

# PERFORMANCE EVALUATION AND MEASUREMENT PLAN

## Incentive B – Award Fee

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

CONTRACT NO. DE-AC27-01RV14136

Evaluation Period 2018  
January 1, 2018, to December 31, 2018

**Bechtel National, Inc.**  
Richland, Washington  
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Issued By:

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Appendix A Award Fee Rating Guide

## 1.0 AWARD FEE OBJECTIVES

This Performance Evaluation Measurement Plan (PEMP) contains the following seven award fee objectives:

1. Project performance (cost, schedule, and efficiencies)
2. One System, startup and commissioning and plant management, and engineering performance
3. Construction, field and resident engineering, occurrence reporting, and conduct of operations
4. Environmental, safety, health, and safety conscious work environment
5. Quality assurance (QA) program and quality of performance
6. Nuclear safety
7. Pretreatment (PT) and High-Level Waste (HLW) facilities.

### 1.1 EVALUATION PROCESS

The U.S. Department of Energy (DOE), Office of River Protection (ORP) will evaluate and measure performance in each of the seven award fee objectives using the criteria in each objective. The evaluation will assign an adjectival rating and corresponding award fee earned to each award fee objective (Table 1, “Award Fee – Incentive Ratings and Definitions”). The fee-determining official (FDO) may consider any other pertinent factors in making a final fee determination.

Table 1. Award Fee – Incentive Ratings and Definition. (2 pages)

Adjectival Rating	Definition	Percentage of Award Fee Earned
Excellent	Contractor has exceeded almost all of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.	91% to 100%
Very Good	Contractor has exceeded many of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.	76% to 90%
Good	Contractor has exceeded some of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.	51% to 75%

Table 1. Award Fee – Incentive Ratings and Definition. (2 pages)

Adjectival Rating	Definition	Percentage of Award Fee Earned
Satisfactory	Contractor has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.	≤ 50%
Unsatisfactory	Contractor has failed to meet overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.	0%

## 1.2 INCENTIVE RATINGS AND DEFINITIONS

ORP will utilize Table 1 to rate performance. ORP will utilize a separate color-coded table (see Appendix A, “Award Fee Rating Guide”) for informal periodic evaluations. The final evaluation will reflect the adjectival rating scale in Table 2, “Award Fee – Fee Earnings Calculations.”

Table 2. Award Fee – Fee Earnings Calculation.

Award Fee Objective		Award Fee Available	Adjectival Rating	Percentage of Award Fee Earned	Award Fee Dollars Earned
1	Project Performance (Cost, Schedule, and Efficiencies)	\$1,700,000			
2	One System, Startup and Commissioning, and Engineering Performance	\$1,700,000			
3	Construction, Field and Resident Engineering, Occurrence Reporting, and Conduct of Operations	\$1,100,000			
4	Environmental, Safety, Health, and Safety Conscious Work Environment	\$1,100,000			
5	Quality Assurance Program and Quality of Performance	\$1,200,000			
6	Nuclear Safety	\$800,000			
7	High-Level Waste and Pretreatment Facilities	\$272,603			
<b>Total Award Fee (Period 2018)</b>		<b>\$7,872,603</b>			

### **1.3 AWARD FEE OBJECTIVE 1: PROJECT PERFORMANCE (COST, SCHEDULE, AND EFFICIENCIES)**

Award fee criteria:

- Project performance
- Cost performance and efficiencies.

#### **1.3.1 Project Cost and Schedule Performance**

ORP will evaluate the contractor's cost and schedule performance based upon actual incurred costs compared to the total estimated costs of that work and actual schedule performance as compared to the planned schedule. The analysis of cost control performance will give consideration to changed programmatic requirements, changed statutory requirements, and/or changes beyond the contractor's control, which impact costs. ORP will rely on other objective and/or subjective cost and schedule performance elements, such as critical path and float analysis, to evaluate the contractor's performance, which includes, but is not limited to the following:

- Contractor Assurance System – Project metrics represent accurate project performance and are used to monitor performance trends. Actions are taken based on performance trends to adjust project performance.
- Cost and Schedule Control – The contractor maintains cost and schedule control (i.e., actual costs incurred for work performed are equal to or less than the estimated costs for that work) and actively pursues cost containment and reduction through innovative approaches and management of resources. Cost control will be monitored against the Performance Measurement Baseline for the Low-Activity Waste (LAW) Facility, Balance of Facilities (BOF), and Analytical Laboratory (LAB) (collectively referred to as LBL)/direct-feed low-activity waste (DFLAW), and Project Services.
- Communication – The contractor is expected to be transparent and communicate clearly and effectively for the reporting of data and metrics in contract deliverable 1.12.
- Risk Management – The contractor shall identify new threats, opportunities, and risk closures to demonstrate an effective risk program. Risks shall be identified early to maximize risk mitigation and risks shall be tracked, managed, and monitored using the Waste Treatment and Immobilization Plant (WTP) Risk Register Database. Risk effectiveness shall be reported on for closed threats, open threats, and opportunities realized.
- Available Funding Utilization – The contractor is expected to optimize utilization of funds while planning for an appropriate amount of carryover to cover outstanding year-end commitments and to provide for the first few weeks of continuing operations into the next fiscal year.
- Baseline and Contract Alignment – The contractor shall work closely with ORP to maintain alignment between the baseline and the contract. The contractor shall submit quality documents as required to support the alignment between the baseline and the contract and to support independent reviews.

- Subcontractor Incurred Cost Audits – Complete a minimum of 20 subcontractor incurred cost audits to Standard.

