

Office of River Protection

CONTRACT MANAGEMENT PLAN

**DESIGN, CONSTRUCTION, AND COMMISSIONING OF
THE HANFORD TANK WASTE TREATMENT &
IMMOBILIZATION PLANT**

CONTRACT NO. DE-AC27-01RV14136

Bechtel National, Inc.



**July 11, 2002
Richland, Washington**

DOE/ORP-2001-02 (Rev. 3)

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(original signed by)

Leif Erickson, Deputy Manager
Office of River Protection

July 2002

Date

Rev. 3 Changes From Rev. 2:

- Made minor editorial changes as appropriate, including verb tense to reflect the current time frame.
- References to “Bechtel Washington” throughout were changed to “Bechtel National, Inc.” to better reflect the legal form of the contracting party
- Updated the Contracting Officer’s Representatives list.
- Eliminated description of the deliverable milestones due shortly after contract award.
- Added the due date for major schedule Milestone M2 – Start of Cold Commissioning.
- Deleted the Contract Milestone schedule graphic.
- Deleted ORP organizational responsibilities and incorporated by reference the organizational descriptions found in ORP M 411.1-1 *Safety Management Functions, Responsibilities, and Authorities Manual* .
- Eliminated the “Transition Period Look Ahead” section to reflect the current point in time.
- Updated the invoice and quarterly fee payment sections to reference the applicable ORP Implementing Directives.
- Change management is discussed and incorporates by reference ORP N 540.5, WTP Baseline Change Control
- Updated Appendix A Deliverables to reflect due dates that had be changed by contract modifications prior to this Revision 3 Plan date.
- Updated Appendix B Clause I.17 to reflect the deletion of this clause in Contract Modification No. M019

Introduction

The U.S. Department of Energy (DOE), in accordance with the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999, established ORP to successfully execute and manage the River Protection Project (RPP), formerly known as the Tank Waste Remediation System. The mission of the RPP is to build and operate the Waste Treatment Complex to complete the cleanup of Hanford's highly radioactive tank waste.

The Office of River Protection oversees the Hanford Site's tank waste remediation system, which is a large and complex effort to remediate 60% (by volume) of the nation's and 90% (by radioactivity) of the Hanford Site's radioactive waste resulting from nuclear weapons development. It includes remediating approximately 190 million curies in 54 million gallons of liquid and solid waste that have been accumulating in underground storage tanks for more than 50 years and 143 million curies in cesium and strontium capsules.

An important milestone in completing this mission was the December 11, 2000, award of Contract No. DE-AC27-01RV14136 to Bechtel National, Inc., of San Francisco, CA, for the design, construction, and commissioning of the Hanford tank waste treatment & immobilization plant. Through this Contract, ORP will manage and oversee the design, construction, and commissioning of a new Waste Treatment and Immobilization Plant (WTP) that will treat and immobilize the waste for ultimate disposal. The WTP is comprised of four major elements, pretreatment, LAW immobilization, HLW immobilization, and balance of plant facilities.

Purpose of Plan

The purpose of this Contract Management Plan (CMP) is to provide guidance to DOE employees involved with the management and administration of this contract. Such guidance should be a useful tool to help the DOE to ensure that BNI and itself, comply with all terms and conditions that govern Contract No. DE-AC27-01RV14136. This CMP has been created with the following guiding principles:

- (1) Shall be a useful tool for administering the contract;
- (2) Shall be an executive summary of the roles and responsibilities of the contracting parties;
- (3) Shall identify who is responsible for various contract administration activities; and
- (4) Shall be flexible and adapt to changing circumstances;

Successful management and administration of this contract will require the coordinated efforts of a variety of DOE personnel. Some of these key personnel include: the Contracting Officer's Representatives (CORs); the Contracting Officer (CO); and Contract Specialists (CSs); General Counsel; DOE Office of Safety Regulation officials and Quality Assurance personnel. This CMP will in many places delineate the roles and responsibilities of these team members and will provide for their interaction on key contract administration duties.

