

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		1. CONTRACT ID CODE	PAGE OF PAGES 1   4
2. AMENDMENT/MODIFICATION NO. 042	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
6. ISSUED BY Office of River Protection U.S. Department of Energy Office of River Protection P.O. Box 450 Richland WA 99352	CODE 00603	7. ADMINISTERED BY (If other than Item 6) Office of River Protection U.S. Department of Energy Office of River Protection P.O. Box 450 MS: 35-60 Richland WA 99352	CODE 00603
8. NAME AND ADDRESS OF CONTRACTOR (No. street, county, State and ZIP Code) WASHINGTON RIVER PROTECTION SOLUTIONS LLC Attn: DUANE SCHMOKER PO BOX 73 720 PARK BLVD BOISE ID 837290001		(x) 9A. AMENDMENT OF SOLICITATION NO.	9B. DATED (SEE ITEM 11)
CODE 806500521	FACILITY CODE	* 10A. MODIFICATION OF CONTRACT/ORDER NO. DE-AC27-08RV14800	10B. DATED (SEE ITEM 13) 05/29/2008

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)  
See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE X	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A. FAR 32.243-2 Changes-Cost Reimbursement (Aug 1987) - Alt II, III, and IV (Apr 1984)
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF.
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor  is not,  is required to sign this document and return 0 copies to the issuing office

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Continued on Page 2.

Subj to Retent: N

Period of Performance: 06/20/2008 to 09/30/2013

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)	18A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Susan E. Bechtol
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED
15B. UNITED STATES OF AMERICA <b>ORIGINAL SIGNED BY</b> (Signature of Contracting Officer)	16C. DATE SIGNED 02/11/2010

**Continued from SF-30, Block 14.**

The purpose of this modification is to issue a change order revising the statement of work and to make certain other changes to the contract terms associated with the revised statement of work. This modification is made under the authority of the contract clause I-103, entitled FAR 52.243-2 - Changes (Aug 1987), Alternate I (Apr 1984), Alternate II (Apr 1984), Alternate III (Apr 1984), and Alt IV (Apr 1984). The work described in this modification shall be performed using funds previously obligated under this contract, appropriated under the American Recovery and Reinvestment Act of 2009, Pub. L. 1115 (Recovery Act) and as such is subject to special statutory conditions.

This change order accelerates scope from the outer years of the contract (option periods) to the contract base period of performance, specifically to Fiscal Years 2010 and 2011. This accelerated scope shall be funded from the remaining \$22.9 million of the *American Recovery and Reinvestment Act of 2009* funds, which were previously obligated to the contract and not definitized in contract Modification 30.

The additional Recovery Act funded projects authorized by this change order by Sub-CLIN are:

- Sub-CLIN 7.1
  - design, fabricate and install a corrosion probe for double-shell tank AW-104, and
  - procure equipment required to support these efforts, e.g. cranes, utility vehicles, etc.
- Sub-CLIN 7.6
  - design, procure and test the vacuum prototype for the Mobile Arm Retrieval System (MARS), including all necessary support systems,
  - construct the TY Farm interim barrier,

The contractor shall begin work immediately and is authorized to incur costs for these specific projects not to exceed \$12 million, consistent with the other contract terms and conditions and pending definitization of this change

The Contractor shall prepare a proposal in accordance with the proposal preparation instructions attached to this modification and submit the proposal to the Contracting Officer by March 31, 2010.

This change order shall be definitized by July 30, 2010.

**The following changes are hereby made to the contract:**

1. Delete Section B, Supplies or Services and Prices/Costs and replace with the attached revised Section B, Supplies or Services and Prices/Costs, incorporating the following general changes:

A. Paragraph B.2(b) is modified to add the following:

f. Sub-CLIN 7.6: ARRA workscope under Sub-CLIN 2.1– Single Shell Tank (SST) Retrieval

B. Revise Table B-4.1 Contract Cost and Contract Fee by adding Sub-CLIN 7.6 Single Shell Tank (SST) Retrieval.

2. In accordance with Section B, clause B.14, DOE Authorization of Work you are hereby given work authorization Sub-CLIN - 7.6 ARRA workscope under Sub-CLIN 2.1 – Single Shell Tank (SST) Retrieval

3. Delete Section C, Statement of Work, and replace with the attached Section C, Statement of Work, incorporating the following changes.

A. Paragraph C.1.3 Scope Summary is modified to add the following under *CLIN 7 – American Recovery and Reinvestment Act (ARRA) Workscope*:

ARRA workscope under Sub-CLIN 2.1 - Single-Shell Tank (SST) Retrieval. Design, procure, permit, construct/fabricate, and operate SST retrieval systems that remove waste from the SSTs and transfer it to the Double Shell Tanks (DSTs) or treatment systems

B. The table at Paragraph C.2 *Description of Project Performance Requirements* is modified to add the following to the table:

Sub-CLIN 7.6 ARRA workscope under Sub-CLIN 2.1 - Single-Shell Tank (SST) Retrieval

C. Paragraph C.2.7 *CLIN #7 – American Recovery and Reinvestment Act (ARRA) workscope* is modified to add the following:

C.2.7.6 Sub-CLIN 7.6: ARRA workscope under Sub-CLIN 2.1 Single-Shell Tank Retrieval

General Scope:

The Contractor shall design, procure, permit, construct/fabricate, and operate the SST retrieval system(s) used to remove waste from SSTs and transfer the waste to pretreatment/treatment systems, or to the DST system for eventual treatment.

Detailed Scope and Requirements:

## Retrieval Technologies

The Contractor shall develop technologies to improve the efficiencies and equipment reliability for retrieving saltcake, hard heel, and other wastes from SSTs; determine technology limitations, retrieval efficiencies, safety and environmental concerns, and cost impacts for SST retrieval systems; and evaluate alternative retrieval technologies and leak detection methods for SSTs.

## Vadose Zone Characterization &amp; Corrective Measures

The Contractor shall perform Tank Farm vadose zone sampling, characterization, and corrective measures (in coordination with the PRC) to integrate these activities and drive efficiencies in the Hanford Site groundwater program. The TOC shall provide support to the lead contractor (PRC) for the groundwater/vadose zone program.

4. Delete Section J, Attachment J.15, American Recovery And Reinvestment Act (ARRA) Milestones and Performance Measures, and replace with the attached Section J.15 American Recovery And Reinvestment Act (ARRA) Scope And End-State Milestones.

Section J, Attachment J.15 will be revised when this change order is definitized to incorporate additional milestones and performance measures associated with the new projects.

5. Proposal Preparation Instructions: The contractor's technical, cost, and fee proposal shall be prepared in accordance with Attachment 1 to this modification.

6. This modification includes the following attachments:

Section B, Supplies or Services and Prices/Costs (22 pages),

Section C, Statement of Work (67 pages),

Section J, Attachment J.15, ARRA Scope and End-State Milestones (5 pages), and

Attachment 1, Proposal Preparation Instructions (13 pages).

**PART I – THE SCHEDULE**

**SECTION B**

**SUPPLIES OR SERVICES AND PRICES/COSTS**

**TABLE OF CONTENTS**

<b>B.1</b>	<b>TYPE OF CONTRACT .....</b>	<b>2</b>
<b>B.2</b>	<b>ITEM(S) BEING ACQUIRED .....</b>	<b>2</b>
<b>B.3</b>	<b>OBLIGATION AND AVAILABILITY OF FUNDS .....</b>	<b>3</b>
<b>B.4</b>	<b>CONTRACT COST AND CONTRACT FEE .....</b>	<b>4</b>
<b>B.5</b>	<b>CHANGES TO CONTRACT COST AND CONTRACT FEE .....</b>	<b>4</b>
<b>B.6</b>	<b>BASIS FOR TOTAL AVAILABLE FEE .....</b>	<b>8</b>
<b>B.7</b>	<b>FEE STRUCTURE .....</b>	<b>8</b>
<b>B.8</b>	<b>FEE DETERMINATION AND PAYMENT .....</b>	<b>9</b>
<b>B.9</b>	<b>FEE REDUCTIONS .....</b>	<b>10</b>
<b>B.10</b>	<b>SMALL BUSINESS SUBCONTRACTING FEE REDUCTION .....</b>	<b>11</b>
<b>B.11</b>	<b>ALLOWABILITY OF SUBCONTRACTOR FEE .....</b>	<b>12</b>
<b>B.12</b>	<b>DEAR 970.5215-3, CONDITIONAL PAYMENT OF FEE, PROFIT, AND OTHER INCENTIVES – FACILITY MANAGEMENT CONTRACTS (ALTERNATE II) (JAN 2004) [DEVIATION] .....</b>	<b>13</b>
<b>B.13</b>	<b>CONDITIONAL PAYMENT OF FEE (CPOF) DOE OFFICE OF RIVER PROTECTION SITE-SPECIFIC PERFORMANCE CRITERIA/REQUIREMENTS .....</b>	<b>20</b>
<b>B.14</b>	<b>DOE AUTHORIZATION OF WORK .....</b>	<b>21</b>

## B.1 TYPE OF CONTRACT

This is a performance-based Cost-Plus-Award Fee Contract to directly support the environmental clean-up mission with a fee structure that provides a strong financial motivation for the Contractor to furnish safe, compliant, cost-effective and energy-efficient services to further the U.S. Department of Energy (DOE) Office of River Protection (ORP) mission to store, retrieve and treat Hanford tank waste, store and dispose of treated waste, and close the tank farm waste management areas to protect the Columbia River.

## B.2 ITEM(S) BEING ACQUIRED

- (a) The Contractor shall, in accordance with the terms of this Contract (Contract refers solely to the Tank Operations Contract), provide the personnel, equipment, materials, supplies, and services, and do all things necessary for, or incident to, providing its best efforts to perform all requirements of this Contract.
- (b) For purposes of cost collection, reporting, work authorization, and administration of the Contract fee structure, the Contract consists of 23 activities divided among six (7) Contract Line Item Numbers (CLINs) and authorized in accordance with the Section B Clause entitled, *DOE Authorization of Work*. The activities identified below are further defined in Section J Attachment entitled, *Supplemental Work Description Tables*:
  - (1) *CLIN 1 – Base Operations:*
    - a. Sub-CLIN 1.1: Transition;
    - b. Sub-CLIN 1.2: Safe, Compliant Operations; and
    - c. Sub-CLIN 1.3: Analytical Laboratory Support.
  - (2) *CLIN 2 – Single-Shell Tank (SST) Retrieval and Closure:*
    - a. Sub-CLIN 2.1: Single-Shell Tank Retrieval; and
    - b. Sub-CLIN 2.2: Single-Shell Tank Farm (Waste Management Area) Closure.
  - (3) *CLIN 3 – Waste Treatment and Immobilization Plant (WTP) Support:*
    - a. Sub-CLIN 3.1: Treatment Planning, Waste Feed Delivery, and WTP Transition;
    - b. Sub-CLIN 3.2: WTP Operational Readiness;
    - c. Sub-CLIN 3.3: Immobilized High-Level Waste (IHLW) Storage and Shipping Facility Construction; and
    - d. Sub-CLIN 3.4: Upgrade and Operate the Effluent Treatment Facility (ETF).
  - (4) *CLIN 4 – Supplemental Treatment:*
    - a. Sub-CLIN 4.1: Demonstration Bulk Vitrification System (DBVS) Construction and Operations;

- b. Sub-CLIN 4.2: Extended Demonstration Bulk Vitrification System Operations;
  - c. Sub-CLIN 4.3: Supplemental Treatment Design
  - d. Sub-CLIN 4.4: Supplemental Treatment Construction and Operations
  - e. Sub-CLIN 4.5: Transuranic Tank Waste Treatment and Packaging.
- (5) *CLIN 5 – Early Feed and Operation of the WTP Low Activity Waste (LAW) Facility:*
- a. Sub-CLIN 5.1: Tank Selection, Retrieval, Pretreatment and Feed Delivery Design;
  - b. Sub-CLIN 5.2: Retrieval, Pretreatment and Feed Delivery Construction and Operations;
  - c. Sub-CLIN 5.3: (moved to Sub-CLIN 3.4)
  - d. Sub-CLIN 5.4: LAW/BOF/LAB Operations.
- (6) *CLIN 6 – Pension and Welfare Plans:*
- a. Sub-CLIN 6.1: Hanford Employee Retirement and Benefit Plan Management; and
  - b. Sub-CLIN 6.2: Legacy Pension and Benefit Plan Management.
- (7) *CLIN 7 – American Recovery and Reinvestment Act (ARRA) Workslope:*
- a. Sub-CLIN 7.1: ARRA workslope under Sub-CLIN 1.2 – Safe, Compliant Operations;
  - b. Sub-CLIN 7.2: ARRA workslope under Sub-CLIN 1.3 – Analytical Laboratory Support;
  - c. Sub-CLIN 7.3: ARRA workslope under Sub-CLIN 3.1 – Treatment Planning, Waste Feed Delivery, and WTP Transition; and
  - d. Sub-CLIN 7.4: ARRA workslope under Sub-CLIN 3.3 – Immobilized High-Level Waste (IHLW) Storage and Shipping Facility Construction
  - e. Sub-CLIN 7.5: ARRA workslope under Sub-CLIN 3.4 - Upgrade and Operate the Effluent Treatment Facility (ETF).
  - f. Sub-CLIN 7.6: ARRA workslope under Sub-CLIN 2.1 Single Shell Tank (SST) Retrieval and Closure

### **B.3 OBLIGATION AND AVAILABILITY OF FUNDS**

- (a) Obligation of Funds. Pursuant to the Section I Clause entitled, FAR 52.232-22 Limitation of Funds, total funds in the amount of \$1,016,188,145.90 have been allotted for obligation and are available for payment of services provided from the effective date of the Notice to Proceed through September 30, 2013.

Of the total identified above, \$322,255,000.00 in Recovery Act funds have been allotted for obligation and are available for payment of services provided from the effective date of this modification through September 30, 2011. (Subject to Section I clause 52.216-24 Limitation of Government Liability).

- (b) Availability of Funds. Except as may be specifically provided in the Section I Clause entitled, *DEAR 952.250-70, Nuclear Hazards Indemnity Agreement*, the duties and obligations of DOE hereunder calling for the expenditure of appropriated funds shall be subject to the availability of funds appropriated by the U.S. Congress that DOE may legally spend for such purposes.
- (c) No fee shall be paid to the contractor for the Recovery Act work, including provisional, prior to the negotiation of any equitable adjustment in the fee and the subsequent modification of the contract to reflect the mutual agreement between the contractor and the Contracting Officer.

#### **B.4 CONTRACT COST AND CONTRACT FEE**

This Section establishes the *Total Contract Cost* and *Contract Fee*. Within Table B.4-1:

- (a) *Contract Period* is defined as the *Transition Period, Base Period, and Option Period(s)* (if exercised) described in the Section F Clause entitled, *Period of Performance*.
- (b) *Contract Cost* is defined as all costs initially proposed by the Contractor.
- (c) *Available Fee* is defined as the maximum amount of fee that may be earned under the Contract by Contract period.
- (d) *Contract Price* in Table B.4-1 is the sum of *Contract Cost* and *Available Fee*, in each year of Contract performance.
- (e) *Total Contract Cost* is defined as the cumulative *Contract Cost* for all Contract periods.
- (f) *Total Available Fee* is defined as the cumulative *Available Fee* for all Contract periods.
- (g) *Total Contract Price* is defined as the sum of *Total Contract Cost* and *Total Available Fee*.
- (h) *Contract Line Item Number (CLIN)* references a specific category of work as defined in the Section C, *Statement of Work*. Proposed costs shall be appropriately categorized into the individual CLINs in Table B.4-1.
- (i) *Contract Cost, Contract Price, and Available Fee* by Fiscal Year and by Sub-CLIN will be adjusted annually by the Contracting Officer upon approval of the Performance Measurement Baseline, and whenever changes affecting the table are made under the Section I Clause entitled, *Changes – Cost Reimbursement*.

#### **B.5 CHANGES TO CONTRACT COST AND CONTRACT FEE**

- (a) Funding.
  - (1) DOE intends to obligate funding to the Contract in accordance with the *Contract Price* shown by fiscal year in Table B.4-1, *Contract Cost and Contract Fee*. The Contractor shall not be entitled to an equitable adjustment to *Available Fee* if the obligated funding by fiscal year is within 10% of the amount shown in Table B.4-1.



- (2) If DOE does not obligate funding within the parameters detailed in paragraph (a)(1) above, the Contracting Officer may initiate a change or consider a request for an equitable adjustment to the *Contract Price* and/or Schedule in accordance with the Section I Clause entitled, *FAR 52.243-2, Changes – Cost Reimbursement, Alternates II, III, and IV.*
- (b) Performance Risk.
  - (1) Changes to *Total Available Fee* will accurately reflect the corresponding changes to the Contract with respect to performance risk as determined by DEAR 915.404-4-70, DOE structured profit and fee system and implemented by the profit-analysis factors defined in FAR 15.404-4, *Profit*. Accordingly, changes to the Contract resulting in an increase or decrease to the Contractor's performance risk as defined in FAR 15.404-4(d)(1), shall cause a proportionate increase or decrease to the *Total Available Fee*.
  - (2) If performance risk changes, the Contracting Officer may initiate a change or consider a request for equitable adjustment to Contract Price and/or Schedule in accordance with the Section I Clause entitled, *FAR 52.243-2, Changes – Cost Reimbursement, Alternates II, III, and IV.*

Table B.4-1, Contract Cost and Contract Fee  
 (\$'s in K)

Transition Period – FY 2008							
CLIN 1 Base Operations	Sub-CLIN 1.1	5,494					
Totals	Contract Cost	5,494					
	Contract Price	5,494					
Base Period							
		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Totals
CLIN 1 Base Operations	Sub-CLIN 1.2	125,350	122,759	125,362	134,704	147,817	655,992
	Sub-CLIN 1.3	14,120	14,379	16,681	17,434	17,899	80,512
CLIN 2 SST Retrieval and Closure	Sub-CLIN 2.1	39,375	29,166	44,854	59,798	66,610	239,803
	Sub-CLIN 2.2	7,434	9,970	6,552	17,389	11,927	53,272
CLIN 3 WTP Support	Sub-CLIN 3.1	9,605	14,549	20,816	17,553	21,056	83,579
	Sub-CLIN 3.2	3,045	3,115	3,187	3,247	3,335	15,929
	Sub-CLIN 3.3	926	0	830	4,272	1,350	7,378
	Sub-CLIN 3.4	16,536	17,333	23,879	19,024	15,145	91,918
CLIN 4 Supplemental Treatment	Sub-CLIN 4.1	49,228	37,388	19,799	13,895	4,689	125,000
	Sub-CLIN 4.2	0	0	22	308	6,353	6,682
	Sub-CLIN 4.3	0	101	382	389	9,149	10,021
	Sub-CLIN 4.4	0	104	396	471	676	1,647
	Sub-CLIN 4.5	9,533	5,686	17,008	9,751	9,932	51,910
CLIN 5 Early Feed and Operation of WTP LAW Facility	Sub-CLIN 5.1	34,118	6,848	2,674	1,973	2,648	48,261
	Sub-CLIN 5.2	0	34,417	49,008	43,452	35,379	162,257
	Sub-CLIN 5.3	0	0	0	0	0	0
	Sub-CLIN 5.4	0	0	0	0	0	0
CLIN 6 Pension and Welfare Plans	Sub-CLIN 6.1	20,036	21,877	23,836	25,948	27,376	119,074
	Sub-CLIN 6.2	105,842	112,696	120,939	127,189	123,003	589,669
Base Contract Sub-Totals	Contract Cost	435,148	430,387	476,225	496,797	504,345	2,342,903
	Available Fee	15,675	TBD by DOE	TBD by DOE	TBD by DOE	TBD by DOE	111,677
	Contract Price	450,823	Total	Total	Total	Total	2,454,579
CLIN 7 American Recovery and Reinvestment Act (ARRA) Workslope	Sub-CLIN 7.1	29,362	85,634	63,201	0	0	178,197
	Sub-CLIN 7.2	2,661	17,260	11,791	0	0	31,712
	Sub-CLIN 7.3	5,756	26,731	26,448	0	0	58,935
	Sub-CLIN 7.4	0	0	0	0	0	0
	Sub-CLIN 7.5	539	6,943	3,268	0	0	10,749
	Sub-CLIN 7.6	0	TBD	TBD	0	0	TBD
ARRA Sub-Totals	Cost	38,318	136,567	104,708	0	0	279,594
	Fee	2,742	9,844	7,549	0	0	20,135
	Price	41,060	146,411	112,257	0	0	299,729
Total Contract Price	Contract Cost	473,466	566,954	580,933	496,797	504,345	2,622,497
	Available Fee	18,417	TBD by DOE	TBD by DOE	TBD by DOE	TBD by DOE	131,812
	Contract Price	491,883	Total	Total	Total	Total	2,754,309

\* Note – Available fee does not include “Stretch Fee”.

Table B.4-1, Contract Cost and Contract Fee (continued)

		Option Period 1			
		FY 2014	FY 2015	FY 2016	Totals
<b>CLIN 1</b> <b>Base Operations</b>	Sub-CLIN 1.2	141,664	100,698	140,688	383,049
	Sub-CLIN 1.3	17,860	18,271	15,561	51,692
<b>CLIN 2</b> <b>SST Retrieval and Closure</b>	Sub-CLIN 2.1	53,635	62,370	74,091	190,096
	Sub-CLIN 2.2	13,087	13,619	7,172	33,879
<b>CLIN 3</b> <b>WTP Support</b>	Sub-CLIN 3.1	23,597	17,359	19,307	60,262
	Sub-CLIN 3.2	3,412	3,220	3,307	9,938
	Sub-CLIN 3.3	3,676	17,845	35,469	56,990
<b>CLIN 4</b> <b>Supplemental Treatment</b>	Sub-CLIN 4.1	0	0	0	0
	Sub-CLIN 4.2	0	0	0	0
	Sub-CLIN 4.3	12,086	22,176	33,154	67,416
	Sub-CLIN 4.4	8,002	122,533	284,921	338,468
	Sub-CLIN 4.5	3,409	2,944	0	6,353
<b>CLIN 5</b> <b>Early Feed and Operation of WTP LAW Facility</b>	Sub-CLIN 5.1	436	0	0	436
	Sub-CLIN 5.2	10,092	21,416	21,908	53,416
	Sub-CLIN 5.3	15,801	15,530	8,561	39,894
	Sub-CLIN 5.4	90,880	124,209	127,237	342,327
<b>CLIN 6</b> <b>Pension and Benefit Plans</b>	Sub-CLIN 6.1	29,972	32,846	36,029	98,848
	Sub-CLIN 6.2	119,377	116,094	113,495	348,965
<b>Base Contract Totals</b>	<b>Contract Cost</b>	546,986	691,131	920,902	2,159,016
	<b>Available Fee</b>	TBD by DOE	TBD by DOE	TBD by DOE	115,598
	<b>Contract Price</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>	2,274,614

		Option Period 2		
		FY 2017	FY 2018	Totals
<b>CLIN 1</b> <b>Base Operations</b>	Sub-CLIN 1.2	176,816	170,985	347,801
	Sub-CLIN 1.3	13,881	14,543	28,065
<b>CLIN 2</b> <b>SST Retrieval and Closure</b>	Sub-CLIN 2.1	69,902	43,482	113,384
	Sub-CLIN 2.2	3,783	2,357	6,140
<b>CLIN 3</b> <b>WTP Support</b>	Sub-CLIN 3.1	9,705	4,009	13,714
	Sub-CLIN 3.2	3,356	3,420	6,776
	Sub-CLIN 3.3	25,165	19,552	44,717
<b>CLIN 4</b> <b>Supplemental Treatment</b>	Sub-CLIN 4.1	0	0	0
	Sub-CLIN 4.2	0	0	0
	Sub-CLIN 4.3	0	0	0
	Sub-CLIN 4.4	448,611	268,471	717,082
	Sub-CLIN 4.5	0	0	0
<b>CLIN 5</b> <b>Early Feed and Operation of WTP LAW Facility</b>	Sub-CLIN 5.1	0	0	0
	Sub-CLIN 5.2	22,412	22,928	45,340
	Sub-CLIN 5.3	13,086	17,239	30,325
	Sub-CLIN 5.4	131,281	134,315	265,595
<b>CLIN 6</b> <b>Pension and Benefit Plans</b>	Sub-CLIN 6.1	39,561	43,479	83,039
	Sub-CLIN 6.2	111,372	109,543	220,915
<b>Base Contract Totals</b>	<b>Contract Cost</b>	1,068,572	854,324	1,922,895
	<b>Available Fee</b>	TBD by DOE	TBD by DOE	114,325
	<b>Contract Price</b>	<b>Total</b>	<b>Total</b>	2,037,220

Contract Totals		
<b>Total: Transition, Base &amp; Option Periods</b>	<b>Contract Cost</b>	6,709,902
	<b>Available Fee</b>	361,735
	<b>Contract Price</b>	7,071,637

**B.6 BASIS FOR TOTAL AVAILABLE FEE**

The cost basis for *Total Available Fee* shall be the *Total Contract Cost*, excluding:

- (a) Pass-through funding provided to other contractors for Hanford Site services identified in the Section J Attachment entitled, *Hanford Site Services and Interface Requirements Matrix*;
- (b) Costs associated with sponsorship, management, administration and/or contributions for Legacy Plans (set forth in the Section H Clause entitled, *Employee Compensation: Pay and Benefits*) administered under this Contract; and
- (c) Costs associated with sponsorship, management, administration and/or contributions for any defined benefit pension plan.

Employee benefit plan costs shall be included in the *Contract Price* by fiscal year and by Contract period shown in Table B.4-1, *Contract Cost and Contract Fee*.

**B.7 FEE STRUCTURE**

- (a) The Contracting Officer reserves the unilateral discretion to determine the amount of *Available Fee* for the *Base Period* and *Option Period(s)* (if exercised), to each fiscal year and Sub-CLIN as described in this Clause; and as adjusted in the Section B Clause entitled, *Changes to Contract Cost and Contract Fee*. The Contractor will have the opportunity to earn 100% of the *Available Fee* within a Contract period, for work authorized in accordance with the Section B Clause entitled, *DOE Authorization of Work* and as adjusted in the Section B Clause entitled, *Changes to Contract Cost and Contract Fee*.
- (b) The Available Fee shown in Table B.4-1, *Contract Cost and Contract Fee*, can be earned through objective fee components and/or subjective fee components. The performance measures for these components and *Available Fee* for the period allocated to the fiscal year are provided in the Section J Attachment entitled, *Performance Evaluation and Measurement Plan (PEMP)*. The PEMP may contain annual and multi-year performance measures.
  - (1) *Available Fee* for the period allocated to annual performance measures may only be earned in that fiscal year. Allocated *Available Fee* for the fiscal year not earned in the fiscal year for an annual performance measure is unavailable and not payable to the Contractor. The Contractor forfeits any rights to unearned fee. The Contracting Officer reserves the unilateral discretion to determine how any

unearned fee will be utilized.

- (2) *Available Fee* for the period allocated to fiscal years for multi-year performance measures may be earned incrementally or upon final fee determination. Allocated *Available Fee* not earned for a multi-year performance measure is unavailable and not payable to the Contractor. The Contractor forfeits any rights to unearned fee. The Contracting Officer reserves the unilateral discretion to determine how any unearned fee will be utilized.
  - (3) *Provisional Fee* is defined as *Available Fee* that is paid contingently during an annual performance period. *Provisional Fee* may become earned fee upon the final fee determination.
  - (4) *Incremental Fee* is defined as *Available Fee* that the Contractor may earn by achieving a specific, fee-bearing performance measure event, subject to withholding in accordance with Section B Clause entitled, Fee Determination and Payment.
  - (5) Individual performance measures may require the Contractor to exceed approved baseline performance to earn 100% of the fee allocated to that performance measure.
- (c) The Contracting Officer will prepare and issue performance measures prior to the start of each fiscal year. The Contracting Officer may provide draft performance measures for Contractor review and input; however, the Contracting Officer reserves the unilateral discretion to issue the performance measures without Contractor review.

## **B.8 FEE DETERMINATION AND PAYMENT**

- (a) Fee earned under this Contract will be paid in accordance with the specific criteria defined in the PEMP and the Clauses in Section B. Monthly provisional payments of fee may be authorized by the Contracting Officer and will be made in accordance with paragraph (b) of this Clause.
- (b) For annual performance measures that do not have specific, incremental, fee-bearing performance measure events, the Contractor may request Contracting Officer approval to execute a monthly draw of *Provisional Fee* payments from the Special Financial Institution Account. The Contractor may request a monthly *Provisional Fee* payment of up to 7.5% of fee allocated to such performance measures, subject to a maximum payment of 80% of fee allocated to such performance measures, and also subject to withholding by DOE as described in paragraphs (e) and (f) of this Clause.
- (c) The Contractor shall request Contracting Officer acceptance of a specific, incremental, fee-bearing performance measure event. Following Contracting Officer acceptance of a specific, incremental, fee-bearing performance measure event, the Contractor may request Contracting Officer approval to execute a draw of *Incremental Fee* from the Special Financial Institution Account, subject to withholding by the Contracting Officer as described in paragraphs (e) and (f) of this Clause and the Section B Clause entitled, *Fee Reductions*.

- (d) At the end of each year of Contract performance, the Fee Determining Official will make a final *Fee Determination* using the PEMP described in the Section B Clause entitled, *Fee Structure*. In the event that fee overpayment results from the *Provisional Fee* payments provided for in this Clause, the Contractor shall reimburse the unearned fee overpayment within 30 days of notification, to the Contracting Officer payable with interest in accordance with the Section I Clause entitled, *FAR 52.232-17, Interest*.
- (e) Withholding of *Incremental* and *Provisional Fee* Payments for adverse Contract Performance.
  - (1) Withholding of *Incremental* and *Provisional Fee* Payments. If the Contractor demonstrates adverse performance, the Contracting Officer reserves the unilateral discretion to withhold *Incremental* and *Provisional Fee* Payments. Withheld Fee Payments are not subject to interest for the amount(s) of the withheld fee payment(s) under 5 CFR 1315, *Prompt Payment*.
  - (2) Release of Withheld *Incremental* and *Provisional Fee* Payments. The Contracting Officer may release withheld *Incremental* and *Provisional Fee* Payments and resume making *Incremental* and *Provisional Fee* Payments when the Contractor demonstrates sustained recovery in performance.
- (f) Withholding of *Incremental* and *Provisional Fee* Payments for bankruptcy or other issues with guarantor company(ies)<sup>4</sup>.
  - (1) Withholding of *Incremental* and *Provisional Fee*. In order to assure the Contractor's ability to repay any *Incremental* and *Provisional Fee* Payments that are determined to be in excess of the total fee earned, the Contracting Officer reserves the unilateral discretion to discontinue *Incremental* and *Provisional Fee* payments, in the event that a guarantor company files bankruptcy, is acquired by other owners, or impacted by other events that arise with the Contractor's guarantor company(ies) that can jeopardize DOE's ability to recover excess *Incremental Payment* and *Provisional Fee* Payments. Withheld Fee Payments are not subject to interest for the amount(s) of the withheld fee payment(s) under 5 CFR 1315, *Prompt Payment*.
  - (2) Release of Withheld *Incremental* and *Provisional Fee* Payments. Following receipt of evidence that bankruptcy or other issues do not affect the ability of the Contractor to continue to perform the obligations under the Contract, the Contracting Officer may release all *Incremental* and *Provisional Fee* Payments and resume making *Incremental* and *Provisional Fee* Payments.

## B.9 FEE REDUCTIONS

- (a) All earned fee in each year of Contract performance is subject to reductions imposed by the terms and conditions of this Contract, including, but not limited to:
  - (1) Section B Clause entitled, *Fee Determination and Payment*;

---

<sup>4</sup> Guarantor Company(ies) is defined as the company(ies) executing the performance guarantee (s) in Section H Clause entitled, *Performance Guarantee Agreement*.

- (2) Section B Clause entitled, *Small Business Subcontracting Fee Reduction*;
  - (3) Section B Clause entitled, *DEAR 970.5215-3, Conditional Payment of Fee, Profit, and Other Incentives – Facility Management Contracts (Alternate II) [DEVIATION]*;
  - (4) Section B Clause entitled, *Conditional Payment of Fee (CPOF) DOE Office of River Protection Site-Specific Performance Criteria/Requirements*;
  - (5) Section E Clause entitled, *FAR 52.246-3, Inspection of Supplies – Cost Reimbursement*;
  - (6) Section E Clause entitled, *FAR 52.246-5, Inspection of Services – Cost Reimbursement*;
  - (7) Section H Clause entitled, *Key Personnel*;
  - (8) Section I Clause entitled, *FAR 52.203-10, Price or Fee Adjustment for Illegal or Improper Activity*;
  - (9) Section I Clause entitled, *FAR 52.215-11, Price Reduction for Defective Cost or Pricing Data – Modifications*;
  - (10) Section I Clause entitled, *FAR 52.215-13, Subcontractor Cost or Pricing Data – Modifications*; and
  - (11) Section I Clause entitled, *FAR 52.243-2, Changes – Cost Reimbursement*.
- (b) The maximum fee reduction in any one (1) year of Contract performance is the allocated *Available Fee*, as defined in the Section J Attachment entitled, *Performance Evaluation and Measurement Plan*, that can be earned in the year the event occurred.

#### **B.10 SMALL BUSINESS SUBCONTRACTING FEE REDUCTION**

- (a) For the purpose of implementing this Clause, the percentage goals established in the Section J Attachment entitled, *Small Business Subcontracting Plan*, will remain in effect for the duration of the Contract, except as modified in accordance with the Section B Clause entitled, *Changes to Contract Cost and Contract Fee*. The Contractor shall submit annual updates to the narrative elements of the *Small Business Subcontracting Plan* by December 31 of each year.
- (b) The Contractor's performance in meeting small business performance percentage goals in accordance with the Section H Clause entitled, *Self-Performed Work*, providing meaningful involvement for small businesses, and entering into the required Mentor-Protégé Agreement(s) will be evaluated after the:
  - (1) Three year period concluding at the end of the 3<sup>rd</sup> year of Contract performance;
  - (2) Two year period concluding at the end of the 5<sup>th</sup> year of Contract performance; and, if *Option Period 1* is exercised;
  - (3) If *Option Period 1* is exercised – two year period concluding at the end of the 7<sup>th</sup>

year of Contract performance; and

- (4) At the end of the Contract period of performance.
- (c) The Contracting Officer will consider the Contractor's performance in meeting small business percentage goals and entering into the required Mentor-Protégé Agreement(s) when making a decision on the *Option Period(s)* authorization.
- (d) If the Contractor has not met any or all of the subcontracting goals, has failed to provide meaningful involvement for small business, and/or has failed to enter into the required Mentor-Protégé Agreement(s) during the above specified periods, the Contracting Officer may reduce the earned fee by an amount up to 10% of total earned fee in each period of the four (4) multi-year periods described above.
- (e) At Contract completion, the total amount of fee reduction for failure to meet its subcontracting goals shall be offset by any amount of liquidated damages assessed in accordance with the Section I Clause entitled, *FAR 52.219-16, Liquidated Damages – Subcontracting Plan*. The fee reduction amount will be a unilateral determination by the Contracting Officer and a permanent reduction in the earned fee under this Contract.
- (f) Any reduction for failure to meet the requirements of the Section H Clause entitled, *Mentor-Protégé Program*, shall be in addition to any liquidated damages assessed in accordance with the Section I Clause entitled, *FAR 52.219-16, Liquidated Damages – Subcontracting Plan*. The fee reduction amount will be a unilateral determination by the Contracting Officer and a permanent reduction in the earned fee under this Contract.

#### **B.11 ALLOWABILITY OF SUBCONTRACTOR FEE**

- (a) If the Contractor is part of a teaming arrangement as described in FAR Subpart 9.6, *Contractor Team Arrangements*, the team shall share in the *Total Available Fee* as shown in Table B.4-1. Separate additional subcontractor fee is not an allowable cost under this Contract for individual team members, or for a subcontractor, supplier, or lower-tier subcontractor that is a wholly-owned, majority-owned, or affiliate of any team member.
- (b) The subcontractor fee restriction in paragraph (a) does not apply to members of the Contractor's team that are: (1) small business(es); (2) Protégé firms as part of an approved Mentor-Protégé relationship under the Section H Clause entitled, *Mentor-Protégé Program*; (3) subcontractors under a competitively awarded firm-fixed price or firm-fixed unit price subcontract; or (4) commercial items as defined in FAR Subpart 2.1, *Definitions of Words and Terms*.



