

2018 FEE DETERMINATION SCORECARD

Contractor: Bechtel National, Inc.

Contract: DE-AC27-01RV14136

Award Period: January 1 through December 31, 2018

Basis of Evaluation: Performance Evaluation and Measurement Plan for 2018

The 2018 Performance Evaluation and Measurement Plan for this contract is available on the Hanford Site website at <https://www.hanford.gov/index.cfm?page=713>

Award Fee Scorecard:

Subjective Fee (Award Fee) Criteria Summary Table

Award Fee Objective	Maximum Available Fee	Adjectival Rating	Fee Determined from Adjectival Ratings	
			Percentage	Fee Amount
1.0 Project Performance (Cost, Schedule, and Efficiencies)	\$1,700,000	Satisfactory	41.5%	\$705,500
2.0 One System, Startup and Commissioning, Plant Management, and Engineering Performance	\$1,700,000	Satisfactory	43%	\$731,000
3.0 Construction, Field and Resident Engineering, Occurrence Reporting, and Conduct of Operations	\$1,100,000	Satisfactory	43%	\$473,000
4.0 Environmental, Safety, Health, and Safety-Conscious Work Environment	\$1,100,000	Good	60%	\$660,000
5.0 Quality Assurance Program and Quality of Performance	\$1,200,000	Satisfactory	49%	\$588,000
6.0 Nuclear Safety	\$800,000	Good	63%	\$504,000
7.0 Pretreatment and High-Level Waste Facilities	\$272,603	Satisfactory	39%	*\$106,315
Total	\$7,872,603	Satisfactory (averaged score)	47.9%	*\$3,767,815

*Figures rounded to the nearest whole number

Achievements:

- Bechtel National, Inc. (BNI) improved project performance measurement capabilities in 2018. BNI also aligned the baseline schedule with the forecast schedule. This was considered a necessary effort, given the large disparity between the two schedules at the beginning of the year.

- Improving coordination, tracking, measurement, and reporting on activities that support a program that is preparing the WTP and workforce to begin treating tank waste no later than 2023. The program is focused on the less radioactive waste that makes up nearly 90 percent of the volume of tank waste. The program is known as Direct Feed Low-Activity Waste.
- Throughout 2018, BNI has improved processes for turnover, testing, handover, and plant management of systems across the WTP Project.
- Preparations for a Defense Nuclear Facilities Safety Board review of the WTP safety culture were well organized and coordinated with responsible personnel in a timely manner, resulting in being well prepared to perform the review and meet the needs of the Defense Nuclear Facilities Safety Board reviewers.
- BNI continued its positive recognition of issue identification and resolution through the Corrective Action Management Program system, which contributes to the safety culture work environment and strengthening BNI's contractor assurance systems.
- Effluent Management Facility permitting products were provided on schedule, worked collaboratively with both the U.S. Department of Energy, Office of River Protection (ORP) and the Washington State Department of Ecology to make a quality product to support the formal submission date. In addition, the permitting products were completed in advance to support all Effluent Management Facility dangerous waste permit construction application material approvals, culminating in the Effluent Management Facility Group III equipment dangerous waste permit approval.
- BNI completed actions to solicit feedback from the workforce on its safety culture, and took actions to address improvement areas identified from multiple surveys and focus groups. BNI completed its action plan developed from opportunities and improvements identified through the 2017 Nuclear Safety and Quality Culture employee survey.
- Effective nuclear safety project management was observed during 2018. Weekly meetings with BNI and ORP management on the status of ongoing nuclear safety deliverables plans are effective. BNI and ORP jointly monitor and discuss the status of WTP nuclear safety emerging issues and discuss paths forward for issue resolution.

Areas for Improvement:

- Not adequately maintaining components installed during several years of construction to ensure they do not fail or need replacement during testing and turnover of systems or during commissioning of the plant prior to startup.
- Improvement in achieving project deadlines for testing components and turning over systems from construction to commissioning.
- Resolving system testing and turnover delays due to a backlog of maintenance or procurement of replacement parts.
- Contractor performance in managing specifications has degraded, as evidenced by the results of surveillance report 18196-WTP, which contains three findings and two opportunities for improvement. The findings indicated (1) inadequate flowdown of

requirements into specifications and (2) inadequate implementation of specification requirements into procedures. BNI is processing these issues for resolution through the Integrated Contractor Assurance System.

- Field startup and operations activities struggled with operational controls for nonradioactive liquid waste disposal interlocks and configuration of chiller compressor building systems. These issues were not identified or addressed prior to field discovery, leading to inefficiencies of resolution and affecting startup and initial operations (ultimately reflecting weaknesses in configuration management).
- BNI has performed an evaluation and identified activities that could result in sustainable labor reductions for the Material Handling Facility. Apart from some near-term actions (e.g., use of radio-frequency identification tags, reduction of inventory frequency, use of robot shop vacuum), this effort identified future efforts that needed further cost/benefit evaluations, but would require investments ranging from \$32,000 to \$4 million, beyond current budgeted estimates with expected payback savings benefits to take 10 to 14 years.
- Quality assurance implementation issues that have not been resolved in a timely manner and that were addressed jointly by ORP and BNI include commercial grade dedication, software quality assurance, quality verification documentation, structural steel records, management of storage areas, and closure of the quality assurance programmatic finding.
- Configuration management of the document 24590-LAW-DSA-NS-18-0001, *Documented Safety Analysis for the Low-Activity Waste Facility*, remains a vulnerability. The BNI safety evaluation process is used to manage the configuration of the safety basis and identify the appropriate level of approval for proposed changes. Both BNI and ORP assessments have identified a number of programmatic weaknesses in the training of safety evaluation evaluators, identification of documents requiring safety evaluation review, and overall rigor in implementation of the safety evaluations process. Effective and timely corrective actions are needed in this area. Corrective actions have been identified, but the program is not fully mature.
- Reductions in labor associated with the Material Handling Facility, as required by the Performance Evaluation and Measurement Plan objective, did not materialize in 2018. The number of Material Handling Facility full-time equivalent employees remained the same as budgeted.
- Inconsistent responsiveness was observed during the last quarter of 2018. Multiple nuclear safety-related issues have occurred, to which BNI has not responded in a timely fashion.
- Issues involving the effectiveness of the BNI safety evaluations process for corrosion and erosion were identified early in the final quarter. BNI has not yet fully responded with a technical discussion of the topic, nor has it responded with a justification of how the issue was evaluated in its safety evaluations process.