is scheduled to commence prior to when IHLW disposal capability becomes available. However, according to the detailed baseline schedule, the HLW facility will have produced only about 22 canisters by the time the disposal facility is operational. The HLW plant itself will be designed with lag storage capability of 45 canisters.

Callout I, sheets 3 & 4

Related Milestone: **M-62-10** Completion of Hot Commissioning

Proposed TPA date of completion: 1/31/11

Major Performer: WTP Contractor (BNI)

Callout I is associated with RPP major milestone #25, HLW - Complete Integrated Hot Commissioning. Activities required to accomplish this milestone are planned and scheduled on sheet 3 of the EMSS. This RPP major milestone is also related to the M-

62-10 Milestone and reflects activities related to HLW Complete Integrated Hot Commissioning.

Completion of this TPA Milestone is dependent on Pre-treatment hot commissioning and key activities are reflected in RPP Major Milestone #17 (Callout E, Sheet 3) Pretreatment – Complete Integrated Hot Commissioning. Key activities related to the Low Activity Waste hot commissioning portion are reflected in RPP Major Milestone #21 (Callout G, sheet 3) LAW Complete Integrated Hot Commissioning. All activities required to complete this milestone are scheduled on sheet 3 of the EMSS. RPP Major Milestone #25 (Callout I, sheet 4) HLW – Complete Integrated Hot Commissioning is also related to the M-62-10. The completion Pre-Treatment, Low Activity and High Level Waste Hot Commissioning encompass the M-62-10 Milestone. BNI shows on their baseline an acceleration of completion of hot commissioning to May 2010. The BNI contract date is January 2011. Due to the complexity associated with this portion of the project and the ten years before it occurs, the TPA milestone reflects the BNI contract date and not the accelerated effort.

Callout K, sheet 2

Related milestone: **M-45-00C** Complete Renegotiation of Second Phase (i.e., 9/30/2006 through 9/30/2015) SST Waste Retrieval Activities

TPA date of completion: **2/28/04** (change to negotiation date)

Major Performer: Tank Farm Contractor (CHG)

This TPA Milestone is associated with the RPP major milestone #29, Establish SST Retrieval Technology. The TPA date of completion of February 28, 2004 can be met. However, if Milestone M-62-06, Start Construction of Phase 1 Treatment Complex, is missed, the completion date for M-45-00C will be nine months after that date. As shown on sheet 2 of the EMSS, to negotiate the next phase of SSTs for retrieval there must be sufficient technical information related to the adequacy of retrieval technology performance, and dilution rates for retrieval which impacts tank space, and the rate of simultaneous retrievals in order to address this issue. This information will not be known until retrievals occur. DOE has performance incentives in place to accelerate these retrievals.

Item L, sheet 2

Related Milestone: **M-62-11** Submittal of Hanford Tank Waste Treatment Phase II Plan

Proposed TPA date of completion: Three years after completion of Hot Commissioning see M-62-10

Related Milestone: **M-92-05** Inclusion of Hanford Site Cs/Sr treatment and/or repackaging parameters in DOE TWRS Phase II request for proposals (treatment and/or repackaging of all remaining Cs/Sr)

Proposed TPA date of completion: 3 years after completion of Hot Commissioning see M-62-10

Major Performer: Future contractor

These TPA Milestones are associated with the RPP major milestone #87, Complete Vitrification of Hanford High Level Tank Waste and reflect the current TPA date of 6/30/03 but have not been aligned with the RPP baseline. These milestones were tied to the original vitrification plant schedule and appear to have not been aligned with changes in the schedule. Also, it should be noted that DOE-ORP and DOE-RL are addressing integration issues with respect to Cs/Sr storage.

Budget and Cost

Attachment 2 provides budget and cost status information for the RPP, for both the WTP contract with BNI and the Tank Farm Contract (TFC) with CHG. The figures provided in this attachment address the contractors' planned expenditures (Budgeted Cost of Work Scheduled or BCWS) as well as DOE's budget requirements (accounting for carryover). The BCWS and budget requirements are shown both annually and cumulatively.

Change Control Forms

Attachment 3 provides the Federal Facility Agreement and Consent Order Change Control Forms that have been prepared by DOE to support this Recovery Plan. These forms describe the changes proposed by DOE, the justification for and impacts of these changes, and identify any affected documents. Changes are proposed for specific M-45, M-62, M-90 and M-92 milestones.

High-Level Bases and Assumptions

Attachment 4 provides the high-level bases and assumptions for the WTP project baseline. These bases and assumptions were developed by BNI as part of their modified WPT Project Baseline that was submitted to DOE on June 29, 2001 and approved by ORP on July 3, 2001. These bases and assumptions deal with various project issues, such as DOE's responsibilities under the WTP contract, that for the most part, are not within BNI's control.