#### **1.4 AWARD FEE OBJECTIVE 2: ONE SYSTEM, STARTUP AND COMMISSIONING AND PLANT MANAGEMENT, AND ENGINEERING PERFORMANCE**

Award fee criteria:

- One System
- Startup and commissioning and plant management
- Engineering performance.

Performance will be evaluated on progress in meeting the following strategic objectives:

##### **1.4.1 One System**

- Establish a prioritized set of activities and timing to fully integrate tank farms, Waste Feed Delivery System (Low-Activity Waste Pretreatment System, Tank Side Cesium Removal, and Double Shell Tank Farm Upgrades) and WTP necessary to meet the contractual dates for startup and commissioning of WTP. Be responsible for coordinating, tracking, measuring, and reporting on these activities.
- Accurately track schedule performance and any schedule slippage for the DFLAW program.
- Recommend to ORP, Washington River Protection Solutions LLC, and Bechtel National, Inc. (BNI) feasible (or implementable) actions needed to more effectively or efficiently conduct the transition to startup, commissioning, and operations.
- Support the establishment of a long-term tank waste disposition integrated flowsheet stewardship and technical management process involving the national laboratories. Performance will be evaluated against milestones planned for the award fee period established by One System.
- Support the integration of tank farms and WTP system planning and modeling, with a focus on the WTP feed vector and waste feed qualification requirements. This includes support for preparation for DOE review of the gaps, risks, opportunities management plan, and technology roadmap.
- Manage the WTP interface control documents and streamline the interface control document process where possible.
- Identify and drive down program risk by finding opportunities to efficiently integrate site contractor interfaces in support of DFLAW partial and full system tests and activations.
- Closely track the integration and interface activities necessary to support DFLAW startup and commissioning and advise the One System Governance Council of any significant risks for the Governance Council milestones.
- Coordinate the alignment of DOE orders between BNI and Washington River Protection Solutions LLC for those DOE orders, DOE directives, and contract changes having a

direct effect on completion of commissioning phase activities of the WTP. Establish an optimum or necessary time to have each item aligned.

- Ensure integration of plant installed and plant administration software systems between WTP and the Tank Operations Contractor in support of DFLAW startup and commissioning.

#### **1.4.2 Startup and Commissioning**

Turnover and startup:

- Execution of turnover processes that are efficient and ensure systems are successfully turned over.
- Turnover from construction to startup completed with effective management of impacts from equipment aging or other adverse conditions impacting startup work performance.
- Successful performance of component and initial system testing, to include review and approval of component test result packages for scoped systems consistent with the project schedule dated August 9, 2017.
- Completion of the following specific activities and all predecessors:
  - 4LL56CHW206: LAW – CHW-L-02 – Construction Turnover to Startup – Chilled Water, February 15, 2018
  - 4LL56HPS006: LAW – HPS-L-01 – Construction Turnover to Startup – High Pressure Steam, June 4, 2018
  - 4LL56LMH006: LAW – LMH-L-01 – Construction Turnover to Startup – LAW Melter Handling System, August 22, 2018
  - 5HLC1UPE360: LAW – UPE-L-01 – Startup Component Testing (Energized) – Uninterruptible Power Electrical, March 20, 2018
  - 5HTDLVE0040: LAB – LVE-A-01 – Startup Component Testing (Energized) – Low Voltage Electrical, April 12, 2018
  - 5HBC108937B: BOF – PCW-B-02 – Startup Component Testing (Energized) – Cooling Tower (Building 83) – Process Cooling Water, May 7, 2018
  - 5HBC108044B: BOF – CHW-B-01 – Startup Component Testing (Energized) – Chiller Compressor (Building 82) – Chilled Water System, August 27, 2018
  - 5HBC1HPSB130: BOF – HPS-B-01 – Startup Component Testing (Energized) – Steam Plant Facility (Building 85) – High Pressure Steam, October 12, 2018
  - 5HTDRLD0790: LAB – RLD-A-01 – Startup Component Testing (Energized) – Radioactive Liquid Waste Disposal System, November 13, 2018
  - Complete functional testing of the cooling tower facility.



## Commissioning and plant management:

- Handover of scoped systems to plant management:
  - 5HBC108074B: BOF – Startup – NLD-B-07 Handover of Scoped System to Plant Operations – Building 82 – Chiller Compressor Facility, February 6, 2018
  - 5HTDC1V1720: LAB – Startup – CIV-A-02 Handover of Scoped System to Plant Operations, July 16, 2018
  - 5HBC108325B: BOF – Startup – PCW-B-01 Handover of Scoped System to Plant Operations – Building 83 – Cooling Tower Facility, September 6, 2018
  - 5HBC1HPSB180: BOF – Startup – HPS-B-01 Handover of Scoped System to Plant Operations – Building 85 – Steam Plant Facility, November 29, 2018
  - 5HLC2MVE220: LAW – Startup – MVE-L-01 – Handover of Scoped System to Plant Operations
  - 5HLC2LVP220: LAW – Startup – LVE-L-01 – Handover of Scoped System to Plant Operations, December 18, 2018
  - 5HLC2LVP190: LAW – Startup – LVE-L-02 – Handover of Scoped System to Plant Operations, December 18, 2018
  - 5HLC2LVP160: LAW – Startup – LVE-L-03 – Handover of Scoped System to Plant Operations, December 18, 2018
  - 5HLC2LVE440: LAW – Startup – LVE-L-04 – Handover of Scoped System to Plant Operations, December 18, 2018.
- Implement commissioning program work control – June 2018.
- Corrective maintenance backlog less than 15 weeks on average over the PEMP period.
- Continue to mature commissioning plan to ensure readiness at 12 months prior to start of cold commissioning by resolution of commissioning plan open issues per the schedule defined in resolution of ORP comment 1 in 17-WSC-0038, “Contract No. DE-AC27-01RV14136 – Response to Contract Deliverable 5.1 – 24590-WTP-PL-RACT-CG-0001, Rev. 0, Commissioning Plan, and Transmittal of Comment Disposition Form.”

