



OFFICE OF RIVER PROTECTION

P.O. Box 450, MSIN H6-60
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13-WTP-0022

JAN 31 2013

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Addressees:

JANUARY 2013 SEMI-ANNUAL REPORT FOR CONSENT DECREE SECTION IV-C-1,
WASHINGTON v. DEPARTMENT OF ENERGY, CASE NO. 08-5085 FVS, FOR WASTE
TREATMENT AND IMMOBILIZATION PLANT (WTP) CONSTRUCTION AND STARTUP
ACTIVITIES AND TANK RETRIEVAL ACTIVITIES FOR MAY 1, 2012 THROUGH OCTOBER 31,
2012

This letter transmits the U.S. Department of Energy, January 2013 Semi-Annual Report (Attachment) under Section IV-C-1 of the above-referenced Consent Decree, for the period of May 1, 2012 through October 31, 2012. As provided in the Consent Decree, this report includes WTP construction and startup activities and tank retrieval activities accomplishments, issues, milestone compliance, and actions being taken.

If you have any questions, please contact Bill Hamel, Assistant Manager for the Waste Treatment and Immobilization Plant Project, (509) 376-6727, or Thomas W. Fletcher, Assistant Manager for the Tank Farms Project, (509) 376-3434.

Kevin W. Smith
Manager

WTP:RBS

Attachments (2)

cc: See page 2

Addressees
12-WTP-0022

-2-

JAN 31 2013

cc w/attach:

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ATTACHMENT 1

13-WTP-0022

**JANUARY 2013 SEMI-ANNUAL REPORT FOR
CONSENT DECREE SECTION IV-C-1, WASHINGTON v.
DEPARTMENT OF ENERGY, CASE NO. 08-5085 FVS,
FOR WASTE TREATMENT AND IMMOBILIZATION
PLANT (WTP) CONSTRUCTION AND STARTUP
ACTIVITIES AND TANK RETRIEVAL ACTIVITIES FOR
MAY 1, 2012 THROUGH OCTOBER 31, 2012**

Pages 12 (Including Coversheet)

**JANUARY 2013 SEMI-ANNUAL REPORT: SECTION IV-C-1,
CONSENT DECREE, WASHINGTON v. DEPARTMENT OF
ENERGY, CASE NO. 08-5085 FVS, FOR WASTE
TREATMENT AND IMMOBILIZATION PLANT (WTP)
CONSTRUCTION AND STARTUP ACTIVITIES AND TANK
RETRIEVAL ACTIVITIES**

May 1, 2012 – October 31, 2012



**U.S. DEPARTMENT OF ENERGY
OFFICE OF RIVER PROTECTION
2440 Stevens Center Place
Richland, Washington 99354**



Stacy L. Charboneau
ORP Deputy Manager

1/31/13
Date

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LIST OF ACRONYMS

AASF	Anhydrous ammonia storage facility
AB	Authorization Basis
AMS	Articulated mast system
ASX	Autosampling system
BNI	Bechtel National, Inc.
BOF	Balance of Facilities
BSA	Breathing air service
C5V	Cascade ventilation with greatest potential for contamination
C&I	Control and instrumentation
CSA	Civil, structural, and architectural
CY	Cubic Yards
DOE	U.S. Department of Energy
DOE-WTP	U.S. Department of Energy - Waste Treatment and Immobilization Plant Project
EAC	Estimate at Completion
Ecology	Washington State Department of Ecology
EDG	Emergency diesel generator
EFRT	External Flowsheet Review Team
FEP	Waste feed evaporation process system
FRP	Feed receipt process
FY	Fiscal Year
HEME	High Efficiency Mist Eliminators
HEPA	High-efficiency Particulate Air (filter)
HFFACO	Hanford Federal Facility Agreement and Consent Order
HLP	High-Level Waste lag storage and feed bleeding process system
HLW	High-Level Waste [Facility]
HOP	High-Level Waste off-gas process
HVAC	Heating, ventilation and air conditioning
IFC	Issue for Construction
LAB	Analytical Laboratory
LAW	Low-Activity Waste [Facility]
LOAM	Low Order Accumulation Model
ORP	Office of River Protection
P&ID	Piping and Instrumentation Drawing
PJM	Pulse jet mixer
PJV	Pulse jet ventilation
PSA	Plant service air
PT or PTF	Pretreatment [Facility]
PVP/PVV	Pretreatment vessel vent process system / Process vessel vent exhaust system
RCRA	Resource Conservation and Recovery Act of 1976, as amended
SC	Safety Class
SCO/SCR	Selective catalytic oxidizer / selective catalytic reducer
SST	Single-shell tank
TLP	Treated LAW evaporation process system

UFP Ultrafiltration process system
WMA Waste Management Area
WTP Waste Treatment and Immobilization Plant

1.0 INTRODUCTION

The Department of Energy is submitting the following information to satisfy its obligation to provide “a written semi-annual report . . . documenting WTP construction and startup activities and tank retrieval activities” as required by Section IV-C-1 of the Consent Decree in *State of Washington v. Department of Energy*, Case No. 08-5085-FVS (E.D. Wash.) (October 25, 2010).

The project and facility progress, budget and cost information in this report is based on the period of May 2012 through October 2012.