This CMP does not capture every action that the DOE or BNI will need to complete to make the contract successful. To do so with a contract of this complexity is neither feasible, nor practical.

This CMP does set forth the higher- level requirements, deliverables, and tasks necessary, and describes the overall process within which the tasks are performed.

Contract Summary & Principal Features

Contract No. DE-AC27-01RV14136 – Design, Construction, and Commissioning of the Hanford Waste Treatment and Immobilization Plant.

The WTP Conceptual Design and supporting information were provided to the Contractor. In the interim period prior to Contract award, the Tank Farm Contractor maintained the WTP Conceptual Design and supporting information, conducted limited additional design and optimization. Subsequent to Contract award, the Tank Farm Contractor transitioned the WTP Conceptual Design to the Contractor.

The Contractor was required to review the WTP Conceptual Design and supporting information, complete process and facility design, manage construction and procurement, conduct acceptance testing, select and integrate a subcontractor into the project team to provide the necessary operability and commissioning capability, and conduct all required environmental, safety, quality, and health actions. From Contract Award, the Contractor will be the design authority responsible for the WTP design. The Contract provides for full Contractor accountability for performance, cost, and schedule throughout the Contract period of performance.

The WTP Conceptual Design provides a reference solution that appears to meet project requirements, but has significant potential for optimization. DOE will seek to improve the WTP by incentivizing the Contractor to optimize life-cycle performance, cost, and schedule of the WTP, including the process design, facility design, and technologies. DOE will evaluate Contractor performance against Contract requirements and review Contractor proposed changes to Contract requirements, but will not accept performance or approve changes that adversely impact overall system-level performance, life-cycle cost, or schedule. DOE reserves the unilateral right to disapprove any adverse change.

Head of Contracting Activity and Authority

The Manager, Office of River Protection (by position not name), is the Head of the Contracting Activity (HCA). HCA authority limitations are set forth in a February 26, 2000, memorandum from the Acting Procurement Executive. A copy of this delegation memorandum is on file in the ORP Contract Management Division office.

Contracting Officer(s) and Authority

The principal ORP Contracting Officer for Contract No. DE-AC27-01RV14136 is:

U. S. Department of Energy
Office of River Protection, MS H6-60
Michael K. Barrett
Contracting Officer
Contract Management Division
P.O. Box 450
Richland, WA 99352

Tele: (509) 373-4143
Fax: (509) 372-2781
E-mail: Michael_K_Barrett@rl.gov

Other warranted ORP Contracting Officers may execute actions in his absence consistent with this Plan.

The CO has authority to enter into, administer, or terminate Federal contracts for goods and services. The CO must ensure that all requirements of law, executive orders, regulations, and all other applicable procedures, including clearances and approvals, have been met. The CO is also responsible for ensuring performance of all necessary actions for effective contracting, ensuring compliance with the terms of the contract, and safeguarding the interests of the United States in its contractual relationships. The FAR allows the CO wide latitude to exercise business judgment. This duty includes the balanced objective of safeguarding the interests of the United States in its contractual relationships and ensuring that contractors receive impartial, fair, and equitable treatment.

Contracting Officer Representative(s) and Authority

The COR will be designated by separate letter and will represent the CO in the technical phases of the work. The COR is not authorized to change any of the terms and conditions of this Contract. The CO, through properly written modification(s) to the Contract, is the only person authorized to make changes to the work scope.

The principal Contracting Officer Representative (COR) for Contract No. DE-AC27-01RV14136 is:

William J. Taylor
Assistant Manager for Project Delivery
U. S. Department of Energy
Office of River Protection
MS H6-60
P.O. Box 450
Richland, WA 99352

Other alternate CORs may be appointed in the separate COR designation letter provided to the Contractor. The alternate CORs generally will be at the Deputy Manager and Assistant Manager level of the ORP organization, and other speciality CORs with specific targeted limitations (e.g., Office of Chief Counsel authority for the Litigation Management Plan).