Attachment 1

RPP Baseline Schedule Information

RPP Milestone Sequence Recovery Chart

RPP Expanded Management Summary Recovery Schedule

See Enclosed Schedule Charts

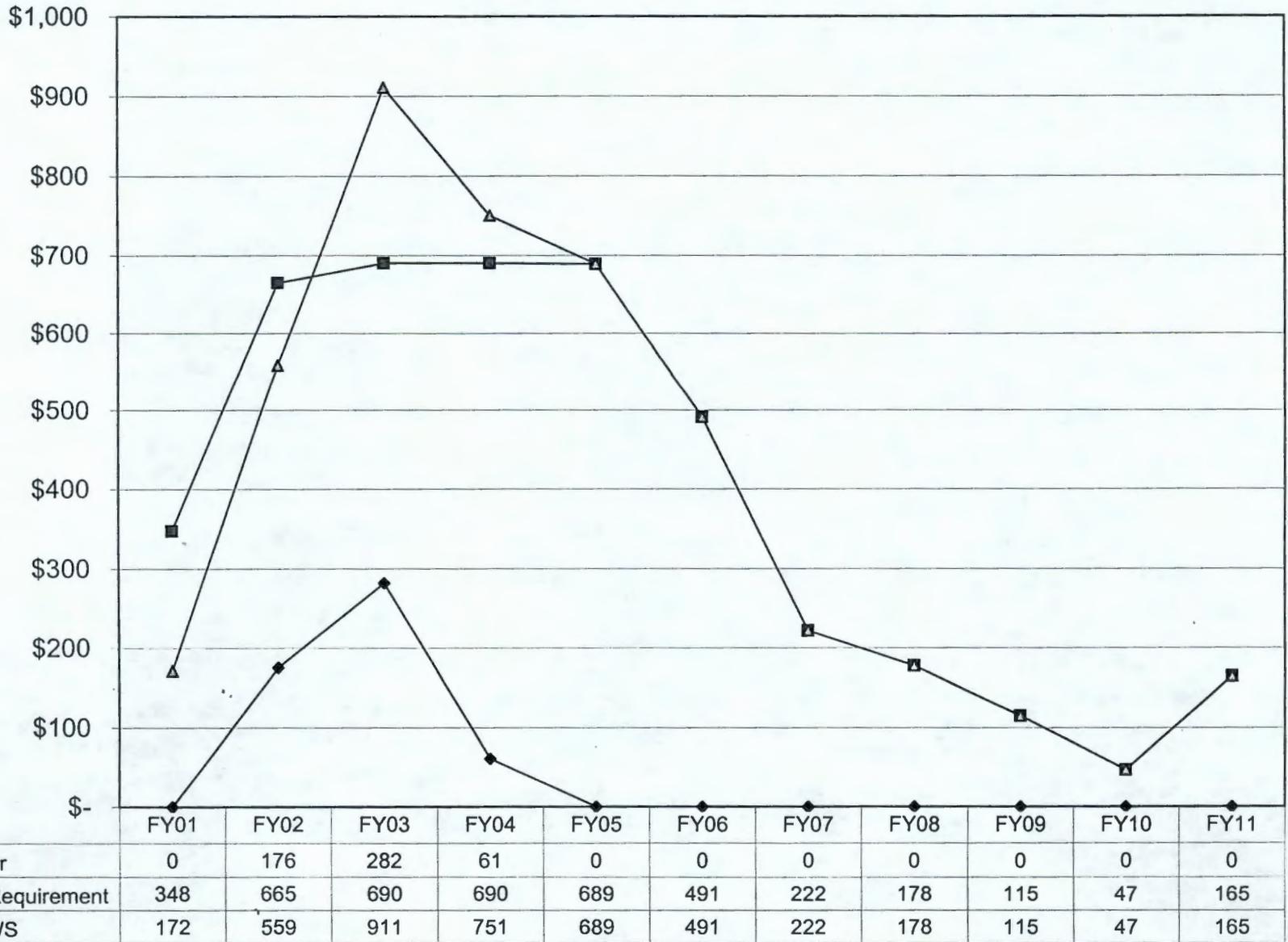
Attachment 2

Budget and Cost Status Information

Waste Treatment and Immobilization Plant Contract

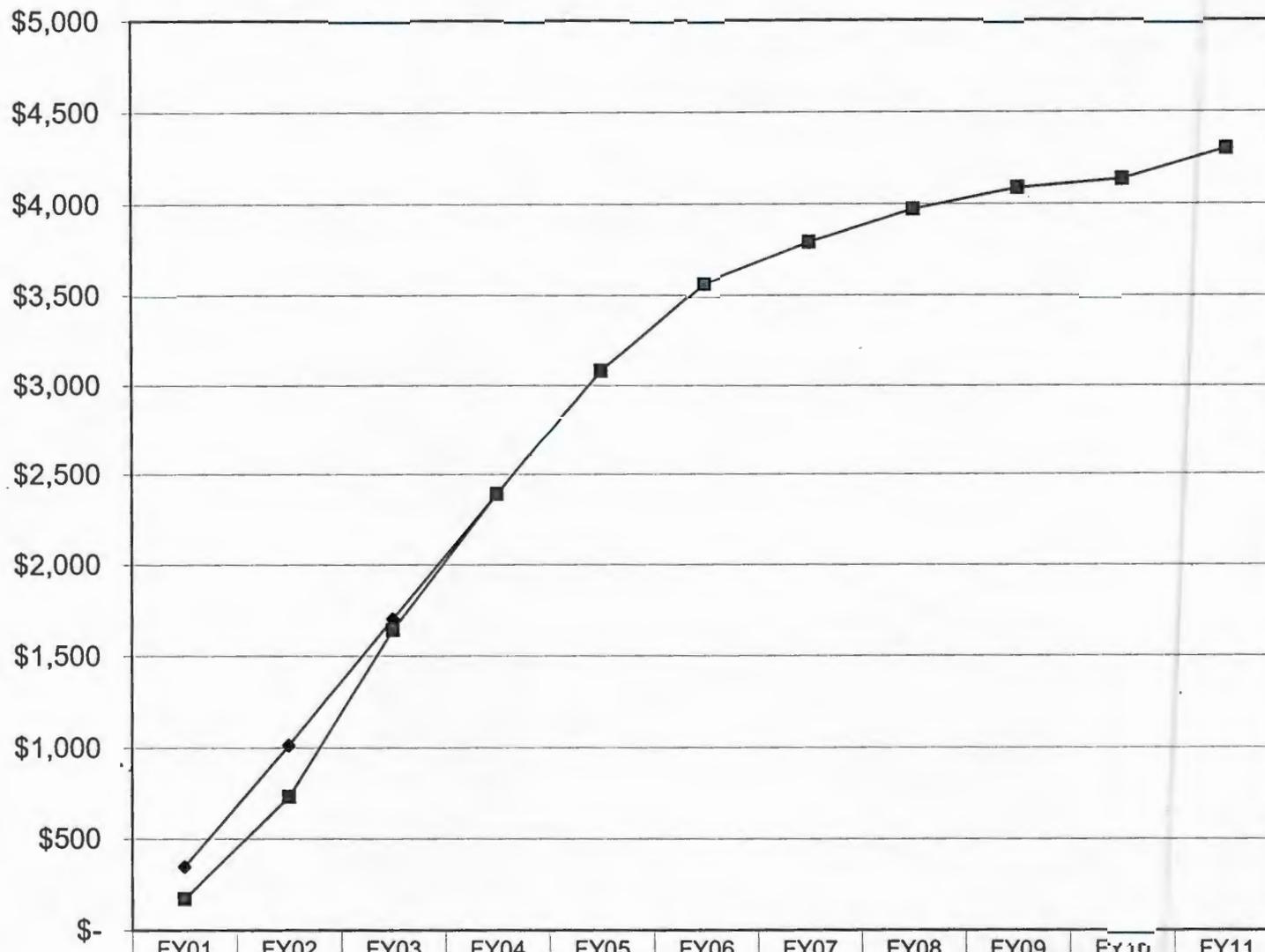