2.0 WTP

2.1 Project Accomplishments and Issues

2.1.1 WTP Project Overview

During this reporting period, design, procurement, and construction activities continued for LAW, BOF and LAB. Activities at the PTF and HLW have been slowed to resolve technical issues. As of the end of the reporting period, the design/engineering for the WTP Project was 87 percent complete, procurement was 73 percent complete, construction was 62 percent complete, startup and commissioning was 15 percent complete and the overall WTP Project was 66 percent complete. At the end of the reporting period, BNI employed about 2440 personnel, with an average of about 1222 personnel (617 craft, 122 subcontractors, and 438 non-manual staff) working at the construction site. Due to two-year interim workplan PT and HLW facility percent completion numbers were frozen as of September 2012. LAW, BOF and LAB project percent complete values reflect the current reporting period.

In November 2011, representatives of the Department of Energy and the Department of Justice contacted their counterparts in the Attorney Generals’ offices of the States of Washington and Oregon regarding risks that DOE may be unable to meet one or more required milestones under the Consent Decree.

On February 21, 2012, ORP issued letter number 12-WTP-0065, *Contract No. DE-AC27-01RV14136, Direction to Re-Baseline/Re-Plan the Waste Treatment and Immobilization Plant (WTP) and Request for Contract Change Proposal and Associated Baseline Change Proposal*, that was predicated on a Key Planning Basis and Assumptions document attached to it. The key planning basis and assumptions for the requested proposal included, among other things, a \$690 million flat funding profile from FY-13 until the end of CD-4 as well as a shift of project focus to LAW, LAB, and BOF while technical issues involving the PTF and HLW are analyzed and resolved. On June 28, 2012, DOE issued letter number 12-WTP-0222, *Contract No. DE-AC27-01RV14136 – Modification of Direction for Re-Baseline/Re-Plan the Waste Treatment and Immobilization Plant (WTP), and Request for Baseline Change Proposal and Associated Contract Change Proposal*, which modified the February 21 re-baseline direction DOE provided in February 2012. Please see Section 4.0 for written directives given by DOE to the contractors for work required by the Consent Decree.

On August 16, 2012, DOE issued letter number 12-WTP-0263, *Contract No. DE-AC27-01RV14136 – Modification of Direction for Re-Baseline/Re-Plan the Waste Treatment and Immobilization Plant (WTP), and Request for Baseline Change Proposal and Associated Contract Change Proposal(s)*, which modified the June 28 re-baseline direction. The purpose of

this modification was to clarify both the deliverables required and DOE's expectations for BNI to continue to focus on resolution of known and emerging technical and management issues at the WTP.

The technical issues relevant to the PTF and HLW facilities include, among others, issues associated with the pulse-jet mixers, erosion/corrosion in vessels, hydrogen accumulation in piping and ancillary vessels (HPAV), full-scale testing, computational fluid dynamics model, and waste feed. There have been multiple communications to the Defense Nuclear Facilities Safety Board (DNFSB) regarding these and other issues during the period covered by this report. Besides the technical issues identified with the DNFSB, there have been several management issues relevant to the WTP that have resulted in level one and two priority findings, which include: cumulative management performance/margin (design, safety and operational) and erosion/corrosion in the black cell vessels. A corrective action plan and a mutually agreed upon path forward between BNI and the DOE is being discussed.

2.1.2 Pretreatment Facility (PTF)

As of the end of this reporting period, the PTF was 56 percent complete overall:

Design/engineering was 85 percent complete, plant equipment and material procurements were 56 percent complete, construction was 43 percent complete, and startup and commissioning was 3 percent complete.

The PTF, HLW, Shared Services FY13 & FY14 Two-Year Interim Work Plan was received, and DOE has commenced reviewing the documentation and providing comments.

BNI Engineering has established five Technical Review Teams to assist with the resolution of identified technical issues: (1) Erosion/Corrosion, (2) Process Transfer/Evaporators/HPAV, (3) Heating Ventilation Air Conditioning (HVAC)/Process Vent Vessel Exhaust (PVV) and Filter, (4) Fire/Flooding and Environmental & Nuclear Safety (E&NS) Integration, and (5) Equipment Qualification.

The key on-going activities in PTF are related to the resolution of the Pretreatment Vessel Vent Process (PVP) system design, Hydrogen in Piping and Ancillary Vessels (HPAV), erosion/corrosion, vessel mixing technical issues, and hazards analysis.

The revised erosion/corrosion action plan to address material selection was issued in August 2012, and the schedule to complete the action items was issued as a part of the Two-Year Work Plan. A corrosion test scoping document is planned to be issued in December 2012.

The hydrogen generation rate (HGR) calculations for the ancillary vessels have been completed and will be issued after Verification and Validation (V&V) of the software. The remaining calculations in support of resolving the HPAV issue are currently planned to be completed in November 2012.

Aerosol testing to determine realistic entrainment coefficient for the PVV system has been completed. The preliminary results for both the small and medium scale tests resulted in an entrainment coefficient smaller than expected, which supports less extensive modification to the PVV system design. The final report documenting the results is expected to be issued in December 2012.

BNI is actively working to resolve issues regarding vessel mixing. Cloud height informational testing has been completed and user defined function (UDF) informational testing has been

initiated. The NQA-1 Computational Fluid Dynamics (CFD) V&V tests are planned to start after resolution of DOE/NETL (National Energy Technology Laboratory) comments on the test plan. The draft alternative study to identify options for the path forward on the non-Newtonian vessels was completed and the options are being evaluated. The construction of the facility to be utilized for the 14-foot vessel testing is progressing well.

The Project Execution Plan (PEP) for the preliminary design safety analysis (PDSA) update, which will integrate the nuclear safety activities with the vessel design confirmation activities, has been issued.

A revision to the 2010-2 Implementation Plan (IP) is being prepared to address the changes in strategy, approach and expectations and is planned to be issued to the DNFSB in December 2012.