The COR will have specific authorities related to technical guidance, inspection and monitoring and these will be prescribed to him/her in writing by the CO. The CO will also notify the contractors in writing of the specific authorities granted to the COR. Representative tasks to be assigned to the COR are as follows:

- Oversee and evaluating work in process
- Inspection of completed work and preparation of recommendations to the CO regarding the acceptability of the product
- Be the technical representative for contract administration
- Review change proposals for need and technical adequacy as appropriate
- Assist in evaluating and making recommendations for acceptance or rejection of nonconforming product
- Provide oversight as required of contractor's compliance with schedule and technical performance
- Ensure that Government-furnished property is delivered to the Contractor and monitor the Contractor's use of the property
- Report to the CO any inadequacies noted in the specifications and technical requirements
- Review for quality and timeliness, the Contractor's submission of required contract deliverables
- Review contractor claims for payment and make payment recommendations to the CO
- Develop DOE's prompt responses to contractor deliverables and provide recommendations to the CO
- Review the Contractor's monthly status reports and Critical Quarterly Analysis and report to the CO any schedule delays or progress problems evidenced by the IMP
- Monitor contractor conducted testing procedures
- Ensure that DOE meets its compliance obligations

ORP Organizations

Various ORP organizational elements have contract management responsibilities and ownership for actions under this CMP. Those organizations are documented under ORP M 411.1-1 *Safety Management Functions, Responsibilities, and Authorities Manual*.

Other Administration Parties: These organizations provide industrial relations and contract audit functions:

- The Richland Operations Office Procurement Services Division provides industrial relations and labor management guidance and advice to the ORP Contracting Officer.
- The Defense Contract Audit Agency under the authority, direction, and control of the Under Secretary of Defense (Comptroller), is responsible for performing contract audits for the Department of Energy, and providing accounting and financial advisory services regarding contracts and subcontracts for ORP contract administration activities. These services are provided in connection with negotiation, administration, and settlement of contracts and subcontracts.

Contract Schedule Milestones

Principal contract deliverable milestones are found in Section C. Principal contract schedule milestones are found in Section F of the contract and are as follows:

Milestone No.	Activity	Date
M1	Start of Construction	TBD
M2	Start of Cold Commissioning	February 12, 2007
M3	Completion of Acceptance Testing	November 30, 2007
M4	Start of Hot Commissioning	December 31, 2007
M5	Completion of Hot Commissioning	January 31, 2011
M6	Completion of Contract Requirements	July 31, 2011

The Milestone for Start of Construction is not specifically named in the Contract, but is given in the WTP Project Baseline required by Section C, Standard 1, *Management Products and Controls*, and concurred on by the U.S. Department of Energy (DOE).

Contract Summary By Section

The contract is structured to follow the FAR Uniform Contract Format

<u>Section</u>	<u>Description</u>
A	Standard Form 33
B	Supplies or services and prices
C	Description/specifications
D	Packaging and marking
E	Inspection and acceptance

F	Deliveries or performance
G	Contract administration data
H	Special contract requirements
I	Contract clauses
J	List of documents, exhibits, and other attachments

Project Measurement Tools

Section C, Standard 1, *Management Products and Controls*, describes the management products and controls required during the Contract period. DOE intends that RPP activities will be managed as a single project by ORP, while still allowing the Contractor autonomy to accomplish the work scope defined in the Contract. The RPP Project Management Plan (DOE/ORP-2000-06) provides the overall direction for DOE and Contractor project management activities, including baseline management, life-cycle planning, requirements management, and technical integration. The Contractor is encouraged to use an existing corporate-level project management system that meets the requirements of this Standard and the RPP Project Management Plan.

(a) Transition Plan – An overall plan and schedule for achieving a smooth and expeditious transition of WTP activities and design assets/products.

(b) Project Execution Plan – Include two distinct parts – a Project Control System Description and the Project Baseline Description. Requirements for the Project Control System Description and Project Baseline Description are described below.