Tank Farm Contract

WTP Requirements per approved BNI Baseline
(July 2001)
(Dollars in Millions)



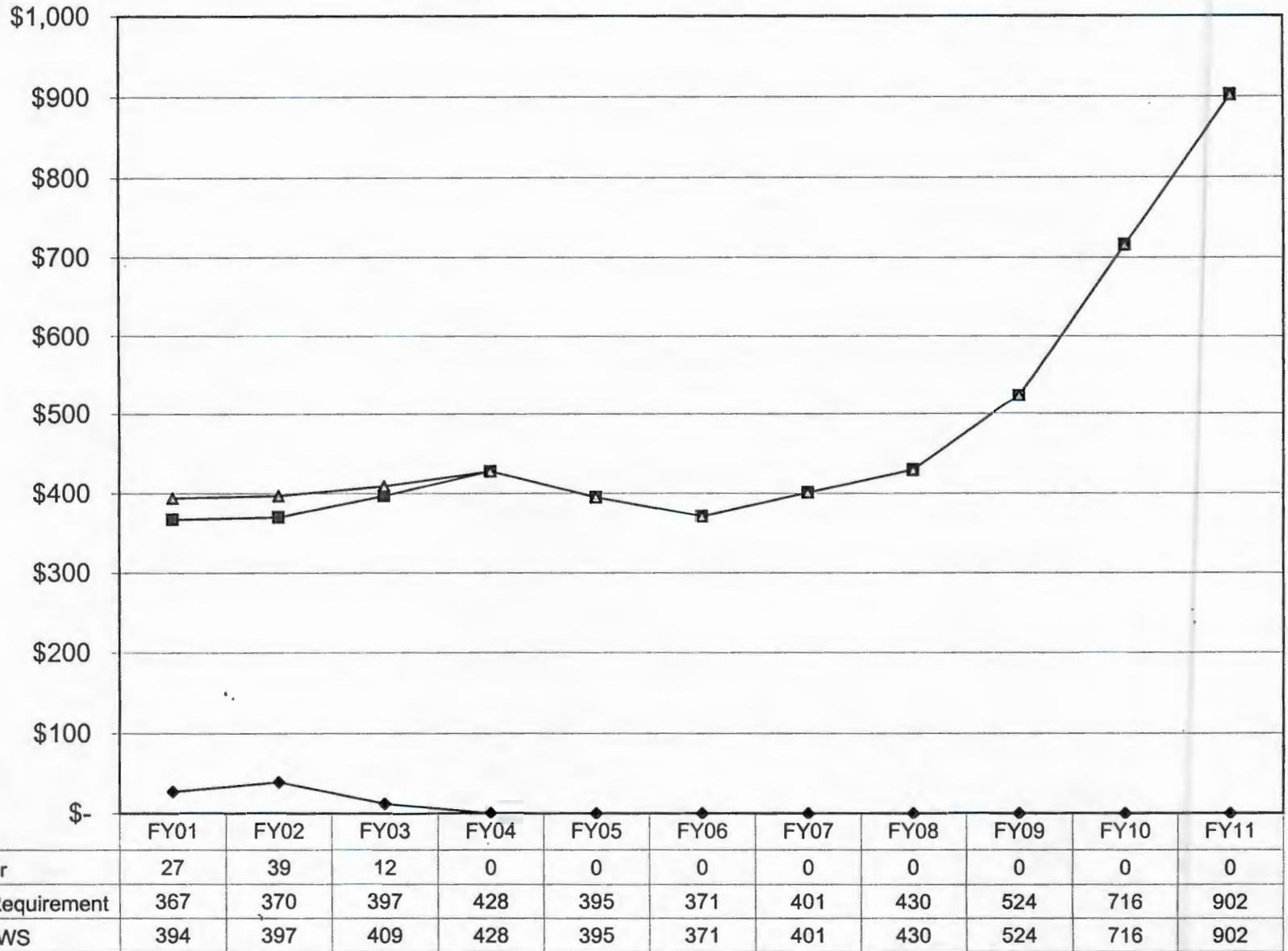
ORP's total budget requirement is the summation of the budget requirement for BNI Workscope and the budget requirement for CHG Workscope. The funds cannot be intermixed between the two contractors.