The Extent of Condition review from the High Level Waste (HLW) vessel RLD-00008 weld discrepancies has been completed and the results evaluated. Based on the results, a more extensive inspection plan involving the similar PTF black cell and hard-to-reach vessels has been initiated.

Major activities for the next six months include: Complete Hazards and Operability Analysis (HAZOP) for the PVP system; complete the HPAV HGR rate calculations; issue the technical scaling selection basis document; submit the 2010-2 Implementation Plan revision; issue the corrosion test scoping document; and, issue Process Corrosion Data Sheet – Volume 3.

2.1.3 High-Level Waste Vitrification Facility (HLW)

As of the end of this reporting period, the HLW facility was 62 percent complete overall: Design/engineering was 89 percent complete, procurement was 81 percent complete, and construction was 43 percent complete, and startup and commissioning was 4 percent complete.

The PTF, HLW, Shared Services FY13 & FY14 Two-Year Interim Work Plan was received, and DOE is currently reviewing the documentation and providing comments.

BNI completed the work associated with Consent Decree Milestone (D-00A-21) “Complete Construction of Structural Steel to 37’ in HLW Facility.” DOE is in the process of validating the completion of this activity.

Testing was performed to evaluate the performance of the radial HEPA filter media when exposed to combined conditions of filter loading, temperature and humidity. The testing showed failure under these combined conditions. DOE has received a schedule from BNI for resolving the HEPA filter requirements. BNI is working with potential vendors to produce prototype filters that will meet operating conditions. Once the vendors are selected, the redesigned filters will be tested, the best filter design option selected, and the selected design will undergo qualifying testing for use in the WTP.

Seventy-five percent of the concrete has been poured in the HLW facility.

Fabrication of the Plant Wash and Drain Vessel (RLD-VSL-08) in England was completed and delivered to the Mid-Columbia Engineering Facility in April. After the initial inspection, additional inspections by BNI noted a number of weld deficiencies. BNI and DOE met to discuss a path forward, and BNI and the vendor are working to develop a detailed Repair Plan.

BNI has issued direction to the vendor to make the vessel compliant with the purchase order requirements for undercut and weld size.

BNI continues the Reliability Validation Process (RVP) to address the DOE level 1 finding on Systemic Integrated Management Performance Concerns. During the RVP, BNI will be conducting in-depth system reviews on critical systems. The systems currently under review for HLW are the RLD, High Level Waste Off-gas Process (HOP), and the HLW Melter Feed Process (HFP), and the majority of engineering work is on hold for these systems.

Factory acceptance testing was completed on Thermal Catalytic Oxidizers (TCO) which are being fabricated in Colorado.

The seismic rails for the decontamination rinse bogie have been set. The Dangerous Waste Permit (DWP) change notification has been approved so that the rinse bogie can be installed. The rinse bogie and decontamination vessel have been installed in the canister rinse tunnel and the rails have been aligned.

Installation of the remote-operated dampers in the filter cave has been completed, and the structural steel which supports the 14ft steel deck has also been installed. The steel decking installation has commenced and good progress has been made.

The melter transport trolley was received by HLW. This trolley will be used to remove and replace the melters.

Major activities for the next six months include: Confirm completion of 37' Structural Steel milestone; review supplier prequalification packages to establish a bidders list for the HEPA filter redesign; award contract(s) for prototype design/fabrication for the HEPA filter redesign; complete RVP reviews; complete the first of the two Authorization Basis Amendment Requests (ABAR) to support the Preliminary Documented Safety Analysis (PDSA) upgrade (the focus of the first ABAR is to incorporate changes in the facility and control description); and, finish all concrete slabs at the 37-foot level.

2.1.4 Low-Activity Waste Vitrification Facility (LAW)

As of the end of this reporting period, the LAW Facility was 60 percent complete overall: Design/engineering was 75 percent complete, procurement was 83 percent complete and construction was 59 percent complete, and startup and commissioning was 4 percent complete.

During this period, the LAW facility issued 3 stress calculations for the Secondary Offgas/Vessel Vent Process System (LVP). The remaining LVP system isometric (ISO) and pipe support drawings were also issued to and received by the BNI vendor, and the vendor is ready to start fabrication.

Procurement activities for the LAW facility continued to be focused on the LVP system components including the pre-heaters, caustic scrubber, and thermal catalytic oxidizer. Engineering continued to place an emphasis on the review of vendor calculations and vendor interactions during the ongoing procurement of LVP system components. Construction activities for the LAW facility focused on the facility partition wall installation and material installation for the melter refractory walls; this included installation of the two temporary 2.5 ton cranes and the setting of reinforcement steel in support of the placement of the concrete slab to support the condensate units.

Additional construction activities were initiated including: installation of the electrical equipment in the annex; removal of the Melter #2 shield/gas barrier lid; plumbing lay out/roughing in the annex; installation of Low-Voltage Electrical (LVE) non-segmented bus ducts in chases; and, installation of piping in the process cells and cable tray/engineered supports in the north finishing line.

Major activities for the next six months include: installation of the LAW melter power supplies; installation of the Auto Sampling (ASX) system; beginning installation of Melter #1 Refractory; receipt of the HEPA Pre-heaters, HEPA housings and the Thermal Catalytic Oxidizer (TCO) for the LVP system.

2.1.5 Balance of Facilities (BOF)

As of the end of this reporting period, the Balance of Facilities was 52 percent complete overall: Design/engineering was 76 percent complete, procurement was 65 percent complete, construction was 70 percent complete and startup and commissioning was 8 percent complete.