## Readiness:

- Successfully complete contractor Integrated Safety Management System Phase 1 verification review by October 31, 2018.
- Successfully complete DOE Phase 1 Integrated Safety Management System verification.
- LAB Facility readiness plan approved by July 2, 2018.
- Submittal of the LAW readiness review plan of action (POA) by December 31, 2018.

### 1.4.3 Engineering Performance

Completion of design and construction:

- Open action management – Enhance line management efforts in the disposition of open actions to drive certainty in the delivery of DFLAW facilities. Demonstrate enhanced tracking, prioritization, management, and work-off of open actions, including but not limited to nonconformance reports, Action Tracking System items, design completion actions, and requirements verification steps. Proactively define, capture, and manage open actions to closure and implement metrics to measure the effectiveness of action closure and resolution.
- Configuration management – Maintains the technical requirements management system, including system design descriptions, and develops and maintains an adequate SmartPlant<sup>®</sup> system to support LBL system turnover.
- Design and engineering output – Issues adequate design and engineering products reflecting acceptable quality; manages margin; controls unverified assumptions; and adequately flows down requirements to calculations, drawings, specifications, datasheets, and procurement documents. Acceptable quality to be demonstrated through use of existing quality engineering metrics for in-process document reviews.
- Safety systems design – Demonstrates significant progress in the implementation of DOE-STD-1195-2011, *Design of Safety Significant Safety Instrumented Systems Used at DOE Nonreactor Nuclear Facilities*, towards completion of safety instrumented systems design for the LAW Facility. Progress is measured by fidelity to DOE-STD-1195-2011 requirements; against planned activities scheduled and the progress for those activities. Activities will include issuance of:
  - 24590-WTP-3DI-G04T-00005, *Engineering Instruction Functional Safety Assessments*, Rev. 0
  - 24590-WTP-PL-MGT-15-0008, *Functional Safety Management Plan for Safety Instrumented Systems and Functions*, Rev. 1
  - Safety performance monitoring procedure(s)
  - Safety systems requirements specifications as identified in the LAW engineering schedule
  - Safety setpoint calculations as identified in the LAW engineering schedule
  - Probability of failure on demand calculations as identified in the LAW engineering schedule.

## **1.5 AWARD FEE OBJECTIVE 3: CONSTRUCTION, FIELD AND RESIDENT ENGINEERING, OCCURRENCE REPORTING, AND CONDUCT OF OPERATIONS**

Award fee criteria:

- Field and resident engineering
- Occurrence reporting
- Conduct of operations.

Performance will be evaluated on continuous improvement in these areas, which includes, but is not limited to:

- Contractor self-reports events and their causes and implements corrective actions prior to recurrence of significant or consequential events.
- Responsiveness to and management of performance and assessment areas needing attention as identified by contractor self-assessments, ORP assessments, and minimal ORP rejection of corrective action plans.
- Deliver effective solutions within contractual, procedural, and/or DOE orders-specified timing to emerging WTP field and resident engineering issues as and when the need arises. Provide efficient and effective field and resident engineering support to WTP construction and turnover to startup. Monitor and continue to reduce design errors resulting in engineering or field rework. Key areas will include mechanical, civil, and electrical inspections.
- Facility status and event notifications are provided to the facility representatives in accordance with contractual, procedural, and/or DOE orders in an accurate manner. Major work in progress and in planning are communicated.
- Contractor processes for safe operations are implemented and effectively applied in operational, maintenance, and construction activities incorporating practices resulting in an effective hierarchy of controls being implemented to mitigate WTP hazards.
- Corrective actions are within contractual, procedural, and/or DOE orders-specified timing, prioritized by importance, and appropriately targeted to correct negative performance and prevent the development of significant issues. In the case of significant conditions adverse to quality, effective compensatory measures are implemented, the causes of the condition are determined within contractual, procedural, and/or DOE orders-specified timing corrective action taken to preclude recurrence.
- Ensure effective interfacing and interactions between construction, engineering, startup and commissioning, and plant management organizations to provide safe and efficient operations.

## **1.6 AWARD FEE OBJECTIVE 4: ENVIRONMENTAL, SAFETY, HEALTH, AND SAFETY CONSCIOUS WORK ENVIRONMENT**

Award fee criteria:

- Nuclear safety and quality culture
- Integrated safety management
- Environmental permitting and compliance.