(c) Project Control System – The Contractor is required to provide a Project Control System that produces accurate planning, budgeting, reporting, and change control data and meets the requirements of the RPP Project Management Plan. The Contractor is required to provide all necessary technical information and support related to the WTP Project to enable DOE to proceed with the critical decision process (DOE Order 430.1A, Life-Cycle Asset Management) and to enable DOE to meet the data requirements of the integrated planning, accountability, and budgeting system. The Contractor is required to also support ORP in developing and maintaining the integrated RPP Baseline.

(d) WTP Project Baseline – The Contractor is required to develop and maintain an integrated and traceable scope, schedule, and cost baseline for the WTP. The baseline shall include: the WTP project technical requirements; definition of work scope to achieve those requirements; schedule to implement project work scope; cost to implement project work scope on the projected schedule; and assessment of the risks to achieving the baseline. The WTP Project Baseline will be summarized in the Project Execution Plan and will be supported by additional baseline documentation, as necessary.

(e) WTP Risk Assessment – The Contractor is required to perform a WTP risk assessment to implement the risk management process defined in the Project Execution Plan. A quantitative assessment of the WTP risks will be maintained and support maintenance of the RPP overall risk assessment. The risk assessment will identify the major risks to achieving the baseline and the Contractor's approach for managing those risks. The Contractor is required to include risk management status reports in the monthly status to DOE.

(f) WTP Performance and Reporting System – The Contractor is required to develop a reporting system that reports project performance on the technical work, schedule, and cost profile defined in the WTP baseline at a level agreed to by DOE. Reporting under this system is through Contractor-prepared monthly status reports that include narrative and performance curves (earned value based on the schedule) for the cost and job hour status (e.g., planned, actual, and forecast percents complete). The percent variances will be identified and addressed. Status reports will include data for the total project cost and performance for the major WBS elements.

(g) Quarterly Critical Analyses – The Contractor is required to submit a comprehensive quarterly report that analyzes the overall status of the WTP Project and key metrics, including: (i) narrative summary of overall project status; performance metrics reported quarterly, cumulative, and at completion for budgeted cost of work performed, budget cost of work scheduled, and actual cost of work performed; analysis of schedule trends, project float, and critical path performance; analysis of cost trends; analysis of critical manpower skills and other resources; and use of contingency.

(h) Occurrence Reporting – The Contractor is required to adhere to DOE Manual 232.1-1A, *Occurrence Reporting and Processing of Operations Information* (or current revision) with Hanford Site specific requirements and methods for notification.

(i) Environment, Safety and Health Reporting – In addition to Occupational Safety and Health Act of 1970, and the Price Anderson Amendments Act of 1988 (10 CFR 820) reporting requirements, the Contractor is required to report all events and information specified in DOE Order 231.1, *Environment, Safety and Health Reporting*. The process and form of reporting will meet the requirements of this Order and DOE Manual 231.1-1, *Environment, Safety and Health Reporting Manual*.

DOE action responsibilities for the Contractor's project measurement and reporting tools is shown in Table C.5-1.1 *Deliverables* shown in Section C of the Contract.

Fee Administration

The DOE objective under this Contract is to receive a completed WTP that meets or exceeds the contractual performance requirements. Incentives are structured to ensure a strong financial motivation for the Contractor to achieve DOE goals for project cost, schedule, and operational performance. The Contractor's fee is held largely at risk subject to the successful "Completion of Hot Commissioning" and "Completion of Contract Requirements" for the WTP.

The WTP contract is a cost-plus-incentive fee (CPIF) completion Contract. The Contract provides incentive fees for cost performance, schedule performance, and operational performance. The target cost, target cost range (upper and lower values), and fees are described in Section B, *Supplies or Services and Prices/Costs*, with specific amount described in contract Table B-1, *Incentive Fee Structure*.