BNI continues to focus on identification of the individual facility requirements within BOF to support facility completion and turnover to the startup organization. While individual BOF facilities are not subject to a formal Operational Readiness Review (ORR), each facility will be evaluated to verify the adequacy of design and readiness for operation. The first stage of this validation will occur as part of the turnover from construction to the startup organization for component level testing.

BNI conducts weekly or bi-weekly meetings, as necessary, to support facility completion. These meetings focus on schedule reviews and punch list development for remaining construction activities. Regular meetings continue to be held for the WTP site switchgear buildings (87 and 91), the Steam Plant, and Chiller Compressor Plant (CCP).

Efforts to complete the remaining activities for the Consent Decree Milestone (A-012) "Steam Plant Construction Complete" are ongoing and scheduled for completion in November 2012.

Recent accomplishments associated with the BOF included: completion of coatings on the Non-Radioactive Liquid (NLD) system at the Water Treatment Plant; completion of floor coatings in the Chiller Compressor Plant; and installation of cathodic protection jumpers in the Steam Plant.

Major activities for the next six months include: completing construction of the cooling tower; completing construction of the BOF switchgear building (Bldg 91); and turnover of the WTP switchgear building (Bldg 87) from construction to the startup organization.

2.1.6 Analytical Laboratory (LAB)

As of the end of this reporting period, the Analytical Laboratory was 64 percent complete overall: Design/engineering was 72 percent complete, procurement was 81 percent complete, construction was 76 percent complete and startup and commissioning was 21 percent complete.

Considerable progress was made on completion of Consent Decree Milestone (A-05) "LAB Construction Substantially Complete." The construction forecast finish date is November 30, 2012 and the Consent Decree compliance date is December 31, 2012. Work continued on completing punch list activities in support of attaining the Consent Decree milestone. Detail/finishing work continued within the individual analytical areas with emphasis on the installation of commodities to support laboratory cabinets and analytical equipment.

Work continued on modifications to the HVAC system including addition of 20 expansion joints to the CSV system in support of seismic anchor motion, installation of RLD HEPA filter housings, and completion of the fire protection system.

Recent accomplishments for the LAB included: completion of electrical and mechanical installations on the C2 ventilation system air handling units at the 14ft elevation; installation of bottle racks for the breathing air system and the mixed gas system; completed installation of skids SCW-SKID-0004A and SCW-SKID-0004B for the steam condensate water system; and installation of hot cell load-in glovebox.

Major activities for the next six months include: installing instrument panels, cabinets, racks and cubicles; completing the high purity gas systems installation; as well as completing and closeout of the HVAC subcontract.

2.2 Milestone Compliance and Impact Evaluation

All milestones that have come due during the reporting period have been completed on or ahead of schedule.

2.3 Schedule Mitigation

As all milestones due during this reporting period have been completed on or ahead of schedule, no schedule mitigation has been necessary. During the reporting period, the Secretary of Energy engaged a number of recognized experts in various scientific fields to address known and emerging technical issues. See Section 2.1.1 for additional information on these technical issues.

2.4 Budget/Cost Status

Total funding available for the WTP Project in FY 2012 was \$886 million, which included \$740 million new budget authority and \$146 million of FY 2011 carryover funds. To date, the WTP Project has received \$8.234 billion of funding. Total funding available for the WTP Project in FY 2013 is \$529 million, which includes \$361 million of new budget authority appropriated during the Continuing Resolution, which expires March 27, 2013, and \$168 million of FY 2012 carryover funds. The next Continuing Resolution is expected to appropriate \$321 million, the balance of the budget of \$690 million. Through October, the WTP Project has received \$8.234 billion of funding.

For FY 2013, the WTP Project plans to spend \$690 million through September 2013. At the end of the reporting period, the total WTP Project spend is \$7.733 billion.

3.0 SINGLE-SHELL TANK WASTE RETRIEVALS

3.1 Accomplishments and Issues

During the reporting period of May 2012 through October 2012, bulk retrieval of tank 241-C-107 continued using modified sluicing with a Mobile Arm Retrieval System (MARS). A second retrieval technology for hard-to-retrieve materials was also finished during this retrieval period at C-108, C-104, and C-109. The retrieval of waste in tanks C-104 and C-109 achieved the Consent Decree criteria of less than 360 cubic feet and the limit of the retrieval technology. Tank C-108 finished above the Consent Decree volume criteria after deployment of two technologies to their respective limits of technology; on September 4, 2012, ORP submitted a request to forego implementing a third retrieval technology in accordance with the Consent Decree (see letter 12-TF-0037).

Accomplishments for tank retrieval construction and infrastructure upgrades during this period also included a number of infrastructure upgrades including operation of a new supernatant pump at double-shell tank 241-AN-106 which supports C-Farm retrievals, retrieval construction at 241-C-101 and 241-C-102, and construction excavation and heel pit removal in preparation for excavation needed to cut the tank dome in tank C-105. Continued progress for completion of the SST Retrieval Consent Decree Milestones as described in Appendix B of the Consent Decree is on-going.

Potential issues during this reporting period are the C-105 dome cutting activities which are planned to support placement of the Mobile Arm Retrieval System – Vacuum (MARS-V) are on hold during a differing professional opinion review of the proposed dome cutting method to be deployed.

3.2 Milestone Compliance and Impact Evaluation

All milestones that have come due during the reporting period have been completed on or ahead of schedule.

3.3 Schedule Mitigation

As all milestones due during this reporting period have been completed on or ahead of schedule, no schedule mitigation has been necessary during this reporting period.