Performance will be evaluated on continuous improvement in these areas, which includes, but is not limited to:

- Having an effective safety conscious work environment and culture through implementation of programs and dissemination of expectations in order to establish a work environment in which employees feel free to raise safety concerns to management and/or a regulator without fear of retaliation.
- Conducting ES&H business in a manner fully transparent to ORP. Activities are demonstrated by open, clear, and well communicated management actions and technical and project documentation.
- Fostering a culture that rewards proactive self-identification and reporting of issues, and proactively identifying and taking action on systemic weaknesses leading to sustained continuous self-improvement.
- Implementing work hazard analysis and controls resulting in improving work injury/illness performance and no unplanned employee exposures to work place hazards.
- Documenting periodic management analysis of work site conditions and implementing strategies resulting in improving WTP Project safety.
- Developing and completing actions to maintain DOE Voluntary Protection Program Star Status.
- Identifying issues and trends are proactively shared with ORP. Performance indicators and/or metrics are developed, monitored on a periodic basis, utilized to track performance, and updated, as needed, for self-improvement.
- Implementing event investigations (e.g., review, cause analysis, and action implementation) resulting in effective organizational learning with the goal of eliminating recurring events and implementing quality corrective actions within contractual, procedural, and/or DOE Orders-specified timing.
- Implementing robust and effective integrated safety management through the Integrated Safety Management System description document and in safety management programs, including the Radiation Protection Program and Electrical Safety Program.

### **1.6.1 Environmental Permitting and Compliance**

Performance will be evaluated on the contractor's programs for environmental stewardship and compliance. ORP will rely on subjective and objective evaluations of the contractor's performance in areas that include but are not limited to documentation and implementation of the

contractor's environmental protection and compliance program including initiatives for continuous improvement, establishment of performance metrics and use in improving the environmental protection and compliance program, timeliness and quality (e.g., accuracy, completeness) of permit documents and compliance to permits and licenses, proactive assessment/evaluation program, and the number and seriousness of any findings or concerns related to noncompliances or violations including the timeliness and quality of related reporting and responses.

Submit permitting products with a high degree of quality on the initial submittal, requiring minimal rework and enable schedule efficiencies. Specific deliverables which will be evaluated are:

- Provide completed Group I EMF piping, Group II EMF evaporator, and Group III EMF vessel vents to ORP, and support regulatory approval of all three applications (Group I by May 3, 2018; Group II by October 15, 2018; and Group III by October 1, 2018).
- Submit a complete EMF radiological air emissions license application by October 18, 2018.
- BNI to modify the WTP laboratory *Resource Conservation and Recovery Act of 1976* dangerous waste operating permit and support regulatory approval by June 28, 2018.
- Support the environmental performance demonstration test plan submittal to the Washington State Department of Ecology with a scheduled approval by November 1, 2018.
- Continue supporting ORP and the Washington State Department of Ecology leading to a final immobilized LAW land disposal restriction treatability variance approval.

### **1.7 AWARD FEE OBJECTIVE 5: QUALITY ASSURANCE PROGRAM AND QUALITY OF PERFORMANCE**

The QA Program and quality of performance objective has been divided into two subparts. Objective 5a will evaluate the effectiveness of the contractor assurance system and Objective 5b will evaluate the contractor's actions to address significant QA issues identified by ORP. Performance will be judged based on the quality and timeliness of products and services produced during the reporting period and the overall effectiveness of the contractor's assurance system to completely identify, track, correct, and communicate issues. In addition, the QA documentation supports the requirements needed for approval of documented safety analyses. ORP will rely on objective and subjective evaluations of the contractor's performance. Ongoing status shall be communicated to the ORP QA Division during the weekly interface meetings.

Award fee criteria:

- Contractor assurance system
- Actions to address significant QA issues identified by ORP.

### **1.7.1 Objective 5a: Contractor Assurance System**

Assessment Program – Rigorous, risk-informed, highly self-critical, credible self-assessments are conducted to identify issues and improvement opportunities by the line management. These self-assessments should demonstrate the line management’s self-critical commitment to quality. The assessment program should also include rigorous independent QA reviews verifying the line management’s achievement of quality. The target for measurement of effectiveness of both the self-critical assessments and the QA independent assessments is that issues are identified and documented in the Corrective Action Management Program.

Trend Analysis Program – Performance metrics are effectively used to provide an accurate picture of current quality performance against goals. Outcomes of the trend analysis program are leveraged to inform management (contractor and ORP) of emerging issues in a timely manner. The analysis of quality performance will also give consideration to the contractor’s ability to self-identify issues (e.g., nonconforming conditions, legacy issues, emerging negative performance trends) and correct negative performance trends before significant issues occur. Quality problems should be resolved and analyzed as part of a collection to identify systemic quality problems and opportunities for process improvement.

Cause Analysis – The causes of problems are investigated and identified. Results of the analysis are documented and communicated to ORP/BNI management in a timely manner. For significant conditions adverse to quality, a disciplined root cause analysis and extent of condition are performed as appropriate. Quality problems should be resolved individually and should be analyzed as part of a collection to identify systemic quality problems and opportunities for process improvement.

Corrective Action Management System – Corrective actions are timely, prioritized by importance, and appropriately targeted to correct negative performance/compliance trends and prevent the development of significant issues. In the case of significant conditions adverse to quality, effective compensatory measures are implemented, the causes of the condition are determined and corrective action taken to preclude recurrence.

Feedback and Improvement – Continuous feedback and improvement, including worker feedback mechanisms are incorporated into the overall work process to measure the effectiveness of continuous improvement. Lessons learned and operational experiences are shared with others.

### **1.7.2 Objective 5b: Actions to address Office of River Protection Findings (Priority Level 1 and 2)**

QA Program Implementation (Priority Level [PL] 1) – BNI shall complete actions necessary to close PL-1 QA finding U-13-QAT-RPPWTP-001-F01 (13-QAT-0061, “Results of Audit U-13-QAT-RPPWTP-001 – Bechtel National, Inc. (BNI) Quality Assurance Program Requirements 3, 4, 7, 8, 15, and 16”), and demonstrate that an adequate QA program has been effectively implemented. Evidence of completion will be based upon the following:

- Completion of actions to address PL-2 actions and marginal areas tied to the PL-1 finding within the established due date (i.e., vertical slice procurement audit and 2016 effectiveness audit)

- Completion of the software quality improvement plan to address integrated control network software (U-13-QAT-RPPWTP-001-F01) within the established due date.