**B.12 DEAR 970.5215-3, CONDITIONAL PAYMENT OF FEE, PROFIT, AND OTHER INCENTIVES – FACILITY MANAGEMENT CONTRACTS (ALTERNATE II) (JAN 2004) [DEVIATION]**

(a) General.

- (1) The payment of earned fee, fixed fee, profit, or share of cost savings under this Contract is dependent upon:
  - (i) The Contractor's or contractor employees' compliance with the terms and conditions of this Contract relating to environment, safety, health and quality (ESH&Q), which includes worker safety and health, including performance under an approved Integrated Safety Management System (ISMS); and
  - (ii) The Contractor's or contractor employees' compliance with the terms and conditions of this Contract relating to the safeguarding of Restricted Data and other classified information.
- (2) The ESH&Q performance requirements of this Contract are set forth in its ESH&Q terms and conditions, including the DOE-approved Contractor ISMS or similar document. Financial incentives for timely mission accomplishment or cost effectiveness shall never compromise or impede full and effective implementation of the ISMS and full ESH&Q compliance.
- (3) The performance requirements of this Contract relating to the safeguarding of Restricted Data and other classified information are set forth in the Section I Clause entitled, *FAR 52.239-1, Privacy or Security Safeguards (AUG 1996)*, and *DEAR 970.5204-2, Laws, Regulations, and DOE Directives*, as well as in other terms and conditions.
- (4) If the Contractor does not meet the performance requirements of this Contract relating to ESH&Q or to the safeguarding of Restricted Data and other classified information during any performance evaluation period established under the Contract, otherwise earned fee, fixed fee, profit or share of cost savings may be unilaterally reduced by DOE.

(b) Reduction Amount.

- (1) The amount of earned fee, fixed fee, profit, or share of cost savings that may be unilaterally reduced will be determined by the severity of the performance failure pursuant to the degrees specified in paragraphs (c) and (d) of this Clause.
- (2) If a reduction of earned fee, fixed fee, profit, or share of cost savings is warranted, unless mitigating factors apply, such reduction shall not be less than 26% nor greater than 100% of the amount of earned fee, fixed fee, profit, or the Contractor's share of cost savings for a first degree performance failure, not less than 11% nor greater than 25% for a second degree performance failure, and up to 10% for a third degree performance failure.

- (3) In determining the amount of the reduction and the applicability of mitigating factors, DOE will consider the Contractor's overall performance in meeting the ESH&Q or security requirements of the Contract. Such consideration will include performance against any site specific performance criteria/requirements that provide additional definition, guidance for the amount of reduction, or guidance for the applicability of mitigating factors. In all cases, DOE will consider mitigating factors that may warrant a reduction below the applicable range (see 48 CFR 970.1504-1-2). The mitigating factors include, but are not limited to, the following ((v), (vi), (vii) and (viii) apply to ESH&Q only).
- (i) Degree of control the Contractor had over the event or incident.
  - (ii) Efforts the Contractor had made to anticipate and mitigate the possibility of the event in advance.
  - (iii) Contractor self-identification and response to the event to mitigate impacts and recurrence.
  - (iv) General status (trend and absolute performance) of: ESH&Q and compliance in related areas; or of safeguarding Restricted Data and other classified information and compliance in related areas.
  - (v) Contractor demonstration to the Contracting Officer's satisfaction that the principles of industrial ESH&Q standards are routinely practiced (e.g., Voluntary Protection Program, ISO [International Organization for Standardization] 14000, *Environmental Management System Standards*).
  - (vi) Event caused by "Good Samaritan" act by the Contractor (e.g., off-site emergency response).
  - (vii) Contractor demonstration that a performance measurement system is routinely used to improve and maintain ESH&Q performance (including effective resource allocation) and to support DOE corporate decision-making (e.g., policy, ESH&Q programs).
  - (viii) Contractor demonstration that an Operating Experience and Feedback Program is functioning that demonstrably affects continuous improvement in ESH&Q by use of lessons-learned and best practices inter- and intra-DOE sites.
- (4) (i) The amount of fee, fixed fee, profit, or share of cost savings that is otherwise earned by a Contractor during an evaluation period may be reduced in accordance with this Clause if it is determined that a performance failure warranting a reduction under this Clause occurs within the evaluation period.
- (i) The amount of reduction under this Clause, in combination with any reduction made under any other clause in the Contract, shall not exceed the amount of fee, fixed fee, profit, or the Contractor's share of cost savings that is otherwise earned during the evaluation period.

- (iii) For the purposes of this clause, earned fee, fixed fee, profit, or share of cost savings for the evaluation period shall mean the amount determined by DOE or fee determination official as otherwise payable based on the Contractor's performance during the evaluation period. Where the Contract provides for financial incentives that extend beyond a single evaluation period, this amount shall also include: any provisional amounts determined otherwise payable in the evaluation period; and, if provisional payments are not provided for, the allocable amount of any incentive determined otherwise payable at the conclusion of a subsequent evaluation period. The allocable amount shall be the total amount of the earned incentive divided by the number of evaluation periods over which it was earned.
- (iv) The Government will effect the reduction as soon as practicable after the end of the evaluation period in which the performance failure occurs. If the Government is not aware of the failure, it will effect the reduction as soon as practical after becoming aware. For any portion of the reduction requiring an allocation the Government will effect the reduction at the end of the evaluation period in which it determines the total amount earned under the incentive. If at any time a reduction causes the sum of the payments the Contractor has received for fee, fixed fee, profit, or share of cost savings to exceed the sum of fee, fixed fee, profit, or share of cost savings the Contractor has earned (provisionally or otherwise), the Contractor shall immediately return the excess to the Government. (What the Contractor "has earned" reflects any reduction made under this or any other Clause of the Contract.)
- (v) At the end of the Contract:
  - (A) The Government will pay the Contractor the amount by which the sum of fee, fixed fee, profit, or share of cost savings the Contractor has earned exceeds the sum of the payments the Contractor has received; or
  - (B) The Contractor shall return to the Government the amount by which the sum of the payments the Contractor has received exceeds the sum of fee, fixed fee, profit, or share of cost savings the Contractor has earned. (What the Contractor "has earned" reflects any reduction made under this or any other Clause of the Contract.)
- (c) Environment, Safety, Health and Quality (ESH&Q). Performance failures occur if the Contractor does not comply with the Contract ESH&Q terms and conditions, including the DOE-approved Contractor ISMS. The degrees of performance failure under which reductions of earned or fixed fee, profit, or share of cost savings will be determined are:

- (1) First Degree: Performance failures that are most adverse to ESH&Q. Failure to develop and obtain required DOE approval of an ISMS is considered first degree. The Government will perform necessary review of the ISMS in a timely manner and will not unreasonably withhold approval of the Contractor's ISMS. The following performance failures or performance failures of similar import will be considered first degree.
  - (i) Type A accident (defined in DOE Order 225.1A, *Accident Investigations*); and
  - (ii) Two (2) Second Degree performance failures during an evaluation period.
- (2) Second Degree: Performance failures that are significantly adverse to ESH&Q. They include failures to comply with an approved ISMS that result in an actual injury, exposure, or exceedence that occurred or nearly occurred but had minor practical long-term health consequences. They also include breakdowns of the Safety Management System. The following performance failures or performance failures of similar import will be considered second degree:
  - (i) Type B accident (defined in DOE Order 225.1A).
  - (ii) Non-compliance with an approved ISMS that results in a near miss of a Type A or B accident. A near miss is a situation in which an inappropriate action occurs, or a necessary action is omitted, but does not result in an adverse effect.
  - (iii) Failure to mitigate or notify DOE of an imminent danger situation after discovery, where such notification is a requirement of the Contract.
- (3) Third Degree: Performance failures that reflect a lack of focus on improving ESH&Q. They include failures to comply with an approved ISMS that result in potential breakdown of the System. The following performance failures or performance failures of similar import will be considered third degree:
  - (i) Failure to implement effective corrective actions to address deficiencies/non-compliances documented through: external (e.g., Federal) oversight and/or reported per ~~DOE Order 232.1A~~ [DOE Manual 232.1A, *Occurrence Reporting and Processing of Operations Information*] requirements; or internal oversight of ~~DOE Order 440.1A~~ [10 CFR 830, 10 CFR 835, 10 CFR 850, and 10 CFR 851] requirements.
  - (ii) Multiple similar non-compliances identified by external (e.g., Federal) oversight that in aggregate indicate a significant programmatic breakdown.
  - (iii) Non-compliances that either have, or may have, significant negative impacts to the worker, the public, or the environment or that indicate a significant programmatic breakdown.
  - (iv) Failure to notify DOE upon discovery of events or conditions where notification is required by the terms and conditions of the Contract.

- (d) **Safeguarding Restricted Data and Other Classified Information.** Performance failures occur if the Contractor does not comply with the terms and conditions of this Contract relating to the safeguarding of Restricted Data and other classified information. The degrees of performance failure under which reductions of fee, profit, or share of cost savings will be determined are as follows:
- (1) **First Degree:** Performance failures that have been determined, in accordance with applicable law, DOE regulation, or directive, to have resulted in, or that can reasonably be expected to result in, exceptionally grave damage to the national security. The following are examples of performance failures or performance failures of similar import that will be considered first degree:
    - (i) Non-compliance with applicable laws, regulations, and DOE directives actually resulting in, or creating a risk of, loss, compromise, or unauthorized disclosure of Top Secret Restricted Data or other information classified as Top Secret, or any classification level of information in a Special Access Program (SAP), information identified as sensitive compartmented information (SCI), or high risk nuclear weapons-related data.
    - (ii) Contractor actions that result in a breakdown of the safeguards and security management system that can reasonably be expected to result in the loss, compromise, or unauthorized disclosure of Top Secret Restricted Data, or other information classified as Top Secret, any classification level of information in a SAP, information identified as SCI, or high risk nuclear weapons-related data.
    - (iii) Failure to promptly report the loss, compromise, or unauthorized disclosure of Top Secret Restricted Data, or other information classified as Top Secret, any classification level of information in a SAP, information identified as SCI, or high risk nuclear weapons-related data.
    - (iv) Failure to timely implement corrective actions stemming from the loss, compromise, or unauthorized disclosure of Top Secret Restricted Data or other information classified as Top Secret, any classification level of information in a SAP, information identified as SCI, or high risk nuclear weapons-related data.
  - (2) **Second Degree:** Performance failures that have been determined, in accordance with applicable law, DOE regulation, or directive, to have actually resulted in, or that can reasonably be expected to result in, serious damage to the national security. The following are examples of performance failures or performance failures of similar import that will be considered second degree:
    - (i) Non-compliance with applicable laws, regulations, and DOE directives actually resulting in, or creating risk of, loss, compromise, or unauthorized disclosure of Secret Restricted Data or other information classified as Secret.

- (ii) Contractor actions that result in a breakdown of the safeguards and security management system that can reasonably be expected to result in the loss, compromise, or unauthorized disclosure of Secret Restricted Data, or other information classified as Secret.
  - (iii) Failure to promptly report the loss, compromise, or unauthorized disclosure of Restricted Data or other classified information regardless of classification (except for information covered by paragraph (d)(1)(iii) of this Clause).
  - (iv) Failure to timely implement corrective actions stemming from the loss, compromise, or unauthorized disclosure of Secret Restricted Data or other classified information classified as Secret.
- (3) Third Degree: Performance failures that have been determined, in accordance with applicable law, regulation, or DOE directive, to have actually resulted in, or that can reasonably be expected to result in, undue risk to the common defense and security. In addition, this category includes performance failures that result from a lack of Contractor management and/or employee attention to the proper safeguarding of Restricted Data and other classified information. These performance failures may be indicators of future, more severe performance failures and/or conditions, and if identified and corrected early would prevent serious incidents. The following are examples of performance failures or performance failures of similar import that will be considered third degree:
- (i) Non-compliance with applicable laws, regulations, and DOE directives actually resulting in, or creating risk of, loss, compromise, or unauthorized disclosure of Restricted Data or other information classified as Confidential.
  - (ii) Failure to promptly report alleged or suspected violations of laws, regulations, or directives pertaining to the safeguarding of Restricted Data or other classified information.
  - (iv) Failure to identify or timely execute corrective actions to mitigate or eliminate identified vulnerabilities and reduce residual risk relating to the protection of Restricted Data or other classified information in accordance with the Contractor's Safeguards and Security Plan or other security plan, as applicable.
  - (iv) Contractor actions that result in performance failures which unto themselves pose minor risk, but when viewed in the aggregate indicate degradation in the integrity of the Contractor's safeguards and security management system relating to the protection of Restricted Data and other classified information.

(e) Minimum requirements for specified level of performance.

- (1) At a minimum the Contractor must perform the following:
  - (i) The requirements with specific incentives which do not require the achievement of cost efficiencies in order to be performed at the level of performance set forth in Section C, *Statement of Work*, work authorization directive(s), or similar document unless an otherwise minimum level of performance has been established in the specific incentive;
  - (ii) All of the performance requirements directly related to requirements specifically incentivized which do not require the achievement of cost efficiencies in order to be performed at a level of performance such that the overall performance of these related requirements is at an acceptable level; and
  - (iii) All other requirements at a level of performance such that the total performance of the Contract is not jeopardized.
- (2) The evaluation of the Contractor's achievement of the level of performance shall be unilaterally determined by the Government. To the extent that the Contractor fails to achieve the minimum performance levels specified in Section C, *Statement of Work*, work authorization directive(s), or similar document, during the performance evaluation period, the DOE Operations/Field Office Manager, or designee, may reduce any otherwise earned fee, fixed fee, profit, or shared net savings for the performance evaluation period. Such reduction shall not result in the total of earned fee, fixed fee, profit, or shared net savings being less than 25% of the total available fee amount. Such 25% shall include base fee, if any.

(f) Minimum requirements for cost performance.

- (1) Requirements incentivized by other than cost incentives must be performed within their specified cost constraint and must not adversely impact the costs of performing unrelated activities.
- (2) The performance of requirements with a specific cost incentive must not adversely impact the costs of performing unrelated requirements.
- (3) The Contractor's performance within the stipulated cost performance levels for the performance evaluation period shall be determined by the Government. To the extent the Contractor fails to achieve the stipulated cost performance levels, the DOE Operations/Field Office Manager, or designee, may reduce in whole or in part any otherwise earned fee, fixed fee, profit, or shared net savings for the performance evaluation period. Such reduction shall not result in the total of earned fee, fixed fee, profit or shared net savings being less than 25% of the total available fee amount. Such 25% shall include base fee, if any.

### **B.13 CONDITIONAL PAYMENT OF FEE (CPOF) DOE OFFICE OF RIVER PROTECTION SITE-SPECIFIC PERFORMANCE CRITERIA/REQUIREMENTS**

This Clause supplements Section B Clause entitled, *DEAR 970.5215-3, Conditional Payment of Fee, Profit, and Other Incentives – Facility Management Contracts (Alternate II) [Deviation]* by establishing Site specific Environment, Safety, Health, and Quality (ESH&Q), and security performance criteria/requirements. Performance failures relating to the performance criteria set forth in this Clause will be processed in accordance with DEAR 970.5215-3. Site-specific performance criteria/requirements for ESH&Q, and Safeguards and Security are as follows:

(a) Environment, Safety, Health, and Quality

- (1) First Degree: Performance failures relating to the criteria set forth in this Clause will be processed in accordance with DEAR 970.5215-3, Alternate II [Deviation].
- (2) Second Degree: Performance failures relating to the criteria set forth in this Clause will be processed in accordance with DEAR 970.5215-3, Alternate II [Deviation].
- (3) Third Degree: Performance failures that reflect a lack of focus on ESH&Q or failures to comply with an approved ISMS that may result in a negative impact to the public, worker or environment. The following performance failures, or events of similar import, are examples of performance failures that are considered third degree:
  - (i) Multiple similar non-compliances identified by external oversight (e.g., Federal) that in the aggregate indicate a significant programmatic breakdown.
  - (ii) Non-compliances or adverse performance trends that either have or may have negative impact to the public, worker, or environment or that indicate a programmatic breakdown.
  - (iii) Failure to notify the Contracting Officer upon discovery of events or conditions where notification is required by the terms and conditions of the Contract.
  - (iv) Failure to report required data accurately and in a timely manner.
  - (v) Failure to implement continuous improvement in ESH&Q performance through effective utilization of ISMS processes, including timely submittal of meaningful performance objectives, measurements and commitments.

(b) Safeguards and Security

- (1) First Degree: Performance failures relating to the performance criteria set forth in this Clause will be processed in accordance with DEAR 970.5215-3, Alternate II [Deviation].



- (2) Second Degree: Performance failures relating to the performance criteria set forth in this Clause will be processed in accordance with DEAR 970.5215-3, Alternate II [Deviation].
- (3) Third Degree: Performance failures that have been determined, in accordance with applicable law, regulation, or DOE directive, to have actually resulted in, or that can reasonably be expected to result in, undue risk to the common defense and security, and/or jeopardizes protection of the facility or Site security interests. The following are examples of performance failures or performance failures of similar import that will be considered third degree:
  - (i) Loss, theft, diversion, or unauthorized disclosure of information classified as Confidential.
  - (ii) Evidence that SNM data has been manipulated or falsified.
  - (iii) Inventory differences of Category IV SNM beyond alarm limits where there is no evidence that the difference is created by loss, theft, or diversion.
  - (iv) Loss, theft, or diversion of Category IV quantities of SNM that is due to a failure or inadequacy of performance by the contractor.
  - (v) Receipt of any topical area rating of Unsatisfactory on any DOE Safeguards and Security survey, audit, and/or inspection.
  - (vi) Failure to implement corrective action(s) in response to any third degree performance failure.
  - (vii) Non-compliant or adverse cyber security performance that indicates serious cyber security program degradation (e.g., negative mission impacts or compromise of sensitive information [Sensitive Unclassified Information, Personally Identifiable Information, Unclassified Controlled Nuclear Information], etc.).

#### B.14 DOE AUTHORIZATION OF WORK

DOE will authorize work as follows:

- (a) The Contracting Officer will authorize the Contractor to begin performance on DOE-selected Sub-CLINS.
- (b) The Contractor is authorized to conduct work in accordance with the approved *Performance Measurement Baseline* on all authorized Sub-CLINS, and subject to the limitations of the Section B Clause entitled, *Obligation and Availability of Funds*.
- (c) Prior to the completion of the *Transition Period*, DOE will provide workscope direction that will be in effect from the initiation of the *Base Period* until DOE approval of the Contractor's initial *Performance Measurement Baseline* submittal.

- (d) DOE reserves the unilateral discretion to modify the PEMP to allocate fee to the associated work.
  
- (e) If the Contracting Officer does not authorize the Contractor to proceed with a Sub-CLIN, the Contractor shall not be entitled to allowable costs, opportunity to earn fee, partial termination costs, and any other similar items for that Sub-CLIN, and shall not be entitled to an equitable adjustment to fee for any other Contract requirement.

## PART I – THE SCHEDULE

### SECTION C

#### STATEMENT OF WORK

#### TABLE OF CONTENTS

<b>C.1 TANK OPERATIONS CONTRACT (TOC) OVERVIEW AND GENERAL REQUIREMENTS</b> .....	<b>1</b>
C.1.1 Background.....	1
C.1.2 Contract Purpose and Overview.....	3
C.1.3 Scope Summary.....	3
C.1.4 Life-Cycle Mission Summary.....	6
C.1.5 Facility Description.....	7
C.1.6 Organization of the <i>Statement of Work</i> .....	7
<b>C.2 DESCRIPTION OF PROJECT PERFORMANCE REQUIREMENTS</b> .....	<b>9</b>
C.2.1 CLIN #1 – Base Operations.....	10
C.2.1.1 Sub-CLIN 1.1: Transition.....	10
C.2.1.2 Sub-CLIN 1.2: Safe, Compliant Operations.....	11
C.2.1.3 Sub-CLIN 1.3: Analytical Laboratory Support.....	14
C.2.2 CLIN #2 – Single-Shell Tank (SST) Retrieval and Closure.....	15
C.2.2.1 Sub-CLIN 2.1: Single-Shell Tank Retrieval.....	15
C.2.2.2 Sub-CLIN 2.2: Single-Shell Tank Farm (Waste Management Area) Closure.....	16
C.2.3 CLIN #3 – Waste Treatment and Immobilization Plant (WTP) Support.....	17
C.2.3.1 Sub-CLIN 3.1: Treatment Planning, Waste Feed Delivery, and WTP Transition.....	17
C.2.3.2 Sub-CLIN 3.2: WTP Operational Readiness.....	20
C.2.3.3 Sub-CLIN 3.3: Immobilized High-Level Waste (IHLW) Storage and Shipping Facility Construction.....	21
C.2.3.4 Sub-CLIN 3.4: Upgrade and Operate the Effluent Treatment Facility.....	22
C.2.4 CLIN #4 – Supplemental Treatment.....	23
C.2.4.1 Sub-CLIN 4.1: Demonstration Bulk Vitrification System (DBVS) Construction and Operations.....	23
C.2.4.2 Sub-CLIN 4.2: Extended Demonstration Bulk Vitrification System Operations.....	25
C.2.4.3 Sub-CLIN 4.3: Supplemental Treatment Design.....	27
C.2.4.4 Sub-CLIN 4.4: Supplemental Treatment Construction and Operations.....	27
C.2.4.5 Sub-CLIN 4.5: Transuranic Tank Waste Treatment and Packaging.....	28
C.2.5 CLIN #5 – Early Feed and Operation of the WTP Low Activity Waste Facility (LAW).....	29
C.2.5.1 Sub-CLIN 5.1: Tank Selection, Retrieval, Pretreatment and Feed Delivery Design.....	29
C.2.5.2 Sub-CLIN 5.2: Retrieval, Pretreatment and Feed Delivery Construction and Operations.....	30
C.2.5.3 Sub-CLIN 5.3: (Reserved).....	30

C.2.5.4	Sub-CLIN 5.4: LAW/BOF/LAB Operations .....	30
C.2.6	CLIN #6 – Pension and Welfare Plans .....	31
C.2.6.1	Sub-CLIN 6.1: Hanford Employee Retirement and Benefit Plan Management	31
C.2.6.2	Sub-CLIN 6.2: Legacy Pension and Benefit Plan Management .....	32
C.2.7	CLIN #7 – American Recovery and Reinvestment Act (ARRA) Workscope .....	32
C.2.7.1	Sub-CLIN 7.1: ARRA workscope under Sub-CLIN 1.2 - Safe, Compliant Operations .....	32
C.2.7.2	Sub-CLIN 7.2: ARRA workscope under Sub-CLIN 1.3 – Analytical Laboratory Support .....	34
C.2.7.3	Sub-CLIN 7.3: ARRA workscope under Sub-CLIN 3.1 – Treatment Planning, Waste Feed Delivery, and WTP Transition .....	34
C.2.7.4	Sub-CLIN 7.4: (Reserved) .....	35
C.2.7.5	Sub-CLIN 7.5: ARRA workscope under Sub-CLIN 3.4 - Upgrade and Operate the Effluent Treatment Facility (ETF) .....	35
C.2.7.6	Sub-CLIN 7.6: ARRA workscope under Sub-CLIN 2.1 Single-Shell Tank Retrieval .....	36
<b>C.3</b>	<b>DESCRIPTION OF PROJECT SUPPORT PERFORMANCE REQUIREMENTS .....</b>	<b>36</b>
C.3.1	Project Management .....	37
C.3.1.1	Project Integration and Control and Earned Value Management .....	37
C.3.1.2	Project Scope, Schedule, and Cost Baseline .....	38
C.3.1.3	Project Performance Reporting .....	40
C.3.1.4	Risk Management .....	41
C.3.1.5	Design, Procurement, Construction, and Acceptance Testing .....	42
C.3.2	Integrated Safety Management System .....	44
C.3.2.1	Environmental Regulatory Management .....	45
C.3.2.2	Nuclear Safety .....	46
C.3.2.3	Worker Safety and Health .....	47
C.3.2.4	Quality .....	48
C.3.2.5	Event Reporting and Investigation .....	48
C.3.3	Security and Emergency Services .....	49
C.3.3.1	Safeguards and Security .....	49
C.3.3.2	Emergency Services .....	56
C.3.4	Interactions .....	57
C.3.4.1	External Affairs .....	58
C.3.4.2	External Review and Support .....	59
C.3.5	Interface Management .....	60
<b>C.4</b>	<b>GOVERNMENT-FURNISHED SERVICES AND INFORMATION .....</b>	<b>62</b>
<b>C.5</b>	<b>SUMMARY OF CONTRACT DELIVERABLES .....</b>	<b>63</b>

## C.1 TANK OPERATIONS CONTRACT (TOC) OVERVIEW AND GENERAL REQUIREMENTS

### C.1.1 Background

The 586-square-mile Hanford Site is located along the Columbia River in southeastern Washington State (illustrated in Figure C.1-1). A plutonium production complex with nine nuclear reactors and associated processing facilities, Hanford played a pivotal role in the nation's defense for more than 40 years, beginning in the 1940s with the Manhattan Project. Today, under the direction of the U.S. Department of Energy (DOE), Hanford is engaged in the world's largest environmental cleanup project, with a number of overlapping technical, political, regulatory, financial and cultural issues.

Challenges at the Hanford Site include approximately 53 million gallons of radioactive and chemically hazardous waste in 177 underground storage tanks (seven of which have been emptied), ~2,300 tons (~2,100 metric tons) of spent nuclear fuel, ~11.5 tons (~10.5 metric tons) of plutonium in various forms, ~25 million cubic feet (~750,000 cubic meters) of buried or stored solid waste, and groundwater contaminated above drinking water standards, spread out over about 80 square miles (208 square kilometers), approximately 1,600 waste sites of which 1,180 remain to be remediated and approximately 1,450 facilities of which about 400 are contaminated (as of September 2005).

In May 1989, DOE, the U.S. Environmental Protection Agency, and the State of Washington Department of Ecology signed the landmark Hanford Federal Facility Agreement and Consent Order, commonly known as the Tri-Party Agreement (TPA). The TPA outlines legally enforceable milestones for Hanford cleanup over the next several decades.

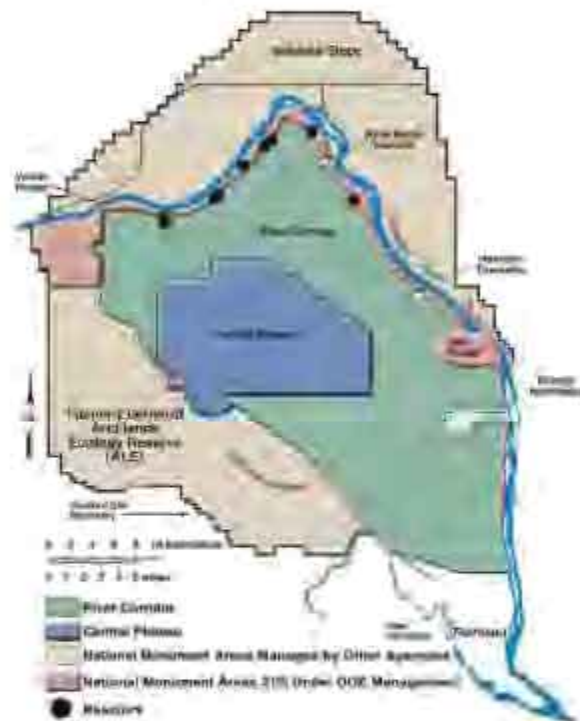


Figure C.1-1  
Hanford Site

DOE has two Federal offices at Hanford, whose mission is environmental cleanup – the DOE Richland Operations Office (DOE-RL), which is responsible for nuclear waste and facility cleanup, and overall management of the Hanford Site; DOE-RL's mission is to restore the Columbia River corridor and transition the Hanford Central Plateau. The DOE Office of River Protection (DOE-ORP), which is responsible for cleanup of Hanford Site tank waste; DOE-ORP's mission is to retrieve and treat Hanford's tank waste and close the Tank Farms to protect the Columbia River. Each Office oversees separate contracts held by private companies. For purposes of this Contract, the land, facilities, property, projects and work performed and overseen by DOE-RL and DOE-ORP constitute the "Hanford Site." The following is a description of the major DOE contracts at the Hanford Site and their workscope:

### Contracts Managed by DOE-ORP

- Hanford Analytical Services Contract provides analysis of highly radioactive samples in support of Hanford Site projects. These services are performed in the 222-S Laboratory Complex located in the 200 Area of the Hanford Site.
- Tank Operations Contract (TOC), when awarded, will include operations and construction activities necessary to store, retrieve and treat Hanford tank waste, store and dispose of treated waste, and begin to close the Tank Farm waste management areas to protect the Columbia River.
- Tank Farm Management Contract (TFC) includes operations and construction activities necessary to store, retrieve and treat Hanford tank waste and store and dispose of treated waste. This scope will be included in the TOC when it is awarded.
- Waste Treatment and Immobilization Plant (WTP) Contract includes design, construction and commissioning of a vitrification facility that will convert radioactive tank wastes into glass logs for long-term storage. The WTP is being constructed on the Hanford Site Central Plateau.

### Contracts Managed by DOE-RL

- Energy Savings Performance Contract (ESPC) includes steam service to support heating and other operations at 200 Area facilities. The contract may include energy conservation measures, such as upgrading lighting systems, pumping systems, automation systems, heating, ventilation, and air conditioning system; and adding utility monitoring and control systems.
- Hanford Site Occupational Medical Services Contract provides occupational health services to personnel at Hanford including medical monitoring and qualification examinations, human reliability testing, and records management.
- Plateau Remediation Contract (PRC), when awarded, will include completion of the Plutonium Finishing Plant (PFP) project; non-Tank Farm waste disposal activities: groundwater monitoring and remediation; facility and waste site characterization, surveillance and maintenance, regulatory document preparation, and remediation.
- Mission Support Contract (MSC), when awarded, will provide DOE-RL, DOE-ORP, and their contractors with the infrastructure and site services necessary to accomplish the Site mission.
- Project Hanford Management Contract (PHMC) includes cleanup and support activities, with the exception of DOE-ORP scope, at the Hanford Site. This scope will be included in the MSC and the PRC, when the contracts are awarded.

- River Corridor Closure Contract (RCCC) includes closing the Hanford Site River Corridor through deactivation, decontamination, decommissioning, and demolishing excess facilities; placing former production reactors in an interim safe and stable condition; remediating waste sites and burial grounds; and transitioning the River Corridor to long-term stewardship.

Another DOE Office -- the Pacific Northwest Site Office (PNSO), a component of the DOE Office of Science -- oversees the science and technology mission operated by the contractor-operated Pacific Northwest National Laboratory (PNNL). PNNL is an Office of Science multi-program laboratory that conducts research and development activities, including technology programs related to the Hanford cleanup mission.

In addition to the cleanup mission, DOE leases Hanford land to non-DOE entities, such as the Laser Interferometer Gravitational Wave Observatory (LIGO), and the State of Washington, which in turn leases the land to US Ecology, Inc., a private firm that operates the Hanford Site burial grounds for commercial low-level waste. DOE also leases land to Energy Northwest (a consortium of public utility companies) that oversees the Northwest's only operating commercial nuclear power reactor, the *Columbia Generating Station*. None of these operations is associated with the Federal cleanup work at Hanford.

### C.1.2 Contract Purpose and Overview

The purpose of this Contract is to furnish safe, compliant, cost-effective and energy-efficient services to further the DOE-ORP mission to store, retrieve and treat Hanford tank waste, store and dispose of treated waste, and to close the Tank Farm waste management areas to protect the Columbia River. The Contractor has the responsibility for determining the specific methods and approaches for accomplishing all work. This Contract applies performance-based contracting approaches; expects the Contractor to innovate and implement techniques that maximize performance efficiencies and scope completion and minimizes the description of how to accomplish the scope of work. The Contractor shall optimize base load facility operating and maintenance costs to maximize mission performance.

### C.1.3 Scope Summary

The TOC<sup>1</sup> workscope is divided into seven (7) Contract Line Item Numbers (CLINs) as follows:

#### ***CLIN 1 – Base Operations***

- Transition. Transition all ongoing Tank Farm workscope.
- Safe, Compliant Operations. Maintain and operate the Tank Farms, 242-A Evaporator, and supporting Tank Farm infrastructure. Perform all required project support functions (project management, integrated safety management, security and emergency services, interactions, interface management).
- Analytical Laboratory Support. Operate and maintain the 222-S Laboratory Complex to support analysis activities performed under a separate DOE-ORP contract.

---

<sup>1</sup> Hereafter, TOC may represent the Contract or the Contractor, as applicable.

### ***CLIN 2 – Single-Shell Tank (SST) Retrieval and Closure***

- Single-Shell Tank Retrieval. Design, procure, permit, construct/fabricate, and operate SST retrieval systems that remove waste from the SSTs and transfer it to the Double Shell Tanks (DSTs) or treatment systems.
- Single-Shell Tank Farm (Waste Management Area) Closure. Perform waste management area closure activities in accordance with Site-wide integrated closure strategies.

### ***CLIN 3 – Waste Treatment and Immobilization Plant (WTP) Support***

- Treatment Planning, Waste Feed Delivery, and WTP Transition. Provide integrated system planning for the DOE-ORP mission and perform project planning, system upgrades/replacements, and operations to accomplish waste feed delivery to treatment facilities. Plan for the turnover of completed WTP facilities.
- WTP Operational Readiness. Conduct a continuing, in-process evaluation of WTP operational readiness to promote contractor understanding of and planning for future WTP operations, verify that there are no deficiencies that would preclude successful Contractor operations, and support the safe and efficient turnover of completed WTP facility(ies).
- Immobilized High-Level Waste (IHLW) Storage and Shipping Facility Construction. Modify the Canister Storage Building and/or design, construct, commission, and operate a separate interim storage facility for IHLW canisters from WTP and a shipping facility to prepare IHLW and spent nuclear fuel (SNF) canisters for shipment to a permanent repository.
- Upgrade and Operate the Effluent Treatment Facility (ETF). Assume responsibility for the ETF, complete upgrade design and permitting, perform upgrades, and operate ETF.

### ***CLIN 4 – Supplemental Treatment***

- Demonstration Bulk Vitrification System (DBVS) Construction and Operations. Procure, construct, and operate a pilot scale one line Low Activity Waste (LAW) bulk vitrification plant for testing to determine the effectiveness of this treatment technology.
- Extended Demonstration Bulk Vitrification System Operations. Following successful DBVS operations, re-permit, modify and perform extended operations of the DBVS.
- Supplemental Treatment Design. Commence design, permitting, and safety analysis for supplemental treatment facilities to vitrify LAW.
- Supplemental Treatment Construction and Operations. Complete designs and permits, and construct and operate supplemental treatment facilities to vitrify LAW.
- Transuranic Tank Waste Treatment and Packaging. Design, construct, and operate a transuranic (TRU) tank waste treatment, packaging, characterization, and storage system for contact-handled (CH) TRU tank waste.



### **CLIN 5 – Early Feed and Operation of the WTP Low Activity Waste (LAW) Facility**

- Tank Selection, Retrieval, Pretreatment and Feed Delivery Design. Commence design, permitting, and safety analysis for selected DST and SST waste retrieval, pretreatment and feed delivery directly to the WTP LAW Facility.
- Retrieval, Pretreatment and Feed Delivery Construction and Operations. Complete designs and permits, and construct and operate systems for selected tank waste retrieval, pretreatment and feed delivery directly to the WTP LAW Facility.
- LAW/BOF/LAB Operations. Operate the completed WTP LAW, Balance of Plant Facilities (BOF), and Laboratory (Lab) facilities to vitrify pre-treated LAW from the Tank Farms.

### **CLIN 6 – Pension and Welfare Plans**

- Hanford Employee Retirement and Benefit Plan Management. Sponsor, manage, and administer both the Hanford incumbent employee pension and benefit plans and the non-incumbent market-based retirement and benefit plans.
- Legacy Pension and Benefit Plan Management. Sponsor, manage, and administer pension and other benefit plans for retired contractor employees associated with work at other designated DOE sites.

While this work scope identified below is already included in the Contract, the specific scope has been identified for acceleration through the use of American Recovery and Reinvestment Act (ARRA) funds.