3.4 Budget/Cost Status

The total budget at completion for SST retrieval activities in fiscal year 2012 is \$100.4 million. For the period May 1, 2012, through October 31, 2012, SST retrieval activities cost is \$57.3 million.

4.0 WRITTEN DIRECTIVES

The WTP Contracting Officer issued two letters to Bechtel National, Inc. (BNI) for Consent Decree related work at the WTP:

- 12-WTP-0222 dated June 28, 2012, *Contract No. DE-AC27-01RV14136 – Modification of Direction for Re-Baseline/Re-Plan the Waste Treatment and Immobilization Plant (WTP), and Request for Baseline Change Proposal and Associated Contract Change Proposal*
- 12-WTP-0263 dated August 16, 2012, *Contract No. DE-AC27-01RV14136 – Modification of Direction for Re-Baseline/Re-Plan the Waste Treatment and Immobilization Plant (WTP), and Request for Baseline Change Proposal(s) and Associated Contract Change Proposal(s)*

The Tank Farms Contracting Officer Representative issued one letter to Washington River Protection Solutions, LLC (WRPS) for Consent Decree related work on single-shell tank retrievals to clarify operational expectations for the mobile arm retrieval system at tank C-105:

- 12-TF-0039 dated September 20, 2012, *Expectations of the U.S. Department of Energy, Office of River Protection (ORP) for the Operations of the Upcoming 241-C-105 Mobile Arm Retrieval system (MARS) Rotary Union*

Copies of the subject letters are attached.

**ATTACHMENT 2
13-WTP-0022**

**THREE DOE LETTERS OF DIRECTION FOR
WORK REQUIRED BY CONSENT DECREE NO. 08-5085-FVS:
12-WTP-0222 DATED 06/28/12; 12-WTP-0263 DATED 08/16/12;
AND 12-TF-0039**

Pages 12 (Including Coversheet)



U.S. Department of Energy
Office of River Protection

P.O. Box 450, MSIN H6-60
Richland, Washington 99352

JUN 28 2012

12-WTP-0222

Mr. F. M. Russo, Project Director
Bechtel National, Inc.
2435 Stevens Center Place
Richland, Washington 99354

Dear Mr. Russo:

CONTRACT NO. DE-AC27-01RV14136 – MODIFICATION OF DIRECTION FOR RE-BASELINE/RE-PLAN THE WASTE TREATMENT AND IMMOBILIZATION PLANT (WTP), AND REQUEST FOR BASELINE CHANGE PROPOSAL AND ASSOCIATED CONTRACT CHANGE PROPOSAL

- References:
1. DOE-WTP letter from R. L. Dawson to F. M. Russo, BNI, "U.S. Department of Energy, Waste Treatment and Immobilization Plant (DOE-WTP) Response to Bechtel National, Inc. (BNI) Response to DOE-WTP Direction to Re-Baseline/Re-Plan the WTP Project," 12-WTP-0139, dated April 17, 2012
 2. DOE-WTP letter from R. L. Dawson to F. M. Russo, BNI, "Direction to Re-Baseline/Re-Plan the Waste Treatment and Immobilization Plant (WTP) and Request for Contract Change Proposal and Associated Baseline Change Proposal," 12-WTP-0065, dated February 21, 2012.

The purpose of this letter is to provide modification to the direction for planning to re-baseline the Pretreatment (PT) and High Level Waste (HLW) facilities that was previously provided in the referenced letters. Bechtel National, Inc. (BNI) is directed to discontinue current re-baseline and corresponding contract change proposal efforts associated with the PT and HLW facilities, and overall Shared Services (WBS 1.90) accounts. Instead, BNI is directed to apply baseline planning efforts to work scope through FY 2014, consistent with the priorities provided in Reference 1 and with continued focus on resolution of technical issues. Further detailed planning guidance will be provided under separate correspondence.

If you have any questions, please contact me at (509) 372-0098, or you may contact Thomas M. Brown, Deputy Federal Project Director, WTP at (509) 376-8656.

Sincerely,

Ronnie L. Dawson
Contracting Officer

WTP:JST

cc: BNI Correspondence



U.S. Department of Energy



**P.O. Box 450, MSIN H6-60
Richland, Washington 99352**

12-WTP-0263

AUG 16 2012

Mr. F. M. Russo, Project Director
Bechtel National, Inc.
2435 Stevens Center Place
Richland, Washington 99354

Dear Mr. Russo:

CONTRACT NO. DE-AC27-01RV14136 – MODIFICATION OF DIRECTION FOR THE RE-BASELINE/RE-PLAN OF THE WASTE TREATMENT AND IMMOBILIZATION PLANT (WTP) PROJECT AND REQUEST FOR BASELINE CHANGE PROPOSAL(S) AND ASSOCIATED CONTRACT CHANGE PROPOSAL(S)