Table B.1 Incentive Fee Structure

Cost Performance Fee		
Target Cost (excluding fee)	\$3,965,000,000	Target Cost for "Completion of Contract Requirements" (as specified in Section C).
Target Fee (Cost Performance)	\$275,567,500	Target Fee (Cost Performance) that can be earned if the Actual Cost at Contract Completion falls within the Target Cost Range.
Target Cost Range Lower Value Upper Value	\$3,766,750,000 \$4,163,250,000	Lower Value to Upper Value of the Target Cost Range.
Minimum Cost Performance Fee	\$128,862,500	
Cost Share Ratio	80/20	Government/Contractor Share Ratio. For each \$1 of cost underrun/overrun, the Contractor's Cost Performance Fee would be increased/decreased by \$0.20
Schedule Performance Fees		
Start of Hot Commissioning Fee	\$19,825,000	Fee earned for achievement of "Start of Hot Commissioning" on or before scheduled date (as specified in Sections C and F). No fee is earned for achievement after the scheduled date.
Completion of Hot Commissioning Fee	\$49,562,500 to \$(49,562,500)	The minimum and maximum fee range for "Completion of Hot Commissioning" (as specified in Section C).
	\$135,788 per day	Fee will be reduced for each day of delay beyond the date of "Completion of Hot Commissioning" specified in Section F. Fee will be increased for each day the milestone is met prior to the date of "Completion of Hot Commissioning" specified in Section F.
Operational Performance Fee		
Operational Performance Fee	\$39,650,000	May be earned as specified in Clause B.5.(c).
Maximum/Minimum Fee		
Maximum Fee	\$594,750,000	
Minimum Fee	\$79,300,000	

The target cost and fee amounts shown above may be modified from time to time by the Contracting Officer for equitable adjustments made under contract changes. A condition precedent to earning fee in an amount greater than the Minimum Fee is successful "Completion of Hot Commissioning" of the WTP, as specified in Section C, Standard 5, Commissioning. This Section will not impact the Contractor's ability to receive Provisional Fee payments in accordance with Clause B.7 of the Contract. However, if "Completion of Hot Commissioning" is not successfully achieved, any previously paid fee, including Provisional Fee and Schedule Performance Fee in excess of the Minimum Fee is required to be repaid to DOE in accordance with Clause B.9.

(a) Cost Performance Fee - The Cost Performance incentive is structured to assure that DOE and the Contractor share in the cost underruns or overruns from the Target Cost Range. The Target Fee (Cost Performance) can be earned if the Contractor's Actual Cost at Contract Completion falls within the Target Cost Range. If the Actual Cost at Contract Completion is above or below the Target Cost Range, the earned Cost Performance Fee will be adjusted upward or downward on an 80/20 cost shareline for cost overruns or underruns.

(b) Schedule Performance Fees – The schedule performance incentives indicate DOE's desire to accelerate completion of critical milestones. There are two incentives connected to critical activities, "Start of Hot Commissioning" and "Completion of Hot Commissioning." (1) An amount of \$19,825,000 may be earned and paid for commencing "Start of Hot Commissioning" on or before the target date for this critical milestone. This schedule performance fee will not be paid if the milestone is achieved after the date specified in Section F. The payment is provisional based on conditions specified in Clause B.4. (2) A schedule performance fee will be earned and paid for achievement of "Completion of Hot Commissioning" before the date specified in Section F.

(c) Operational Performance Fee – The Contractor may earn up to a maximum of \$39,650,000 in fee for operational performance improvements proposed by the Contractor during Contract performance. Operational performance improvements include, but are not limited to, improvements that exceed the minimum Contract requirements related to operability, reliability, maintainability, throughput, life-cycle performance, system interfaces; and improvements related to waste minimization and energy efficiency.

The Contractor will be paid cost performance fee provisionally during the period of performance of the Contract. The amount to be paid will be determined quarterly and will be based on the Contractor's cumulative cost and schedule performance. A portion of the Provisional Fee will be paid quarterly and the remainder will be withheld pending successful completion of the Contract. The portion of provisional fee paid will be: (i) for quarters before "Start of Construction," an amount equal to 25% of the Provisional Fee; (ii) for quarters after "Start of Construction" and before "Completion of Acceptance Testing," an amount equal to 50% of the Provisional Fee; and (iii) for those quarters following "Completion of Acceptance Testing," an amount equal to 75% of the Provisional Fee.