PL-2 Findings – BNI shall develop and complete corrective action plans to address PL-2 findings identified by ORP. Actions shall be completed within the established due date.

Commercial Grade Dedication – Expedite close of commercial grade dedication actions (parking lot items that require alignment) and extent of condition reviews with DOE concurrence. Complete closure of all actions and extent of condition reviews by April 1, 2018.

## **1.8 AWARD FEE OBJECTIVE 6: NUCLEAR SAFETY**

Award fee criteria:

- Contract No. DE-AC27-01RV14136, *Design, Construction, and Commissioning of the Hanford Tank Waste Treatment and Immobilization Plant*, Section C, “Statement of Work,” Standard 9, “Nuclear Safety (Table C.5-1.1, Deliverable 9.1),” describes contractor requirements to ensure radiological, nuclear, and process safety. This work scope includes implementation of a standards-based safety management program in compliance with the rules provided in 10 CFR 830, “Nuclear Safety Management,” on nuclear safety to ensure WTP safety requirements are defined, implemented, and maintained.
- Evaluation criteria to measure performance will include ORP’s evaluation of the contractor’s progress toward and compliance with contract requirements for nuclear safety performance. Progress will be evaluated against interim project schedules for nuclear safety submittals and supporting documentation (e.g., hazards analyses) with consideration of any emerging issues. Compliance will be evaluated against guidance found in DOE-STD-3009-1994 CN3, *Preparation of Nonreactor Nuclear Facility Documented Safety Analysis*, Chg. 3 as well as all other contract requirements and clarifying direction from ORP.

ORP-WTP will consider any available information bearing on nuclear safety performance in making this evaluation. Documents to be considered include:

- Draft nuclear safety deliverables submitted for informal review possess a high degree of quality, and meet the requirements defined in the Implementation Plan for Contract No. DE-AC27-01RV14136, Section C, Standard 9. Acceptable quality to be determined through use of existing quality engineering metrics for in-process documents.
- Nuclear safety calculations and engineering studies developed to support resolution of technical issues will possess a high degree of quality and will meet the requirements defined in the implementation plan for Contract No. DE-AC27-01RV14136, Section C, Standard 9 for submittal of draft documents for informal review.
- Effectiveness in self-identifying nuclear safety concerns early and responding to concerns raised both internally and by external stakeholders and review teams.
- Revise and issue 24590-WTP-G04B-00022, *Licensing Document*; 24590-WTP-3DG-W10T-00001, *WTP Nuclear Safety Analysis Design Guide*; and applicable desktop

instructions to address corrective actions resulting from quality issues identified in 16-NSD-0026, “Contract No. DE-AC27-01RV14136 – Low-Activity Waste Process Hazards Analysis Report Quality Issues.”

## **1.9 AWARD FEE OBJECTIVE 7: PRETREATMENT AND HIGH-LEVEL WASTE FACILITIES**

This award fee objective is for the PT and HLW facilities to perform an evaluation of the resource needs for the material handling activities and reduce the recurring annual budget, due to minimal new equipment receipt and transfer in fiscal year 2018 and future years.

Award fee criterion:

- BNI shall take the initiative to reduce the labor resources needed for the PT and HLW material handling activities in calendar year 2018. Initiative should show meaningful effort, and shall result in measurable, traceable, and sustainable cost reduction as early as possible, from the current total PT and HLW budget plan for fiscal year 2018 (IFT-PC-17-0061/0069).

## **2.0 PERFORMANCE EVALUATION AND MEASUREMENT PLAN GENERAL INFORMATION**

### **A. CONTRACT INCENTIVE FEE STRUCTURE**

Contract No. DE-AC27-01RV14136 utilizes multiple, performance-based incentive fee components to drive contractor performance excellence in completing the design, construction, and commissioning of the WTP Contract.

Contract No. DE-AC27-01RV14136, Section B, “Supplies or Services and Prices/Costs,” attachments have the following incentive fee elements:

- “Incentive Fee A – Final Fee Determination for Work Prior to Modification No. A143”
- “Incentive Fee B – Final Fee Determination for Work from Modification No. A143 and Modification No. 384”
- “Incentive Fee C – Fixed Fee Payment”
- “Incentive Fee D – Award Fee”
- “Incentive Fee E – LBL Construction Complete Performance Based Incentives”
- “Incentive Fee F – Commission LBL in the DFLAW Configuration Performance Based Incentive”
- “Incentive Fee G – CLIN 1.0 Cost Share Incentives”
- “Incentive Fee H – CLIN 2.1 DFLAW Design Completion Fee.”



This PEMP covers Incentive D, which is updated annually. The fee administration terms and conditions of incentive fee elements A, B, C, E, F, G, and H are self-contained within Section B of the contract, and thus, are not addressed in this PEMP.

The award fee provides a performance incentive for the contractor and gives the Government a tool to identify and reward superior performance. The amount of award fee the contractor earns is based on both an objective and subjective evaluation by the Government of the contractor's performance as measured against the criteria contained in this PEMP.