WTP Requirements
 Cumulative Budget Authority / Cumulative BCWS
 (Dollars in Millions)



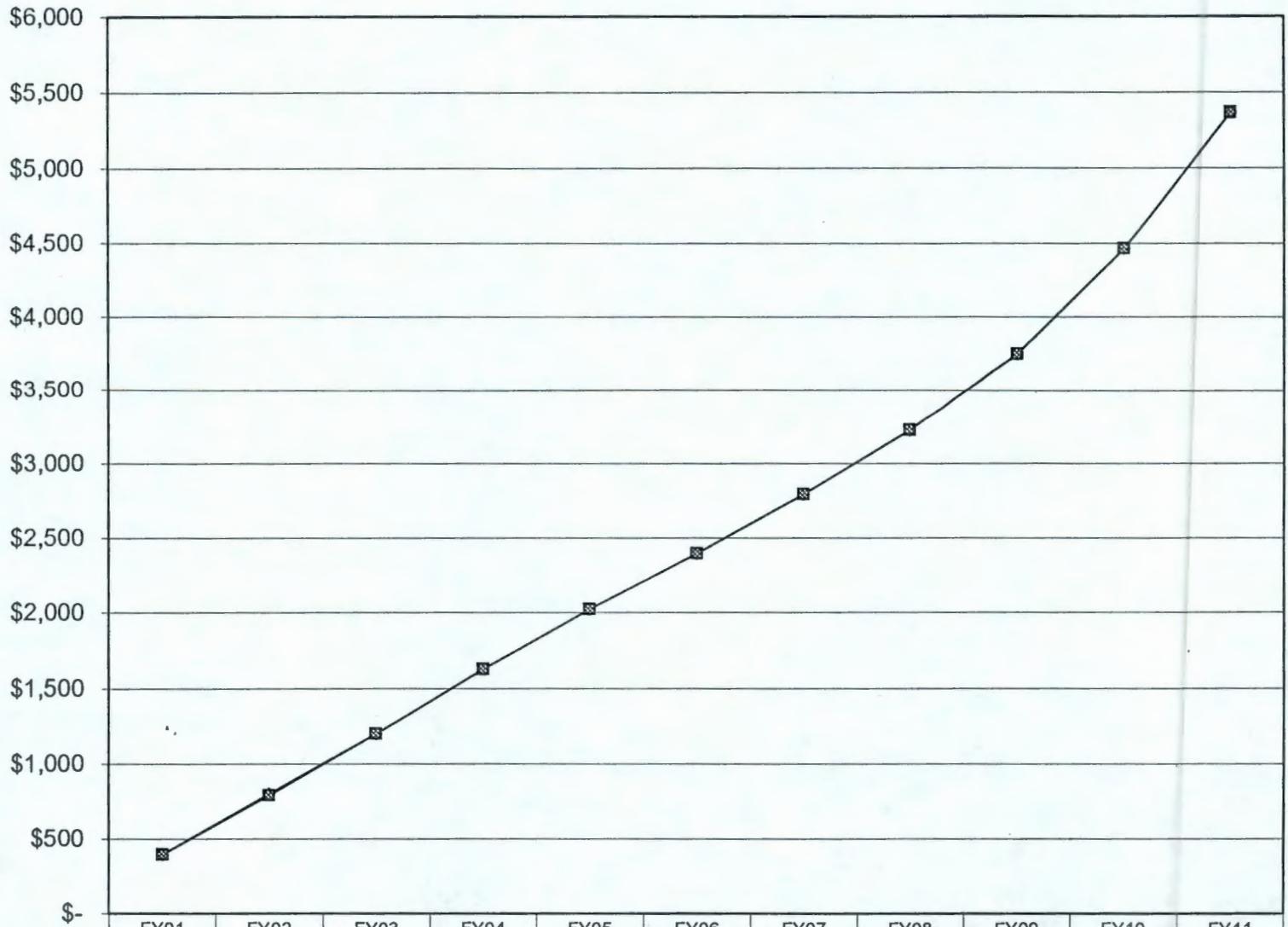
◆ Cumulative Budget Requirement	348	1013	1703	2393	3082	3573	3795	3973	4088	4135	4300
■ Cumulative BCWS	172	731	1642	2393	3082	3573	3795	3973	4088	4135	4300

TFC Requirements (including ORP Program Support)
(Dollars in Millions)



ORP's total budget requirement is the summation of the budget requirement for BNI Workscope and the budget requirement for CHG Workscope. The funds cannot be intermixed between the two contractors.