Provisional Fee payments will cease after the end of the quarter that the "Completion of Contract Requirements" is scheduled to occur. Provisional Fee payments will be made for a maximum of 42 quarters.

The ORP Manager may make unilateral fee reductions if the Contractor fails to obtain approval of the ISMS or fails to achieve the minimum performance requirements of the System, or if there is a catastrophic event (such as, a fatality, or a serious workplace-related injury or illness to one or more Federal, Contractor, or subcontractor employees or the general public, loss of control over classified or special nuclear material, or significant damage to the environment).

Fee is substantially unearned on this contract until successful completion of all contract requirements, including successful hot commissioning. Partial payment of "Provisional Fee" for the Cost Performance Fee will be made in accordance with Section B of the contract. Detailed procedures for performance validation and payment will be set forth in Appendix C to this Plan.

Specific procedures for BNI cost performance fee payments are provided in ORPID M 210.2-1 *Provisional Payment Of Cost Performance Fee For The WTP Contract*.

Deliverables & DOE Owners

Various deliverables are required during contract performance. Contract Table C.5-1.1, *Deliverables*, denotes the Item No., Deliverable Reference, Action Required, DOE Action Party, Point of Delivery, and Contract Due Date for each deliverable. Appendix A to this CMP shows contract deliverables by date and year and Assistant Manager lead and support responsibilities for review of these documents.

Beyond Transition

Facility and Process Design: The Contractor is required to prepare all design documents and required supporting information; ensure that the facility is designed to meet all requirements, and that these requirements are captured in a single location to achieve a systematic approach to design; design the WTP (Pretreatment, HLW Vitrification, LAW Vitrification, and balance of plant facilities) consistent with the functional requirements described in Section C; perform optimization; and conduct periodic design, constructability, and operability reviews to status the design activities, and resolve design oversight comments from DOE.

Construction Management and Procurement: The Contractor is required to plan and execute all construction, procurement, and acceptance testing. Specific requirements are to provide a Construction, Procurement, and Acceptance Testing Plan; identify all long lead procurement actions and describe the contracting approach and method of performance; procure all required material and equipment; prepare bid and work packages; manage or perform all required construction; and manage the construction site and provide all required construction support services.

Acceptance Testing: The Contractor is required to provide integrated construction acceptance test plans and procedures for DOE concurrence.

Facility Commissioning: The Contractor is required to commission, demonstrate operational performance, and transition the WTP to the future operations contractor(s).

Invoice Payments and Quarterly Fee Payments

Invoice processing is to be performed bi-weekly in accordance with Clauses G.4 *Billing Instructions* and I.68 FAR 52.232.25 *Prompt Payment* which requires payment within seven days of submitted an approved invoice.

Specific procedures for BNI invoice payments are provided in ORPID M 131.7, *ORP Review of Bechtel National, Inc. Semimonthly Invoices*.

Specific procedures for BNI cost performance fee payments are provided in ORPID M 210.2-1 *Provisional Payment Of Cost Performance Fee For The WTP Contract*.

Change Management

ORP M 540.5, *Evaluating BNI Contract Change Requests and Claims* describes and standardizes a process for performing reviews and making fair and equitable determinations on the merits of BNI contract change requests and/or claims for equitable adjustment, provides guidance to ORP organizations involved in these reviews, and establishes the information requirements of the ORP Change Control Board needed to authorize proceeding into negotiations with BNI.

Deliverable Reviews

Separate deliverable review plans will be developed for each deliverable. AM review responsibilities are provided in Attachment A to this Plan.

Other Contract Management Responsibilities

Other contract management responsibilities may be added as necessary in future revisions to this Plan.

Attachments:

Appendix A – Bechtel Deliverable Schedule (Chronological)
Appendix B – DOE Contract Management and Administration Actions