- References:
1. DOE-WTP letter from R. L. Dawson to F. M. Russo, BNI, "Direction to Re-Baseline/Re-Plan the Waste Treatment and Immobilization Plant (WTP) and Request for Contract Change Proposal and Associated Baseline Change Proposal," 12-WTP-0065, dated February 21, 2012.
 2. DOE-WTP letter from R. L. Dawson to F. M. Russo, BNI, "Modification of Direction for Re-Baseline/Re-Plan the Waste Treatment and Immobilization Plant (WTP) and Request for Baseline Change Proposal and Associated Contract Change Proposal," 12-WTP-0222, dated June 28, 2012.
 3. BNI letter from R.W. Bradford to S. L. Samuelson, ORP, "Baseline Change Proposal 24590-06-06081 (Phase 1B) Law Direct Feed – LBL Re-plan," CCN: 243026, dated June 12, 2012.
 4. Combined letter from F. M. Russo, BNI and C. G. Spencer, WRPS, to R. L. Dawson and S. E. Bechtol, ORP, "Transmittal of 2020 Vision One System Proposal, CCN: 237679, dated October 24, 2011.
 5. DOE-WTP letter from R. L. Dawson to F. M. Russo, BNI, "U.S. Department of Energy, Waste Treatment and Immobilization Plant (DOE-WTP) Response to BNI Response to DOE-WTP Direction to Re-Baseline/Re-Plan the WTP Project," 12-WTP-0139, dated April 17, 2012.
 6. BNI letter from F. M. Russo to R. L. Dawson, DOE-WTP, "Notification of Change Related to DOE-WTP Direction to Re-Baseline/Re-Plan and Continued Contract Performance," CCN: 231183, dated April 4, 2012.

7. DOE-WTP letter from R. L. Dawson to F. M. Russo, BNI, "Notification of Change related to U.S. Department of Energy, Waste Treatment and Immobilization Plant (DOE-WTP) Direction to Re-baseline/Re-plan and Continued Contract Performance," 12-WTP-0168, dated May 10, 2012.
8. BNI letter from S.L. Sawyer to R.L. Dawson, DOE-WTP, "Re-baseline/Re-plan Baseline Change Proposal Submittal," CCN: 246760, dated July 25, 2012.
9. DOE-WTP letter from R. L. Dawson to F. M. Russo, BNI, "Modification of Direction for Re-baseline/Re-plan Waste Treatment and Immobilization Plant (WTP) and Request for Baseline Change Proposal and associated Contract Change Proposal," 12-WTP-0222, dated June 28, 2012.

This letter of direction modifies and clarifies the direction that the U.S. Department of Energy (DOE) previously provided to Bechtel National, Inc. (BNI), in Reference 1, as further modified and clarified in References 2, and 5 through 7. The purpose of this modification is to clarify both the deliverables required and DOE's expectation for BNI to continue to focus on resolution of known and emerging technical and management issues at the Waste Treatment and Immobilization Plant (WTP).

The key planning basis, assumptions, and funding guidance that was attached to Reference 1 are not changed by this modification/clarification, except as provided below. DOE's objective is to maintain substantial progress towards completing the Low-Activity Waste (LAW), Balance of Facilities (BOF), and Analytical Laboratory (LAB), collectively the LBL facilities, while resolving technical and management issues associated with completing design, construction, and startup of High-Level Waste (HLW) and PreTreatment (PT). Consequently, BNI is directed to proceed as follows:

1. Proceed with the current direction, approach, and schedule for the re-plan of the LBL facilities:
 - a) Complete the re-plan for the design, construction, and startup of LBL facilities. The re-plan should provide for the resolution of any issues which could compromise completion of construction and commissioning of the LBL facilities in accordance with Consent Decree milestones.
 - b) The re-plan must include the resolution of extent of condition reviews and the formulation of management actions necessary to complete the integration of nuclear safety matters with the design of facilities in order to achieve the successful and timely startup of these facilities.

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- c) Reference 1 established a deadline of no later than August 21, 2012, for the submission of a Baseline Change Proposal (BCP) for the LBL re-plan, with the associated contract modification proposal to follow no later than 45 days after that submittal. Reference 8 informed DOE that this date will be delayed until BNI can evaluate the requirements within this letter; however, it is DOE's expectation that the BCP shall be delivered no later than September 21, 2012.
 - d) BNI will maintain their current LAB and LAW Construction Substantially Complete milestones. BNI is to complete construction of LAB by June 16, 2014, complete construction of LAW by June 15, 2015, (excluding the direct feed scope), and complete construction of the supporting BOF facilities (as needed to support LBL Start-up activities). If these construction complete dates cause unanticipated problems or inefficiencies, then BNI must notify the Federal Project Director (FPD) and make relevant recommendations.
 - e) The LBL re-plan and associated BCP will include the phased CD-4 approach, as described in Reference 1, and any remaining LBL work scope for implementation of LAW direct feed not covered by BCP 24590-06-06081, which was transmitted to DOE in Reference 3. BNI's plan must include completing all tasks and documentation required for CD-4a. BNI's plan will allow for CD-4a package submittal to DOE no later than September 30, 2018, for review and concurrence.
 - f) BOF facility completions, such as the Emergency Turbine Generator and PT's Wet Chemical Storage Facility, that are not required to support LAW operations, may be re-planned at a later date as part of the revised HLW and PT strategy re-baseline.
2. Complete an integrated, comprehensive plan that will document the approach necessary to implement corrective actions and close the remaining technical and management issues. The plan will include a cost and schedule estimate for resolving these issues. The plan will provide the integrated framework for the preparation of a revised baseline for PT and HLW that will minimize risk and result in high confidence¹ from DOE of successful project completion in accordance with the revised baseline:
- a) Address remaining WTP technical and management issues sufficient to produce a high confidence¹ baseline, including, but not limited to:
 - i. DNFSB 2010-2 Pulse Jet Mixing Implementation Plan activities;
 - ii. Vessel Design Verification;

¹ Wherever the term "high confidence" is used in this document, it shall mean that DOE has made any such determination of high confidence in the exercise of its sole discretion.

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- iii. Corrective Action Plans for all recent Level 1 Findings; and
 - iv. Erosion and Corrosion
- b) Complete the development of nuclear safety basis documentation and fully integrate the safety basis with the WTP design.