### **CLIN 7 – American Recovery and Reinvestment Act (ARRA) Workslope**

- ARRA workslope under Sub-CLIN 1.2 - Safe, Compliant Operations. Maintain and operate the Tank Farms, 242-A Evaporator, and supporting Tank Farm infrastructure. Perform all required project support functions (project management, integrated safety management, security and emergency services, interactions, interface management).
- ARRA workslope under Sub-CLIN 1.3 - Analytical Laboratory Support. Operate and maintain the 222-S Laboratory Complex to support analysis activities performed under a separate DOE-ORP contract.
- ARRA workslope under Sub-CLIN 2.1 - Single-Shell Tank (SST) Retrieval. Design, procure, permit, construct/fabricate, and operate SST retrieval systems that remove waste from the SSTs and transfer it to the Double Shell Tanks (DSTs) or treatment systems
- ARRA workslope under Sub-CLIN 3.1 - Treatment Planning, Waste Feed Delivery, and WTP Transition. Provide integrated system planning for the DOE-ORP mission and perform project planning, system upgrades/replacements, and operations to accomplish waste feed delivery to treatment facilities. Plan for the turnover of completed WTP facilities.

- ARRA workscope under Sub-CLIN 3.3 - (Reserved)
- ARRA workscope under Sub-CLIN 3.4 - Upgrade and Operate the Effluent Treatment Facility (ETF). Assume responsibility for the ETF, complete upgrade design and permitting, perform upgrades, and operate ETF.

#### **C.1.4 Life-Cycle Mission Summary**

The DOE-ORP River Protection Project (RPP) is composed of two major scopes of work performed by two separate contractors. The WTP contractor will design, construct, and commission the WTP for treating the Tank Farm waste. The TOC shall be responsible for planning, managing, and executing the Tank Farm project, sub-projects, operations and other activities as described in this *Statement of Work*. To accomplish the RPP mission, the TOC must interface with other Hanford Site contractors for necessary services and work coordination. General objectives are to perform the work within the established budget profile, reduce hazards to the workers, the public, and the environment, and to significantly reduce program life-cycle costs and schedules.

The life-cycle objectives (including this Contract term and beyond) of the RPP mission are as follows:

- Maintain safe tank waste storage until waste is retrieved.
- Retrieve waste from all 149 SSTs and transfer to DSTs or treatment facilities.
- Retrieve waste from all 28 DSTs to deliver waste feed to the tank waste treatment facilities (WTP and supplemental treatment).
- Operate treatment facilities.
- Store and disposition treated waste products in accordance with the WTP schedule and the RPP System Plan to support RPP mission completion.
- Implement effective supplemental treatment technologies that will increase DST space availability and operate with the WTP to accomplish tank waste treatment.
- Prepare interim stored IHLW and packaged TRU waste for shipment to the appropriate repositories.
- Treat and dispose of secondary waste streams.
- Dispose of immobilized low activity waste (ILAW) on-site in near-surface disposal facilities.
- Characterize vadose zone contamination related to the Tank Farms and associated facilities, and perform barrier installations and soils remediation in coordination with the Hanford Site groundwater program.
- Close Waste Management Areas including SSTs, DSTs, Tank Farm facilities, ancillary equipment, and remediated soils.
- Decommission WTP and supplemental treatment facilities and equipment after mission completion.

### C.1.5 Facility Description

The Tank Farm system facilities are located in the 200 East Area, 200 West Area, and 600 Area of the Hanford Site. The Tank Farm system facilities comprise the SST farms, the DST farms, and associated support facilities, systems, and transfer equipment. The Tank Farm system includes 177 single- and double-shell tanks; double-contained receiver tanks; catch tanks; waste transfer pipelines and associated equipment used in waste transfers (e.g., diversion boxes and valve pits); miscellaneous inactive storage facilities; waste-handling and storage facilities; miscellaneous support and administrative facilities; in-tank, out-of-tank, and liquid transfer monitoring systems; associated ancillary equipment; and soils. Additional Tank Farm related facilities include the 242-A Evaporator, and the 222-S Analytical Laboratory. A detailed Hanford Site structures list is provided in the Section J Attachment entitled, *Hanford Site Structures List* and a detailed waste site list is provided in the Section J Attachment entitled, *Hanford Site Waste Assignments List*.

### C.1.6 Organization of the Statement of Work

This *Statement of Work* is divided into five sections, with Section C.1 containing the background, contract purpose and overview, scope and organization of the *Statement of Work*; Section C.2, *Description of Project Performance Requirements*; Section C.3, *Description of Project Support Performance Requirements*; Section C.4, *Government-Furnished Services and Information*; and Section C.5, *Summary of Contract Deliverables*.

Figure C.1-2, River Protection Project (RPP) Mission

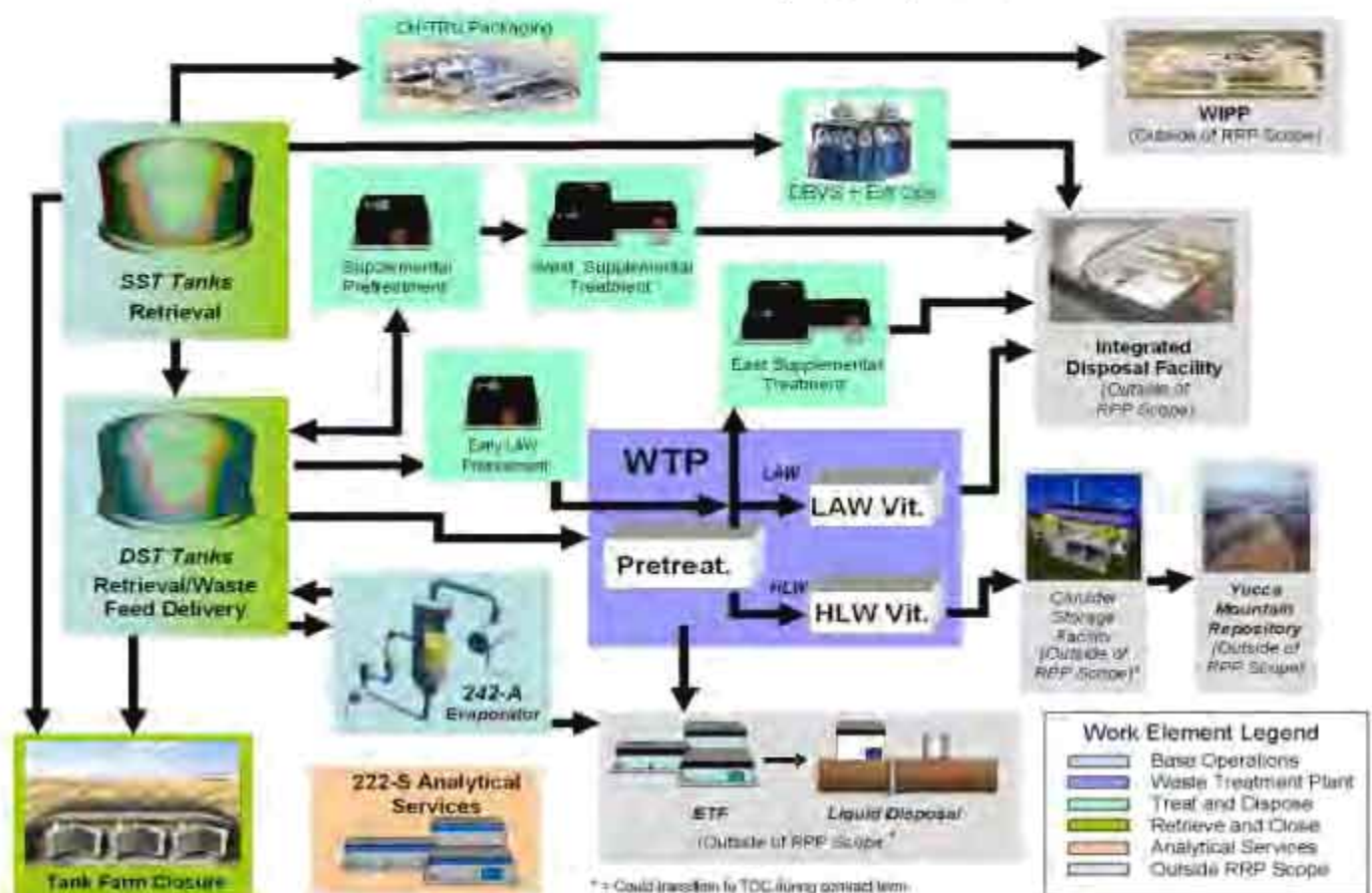
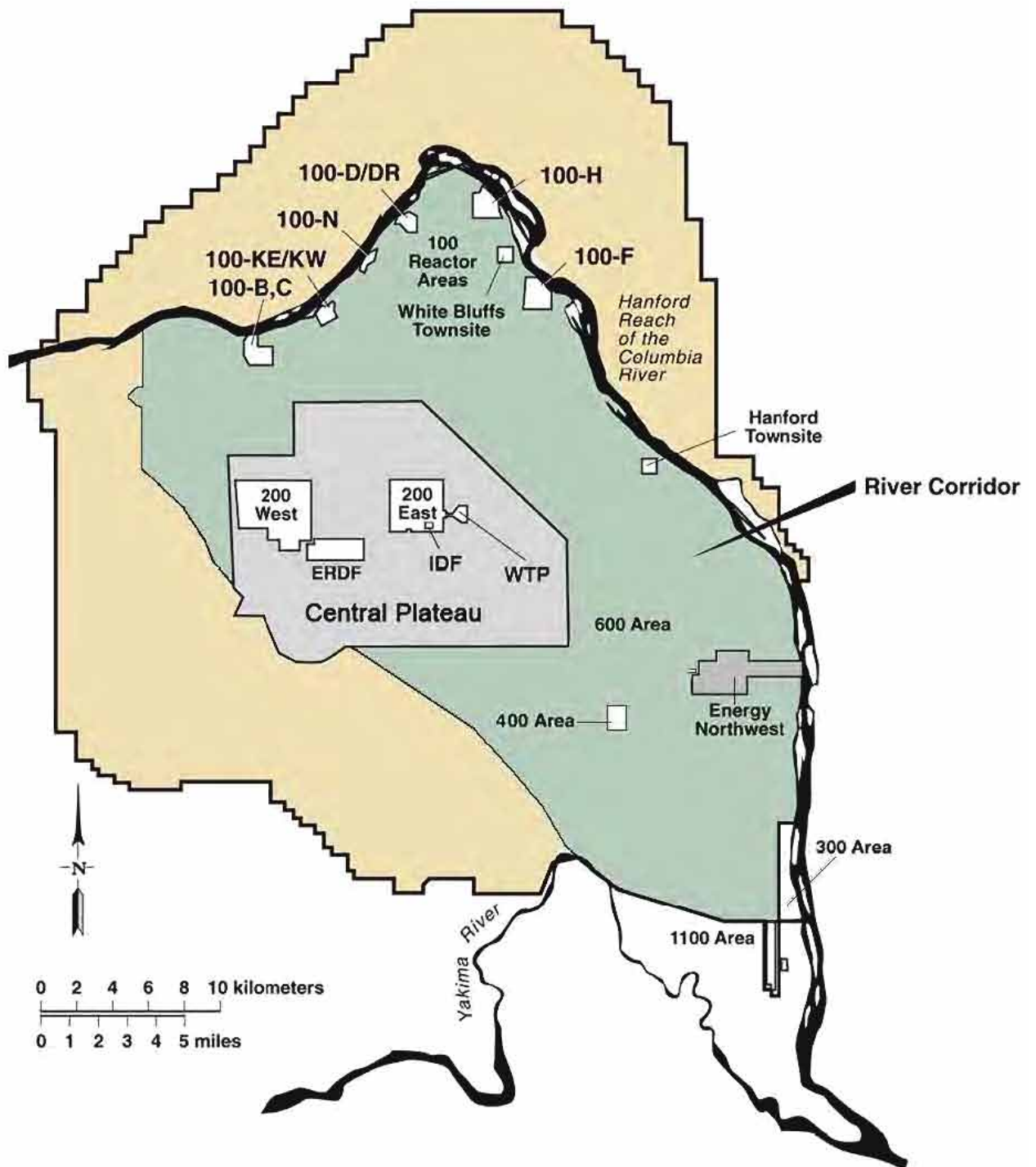


Figure C.1-3, Hanford Site (TOC activities located in the 200 West and 200 East Areas)



## C.2 DESCRIPTION OF PROJECT PERFORMANCE REQUIREMENTS

Consistent with DOE-ORP authorization, the Contractor shall perform the following major activities which are divided into six CLINs and the respective sub-CLINs. DOE-ORP will authorize performance of the individual Sub-CLINs in accordance with the Section B Clauses entitled, *Item(s) Being Acquired* and *DOE Authorization of Work*.

The Contractor shall plan and perform the work under this Contract in accordance with the Section H Clause entitled, *Environmental Responsibility*, which requires compliance with current and future milestones in the TPA.

Table C.5, *Summary of Contract Deliverables*, provides a list of the deliverables described throughout this *Statement of Work*, including the due dates for the original submittals, and where applicable, the timing of required updates to these documents.

Title	Sub-CLINs	Activities
<b>CLIN #1 Base Operations</b>	1.1	Transition
	1.2	Safe, Compliant Operations
	1.3	Analytical Laboratory Support
<b>CLIN #2 Single-Shell Tank (SST) Retrieval And Closure</b>	2.1	Single-Shell Tank Retrieval
	2.2	Single-Shell Tank Farm (Waste Management Area) Closure
<b>CLIN #3 Waste Treatment and Immobilization Plant (WTP) Support</b>	3.1	Treatment Planning, Waste Feed Delivery, and WTP Transition
	3.2	WTP Operational Readiness
	3.3	Immobilized High-Level Waste (IHLW) Storage and Shipping Facility Construction
	3.4	Upgrade and Operate the Effluent Treatment Facility (ETF)
<b>CLIN #4 Supplemental Treatment</b>	4.1	Demonstration Bulk Vitrification System (DBVS) Construction and Operations
	4.2	Extended Demonstration Bulk Vitrification System Operations
	4.3	Supplemental Treatment Design
	4.4	Supplemental Treatment Construction and Operations
	4.5	Transuranic Tank Waste Treatment and Packaging
<b>CLIN #5 Early Feed and Operation of the WTP Low Activity Waste (LAW) Facility</b>	5.1	Tank Selection, Retrieval, Pretreatment and Feed Delivery Design
	5.2	Retrieval, Pretreatment and Feed Delivery Construction and Operations
	5.3	(Reserved)
	5.4	LAW/BOF/LAB Operations
<b>CLIN #6 Pension and Welfare Plans</b>	6.1	Hanford Employee Retirement and Benefit Plan Management
	6.2	Legacy Pension and Benefit Plan Management
<b>CLIN #7 American Recovery and Reinvestment Act (ARRA) Workslope</b>	7.1	ARRA workslope under Sub-CLIN 1.2 - Safe, Compliant Operations
	7.2	ARRA workslope under Sub-CLIN 1.3 - Analytical Laboratory Support
	7.3	ARRA workslope under Sub-CLIN 3.1 - Treatment Planning, Waste Feed Delivery, and WTP Transition
	7.4	ARRA workslope under Sub-CLIN 3.3 - (Reserved)
	7.5	ARRA workslope under Sub-CLIN 3.4 - Upgrade and Operate the Effluent Treatment Facility (ETF)
	7.6	ARRA workslope under Sub-CLIN 2.1 - Single-Shell Tank (SST) Retrieval.

## C.2.1 CLIN #1 – Base Operations

### C.2.1.1 Sub-CLIN 1.1: Transition

#### General Scope:

The Contractor shall transition all ongoing TFC workscope; transition any subcontract work that the Contractor elects (or is directed by DOE) to continue under an existing subcontract with the TFC; complete workforce transition in accordance with the requirements of Section H Clause entitled, *Special Contract Requirements*; and deliver a completed *Transition Plan* and *Transition Agreement*.

#### Detailed Scope and Requirements:

The Contractor shall:

- Submit a *Transition Plan* for DOE-ORP approval (Deliverable C.2.1.1-1) that includes a description of transition activities, involved organizations, and the transition schedule. The *Transition Plan* shall include a draft *Transition Agreement* to document completion of *Transition Plan* activities during the *Transition Period*.
- Coordinate directly with prime contractors, subcontractors, and DOE-ORP to finalize the *Transition Agreement*.
- Develop the inter-contractor ordering and financial agreements as defined by the Section J Attachment entitled, *Hanford Site Services and Interface Requirements Matrix* that are necessary to support Transition and Contract performance. The Contractor shall be responsible for the costs incurred or to be recovered under these agreements.
- Identify any material differences in the systems, facilities, waste sites, property, and services described in this *Statement of Work* and in the Section J Attachments entitled, *Supplemental Work Description Tables*, *Hanford Site Structures List*, and *Hanford Waste Site Assignment List*, versus the actual project status. The Contractor shall submit a *Statement of Material Differences* (Deliverable C.2.1.1-2) for DOE-ORP approval.
- Submit fundamental project management, environmental, safety, health, quality, security, and interface program documents as described in the *Statement of Work* within 60 days of Notice to Proceed. Key deliverables required during Transition are listed in Section C.5, entitled, *Summary of Contract Deliverables*.
- Conduct a joint reconciliation of the government property inventory with the predecessor contractor. This information shall be used to provide a baseline for the succeeding contract and for closeout of the predecessor contract.
- Support DOE-ORP in-process verification of Contract transition, provide weekly written *Transition Status Reports* (Deliverable C.2.1.1-3) to DOE-ORP for information, and be accountable for all work performed under this Contract at the end of the *Transition Period*.
- Submit a final *Transition Agreement* (Deliverable C.2.1.1-4) for DOE-ORP approval that includes the signatures of all contractor Transition parties or successor contracts.

During the Transition Period and prior to assuming control and responsibility for Safeguards and Security (SAS) responsibilities, the Contractor shall be subject to a DOE-ORP SAS initial survey conducted in accordance with DOE Manual (M) 470.4-1, *Safeguards and Security Program Planning and Management*. The results of the survey shall be documented and form the basis



for DOE-ORP authorization for the TOC to assume SAS responsibilities, in particular, responsibility for SNM. Following the survey, the Contractor shall assume responsibility for all applicable SAS resources, materials, facilities, documents, and equipment.

Upon completion of transition, the Contractor shall operate under the existing baseline or as modified at the unilateral discretion of DOE-ORP until the Contractor's initial baseline submittal is approved by DOE-ORP.

### **C.2.1.2 Sub-CLIN 1.2: Safe, Compliant Operations**

#### **Background:**

The Hanford Tank Farms System consists of underground radioactive waste storage tanks, waste transfer systems, infrastructure and related facilities including the 242-A Evaporator. The 177 underground tanks, ranging in size from 55,000 to 1,160,000 gallons in capacity are grouped into 18 tank farms. The Tank Farms are a Hazard Category 2 nuclear facility and the Documented Safety Analyses (DSA), Technical Safety Requirements (TSRs), operations specifications documents, environmental permits, and current operating procedures define the necessary controls for safe operations.

#### **General Scope:**

The Contractor shall maintain and operate the Tank Farms, 242-A Evaporator, and supporting Tank Farm infrastructure.

For the assigned workscope, the Contractor shall establish and implement the necessary programs and processes for:

- Project Management (Section C.3.1);
- Integrated Safety Management System (ISMS) (Section C.3.2);
- Security and Emergency Services (Section C.3.3);
- Interactions (Section C.3.4); and
- Interface Management (Section C.3.5).

#### **Detailed Scope and Requirements:**

##### ***Base Cost Reduction***

The Contractor shall seek to improve the effectiveness and efficiency of Tank Farm operations and maintenance in order to maximize budgeted funds directed to tank waste retrievals and treatment.

The Contractor shall evaluate the requirements basis and collaborate with DOE-ORP, regulators, and other Hanford Site contractors to develop innovative compliance methods that promote safe storage and cleanup work accomplishment.

### ***SST System Management***

The Contractor shall operate and maintain the SST system and ancillary facilities to safely store tank waste and facilitate tank waste retrieval and component closure. The Contractor shall perform non-destructive testing and evaluation of SSTs and miscellaneous underground storage tanks to assure continued tank integrity commensurate with the waste contained in each tank and the associated risk.

### ***DST System Management***

The Contractor shall integrate with the WTP contractor, and operate the DST system to maintain acceptable waste feed specifications for future waste feed delivery to the WTP while optimizing use of available DST space to facilitate SST waste retrieval and in-tank treatment to preserve tank integrity and improve waste feed characteristics.

### ***Maintenance***

The Contractor shall perform calibrations, maintenance and required equipment installations to assigned facilities in support of the RPP mission with a prioritization that provides the best value to DOE-ORP.

### ***Upgrades***

The Contractor shall plan and execute Tank Farm and related facilities upgrade sub-projects, as necessary, to support safe, reliable, and compliant storage, and tank waste retrieval, staging, delivery, and treatment efforts.

### ***DST Integrity/Life Extension***

The Contractor shall maintain DST waste within TSR chemistry specifications to minimize tank corrosion. Chemistry specifications shall be evaluated to optimize tank protection while minimizing waste generation and resultant vitrified waste form volume. The Contractor shall perform non-destructive testing and evaluation of tanks to meet *Resource Conservation and Recovery Act of 1976* (RCRA) requirements, status tank corrosion, and assure continued tank integrity.

### ***Sampling & Characterization***

The Contractor shall maintain a ready-to-serve waste tank sampling and sample transportation capability. The Contractor shall perform tank waste sampling and characterization to support safe storage and evaporator operations, and to preserve tank integrity. Sampling and characterization activities for tank waste retrieval, tank closure, treatment planning and waste feed delivery are included in their respective sub-CLINs.

### ***Receipt of Wastes***

The Contractor shall maintain the necessary equipment and receive waste from other Hanford Site facilities, as required, to support the Hanford Site cleanup mission.



### ***Evaporator Operation***

The Contractor shall operate the 242-A Evaporator in support of DST space management, waste retrieval, and feed delivery activities. The Contractor shall perform evaporator maintenance and upgrades, as necessary, to support the RPP mission.

### ***Secondary Wastes***

The Contractor shall perform detailed planning and implementation of activities to support packaging and treatment for disposal of secondary liquid and solid wastes generated in the Tank Farms and assigned facilities.

### ***WTP Infrastructure Support***

The Contractor shall be responsible for coordinating, planning and paying for the WTP contractor requirements for infrastructure, utility, and service support from the MSC and the PRC.

### ***Vent and Balance Service***

The Contractor shall perform cost-effective/efficient vent and balance services (primarily high efficiency particulate air (HEPA) filter testing) for RPP facilities and the balance of the Hanford Site.

### ***Project Management***

The Contractor shall implement and maintain Tank Farm and assigned facility project management processes as further described in Section C.3.1, *Project Management*. Where appropriate, the Contractor shall integrate these projects with the Hanford Site-wide programs coordinated by the MSC.

### ***Integrated Safety Management System***

The Contractor shall implement and maintain a Tank Farm and related facility ISMS that includes environment, safety, health, and quality programs as described in Section C.3.2, *Integrated Safety Management System*. Where appropriate, the Contractor shall integrate these programs with the Hanford Site-wide programs coordinated by the MSC.

### ***Security and Emergency Services***

The Contractor shall implement and maintain Tank Farm and assigned facility safeguards, security, and emergency preparedness programs as described in Section C.3.3, *Security and Emergency Services*. Where appropriate, the Contractor shall integrate these programs with the Hanford Site-wide programs coordinated by the MSC.

### ***Interactions***

The Contractor shall implement and maintain processes for interactions with Defense Nuclear Facilities Safety Board (DNFSB), Native Tribal Governments, regulators, advisory boards, stakeholders, and the media as described in Section C.3.4, *Interactions*.

## ***Interface Management***

In cooperation with other Hanford Site contractors, the Contractor shall establish interface management processes to assure effective control of technical, administrative, and regulatory interfaces as further described in Section C.3.5, *Interface Management*. Development and compliance with interface control documents (ICDs) between the Contractor and the WTP contractor are described separately in Section C.2.3.1.

### **C.2.1.3 Sub-CLIN 1.3: Analytical Laboratory Support**

#### **Background:**

The 222-S Laboratory Complex in the 200 West Area of the Hanford Site is the primary Hanford Site laboratory for analysis of highly radioactive samples. The Analytical Services Production Contractor (ASPC), under contract to DOE-ORP through 2010, performs analytical services; however, the TOC shall operate and maintain the laboratory facility. The laboratory is a Hazard Category 3 nuclear facility and contains hot cells and equipment to perform analysis of solid, liquid and gaseous samples. The ASPC maintains its own ISMS, Quality Assurance Plan, and Assurance System Description, but relies on the TOC for nuclear safety, radiation protection, and any other facility-related support. The ASPC is required to annually perform approximately 25,000 inorganic, organic, and radionuclide analyses. The ASPC will perform these analyses on approximately 3,000 intermediate to high level radioactive and/or hazardous waste samples received from multiple locations and contractors on the Hanford Site.

#### **General Scope:**

The Contractor shall operate and maintain the 222-S Laboratory Complex to support analysis activities performed by the ASPC.

#### **Detailed Scope and Requirements:**

#### ***Integrated Planning***

The Contractor shall coordinate with the ASPC to develop integrated Hanford Site-wide analysis plans, data quality objectives, and provide process and analytical technology support.

The Contractor shall document the interfaces in a mutually-approved *Administrative Interface Agreement with the Analytical Services Production Contractor* (Deliverable C.2.1.3-1) and submit to DOE-ORP for information.

The Contractor shall interface with the ASPC to develop sample analysis rates and waste generation estimates to allow the Contractor and other Site contractors to plan sample analysis expenditures.

#### ***Instrumentation & Equipment***

The Contractor shall provide analytical instrumentation and support equipment to ensure capability, capacity, storage, and reliability are available to support Hanford Site cleanup schedules.

### ***Radiological Safety***

The Contractor shall provide radiological protection program support and radiological control technician services to the ASPC. The ASPC work shall be performed in accordance with the Contractor's Radiation Protection Program.

### ***Waste Management***

The Contractor shall manage, treat, store or dispose of wastes generated by the ASPC.

### ***Transportation***

The Contractor shall transport Tank Farm-related samples to the 222-S Analytical Laboratory.

Other Hanford Site contractors are responsible for transportation of their samples to the 222-S Analytical Laboratory.

### ***Regulatory Authorization & Compliance***

The Contractor shall develop, evaluate, and maintain authorization basis documentation, environmental permitting, and other regulatory compliance documentation and perform the necessary compliance activities.

### ***Maintenance***

The Contractor shall provide maintenance, routine calibrations, repairs and engineering functions.

### ***Upgrades***

The Contractor shall plan and execute upgrades to the 222-S Laboratory Complex to support safe, reliable, and compliant operations.

## **C.2.2 CLIN #2 – Single-Shell Tank (SST) Retrieval and Closure**

### **C.2.2.1 Sub-CLIN 2.1: Single-Shell Tank Retrieval**

#### **Background:**

The 149 SSTs contain a mixture of liquid, sludge and saltcake; pumpable liquids have been removed. Tank wastes are retrieved to support waste treatment and Tank Farm closure.

#### **General Scope:**

The Contractor shall design, procure, permit, construct/fabricate, and operate the SST retrieval system(s) used to remove waste from SSTs and transfer the waste to pretreatment/treatment systems, or to the DST system for eventual treatment.

#### **Detailed Scope and Requirements:**

### ***Integrated Retrieval Planning and Implementation***

The Contractor shall develop, submit for DOE-ORP approval, implement, and maintain an *Integrated SST Retrieval Plan* (Deliverable C.2.2.1-1) that describes waste treatment, closure objectives, and near-term SST retrieval commitments.

The Contractor shall incorporate retrieval planning into the overall *RPP System Plan* (See Section 2.3.1).

### ***Retrieval Technologies***

The Contractor shall develop technologies to improve the efficiencies and equipment reliability for retrieving saltcake, hard heel, and other wastes from SSTs; determine technology limitations, retrieval efficiencies, safety and environmental concerns, and cost impacts for SST retrieval systems; and evaluate alternative retrieval technologies and leak detection methods for SSTs.

### ***Process Controls***

The Contractor shall establish the necessary process controls and perform required tank waste sampling and characterization to prevent transfer line and equipment degradation, preserve DST integrity, and prevent flammable gas issues and other potential safety and environmental concerns.

### ***Retrieval Execution***

The Contractor shall provide SST retrieval system(s), and transfer waste to the DST system or pretreatment/treatment systems to support treatment schedules.

The Contractor shall design, procure, permit, construct and/or fabricate, test, start-up and operate SST retrieval and transfer system(s) that efficiently achieve the waste removal goals.

### ***Cold Test Facility Operation***

The Contractor shall manage, maintain and operate the Cold Test Facility to support personnel training, development and testing of retrieval technologies and tank sampling technologies, and to support testing and technology development.

### ***Vadose Zone Characterization & Corrective Measures***

The Contractor shall perform Tank Farm vadose zone sampling, characterization, and corrective measures (in coordination with the PRC) to integrate these activities and drive efficiencies in the Hanford Site groundwater program. The TOC shall provide support to the lead contractor (PRC) for the groundwater/vadose zone program.

#### **C.2.2.2 Sub-CLIN 2.2: Single-Shell Tank Farm (Waste Management Area) Closure**

##### **Background:**

There are 149 underground SSTs, ancillary equipment, and contaminated soil, aggregated into seven (7) waste management areas that require remediation and closure.

General Scope:

The Contractor shall perform waste management area closure activities in accordance with Hanford Site-wide integrated closure strategies.

Detailed Scope and Requirements:

***Integrated Closure Planning and Implementation***

The Contractor shall develop, submit for DOE-ORP approval, implement, and maintain an *Integrated SST Waste Management Area Closure Plan* (Deliverable C.2.2.2-1).

The Contractor shall incorporate closure planning into the overall *RPP System Plan*.

***Regulatory Acceptance***

The Contractor shall obtain regulatory approval for component and/or waste management area closure activities through regulator approval of necessary permits and authorization documents that demonstrate compliance with state and federal rules/regulations.

***Physical Closure***

The Contractor shall design, construct, and operate equipment and systems necessary to support the work specified in the regulatory closure documents.

The Contractor shall demonstrate technologies and gather data to support closure decisions.

**C.2.3 CLIN #3 – Waste Treatment and Immobilization Plant (WTP) Support**

**C.2.3.1 Sub-CLIN 3.1: Treatment Planning, Waste Feed Delivery, and WTP Transition**

Background:

High level and low activity portions of tank waste must be reliably provided to the WTP and other waste treatment equipment and facilities in time to support hot commissioning and operation. The existing DST system does not have the capability to retrieve, blend, and transfer wastes to the treatment facilities.

General Scope:

The Contractor shall provide integrated system planning for the RPP mission, incorporating the results from other integrated planning tools for SST retrievals, closures, and for waste feed delivery.

The Contractor shall perform waste feed delivery, including project planning, Tank Farm upgrade and new equipment installations, and operations to accomplish pretreatment (if needed), blending, mixing, retrieval and transfer of tank waste to support optimized and reliable feed delivery to the waste treatment facilities.

The Contractor and the WTP Contractor shall jointly develop a transition plan for safe and efficient transition of the operational WTP facilities to the Contractor.

#### Detailed Scope and Requirements:

##### ***Planning Models***

The Contractor shall maintain the Hanford Tank Waste Operation Simulator (HTWOS) model and use the model to evaluate alternative cases to optimize RPP system performance and provide a technical basis for the approved *Performance Measurement Baseline* described in Section C.3.1.2, *Project Scope, Schedule, and Cost Baseline*. The key assumptions and inputs associated with this HTWOS model shall be submitted to DOE-ORP for approval.

The Contractor shall assist DOE-ORP in making the HTWOS model available for independent analysis of RPP System Planning.

##### ***RPP System Planning***

The Contractor shall develop, submit for DOE-ORP approval, and maintain the *River Protection Project System Plan* (Deliverable C.2.3.1-1) and subsequent planning documents that describe the technical planning for optimizing tank retrieval sequence, waste feed delivery, treatment strategies, storage, disposal options and operations, tank closure, and mission completion projections. The *System Plan* shall consider effectiveness of the overall treatment system, including selection of waste feeding the WTP versus supplemental treatment options, and recycle streams and secondary waste streams. The Contractor shall conduct related planning, such as technology roadmapping, identification of technology needs, reductions to Tank Farm cost and risk, and streamlining of work processes.

The Contractor shall update the *System Plan*, as required, to reflect significant changes in mission strategies and to remain consistent with the *Performance Measurement Baseline* (See Section C.3.1.2.1). The key assumptions and inputs associated with this *System Plan* shall be submitted to DOE-ORP for approval prior to revision of the *System Plan*. All revisions of the *System Plan* shall be submitted to DOE-ORP for approval.

##### ***Integrated Waste Feed Delivery Planning***

The Contractor shall prepare, submit for DOE-ORP approval, and implement an *Integrated Waste Feed Delivery Plan* (Deliverable C.2.3.1-2) to provide optimum and reliable pretreatment (if needed), blending/mixing, retrieval and delivery of feed to DOE-ORP treatment facilities. This Plan shall include the needs of commissioning, near-term, and long-term operations; necessary studies, testing, and infrastructure installation; and projected waste transfer/pretreatment operations.

The Contractor shall ensure that the *Integrated Waste Feed Delivery Plan* is integrated with the *RPP System Plan*.

##### ***Retrieval & Transfer System Upgrades***

The Contractor shall design, procure, and install DST retrieval and transfer system upgrades in support of Tank Farms activities, including in-tank treatment, waste staging, waste feed delivery to treatment systems, and optimizing use of DST space.

### ***Waste Pretreatment and Staging, DST Retrieval, and Feed Delivery Operations***

The Contractor shall operate and maintain the DST retrieval and feed delivery systems including in-tank treatment/pretreatment and blending/mixing systems to maximize the waste treatment system efficiency.

The Contractor shall perform sampling and characterization of DST waste as required to support feed delivery planning.

### ***Tank Waste Inventory Management***

The Contractor shall maintain the electronic and physical systems necessary to manage the tank waste inventory, including the:

- Tank Waste Information Network System (TWINS) database;
- Best Basis Inventory (BBI) – updated quarterly to account for tank waste transfers and data from sampling;
- Archive sample storage in the 222-S Laboratory; and
- WTP feed sampling.

### ***WTP Interface***

The Contractor shall:

- Assist DOE-ORP (as lead) and the WTP contractor in developing and implementing an *Interface Management Plan*.
- Assist the WTP contractor in the developing, implementing, and updating Interface Control Documents (ICDs) which define the scope of each interface and required deliverables.

### ***IHLW Storage and Disposition Planning***

The Contractor shall perform system planning and baseline management activities for IHLW storage and disposition, and shall assist DOE-ORP in their interface with the DOE Office of Civilian Radioactive Waste Management. The IHLW system planning shall be integrated into the *RPP System Plan*.

### ***WTP Transition Plan***

The Contractor and the WTP contractor shall jointly develop a *WTP Facility Transition Plan* (Deliverable C.2.3.1-3) that describes the strategy, schedule and requirements for safe, efficient, and sequential transfer of the WTP facilities, associated workforce, and all activities that support operations from the WTP contractor to the Contractor. The Plan shall identify, at a minimum, each facility, the proposed schedule for facility turnover, and provide a checklist of requirements to be completed to ensure that the facilities can be safely transitioned and operated by the Contractor. The Plan shall provide for the flexibility of early and/or extended operations of any of the WTP facilities during the Transition Period.

The Contractor shall submit the *WTP Facility Transition Plan* to DOE-ORP for approval at the completion of the WTP contractor certification of WTP cold commissioning.

### ***WTP LAW/BOF/LAB Facility Transition Plan***

If the DOE-ORP directs early feed and operation of the WTP LAW/BOF/LAB facilities, the Contractor and the WTP contractor shall jointly develop a *WTP LAW/BOF/LAB Facility Transition Plan* (Deliverable C.2.3.1-4). The Contractor shall submit the *WTP LAW/BOF/LAB Facility Transition Plan* to DOE-ORP for approval at the completion of WTP contractor certification of WTP LAW/BOF/LAB cold commissioning.

### **C.2.3.2 Sub-CLIN 3.2: WTP Operational Readiness**

#### Background:

The WTP Pretreatment facility, HLW facility, LAW facility, Analytical Laboratory (LAB), and Balance of Facilities (BOF) will be used to treat and immobilize the tank waste. The WTP is currently under construction and scheduled to perform start-up testing, cold commissioning, and hot commissioning under a separate contract during the Contract performance period.