## **B. ROLES AND RESPONSIBILITIES**

The award fee process utilizes a three-level system to ensure full and fair performance evaluation:

Level 1.0 – FDO

Level 1.1 – WTP Contracting Officer (CO)

Level 2.0 – Performance Evaluation Board (PEB)

Level 3.0 – Performance Evaluation Monitors (PEM).

### **2.1.1 Level 1.0 – Fee-Determining Official: Office of River Protection Deputy Manager**

The FDO will:

- Review the recommendation of the PEB, consider all pertinent data, and determine the amount of award fee earned during each evaluation period
- Notify the contractor via the CO of performance strengths, areas for improvement, and future expectations
- Approve this PEMP and any significant changes thereto
- Authorize the CO to make the award fee payment.

Level 1.0 ensures independent, executive-level review of the work of the PEB and PEMs.

### **2.1.2 Level 1.1 – Waste Treatment and Immobilization Contracting Officer**

The WTP CO will:

- Serve as a voting member of the PEB
- Issue the PEMP on an annual basis in accordance with Section B.8, "Award Fee Administration," of the contract
- Ensure the award fee and contract incentives process is managed consistent with applicable acquisition regulations
- Ensure the award fee process meets the overall WTP business objectives
- Issue the award fee amount earned determination as authorized by the FDO in accordance with Section B.8.

### **2.1.3 Level 2.0 – Performance Evaluation Board**

- WTP federal project director, Chair
- WTP deputy federal project director, field operations
- WTP CO
- Assistant Manager for Technical and Regulatory Support.

The PEB reviews the PEM evaluations of contractor performance, considers the contractor's self-assessment if submitted, considers all information from pertinent sources, prepares draft and final performance reports, and arrives at an earned award fee recommendation to be presented to the FDO. The PEB may also recommend changes to this PEMP.

#### **2.1.3.1 Performance Evaluation Board Chair**

The PEB Chair will be the assistant manager/federal project director for WTP. The Chair will:

- Review the performance monitors' evaluations and consider the contractor's self-assessment
- Analyze the contractor's performance against the criteria set forth in this PEMP
- Consider any additional relevant contractor performance
- Provide periodic interim performance feedback to the contractor via the CO
- Provide a recommendation to the FDO on the award fee scoring and the amount earned by the contractor
- Recommend any changes to this PEMP.

### **2.1.4 Level 3.0 – Performance Evaluation Monitors:**

PEMs will consist primarily of WTP sub-federal project directors and ORP division directors. The PEMs will:

- Monitor, evaluate, and assess contractor performance in their assigned areas
- Periodically prepare a contractor performance monitor report for the PEB and recommend verbal performance input as well
- Recommend any needed changes to this PEMP for consideration by the PEB and FDO
- Maintain a performance dialogue with their respective BNI counterparts throughout the evaluation period.

## **C. PROCESS**

The total available award fee for the 2018 evaluation period is \$7,872,603.

In accordance with FAR 16.401(e)(3)(v), "Incentive Contracts," "General," the contractor is prohibited from earning any award fee when the contractor's overall cost, schedule, and technical performance is below satisfactory.

## **D. PROVISIONAL FEE**

Provisional fee requirements in Contract No. DE-AC27-01RV14136 Section B, Clause B.8(g), “Provisional Payment of Fee,” apply to this PEMP. The clause paragraphs are restated below for emphasis:

(g)(3)(vi) Provisional payment of fee for an incentive means the Government’s paying available fee for an incentive to the Contractor for making progress towards meeting the performance measures for the incentive before the Contractor has earned the available fee.

(g)(3)(vii) Provisional payment of fee has no implications for the Government’s eventual determination that the Contractor has or has not earned the associated available fee. Provisional payment of fee is a separate and distinct concept from earned fee.

(g)(6) The Contracting Officer, at his/her sole discretion, will determine if the Contractor has met the requirements under which the Government will be obligated to pay fee, provisionally, to the Contractor and for the Contractor to have any right to retain the provisionally paid fee.

(g)(7) If the Contracting Officer determines the Contractor has not met the requirements to retain any provisionally paid fee and notifies the Contractor, the Contractor must return that provisionally paid fee to the Government within 30 days:

(i) the Contractor’s obligation to return the provisional paid fee is independent of its intent to dispute or its disputing the Contracting Officer’s determination; and

(ii) if the Contractor fails to return the provisionally paid fee within 30 days of the Contracting Officer’s determination, the Government, in addition to all other rights that accrue to the Government and all other consequences for the Contractor due to the Contractor’s failure, may deduct the amount of the provisionally paid fee from: amounts it owes under invoices; amounts it would otherwise authorize the Contractor to draw down under a Letter of Credit; or any other amount it owes the Contractor for payment, financing, or other obligation.

(g)(8) If the Contractor has earned fee associated with an incentive in an amount greater than the provisional fee the Government paid to the Contractor for the incentive, the Contractor will be entitled to retain the provisional fee and the Government will pay it the difference between the earned fee and the provisional fee.

Provisional fee procedures:

The Government and the Contractor will meet monthly to review the Contractor’s performance against the PEMP criteria. Subsequent to each monthly meeting and pending satisfactory performance, the Contractor is authorized to invoice for

provisional fee once per month, at a rate of \$328,025 per month (calculated as one-twelfth of 50 percent of the \$7,872,603 maximum annual available PEMP fee). However, the Contracting Officer may reduce the amount in accordance with Section B, Clause B.8 (g) Provisional Payment of Fee.

In the event fee overpayment results from the provisional fee payments provided for in this section exceeding the earned fee, as determined by the FDO, the contractor shall reimburse the unearned fee overpayment within 30 days of notification to the CO.