BNI shall schedule a meeting with the WTP FPD no later than two weeks after receipt of this letter to propose a format and content for this plan. BNI will submit this plan to DOE for review by October 1, 2012.

3. Establish a BNI-chartered, DOE-endorsed external review panel to ensure BNI's plans for resolving the issues described in Item 2 above will result in the timely resolution of the open issues and achieve a high-confidence¹ estimate for completing the design, construction, and commissioning of the PT and HLW Facilities. BNI will submit a Draft Charter for this External Review to the FPD within 30 days of receipt of this letter for DOE's review and concurrence, and then initiate this review panel in order to complete and interim report by December 15, 2012.
4. Develop a BCP that will establish a near-term Performance Measurement Baseline (PMB) for the PT and HLW facilities for work planned to be performed through September 30, 2014. This BCP shall be submitted to DOE for review and approval by September 21, 2012.
- a) This BCP shall incorporate the FY 2013 and FY 2014 work scope of those technical issues, such as the DNFSB 2010-2 Implementation Plan that can be adequately definitized for cost and schedule to include in the PMB through FY 2014. This BCP will also correspond to the first two years of the Integrated Comprehensive Plan in Item 2 above and the priority of the BCP will be to complete those activities that will result in cost and schedule risk reduction through technical issue resolution.
 - b) Planned work must assure adequate safeguarding and preventive maintenance of constructed facilities, and procured or installed equipment.
 - c) Current procurement or construction activities that may be affected by the resolution of outstanding technical issues in Item 2 above should be evaluated to alleviate the need for rework. In order to ensure an orderly suspension and future re-start effort, planned work shall include activities to assure adequate safeguarding and verification

¹ Wherever the term "high confidence" is used in this document, it shall mean that DOE has made any such determination of high confidence in the exercise of its sole discretion.

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of the documentation for in-process fabricated equipment at the vendors that will be delayed, suspended, or cancelled due to changes in priority. Minimizing future cost and schedule impacts to DOE is of paramount consideration for this effort.

- d) DOE expects that production engineering work and construction for PT and HLW will not proceed until DOE determines that there is high confidence¹ that associated technical risk is substantially reduced. BNI will meet with DOE after the receipt of this letter to recommend those areas where production engineering and construction have minimal risk associated with proceeding.
5. Develop a BCP for the Shared Services (SS) account that supports LBL achieving CD-4a by no later than September 30, 2018, and the near term PMB for HLW and PT. Planning assumptions for post FY14 work must be adequately documented. This BCP shall be submitted to DOE for review and approval by September 21, 2012. Reference 9 requested a two year work-plan for the SS account; however, shared services must be planned out to support LBL completion activities.
6. Complete the "Options Workshop" report by August 21, 2012, consistent with the direction provided in Reference 5.

Attachment 1 includes those DOE Directives that BNI shall include in their submittals. This includes the addition of three new orders, updating three existing orders and deleting one order.

The re-plan work scope through FY 2014 will be implemented as a near term baseline until the necessary contract modifications are executed. The current PMB shall be archived pending resolution of BCPs and contract modifications resulting from the comprehensive re-baseline effort. Additional contract scope or directed changes that must be performed within this time period will be approved through the normal contract modification process. Remaining (post FY 2014) PT and HLW account scope/budget within the current PMB is to be moved into undistributed budget for that scope that is not being baselined at this time. Full Earned Value Management System reporting will resume upon implementation of the BCPs.

The integrated cost allocation method proposed by BNI in Reference 6 for the contract modification proposal(s) is acceptable. The contract modification proposal for the LBL re-plan should include the re-planning information associated with existing LBL work scope, plus all changes associated with the phased CD-4 approach and LAW direct feed, including those changes documented in Reference 3. It is acknowledged that BNI has already submitted a contract change proposal (Reference 4) that includes the work scope associated with the LAW direct-feed BCP provided in Reference 3.

¹ Wherever the term "high confidence" is used in this document, it shall mean that DOE has made any such determination of high confidence in the exercise of its sole discretion.

The WTP portion of the 2020 Vision One-System proposal submitted in Reference 4 is no longer valid and will be addressed as a separate BCP and contract modification.

Notwithstanding any previous direction in regards to submittal of contract modification proposal(s), BNI is responsible for determining whether or not it will submit request(s) for equitable adjustment(s) [REA(s)] associated with this re-baseline / re-plan. If BNI decides to submit REA(s), the previous instructions and/or direction for submittal still applies.

As directed in Reference 1, BNI shall submit the complete associated contract modification proposal(s) in accordance with the Federal Acquisition Regulation (FAR) 15.408, Table 15-2 – Instruction for Submitting Cost/Price Proposals When Certified Cost or Pricing Data Are Required Format IIIB, and separately identify the costs associated with the funding changes, any overrun(s), and other costs relating to other proposed changes. To further clarify the direction provided in Reference 7, BNI is directed to include the entirety (all four categories) of cost changes in the contract proposal, such that the contract proposal and BCPs are aligned. BNI is directed to provide certified cost and pricing data that meets the definition in FAR 2.101 – Definitions, for all four categories of changes, including cost overruns. Cost changes should reconcile to the end of the February 2012, Earned Value reporting period to maintain consistency of reconciliation between the BCPs and the contract proposal.