#### General Scope:

The Contractor shall conduct a continuing in-process evaluation of WTP operational readiness to promote Contractor understanding of and planning for future WTP operations, verify that there are no deficiencies that would preclude successful Contractor operations, and support safe and efficient turnover of completed WTP facility(ies). DOE will require that the WTP Contractor certify that performance requirements are met, and DOE will independently accept the WTP facility(ies).

#### Detailed Scope and Requirements:

The Contractor shall develop a *WTP Operational Readiness Plan* (Deliverable C.2.3.2-1) detailing a time-phased approach for evaluation of WTP operational readiness to:

- Promote Contractor understanding of and planning for future WTP operations;
- Perform a continuing, in-process evaluation on WTP operability at a component, system, and facility basis;
- Verify that the WTP is ready to transition to Contractor operations; and
- Support safe and efficient Contractor acceptance of WTP facility(ies).

The Contractor shall submit the *WTP Operational Readiness Plan* to DOE-ORP for approval.

The Contractor shall report its evaluation of WTP operability in a *Semi-annual WTP Operational Readiness Evaluation* (Deliverable C.2.3.2-2). The evaluation will address each of the five (5) topical areas shown below for each of the WTP facilities (Pretreatment, HLW, LAW, LAB, and BOF).

#### Topical Areas:

- Process flowsheet viability;
- Reliability, availability, maintainability, and inspectability;



- Training and testing activities; and
- Cold and hot commissioning.

In the *Semi-annual WTP Operational Readiness Evaluation*, the Contractor shall document its technical basis to verify that the WTP is ready for transition to Contractor operations and that there are no deficiencies that would preclude successful Contractor operations. The responsible corporate official with knowledge of the basis for the evaluation, identified in Section H Clause entitled, *Responsible Corporate Official*, shall sign each of the *Semi-annual WTP Operational Evaluations*.

### **C.2.3.3 Sub-CLIN 3.3: Immobilized High-Level Waste (IHLW) Storage and Shipping Facility Construction**

#### Background:

IHLW produced by the WTP will be stored on-site until shipment to an off-site repository. A Canister Storage Building (CSB), with three below grade vaults, is in operation. One of the three vaults currently provides interim storage for spent nuclear fuel canisters. The other two vaults are empty and require modifications to be able to accept up to 880 IHLW canisters. Project design to modify the two empty vaults is complete, but modifications have not begun.

#### General Scope:

The Contractor shall design, construct, commission, and operate a storage facility for IHLW canisters to support WTP production of IHLW. Based on the availability of an off-site repository, the Contractor shall design, construct, commission and operate a Hanford Shipping Facility for IHLW and SNF.

#### Detailed Scope and Requirements:

##### ***Hanford Shipping Facility and IHLW Interim Storage***

The Contractor shall:

- Define and evaluate alternatives for location of the Hanford Shipping Facility, and the amount and location of on-site interim storage. The Contractor shall prepare a *Hanford Spent Nuclear Fuel and Immobilized High Level Waste Interim Storage Alternatives Analysis* (Deliverable C.2.3.3-1) and submit to DOE-ORP for information.
- Design a Hanford Shipping Facility that is capable of:
  - Receiving IHLW and SNF transportation casks on railroad cars from the off-site repository;
  - Removing and opening the casks;
  - Placing IHLW and SNF canisters into the casks,
  - Closing the casks and remounting them on the railcars; and
  - Staging the loaded railcars for return to the off-site repository.
- Complete modifications to the CSB and/or construction of a separate interim storage facility and ensure that the facility is ready for operation prior to WTP commencement of IHLW production.

- Complete construction of the Hanford Shipping Facility with capability to ship at a rate of 600 canisters per year. Actual shipping rates will be determined by the DOE Office of Civilian Radioactive Waste Management in accordance with the Integrated Acceptance Schedule.
- Prepare to operate the Hanford Shipping Facility in accordance with DOE-ORP direction (to be provided post-award) derived from the *Memorandum of Agreement for Acceptance of Department of Energy Spent Nuclear Fuel and High-Level Radioactive Waste*. Contractor responsibilities will include:
  - Loading IHLW and SNF canisters into transportation casks in accordance with procedures provided by DOE Office of Civilian Radioactive Waste Management;
  - Performing routine and incidental maintenance of transportation casks and equipment; and
  - Providing procedures, equipment and supplies, and personnel training for both Contractor and DOE staffs in the handling and maintenance of the SNF and IHLW canisters, as well as storage facilities and transportation equipment.

### ***ILAW and IHLW Transport***

The Contractor shall design and procure the necessary equipment and arrange for transportation of ILAW, IHLW, and unique waste forms from WTP and supplemental treatment facilities to their respective on-site disposition or storage locations.

#### **C.2.3.4 Sub-CLIN 3.4: Upgrade and Operate the Effluent Treatment Facility**

##### General Scope:

The Contractor shall assume responsibility for the 200 East Area ETF and LERF, and complete upgrade designs and permitting, perform facility upgrades, and operate the ETF and LERF.

##### Detailed Scope and Requirements:

The Contractor shall assume responsibility for the 200 East Area ETF and LERF from the PRC in accordance with the DOE-ORP approved *ETF/LERF Transition Plan*.

The Contractor shall complete ETF and LERF upgrade designs and permitting, and perform facility upgrades to enable the facilities to receive and treat anticipated waste stream volumes and types.

The Contractor shall maintain the facilities in a ready-to-serve status, function as a service provider for other site contractors, and coordinate with waste generators to develop annual waste volume projections for DOE-ORP review.

The Contractor shall operate the LERF and ETF to receive liquid waste that meets applicable waste acceptance criteria.

The Contractor shall treat liquid wastes and dispose of liquid and solid wastes in accordance with DOE directives, regulations, and discharge permits.

## **C.2.4 CLIN #4 – Supplemental Treatment**

### **C.2.4.1 Sub-CLIN 4.1: Demonstration Bulk Vitrification System (DBVS) Construction and Operations**

#### **Background:**

Bulk vitrification is the tank waste treatment technology currently selected for testing and development at Hanford. Alternative technologies are being tested at other DOE Sites. Selection of the Hanford Site technology is dependent on the performance of the DOE options under development. The DBVS has been sited and designed. Laboratory, engineering, and production-scale testing continues to be conducted.

#### **General Scope:**

The Contractor shall complete an evaluation of DBVS design; procure, build, and operate a pilot scale one-line bulk vitrification plant; and conduct plant and waste form performance testing to determine the effectiveness of the treatment technology.

#### **Detailed Scope and Requirements:**

##### ***DBVS Planning***

The Contractor shall evaluate the current design and pre-construction testing for acceptability.

The Contractor shall develop a *DBVS Construction, Testing, and Operations Plan* (Deliverable C.2.4.1-1) for DOE-ORP approval. The Plan shall include, but not be limited to, pre-construction testing of pilot plant systems, pilot plant construction, construction acceptance and operational testing, and operations including waste form and plant performance evaluation.

##### ***DBVS Execution***

The Contractor shall procure, build, test, start up, and operate the DBVS. Plant and immobilized waste form performance data shall be collected to support a decision by DOE on supplemental LAW treatment technologies.

The Contractor shall develop a *DBVS Pilot Plant and Vitrified Waste Form Performance Test Plan* (Deliverable C.2.4.1-2) for DOE-ORP approval.

The pilot plant shall be capable of testing waste processing under radioactive conditions, demonstrate the effectiveness of joule-heated melting utilizing Hanford radioactive tank waste, and provide design, construction, and operations lessons learned and training that could minimize technical and schedule risks for the production-scale bulk vitrification system.

The Contractor shall document the results of the DBVS pilot plant operational performance and the primary waste packages and vitrified waste forms environmental performance in a *DBVS Pilot Plant and Vitrified Waste Form Performance Results* report (Deliverable C.2.4.1-3) and submit the report to DOE-ORP for review. The report shall document performance data to include, but not limited to:

- DBVS pilot plant unit processing duration, and melter throughput, availability, and reliability while processing radioactive waste streams;
- Operational resource requirements and total operating efficiency;
- Equipment availability input to production plant;
- Maintenance and critical spares information;
- Quantification of the bounds of glass composition envelopes;
- Primary waste packages and vitrified waste forms environmental performance comparison to the waste acceptance criteria of the Hanford Site Integrated Disposal Facility (IDF);
- Secondary waste streams including off-gases and liquids environmental performance and volume quantification;
- Critical permitting data for the production-scale project;
- Identification of optimization in technology application, startup, operations, and process control for a production facility;
- Validation of whether off-gas treatment system consistently performs to meet or exceed (i.e., performs better than) regulatory requirements; and
- Operation of the vitrified waste package core sampling system.

### ***Quality Assurance***

The Contractor shall ensure that analytical laboratory analyses conducted on the DBVS waste feed, primary waste packages, vitrified waste forms, and secondary waste forms meet the quality requirements of the *Hanford Analytical Services Quality Assurance Requirements Document*.

### ***Technical Recommendation***

The Contractor shall make a technical recommendation on the viability of bulk vitrification as a LAW treatment technology for application on a production-scale based on the pilot plant operational performance, primary waste packages and vitrified waste forms environmental performance, and secondary waste forms environmental performance data.

The Contractor shall submit a *Recommendation on the Viability of the Bulk Vitrification Waste Treatment Technology* report (Deliverable C.2.4.1-4) to DOE-ORP for approval.

### ***Comparative Analysis***

The Contractor shall perform a comparative analysis of the bulk vitrification technology to alternative technologies (e.g., steam reforming, cast stone, a second WTP ILAW facility, and any other viable technologies) based on the pilot plant operational performance, vitrified waste form and secondary waste form performance. The Contractor shall provide assistance as determined by DOE-ORP during the DOE independent, expert review of its comparative analysis process and results.

The Contractor shall submit a *Comparative Analysis of Supplemental Treatment Technologies* report (Deliverable C.2.4.1-5) to DOE-ORP for review.

### ***Re-permit Recommendation***

Upon completion of the DBVS mission at its present site, the Contractor shall evaluate system performance results and submit a recommendation to DOE-ORP to either decommission the DBVS pilot plant and return the site to grade, or negotiate with Washington State regulators to re-permit the facility for an additional treatment mission.

The Contractor shall submit a *Recommendation to Re-Permit DBVS* report (Deliverable C.2.4.1-6) to DOE-ORP for approval.

### ***Disposal***

The Contractor shall design and procure the transportation equipment and arrange for transportation of the vitrified waste packages to the appropriate on-site disposal location, in accordance with the facility waste acceptance criteria and regulatory requirements.

### ***Decommission***

If the DBVS will not be modified for extended operations, then the Contractor shall decommission the DBVS facility in accordance with approved plans and permitting requirements.

## **C.2.4.2 Sub-CLIN 4.2: Extended Demonstration Bulk Vitrification System Operations**

### **Background:**

When the DBVS has completed its mission as a pilot plant, and if proven successful, DOE-ORP may direct the Contractor to upgrade the pilot plant so that it may be permitted to process additional tank waste.

### **General Scope:**

The Contractor shall permit, modify, and perform extended operations of the DBVS.

### **Detailed Scope and Requirements:**

#### ***Permit***

The Contractor shall re-permit the DBVS for further service.

The Contractor shall meet RCRA Part B permit and radioactive mixed waste processing requirements.

The Contractor shall assume a lead role in negotiations with the regulators to develop the RCRA Part B Permit modification.

#### ***Pilot Plant Modification***

The Contractor shall develop an 80 percent (%) probability cost and schedule estimate to refit the pilot plant to meet RCRA Part B permit and radioactive mixed waste processing requirements,

and submit a *Cost and Schedule Estimate for the Extended Operations of the Demonstration Bulk Vitrification System* report (Deliverable C.2.4.2-1) to DOE-ORP for approval.

The Contractor shall:

- Modify the pilot plant for further service and identify candidate tanks for processing.
- Design and fabricate components and systems, and perform construction activities to install and upgrade the pilot plant, as necessary, for the plant to meet RCRA Part B permit and radioactive mixed waste processing requirements.
- Revise the existing waste feed acceptance specification consistent with the design modifications and waste forms to be processed.
- Submit for DOE-ORP approval an *Extended Operations of the DBVS Final Design Modifications and Feed Acceptance Specifications* report (Deliverable C.2.4.2-2).

### ***Extended Demonstration Bulk Vitrification System Operations***

The Contractor shall develop sampling and analysis plans for the plant waste feed, primary waste packages and vitrified waste forms, and secondary waste forms, and submit an *Extended Operations of the DBVS Sampling and Analysis Plan* (Deliverable C.2.4.2-3), to DOE-ORP for approval.

The Contractor shall perform extended operations of the DBVS and ensure that the waste feed meets feed acceptance specifications and the immobilized products meet the standards for on-site disposal under DOE, RCRA, and Ecology permit requirements.

The Contractor shall operate the plant and ensure that all effluent vapor and liquids and all secondary waste streams meet on-site disposal requirements. The Contractor shall perform solid/liquid separation and waste feed pretreatment necessary to meet the waste feed requirements.

### ***Quality Assurance***

The Contractor shall ensure that analytical laboratory analyses conducted on the waste feed, primary waste packages, vitrified waste forms, and the secondary waste forms meet the requirements of the *Hanford Analytical Services Quality Assurance Requirements Document*.

### ***Decommission***

Upon completion of extended DBVS operations, the Contractor shall decommission and demolish the DBVS facility in accordance with approved plans and permitting requirements.

## ***Disposal***

The Contractor shall arrange for transportation of the vitrified waste packages to the appropriate on site disposal location.

### **C.2.4.3 Sub-CLIN 4.3: Supplemental Treatment Design**

#### **Background:**

Depending on future waste treatment decisions, DOE-ORP may direct the Contractor to permit and commence design on supplemental LAW treatment capacity.

#### **General Scope:**

The Contractor shall perform the necessary activities to permit and commence design of additional supplemental treatment capacity for low activity tank waste.

#### **Detailed Scope and Requirements:**

The Contractor shall commence design, permitting, and safety analysis activities up through Critical Decision 2, *Approve Performance Baseline*, for LAW treatment facilities in accordance with the requirements of DOE Order (O) 413.3A, *Program and Project Management for Acquisition of Capital Assets*. Plant treatment capacity shall meet the requirements determined by the planning models and RPP System Plan described in Section C.2.3.1, Treatment Planning and Waste Feed Delivery.

The Contractor shall design treatment processes to ensure that the treated waste meets the standards for on-site disposal under DOE, RCRA, and Ecology permit requirements.

The Contractor shall develop treatment waste feed acceptance specifications consistent with the design and waste forms to be processed. The design shall incorporate solid/liquid separation and waste feed pretreatment necessary to meet the waste feed acceptance specifications.

### **C.2.4.4 Sub-CLIN 4.4: Supplemental Treatment Construction and Operations**

#### **Background:**

Depending on future waste treatment decisions, DOE-ORP may direct the Contractor to complete design and construction of supplemental LAW treatment capacity.

When supplemental treatment construction is completed, it may be advantageous for DOE to direct transition and/or operation of the supplemental LAW treatment capacity.

#### **General Scope:**

The Contractor shall construct additional supplemental treatment capacity for LAW.

**Detailed Scope and Requirements:**

The Contractor shall complete design and permitting, and procure and construct supplemental LAW treatment capacity. The plant(s) shall receive LAW feed from SSTs and DSTs.

Plant treatment capability shall meet the requirements determined by the planning models and *RPP System Plan* described in Section C.2.3.1, *Treatment Planning and Waste Feed Delivery*.

Treated waste shall meet the standards for on-site disposal under DOE, RCRA, and Ecology permit requirements.

The Contractor shall perform solid/liquid separation and waste feed pretreatment necessary to meet the waste feed acceptance specifications.

**C.2.4.5 Sub-CLIN 4.5: Transuranic Tank Waste Treatment and Packaging**

**Background:**

The Hanford Transuranic (TRU) Tank Waste Project was initiated to provide supplemental treatment of TRU tank waste. Project and equipment status is documented in RPP-PLAN-25638, Revision 0, *Transuranic Waste Project Standby Report*. Significant portions of the retrieval and treatment systems are currently used in other Tank Farm projects.

Regulatory documentation including the Waste Isolation Pilot Plant (WIPP) Class III RCRA permit modification, the RCRA Part B permit modification, the U.S. Environmental Protection Agency (EPA) Compliance Recertification Application, and appropriate *National Environmental Policy Act of 1969* (NEPA) documentation are in development.

**General Scope:**

The Contractor shall design, permit, construct, and operate a TRU tank waste packaging, characterization, and storage system for CH-TRU tank waste.

**Detailed Scope and Requirements:**

***CH-TRU Packaging System***

The Contractor shall permit, design, construct and operate a CH-TRU waste treatment and packaging system for TRU tank waste retrieved from selected SSTs.

***WIPP Certification***

The Contractor shall perform the WIPP-required characterization and support PRC in certification activities to demonstrate acceptability of the CH-TRU tank waste packages for disposal at WIPP.



### **CH-TRU Temporary Storage**

The Contractor shall arrange for transportation of the CH-TRU waste packages to the PRC for storage pending shipment to WIPP.

### **C.2.5 CLIN #5 – Early Feed and Operation of the WTP Low Activity Waste Facility (LAW)**

#### **Background:**

Depending on future waste treatment decisions, DOE-ORP may direct the Contractor to pursue actions to allow the WTP LAW Facility to begin vitrifying pretreated tank waste prior to the projected complete WTP hot start. Startup of the WTP LAW Facility will require early startup of the WTP LAB and the BOF on the WTP site, as well as modifications to other Hanford Site infrastructure (i.e., ETF). Construction work would continue on the WTP Pretreatment and HLW facilities with the construction zones cordoned off from the operational facilities.

When WTP Pretreatment and HLW facilities are completed, it may be advantageous for DOE to direct transition and/or operation of these WTP capabilities to support early feed and operation of the WTP LAW facility.

#### **C.2.5.1 Sub-CLIN 5.1: Tank Selection, Retrieval, Pretreatment and Feed Delivery Design**

#### **General Scope:**

The Contractor shall perform the activities necessary to permit and commence design of tank waste retrieval, pretreatment and waste feed delivery equipment and facilities to provide pretreated waste to the WTP LAW facility.

#### **Detailed Scope and Requirements:**

The Contractor shall identify the waste tank retrieval, staging, conditioning, pretreatment, and feed delivery sequences to provide waste feed delivery to the WTP LAW facility while optimizing the later waste feed retrieval and delivery processes for subsequent startup of the entire WTP complex. These planning sequences shall be documented and approved by DOE-ORP as described in the Sub-CLIN entitled, *Treatment Planning, Waste Feed Delivery, and WTP Transition*.

The Contractor shall commence design, permitting, and safety analysis activities up through Critical Decision 2, *Approve Performance Baseline*, for the waste tank retrieval; waste staging, conditioning, and pretreatment; feed delivery equipment and facilities; and secondary waste stream treatment (including modifications to the ETF) in accordance with the requirements of DOE O 413.3A, *Program and Project Management for Acquisition of Capital Assets*.

The Contractor shall produce a design to provide waste feed to the WTP LAW facility that meets the waste acceptance criteria in the WTP contract as described in the ICDs between the WTP and the TOC.

The Contractor shall compare early startup of the WTP LAW facility versus other treatment options for LAW – considering projected life-cycle costs, waste treatment schedules, waste form

performance, environmental and program risks, and impacts to other Hanford mission activities. The Contractor shall incorporate the analysis results into the *RPP System Plan*.

The Contractor shall interface with applicable Hanford Site contractors to ensure treatment planning includes planning for impacts and for the necessary modifications to projected Site services and waste management functions and facilities including ETF and the Liquid Effluent Retention Facility (LERF). The Contractor shall submit for DOE-ORP approval an *ETF/LERF Transition Plan* (Deliverable C.2.5.1-1) detailing the turnover of the ETF and LERF to the TOC.

#### **C.2.5.2 Sub-CLIN 5.2: Retrieval, Pretreatment and Feed Delivery Construction and Operations**

##### General Scope:

The Contractor shall complete design and permitting, and procure, construct and operate tank waste retrieval, pretreatment, waste feed delivery, and secondary waste treatment equipment and facilities to provide pretreated waste to the WTP LAW facility.

##### Detailed Scope and Requirements:

The Contractor shall complete designs and permits; and procure and construct the waste tank retrieval; waste staging, conditioning, and pretreatment; feed delivery equipment and facilities; and secondary waste stream treatment to provide waste feed delivery to the WTP LAW facility.

The Contractor shall operate the equipment and facilities to stage pretreated waste and to provide waste feed to the WTP LAW facility that meets the waste acceptance criteria in the WTP contract as described in the ICDs between the WTP and the TOC.

#### **C.2.5.3 Sub-CLIN 5.3: (Reserved)**

#### **C.2.5.4 Sub-CLIN 5.4: LAW/BOF/LAB Operations**

##### General Scope:

The Contractor shall transition, manage, maintain, and operate the WTP LAW/BOF/LAB facilities to produce Immobilized Low Activity Waste (ILAW) for delivery to the on-site disposal facility.

##### Detailed Scope and Requirements:

##### ***Operating Specifications***

The Contractor shall submit the *WTP LAW Facility Operating and Product Specifications* (Deliverable C.2.5.4-1) concurrent with the *WTP LAW/BOF/LAB Facility Transition Plan* to DOE-ORP for approval. The specifications document shall include:

- ILAW container requirements and filled container limitations;
- Container fill and constituent requirements;
- Waste form sampling; and

- ILAW container handling and shipping to the approved on site disposal location.

### **WTP Facility Transition**

Once each operational WTP facility(ies) is accepted by DOE-ORP under the WTP contract, the Contractor shall begin the transfer of the operational facility(ies), necessary operations and maintenance workforce, and all activities that support operations between the WTP contractor and the Contractor.

The Contractor shall coordinate directly with all other Hanford Site contractors that support an interface with the WTP facility(ies) and submit for DOE-ORP approval a *Transition Agreement* with the signatures of all involved parties.

The Contractor shall conduct a self-assessment of each facility(ies) transfer, support DOE-ORP verification of each transfer, and be accountable for WTP facility(ies) operation following transfer.

### **LAW/BOF/LAB Operations**

The Contractor shall manage, maintain, and operate the WTP LAW/BOF/LAB facilities to produce containers of ILAW. Each container shall be routed through the complete process and equipment system, including level measurement, sampling as required, inert fill (as required), lid closure, decontamination, and placement in position for shipment.

The Contractor shall arrange for transportation of the ILAW containers to the appropriate on-site disposal location in accordance with the facility waste acceptance criteria and regulatory requirements.

## **C.2.6 CLIN #6 – Pension and Welfare Plans**

### **C.2.6.1 Sub-CLIN 6.1: Hanford Employee Retirement and Benefit Plan Management**

The Contractor will have certain responsibilities regarding sponsorship, management and administration of pension and other benefit plans for certain active and retired contractor employees at the Hanford Site. The requirements and scope of these responsibilities are set forth in the Section H Clause entitled, *Employee Compensation: Pay and Benefits* and the Section H Clause entitled, *Post-Contract Responsibilities for Pension and Other Benefit Plans*.

### **C.2.6.2 Sub-CLIN 6.2: Legacy Pension and Benefit Plan Management**

The Contractor will have certain responsibilities regarding sponsorship, management and administration of pension and other benefit plans for certain retired contractor employees associated with work at different DOE Sites. The requirements associated with these responsibilities are set forth in the Section H Clause entitled, *Employee Compensation: Pay and Benefits* and the Section H Clause entitled, *Post-Contract Responsibilities for Pension and Other Benefit Plans*.

### **C.2.7 CLIN #7 – American Recovery and Reinvestment Act (ARRA) Workslope**

The workslope identified in CLIN 7 is not new scope. The work identified in Sub-CLIN 7.1, 7.2, 7.3, and 7.4 is scope that is already part of Sub-CLIN(s) 1.2, 1.3, 3.1, and 3.3 identified above. CLIN 7 and associated Sub-CLIN(s) has been developed solely for the purpose of identifying the scope contemplated and provide for a method of tracking funds received as part of the American Recovery and Reinvestment Act (ARRA). See Section J, attachment J.15, *American Recovery and Reinvestment Act (ARRA) Milestones and Performance Measures*, for specific major ARRA program milestones, milestone dates, required evidence of achievement, and performance measures/metrics.

#### **C.2.7.1 Sub-CLIN 7.1: ARRA workslope under Sub-CLIN 1.2 - Safe, Compliant Operations**

##### General Scope:

The Contractor shall maintain and operate the Tank Farms, 242-A Evaporator, and supporting Tank Farm infrastructure.

For the assigned work scope, the Contractor shall establish and implement the necessary programs and processes for:

Project Management (Section C.3.1);  
Integrated Safety Management System (ISMS) (Section C.3.2);  
Security and Emergency Services (Section C.3.3);  
Interactions (Section C.3.4); and  
Interface Management (Section C.3.5).

##### Detailed Scope and Requirements:

#### ***SST System Management***

The Contractor shall operate and maintain the SST system and ancillary facilities to safely store tank waste and facilitate tank waste retrieval and component closure. The Contractor shall perform non-destructive testing and evaluation of SSTs and miscellaneous underground storage tanks to assure continued tank integrity commensurate with the waste contained in each tank and the associated risk.

### ***DST System Management***

The Contractor shall integrate with the WTP contractor, and operate the DST system to maintain acceptable waste feed specifications for future waste feed delivery to the WTP while optimizing use of available DST space to facilitate SST waste retrieval and in-tank treatment to preserve tank integrity and improve waste feed characteristics.

### ***Maintenance***

The Contractor shall perform calibrations, maintenance and required equipment installations to assigned facilities in support of the RPP mission with a prioritization that provides the best value to DOE-ORP.

### ***Upgrades***

The Contractor shall plan and execute Tank Farm and related facilities upgrade sub-projects, as necessary, to support safe, reliable, and compliant storage, and tank waste retrieval, staging, delivery, and treatment efforts.

### ***DST Integrity/Life Extension***

The Contractor shall maintain DST waste within TSR chemistry specifications to minimize tank corrosion. Chemistry specifications shall be evaluated to optimize tank protection while minimizing waste generation and resultant vitrified waste form volume. The Contractor shall perform non-destructive testing and evaluation of tanks to meet Resource Conservation and Recovery Act of 1976 (RCRA) requirements, status tank corrosion, and assure continued tank integrity.

### ***Sampling & Characterization***

The Contractor shall maintain a ready-to-serve waste tank sampling and sample transportation capability. The Contractor shall perform tank waste sampling and characterization to support safe storage and evaporator operations, and to preserve tank integrity. Sampling and characterization activities for tank waste retrieval, tank closure, treatment planning and waste feed delivery are included in their respective sub-CLINs.

### ***Evaporator Operation***

The Contractor shall operate the 242-A Evaporator in support of DST space management, waste retrieval, and feed delivery activities. The Contractor shall perform evaporator maintenance and upgrades, as necessary, to support the RPP mission.

### ***Secondary Wastes***

The Contractor shall perform detailed planning and implementation of activities to support packaging and treatment for disposal of secondary liquid and solid wastes generated in the Tank Farms and assigned facilities.

### **C.2.7.2 Sub-CLIN 7.2: ARRA workscope under Sub-CLIN 1.3 – Analytical Laboratory Support**

#### **General Scope:**

The Contractor shall operate and maintain the 222-S Laboratory Complex to support analysis activities performed by the ASPC.

#### **Detailed Scope and Requirements:**

##### ***Instrumentation & Equipment***

The Contractor shall provide analytical instrumentation and support equipment to ensure capability, capacity, storage, and reliability are available to support Hanford Site cleanup schedules.

##### ***Maintenance***

The Contractor shall provide maintenance, routine calibrations, repairs and engineering functions.

##### ***Upgrades***

The Contractor shall plan and execute upgrades to the 222-S Laboratory Complex to support safe, reliable, and compliant operations.

### **C.2.7.3 Sub-CLIN 7.3: ARRA workscope under Sub-CLIN 3.1 – Treatment Planning, Waste Feed Delivery, and WTP Transition**

#### **General Scope:**

The Contractor shall provide integrated system planning for the RPP mission, incorporating the results from other integrated planning tools for SST retrievals, closures, and for waste feed delivery.

The Contractor shall perform waste feed delivery, including project planning, Tank Farm upgrade and new equipment installations, and operations to accomplish pretreatment (if needed), blending, mixing, retrieval and transfer of tank waste to support optimized and reliable feed delivery to the waste treatment facilities.

The Contractor and the WTP Contractor shall jointly develop a transition plan for safe and efficient transition of the operational WTP facilities to the Contractor.

#### **Detailed Scope and Requirements:**

##### ***Integrated Waste Feed Delivery Planning***

The Contractor shall prepare, submit for DOE-ORP approval, and implement an *Integrated Waste Feed Delivery Plan* (Deliverable C.2.3.1-2) to provide optimum and reliable pretreatment

(if needed), blending/mixing, retrieval and delivery of feed to DOE-ORP treatment facilities. This Plan shall include the needs of commissioning, near-term, and long-term operations; necessary studies, testing, and infrastructure installation; and projected waste transfer/pretreatment operations.

The Contractor shall ensure that the *Integrated Waste Feed Delivery Plan* is integrated with the *RPP System Plan*.

### ***Retrieval & Transfer System Upgrades***

The Contractor shall design, procure, and install DST retrieval and transfer system upgrades in support of Tank Farms activities, including in-tank treatment, waste staging, waste feed delivery to treatment systems, and optimizing use of DST space.

### ***Waste Pretreatment and Staging, DST Retrieval, and Feed Delivery Operations***

The Contractor shall operate and maintain the DST retrieval and feed delivery systems including in-tank treatment/pretreatment and blending/mixing systems to maximize the waste treatment system efficiency.

The Contractor shall perform sampling and characterization of DST waste as required to support feed delivery planning.

### ***Tank Waste Inventory Management***

The Contractor shall maintain the electronic and physical systems necessary to manage the tank waste inventory, including the:

- Tank Waste Information Network System (TWINS) database;
- Best Basis Inventory (BBI) – updated quarterly to account for tank waste transfers and data from sampling;
- Archive sample storage in the 222-S Laboratory; and
- WTP feed sampling.

### ***IHLW Storage and Disposition Planning***

The Contractor shall perform system planning and baseline management activities for IHLW storage and disposition, and shall assist DOE-ORP in their interface with the DOE Office of Civilian Radioactive Waste Management. The IHLW system planning shall be integrated into the *RPP System Plan*.

#### **C.2.7.4 Sub-CLIN 7.4: (Reserved)**

**C.2.7.5 Sub-CLIN 7.5:** ARRA workscope under Sub-CLIN 3.4 - Upgrade and Operate the Effluent Treatment Facility (ETF).

#### **General Scope:**

The Waste Treatment Plant is anticipated to produce a liquid effluent from the processing of High and Low Activity waste. This effluent is expected to contain low levels of radioactive and hazardous components that will need to be treated before final disposal. ETF is currently envisioned to be used as the treatment facility with final disposal occurring at the Integrated Disposal Facility.

Detailed Scope and Requirements:

The contractor shall:

- Initiate test program to determine a final secondary waste form that will be acceptable for disposal at the Integrated Disposal Facility (IDF). This waste form will need to meet long term performance objects that will be included in the IDF's Waste Acceptance Criteria.
- Perform crucible and small scale melter testing to enhance the low activity glass formulations retention of technetium (Tc) and other contaminants of concern. This testing is anticipated to reduce the requirements on the secondary waste form for final disposal at IDF.

**C.2.7.6 Sub-CLIN 7.6: ARRA workscope under Sub-CLIN 2.1 Single-Shell Tank Retrieval**

General Scope:

The Contractor shall design, procure, permit, construct/fabricate, and operate the SST retrieval system(s) used to remove waste from SSTs and transfer the waste to pretreatment/treatment systems, or to the DST system for eventual treatment.

Detailed Scope and Requirements:

***Retrieval Technologies***

The Contractor shall develop technologies to improve the efficiencies and equipment reliability for retrieving saltcake, hard heel, and other wastes from SSTs; determine technology limitations, retrieval efficiencies, safety and environmental concerns, and cost impacts for SST retrieval systems; and evaluate alternative retrieval technologies and leak detection methods for SSTs.

***Vadose Zone Characterization & Corrective Measures***

The Contractor shall perform Tank Farm vadose zone sampling, characterization, and corrective measures (in coordination with the PRC) to integrate these activities and drive efficiencies in the Hanford Site groundwater program. The TOC shall provide support to the lead contractor (PRC) for the groundwater/vadose zone program.

**C.3 DESCRIPTION OF PROJECT SUPPORT PERFORMANCE REQUIREMENTS**

The following Sections define the programs that must exist to safely and effectively perform the cleanup mission in the Hanford Tank Farms and related facilities. Beginning with Project



Management and progressing through Integrated Safety Management, Environmental, Safety, Health and Quality (ESH&Q), Security and Emergency Services, Interactions, and Interface Management, these programs shall be conducted in an integrated manner that protects the workers, public, and environment while enabling efficient cleanup.

### C.3.1 Project Management

The Contractor shall provide all management and technical information to:

- Meet the requirements of DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets* and DOE M 413.3-1, *Project Management for the Acquisition of Capital Assets*;
- Support the budget formulation activities including but not limited to emerging work items list; budget formulation input (including Integrated Priority List); fall limited budget update submission; budget scenario development; and budget presentations (such as public and regulatory briefings, etc.);
- Meet the data requirements of the DOE Integrated Planning; Accountability and Budgeting System;
- Ensure transparency in project performance and efficiency in project execution;
- Support audits, evaluations, and external technical reviews; and
- Support other DOE-ORP performance assessments and information needs.

The Contractor shall ensure that all project management information developed under this Contract is accessible to DOE-ORP electronically.

#### C.3.1.1 Project Integration and Control and Earned Value Management

The Contractor shall prepare and submit for DOE-ORP approval a *Project Execution Plan (PEP)* (Deliverable C.3.1.1-1) consistent with the PEP requirements in DOE O 413.3A and DOE M 413.3-1. The PEP shall describe the approach for managing and controlling all activities necessary to execute this Contract and shall focus on Contractor policies, methods, and approach to project integration of scope, schedule and cost information.

The Contractor shall provide, as an attachment to the PEP, a *Project Control System Description* that complies with the requirements of DOE O 413.3A, DOE M 413.3-1, and *American National Standards Institute (ANSI)/Electronic Industries Alliance (EIA)-748-A-1998 Earned Value Management Systems (EVMS)*.

The *Project Control System Description* shall describe the management processes and controls that shall be used to implement an EVMS, manage and control work, and complete Contract requirements. The *Project Control System Description* shall include:

- The baseline development process and the hierarchy of documents that shall be used to describe and maintain the *TOC Project Performance Measurement Baseline (PMB)* (See Section C.3.1.2.1, *Performance Measurement Baseline*);
- The process the Contractor intends to use for earned value management, change control, configuration control, interface control, and document control;
- The organizational breakdown structure, including roles and responsibilities of each

- major organization and identification of key management personnel; and
- A list of project software the Contractor proposes to use for project control.

The Contractor shall have the EVMS evaluated against the ANSI standard by a qualified, independent third party chosen by the DOE Office of Engineering and Construction Management (DOE-OECM). Upon successful completion of the evaluation, DOE-OECM will certify the Contractor's EVMS as compliant with the ANSI standard. Subsequent to the initial evaluation and certification, DOE-OECM may at any time require the Contractor to repeat the evaluation and certification process. The Contractor shall provide all necessary support to conduct the initial and any subsequent evaluations and closure of all corrective actions.

The Contractor shall flow down the EVMS requirements in accordance with the Section I Clause entitled, *FAR 52.234-4, Earned Value Management System*.

Upon DOE-ORP approval of the PEP, the Contractor shall fully implement the *Project Control System Description*. The Contractor shall obtain Contracting Officer approval prior to implementing materially significant changes to the PEP. The Contractor shall provide DOE-ORP with access to all pertinent records, data, and plans for purposes of initial approval, approval of proposed changes, and the ongoing operation of the project control system.

### **C.3.1.2 Project Scope, Schedule, and Cost Baseline**

#### **C.3.1.2.1 Performance Measurement Baseline**

The Contractor shall develop and maintain a TOC Project Performance Measurement Baseline (PMB). The PMB is a life-cycle integrated and traceable technical scope, schedule, and cost baseline that encompass all activities to execute the requirements of this Contract, integrate the WTP scope and schedule, and complete the River Protection Project mission.