TFC Requirements (including ORP Program Support)
 Cumulative Budget Request / Cumulative BCWS
 (Dollars in Millions)



◆ Cumulative Budget Requirement	394	803	1200	1628	2023	2394	2795	3225	3749	4465	5367
■ Cumulative BCWS	394	791	1200	1628	2023	2394	2795	3225	3749	4465	5367

Attachment 3

Federal Facility Agreement and Consent Order Change Control Forms

M-45-1-03

M-62-01-03

M-90-01-03

M-92-01-03

Change Number M-45-01-03	Federal Facility Agreement and Consent Order Change Control Form Do not use blue ink. Type or print using black ink. DRAFT	Date 9/27/01																				
Originator DOE, Office of River Protection		Phone 376-2247																				
Class of Change <input checked="" type="checkbox"/> I - Signatories <input type="checkbox"/> II - Executive Manager <input type="checkbox"/> III - Project Manager																						
Change Title Modifications to the M-45-00C milestone that are necessary to provide consistency between Tri-Party Agreement milestone language, completion schedules for contract No.'s DE-AC27-01RV14136, DE-AC27-99RL14047 and align the Office of River Protection Project integrated baseline.																						
Description/Justification of Change The M-45-00C milestone had been originally developed to take into account having adequate technical information with respect to retrieval technology and respective SST sequencing decisions. It would be premature to make a decision on tank space and additional retrievals when key pieces of data such as how much dilution water is needed to retrieve waste, and how many simultaneous retrievals, can be accomplished at one time are unknown. U.S. Department of Energy is making a good faith effort to obtain these key pieces of information by accelerating retrieval work with performance indicators. In addition, due to the need for continued storage, DOE has agreed to milestones in M-23 for Single Shell Tank (SST) Integrity addressing near term leak detection and monitoring requirements, and SST integrity. Based on the fact that DOE has accelerated retrieval information and is addressing continued storage in the SSTs, extension to this milestone would allow key pieces of data to be available to support negotiations in 2004. DOE assumes that Ecology will be able to approve the Functions and Requirement primary documents in accordance with TPA milestones to support the current TPA retrieval milestone commitments. This change request is based on the assumption of funding in the RPP Baseline.																						
Impact of Change This change will allow negotiations for FY 2006-2015 future retrievals when there is adequate technical information about retrieval technology, retrieval sequencing, tank space issues and vitrification plant progress to develop outyear retrieval strategy.																						
Affected Documents The Hanford Federal Facility Agreement and Consent Order, as amended, including HHFACO Action Plan Appendix D, DOE Annual Land Disposal Restrictions report, DOE Tank Farm Closure/Post Closure workplan Update, and Hanford site internal planning and management, and budget documents (e.g. DOE and DOE contractor Baselines, Baseline Change Control documents; Sitewide Systems Engineering Control documents; Project Management Plans and the Integrated Priority List (IPL)).																						
Approvals <table border="0" style="width: 100%;"> <tr> <td style="width: 35%; border-bottom: 1px solid black;">DOE - ORP</td> <td style="width: 15%; border-bottom: 1px solid black;">Date</td> <td style="width: 15%; border-bottom: 1px solid black;">_____</td> <td style="width: 15%; border-bottom: 1px solid black;">Approved _____</td> <td style="width: 15%; border-bottom: 1px solid black;">Disapproved _____</td> </tr> <tr> <td style="border-bottom: 1px solid black;">DOE - RL</td> <td style="border-bottom: 1px solid black;">Date</td> <td style="border-bottom: 1px solid black;">_____</td> <td style="border-bottom: 1px solid black;">Approved _____</td> <td style="border-bottom: 1px solid black;">Disapproved _____</td> </tr> <tr> <td style="border-bottom: 1px solid black;">EPA</td> <td style="border-bottom: 1px solid black;">Date</td> <td style="border-bottom: 1px solid black;">_____</td> <td style="border-bottom: 1px solid black;">Approved _____</td> <td style="border-bottom: 1px solid black;">Disapproved _____</td> </tr> <tr> <td style="border-bottom: 1px solid black;">Ecology</td> <td style="border-bottom: 1px solid black;">Date</td> <td style="border-bottom: 1px solid black;">_____</td> <td style="border-bottom: 1px solid black;">Approved _____</td> <td style="border-bottom: 1px solid black;">Disapproved _____</td> </tr> </table>			DOE - ORP	Date	_____	Approved _____	Disapproved _____	DOE - RL	Date	_____	Approved _____	Disapproved _____	EPA	Date	_____	Approved _____	Disapproved _____	Ecology	Date	_____	Approved _____	Disapproved _____
DOE - ORP	Date	_____	Approved _____	Disapproved _____																		
DOE - RL	Date	_____	Approved _____	Disapproved _____																		
EPA	Date	_____	Approved _____	Disapproved _____																		
Ecology	Date	_____	Approved _____	Disapproved _____																		

MS Number
M-45-00C

Milestone Description
COMPLETE RENEGOTIATION OF SECOND PHASE (I.E., 9/30/2006 THROUGH 9/30/2015) SST WASTE RETRIEVAL ACTIVITIES

Due Date
2/28/2004*

THESE NEGOTIATIONS SHALL TAKE INTO ACCOUNT VARIABLES SUCH AS WORK IN PROGRESS, E.G. DOE'S TANK WASTE TREATMENT COMPLEX ACQUISITION INITIATIVE AND ENVIRONMENTAL AND HUMAN HEALTH RISKS ASSOCIATED WITH RELEASES FROM DOE'S SSTs. NEGOTIATIONS SHALL BE DESIGNED TO ESTABLISH A SUFFICIENT NUMBER OF AGREEMENT MILESTONES AND TARGET DATES TO EFFECTIVELY DRIVE EACH PHASE OF WORK INCLUDING BUT NOT LIMITED TO: 1) WASTE RETRIEVAL TECHNOLOGY DEVELOPMENT, 2) RETRIEVAL PERFORMANCE EVALUATIONS, 3) LEAK DETECTION MONITORING, AND MITIGATION, 4) SELECTION OF SST RETRIEVAL SEQUENCE, 5) DESIGN, CONSTRUCTION AND OPERATION OF SST WASTE RETRIEVAL SYSTEMS, AND 6) CLOSURE PLANNING AND CLOSURE PLAN DEVELOPMENT.