Notwithstanding any other response to BNI's numerous Notifications of Changes in regards to this re-baseline / re-plan, it is DOE's current position that BNI has not provided adequate information for the DOE to make a determination at this time as to whether or not this re-baseline / re-plan constitutes change(s) to the contract. In order to either confirm or deny that a change has taken place, the DOE requires more detailed and specific information as required by the contract clause I.84 "FAR 52.243-7 Notification of Changes (APR 1984)." DOE requests that BNI provide this more detailed and specific information as soon as it becomes available to BNI. Upon receipt, the Contracting Officer will promptly, within 30 calendar days after receipt of the information, respond to the notice in writing.

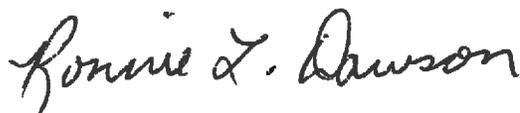
F. M. Russo
12-WTP-0263

-7-

AUG 16 2012

If you have any questions, please contact me at (509) 372-0098, or you may contact Thomas M. Brown, Deputy Federal Project Manager, Waste Treatment and Immobilization Plant at (509) 376-8656.

Sincerely,

A handwritten signature in cursive script that reads "Ronnie L. Dawson".

Ronnie L. Dawson,
Contracting Officer

WTP:GBO

Attachment

cc w/Attach:
BNI Correspondence

**Attachment
to
12-WTP-0263**

**MODIFICATION OF DIRECTION FOR THE RE-BASELINE/RE-
PLAN OF THE WASTE TREATMENT AND IMMOBILIZATION
PLANT (WTP) PROJECT AND REQUEST FOR BASELINE
CHANGE PROPOSAL(S) AND ASSOCIATED CONTRACT
CHANGE PROPOSAL(S)**

**Doe Orders and Directives to be Added,
Updated and Deleted from the WTP Project**

No. of Pages, (not including cover sheet): 1

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Attachment
12-WTP-0263

DOE Orders and Directives to be Added, Updated and Deleted From the WTP Project

ADD:

O 225.1B CRD Accident Investigations

O 426.2 CRD Personnel Selection, Training, Qualification, and Certification Requirements for
DOE Nuclear Facilities

O 433.1B CRD Maintenance Management Program for DOE Nuclear Facilities

UPDATE:

From O 210.2 CRD DOE Corporate Operating Experience Program to O 210.2A CRD (same
title)

From O 226.1A CRD Implementation of DOE Oversight Policy to O 226.1B CRD (same title)

From M 471.3-1 CRD Manual for Identifying and Protecting Official Use Information to M
471.3-1 Chg 1 CRD (same title)

DELETE:

O 5480.20A Chg 1 CRD Personnel Selection, Training, Qualification, and Certification
Requirements for DOE Nuclear Facilities (replaced by O 426.2)

CRD – Contractor Requirements Document



U.S. Department of Energy
Office of River Protection

P.O. Box 450, MSIN H6-60
Richland, Washington 99352

SEP 20 2012

12-TF-0039

Mr. Michael D. Johnson, President
and Project Manager
Washington River Protection Solutions LLC
2440 Stevens Center Place
Richland, Washington 99354

Dear Mr. Johnson:

CONTRACT NO. DE-AC27-08RV14800 – EXPECTATIONS OF THE U. S. DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION (ORP) FOR THE OPERATION OF THE UPCOMING 241-C-105 MOBILE ARM RETRIEVAL SYSTEM (MARS) ROTARY UNION

Reference: ORP letter from S. L. Samuelson to M. D. Johnson, WRPS, "Approval of Tank Farms Safety Basis Amendment to Address the Mobile Arm Retrieval System Rotary Union," 12-NSD-0053, dated August 21, 2012.

ORP has recently approved the Tank Farms Documented Safety Analysis and Technical Safety Requirements submitted in the reference, and its attached safety evaluation report. The reference allows continued operations of the MARS rotary union to support waste retrieval from 241-C-107 even though evidence of waste seepage from the rotary union has been discovered. While continued operation of the rotary union has been accepted, it is an ORP expectation that all reasonable and prudent actions be taken to prevent seepage from future deployments of the MARS technology. Specifically, it is an ORP expectation that an engineering review of the rotary union be performed that incorporates all the lessons learned from the 241-C-107 MARS for use in all future deployments of the MARS technology.

This letter is not considered to constitute a change to the Contract. In the event the Contractor disagrees with this interpretation, it must immediately notify the Contracting Officer orally, and otherwise comply with the requirements of the Contract clause entitled 52.243-7, "Notification of Changes."

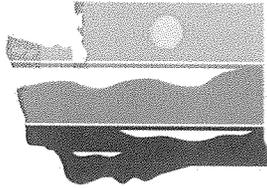
If you have any questions, please contact me, or your staff may contact Joanne F. Grindstaff, Federal Project Director, Tank Farm Project, (509) 376-6202.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Fletcher", is written over a horizontal line.

Thomas W. Fletcher,
Contracting Officers Representative

cc: C. A. Simpson, WRPS
WRPS Correspondence



DEPARTMENT OF
ECOLOGY
State of Washington

Washington State Department of Ecology
Nuclear Waste Program
Hanford Project

Document Receipt Verification

Date: 1/31/13

Incoming

Outgoing

To: Jane A. Hedges

Receiver Signature: *Andrea Adams*

From: Kevin W. Smith

Document Title and Number:

13-WTP-0022

January 2013 Semi-annual Report for Consent Decree Section IV-C-1, Washington v. Department of Energy, Case No. 08-5085 FVS, for Waste Treatment and Immobilization Plant (WTP) Construction and Startup Activities and Tank Retrieval Activities for May 1, 2012 through October 31, 2012