The PMB shall include the following:

- Technical Scope. The following baseline documents shall be viewed collectively as the technical scope for the PMB:
  - The Contract Section C, *Statement of Work*;
  - The *River Protection Project System Plan*;
  - Waste site and facility lists;
  - Approved Interface Control Documents (ICDs);
  - Work Breakdown Structure (WBS) dictionary sheets required to a WBS level to be determined post-award by DOE-ORP;
- Schedule at a WBS level to be determined post-award by DOE-ORP; and
- Time-phased life-cycle cost estimate.

The PMB shall comply with the following requirements:

- The scope, cost and schedule shall be linked through use of the WBS provided by DOE-ORP or as otherwise approved by DOE-ORP. The WBS shall encompass all activities required in this Contract and provide the basis for all project control system components, including estimating, scheduling, budgeting, and project performance reporting. Control accounts within the WBS shall be identified.
- The baseline and management thereof shall comply with; *ANSI/EIA-748-A-1998 Earned Value Management Systems (EVMS)*, DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets*, and DOE M 413.3-1, *Project Management for the Acquisition of Capital Assets*.
- The PMB schedule shall:
  - Include all significant external interfaces, all TPA milestones, other regulatory and DNFSB commitments, and Government-Furnished Services and Information (GFS/I) dependencies.
  - Be an integrated, logical network-based plan that correlates to the WBS, is vertically traceable to the EVMS control accounts, and successfully aligns the Tank Farm Project schedule with the WTP schedule. The schedule shall be capable of summarizing from control accounts to higher WBS levels.
- A working level schedule(s) shall be developed for the execution year plus 6 additional months. The working level schedule(s) shall be integrated with the PMB and able to provide earned value reporting in compliance with *ANSI/EIA-748-A-1998 Earned Value Management Systems (EVMS)*.
- The PMB cost estimate shall include project resource plans, detailed resource estimates, basis of estimates, budgetary requirements, and identification of direct costs, indirect costs, management reserve, and fee.
- The method used to determine earned value shall be identified for each control account.
- The PMB shall be accessible to DOE-ORP at any time through access to electronic files.
- The PMB shall integrate with the:
  - Financial systems(s);
  - Budget formulation;
  - Regulatory, DOE, and Congressional commitments; and,
  - Performance milestones including contract performance incentives and other performance measures established by DOE-ORP.

#### **C.3.1.2.2 Performance Measurement Baseline Submittals**

The Contractor shall develop and submit an initial *TOC Project Performance Measurement Baseline* (Deliverable C.3.1.2.2-1) to DOE-ORP for approval. The PMB submittal shall include both hard copies and electronic files for the:

- WBS and WBS dictionary sheets at the level in which the costs are collected and cross referenced to the corresponding Contract CLIN number;
- Time-phased cost estimate at a WBS level to be determined post-award by DOE-ORP;
- Basis of estimate at a WBS level to be determined post-award by DOE-ORP; and

- Time-phased resource-loaded schedule at a WBS level to be determined post-award by DOE-ORP.

The Contractor shall provide the WBS, WBS dictionary data, and the basis of estimate data in either Microsoft Word<sup>®</sup> or Microsoft Access<sup>®</sup> format. Cost data shall be provided in Microsoft Access<sup>®</sup> or Excel<sup>®</sup> format and the schedule shall be provided using the current version of Primavera Systems, Inc., Enterprise for Construction<sup>®</sup> software unless agreed to otherwise by DOE-ORP.

The Contractor shall provide additional data that may be required by the MSC for development of the Hanford Site-wide life-cycle baseline.

The Contractor shall support the DOE-ORP External Independent Review and Energy Systems Acquisition Advisory Board (ESAAB) review of the initial submittal of the PMB and follow-on reviews of required updates.

#### **C.3.1.2.3 Performance Measurement Baseline Change Control Process**

The PMB change process shall be sufficiently rigorous and disciplined to ensure that the PMB is accurate, up to date and capable of providing meaningful data and information.

The Contractor shall:

- Develop and submit for DOE-ORP approval, a *TOC Project Performance Measurement Baseline Change Control Process* document (Deliverable C.3.1.2.3-1), with change authorities consistent with the approved *Project Execution Plan* and DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets*.
- Implement the *Project Baseline Change Control Process* with the PMB used as the reference for all baseline changes.

#### **C.3.1.3 Project Performance Reporting**

The Contractor shall provide DOE with the necessary project performance information to support budget planning, execution, and reporting; project planning and execution; audit and evaluation; and other DOE performance assessment and information needs.

##### **C.3.1.3.1 Monthly Performance Report**

The Contractor shall submit a *Monthly Performance Report* (Deliverable C.3.1.3-1) representing the prior month's performance and transmit it to DOE-ORP for review by the last Tuesday of each month.

The Monthly Performance Report shall be a written report that includes, but is not limited to, the following:

- Project manager narrative assessment.
- Significant accomplishments and progress towards completion of project goals and objectives.

- Major issues including actions required by the Contractor and DOE-ORP;
- Analysis of funds expenditure, with projections for the Project by fiscal year and life of the Contract.
- Evaluation of safety performance (including ISMS metrics and all recordable injuries, lost-time injuries, and near-misses).
- Business structure information to demonstrate ongoing compliance with the requirements of the Section H clause entitled, *Self Performed Work*.
- Project Baseline Performance including:
  - Earned value management system information using the following OMB Contract Performance Report formats (DID-MGMT-81466):
    - Format 1, DD Form 2734/1, Mar 05, *Work Breakdown Structure*;
    - Format 2, DD Form 2734/2, Mar 05, *Organizational Categories*;
    - Format 3, DD Form 2734/3, Mar 05, *Baseline*;
    - Format 4, DD Form 2734/4, Mar 05, *Staffing*; and
    - Format 5, DD Form 2734/5, Mar 05, *Explanations and Problem Analysis*.
  - Stated baseline schedule, which reflects progress against the baseline and includes critical path analysis, performance trends, variance discussion(s), and potential issues related to TPA or DNFSB milestones.
  - Contract estimates-to-complete.
  - A change control section that summarizes the scope, technical, cost, and/or schedule impacts resulting from any implemented actions; and that discusses any known or pending baseline changes and use of management reserve.
- Project Risk Assessment including identification of critical risks, actions planned, and actions taken to address those risks, potential problems, impacts, and alternative courses of action, including quality issues, staffing issues, assessment of the effectiveness of actions taken previously for significant issues, or the monitoring results of recovery plan implementation. The Project Risk Assessment shall also identify the engineering and technology to reduce the risk and uncertainty with the project.
- Actions required by DOE-ORP including GFS/I and DOE-ORP decisions.

#### **C.3.1.3.2 Project Review Meetings**

The Contractor shall participate in a monthly contract/project review with DOE-ORP and be prepared to address any of the information in the monthly report, as well as other information requested by DOE-ORP. A weekly contract or project status meeting shall be conducted at DOE request to provide interim updates and address issues.

#### **C.3.1.4 Risk Management**

The Contractor shall implement a risk management process in compliance with the PEP, DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets*; and, DOE M 413.3-1, *Project Management for the Acquisition of Capital Assets*.

Risk and decision management activities shall be coordinated on a continuing basis with DOE-ORP (as lead), the WTP contractor, and the other Hanford Site contractors. Contractor risk analysis information pertaining to “cross-cutting” decisions shall be communicated to DOE-ORP, the WTP contractor, and other Hanford Site contractors, including agreement as to who should be the lead for managing each risk.

The Contractor shall provide a *Risk Management Plan* (Deliverable C.3.1.4-1) to DOE-ORP for approval. In the *Risk Management Plan*, the Contractor shall identify the management reserve required to adequately address contractor-controlled risks.

### **C.3.1.5 Design, Procurement, Construction, and Acceptance Testing**

This Section applies to all capital asset construction activities performed as part of executing this Contract. In the context of this Section, the terms “acceptance testing” and “acceptance” refer to the Contractor’s testing and acceptance of Tank Farm-related systems and equipment. The Contractor shall provide the necessary documents to support the critical decision process in DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets*.

#### **C.3.1.5.1 Project Design**

- **Design Authority:** The Contractor shall act as the design authority unless otherwise determined in accordance with DOE O 413.3A, with duties to include developing design solutions, preparing all design media and documentation, maintaining the design basis, and performing design reviews.
- **Design Standards:** The Contractor shall submit for DOE-ORP approval a list of the standards to be used in the design of facilities and equipment. The Contractor shall ensure that the project’s design meets all applicable standards, and that the list of applicable standards is maintained under configuration control. The Contractor shall integrate safety into the design process.
- **Design Reviews:** The Contractor shall conduct periodic design, constructability, and operability reviews. When directed by DOE-ORP, the Contractor shall facilitate independent DOE design reviews in support of the requirements of DOE O 413.3A, to demonstrate that the project will perform its intended functions and meets requirements. The Contractor shall provide the design at the end of the three (3) design stages (conceptual, preliminary and final), or as otherwise directed by DOE, for DOE review. The Contractor shall resolve any comments resulting from these reviews with DOE-ORP.
- **Release for Construction:** Upon receipt of Critical Decision 3, *Approve Start of Construction*, and resolution of DOE comments, DOE-ORP will authorize the Contractor to release the design for construction.

### **C.3.1.5.2 Procurement, Construction, and Acceptance**

The Contractor shall prepare and submit a *Procurement, Construction, and Acceptance Testing Plan* (Deliverable C.3.1.5.2-1) for DOE-ORP approval and update the Plan as required after initial submission. The Plan shall include:

- Description of procurements, construction bids, and work packages;
- Construction management;
- Construction site management;
- Acceptance testing; and
- Descriptive linkage to the *Project Execution Plan* and the *Integrated Safety Management System Description*.

The Contractor shall procure all required material and equipment through the preparation of bid packages and solicitations; evaluating, awarding, and managing subcontracts; accepting subcontractor materials and equipment; and verifying subcontractor acceptance tests.

The Contractor shall submit a *Purchasing System* (Deliverable C.3.1.5.2-2) for DOE-ORP approval in accordance with the Section I Clause entitled, *Subcontracts*.

The Contractor shall certify to DOE-ORP that construction has been initiated.

The Contractor shall maintain a construction inspection system and acceptance testing system, perform inspections and testing, and ensure that the work performed under the Contract conforms to Contract requirements. The Contractor shall maintain complete inspection and testing records and make them available to DOE-ORP. DOE-ORP may elect to use independent acceptance inspectors to participate in acceptance testing and system turnover. The Contractor shall develop and submit an integrated *Construction and Acceptance Testing Program* (Deliverable C.3.1.5.2-3) to DOE-ORP for approval that includes the following elements:

- Verification and approval of all vendor's shop drawings to assure conformity with the approved design and working drawings and specifications;
- Acceptance test plans and procedures for on-site Contractor/subcontractor inspection of construction workmanship, compliance with design drawings and specifications, management of the design construction changes, and criteria for acceptance of fabricated and constructed items;
- Integrated construction acceptance test plans and inspection of construction to assure adherence to approved working drawings and specifications.

The Contractor shall prepare for DOE-ORP review and approval an *As-built Program Description* (Deliverable C.3.1.5.2-4). The as-built process and associated procedures shall identify:

- Description of the as-built process, including the role of DOE-ORP and the operations contractor. The operations contractor shall participate in acceptance of the as-built design, following construction, and commissioning.
- Drawing series to be as-built.

- Document control process for maintaining as-built.
- Procedures for modification of the as-built.

During the construction and acceptance phase, the Contractor shall remain current on the process and facility as-built program. The Contractor shall report the status of the as-built program in accordance with the process defined in the *Procurement, Construction, and Acceptance Testing Plan*.

The Contractor shall provide all necessary labor, equipment, materials, test equipment, spare parts sufficient to maintain all structure, systems, and components in an operable condition, and other related resources for the acceptance testing program.

DOE-ORP, and other Hanford Site contractor staff identified by DOE-ORP, shall be invited to participate in all construction project overview activities. Construction overview activities include any meeting that discusses significant issues associated with the establishment, development, and/or progress of the construction activities.

The Contractor shall certify to DOE-ORP that facility acceptance has been completed. Completion of facility acceptance is defined when all components and systems associated with the facility have been installed, functionally tested and the facility design as-built documents are complete in accordance with the *Procurement, Construction, and Acceptance Testing Plan*. Facility acceptance shall require acceptance of components and systems, including as-built design drawings.

The Contractor shall provide CD-4 documentation in accordance with DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets* and DOE Office of Environmental Management guidance.

### **C.3.2 Integrated Safety Management System**

The Contractor shall establish and maintain a single, project-wide Integrated Safety Management System (ISMS) in accordance with the requirements of the Section I Clause entitled, *Integration of Environmental, Safety and Health into Work Planning and Execution*, Section I Clause entitled, *Laws, Regulations, and DOE Directives*; and the Section B Clause entitled *Conditional Payment of Fee, Profit and Other Incentives*.

The ISMS Description shall describe how ESH&Q is integrated into the contractor's work planning and execution process; clearly communicate the roles, responsibilities, and authorities of line managers; hold line managers accountable for the performance of work in a manner ensuring protection of workers, the public, and the environment; and ensure quality work and products.

The Contractor shall develop and submit for DOE-ORP approval an *Integrated Safety Management System Description* (Deliverable C.3.2-1), for ISM Phase I and Phase II Verification to be performed at a later date. The Contractor shall update the ISMS Description and obtain DOE-ORP approval annually or as required to reflect changing conditions and contractor responsibilities. The ISMS Description shall include an integrated Environmental Management System (EMS) developed pursuant to the DOE O 450.1, *Environmental Protection Program*. The Contractor shall provide this EMS to the MSC.



In accordance with the DOE M 450.4-1, *Integrated Safety Management System Manual*, the Contractor shall develop and submit an *Authorization Agreement (AA)* (Deliverable C.3.2-2) to DOE-ORP for approval. The AAs are the mechanism whereby DOE-ORP and the Contractor jointly clarify and agree to the key conditions for conducting work safely, effectively, and efficiently for Hazard Category 2 and 3 nuclear facilities. The Contractor shall update the AA and obtain DOE-ORP approval annually or as required to reflect changing conditions and contractor responsibilities.

The Contractor shall flow the applicable ISMS/ESH&Q requirements down to all levels of self-performed work and all tiers of subcontracted work performance, and promptly identify and correct areas of non-compliance and performance concerns on self-performed and subcontracted levels of work performance.

The Contractor shall pursue continuous improvement through the establishment, tracking, and annual updating of *ISMS/ESH&Q Performance Objectives, Measures, and Commitments* (Deliverable 3.2-3).

### **C.3.2.1 Environmental Regulatory Management**

The Contractor shall establish an environmental program which is compliant with applicable laws, regulations, DOE directives (including DOE O 450.1, *Environmental Protection Program*), and the Section H Clause entitled, *Environmental Responsibility*.

The Contractor shall provide MSC with the necessary support for MSC to:

- Develop an inclusive Site-wide Environmental Management System (EMS) Program Management Plan that complies with DOE O 450.1;
- Perform Site-wide environmental permits/licenses responsibilities, including maintenance, application and reporting;
- Track, trend, and evaluate all Site-wide enforcement actions, compliance issues, and regulatory inspections conducted and planned at the Hanford Site;
- Provide site-wide Tri-Party Agreement (TPA) Technical Support to DOE; and
- Establish, manage, and maintain integrated Hanford Site Administrative Records and Public Information Repository.

The Contractor shall submit for DOE-ORP approval, an *Environmental Protection and Compliance Plan* (Deliverable C.3.2.1-1), which describes the current environmental protection and compliance framework, proposed changes to this framework, and the proposed approach to maintain compliance with the TPA and other regulatory permits and requirements throughout the duration of the Contract. The Contractor shall update the *Environmental Protection and Compliance Plan* and obtain DOE-ORP approval, annually or as required to reflect changing conditions and contractor responsibilities.

The Contractor shall manage its facilities, waste management units, and operable units to assure compliance with environmental requirements and agreements. The Contractor shall integrate their environmental permitting and regulatory compliance activities with the Hanford Site-wide permitting and compliance framework maintained by the MSC, including but not limited to the *Hanford Air Operating Permit* and the *Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit (WA7890008967)*.

The Contractor shall interface with the MSC and other designated contractors in providing

legally and regulatory required air and liquid effluent and near facility environmental monitoring data. The Contractor shall collect, compile, and/or integrate air and liquid effluent monitoring data from operations and activities under their control. The Contractor shall compare the monitoring data with regulatory and/or permit standards applicable to their activities and/or operations and provide the data and analyses to the MSC or other designated contractors for use in preparing the mandatory state and Federal environmental reports for the Hanford Site, including the *Hanford Site Environmental Report*.

The Contractor shall integrate NEPA and RCRA required activities into the CERCLA process for the Central Plateau wherever appropriate. The Contractor shall prepare the technical information required for any additional NEPA analyses and/or documentation that may be required.

The Contractor shall provide all necessary support to DOE-ORP in executing its owner role with regulators and stakeholders in the preparation, submission, and approval of regulatory and supporting documentation required to complete the work under this Contract.

The Contractor is assigned lead responsibility for coordination with the regulators to develop an optimum regulatory approach for all work under this Contract. As part of this responsibility, the Contractor is encouraged to propose changes to the regulatory approach, including changes to current regulatory end-points to establish risk-based end-states that maintain protection of human health and the environment; and innovations to regulatory strategies and processes that improve total performance. The Contractor shall consult with DOE-ORP as an owner in advance of any proposed change to the regulatory approach.

#### **C.3.2.2 Nuclear Safety**

DOE will execute its nuclear safety responsibilities in accordance with DOE O 410.1. The Contractor shall adopt existing DOE-ORP-approved nuclear safety basis (e.g., Documented Safety Analysis (DSA) and Technical Safety Requirements (TSR)) documentation for the assigned Hazard Category 2 and 3 nuclear facilities

The Contractor shall maintain, implement and improve the nuclear safety basis documents and comply with the TSR for its assigned Hazard Category 2 and 3 facilities in accordance with 10 CFR 830, Subpart B, *Safety Basis Requirements*.

For new Hazard Category 1, 2 and 3 nuclear facilities or major modifications to nuclear facilities, the Contractor shall develop safety basis documents up to and including a Preliminary Documented Safety Analysis (PDSA) to support construction and a DSA and TSRs to support operations that incorporate the expectations identified in DOE Guide 421.1-2, *Implementation Guide For Use in Developing Documented Safety Analyses To Meet Subpart B Of 10 CFR 830*, and DOE Guide 423.1-1, *Implementation Guide For Use In Developing Technical Safety Requirements*. The Contractor shall integrate nuclear safety into the design process.

As required by 10 CFR 830.203, *Unreviewed Safety Question Process*, the Contractor shall submit an *Unreviewed Safety Question Process* procedure (Deliverable C.3.2.2-2) that incorporates the expectations identified in DOE G 424.1-1A, *Implementation Guide for Use in Addressing Unreviewed Safety Question Requirements*, to DOE-ORP for approval.

The Contractor shall ensure that the safety-related structures, systems, and components relied upon to meet the requirements of the nuclear safety basis documents are identified and

maintained with appropriate to their classification sufficient reliability to enable timely performance of mission work in the assigned facilities.

The Contractor shall instill a Nuclear Safety Culture at all levels of the workforce in accordance with applicable Institute of Nuclear Operations (INPO) standards.

### **C.3.2.3 Worker Safety and Health**

The Contractor shall implement a worker safety and health program that reduces or prevents occupational injuries, illnesses, and accidental losses by providing workers with a safe and healthy workplace. This program shall implement a structured, standards-based approach to planning and control of work including identification and implementation of worker safety and health standards and requirements that are appropriate for the work to be performed and for identifying and controlling related hazards, while facilitating the effective and efficient delivery of work. The program shall meet the requirements of 10 CFR 851, *Worker Safety and Health Program*.

The Contractor shall develop and submit for DOE-ORP approval a 10 CFR 851-compliant *Worker Safety and Health Program* (Deliverable C.3.2.3-1). The Contractor shall update the Program and obtain DOE-ORP approval, as required, to reflect changing conditions and contractor responsibilities. The Worker Safety and Health Program shall address the Worker Safety and Health Functional Areas described in Appendix A to 10 CFR Part 851.

The Contractor shall promote a "Safety Conscious Work Environment" and "Human Performance Improvement" environment in which safety issues are promptly identified and effectively resolved, and in which employees are free to raise safety issues free of recrimination, harassment, intimidation, or other actions that induce peer pressure to not raise safety issues or otherwise create an environment where safety issues are not identified and resolved.

The Contractor shall document and implement a Radiation Protection Program as required by 10 CFR Part 835.101, *Radiation Protection Programs*. The Contractor shall develop and submit for DOE-ORP approval a *Radiation Protection Program* (Deliverable C.3.2.3-2). The Contractor shall obtain DOE-ORP approval for updates to the Program, as required.

The Contractor shall develop and implement a *Chronic Beryllium Disease Prevention Program* in accordance with 10 CFR Part 850, *Chronic Beryllium Disease Prevention Program*. The Contractor shall submit the *Chronic Beryllium Disease Prevention Program* (Deliverable C.3.2.3-3) for DOE-ORP approval and obtain DOE-ORP approval for updates to the program, as required.

The Contractor shall empower workers through active pursuit of employee involvement in work planning and control, and through implementation of the tenets of the DOE Voluntary Protection Program (VPP). The Contractor shall support and facilitate transition and maintenance of this achievement by the workforce until such time as the Contractor can apply for recognition as a new entity.

#### **C.3.2.4 Quality**

The Contractor shall develop, submit for DOE-ORP approval, and implement a *Quality Assurance Program Description* (Deliverable C.3.2.4-1) that describes the overall implementation of DOE quality assurance (QA) requirements. The QAP shall be applied to all (not just ES&H) work performed by the Contractor. The Contractor shall obtain DOE-ORP approval for *Quality Assurance Program Description* updates as required.

The *Quality Assurance Program Description* shall implement the requirements of:

- 10 CFR 830 Nuclear Safety Management, Subpart A, *Quality Assurance Requirements*;
- DOE O 414.1C, *Quality Assurance*;
- DOE/CBFO-94-1012, *DOE Carlsbad Field Office, Quality Assurance Program Description*, Revision 8, for WIPP-related activities;
- DOE/RW-0333P, *DOE Office of Civilian Radioactive Waste Management, Quality Assurance Requirements and Description*, Revision 18, for activities related to disposal at Yucca Mountain; and
- ASME NQA-1-2004 (or latest edition and addenda), *Quality Assurance Requirements for Nuclear Facility Applications*, as the national consensus standard for TOC workscope implementing QA Criteria of 10 CFR 830 Subpart A and O 414.1C. The Contractor shall implement Parts I and II of the NQA-1 standard and indicate within the QA Program those portions of NQA-1 Parts III and IV that are applied to Contractor's workscope. If additional standards are required to address unique/specific work activities, the standards shall be identified within the Contractor's QA Program.

The Contractor shall develop, submit for DOE-ORP approval, and implement an *Assurance System Description* (Deliverable C.3.2.4-2) to identify and address program and performance deficiencies, opportunities for improvement, provide the means and requirements to report deficiencies to the responsible managers and authorities, establish and effectively implement corrective and preventive actions, and share lessons learned across all aspects of the workscope. The Contractor shall annually update and re-submit the *Assurance System Description* to DOE-ORP for approval.

The Contractor shall use a "zero-threshold" issue reporting system to capture, in one system, the issues raised across all Contractor organizations and working levels.

#### **C.3.2.5 Event Reporting and Investigation**

The Contractor shall report all environmental, safety, and health events and information as required in DOE M 231.1-1A, *Environment, Safety, and Health Reporting*; DOE O 450.1, *Environmental Protection Program*; and DOE O 5400.5, *Radiation Protection of the Public and the Environment*. The Contractor shall flow down the applicable reporting requirements to all levels of self-performed work and all tiers of subcontracted work performance. The Contractor shall consolidate all information and serve as a single point of reporting to DOE for all environmental, safety, and health events and information associated with the Contractor's workscope.

The Contractor shall support all Type A and Type B accident investigations for accidents on all self-performed and subcontracted levels of work performance, as required in DOE O 225.1A, *Accident Investigations*. The Contractor shall establish and maintain readiness to respond to an accident; respond to all accidents; mitigate potential accident consequences; assist in preserving,

collecting, and processing information and evidence from the scene of the accident; and provide all necessary support required to investigate the accident and support an accident investigation board.

The Contractor shall develop and maintain an effective Lessons Learned Program to capture lessons learned from both internally and externally identified deficiencies and good practices. The Lessons Learned Program shall be rigorous and comprehensive such that the Contractor can demonstrate actions taken to address significant occurrences from both inside and outside of the DOE complex. Lessons learned information should be targeted and made available to the personnel in the Contractor's organization actually conducting the type of work involved and most able to benefit from the information.

### **C.3.3 Security and Emergency Services**

#### **C.3.3.1 Safeguards and Security**

##### **C.3.3.1.1 Safeguards and Security Program Management**

The Contractor shall coordinate and interface with the MSC and its subcontractors who provide safeguards and security (SAS) services (e.g., Hanford Site access control, security police officers, vulnerability analysis).

The Contractor shall perform the following SAS program management functions:

#### ***SAS Program Planning, Oversight, and Administration***

The Contractor shall identify and coordinate their SAS operational planning activities with MSC operational planning activities on a Hanford Site-wide basis.

The Contractor shall provide SAS technical, cost, and schedule performance information to the MSC.

#### ***Security Conditions (SECON)***

The Contractor shall conform to and comply with the DOE SECON system. The Contractor shall comply with any protective measure requirements that may be implemented in the event of a crisis or emergency, and/or in response to a malevolent or terrorist threat to any or all DOE facilities, assets, and personnel.

#### ***Site Safeguards and Security Plan and Other SAS Plans***

The Contractor shall provide information to the MSC in support of maintaining the Hanford Site Safeguards and Security Plan and other SAS plans.

#### ***Vulnerability Assessments***

The Contractor shall provide the necessary operational and technical expertise in support of the preparation of vulnerability assessments, security analyses, and special SAS studies and evaluations as identified by the MSC for the Hanford Site.

#### ***Design Basis Threat (DBT)***

The Contractor shall implement SAS actions, procedures, and/or processes as assigned by DOE that are necessary to comply with DOE DBT requirements. Overall DBT implementation actions and/or plans shall be consolidated and prepared by the MSC and approved by the DOE.

### ***Performance Assurance***

The Contractor shall provide information to the MSC to support preparation of the Hanford Site-wide Performance Assurance Program Plan as part of the *Site Safeguards and Security Plan*.

### ***Surveys, Reviews, and Assessments***

The Contractor shall provide operational and technical expertise, when requested, to support SAS surveys, reviews, assessments and/or SAS performance tests (e.g., force-on-force exercises) that are conducted by the MSC and/or DOE for SAS program elements. The Contractor shall identify, implement, and close corrective actions for TOC deficiencies in accordance with the SAS corrective action management programs.

### ***Facility Clearance and Registration***

The Contractor shall submit all required information to the MSC for facility clearance and registration actions.

### ***SAS Training***

The Contractor shall identify SAS training needs for TOC staff and shall arrange, fund, and schedule training in accordance with applicable requirements.

### ***SAS Awareness***

The Contractor shall comply with the requirements of the Hanford Security Awareness Program.

The Contractor shall maintain awareness of Hanford Site wide security issues/topics and incorporate them into the Contractor's internal practices and procedures, as appropriate.

The Contractor shall implement supplementary SAS awareness activities and/or briefings (e.g., at staff and safety meetings) in coordination with Site-wide policies.

### ***Classified Visits***

The Contractor shall submit required information to the MSC for Classified visits. The Contractor's Classified Visits Program or process shall ensure that only persons with the appropriate access authorizations and need-to-know receive access to classified information or matter in connection with visits involving the release or exchange of classified information or matter.

### ***Deviations***

The Contractor shall identify, evaluate, and submit deviations to SAS requirements to DOE.

The Contractor shall coordinate with the MSC prior to submitting deviations to DOE. Deviation requests shall be applicable and unique to the project/program scopes of work, and submitted only when other means to meet requirements would not meet DOE's SAS program objectives.

### ***Incidents of Security Concern***

The Contractor shall develop and implement procedures and processes consistent with DOE requirements for addressing incidents of security concern.

The Contractor shall provide information and facility access to the MSC for investigation of security incidents. The Contractor shall develop and implement corrective actions. The Contractor shall provide information to MSC to support the administration of the Hanford Site Security Infraction Program.

#### **C.3.3.1.2 Physical Security**

The Contractor shall comply with the MSC security plans and DOE security plans/requirements.

The Contractor shall support the MSC in the development or updating of facility asset protection agreements for TOC facilities and shall conduct operations consistent with the agreements.

The Contractor shall submit, through MSC for DOE review and approval, any SAS arrangements or changes prior to operations commencing, or changing operations, or configurations that might alter the performance of existing SAS systems (e.g., limited/protected area boundaries, physical security configurations and associated hardware [sensors/cameras], patrol coverage and responses, safeguards methods or boundaries, entry/access control systems/procedures).

#### **C.3.3.1.3 Protective Forces**

The protective forces function is comprised of select security elements (armed personnel, specialized equipment, tactical procedures, etc.) associated with physically protecting people and property on the Hanford Site. The MSC is responsible for all protective forces activities; however, there are many areas of facility operations management that interweave. The MSC Protective Forces function serves DOE, all Hanford Site contractors, and in particular facilities possessing critical safeguards and security interests (e.g., special nuclear material (SNM)).

The Contractor shall support and integrate operational/business activities in conjunction with MSC Protective Forces in use at Hanford for the physical protection of SNM, classified materials, industrial assets, and mitigation and deterrence of radiological and toxicological sabotage events.

The Contractor shall manage their activities consistent with DOE-RL and DOE-ORP approved risk and vulnerability assessments, the *Site Safeguards and Security Plan*, and other security plans and facility asset protection requirements coordinated by the MSC that involve the use of Protective Forces.

#### **C.3.3.1.4 Information Security**

The Information Security program encompasses the identification and protection of sensitive and classified information and matter. The Information Security scope shall include, but is not limited to: Classification, Classified Matter Protection and Control, Sensitive Information Management (e.g., OOU), and Operations Security (OPSEC)

The Contractor shall perform the following information security functions:

***Operations Security***

The Contractor shall:

- Participate in and support Hanford Site-wide OPSEC Working and Awareness groups and perform the necessary management and support functions required for an effective OPSEC program.
- Provide support to the MSC OPSEC assessments of all Hanford Site facilities having Category I SNM and OPSEC reviews of all Hanford Site facilities that have the potential to process or store classified or sensitive information.
- Support the annual Site OPSEC threat assessment and preparation of the annual OPSEC plan.

***Classified Matter Protection and Control***

The Contractor shall:

- Develop and maintain a system of procedures, facilities, and equipment to identify, protect, and control classified matter that is being generated, received, transmitted, used, stored, reproduced, or destroyed in accordance with DOE directives.
- Be responsible for asset protection reviews for facilities that contain classified matter and, in conjunction with the MSC, maintain an updated list of security containers, locations, and custodians.
- Continuously reduce unneeded classified matter; and report and support investigation of any and all potential or actual compromise of classified information.

***Classification and Unclassified Controlled Nuclear Information (UCNI) Program***

The Contractor shall:

- Nominate a sufficient number of Derivative Classifiers and Reviewing Officials to be trained and approved by the MSC.
- Have appropriate classification and/or UCNI topical guidance available to organizations that are potential generators of classified and/or UCNI information.
- Provide for receipt and storage of classified documents from the MSC Classified Document Control Center.
- Interface with the MSC and other on-site contractor management, as necessary, to inform employees of subject areas of a sensitive and/or potentially classified nature.
- Be subject to the direction of the MSC Classification Officer.

***Official Use Only (OUO)***

The Contractor shall manage and implement an OUO information program consistent with the common Hanford Site-wide OUO information program policies including the following:

- Provide OUO education and awareness for all staff, and



- Review TOC documents released to the public or assigned a formal document number for OOU content.

### ***Critical Infrastructure***

The Contractor shall maintain TOC information systems that are critical to the Hanford Site mission and shall protect these systems from internal and external threats in conjunction with the MSC SAS program.

### **C.3.3.1.5 Personnel Security**

The MSC manages and conducts a centralized Personnel Security program for the Hanford Site on behalf of DOE.

The Contractor shall perform the following personnel security functions:

#### ***Access Authorization (Clearance) Processing***

The Contractor shall:

- Request and obtain personnel security clearances and badges, including "Special Access" (e.g., SIGMA) from the MSC. The Contractor shall support the MSC in downgrading and terminating clearances, as required.
- Support the MSC's processes for obtaining security badges, keys, proximity cards, etc., from terminating employees and support the MSC in removing such individuals from automated access control systems.
- Provide MSC pre-employment/pre-clearance suitability investigations information to the MSC for TOC prospective and current employees.

#### ***Workplace Substance Abuse Programs***

The Contractor shall comply with requirements outlined in 10 CFR 707, *Workplace Substance Abuse Programs (WSAP) at DOE Sites*.

#### ***Unclassified Foreign National Visits and Assignment (FNVA)***

The Contractor shall:

- Notify the MSC of potential foreign visitors or employees, prepare and submit security plans to the MSC for foreign national visitors to the Hanford Site before approval of the visit/assignment.
- Require FNVA training for Contractor personnel who host FNVA's.
- Conduct FNVA in compliance with approved security plans.

### **Foreign Travel**

The Contractor shall administer Official Foreign Travel in accordance with DOE O 551.1B, *Official Foreign Travel*, including submittal of projections of potential foreign travel, and all official foreign travel requests packages to DOE-ORP for review and subsequent submittal to DOE-HQ for approval in accordance with established timeframes, prior to any official foreign travel.

#### **C.3.3.1.6 Nuclear Material Control and Accountability**

The MC&A scope involves many metric tons of accountable nuclear material (i.e., Other, Source, and SNM) in various locations on the Hanford Site. The nuclear material attractiveness and quantities encompass the entire range described in DOE requirements (e.g., Category IVE highly radioactive spent nuclear fuel, to Category I quantities of plutonium in a variety of chemical forms and isotopic amounts). The MSC manages and conducts a centralized MC&A program for the Hanford Site on behalf of DOE.

The Contractor shall perform the following MC&A functions:

- Assign an individual that will serve as the Contractor's MC&A single point-of-contact, independent of line operations, with the responsibility and authority to affect implementation of MC&A requirements. This individual shall work with the Hanford Site MC&A management official within the MSC to provide oversight of accountable nuclear material in possession of the TOC.
- Support the MSC in preparation and maintenance of a Hanford Site-wide MC&A plan, administration of treaty related activities (e.g., IAEA), performing safeguards occurrence investigation and reporting, scheduling of periodic inventories consistent with the Contractor's project work schedules.
- Identify personnel requiring MC&A training provided by the MSC and coordinate training schedules with the MSC.
- Conduct on-the-job MC&A training specific to TOC facilities and systems.
- Request from the MSC:
  - Final authorization to move, ship, process, or store nuclear materials, including approval of shipper/receiver plans;
  - Final approval of Material Balance Area (MBA) Custodians; and
  - Final determination of MBA categorizations; and
  - Final approval of MC&A-related implementing procedures.
- Respond to MSC or DOE calls related to the MC&A program.

The Contractor's MC&A program shall include coordinating and integrating all aspects of implementation with the MSC. The Contractor shall utilize the MSC for, but is not limited to:

- MC&A requirement interpretation with overall responsibility for the MC&A program;
- Training and qualification of all personnel performing MC&A functions (with the exception of specific facility/system on-the-job MC&A training);
- Nuclear materials accounting and reporting requirements for all nuclear materials both active and inactive (e.g., "V-RIS") and be responsible for the official nuclear material inventory, including discrepancy reconciliation;
- Statistical Services;

- Purchasing, regulating, and managing MC&A-controlled forms and tamper indicating devices; and
- Nuclear materials measurement system approvals and measurement system control requirements for all MC&A nuclear materials measurement activities (e.g., monitoring measurement control information; collecting and analyzing measurement control information; calculating control limits and monitoring equipment performance against those limits, etc.).

The Contractor shall integrate MC&A requirements with other plans, projects/programs, and activities at all life-cycle stages and inform the MSC of such. The Contractor shall proactively take into account MC&A requirements, systems, and technologies in the planning, design, construction, and operation of new or renovated DOE facilities and activities.