#### **E. CONTRACTOR SELF-ASSESSMENT**

Contract No. DE-AC27-01RV14136 Section B, Clause B.8(f) states:

Following each evaluation period, the Contractor may submit a self-assessment, provided such assessment is submitted within ten (10) calendar days after the end of the period. This self-assessment shall address both the strengths and weaknesses of the Contractor's performance during the evaluation period. Where deficiencies in performance are noted, the Contractor shall describe the actions planned or taken to correct such deficiencies and avoid their recurrence. The Contracting Officer will review the Contractor's self-assessment, if submitted, as part of its independent evaluation of the Contractor's management during the period.

#### **F. METHOD FOR CHANGING THE PERFORMANCE EVALUATION AND MEASUREMENT PLAN DURING THE EVALUATION PERIOD**

Proposed changes to the current period PEMP may be initiated by either ORP or the contractor. Proposed changes shall be in writing. Both ORP and the contractor must agree to any changes. Once agreement is reached, the FDO and contractor representative will sign the revised PEMP. The revision number (e.g., Rev. 1) will be noted on the PEMP. Subsequently, the revised PEMP will be incorporated into the contract by reference via contract modification.

## ABBREVIATIONS AND ACRONYMS

BNI	Bechtel National, Inc.
BOF	Balance of Facilities
CO	contracting officer
DFLAW	direct-feed low-activity waste
DOE	U.S. Department of Energy
EMF	Effluent Management Facility
FDO	fee-determining official
HLW	high-level waste
LAB	Analytical Laboratory
LAW	low-activity waste
LBL	Low-Activity Waste Facility, Balance of Facilities, and Analytical Laboratory
MASL	master approved supplier list
ORP	U.S. Department of Energy, Office of River Protection
PEB	Performance Evaluation Board
PEM	performance evaluation monitor
PEMP	performance evaluation measurement plan
PL	priority level
PPR	project peer review
PT	pretreatment
QA	quality assurance
WTP	Waste Treatment and Immobilization Plant

## REFERENCES

- 10 CFR 830, “Nuclear Safety Management,” *Code of Federal Regulations*, as amended.
- 13-QAT-0061, 2013, “Results of Audit U-13-QAT-RPPWTP-001 – Bechtel National, Inc. (BNI) Quality Assurance Program Requirements 3, 4, 7, 8, 15, and 16” (internal memorandum to K.W. Smith), from J.D. May, U.S. Department of Energy, Office of River Protection, Richland, Washington, October 15.
- 16-NSD-0026, 2016, “Contract No. DE-AC27-01RV14136 – Low-Activity Waste Process Hazards Analysis Report Quality Issues” (external letter to M. McCullough, Bechtel National, Inc.), from W.F. Hamel, U.S. Department of Energy, Office of River Protection, Richland, Washington, June 23.
- 17-WSC-0038, 2017, “Contract No. DE-AC27-01RV14136 – Response to Contract Deliverable 5.1 – 24590-WTP-PL-RACT-CG-0001, Rev. 0, Commissioning Plan, and Transmittal of Comment Disposition Form” (external letter to C.K. Binns, Bechtel National, Inc.), from W.F. Hamel, U.S. Department of Energy, Office of River Protection, Richland, Washington, August 30.
- 17-WTP-0208, 2017, “Programmatic Actions Needed to Ensure Certainty of Completion of Waste Treatment and Immobilization Plant Facilities Needed for Direct-Feed Low-Activity Waste,” (external letter to M.G. McCullough, Bechtel National, Inc.), from G.F. Champlain and W.F. Hamel, U.S. Department of Energy, Office of River Protection, Richland, Washington, October 31.
- 24590-WTP-3DG-W10T-00001, *WTP Nuclear Safety Analysis Design Guide*, Bechtel National, Inc., Richland, Washington,
- 24590-WTP-3DI-G04T-00005, *Engineering Instruction Functional Safety Assessments*, Rev. 0, Bechtel National, Inc., Richland, Washington,
- 24590-WTP-G04B-00022, *Licensing Document*, Bechtel National, Inc., Richland, Washington,
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- Contract No. DE-AC27-01RV14136, *Design, Construction, and Commissioning of the Hanford Tank Waste Treatment and Immobilization Plant*, U.S. Department of Energy, Washington, D.C., as amended.
- DOE-STD-1195-2011, 2011, *Design of Safety Significant Safety Instrumented Systems Used at DOE Nonreactor Nuclear Facilities*, DOE Standard, U.S. Department of Energy, Washington, D.C., April.
- DOE-STD-3009-2014, 2014, *Preparation of Nonreactor Nuclear Facility Documented Safety Analysis*, DOE Standard, U.S. Department of Energy, Washington, D.C., November.

FAR 16.401, “Incentive Contracts,” “General,” *Federal Acquisitions Regulations*, as amended.

*Price-Anderson Amendments Act of 1988*, as amended, 42 USC 2010, et seq.

*Resource Conservation and Recovery Act of 1976*, 42 USC 6901, et seq.

U-13-QAT-RPPWTP-001, 2013, *BNI Quality Assurance Program Requirements 3, 4, 7, 8, 15, and 16*, U.S. Department of Energy, Office of River Protection, Richland, Washington, October 28.

