

FY 2001 – 2006 PERFORMANCE BASED INCENTIVE**SECTION 1
General Information**

Title: Double-Shell Tank Integrity Project High Priority Caustic Additions, Video Inspections, and Ultra Sonic Testing Inspections

Project Baseline Summary (PBS): TW03

Work Breakdown Structure (WBS): 5.01.03.05.

Maximum Available Incentive Fee:

Superstretch Fee Potential* = \$167K

Type: Superstretch

FY 2002: \$1,667K* BCWS + \$167K Fee = \$1,834 Funds

*Superstretch fee set at 10%. BCWS and corresponding fee dollars subject to change based on approved BCR.

Note: ORP may at its unilateral discretion choose to revise downward the baseline cost estimate for this SSPBI to reflect the results of the FY 2002 baseline improvement process (BIP). No payments upon this SSPBI would be made until the BIP baseline change request has been approved by ORP.

**SECTION 2
Technical Contacts**

ORP Point of Contact: J. Swailes/D. Noyes

Contractor Point of Contact: D. Allen/M. Ostrom

**SECTION 3
Performance Expectations and Earning Schedule****General:**

1. The Contractor's final fee will be determined in accordance with clause H.1, Performance Based Incentives and Fee Distribution.
2. Performance Based Incentives (PI) may be modified to reflect changes to the project baseline resulting from external drivers, such as, submission and approval of TPA change requests for consistency purposes.
3. Acceptable product completion represents technical adequacy and good value to the government.

SUPERSTRETCH:

1. Complete ultrasonic testing (UT) reinspection of Double-Shell Tanks (DSTs) AP-108 by September 30, 2002 – earn 10.4% of fee.
2. Complete the addition of sufficient caustic to (DSTs AZ-102 and AN-106 by September 30, 2002, to bring calculated bulk hydroxide concentration within chemistry specification – earn 32.1% of fee.
3. Complete the preparations to make the Synthetic Aperture Focusing Technique/Tandem-Synthetic Aperture Focusing Technique (SAFT/T-SAFT) ultrasonic inspection tool ready for deployment in a Double Shell Tank (DST) by September 30, 2002 - earn 18.7% of fee.
4. Complete video inspections of the following DSTs: AN-101, AN-102, AN-103, AN-104, AN-106, AN-107, AP-107, AP-108, AW-103, and AW-104 by September 30, 2002 – earn 38.8% of fee.

**SECTION 4
Performance Requirements**

DEFINE COMPLETION: (*Specify Performance Elements and describe indicators of success (quality/progress). Include baseline documentation/data against which completion documentation should be compared.*)

Completion of Expectation 1 shall be documented in RPP-6684, Revision 0B, *Ultrasonic Inspection Results of DST 241-AP-108* on the results of the UT inspection for Tank AP-108 per the approved inspection plan by September 30, 2002. The inspection of AP-108 will consist of a reexamination of the indication found in a prior UT inspection (July 2000).

Completion of Expectation 2 shall be documented by CHG letter to ORP stating that the required calculated volume of caustic has been added to each tank per the specified Tank Farm Operating Procedure, with attached procedure data sheets including caustic transfers, copies of the calculations and certifications of analysis from the chemical manufacturers verifying required weight percentage of sodium hydroxide. Sufficient caustic shall be added to each tank to bring the tanks into specification for a minimum

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of 5 years per the definition of sufficient caustic/nitrite in Definitions below. Earn 8.05% of fee for completing one tank and full fee (32.1% of total) for completing both caustic additions.

Completion of Expectation 3 shall be documented in a performance demonstration test report. The performance demonstration test report will document SAFT/T-SAFT performance demonstration results of a tank knuckle mockup with crack like fabrications set up as a prototype DST annulus wall and lower knuckle. The report will also document the ability of the operators to operate and interpret the data collected. This document will be used as the baseline for identifying circumferential stress corrosion cracking in the lower knuckle regions of actual DSTs.

Completion of Expectation 4 shall be documented in released reports for each of the 10 tanks by September 30, 2002.

DEFINITIONS: *(define terms)*

Sufficient Caustic/Nitrite: Calculations to determine “sufficient caustic/nitrite” for Expectation 2 are based on the DST chemistry specifications contained in Tank Farm Technical Safety Requirement (TSR) HNF-SD-WM-TSR-006, Administrative Control 5.15, Table 5.15.1, and on tank characterization data prior to the caustic additions. Sufficient caustic/nitrite is defined as the free hydroxide concentration above the minimum specification in Table 5.15.1, which is calculated to keep bulk hydroxide concentration above the minimum specification for at least 5 years. The amount of caustic to be added will be documented in released engineering calculations.

The video examinations of Expectation 4 shall include 360° video examinations through at least four (4) annulus risers and one (1) primary dome riser.

For Expectation 3, Pacific Northwest National Laboratory will begin fabrication of the stress corrosion cracked plate into a knuckle performance demonstration test plate by June 17, 2002. The performance demonstration test will measure the performance of SAFT/T-SAFT against its Functions and Requirements and it will test the operator’s ability to operate the SAFT/T-SAFT and correctly interpret data collected as specified in *Crack Sizing Requirements* (PNNL-13436, *Functions and Requirements for the DST Knuckle Region Ultrasonic Scanning System*).

COMPLETION DOCUMENTS LIST: *(Name the Documents, Databases, etc., which will be submitted to show completion for each Performance Expectation.)*

As indicated in Define Completion above.

ASSUMPTIONS/TECHNICAL BOUNDARY CONDITIONS: *(For reasonably foreseeable impacts to performance that are not within control of Contractor. If the assumption or condition proves false, the remedy is renegotiations unless stated otherwise.)*

For Expectation 1, UT data can be obtained from AP-108 using the technologies identified in the Inspection Plan (RPP-8867, Engineering Task Plan for the Ultrasonic Inspection of Hanford DST 241-AP-108 and 241-AY-101 and 241-AZ-102 – FY 2002)

For Expectation 2, no forced mixing is required for the caustic addition activities; therefore, the work does not include pump installation or use. A process control plan/memorandum must be forwarded to ORP for review prior to commencement of caustic additions.

For Expectation 3, continued receipt of EM-50 funding to a total of \$420K will be received to support SAFT/T-SAFT development.

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SECTION 5
Signatures

ORP Manager/Date

CHG President and General Manager/Date

ORP Contracting Officer/Date

CHG Contract Representative/Date