#### **C.3.3.1.7 Cyber Security**

Unclassified computing at Hanford is conducted on the Hanford Local Area Network (HLAN). The HLAN is the central electronic communications network that provides computing infrastructure to DOE and the majority of the prime contractors and their subcontractors. The MSC manages and conducts a centralized cyber security program for the Hanford Site on behalf of DOE.

Classified computing at the Hanford Site is conducted on individual systems and isolated networks that are not inter-connected nor connected to the Internet.

The Contractor shall manage and execute cyber security responsibilities consistent with DOE requirements and the MSC centralized cyber security program to provide for confidentiality, integrity, and availability of cyber security components and information such that there is no degradation of performance, disruption or compromise of the cyber security system, including impacts to the users.

The Contractor shall coordinate and interface with the MSC regarding activities involving unclassified and classified information processing and use consistent with the *Office of the Under Secretary of Energy Program Cyber Security Plan (PCSP)*, *EM Program Security Plan (PSP)*, and DOE-approved *Hanford System Security Plan(s) (SSP)*.

#### ***Classified Cyber Security***

The Contractor shall:

- Identify all computers used by the Contractor, or any tier subcontractor, that process classified information.
- Ensure all computers used for classified processing are certified and accredited and properly de-commissioned when no longer required.
- Develop and maintain specific administrative procedures and hardware/software security measures to:
  - Ensure that all classified computers used to process classified information can protect that information against loss, improper use, compromise, or unauthorized alteration or modification of classified information as required by DOE directive.
  - Comply with the *Hanford Master Classified Information Systems Security Plan*.
  - Train users of classified computer systems on cyber security requirements.

- Support the DOE-RL Information Systems Security Operations Manager (ISOM) and/or MSC, as required, to facilitate resolution of classified computer systems security issues and associated incident reporting.

### ***Unclassified Cyber Security***

The Contractor shall:

- Ensure that all systems used for unclassified processing are certified and accredited.
- Report all cyber security incidents as required by DOE directive.
- Develop and maintain specific administrative procedures and hardware/software security measures to:
  - Ensure all computers used for processing sensitive unclassified information can protect that information against loss, improper use, compromise, or unauthorized alteration or modification of information as required by DOE directive.
  - Ensure all users are provided information security awareness training.

### ***Telecommunications***

The Contractor shall comply with Hanford Site procedures and policies regarding activities involving Communications Security (COMSEC), protected distribution systems, and TEMPEST/Transmission Security programs of Telecommunications Security.

#### **C.3.3.2 Emergency Services**

##### **C.3.3.2.1 Fire Services**

As an independent contractor, the MSC manages and conducts the Fire Services for the Hanford Site. This includes wild land fire, structural fire, and ambulance emergency response. Also included, are activities, such as, hazardous material and chemical/biological/ radiological emergency response, pre-fire planning, site-wide respiratory protection services, and the testing and maintenance of life safety fire protection systems in designated facilities.

The Contractor shall support facility access to the MSC fire services personnel, and notify the Fire Department of work activities, events, and incidents that may require Fire Services involvement and/or response (e.g., medical assistance, hazardous or radiological emergency help, etc.).

##### **C.3.3.2.2 Emergency Operations**

#### ***Emergency Management Program***

The MSC establishes and maintains a centralized Emergency Operations Program and the Hanford Site-wide Emergency Preparedness (EP) Program for the Hanford Site on behalf of DOE-RL. The EP Program is responsible for the Hanford Emergency Operations Center (EOC), develops and maintains emergency plans and procedures, performs hazard surveys and assessments, reviews hazard assessments for all facilities at Hanford, and supports Hanford Site-wide EP training and drills.

The Contractor shall develop and maintain an Emergency Management Program as described in DOE/RL-94-02, *Hanford Emergency Management Plan* for structures and waste sites under its control. The Contractor's Emergency Management Program shall be consistent with DOE requirements and the centralized EP Program. The Contractor's program shall establish processes and instructions for all Contractor EP activities. Because of the potential for the Contractor to become the event contractor as defined in the *Hanford Emergency Management Plan*, the Contractor shall maintain a 24-hour per day, 7-days per week, capability to staff the required facility specific emergency response organization positions within 60 minutes of receipt of notification from the Occurrence Notification Center of a Hanford Site emergency.

### ***Radiological Assistance Program (RAP)***

The MSC manages the Region 8 Radiological Assistance Program (RAP) on behalf of DOE-RL. The Region 8 RAP is responsible for Alaska, Oregon, and Washington and other Regions, as directed by DOE-Headquarters. The RAP mission is to provide first-responder radiological assistance to protect the health and safety of the general public and the environment; assist DOE program elements, and other Federal, state, Tribal and local agencies in the detection, identification and analysis, and response to events involving the use of radiological/nuclear material. The RAP provides 24-hour a day radiological response capabilities. The RAP teams consist of DOE/DOE contractor personnel who perform radiological assistance duties as part of their normal employment or as part of the terms of the contract between their employer and DOE. The MSC will require augmentation of RAP response team personnel, equipment, and expertise as delineated in workscope arrangements with the Contractor and other Hanford Site contractors or off-site vendors.

The Contractor shall provide qualified personnel, technical expertise, equipment, and support to the DOE Region 8 RAP to ensure maintenance and staffing of emergency teams with the ability to respond under the direction of DOE National Nuclear Security Administration (NNSA) and the U.S. Department of Homeland Security.

The Contractor shall establish an agreement with the MSC detailing the specific services to be provided by the Contractor in support of the Region 8 RAP.

The Contractor shall:

- Provide personnel, trained and qualified as RAP Team Members, and additional supervisory or management members as directed, to support the MSC's RAP duties as delineated in its contract with DOE;
- Perform routine scheduled tasks to maintain equipment and RAP team readiness;
- Participate in meetings, working groups, drills, and exercises;
- Provide technical expertise to the RAP team as requested;
- Respond to declared emergencies as a RAP team member;
- Participate in no-notice activations; and
- Maintain fitness for duty, as requested.

### **C.3.4 Interactions**

### C.3.4.1 External Affairs

External Affairs includes information and involvement programs to reach diverse external parties interested in Hanford (e.g. Tribal Nations, stakeholders, news media, elected officials and their staffs, local community officials and the public) with the status, challenges and objectives of the cleanup work. For all external constituencies, the Contractor shall anticipate specific areas of concern, interest, or controversy, and employ appropriate communication strategies that inform and involve.

The Contractor shall submit an *External Affairs Program Description* for DOE-ORP approval (Deliverable C.3.4.1-1) that provides a comprehensive description of the External Affairs Program, staffing, products and services, with an emphasis on innovative approaches to communications.

DOE-ORP retains the primary role in directing the timing, substance and form of public information and must approve all products and outreach.

For activities within the Contract scope, the Contractor shall:

- Maintain effective interactions with local, regional, national and international news media. Provide information and/or resources as requested in support of DOE-ORP media interactions.
- Work with DOE-ORP to inform and involve the Tribal Nations as part of cleanup decision making processes, in accordance with the DOE American Indian and Alaska Native Tribal Government Policy and implementation guidance. Support and coordinate with DOE-ORP on the ongoing technical staff interactions to ensure that affected Tribes can be involved early and often in proposed plans and activities.
- Inform and involve the public, citizens advisory boards, and other interested parties in proposed plans and activities. Provide strategy and resources for required public comment and outreach processes related to upcoming decision making (e.g., NEPA and CERCLA).
- Reach out to the communities affected by Hanford to provide information, answer questions, and gain feedback.
- Participate in tour planning and preparation, and make facilities and personnel available as requested by DOE-ORP. Visits to the project sites shall be part of ongoing communication and outreach activities.
- Provide MSC with current information related to the Contract scope to maintain the external Hanford website.
- Participate in meetings and briefings to update interested external parties on Contract activities when requested by DOE-ORP.
- Provide ongoing support to DOE-ORP in the preparation of communication materials, such as presentations, fact sheets, specialized graphics and charts, large posters, and up-to-date photography.
- Maintain a 24-hour per day, 7-days per week, capability to staff the communication functions/positions of the Hanford Emergency Operations Center within 60 minutes of receipt of notification from the Occurrence Notification Center of a Hanford Site emergency.

### C.3.4.2 External Review and Support

External Review and Support to DOE-ORP involves providing support during audits and assessments by entities having oversight responsibility for DOE-ORP and its contractors. These entities include:

- Defense Nuclear Facilities Safety Board (DNFSB);
- Government Accountability Office (GAO);
- DOE Office of Inspector General (OIG); and
- Other governmental and DOE oversight organizations.

The Contractor shall support DOE-ORP and the MSC in hosting staff from auditing and assessing organizations, providing required presentations, responding to information requests, and by providing required subject matter experts to respond to questions and information requests.

The Contractor shall:

- Support DNFSB oversight activities by:
  - Conducting activities in accordance with DOE commitments to the DNFSB, which are contained in DOE implementation plans and other DOE correspondence to the DNFSB.
  - Providing support for the preparation of DOE responses to DNFSB issues and recommendations that affect Contract scope.
  - Cooperating with the DNFSB and providing access to work areas, personnel, and information, as necessary.
  - Maintaining a document process in accordance with the DOE M 140.1-1B, *Interface with the Defense Nuclear Facilities Safety Board* (or current version).
  - Obtaining approval from DOE-ORP at least five (5) days in advance before committing to completion of actions to the DNFSB.
- Support GAO, OIG, and other governmental and DOE oversight activities by:
  - Providing subject matter expertise.
  - Cooperating with assessors and auditors, and providing access to work areas, personnel, and information.
  - Providing support during audits and assessments, including delivering information within a specified time, arranging briefings, preparing presentation materials, maintaining a record of documents provided in response to requests, and making this record available to DOE-RL and/or DOE-ORP, as requested.
- Provide knowledgeable single points-of-contact for each of the following:
  - DNFSB; and
  - OIG, GAO, and other assessing governmental and DOE oversight organizations (including the DOE Office of Enforcement).

### C.3.5 Interface Management

The Contractor shall provide input to MSC to facilitate MSC's development and maintenance of a *Hanford Site Interface Management Plan (Plan)*, which establishes and maintains interface management processes and agreements to assure effective control of technical, administrative, and regulatory interfaces.

The *Hanford Site Interface Management Plan (Plan)* shall provide the content for and processes to:

- Identify the various interfaces, define the scope of each interface, provide a brief description of the required deliverables (products, documents, procedures, services, etc.), define interface requirements, and cite applicable source documents for each interface;
- Implement changes to interface agreements through the appropriate change control process and, if necessary, contract changes; and
- Identify, track, and elevate issues for management review on a regular basis.

The *Plan* shall include:

- Organizational points of contact for participants and their responsibilities, and
- Associated controlling agreements (e.g., an MOA).

The *Plan* shall be signed by the MSC, PRC, and TOC. The MSC will submit the document to DOE for review and approval. The *Plan* shall be reviewed at least annually, and if updated, submitted to DOE for approval.

DOE shall be the exclusive authority for resolving disputes associated with any interface issues that cannot be resolved between parties in a timely manner. Costs associated with litigation arising from either the *Plan* or agreements made pursuant to the *Plan* shall not be allowable under this Contract.

The Contractor shall establish, appropriately document, and manage interfaces in accordance with the Section J Attachment entitled, *Hanford Site Services and Interface Requirements Matrix*.

#### ***Infrastructure and Services Alignment Plan and Annual Forecast of Services and Infrastructure***

The Contractor shall provide input to the annual update to the Hanford Site's *Infrastructure and Services Alignment Plan (ISAP)*. MSC develops, maintains, and updates the master ISAP, and submits the ISAP on an annual basis to DOE for approval. The Contractor shall concur or non-concur on the ISAP prior to MSC submittal to DOE.

The ISAP incorporates a strategic vision and describes the activities necessary to integrate MSC responsibilities with those of other Hanford Site (Mission) contractors, to right-size the infrastructure and services, and to maintain the capacity of infrastructure systems provided for the Site over its life-cycle. The ISAP identifies opportunities to re-engineer or replace systems as necessary (without negatively impacting the Mission Contractor's project schedules) in a timely and coordinated fashion. The ISAP also provides tactical-level information to successfully achieve MSC outcomes while minimizing the Site's life-cycle costs. The ISAP



includes an approach for taking advantage of new technologies and business practices that make good business sense from a cost and schedule perspective.

As necessitated by changes to the Hanford Site funding profile, MSC provides updates to the ISAP regarding the relative priority of work requirements. The Contractor shall provide input to the *Annual Forecast of Services and Infrastructure's* projection of needed utilities, services and infrastructure, which is incorporated into the ISAP.

***Hanford Site Services and Interface Requirements Matrix***

The Contractor shall provide input to the MSC to support the development of the annual update to the *Hanford Site Services and Interface Requirements Matrix*. Service provider and user interface requirements are identified in the Section J Attachment entitled, *Hanford Site Services and Interface Requirements Matrix*. Services are designated as either "mandatory" or "optional" for use by Hanford Site contractors and their subcontractors. MSC is responsible for submitting the *Hanford Site Services and Interface Requirements Matrix* to DOE with the annual ISAP. The Contractor shall concur on the Matrix prior to MSC submittal to DOE.

#### **C.4 GOVERNMENT-FURNISHED SERVICES AND INFORMATION**

DOE-ORP is committed to providing effective support to the Contractor throughout the period of Contract performance, and the Contractor may request that DOE-ORP consider providing additional GFS/I. To manage the GFS/I to be furnished under the Contract and to evaluate the additional GFS/I that may be required by the Contractor, the Contractor shall submit for DOE-ORP approval:

- *Government-Furnished Services and Information Request* (Deliverable C.4-1): 12-month advance projection of GFS/I to be furnished under the Contract and additional Contractor-requested GFS/I, prior to each fiscal year; and
- *Government-Furnished Services and Information Request -- Update* (Deliverable C.4-2): quarterly update to the projection of GFS/I to be furnished under the Contract and additional Contractor-requested GFS/I, prior to each quarter.

DOE-ORP will review the 12-month and quarterly advance projections. If DOE-ORP can support the additional Contractor-requested GFS/I, DOE-ORP will notify the Contractor within 30 days that the additional Contractor-requested GFS/I can be provided, and will provide the Contractor details regarding the DOE-ORP action(s). The supported GFS/I will be added to the Section J Attachment entitled, *Government-Furnished Services and Information*, as an DOE-ORP commitment to the Contractor.

If DOE-ORP cannot support a Contractor request, DOE-ORP will notify the Contractor within 30 days that the requested GFS/I cannot be provided, and there will be no DOE-ORP commitment to the Contractor to furnish the GFS/I.

For the additional Contractor-requested GFS/I, DOE-ORP will use its best efforts to meet these requests; however, in the event that DOE-ORP is unable, for any reason, to provide the Contractor with its requested additional GFS/I, the Contractor remains fully and solely responsible for obtaining the needed services and/or information in a timely manner and without any further recourse against DOE-ORP.

## C.5 SUMMARY OF CONTRACT DELIVERABLES

Table C.5, *Summary of Contract Deliverables* summarizes the specific products the Contractor shall submit to DOE-ORP, the type of action DOE-ORP will perform, the associated DOE response time, and the date/timeframe that the Contractor is required to submit the product.

Deliverables are considered Contractor endpoints, workscope completions, products, reports or commitments that shall be delivered to DOE-ORP.

The types of DOE-ORP action are defined as:

- Approve – The Contractor shall provide the deliverable to DOE-ORP for review and approval. DOE-ORP will review the deliverable and provide comments in writing. DOE-ORP comments will be discussed with the Contractor, and the Contractor shall provide written responses. The Contractor shall re-write the documents to incorporate all DOE-ORP mandatory comments. Once DOE-ORP approves a deliverable or document, the Contractor shall place it under change control and shall make no changes to that document without DOE-ORP approval.
- Review – The Contractor shall provide the deliverable to DOE-ORP for review and comment. DOE-ORP will have the option of reviewing the information and providing comment. The Contractor shall respond to all written comments.
- Information – The Contractor shall provide the deliverable to DOE-ORP for information purposes only. DOE-ORP will have the option of reviewing the information and providing comments. Such comments do not require resolution under the Contract.

Table C.5, *Summary of Contract Deliverables* does not include required deliverables identified in other Contract sections, DOE directives, Federal Regulations, or regulatory documents.

Table C.5, Summary of Contract Deliverables

Deliverable Number	Deliverable	DOE-ORP		Deliverable Due Date <sup>2</sup>
		Action	Response Time <sup>3</sup>	
C.2.1.1-1	Transition Plan	Approve	5 days	10 days after contract Notice to Proceed
C.2.1.1-2	Statement of Material Differences	Approve	30 days	60 days after contract Notice to Proceed
C.2.1.1-3	Transition Status Reports	Information	N/A	Weekly during Transition
C.2.1.1-4	Transition Agreement	Approve	15 days	75 days after contract Notice to Proceed
C.2.1.3-1	Administrative Interface Agreement with the Analytical Services Production Contractor	Information	N/A	60 days after contract Notice to Proceed with updates as required
C.2.2.1-1	Integrated SST Retrieval Plan	Approve	30 days	April 15, 2009 with annual updates
C.2.2.2-1	Integrated SST Waste Management Area Closure Plan	Approve	30 days	April 15, 2009 with annual updates
C.2.3.1-1	River Protection Project System Plan	Approve	30 days	April 11, 2009 with updates as required
C.2.3.1-2	Integrated Waste Feed Delivery Plan	Approve	30 days	July 30, 2009 with annual updates
C.2.3.1-3	WTP Facility Transition Plan	Approve	30 days	Upon completion of certification of WTP Cold Commissioning with updates as required
C.2.3.1-4	WTP LAW/BOF/LAB Facility Transition Plan	Approve	30 days	Upon completion of certification of WTP LAW/BOF/LAB Cold Commissioning with updates as required

<sup>2</sup> All days refer to calendar days. For the purposes of calculating deliverable due dates, the Notice to Proceed date is July 3, 2008.

<sup>3</sup> Number of calendar days for DOE-ORP to execute its GFS/I responsibilities to provide review, approval, and/or certification action on the deliverable following Contractor submission of an acceptable product; or DOE-ORP comments on the deliverable following Contractor submission of an unacceptable product that will require revision and re-submission for DOE-ORP review, approval, and/or certification action.

Deliverable Number	Deliverable	DOE-ORP		Deliverable Due Date <sup>2</sup>
		Action	Response Time <sup>3</sup>	
C.2.3.2-1	WTP Operational Readiness Plan	Approve	30 days	180 days after sub-CLIN Notice to Proceed
C.2.3.2-2	Semi-annual WTP Operational Readiness Evaluation	Approve	30 days	360 days after sub-CLIN Notice to Proceed with semi-annual updates
C.2.3.3-1	Hanford Spent Nuclear Fuel and Immobilized High Level Waste Interim Storage Alternatives Analysis	Information	N/A	180 days after sub-CLIN Notice to Proceed
C.2.4.1-1	DBVS Construction, Testing, and Operations Plan	Approve	30 days	180 days after contract Notice to Proceed
C.2.4.1-2	DBVS Pilot Plant and Vitrified Waste Form Performance Test Plan	Approve	30 days	360 days after contract Notice to Proceed
C.2.4.1-3	DBVS Pilot Plant and Vitrified Waste Form Performance Results	Review	30 days	90 days following completion of DBVS operations
C.2.4.1-4	Recommendation on the Viability of the Bulk Vitrification Waste Treatment Technology	Approve	30 days	120 days following completion of DBVS operations
C.2.4.1-5	Comparative Analysis of Supplemental Treatment Technologies	Review	30 days	360 days following completion of DBVS operations
C.2.4.1-6	Recommendation to Re-Permit DBVS	Approve	30 days	360 days following completion of DBVS operations
C.2.4.2-1	Cost and Schedule Estimate for the Extended Operations of the Demonstration Bulk Vitrification System	Approve	30 days	180 days following DOE-ORP approval of Deliverable C.2.4.1-6
C.2.4.2-2	Extended Operations of the DBVS Final Design Modifications and Feed Acceptance Specifications	Approve	30 days	360 days following DOE-ORP approval of Deliverable C.2.4.1-6
C.2.4.2-3	Extended Operations of the DBVS Sampling and Analysis Plan	Approve	30 days	360 days following DOE-ORP approval of Deliverable C.2.4.1-6
C.2.5.1-1	ETF/LERF Transition Plan	Approve	30 days	180 days after Notice to Proceed
C.2.5.4-1	WTP LAW Facility Operating and Product Specifications	Approve	30 days	Upon completion of certification of WTP LBL Cold Commissioning
C.3.1.1-1	Project Execution Plan	Approve	45 days	90 days after contract Notice to Proceed with updates as required

Deliverable Number	Deliverable	DOE-ORP		Deliverable Due Date <sup>2</sup>
		Action	Response Time <sup>3</sup>	
C.3.1.2.2-1	TOC Project Performance Measurement Baseline	Approve	45 days	June 30, 2009 with updates as required
C.3.1.2.3-1	TOC Project Performance Measurement Baseline Change Control Process	Approve	30 days	120 days after contract Notice to Proceed with updates as required
C.3.1.3-1	Monthly Performance Report	Review	N/A	Last Tuesday of each Month
C.3.1.4-1	Risk Management Plan	Approve	45 days	120 days after contract Notice to Proceed with updates as required
C.3.1.5.2-1	Procurement, Construction, and Acceptance Testing Plan	Approve	30 days	120 days after contract Notice to Proceed with updates as required
C.3.1.5.2-2	Purchasing System	Approve	30 days	120 days after contract Notice to Proceed with updates as required
C.3.1.5.2-3	Construction and Acceptance Testing Program	Approve	30 days	120 days after contract Notice to Proceed with updates as required
C.3.1.5.2-4	As-built Program Description	Approve	30 days	120 days after contract Notice to Proceed with updates as required
C.3.2-1	Integrated Safety Management System Description	Approve	30 days	60 days after contract Notice to Proceed with annual updates
C.3.2-2	Authorization Agreement	Approve	30 days	60 days after contract Notice to Proceed with annual updates
C.3.2-3	ISMS/ESH&Q Performance Objectives, Measures, and Commitments	Approve	30 days	60 days after contract Notice to Proceed with annual updates
C.3.2.1-1	Environmental Protection and Compliance Plan	Approve	30 days	60 days after contract Notice to Proceed with updates as required
C.3.2.2-1	Deleted (Mod 037)			
C.3.2.2-2	Unreviewed Safety Question Process	Approve	30 days	60 days after contract Notice to Proceed with updates as required

Deliverable Number	Deliverable	DOE-ORP		Deliverable Due Date <sup>2</sup>
		Action	Response Time <sup>3</sup>	
C.3.2.3-1	Worker Safety and Health Program	Approve	30 days	60 days after contract Notice to Proceed with updates as required
C.3.2.3-2	Radiation Protection Program	Approve	30 days	60 days after contract Notice to Proceed with updates as required
C.3.2.3-3	Chronic Beryllium Disease Prevention Program	Approve	30 days	60 days after contract Notice to Proceed with updates as required
C.3.2.4-1	Quality Assurance Program Description	Approve	30 days	60 days after contract Notice to Proceed with updates as required
C.3.2.4-2	Assurance System Description	Approve	30 days	60 days after contract Notice to Proceed with updates as required
C.3.4.1-1	External Affairs Program Description	Approve	30 days	60 days after contract Notice to Proceed, and updated annually (12/1)
C.4-1	Government-Furnished Services and Information Request	Approve	30 days	45 days prior to each fiscal year
C.4-2	Government-Furnished Services and Information Request – Update	Approve	30 days	30 days prior to each quarter

**ATTACHMENT J.15  
 AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA) SCOPE AND END-STATE  
 MILESTONES**

Analytical Building Block	Contract Line Item Number	Scope	Date*	Completion End Point(s)
RA-1 Tank Farm Infrastructure Upgrades	Sub-CLIN 7.1	AP/SY Ventilation Design and Fabrication	Sep – 11	Fabrication complete.
RA-1 Tank Farm Infrastructure Upgrades	Sub-CLIN 7.1	SY Electrical Upgrades	Sep – 11	Upgrades complete.
RA-1 Tank Farm Infrastructure Upgrades	Sub-CLIN 7.1	Valve Funnel Replacement	Sep – 11	Installation complete.
RA-1 Tank Farm Infrastructure Upgrades	Sub-CLIN 7.1	AP Valve Pit Jumpers	Sep – 11	Installation complete.
RA-1 Tank Farm Infrastructure Upgrades	Sub-CLIN 7.1	AP Level Rise Construction Modifications	Oct – 10	Construction Modifications complete.
RA-1 Tank Farm Infrastructure Upgrades	Sub-CLIN 7.1	AZ Farm Control System Upgrade	July – 11	Installation complete.
RA-1 Tank Farm Infrastructure Upgrades	Sub-CLIN 7.1	<b>Other Tank/Farm Upgrades (multiple subprojects)</b> 1. ENRAF <sup>®</sup> upgrades. 2. Ventilation system reliability study. 3. Obsolete tank farm equipment removal. 4. Decon trailer procurement.	Aug – 11 Sep – 09 Sep – 11 Sep – 10	Upgrades complete. Vent system reliability study complete. Equipment removed. System received.
RA-1 Tank Farm Infrastructure Upgrades	Sub-CLIN 7.1	<b>DST Upgrades/Life Extension (multiple subprojects)</b> 1. Issue DSTIP lab report. 2. Fabricate and install AN-107 corrosion probe. 3. Cathodic protection modifications/adjustments.	Dec – 10 Oct – 10 Sep – 11	Issue report. Installation complete. Adjustments complete.
RA-1 Tank Farm Infrastructure Upgrades	Sub-CLIN 7.1	<b>SST Life Extension</b> 1. Replace radial filters. 2. Remove obsolete SST equipment. 3. Complete SST electrical system upgrades.	Aug – 11 Aug – 11 Aug – 11	Radial filters replaced. Equipment removed. Upgrades complete.



Analytical Building Block	Contract Line Item Number	Scope	Date *	Completion End Point(s)
RA-1 Tank Farm Infrastructure Upgrades	Sub-CLIN 7.1	<b>Removal of Tank Farm Equipment and Facilities that are out of Service</b>		
		1. SY-271 Auxiliary Building.	Sep – 09	Building removed.
		2. SY-271 Standby Diesel Generator.	Sep – 09	Generator removed.
		3. 242-T Evaporator HEPA Filters.	Sep – 09	Filters removed.
		4. P-28 Exhauster.	Sep – 09	Exhauster removed
RA-1 Tank Farm Infrastructure Upgrades	Sub-CLIN 7.1	<b>NEC Resolution and Electrical Modifications</b>	Nov – 09	Construction complete
RA-1 Tank Farm Infrastructure Upgrades	Sub-CLIN 7.1	<b>Replace 10 Drains Seals in DST valve/pump boxes</b>	Nov – 09	Construction complete
RA-1 Tank Farm Infrastructure Upgrades	Sub-CLIN 7.1	<b>Statements of Work</b>		
		1. Valve Funnel Replacement.	Dec – 09	Statement of work complete.
RA-2 Other Infrastructure Upgrades	Sub-CLIN 7.3	<b>Wiped Film Evaporator</b>		
		1. Small-scale demonstration.	Sep – 10	Small-scale demonstration complete.
		2. Full-scale demonstration.	Sep – 11	Full-scale demonstration complete.
RA-2 Other Infrastructure Upgrades	Sub-CLIN 7.1	<b>Core Sampling System</b>	<b>Sep – 11</b>	System received.
RA-3 Facilities Upgrades	Sub-CLIN 7.1	<b>242-A Upgrades/Operation</b>		
		1. Refurbish pump PB-1.	Mar – 11	Pump refurbished.
		2. Electrical panel replacement/repair.	Sep – 11	Panel replaced/repared.
		3. Decontaminate condenser room.	Dec – 09	Decontamination complete.
		4. Evaporator Compressors.	Sep – 09	Compressor installation complete.
		5. Raw water service building upgrade.	Feb – 10	Upgrade complete.
RA-3 Facilities Upgrades	Sub-CLIN 7.1	<b>242-A Upgrades/Life Extension (multiple subprojects)</b>		
		1. Install exhaust skid.	Sep – 11	Exhauster replaced.
		2. Replace instruments.	Dec – 10	Instruments installed.

Analytical Building Block	Contract Line Item Number	Scope	Date *	Completion End Point(s)
		3. Process condensate leak detection upgrades.	Sep – 10	Condensate leak detection system upgraded / Construction Complete
		4. Asbestos abatement.	Oct – 10	Abatement complete.
<b>RA-3 Facilities Upgrades</b>	<b>Sub-CLIN 7.2</b>	<b>222-S Instrument Upgrades</b> 1. Statements of Work for Priority Instruments (alpha energy analyzer, gamma energy analyzer, liquid chromatograph/mass spectrometer, ion chromatograph).	<b>Sep – 11</b> Sep – 09	Instruments upgraded Statements of work complete.
<b>RA-3 Facilities Upgrades</b>	<b>Sub-CLIN 7.2</b>	<b>222-S Life Extensions (multiple subprojects)</b> 1. Roof replacement. 2. Conditioned storage addition. 3. Replace HPT support facilities. 4. Replace mobile office. 5. Replace HVAC control system. 6. Renovate rooms. 7. Upgrade stairway access.	Nov – 10 Oct – 10 Sep – 10 Aug – 11 Sep – 11 Sep – 11 Sep – 09	222-S roof replaced. Conditioned storage facility constructed. Facility constructed. Office constructed. Control system installed. 222-S rooms upgraded. Stairway access meets current building code.
<b>RA-3 Facilities Upgrades</b>	<b>Sub-CLIN 7.2</b>	<b>222-S Upgrades (multiple subprojects)</b> 1. Upgrade HVAC system to electric. 2. Increase HLAN speed. 3. Room HVAC upgrades. 4. Back-up compressed air system. 5. As-built electrical drawings. 6. Update PAX system.	Sep – 11 Sep – 09 Sep – 11 Jul – 10 Jul – 11 Jun – 11	Conversion to electric heat complete. HLAN upgraded. HVAC for rooms upgraded. Air system installed. Drawings updated. PAX system upgraded.
		7. Lighting upgrades.	Sep – 11	Light systems replaced.
		8. Access to fan deck upgrade.	Sep – 09	New access provided.
		9. Demolish MO-924.	Sep – 09	MO-924 demolished.
<b>RA-3 Facilities Upgrades</b>	<b>Sub-CLIN 7.5</b>	<b>Effluent Treatment Facility (Grout and Waste Form Testing)</b>		

Analytical Building Block	Contract Line Item Number	Scope	Date *	Completion End Point(s)
		1. Test glass formulations for technetium retention.	Sep – 11	Issue final report.
		2. Short-term leaching tests of grout formulations to solidify ETF waste streams.	Sep – 11	Issue final report.
RA-4 Waste Feed Infrastructure Upgrades	Sub-CLIN 7.1	DST Control Systems Update	Sep – 11	Control systems installed.
RA-4 Waste Feed Infrastructure Upgrades	Sub-CLIN 7.1	Exhauster D&D (AW/AN)	Apr – 11	Exhausters removed.
RA-4 Waste Feed Infrastructure Upgrades	Sub-CLIN 7.3	AZ Condensate Line Upgrade	Feb – 11	Upgrades complete.
RA-4 Waste Feed Infrastructure Upgrades	Sub-CLIN 7.3	AW COB Isolation and Removal	May – 11	Construction complete.
RA-4 Waste Feed Infrastructure Upgrades	Sub-CLIN 7.3	Mixer Pump Design	Mar – 11	Mixer pump design complete.
RA-4 Waste Feed Infrastructure Upgrades	Sub-CLIN 7.3	Tank Waste Mixing Demonstrations		
		1. Complete small-scale mixing demonstration and submit draft report to DOE-ORP.	Sep – 10	Draft small-scale mixing demo report.
		2. Complete test loop demonstration and submit draft report to DOE-ORP.	Jan – 11	Draft test loop demonstration report.
		3. Complete small-scale sampling demonstration and submit draft report to DOE-ORP.	Jun – 11	Draft small-scale sampling demonstration report.
RA-4 Waste Feed Infrastructure Upgrades	Sub-CLIN 7.3	AW D&D (SHMS-GCS Removal)	Sep – 10	Equipment Removal complete.
RA-4 Waste Feed Infrastructure Upgrades	Sub-CLIN 7.3	SY-102 D&D (SHMS-GCS Removal)	Sep – 10	Equipment Removal complete.
RA-4 Waste Feed Infrastructure Upgrades	Sub-CLIN 7.3	Strategic Planning – Process Control Flow Sheets Complete for First 3 WTP Feed Tanks	Sep – 11	Flow sheet complete.
RA-4 Waste Feed Infrastructure Upgrades	Sub-CLIN 7.3	Waste Feed Delivery – Pre-Design/Design Activities for Waste Feed Delivery	Sep – 11	Design review complete.
RA-4 Waste Feed Infrastructure Upgrades	Sub-CLIN 7.3	Statements of Work and Procurement Specifications		
		1. Prepare SOW for Exhauster D&D.	Dec – 09	Statement of work prepared.

Analytical Building Block	Contract Line Item Number	Scope	Date *	Completion End Point(s)
		2. Complete Mixer Pump Procurement Specification.	Dec – 09	Procurement Specification prepared.
<b>RA-5 Waste Feed Transfer Line Upgrades</b>	<b>Sub-CLIN 7.3</b>	<b>Transfer Line Upgrades – SL-177/SN-277 and SL-180/SN-280</b>	<b>Aug – 11</b>	Construction complete.
<b>RA-5 Waste Feed Transfer Line Upgrades</b>	<b>Sub-CLIN 7.3</b>	<b>Transfer Line Upgrades – SN-278/SN-279 and SN-285/SN-286</b>	<b>Sep – 11</b>	Construction complete.
<b>RA-5 Waste Feed Transfer Line Upgrades</b>	<b>Sub-CLIN 7.3</b>	<b>Design</b> 1. Complete 90 % design for Transfer Line Upgrades – SL-177/SN-277 and SL-180/SN-280. 2. Complete 90% design for Transfer Line Upgrades – SN-278/SN-279 and SN-285/SN-286.	Dec – 09  Mar – 10	90% Design complete.  90% Design complete.

\* Dates represent completion by the end of the month indicated.

® ENRAF is a registered trademark of Enraf B.V. Corporation, Delft, Netherlands.

COB = cleanout box

D&D = deactivation and decommissioning

DST = double-shell tank

DSTIP = double-shell tank integrity program

FY = fiscal year

GCS = Gas Characterization System

HLAN = Hanford Local Area Network

HPT = health physics technician

HVAC = heating, ventilation, and air conditioning

MO = mobile office

SHMS = Standard Hydrogen Monitoring System

SST = single-shell tank

WTP = Waste Treatment and Immobilization Plant

**PROPOSAL PREPARATION INSTRUCTIONS****1. INTRODUCTION**

This document contains instructions to the contractor for the preparation of a proposal in response to the modification of the contract which defines work that will be funded by and performed under the provisions of the American Recovery and Reinvestment Act (Recovery Act).

The contractor shall provide a written proposal consisting of a Technical Proposal and a Cost and Fee Proposal. The Technical Proposal shall contain the contractor's approach to perform the work, and the Cost and Fee Proposal shall contain the estimated cost of performing the work and any associated fee. The contractor shall assure that there is consistency between the Technical Proposal and the Cost and Fee Proposal.

**2. PREPARATION INSTRUCTIONS – GENERAL INFORMATION**

The contractor shall submit written proposal information in the format as outlined in Table 1.

Table 1

<b>Proposal Instructions</b>	
Number of Copies	<ul style="list-style-type: none"> <li>• Technical Proposal – 2 hard copies and 3 electronic copy.</li> <li>• Cost and Fee Proposal – 2 hard copies and 3 electronic copy.</li> <li>• Both portions of the proposal shall contain a table of contents.</li> </ul>
Paper Size	<ul style="list-style-type: none"> <li>• 8 1/2" x 11" paper.</li> <li>• Fold-outs shall not exceed 11" x 17"</li> </ul>
Print Type	<ul style="list-style-type: none"> <li>• Print type (Font size) used in the text portions of the proposal shall be no smaller than 12 point font.</li> <li>• Print type used in completing any forms attached to this document as Microsoft® (MS) Word®, Access®, or Excel® documents should not be changed from the styles used in the attachments.</li> <li>• Print type used in charts, graphics, figures and tables may be smaller than 12 point Font, but must be clearly legible.</li> </ul>
Page Margins	Page margins shall be 1-inch on the top, bottom, left, and right sides of the page, exclusive of headers and footers.
Page Numbering	All pages, including forms, tables, and exhibits, shall be appropriately numbered.
CD-ROM or DVD Requirements	CD-ROMs or DVDs shall be clearly labeled with the contract number. Files submitted shall be readable using Microsoft® (MS) Word®, Access®, or Excel® (Version 2007), and the proposal schedule shall be submitted as a Primavera P3e Version 5.x, "XER" file type.