DOE AND DOE'S CONTRACTOR(S) WILL RETRIEVE AND TRANSFER SST WASTES INTO THE DST SYSTEM AS SOON AS SPACE IS MADE AVAILABLE, ALLOWING DST SPACE FOR TREATMENT PLANT FEED STAGING AND SAFETY ISSUE RESOLUTION. TRANSFER OF SST WASTE WILL BE MADE ONCE SUFFICIENT DST SYSTEM SPACE IS AVAILABLE TO ALLOW A TRANSFER OF AN OPERATIONALLY PRACTICABLE VOLUME OF WASTE. SST WASTE WILL BE RETRIEVED ON A PRIORITY BASIS WITH THE GOALS OF REDUCING ENVIRONMENTAL RISK AND TREATMENT PROCESS OPTIMIZATION. DOE AND ECOLOGY WILL AGREE ON THE CRITERIA TO DETERMINE ENVIRONMENTAL RISK REDUCTION.

* These negotiations will also consider the need for additional compliant storage space. Should DOE fail to initiate construction of the Phase 1 Hanford Tank Waste Treatment Complex within five months of the required completion date as listed in M-62-06 by December 31, 2001 as defined in Agreement interim milestone M-62-06, the due date for this M-45-00C milestone shall be automatically adjusted to a date that extends nine months (initial five months plus four additional months to allow for project planning) from the completion date as listed in M-62-06.

The Parties will revise or confirm construction progress milestone due dates following the guidance found in M-62-13 and the contract authorizing the design, construction and commissioning of a facility for the treatment of single-shell and double-shell tank wastes. Revision if necessary shall be consistent with Hot Commissioning by December 2007 and completion of Phase 1 Treatment by February 2018.

Change Number M-62-01-03	Federal Facility Agreement and Consent Order Change Control Form <small>Do not use blue ink. Type or print using black ink.</small> DRAFT	Date 9/27/01
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Originator DOE, Office of River Protection (ORP)	Phone 376-2247
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Class of Change

I - Signatories II - Executive Manager III - Project Manager

Change Title
Modifications to the M-62-06, M-62-07, M-62-10 & M-62-11 milestones, that are necessary to provide consistency between Tri-Party Agreement milestone language, completion schedules for contract No. DE-AC27-01RV14136 and the ORP baseline schedule.

Description/Justification of Change
In the September 19, 2000 approved amendment to Consent Decree No. CT-99-5076-EFS, DOE was required to award a contract to replace the terminated privatization contract for the design, construction and commissioning of a Phase I Treatment Complex by January 15, 2001. The Tri-Party Agreement milestone M-62-06 (Start of Construction Phase 1 Treatment Complex by July 31, 2001) was no longer technically achievable as a result of an unacceptable price estimate from the Privatization Contractor at \$15.2 billion vs. \$6.6 billion government cost estimate. This resulted in unavoidable time delays necessary to award a new Waste Treatment Plant contract under competitive federal procurement rules.
(Continued on page 2)

Impact of Change
This change request modifies the language for the M-62-06, M-62-07 milestones in accordance with the original language from the M-62-05 milestone prior to deletion of M-62-05 per the terms of Consent Decree No. CT-99-5076-EFS, First Amendment. This change also recommends modifications to the M-62-10 and M-62-11 milestones that are necessary to provide consistency between Tri-Party Agreement milestones, completion schedules for contract No. DE-AC27-01RV14136 and the ORP baseline schedule. Contract No. DE-AC27-01RV14136 provides for the Design, Construction and Commission of a Facility for the Phase I Hanford Tank Waste Treatment Complex. The milestones established for renegotiation of the M-62 series milestones are consistent with the recently established contract for the Waste Treatment Contractor (WTC). This change will also impact the M-90-08, M-90-09-T01, M-90-10, M-90-11, and M-45-00C. These are addressed in other change requests submitted separately.

Affected Documents
The Hanford Federal Facility Agreement and Consent Order, as amended, including HHFACO Action Plan Appendix D, DOE Annual Land Disposal Restrictions report, DOE Tank Farm Closure/Post Closure workplan Update, and Hanford site internal planning and management, and budget documents (e.g. DOE and DOE contractor Baselines, Baseline Change Control documents; Sitewide Systems Engineering Control documents; Project Management Plans and the Integrated Priority List (IPL).

Approvals		
_____	_____	_____ Approved _____ Disapproved
DOE - ORP	Date	
_____	_____	_____ Approved _____ Disapproved
DOE - RL	Date	
_____	_____	_____ Approved _____ Disapproved
EPA	Date	
_____	_____	_____ Approved _____ Disapproved
Ecology	Date	

Contract No. DE-AC27-01RV14136 was awarded on December 11, 2000 for the Design, Construction and Commission of a Facility for the Phase I Hanford Tank Waste Treatment Complex. This change request modifies the following milestones by adopting original language from the recently deleted M-62-05 milestone and integrating the programmatic schedules as outlined in contract No. DE-AC27-01RV14136. Note: Other milestones (i.e., those not listed) within the M-62 series remain unchanged. Additional modifications are necessary to provide consistency between milestone completion dates and the ORP baseline schedule. Major assumptions associated with this activity which if invalid would impact Start of Construction (M-62-06) are 1) the Risk Assessment Work Plan and Preliminary Risk Assessment are not required before the RCRA Permit is issued, 2) There will not be major issued during the public comment process, 3) the Risk Based Disposal Approval strategy outlined in the August 2000 Toxic Substance Control Act Framework Agreement will be obtained. For M-62-11, the RPP Baseline shows a completion date of May 2010, which has been accelerated. Due to the complexity associated with this milestone and the timeframes involved, the date proposed in this milestone request reflects the contract date for completion of January 31, 2011. This change request is based on the assumption of funding in the RPP Baseline.