**APPENDIX A**  
**AWARD FEE RATING GUIDE**



Appendix A. Award Fee Rating Guide. (3 pages)

	<b>OBJECTIVE ITEMS</b>	<b>SUBJECTIVE ITEMS</b>
<b>Dark Blue</b> “Excellent” Performance	<ul style="list-style-type: none"> <li>• Objective measures are achieved on or ahead of time</li> <li>• Very high probability of achieving the outcome</li> <li>• Meeting all cost, scope, and schedule objectives</li> <li>• Very high degree of transparency</li> </ul>	<ul style="list-style-type: none"> <li>• 100% of key areas meeting requirements</li> <li>• 100% of key deliverables will be met on time</li> <li>• 90% of sub or supporting areas are performing very well</li> <li>• No safety, security, or quality issues of note</li> <li>• Very high degree of self-identification and reporting deficiencies</li> <li>• Very high degree of transparency</li> <li>• Strong ISMS practices, timely reporting, critiqued/EOC whenever needed</li> </ul>
<b>Light Blue</b> “Very Good” Performance	<ul style="list-style-type: none"> <li>• Objective measures expected to be achieved on time</li> <li>• Very good probability of achieving the outcome</li> <li>• Expect to meet cost, scope, and schedule objectives</li> <li>• High degree of transparency</li> </ul>	<ul style="list-style-type: none"> <li>• 100% of key areas meeting or close to meeting requirements</li> <li>• 100% of key deliverables are meeting or expected to meet requirements</li> <li>• Majority of sub or supporting areas are performing very well</li> <li>• At most minor safety, security, or quality issues of note</li> <li>• High degree of self-identification and reporting deficiencies</li> <li>• High degree of transparency</li> <li>• Strong ISMS practices, timely reporting, critiqued/EOC whenever needed</li> </ul>
<b>Green</b> “Good” Performance	<ul style="list-style-type: none"> <li>• Objective measures reasonably expected to be achieved on time</li> <li>• Reasonable probability of achieving the outcome</li> <li>• Expect to meet or be very close to cost, scope, and schedule</li> <li>• Good degree of transparency</li> </ul>	<ul style="list-style-type: none"> <li>• Almost all key areas meeting or close to meeting requirements</li> <li>• Majority of key deliverables are satisfactory or better</li> <li>• Majority of sub or supporting areas are performing satisfactorily</li> <li>• Mostly minor safety, security, or quality issues of note</li> <li>• Good degree of self-identification and reporting deficiencies</li> <li>• Good degree of transparency</li> <li>• Infrequent deviation in ISMS practices, timely reporting, critiqued/EOC reviews</li> </ul>

Appendix A. Award Fee Rating Guide. (3 pages)

		<b>OBJECTIVE ITEMS</b>	<b>SUBJECTIVE ITEMS</b>
<p><b>Yellow</b>                      “Underperforming”                      “Needs improvement”                      “Elevated risk”</p>		<ul style="list-style-type: none"> <li>• Elevated risk of objectives not being achieved on time</li> <li>• Reasonable probability of not achieving the outcome</li> <li>• Expect to not meet cost, scope, or schedule</li> <li>• Partial degree of transparency</li> </ul>	<ul style="list-style-type: none"> <li>• Majority key areas meeting or close to meeting requirements</li> <li>• Notable percentage of key deliverables are satisfactory or better</li> <li>• Notable percentage of sub or supporting areas are performing satisfactorily</li> <li>• Occasional mid-level safety, security, or quality issues of note</li> <li>• Approximately 75% of issues are self-identified with most reporting in a timely manner</li> <li>• Partial degree of transparency</li> <li>• Clear deviations of ISMS practices, reporting, critiques, EOC reviews, safety basis/CONOPS/engineering deviations that are generally infrequent or have minor consequences</li> <li>• Nominal NOV, PAAA, fine, injury, security infraction(s)</li> </ul>
<p><b>Red</b>                      “Does not meet requirements”                      “Failing or will fail”</p>		<ul style="list-style-type: none"> <li>• Clear (or high) risk of objectives not being achieved on time</li> <li>• High probability of not achieving the outcome</li> <li>• Expect to not meet or significantly miss cost, scope, or schedule</li> <li>• Inadequate degree of transparency</li> </ul>	<ul style="list-style-type: none"> <li>• Overall most key areas meeting or close to meeting requirements</li> <li>• Inadequate percentage of key deliverables are satisfactory or better</li> <li>• Inadequate percentage of sub or supporting areas are performing satisfactorily</li> <li>• Too high a frequency of mid-level safety, security, or quality issues of note</li> <li>• Major safety, security, or quality issue</li> <li>• Less than approximately 75% of issues are self-identified and reported in a timely manner</li> <li>• Inadequate degree of transparency</li> <li>• Significant deviations of ISMS practices, reporting, critiques, EOC reviews, multiple safety basis/CONOPS/engineering deviations or a significant deviation with nuclear safety or operational implications</li> <li>• Significant NOV, PAAA, fine, injury, security deviation(s)</li> </ul>

Appendix A. Award Fee Rating Guide. (3 pages)

	<b>OBJECTIVE ITEMS</b>	<b>SUBJECTIVE ITEMS</b>
<b>Grey</b> “Insufficient data” “Not able to assess”	<ul style="list-style-type: none"> <li>• Insufficient data to assess at this time</li> </ul>	<ul style="list-style-type: none"> <li>• Insufficient data to assess at this time</li> <li>• Parties misaligned on the objective</li> </ul>

*Price-Anderson Amendments Act of 1988*, as amended, 42 USC 2010, et seq.

CONOPS = conduct of operations.

EOC = extent of condition.

ISMS = Integrated Safety Management System.

NOV = notice of violation.

PAAA = *Price-Anderson Amendment Act.*