**3. PREPARATION INSTRUCTIONS - COVER LETTER**

The cover letter shall include, but not be limited to, the following:

- (a) The contract and modification number.
- (b) The name, address, telephone numbers, facsimile numbers, and electronic addresses of the contractor's representative(s) responsible for providing additional information, as required, on the Technical Proposal and the Cost and Fee Proposal.
- (c) The name and contact information of the contractor's representative(s) with the authority to negotiate the definitization of this modification with the Contracting Officer.
- (d) Identification of any proposed changes to the statement of work or other terms included in this modification that the contractor believes would be in the best interest of the Government in meeting the objectives of the Recovery Act.
- (e) A statement that the contractor will cooperate fully and expeditiously in providing access to proposal information that may be necessary to be reviewed by representatives of DOE, e.g. Defense Contract Audit Agency (DCAA), for the purpose of definitizing this modification.

**4. PREPARATION INSTRUCTIONS - TECHNICAL PROPOSAL**

The Technical Proposal shall be organized in accordance with the WBS as shown in Section C. Statement of Work and shall include the following:

- (a) Description of the proposed strategy and technical approach (including any innovations) to implement the requirements of the Recovery Act work.
- (b) Description of the specific detailed approach to the management, execution and sequencing of the work for the major Work Breakdown Structure (WBS) elements identified in the Section C, Statement of Work. This description shall include the following:
  - i. A description of the work that will be performed by the contractor and the work that will be performed by subcontractors;
  - ii. The supporting rationale for the division of work between the contractor and subcontractors, including considerations related to efficiency of performance, cost, the need to hire additional staff, etc;
  - iii. The extent of utilization of small business subcontractors; and
  - iv. The extent of utilization of fixed-price subcontracting.
- (c) Identification of the risks and impacts to the proposed approach, rationale for the identified risks and impacts, and the contractor's approach to eliminate, avoid and/or mitigate the risks throughout performance of the Recovery Act work.
- (d) Integrated critical path method schedule, through completion, for the activities defined in the WBS.

- (e) Description of the contractor’s approach to achieve regulatory approval, as required, for the proposed execution of the Recovery Act work and how the regulatory approach will be integrated with project management and execution.
- (f) Identification of the project staffing throughout the performance of the Recovery Act work. This should include the following:
  - i. The estimated staffing for both the contractor’s employees and existing or proposed subcontractor employees (assure this is consistent with the man hours identified in the cost proposal).
  - ii. The names and area of responsibility of the contractor’s lead personnel that will be directly responsible for the management and oversight of the Recovery Act work. The areas of responsibility should include, but not be limited to, the following: contracting, including prime contract, subcontracts, and small business; project management; project controls; safety; engineering; quality assurance; budget; finance; property; legal; environmental regulation; public communications; and security. The specific areas of responsibility will depend on the nature of the Recovery Act work to be performed.
- (g) Description of existing and/or any new methods or processes that the contractor will use in the oversight and control of the Recovery Act work to help assure the following:
  - i. The work is performed in accordance with the statement of work requirements;
  - ii. The performance schedule and milestones are accomplished;
  - iii. The deliverables are completed; and
  - iv. The performance outcomes and measures are attained.
- (h) Estimate of contractor’s and first tier subcontractors’ jobs that will be “created” or “retained” as a result of the performance of the Recovery Act work. The definitions for “created” and “retained” are based on the requirements of the clause in Section I , entitled “52.204-11 American Recovery and Reinvestment Act – Reporting Requirements (MAR 2009).” This estimate should be by fiscal year.

## 5. PREPARATION INSTRUCTIONS – COST AND FEE PROPOSAL

The Cost and Fee Proposal shall be prepared in accordance with the following instructions:

- (a) FAR 15 - The contractor shall prepare its cost proposal in accordance with Table 15-2, of Part 15 of the Federal Acquisition Regulation (FAR).
- (b) WBS - Costs shall be proposed consistent with and at the lowest level of the WBS described in the statement of work and consistent with the Technical Proposal.
- (c) Formats - Formats contained in the appendices to this document shall be used for the submission of the estimated costs as follows:
  - Appendix 1 – Cost by WBS (Schedules A-C)
  - Appendix 2 – Labor – Consolidated Summary
  - Appendix 3 – Material, Equipment, Subcontracts, and Other Direct Costs -Consolidated Summaries (Schedules A-D)
  - Appendix 4 – Waste Quantities and Cost – Consolidated Summary

The contractor should assure consistency and traceability between these various appendices, schedules, and supporting information. If multiple Recovery Act funding sources are identified, the contractor shall identify the estimated costs for each work activity by the appropriate funding source.

- (d) Appendix 2 - Appendix 2 is to be used to provide a direct labor summary (labor category, labor rate, and labor hours) on both a cumulative total and fiscal year basis. This should show the hours for the contractor, subcontractor, LLC members, and any other direct labor hours.
- (e) Appendix 3 - Appendix 3 is to be used to provide, in total and by fiscal year, materials (Schedule A), equipment (Schedule B), subcontracts (Schedule C, subcontracts over \$XM are to be individually listed), and other direct costs (Schedule D). Additional schedules should be included as appropriate to address elements of cost which are not included in Schedules A-D.
- (f) Appendix 4 - Appendix 4 is to be used to provide a separate summary table of waste quantities by waste type in cubic feet by fiscal year by WBS. The contractor shall provide the summary of waste quantities, at a minimum, to a level equal to the WBS. This waste summary shall be supplemented by additional tables that include all costs associated with waste disposition including treatment, transportation and disposal for each waste type by fiscal year. Separate detailed computations shall be provided for treatment, transportation, and disposal cost by WBS. The basis of estimate associated with information provided in the waste summary table (including the additional tables) should be fully explained in supporting documentation.
- (g) Schedule - A resource loaded P6 schedule shall be provided which shall be presented at the level of detail as shown in the WBS. The schedule shall include logic ties.
- (h) Basis of Estimate – A basis of estimate shall be provided that thoroughly documents all estimates. A basis of estimate description shall be provided for each activity at the lowest level in the estimate. The detailed narrative description of the basis of estimate shall be organized by WBS and include the following: how the proposed costs were derived; key assumptions and supporting rationale, including assumptions related to site conditions; source of existing verifiable data and judgment factors in projecting from known data to the estimate; estimating methods, parametric estimates, and models, etc; and other assumptions and related information to provide clarity and understanding of the contractor’s basis of estimate to demonstrate reasonableness and realism.
- (i) Cost Elements - Costs shall be provided by major cost elements such as: direct labor (including labor categories, direct labor hours and direct labor rates for each labor category type), fringe benefits (if applicable), direct labor overhead (if applicable), material, material handling overhead (if applicable), equipment (including capital investments), subcontract cost, disposal cost, transportation cost, treatment cost, supplies, travel, relocation, other direct costs, and general and administrative (G&A) costs (if applicable). Notwithstanding that all “subcontract” costs are included above, LLC member/other teaming arrangement/subcontractors (\$X million or more) shall be individually estimated and costs provided by major cost elements as described in this paragraph. Appendix 1 is to be used to provide the costs by major cost elements, WBS, and fiscal year.
- (j) Indirect Rates - A detailed estimate for each indirect rate (fringe benefit, material handling, labor overhead and G&A, if applicable) proposed by fiscal year is to be provided. The detailed estimate shall include cost, by cost element, for the allocation pool and the allocation base showing how each cost element within the allocation pool and allocation base was derived. The contractor shall provide all related information to provide a clear understanding



of the basis of estimate. The contractor shall compute all of the indirect rates by fiscal year. This data shall be provided for each LLC member/other teaming arrangement/subcontractor (over \$X million).

- (k) Escalation - Identify the escalation factors used for each fiscal year, the source of the proposed escalation rates, and the rationale as to why the proposed escalation rates are reasonable.
- (l) Electronic Media - Cost Proposal information and any spreadsheets or mathematical computation shall be submitted using Microsoft Excel 2003 and shall be working versions, including formulas and computations. The contractor shall provide the electronic version of the cost proposal in Adobe Acrobat 8.0 (PDF) or higher. The electronic media versions provided shall be searchable.
- (m) Cognizant ACO/DCAA - The contractor shall provide the name, address and telephone number of the cognizant Administrative Contracting Officer and the cognizant Defense Contract Audit Agency (DCAA) office, if any. If the contractor is an LLC or has subcontractor(s) (\$X million or more), this data must be provided for each entity performing work.
- (n) Accounting System - The contractor shall submit an explanation of how costs related to the Recovery Act work will be accumulated, recorded, invoiced, and reported using the contractor's accounting system in order to assure that costs associated with Recovery Act work are separate from other costs incurred under the contract. The contractor shall describe how its existing accounting system, any proposed changes, and/or new oversight controls will help assure this necessary separation of Recovery Act funds. The contractor shall identify the cognizant Government audit agency that has issued reports regarding the adequacy of the accounting system for accumulating and billing costs under Government contracts. This data must also be provided for each member of an LLC and each subcontractor that is performing work estimated to be \$X million or more.
- (o) Cost Accounting Standards - If the contractor, LLC members, or subcontractor(s) (\$X million or more) performing work are covered by Cost Accounting Standards (CAS), the contractor shall discuss the adequacy of the disclosure statement. The contractor shall also identify whether the cognizant Government audit agency has issued any audit reports on the compliance with the CAS requirements of any of these entities.
- (p) Government Furnished Property - The contractor shall provide a list of any Government Furnished Property (GFP) that will be used in the performance of the Recovery Act work that is in addition to the GFP already provided.
- (q) Fee - The contractor's fee proposal shall address the following:
  - (i) The contractual basis for any adjustment in the fee currently in the contract;
  - (ii) The proposed amount of fee associated with the Recovery Act work; and
  - (iii) A description of how the proposed fee is calculated and the supporting rationale as to why the proposed fee amount is reasonable.
  - (iv) Proposed Performance-Based Incentives

Cost By WBS

<u>WBS</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Total</u>
C.1.1 - Groundwater Environmental Actions				
C.2.1 - D&D of Building XX				
C.3.1 - Waste Disposal				
Total Cost				
Fee				
Total Cost and Fee				

**Cost by Cost Element WBS 1.1 - Groundwater Environmental Actions**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Total</u>
Direct Labor				
<i>Insert Direct Labor Categories</i>				
Fringe Benefits				
Direct Labor Overhead				
Materials				
Material Handling Overhead				
Equipment				
Subcontract Costs (Under \$?M)				
Disposal Costs				
Transportation Costs				
Treatment Costs				
Supplies				
Travel				
Relocation				
Other Direct Costs				
<i>Joint Venture/LLC Member/Other teaming arrangement/Subcontractor</i>				
<i>(\$?M or over) (complete for each major entity)</i>				
<i>Direct Labor</i>				
<i>Insert Direct Labor Categories</i>				
<i>Fringe Benefits</i>				
<i>Direct Labor Overhead</i>				
<i>Materials</i>				
<i>Material Handling Overhead</i>				
<i>Equipment</i>				
<i>Subcontract costs</i>				
<i>Disposal Costs</i>				
<i>Transportation Costs</i>				
<i>Treatment Costs</i>				
<i>Supplies</i>				
<i>Travel</i>				
<i>Relocation</i>				
<i>Other Direct Costs</i>				
<i>G&amp;A Costs</i>				
Subtotal Cost				
G&A Costs				
<b>Total Cost</b>				

Each Spreadsheet shall be completed by FY and cumulatively
--

**Cost by Cost Element WBS 1.1.1 - Groundwater Subproject X**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Total</u>
Direct Labor				
Fringe Benefits				
Direct Labor Overhead				
Materials				
Material Handling Overhead				
Equipment				
Subcontract Costs (Under \$?M)				
Disposal Costs				
Transportation Costs				
Treatment Costs				
Supplies				
Travel				
Relocation				
Other Direct Costs				
<i>Joint Venture/LLC Member/Other teaming arrangement/Subcontractor</i>				
<i>(\$?M or Over) (complete for each major entity)</i>				
<i>Direct Labor</i>				
<i>Insert Direct Labor Categories</i>				
<i>Fringe Benefits</i>				
<i>Direct Labor Overhead</i>				
<i>Materials</i>				
<i>Material Handling Overhead</i>				
<i>Equipment</i>				
<i>Subcontract costs</i>				
<i>Disposal Costs</i>				
<i>Transportation Costs</i>				
<i>Treatment Costs</i>				
<i>Supplies</i>				
<i>Travel</i>				
<i>Relocation</i>				
<i>Other Direct Costs</i>				
<i>G&amp;A Costs</i>				
Subtotal Cost				
G&A Costs				
<b>Total Cost</b>				

Each Spreadsheet shall be completed by FY and cumulatively
--

**Labor - Consolidated Summary**

<u>Labor Category:</u>	<u>FY 2009</u>			<u>FY 2010</u>			<u>FY 2011</u>			<u>Total</u>
	<u>Hourly Rate</u>	<u>Hours</u>	<u>Total</u>	<u>Hourly Rate</u>	<u>Hours</u>	<u>Total</u>	<u>Hourly Rate</u>	<u>Hours</u>	<u>Total</u>	<u>All Years</u>
Contractor:										
-Category A										
-Category B										
-Category C										
Total										
Subcontractor:										
-Category A										
-Category B										
-Category C										
Total										
LLC:										
-Category A										
-Category B										
-Category C										
Total										
Grand Total										

**Materials - Consolidated Summary**

<u>Description</u>	<u>FY 2009</u>			<u>FY 2010</u>			<u>FY 2011</u>			<u>Total All Years</u>
	<u>Units</u>	<u>Unit Rate</u>	<u>Total</u>	<u>Units</u>	<u>Unit Rate</u>	<u>Total</u>	<u>Units</u>	<u>Unit Rate</u>	<u>Total</u>	
-Item A										
-Item B										
-Item C										
-Item D										
-All Other Items										
Total										

Equipment - Consolidated Summary

<u>Description</u>	<u>FY 2009</u>			<u>FY 2010</u>			<u>FY 2011</u>			<u>Total All Years</u>
	<u>Units</u>	<u>Unit Rate</u>	<u>Total</u>	<u>Units</u>	<u>Unit Rate</u>	<u>Total</u>	<u>Units</u>	<u>Unit Rate</u>	<u>Total</u>	
-Equipment A										
-Equipment B										
-Equipment C										
-Equipment D										
Total										

Appendix 3  
Schedule C

*Subcontracts - Consolidated Summary*

<u><i>Description</i></u>	<u><i>FY 2009</i></u>	<u><i>FY 2010</i></u>	<u><i>FY 2011</i></u>	<u><i>Total All Years</i></u>
-A				
-B				
-C				
-D				
Total				



*Other Direct Costs - Consolidated Summary*

<u><i>Description</i></u>	<u><i>FY 2009</i></u>			<u><i>FY 2010</i></u>			<u><i>FY 2011</i></u>			<u><i>Total All Years</i></u>
	<u><i>Units</i></u>	<u><i>Unit Rate</i></u>	<u><i>Total</i></u>	<u><i>Units</i></u>	<u><i>Unit Rate</i></u>	<u><i>Total</i></u>	<u><i>Units</i></u>	<u><i>Unit Rate</i></u>	<u><i>Total</i></u>	
-A										
-B										
-C										
-D										
Total										

**PART I – THE SCHEDULE**

**SECTION B**

**SUPPLIES OR SERVICES AND PRICES/COSTS**

**TABLE OF CONTENTS**

<b>B.1</b>	<b>TYPE OF CONTRACT .....</b>	<b>2</b>
<b>B.2</b>	<b>ITEM(S) BEING ACQUIRED .....</b>	<b>2</b>
<b>B.3</b>	<b>OBLIGATION AND AVAILABILITY OF FUNDS .....</b>	<b>3</b>
<b>B.4</b>	<b>CONTRACT COST AND CONTRACT FEE .....</b>	<b>4</b>
<b>B.5</b>	<b>CHANGES TO CONTRACT COST AND CONTRACT FEE .....</b>	<b>4</b>
<b>B.6</b>	<b>BASIS FOR TOTAL AVAILABLE FEE .....</b>	<b>8</b>
<b>B.7</b>	<b>FEE STRUCTURE .....</b>	<b>8</b>
<b>B.8</b>	<b>FEE DETERMINATION AND PAYMENT .....</b>	<b>9</b>
<b>B.9</b>	<b>FEE REDUCTIONS .....</b>	<b>10</b>
<b>B.10</b>	<b>SMALL BUSINESS SUBCONTRACTING FEE REDUCTION .....</b>	<b>11</b>
<b>B.11</b>	<b>ALLOWABILITY OF SUBCONTRACTOR FEE .....</b>	<b>12</b>
<b>B.12</b>	<b>DEAR 970.5215-3, CONDITIONAL PAYMENT OF FEE, PROFIT, AND OTHER INCENTIVES – FACILITY MANAGEMENT CONTRACTS (ALTERNATE II) (JAN 2004) [DEVIATION] .....</b>	<b>13</b>
<b>B.13</b>	<b>CONDITIONAL PAYMENT OF FEE (CPOF) DOE OFFICE OF RIVER PROTECTION SITE-SPECIFIC PERFORMANCE CRITERIA/REQUIREMENTS .....</b>	<b>20</b>
<b>B.14</b>	<b>DOE AUTHORIZATION OF WORK .....</b>	<b>21</b>

## B.1 TYPE OF CONTRACT

This is a performance-based Cost-Plus-Award Fee Contract to directly support the environmental clean-up mission with a fee structure that provides a strong financial motivation for the Contractor to furnish safe, compliant, cost-effective and energy-efficient services to further the U.S. Department of Energy (DOE) Office of River Protection (ORP) mission to store, retrieve and treat Hanford tank waste, store and dispose of treated waste, and close the tank farm waste management areas to protect the Columbia River.

## B.2 ITEM(S) BEING ACQUIRED

- (a) The Contractor shall, in accordance with the terms of this Contract (Contract refers solely to the Tank Operations Contract), provide the personnel, equipment, materials, supplies, and services, and do all things necessary for, or incident to, providing its best efforts to perform all requirements of this Contract.
- (b) For purposes of cost collection, reporting, work authorization, and administration of the Contract fee structure, the Contract consists of 23 activities divided among six (7) Contract Line Item Numbers (CLINs) and authorized in accordance with the Section B Clause entitled, *DOE Authorization of Work*. The activities identified below are further defined in Section J Attachment entitled, *Supplemental Work Description Tables*:
  - (1) *CLIN 1 – Base Operations:*
    - a. Sub-CLIN 1.1: Transition;
    - b. Sub-CLIN 1.2: Safe, Compliant Operations; and
    - c. Sub-CLIN 1.3: Analytical Laboratory Support.
  - (2) *CLIN 2 – Single-Shell Tank (SST) Retrieval and Closure:*
    - a. Sub-CLIN 2.1: Single-Shell Tank Retrieval; and
    - b. Sub-CLIN 2.2: Single-Shell Tank Farm (Waste Management Area) Closure.
  - (3) *CLIN 3 – Waste Treatment and Immobilization Plant (WTP) Support:*
    - a. Sub-CLIN 3.1: Treatment Planning, Waste Feed Delivery, and WTP Transition;
    - b. Sub-CLIN 3.2: WTP Operational Readiness;
    - c. Sub-CLIN 3.3: Immobilized High-Level Waste (IHLW) Storage and Shipping Facility Construction; and
    - d. Sub-CLIN 3.4: Upgrade and Operate the Effluent Treatment Facility (ETF).
  - (4) *CLIN 4 – Supplemental Treatment:*
    - a. Sub-CLIN 4.1: Demonstration Bulk Vitrification System (DBVS) Construction and Operations;

- b. Sub-CLIN 4.2: Extended Demonstration Bulk Vitrification System Operations;
  - c. Sub-CLIN 4.3: Supplemental Treatment Design
  - d. Sub-CLIN 4.4: Supplemental Treatment Construction and Operations
  - e. Sub-CLIN 4.5: Transuranic Tank Waste Treatment and Packaging.
- (5) *CLIN 5 – Early Feed and Operation of the WTP Low Activity Waste (LAW) Facility:*
- a. Sub-CLIN 5.1: Tank Selection, Retrieval, Pretreatment and Feed Delivery Design;
  - b. Sub-CLIN 5.2: Retrieval, Pretreatment and Feed Delivery Construction and Operations;
  - c. Sub-CLIN 5.3: (moved to Sub-CLIN 3.4)
  - d. Sub-CLIN 5.4: LAW/BOF/LAB Operations.
- (6) *CLIN 6 – Pension and Welfare Plans:*
- a. Sub-CLIN 6.1: Hanford Employee Retirement and Benefit Plan Management; and
  - b. Sub-CLIN 6.2: Legacy Pension and Benefit Plan Management.
- (7) *CLIN 7 – American Recovery and Reinvestment Act (ARRA) Workslope:*
- a. Sub-CLIN 7.1: ARRA workslope under Sub-CLIN 1.2 – Safe, Compliant Operations;
  - b. Sub-CLIN 7.2: ARRA workslope under Sub-CLIN 1.3 – Analytical Laboratory Support;
  - c. Sub-CLIN 7.3: ARRA workslope under Sub-CLIN 3.1 – Treatment Planning, Waste Feed Delivery, and WTP Transition; and
  - d. Sub-CLIN 7.4: ARRA workslope under Sub-CLIN 3.3 – Immobilized High-Level Waste (IHLW) Storage and Shipping Facility Construction
  - e. Sub-CLIN 7.5: ARRA workslope under Sub-CLIN 3.4 - Upgrade and Operate the Effluent Treatment Facility (ETF).
  - f. Sub-CLIN 7.6: ARRA workslope under Sub-CLIN 2.1 Single Shell Tank (SST) Retrieval and Closure

### **B.3 OBLIGATION AND AVAILABILITY OF FUNDS**

- (a) Obligation of Funds. Pursuant to the Section I Clause entitled, FAR 52.232-22 Limitation of Funds, total funds in the amount of \$1,016,188,145.90 have been allotted for obligation and are available for payment of services provided from the effective date of the Notice to Proceed through September 30, 2013.

Of the total identified above, \$322,255,000.00 in Recovery Act funds have been allotted for obligation and are available for payment of services provided from the effective date of this modification through September 30, 2011. (Subject to Section I clause 52.216-24 Limitation of Government Liability).

- (b) Availability of Funds. Except as may be specifically provided in the Section I Clause entitled, *DEAR 952.250-70, Nuclear Hazards Indemnity Agreement*, the duties and obligations of DOE hereunder calling for the expenditure of appropriated funds shall be subject to the availability of funds appropriated by the U.S. Congress that DOE may legally spend for such purposes.
- (c) No fee shall be paid to the contractor for the Recovery Act work, including provisional, prior to the negotiation of any equitable adjustment in the fee and the subsequent modification of the contract to reflect the mutual agreement between the contractor and the Contracting Officer.

#### **B.4 CONTRACT COST AND CONTRACT FEE**

This Section establishes the *Total Contract Cost* and *Contract Fee*. Within Table B.4-1:

- (a) *Contract Period* is defined as the *Transition Period, Base Period, and Option Period(s)* (if exercised) described in the Section F Clause entitled, *Period of Performance*.
- (b) *Contract Cost* is defined as all costs initially proposed by the Contractor.
- (c) *Available Fee* is defined as the maximum amount of fee that may be earned under the Contract by Contract period.
- (d) *Contract Price* in Table B.4-1 is the sum of *Contract Cost* and *Available Fee*, in each year of Contract performance.
- (e) *Total Contract Cost* is defined as the cumulative *Contract Cost* for all Contract periods.
- (f) *Total Available Fee* is defined as the cumulative *Available Fee* for all Contract periods.
- (g) *Total Contract Price* is defined as the sum of *Total Contract Cost* and *Total Available Fee*.
- (h) *Contract Line Item Number (CLIN)* references a specific category of work as defined in the Section C, *Statement of Work*. Proposed costs shall be appropriately categorized into the individual CLINs in Table B.4-1.
- (i) *Contract Cost, Contract Price, and Available Fee* by Fiscal Year and by Sub-CLIN will be adjusted annually by the Contracting Officer upon approval of the Performance Measurement Baseline, and whenever changes affecting the table are made under the Section I Clause entitled, *Changes – Cost Reimbursement*.

#### **B.5 CHANGES TO CONTRACT COST AND CONTRACT FEE**

- (a) Funding.
  - (1) DOE intends to obligate funding to the Contract in accordance with the *Contract Price* shown by fiscal year in Table B.4-1, *Contract Cost and Contract Fee*. The Contractor shall not be entitled to an equitable adjustment to *Available Fee* if the obligated funding by fiscal year is within 10% of the amount shown in Table B.4-1.

- (2) If DOE does not obligate funding within the parameters detailed in paragraph (a)(1) above, the Contracting Officer may initiate a change or consider a request for an equitable adjustment to the *Contract Price* and/or Schedule in accordance with the Section I Clause entitled, *FAR 52.243-2, Changes – Cost Reimbursement, Alternates II, III, and IV.*
- (b) Performance Risk.
  - (1) Changes to *Total Available Fee* will accurately reflect the corresponding changes to the Contract with respect to performance risk as determined by DEAR 915.404-4-70, DOE structured profit and fee system and implemented by the profit-analysis factors defined in FAR 15.404-4, *Profit*. Accordingly, changes to the Contract resulting in an increase or decrease to the Contractor's performance risk as defined in FAR 15.404-4(d)(1), shall cause a proportionate increase or decrease to the *Total Available Fee*.
  - (2) If performance risk changes, the Contracting Officer may initiate a change or consider a request for equitable adjustment to Contract Price and/or Schedule in accordance with the Section I Clause entitled, *FAR 52.243-2, Changes – Cost Reimbursement, Alternates II, III, and IV.*

Table B.4-1, Contract Cost and Contract Fee  
 (\$'s in K)

Transition Period – FY 2008							
CLIN 1 Base Operations	Sub-CLIN 1.1	5,494					
Totals	Contract Cost	5,494					
	Contract Price	5,494					
Base Period							
		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Totals
CLIN 1 Base Operations	Sub-CLIN 1.2	125,350	122,759	125,362	134,704	147,817	655,992
	Sub-CLIN 1.3	14,120	14,379	16,681	17,434	17,899	80,512
CLIN 2 SST Retrieval and Closure	Sub-CLIN 2.1	39,375	29,166	44,854	59,798	66,610	239,803
	Sub-CLIN 2.2	7,434	9,970	6,552	17,389	11,927	53,272
CLIN 3 WTP Support	Sub-CLIN 3.1	9,605	14,549	20,816	17,553	21,056	83,579
	Sub-CLIN 3.2	3,045	3,115	3,187	3,247	3,335	15,929
	Sub-CLIN 3.3	926	0	830	4,272	1,350	7,378
	Sub-CLIN 3.4	16,536	17,333	23,879	19,024	15,145	91,918
CLIN 4 Supplemental Treatment	Sub-CLIN 4.1	49,228	37,388	19,799	13,895	4,689	125,000
	Sub-CLIN 4.2	0	0	22	308	6,353	6,682
	Sub-CLIN 4.3	0	101	382	389	9,149	10,021
	Sub-CLIN 4.4	0	104	396	471	676	1,647
	Sub-CLIN 4.5	9,533	5,686	17,008	9,751	9,932	51,910
CLIN 5 Early Feed and Operation of WTP LAW Facility	Sub-CLIN 5.1	34,118	6,848	2,674	1,973	2,648	48,261
	Sub-CLIN 5.2	0	34,417	49,008	43,452	35,379	162,257
	Sub-CLIN 5.3	0	0	0	0	0	0
	Sub-CLIN 5.4	0	0	0	0	0	0
CLIN 6 Pension and Welfare Plans	Sub-CLIN 6.1	20,036	21,877	23,836	25,948	27,376	119,074
	Sub-CLIN 6.2	105,842	112,696	120,939	127,189	123,003	589,669
Base Contract Sub-Totals	Contract Cost	435,148	430,387	476,225	496,797	504,345	2,342,903
	Available Fee	15,675	TBD by DOE	TBD by DOE	TBD by DOE	TBD by DOE	111,677
	Contract Price	450,823	Total	Total	Total	Total	2,454,579
CLIN 7 American Recovery and Reinvestment Act (ARRA) Workslope	Sub-CLIN 7.1	29,362	85,634	63,201	0	0	178,197
	Sub-CLIN 7.2	2,661	17,260	11,791	0	0	31,712
	Sub-CLIN 7.3	5,756	26,731	26,448	0	0	58,935
	Sub-CLIN 7.4	0	0	0	0	0	0
	Sub-CLIN 7.5	539	6,943	3,268	0	0	10,749
	Sub-CLIN 7.6	0	TBD	TBD	0	0	TBD
ARRA Sub-Totals	Cost	38,318	136,567	104,708	0	0	279,594
	Fee	2,742	9,844	7,549	0	0	20,135
	Price	41,060	146,411	112,257	0	0	299,729
Total Contract Price	Contract Cost	473,466	566,954	580,933	496,797	504,345	2,622,497
	Available Fee	18,417	TBD by DOE	TBD by DOE	TBD by DOE	TBD by DOE	131,812
	Contract Price	491,883	Total	Total	Total	Total	2,754,309

\* Note – Available fee does not include “Stretch Fee”.

Table B.4-1, Contract Cost and Contract Fee (continued)

		Option Period 1			
		FY 2014	FY 2015	FY 2016	Totals
<b>CLIN 1</b> <b>Base Operations</b>	Sub-CLIN 1.2	141,664	100,698	140,688	383,049
	Sub-CLIN 1.3	17,860	18,271	15,561	51,692
<b>CLIN 2</b> <b>SST Retrieval and Closure</b>	Sub-CLIN 2.1	53,635	62,370	74,091	190,096
	Sub-CLIN 2.2	13,087	13,619	7,172	33,879
<b>CLIN 3</b> <b>WTP Support</b>	Sub-CLIN 3.1	23,597	17,359	19,307	60,262
	Sub-CLIN 3.2	3,412	3,220	3,307	9,938
	Sub-CLIN 3.3	3,676	17,845	35,469	56,990
<b>CLIN 4</b> <b>Supplemental Treatment</b>	Sub-CLIN 4.1	0	0	0	0
	Sub-CLIN 4.2	0	0	0	0
	Sub-CLIN 4.3	12,086	22,176	33,154	67,416
	Sub-CLIN 4.4	8,002	122,533	284,921	338,468
	Sub-CLIN 4.5	3,409	2,944	0	6,353
<b>CLIN 5</b> <b>Early Feed and Operation of WTP LAW Facility</b>	Sub-CLIN 5.1	436	0	0	436
	Sub-CLIN 5.2	10,092	21,416	21,908	53,416
	Sub-CLIN 5.3	15,801	15,530	8,561	39,894
	Sub-CLIN 5.4	90,880	124,209	127,237	342,327
<b>CLIN 6</b> <b>Pension and Benefit Plans</b>	Sub-CLIN 6.1	29,972	32,846	36,029	98,848
	Sub-CLIN 6.2	119,377	116,094	113,495	348,965
<b>Base Contract Totals</b>	<b>Contract Cost</b>	546,986	691,131	920,902	2,159,016
	<b>Available Fee</b>	TBD by DOE	TBD by DOE	TBD by DOE	115,598
	<b>Contract Price</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>	2,274,614

		Option Period 2		
		FY 2017	FY 2018	Totals
<b>CLIN 1</b> <b>Base Operations</b>	Sub-CLIN 1.2	176,816	170,985	347,801
	Sub-CLIN 1.3	13,881	14,543	28,065
<b>CLIN 2</b> <b>SST Retrieval and Closure</b>	Sub-CLIN 2.1	69,902	43,482	113,384
	Sub-CLIN 2.2	3,783	2,357	6,140
<b>CLIN 3</b> <b>WTP Support</b>	Sub-CLIN 3.1	9,705	4,009	13,714
	Sub-CLIN 3.2	3,356	3,420	6,776
	Sub-CLIN 3.3	25,165	19,552	44,717
<b>CLIN 4</b> <b>Supplemental Treatment</b>	Sub-CLIN 4.1	0	0	0
	Sub-CLIN 4.2	0	0	0
	Sub-CLIN 4.3	0	0	0
	Sub-CLIN 4.4	448,611	268,471	717,082
	Sub-CLIN 4.5	0	0	0
<b>CLIN 5</b> <b>Early Feed and Operation of WTP LAW Facility</b>	Sub-CLIN 5.1	0	0	0
	Sub-CLIN 5.2	22,412	22,928	45,340
	Sub-CLIN 5.3	13,086	17,239	30,325
	Sub-CLIN 5.4	131,281	134,315	265,595
<b>CLIN 6</b> <b>Pension and Benefit Plans</b>	Sub-CLIN 6.1	39,561	43,479	83,039
	Sub-CLIN 6.2	111,372	109,543	220,915
<b>Base Contract Totals</b>	<b>Contract Cost</b>	1,068,572	854,324	1,922,895
	<b>Available Fee</b>	TBD by DOE	TBD by DOE	114,325
	<b>Contract Price</b>	<b>Total</b>	<b>Total</b>	2,037,220



Contract Totals		
<b>Total: Transition, Base &amp; Option Periods</b>	<b>Contract Cost</b>	6,709,902
	<b>Available Fee</b>	361,735
	<b>Contract Price</b>	7,071,637

**B.6 BASIS FOR TOTAL AVAILABLE FEE**

The cost basis for *Total Available Fee* shall be the *Total Contract Cost*, excluding:

- (a) Pass-through funding provided to other contractors for Hanford Site services identified in the Section J Attachment entitled, *Hanford Site Services and Interface Requirements Matrix*;
- (b) Costs associated with sponsorship, management, administration and/or contributions for Legacy Plans (set forth in the Section H Clause entitled, *Employee Compensation: Pay and Benefits*) administered under this Contract; and
- (c) Costs associated with sponsorship, management, administration and/or contributions for any defined benefit pension plan.

Employee benefit plan costs shall be included in the *Contract Price* by fiscal year and by Contract period shown in Table B.4-1, *Contract Cost and Contract Fee*.

**B.7 FEE STRUCTURE**

- (a) The Contracting Officer reserves the unilateral discretion to determine the amount of *Available Fee* for the *Base Period* and *Option Period(s)* (if exercised), to each fiscal year and Sub-CLIN as described in this Clause; and as adjusted in the Section B Clause entitled, *Changes to Contract Cost and Contract Fee*. The Contractor will have the opportunity to earn 100% of the *Available Fee* within a Contract period, for work authorized in accordance with the Section B Clause entitled, *DOE Authorization of Work* and as adjusted in the Section B Clause entitled, *Changes to Contract Cost and Contract Fee*.
- (b) The Available Fee shown in Table B.4-1, *Contract Cost and Contract Fee*, can be earned through objective fee components and/or subjective fee components. The performance measures for these components and *Available Fee* for the period allocated to the fiscal year are provided in the Section J Attachment entitled, *Performance Evaluation and Measurement Plan (PEMP)*. The PEMP may contain annual and multi-year performance measures.
  - (1) *Available Fee* for the period allocated to annual performance measures may only be earned in that fiscal year. Allocated *Available Fee* for the fiscal year not earned in the fiscal year for an annual performance measure is unavailable and not payable to the Contractor. The Contractor forfeits any rights to unearned fee. The Contracting Officer reserves the unilateral discretion to determine how any

unearned fee will be utilized.

- (2) *Available Fee* for the period allocated to fiscal years for multi-year performance measures may be earned incrementally or upon final fee determination. Allocated *Available Fee* not earned for a multi-year performance measure is unavailable and not payable to the Contractor. The Contractor forfeits any rights to unearned fee. The Contracting Officer reserves the unilateral discretion to determine how any unearned fee will be utilized.
  - (3) *Provisional Fee* is defined as *Available Fee* that is paid contingently during an annual performance period. *Provisional Fee* may become earned fee upon the final fee determination.
  - (4) *Incremental Fee* is defined as *Available Fee* that the Contractor may earn by achieving a specific, fee-bearing performance measure event, subject to withholding in accordance with Section B Clause entitled, Fee Determination and Payment.
  - (5) Individual performance measures may require the Contractor to exceed approved baseline performance to earn 100% of the fee allocated to that performance measure.
- (c) The Contracting Officer will prepare and issue performance measures prior to the start of each fiscal year. The Contracting Officer may provide draft performance measures for Contractor review and input; however, the Contracting Officer reserves the unilateral discretion to issue the performance measures without Contractor review.