MS Number	Milestone Description	Due Date
M-62-06	START OF CONSTRUCTION PHASE I TREATMENT COMPLEX FIRST PLACEMENT OF STRUCTURAL CONCRETE AT ONE OF THE TREATMENT COMPLEX PRINCIPALE FACILITIES (I.E. PRETREATMENT, LOW- ACTIVITY WASTE VITRIFICATION, OR HIGH-LEVEL WASTE VITRIFICATION FACILITIES).	7/31/2004 12/31/2002
M-62-07 M-62-07A	CONSTRUCTION PROGRESS MILESTONES (2) – PHASE I TREATMENT COMPLEX <u>INITIAL ERECTION OF STRUCTURAL STEEL IN THE LOW ACTIVITY WASTE FACILITY ABOVE ELEVATION MINUS 21.</u>	FBD 10/30/2003
M-62-07B	<u>LOW ACTIVITY WASTE MELTER #1 STAGED AND READY FOR REFRACTORY.</u>	11/30/2005
M-62-09	START (HOT) COMMISSIONING – PHASE I TREATMENT COMPLEX DOE WILL START HOT COMMISSIONING OF ITS TANK WASTE TREATMENT COMPLEX (DEFINED AS FIRST PRINCIPALE FACILITY RECEIPT OF RADIOACTIVE TANK WASTE FOR TREATMENT).	12/31/2007
M-62-10	<u>COMPLETION OF HOT COMMISSIONING</u> START COMMERCIAL OPERATIONS – PHASE I TREATMENT COMPLEX 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.	01/31/2011 12/31/2009
M-62-11	SUBMITTAL OF HANFORD TANK WASTE TREATMENT PHASE II PLAN 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 NEGOTIATIONS 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.	3 years after completion start of Commercial Operations Hot Commissioning see (M-62-10)

Change Number M-90-01-03	Federal Facility Agreement and Consent Order Change Control Form Do not use blue ink. Type or print using black ink. DRAFT	Date 09/27/01
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Originator DOE, Office of River Protection	Phone 376-2247
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Class of Change <input type="checkbox"/> I - Signatories <input checked="" type="checkbox"/> II - Executive Manager <input type="checkbox"/> III - Project Manager		
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Change Title Modifications to the M-90-08, M-90-09-T01, M-90-10, M-90-11, milestones, that are necessary to provide consistency between Tri-Party Agreement milestone language, completion schedules for contract No.'s DE-AC27-01RV14136, DE-AC27-99RL14047 and the ORP baseline schedule.

Description/Justification of Change In the September 19, 2000 approved amendment to Consent Decree No. CT-99-5076-EFS, DOE was required to award a contract to replace the terminated privatization contract for the design, construction and commissioning of a Phase I Treatment Complex by January 15, 2001. Contract No. DE-AC27-01RV14136 was awarded on December 11, 2000 for the Design, Construction and Commission of a Facility for the Phase I Hanford Tank Waste Treatment Complex. Contract No. DE-AC27-99RL14047 was extended for an additional 5-year term. (Continued on page 2)

Impact of Change This change recommends modifications to the M-90-08, M-90-09-T01, M-90-10, and M-90-11 milestones that are necessary to provide consistency between Tri-Party Agreement milestones, completion schedules for contract numbers DE-AC27-01RV14136, DE-AC27-99RL-14047, and the ORP baseline schedule. Contract No. DE-AC27-01RV14136 provides for the Design, Construction and Commission of a Facility for the Phase I Hanford Tank Waste Treatment Complex. The milestone established for renegotiation of the M-90 series milestones is consistent with the recently established contracts for the Waste Treatment Contractor (WTC) and the Tank Farm Contractor (TFC).

Affected Documents The Hanford Federal Facility Agreement and Consent Order, as amended, including HHFACO Action Plan Appendix D, DOE Annual Land Disposal Restrictions report, DOE Tank Farm Closure/Post Closure workplan Update, and Hanford site internal planning and management, and budget documents (e.g. DOE and DOE contractor Baselines, Baseline Change Control documents; Sitewide Systems Engineering Control documents; Project Management Plans and the Integrated Priority List (IPL).

Approvals		
_____ DOE - ORP	_____ Date	_____ Approved _____ Disapproved
_____ DOE - RL	_____ Date	_____ Approved _____ Disapproved
_____ EPA	_____ Date	_____ Approved _____ Disapproved
_____ Ecology	_____ Date	_____ Approved _____ Disapproved

The M-20-56 and M-20-57 submittals will be based on the use of conceptual design information for permitting of the ILAW as final status units. It is assumed DOE-ORP and Ecology will be able to address design issues during permitting process therefore a change to M-20-56 and M-20-57 milestones is not requested. Storage and disposal facility TPA milestone M-90-10 and M-90-11 dates are aligned to coincide with the dates vitrified waste will be ready for disposition. Considering proposed WTP hot commissioning schedules, storage capacity will not be needed for ILAW until August 2008, and will not be required for high-level waste until June 2009. M-90-10 placement of ILAW canisters in the ILAW disposal facility is based on the following assumption that ILAW disposal facility will be ready to accept containers when the WTP begins ILAW production scheduled for hot commissioning. This assumes log storage capacity in WTP is not needed for ILAW and is based on M-62-09 Start of Phase 1 Treatment Complex of December 31, 2007. For M-90-11 placement of IHLW canisters in the CSB, it is assumed that the CSB will be ready to accept containers when WTP log storage capacity reaches 50% of capacity (45 canisters) based on scheduled production during hot commissioning (based on 1.5 MT/day of HLW). This change request is based on the assumption of funding in the RPP baseline.

MS Number	Milestone Description	Due Date
M-90-08	INITIATE ILAW DISPOSAL FACILITY CONSTRUCTION	<u>7/31/2004</u> <u>6/30/2005</u>
	INITIATION OF CONSTRUCTION OCCURS WHEN THE CONTRACTOR COMMENCES EXCAVATION OF THE RCRA DISPOSAL FACILITY.	
M-90-09-T01	COMPLETE ILAW DISPOSAL FACILITY DETAILED DESIGN	<u>3/30/2004</u> <u>2/28/2005</u>
M-90-10	INITIATE PLACEMENT OF ILAW WASTE CANISTERS IN ILAW DISPOSAL FACILITY (LOW ACTIVITY WASTE PACKAGES PLACED WITHIN THESE FACILITIES WILL BE RETRIEVABLE).	<u>1/31/2007</u> <u>8/31/2008</u>
M-90-11	COMPLETE CANISTER STORAGE FACILITY CONSTRUCTION	<u>2/01/2007</u> <u>6/30/2009</u>
	COMPLETION OF THIS MILESTONE REQUIRES THE COMPLETION OF ALL CONSTRUCTION, INTERNAL/EXTERNAL FACILITY(S) MODIFICATION AND STARTUP ACTIVITIES NECESSARY FOR CANNISTER STORAGE FACILITY RECEIPT OF ALL PHASE I HANFORD SITE HIGH LEVEL WASTE CANISTERS FROM TANK WASTE REMEDIATION SYSTEM (TWRS) PROCESSING. FOR PURPOSES OF THIS INTERIM MILESTONE PHASE I IHLW CANISTER STORAGE OF AT LEAST 600 IHLW CANISTERS. INTERIM MILESTONES AND ASSOCIATED TARGET DATES ESTABLISHING WORK SCHEDULES FOR PHASE II IHLW CANISTER STORAGE WILL BE ESTABLISHED PURSUANT TO THE PHASE II REQUEST FOR PROPOSAL FOR TWRS PRIVATIZATION.	

MS Number	Milestone Description	Due Date
M-92-05	Inclusion of Hanford Site Cs/Sr treatment and /or repackaging parameters in DOE TWRS Phase II request for proposals (treatment and/or repackaging of all remaining Cs/Sr).	6/30/2003 3 years after completion of Hot Commissioning see M-62-10

Attachment 4

High-Level Bases and Assumptions for the WTP Project Baseline

High-Level Bases and Assumptions for the WTP Project Baseline

1. The scope basis for the baseline is defined and underpinned by the technical submittal in April 2000.
2. The process design is adequate to perform the intended function.
3. DOE will meet all of its responsibilities set forth in the ICD's.
4. DOE will be able to provide timely financial authorization in accordance with the contract, to achieve the project schedule.
5. DOE site activities will have no disruptive impact on project activities.
6. DOE will provide water and power at quantities required by the project at no cost to the contractor. The baseline does not include changing electric-based hot water heating to fuel-oil-based.
7. Regulatory actions will support the dates specified in the schedule baseline.
8. The Toxic Substance Control Act (TSCA) Permit will not be required to treat Hanford tank waste.
9. The LAW and LPP facilities will be designed as SC-III facilities.
10. Qualified vendors and construction craft will be available to support the baseline schedule requirements.
11. Melter will meet or exceed their four-year design life and will not fail during the project. Failed melter/spare melter handling and/or disposal costs, as well as associated schedule impacts, are not included in the scope of this baseline.
12. The R&T estimate incorporates a success-oriented approach; for instance, technology and design confirmation issues close on schedule.
13. The facility models and R&T results will demonstrate that plant throughput requirements specified in the contract will be achieved with the current plant design. The baseline contains no provisions or allowances for plant modifications or enhancements to achieve specified capacities.
14. No re-work will be required for previously completed R&T work due to technical, quality or regulatory interpretation.
15. The period for DOE review of safety documents is compliant with the contract requirements. Specifically, the review period for the PSAR is 7 months after submittal.
16. Excavated materials will be suitable for structural backfill.
17. Aggregate for concrete will be available from a qualified quarry on the DOE Hanford Site.
18. Construction will be performed on a 4-day, 10-hour per day basis. A second shift will be utilized for approximately 30% of the work.
19. Following the hot commissioning of the facilities (cold commissioning for BOF) and the laboratory, operations of the facilities will be the responsibility of DOE's operating contractor. Support and interface requirements to complete the WTP prime contract will be provided on interfacing agreements.
20. There will be no flushing of the process equipment between different feed envelope campaigns (normal melter turnover will be utilized).
21. No operations, surveillance, or maintenance costs are incurred by BNI after hot commissioning for each facility.
22. Project will not provide any facility specific qualification related training after initial hot commissioning qualifications. Operations and maintenance staffing will be reduced after start of hot commissioning from a five-shift to a four-shift rotation due to elimination of facility specific qualification training.
23. Funding (budget authority) will not be incrementally obligated within a fiscal year.
24. The basis of estimate recognizes a change to the April 24, 2000 commissioning strategy due to the Prime Contracts requirement to start up and commission all three LAW melter simultaneously rather than a phased startup approach.
25. New requirements of 10 CFR 830 are not included in the cost or schedule baseline.