## **B.8 FEE DETERMINATION AND PAYMENT**

- (a) Fee earned under this Contract will be paid in accordance with the specific criteria defined in the PEMP and the Clauses in Section B. Monthly provisional payments of fee may be authorized by the Contracting Officer and will be made in accordance with paragraph (b) of this Clause.
- (b) For annual performance measures that do not have specific, incremental, fee-bearing performance measure events, the Contractor may request Contracting Officer approval to execute a monthly draw of *Provisional Fee* payments from the Special Financial Institution Account. The Contractor may request a monthly *Provisional Fee* payment of up to 7.5% of fee allocated to such performance measures, subject to a maximum payment of 80% of fee allocated to such performance measures, and also subject to withholding by DOE as described in paragraphs (e) and (f) of this Clause.
- (c) The Contractor shall request Contracting Officer acceptance of a specific, incremental, fee-bearing performance measure event. Following Contracting Officer acceptance of a specific, incremental, fee-bearing performance measure event, the Contractor may request Contracting Officer approval to execute a draw of *Incremental Fee* from the Special Financial Institution Account, subject to withholding by the Contracting Officer as described in paragraphs (e) and (f) of this Clause and the Section B Clause entitled, *Fee Reductions*.

- (d) At the end of each year of Contract performance, the Fee Determining Official will make a final *Fee Determination* using the PEMP described in the Section B Clause entitled, *Fee Structure*. In the event that fee overpayment results from the *Provisional Fee* payments provided for in this Clause, the Contractor shall reimburse the unearned fee overpayment within 30 days of notification, to the Contracting Officer payable with interest in accordance with the Section I Clause entitled, *FAR 52.232-17, Interest*.
- (e) Withholding of *Incremental* and *Provisional Fee* Payments for adverse Contract Performance.
  - (1) Withholding of *Incremental* and *Provisional Fee* Payments. If the Contractor demonstrates adverse performance, the Contracting Officer reserves the unilateral discretion to withhold *Incremental* and *Provisional Fee* Payments. Withheld Fee Payments are not subject to interest for the amount(s) of the withheld fee payment(s) under 5 CFR 1315, *Prompt Payment*.
  - (2) Release of Withheld *Incremental* and *Provisional Fee* Payments. The Contracting Officer may release withheld *Incremental* and *Provisional Fee* Payments and resume making *Incremental* and *Provisional Fee* Payments when the Contractor demonstrates sustained recovery in performance.
- (f) Withholding of *Incremental* and *Provisional Fee* Payments for bankruptcy or other issues with guarantor company(ies)<sup>4</sup>.
  - (1) Withholding of *Incremental* and *Provisional Fee*. In order to assure the Contractor's ability to repay any *Incremental* and *Provisional Fee* Payments that are determined to be in excess of the total fee earned, the Contracting Officer reserves the unilateral discretion to discontinue *Incremental* and *Provisional Fee* payments, in the event that a guarantor company files bankruptcy, is acquired by other owners, or impacted by other events that arise with the Contractor's guarantor company(ies) that can jeopardize DOE's ability to recover excess *Incremental Payment* and *Provisional Fee* Payments. Withheld Fee Payments are not subject to interest for the amount(s) of the withheld fee payment(s) under 5 CFR 1315, *Prompt Payment*.
  - (2) Release of Withheld *Incremental* and *Provisional Fee* Payments. Following receipt of evidence that bankruptcy or other issues do not affect the ability of the Contractor to continue to perform the obligations under the Contract, the Contracting Officer may release all *Incremental* and *Provisional Fee* Payments and resume making *Incremental* and *Provisional Fee* Payments.

## B.9 FEE REDUCTIONS

- (a) All earned fee in each year of Contract performance is subject to reductions imposed by the terms and conditions of this Contract, including, but not limited to:
  - (1) Section B Clause entitled, *Fee Determination and Payment*;

---

<sup>4</sup> Guarantor Company(ies) is defined as the company(ies) executing the performance guarantee (s) in Section H Clause entitled, *Performance Guarantee Agreement*.

- (2) Section B Clause entitled, *Small Business Subcontracting Fee Reduction*;
  - (3) Section B Clause entitled, *DEAR 970.5215-3, Conditional Payment of Fee, Profit, and Other Incentives – Facility Management Contracts (Alternate II) [DEVIATION]*;
  - (4) Section B Clause entitled, *Conditional Payment of Fee (CPOF) DOE Office of River Protection Site-Specific Performance Criteria/Requirements*;
  - (5) Section E Clause entitled, *FAR 52.246-3, Inspection of Supplies – Cost Reimbursement*;
  - (6) Section E Clause entitled, *FAR 52.246-5, Inspection of Services – Cost Reimbursement*;
  - (7) Section H Clause entitled, *Key Personnel*;
  - (8) Section I Clause entitled, *FAR 52.203-10, Price or Fee Adjustment for Illegal or Improper Activity*;
  - (9) Section I Clause entitled, *FAR 52.215-11, Price Reduction for Defective Cost or Pricing Data – Modifications*;
  - (10) Section I Clause entitled, *FAR 52.215-13, Subcontractor Cost or Pricing Data – Modifications*; and
  - (11) Section I Clause entitled, *FAR 52.243-2, Changes – Cost Reimbursement*.
- (b) The maximum fee reduction in any one (1) year of Contract performance is the allocated *Available Fee*, as defined in the Section J Attachment entitled, *Performance Evaluation and Measurement Plan*, that can be earned in the year the event occurred.

#### **B.10 SMALL BUSINESS SUBCONTRACTING FEE REDUCTION**

- (a) For the purpose of implementing this Clause, the percentage goals established in the Section J Attachment entitled, *Small Business Subcontracting Plan*, will remain in effect for the duration of the Contract, except as modified in accordance with the Section B Clause entitled, *Changes to Contract Cost and Contract Fee*. The Contractor shall submit annual updates to the narrative elements of the *Small Business Subcontracting Plan* by December 31 of each year.
- (b) The Contractor's performance in meeting small business performance percentage goals in accordance with the Section H Clause entitled, *Self-Performed Work*, providing meaningful involvement for small businesses, and entering into the required Mentor-Protégé Agreement(s) will be evaluated after the:
  - (1) Three year period concluding at the end of the 3<sup>rd</sup> year of Contract performance;
  - (2) Two year period concluding at the end of the 5<sup>th</sup> year of Contract performance; and, if *Option Period 1* is exercised;
  - (3) If *Option Period 1* is exercised – two year period concluding at the end of the 7<sup>th</sup>

year of Contract performance; and

- (4) At the end of the Contract period of performance.
- (c) The Contracting Officer will consider the Contractor's performance in meeting small business percentage goals and entering into the required Mentor-Protégé Agreement(s) when making a decision on the *Option Period(s)* authorization.
- (d) If the Contractor has not met any or all of the subcontracting goals, has failed to provide meaningful involvement for small business, and/or has failed to enter into the required Mentor-Protégé Agreement(s) during the above specified periods, the Contracting Officer may reduce the earned fee by an amount up to 10% of total earned fee in each period of the four (4) multi-year periods described above.
- (e) At Contract completion, the total amount of fee reduction for failure to meet its subcontracting goals shall be offset by any amount of liquidated damages assessed in accordance with the Section I Clause entitled, *FAR 52.219-16, Liquidated Damages – Subcontracting Plan*. The fee reduction amount will be a unilateral determination by the Contracting Officer and a permanent reduction in the earned fee under this Contract.
- (f) Any reduction for failure to meet the requirements of the Section H Clause entitled, *Mentor-Protégé Program*, shall be in addition to any liquidated damages assessed in accordance with the Section I Clause entitled, *FAR 52.219-16, Liquidated Damages – Subcontracting Plan*. The fee reduction amount will be a unilateral determination by the Contracting Officer and a permanent reduction in the earned fee under this Contract.

#### **B.11 ALLOWABILITY OF SUBCONTRACTOR FEE**

- (a) If the Contractor is part of a teaming arrangement as described in FAR Subpart 9.6, *Contractor Team Arrangements*, the team shall share in the *Total Available Fee* as shown in Table B.4-1. Separate additional subcontractor fee is not an allowable cost under this Contract for individual team members, or for a subcontractor, supplier, or lower-tier subcontractor that is a wholly-owned, majority-owned, or affiliate of any team member.
- (b) The subcontractor fee restriction in paragraph (a) does not apply to members of the Contractor's team that are: (1) small business(es); (2) Protégé firms as part of an approved Mentor-Protégé relationship under the Section H Clause entitled, *Mentor-Protégé Program*; (3) subcontractors under a competitively awarded firm-fixed price or firm-fixed unit price subcontract; or (4) commercial items as defined in FAR Subpart 2.1, *Definitions of Words and Terms*.

**B.12 DEAR 970.5215-3, CONDITIONAL PAYMENT OF FEE, PROFIT, AND OTHER INCENTIVES – FACILITY MANAGEMENT CONTRACTS (ALTERNATE II) (JAN 2004) [DEVIATION]**

(a) General.

- (1) The payment of earned fee, fixed fee, profit, or share of cost savings under this Contract is dependent upon:
  - (i) The Contractor's or contractor employees' compliance with the terms and conditions of this Contract relating to environment, safety, health and quality (ESH&Q), which includes worker safety and health, including performance under an approved Integrated Safety Management System (ISMS); and
  - (ii) The Contractor's or contractor employees' compliance with the terms and conditions of this Contract relating to the safeguarding of Restricted Data and other classified information.
- (2) The ESH&Q performance requirements of this Contract are set forth in its ESH&Q terms and conditions, including the DOE-approved Contractor ISMS or similar document. Financial incentives for timely mission accomplishment or cost effectiveness shall never compromise or impede full and effective implementation of the ISMS and full ESH&Q compliance.
- (3) The performance requirements of this Contract relating to the safeguarding of Restricted Data and other classified information are set forth in the Section I Clause entitled, *FAR 52.239-1, Privacy or Security Safeguards (AUG 1996)*, and *DEAR 970.5204-2, Laws, Regulations, and DOE Directives*, as well as in other terms and conditions.
- (4) If the Contractor does not meet the performance requirements of this Contract relating to ESH&Q or to the safeguarding of Restricted Data and other classified information during any performance evaluation period established under the Contract, otherwise earned fee, fixed fee, profit or share of cost savings may be unilaterally reduced by DOE.

(b) Reduction Amount.

- (1) The amount of earned fee, fixed fee, profit, or share of cost savings that may be unilaterally reduced will be determined by the severity of the performance failure pursuant to the degrees specified in paragraphs (c) and (d) of this Clause.
- (2) If a reduction of earned fee, fixed fee, profit, or share of cost savings is warranted, unless mitigating factors apply, such reduction shall not be less than 26% nor greater than 100% of the amount of earned fee, fixed fee, profit, or the Contractor's share of cost savings for a first degree performance failure, not less than 11% nor greater than 25% for a second degree performance failure, and up to 10% for a third degree performance failure.

- (3) In determining the amount of the reduction and the applicability of mitigating factors, DOE will consider the Contractor's overall performance in meeting the ESH&Q or security requirements of the Contract. Such consideration will include performance against any site specific performance criteria/requirements that provide additional definition, guidance for the amount of reduction, or guidance for the applicability of mitigating factors. In all cases, DOE will consider mitigating factors that may warrant a reduction below the applicable range (see 48 CFR 970.1504-1-2). The mitigating factors include, but are not limited to, the following ((v), (vi), (vii) and (viii) apply to ESH&Q only).
- (i) Degree of control the Contractor had over the event or incident.
  - (ii) Efforts the Contractor had made to anticipate and mitigate the possibility of the event in advance.
  - (iii) Contractor self-identification and response to the event to mitigate impacts and recurrence.
  - (iv) General status (trend and absolute performance) of: ESH&Q and compliance in related areas; or of safeguarding Restricted Data and other classified information and compliance in related areas.
  - (v) Contractor demonstration to the Contracting Officer's satisfaction that the principles of industrial ESH&Q standards are routinely practiced (e.g., Voluntary Protection Program, ISO [International Organization for Standardization] 14000, *Environmental Management System Standards*).
  - (vi) Event caused by "Good Samaritan" act by the Contractor (e.g., off-site emergency response).
  - (vii) Contractor demonstration that a performance measurement system is routinely used to improve and maintain ESH&Q performance (including effective resource allocation) and to support DOE corporate decision-making (e.g., policy, ESH&Q programs).
  - (viii) Contractor demonstration that an Operating Experience and Feedback Program is functioning that demonstrably affects continuous improvement in ESH&Q by use of lessons-learned and best practices inter- and intra-DOE sites.
- (4) (i) The amount of fee, fixed fee, profit, or share of cost savings that is otherwise earned by a Contractor during an evaluation period may be reduced in accordance with this Clause if it is determined that a performance failure warranting a reduction under this Clause occurs within the evaluation period.
- (i) The amount of reduction under this Clause, in combination with any reduction made under any other clause in the Contract, shall not exceed the amount of fee, fixed fee, profit, or the Contractor's share of cost savings that is otherwise earned during the evaluation period.



- (iii) For the purposes of this clause, earned fee, fixed fee, profit, or share of cost savings for the evaluation period shall mean the amount determined by DOE or fee determination official as otherwise payable based on the Contractor's performance during the evaluation period. Where the Contract provides for financial incentives that extend beyond a single evaluation period, this amount shall also include: any provisional amounts determined otherwise payable in the evaluation period; and, if provisional payments are not provided for, the allocable amount of any incentive determined otherwise payable at the conclusion of a subsequent evaluation period. The allocable amount shall be the total amount of the earned incentive divided by the number of evaluation periods over which it was earned.
- (iv) The Government will effect the reduction as soon as practicable after the end of the evaluation period in which the performance failure occurs. If the Government is not aware of the failure, it will effect the reduction as soon as practical after becoming aware. For any portion of the reduction requiring an allocation the Government will effect the reduction at the end of the evaluation period in which it determines the total amount earned under the incentive. If at any time a reduction causes the sum of the payments the Contractor has received for fee, fixed fee, profit, or share of cost savings to exceed the sum of fee, fixed fee, profit, or share of cost savings the Contractor has earned (provisionally or otherwise), the Contractor shall immediately return the excess to the Government. (What the Contractor "has earned" reflects any reduction made under this or any other Clause of the Contract.)
- (v) At the end of the Contract:
  - (A) The Government will pay the Contractor the amount by which the sum of fee, fixed fee, profit, or share of cost savings the Contractor has earned exceeds the sum of the payments the Contractor has received; or
  - (B) The Contractor shall return to the Government the amount by which the sum of the payments the Contractor has received exceeds the sum of fee, fixed fee, profit, or share of cost savings the Contractor has earned. (What the Contractor "has earned" reflects any reduction made under this or any other Clause of the Contract.)
- (c) Environment, Safety, Health and Quality (ESH&Q). Performance failures occur if the Contractor does not comply with the Contract ESH&Q terms and conditions, including the DOE-approved Contractor ISMS. The degrees of performance failure under which reductions of earned or fixed fee, profit, or share of cost savings will be determined are:



- (1) First Degree: Performance failures that are most adverse to ESH&Q. Failure to develop and obtain required DOE approval of an ISMS is considered first degree. The Government will perform necessary review of the ISMS in a timely manner and will not unreasonably withhold approval of the Contractor's ISMS. The following performance failures or performance failures of similar import will be considered first degree.
  - (i) Type A accident (defined in DOE Order 225.1A, *Accident Investigations*); and
  - (ii) Two (2) Second Degree performance failures during an evaluation period.
- (2) Second Degree: Performance failures that are significantly adverse to ESH&Q. They include failures to comply with an approved ISMS that result in an actual injury, exposure, or exceedence that occurred or nearly occurred but had minor practical long-term health consequences. They also include breakdowns of the Safety Management System. The following performance failures or performance failures of similar import will be considered second degree:
  - (i) Type B accident (defined in DOE Order 225.1A).
  - (ii) Non-compliance with an approved ISMS that results in a near miss of a Type A or B accident. A near miss is a situation in which an inappropriate action occurs, or a necessary action is omitted, but does not result in an adverse effect.
  - (iii) Failure to mitigate or notify DOE of an imminent danger situation after discovery, where such notification is a requirement of the Contract.
- (3) Third Degree: Performance failures that reflect a lack of focus on improving ESH&Q. They include failures to comply with an approved ISMS that result in potential breakdown of the System. The following performance failures or performance failures of similar import will be considered third degree:
  - (i) Failure to implement effective corrective actions to address deficiencies/non-compliances documented through: external (e.g., Federal) oversight and/or reported per ~~DOE Order 232.1A~~ [DOE Manual 232.1A, *Occurrence Reporting and Processing of Operations Information*] requirements; or internal oversight of ~~DOE Order 440.1A~~ [10 CFR 830, 10 CFR 835, 10 CFR 850, and 10 CFR 851] requirements.
  - (ii) Multiple similar non-compliances identified by external (e.g., Federal) oversight that in aggregate indicate a significant programmatic breakdown.
  - (iii) Non-compliances that either have, or may have, significant negative impacts to the worker, the public, or the environment or that indicate a significant programmatic breakdown.
  - (iv) Failure to notify DOE upon discovery of events or conditions where notification is required by the terms and conditions of the Contract.

- (d) Safeguarding Restricted Data and Other Classified Information. Performance failures occur if the Contractor does not comply with the terms and conditions of this Contract relating to the safeguarding of Restricted Data and other classified information. The degrees of performance failure under which reductions of fee, profit, or share of cost savings will be determined are as follows:
- (1) First Degree: Performance failures that have been determined, in accordance with applicable law, DOE regulation, or directive, to have resulted in, or that can reasonably be expected to result in, exceptionally grave damage to the national security. The following are examples of performance failures or performance failures of similar import that will be considered first degree:
    - (i) Non-compliance with applicable laws, regulations, and DOE directives actually resulting in, or creating a risk of, loss, compromise, or unauthorized disclosure of Top Secret Restricted Data or other information classified as Top Secret, or any classification level of information in a Special Access Program (SAP), information identified as sensitive compartmented information (SCI), or high risk nuclear weapons-related data.
    - (ii) Contractor actions that result in a breakdown of the safeguards and security management system that can reasonably be expected to result in the loss, compromise, or unauthorized disclosure of Top Secret Restricted Data, or other information classified as Top Secret, any classification level of information in a SAP, information identified as SCI, or high risk nuclear weapons-related data.
    - (iii) Failure to promptly report the loss, compromise, or unauthorized disclosure of Top Secret Restricted Data, or other information classified as Top Secret, any classification level of information in a SAP, information identified as SCI, or high risk nuclear weapons-related data.
    - (iv) Failure to timely implement corrective actions stemming from the loss, compromise, or unauthorized disclosure of Top Secret Restricted Data or other information classified as Top Secret, any classification level of information in a SAP, information identified as SCI, or high risk nuclear weapons-related data.
  - (2) Second Degree: Performance failures that have been determined, in accordance with applicable law, DOE regulation, or directive, to have actually resulted in, or that can reasonably be expected to result in, serious damage to the national security. The following are examples of performance failures or performance failures of similar import that will be considered second degree:
    - (i) Non-compliance with applicable laws, regulations, and DOE directives actually resulting in, or creating risk of, loss, compromise, or unauthorized disclosure of Secret Restricted Data or other information classified as Secret.

- (ii) Contractor actions that result in a breakdown of the safeguards and security management system that can reasonably be expected to result in the loss, compromise, or unauthorized disclosure of Secret Restricted Data, or other information classified as Secret.
  - (iii) Failure to promptly report the loss, compromise, or unauthorized disclosure of Restricted Data or other classified information regardless of classification (except for information covered by paragraph (d)(1)(iii) of this Clause).
  - (iv) Failure to timely implement corrective actions stemming from the loss, compromise, or unauthorized disclosure of Secret Restricted Data or other classified information classified as Secret.
- (3) Third Degree: Performance failures that have been determined, in accordance with applicable law, regulation, or DOE directive, to have actually resulted in, or that can reasonably be expected to result in, undue risk to the common defense and security. In addition, this category includes performance failures that result from a lack of Contractor management and/or employee attention to the proper safeguarding of Restricted Data and other classified information. These performance failures may be indicators of future, more severe performance failures and/or conditions, and if identified and corrected early would prevent serious incidents. The following are examples of performance failures or performance failures of similar import that will be considered third degree:
- (i) Non-compliance with applicable laws, regulations, and DOE directives actually resulting in, or creating risk of, loss, compromise, or unauthorized disclosure of Restricted Data or other information classified as Confidential.
  - (ii) Failure to promptly report alleged or suspected violations of laws, regulations, or directives pertaining to the safeguarding of Restricted Data or other classified information.
  - (iv) Failure to identify or timely execute corrective actions to mitigate or eliminate identified vulnerabilities and reduce residual risk relating to the protection of Restricted Data or other classified information in accordance with the Contractor's Safeguards and Security Plan or other security plan, as applicable.
  - (iv) Contractor actions that result in performance failures which unto themselves pose minor risk, but when viewed in the aggregate indicate degradation in the integrity of the Contractor's safeguards and security management system relating to the protection of Restricted Data and other classified information.

(e) Minimum requirements for specified level of performance.

- (1) At a minimum the Contractor must perform the following:
  - (i) The requirements with specific incentives which do not require the achievement of cost efficiencies in order to be performed at the level of performance set forth in Section C, *Statement of Work*, work authorization directive(s), or similar document unless an otherwise minimum level of performance has been established in the specific incentive;
  - (ii) All of the performance requirements directly related to requirements specifically incentivized which do not require the achievement of cost efficiencies in order to be performed at a level of performance such that the overall performance of these related requirements is at an acceptable level; and
  - (iii) All other requirements at a level of performance such that the total performance of the Contract is not jeopardized.
- (2) The evaluation of the Contractor's achievement of the level of performance shall be unilaterally determined by the Government. To the extent that the Contractor fails to achieve the minimum performance levels specified in Section C, *Statement of Work*, work authorization directive(s), or similar document, during the performance evaluation period, the DOE Operations/Field Office Manager, or designee, may reduce any otherwise earned fee, fixed fee, profit, or shared net savings for the performance evaluation period. Such reduction shall not result in the total of earned fee, fixed fee, profit, or shared net savings being less than 25% of the total available fee amount. Such 25% shall include base fee, if any.

(f) Minimum requirements for cost performance.

- (1) Requirements incentivized by other than cost incentives must be performed within their specified cost constraint and must not adversely impact the costs of performing unrelated activities.
- (2) The performance of requirements with a specific cost incentive must not adversely impact the costs of performing unrelated requirements.
- (3) The Contractor's performance within the stipulated cost performance levels for the performance evaluation period shall be determined by the Government. To the extent the Contractor fails to achieve the stipulated cost performance levels, the DOE Operations/Field Office Manager, or designee, may reduce in whole or in part any otherwise earned fee, fixed fee, profit, or shared net savings for the performance evaluation period. Such reduction shall not result in the total of earned fee, fixed fee, profit or shared net savings being less than 25% of the total available fee amount. Such 25% shall include base fee, if any.

### **B.13 CONDITIONAL PAYMENT OF FEE (CPOF) DOE OFFICE OF RIVER PROTECTION SITE-SPECIFIC PERFORMANCE CRITERIA/REQUIREMENTS**

This Clause supplements Section B Clause entitled, *DEAR 970.5215-3, Conditional Payment of Fee, Profit, and Other Incentives – Facility Management Contracts (Alternate II) [Deviation]* by establishing Site specific Environment, Safety, Health, and Quality (ESH&Q), and security performance criteria/requirements. Performance failures relating to the performance criteria set forth in this Clause will be processed in accordance with DEAR 970.5215-3. Site-specific performance criteria/requirements for ESH&Q, and Safeguards and Security are as follows:

(a) Environment, Safety, Health, and Quality

- (1) First Degree: Performance failures relating to the criteria set forth in this Clause will be processed in accordance with DEAR 970.5215-3, Alternate II [Deviation].
- (2) Second Degree: Performance failures relating to the criteria set forth in this Clause will be processed in accordance with DEAR 970.5215-3, Alternate II [Deviation].
- (3) Third Degree: Performance failures that reflect a lack of focus on ESH&Q or failures to comply with an approved ISMS that may result in a negative impact to the public, worker or environment. The following performance failures, or events of similar import, are examples of performance failures that are considered third degree:
  - (i) Multiple similar non-compliances identified by external oversight (e.g., Federal) that in the aggregate indicate a significant programmatic breakdown.
  - (ii) Non-compliances or adverse performance trends that either have or may have negative impact to the public, worker, or environment or that indicate a programmatic breakdown.
  - (iii) Failure to notify the Contracting Officer upon discovery of events or conditions where notification is required by the terms and conditions of the Contract.
  - (iv) Failure to report required data accurately and in a timely manner.
  - (v) Failure to implement continuous improvement in ESH&Q performance through effective utilization of ISMS processes, including timely submittal of meaningful performance objectives, measurements and commitments.

(b) Safeguards and Security

- (1) First Degree: Performance failures relating to the performance criteria set forth in this Clause will be processed in accordance with DEAR 970.5215-3, Alternate II [Deviation].

- (2) Second Degree: Performance failures relating to the performance criteria set forth in this Clause will be processed in accordance with DEAR 970.5215-3, Alternate II [Deviation].
- (3) Third Degree: Performance failures that have been determined, in accordance with applicable law, regulation, or DOE directive, to have actually resulted in, or that can reasonably be expected to result in, undue risk to the common defense and security, and/or jeopardizes protection of the facility or Site security interests. The following are examples of performance failures or performance failures of similar import that will be considered third degree:
  - (i) Loss, theft, diversion, or unauthorized disclosure of information classified as Confidential.
  - (ii) Evidence that SNM data has been manipulated or falsified.
  - (iii) Inventory differences of Category IV SNM beyond alarm limits where there is no evidence that the difference is created by loss, theft, or diversion.
  - (iv) Loss, theft, or diversion of Category IV quantities of SNM that is due to a failure or inadequacy of performance by the contractor.
  - (v) Receipt of any topical area rating of Unsatisfactory on any DOE Safeguards and Security survey, audit, and/or inspection.
  - (vi) Failure to implement corrective action(s) in response to any third degree performance failure.
  - (vii) Non-compliant or adverse cyber security performance that indicates serious cyber security program degradation (e.g., negative mission impacts or compromise of sensitive information [Sensitive Unclassified Information, Personally Identifiable Information, Unclassified Controlled Nuclear Information], etc.).

#### B.14 DOE AUTHORIZATION OF WORK

DOE will authorize work as follows:

- (a) The Contracting Officer will authorize the Contractor to begin performance on DOE-selected Sub-CLINS.
- (b) The Contractor is authorized to conduct work in accordance with the approved *Performance Measurement Baseline* on all authorized Sub-CLINS, and subject to the limitations of the Section B Clause entitled, *Obligation and Availability of Funds*.
- (c) Prior to the completion of the *Transition Period*, DOE will provide workscope direction that will be in effect from the initiation of the *Base Period* until DOE approval of the Contractor's initial *Performance Measurement Baseline* submittal.

- (d) DOE reserves the unilateral discretion to modify the PEMP to allocate fee to the associated work.
- (e) If the Contracting Officer does not authorize the Contractor to proceed with a Sub-CLIN, the Contractor shall not be entitled to allowable costs, opportunity to earn fee, partial termination costs, and any other similar items for that Sub-CLIN, and shall not be entitled to an equitable adjustment to fee for any other Contract requirement.

## PART I – THE SCHEDULE

### SECTION C

#### STATEMENT OF WORK

#### TABLE OF CONTENTS

<b>C.1 TANK OPERATIONS CONTRACT (TOC) OVERVIEW AND GENERAL REQUIREMENTS</b> .....	<b>1</b>
C.1.1 Background.....	1
C.1.2 Contract Purpose and Overview.....	3
C.1.3 Scope Summary.....	3
C.1.4 Life-Cycle Mission Summary.....	6
C.1.5 Facility Description.....	7
C.1.6 Organization of the <i>Statement of Work</i> .....	7
<b>C.2 DESCRIPTION OF PROJECT PERFORMANCE REQUIREMENTS</b> .....	<b>9</b>
C.2.1 CLIN #1 – Base Operations.....	10
C.2.1.1 Sub-CLIN 1.1: Transition.....	10
C.2.1.2 Sub-CLIN 1.2: Safe, Compliant Operations.....	11
C.2.1.3 Sub-CLIN 1.3: Analytical Laboratory Support.....	14
C.2.2 CLIN #2 – Single-Shell Tank (SST) Retrieval and Closure.....	15
C.2.2.1 Sub-CLIN 2.1: Single-Shell Tank Retrieval.....	15
C.2.2.2 Sub-CLIN 2.2: Single-Shell Tank Farm (Waste Management Area) Closure.....	16
C.2.3 CLIN #3 – Waste Treatment and Immobilization Plant (WTP) Support.....	17
C.2.3.1 Sub-CLIN 3.1: Treatment Planning, Waste Feed Delivery, and WTP Transition.....	17
C.2.3.2 Sub-CLIN 3.2: WTP Operational Readiness.....	20
C.2.3.3 Sub-CLIN 3.3: Immobilized High-Level Waste (IHLW) Storage and Shipping Facility Construction.....	21
C.2.3.4 Sub-CLIN 3.4: Upgrade and Operate the Effluent Treatment Facility.....	22
C.2.4 CLIN #4 – Supplemental Treatment.....	23
C.2.4.1 Sub-CLIN 4.1: Demonstration Bulk Vitrification System (DBVS) Construction and Operations.....	23
C.2.4.2 Sub-CLIN 4.2: Extended Demonstration Bulk Vitrification System Operations.....	25
C.2.4.3 Sub-CLIN 4.3: Supplemental Treatment Design.....	27
C.2.4.4 Sub-CLIN 4.4: Supplemental Treatment Construction and Operations.....	27
C.2.4.5 Sub-CLIN 4.5: Transuranic Tank Waste Treatment and Packaging.....	28
C.2.5 CLIN #5 – Early Feed and Operation of the WTP Low Activity Waste Facility (LAW).....	29
C.2.5.1 Sub-CLIN 5.1: Tank Selection, Retrieval, Pretreatment and Feed Delivery Design.....	29
C.2.5.2 Sub-CLIN 5.2: Retrieval, Pretreatment and Feed Delivery Construction and Operations.....	30
C.2.5.3 Sub-CLIN 5.3: (Reserved).....	30



C.2.5.4	Sub-CLIN 5.4: LAW/BOF/LAB Operations .....	30
C.2.6	CLIN #6 – Pension and Welfare Plans .....	31
C.2.6.1	Sub-CLIN 6.1: Hanford Employee Retirement and Benefit Plan Management	31
C.2.6.2	Sub-CLIN 6.2: Legacy Pension and Benefit Plan Management .....	32
C.2.7	CLIN #7 – American Recovery and Reinvestment Act (ARRA) Workscope .....	32
C.2.7.1	Sub-CLIN 7.1: ARRA workscope under Sub-CLIN 1.2 - Safe, Compliant Operations .....	32
C.2.7.2	Sub-CLIN 7.2: ARRA workscope under Sub-CLIN 1.3 – Analytical Laboratory Support .....	34
C.2.7.3	Sub-CLIN 7.3: ARRA workscope under Sub-CLIN 3.1 – Treatment Planning, Waste Feed Delivery, and WTP Transition .....	34
C.2.7.4	Sub-CLIN 7.4: (Reserved) .....	35
C.2.7.5	Sub-CLIN 7.5: ARRA workscope under Sub-CLIN 3.4 - Upgrade and Operate the Effluent Treatment Facility (ETF) .....	35
C.2.7.6	Sub-CLIN 7.6: ARRA workscope under Sub-CLIN 2.1 Single-Shell Tank Retrieval .....	36
<b>C.3</b>	<b>DESCRIPTION OF PROJECT SUPPORT PERFORMANCE REQUIREMENTS .....</b>	<b>36</b>
C.3.1	Project Management .....	37
C.3.1.1	Project Integration and Control and Earned Value Management .....	37
C.3.1.2	Project Scope, Schedule, and Cost Baseline .....	38
C.3.1.3	Project Performance Reporting .....	40
C.3.1.4	Risk Management .....	41
C.3.1.5	Design, Procurement, Construction, and Acceptance Testing .....	42
C.3.2	Integrated Safety Management System .....	44
C.3.2.1	Environmental Regulatory Management .....	45
C.3.2.2	Nuclear Safety .....	46
C.3.2.3	Worker Safety and Health .....	47
C.3.2.4	Quality .....	48
C.3.2.5	Event Reporting and Investigation .....	48
C.3.3	Security and Emergency Services .....	49
C.3.3.1	Safeguards and Security .....	49
C.3.3.2	Emergency Services .....	56
C.3.4	Interactions .....	57
C.3.4.1	External Affairs .....	58
C.3.4.2	External Review and Support .....	59
C.3.5	Interface Management .....	60
<b>C.4</b>	<b>GOVERNMENT-FURNISHED SERVICES AND INFORMATION .....</b>	<b>62</b>
<b>C.5</b>	<b>SUMMARY OF CONTRACT DELIVERABLES .....</b>	<b>63</b>

## C.1 TANK OPERATIONS CONTRACT (TOC) OVERVIEW AND GENERAL REQUIREMENTS

### C.1.1 Background

The 586-square-mile Hanford Site is located along the Columbia River in southeastern Washington State (illustrated in Figure C.1-1). A plutonium production complex with nine nuclear reactors and associated processing facilities, Hanford played a pivotal role in the nation's defense for more than 40 years, beginning in the 1940s with the Manhattan Project. Today, under the direction of the U.S. Department of Energy (DOE), Hanford is engaged in the world's largest environmental cleanup project, with a number of overlapping technical, political, regulatory, financial and cultural issues.

Challenges at the Hanford Site include approximately 53 million gallons of radioactive and chemically hazardous waste in 177 underground storage tanks (seven of which have been emptied), ~2,300 tons (~2,100 metric tons) of spent nuclear fuel, ~11.5 tons (~10.5 metric tons) of plutonium in various forms, ~25 million cubic feet (~750,000 cubic meters) of buried or stored solid waste, and groundwater contaminated above drinking water standards, spread out over about 80 square miles (208 square kilometers), approximately 1,600 waste sites of which 1,180 remain to be remediated and approximately 1,450 facilities of which about 400 are contaminated (as of September 2005).

In May 1989, DOE, the U.S. Environmental Protection Agency, and the State of Washington Department of Ecology signed the landmark Hanford Federal Facility Agreement and Consent Order, commonly known as the Tri-Party Agreement (TPA). The TPA outlines legally enforceable milestones for Hanford cleanup over the next several decades.



Figure C.1-1  
Hanford Site

DOE has two Federal offices at Hanford, whose mission is environmental cleanup – the DOE Richland Operations Office (DOE-RL), which is responsible for nuclear waste and facility cleanup, and overall management of the Hanford Site; DOE-RL's mission is to restore the Columbia River corridor and transition the Hanford Central Plateau. The DOE Office of River Protection (DOE-ORP), which is responsible for cleanup of Hanford Site tank waste; DOE-ORP's mission is to retrieve and treat Hanford's tank waste and close the Tank Farms to protect the Columbia River. Each Office oversees separate contracts held by private companies. For purposes of this Contract, the land, facilities, property, projects and work performed and overseen by DOE-RL and DOE-ORP constitute the "Hanford Site." The following is a description of the major DOE contracts at the Hanford Site and their workscope:

### Contracts Managed by DOE-ORP

- Hanford Analytical Services Contract provides analysis of highly radioactive samples in support of Hanford Site projects. These services are performed in the 222-S Laboratory Complex located in the 200 Area of the Hanford Site.
- Tank Operations Contract (TOC), when awarded, will include operations and construction activities necessary to store, retrieve and treat Hanford tank waste, store and dispose of treated waste, and begin to close the Tank Farm waste management areas to protect the Columbia River.
- Tank Farm Management Contract (TFC) includes operations and construction activities necessary to store, retrieve and treat Hanford tank waste and store and dispose of treated waste. This scope will be included in the TOC when it is awarded.
- Waste Treatment and Immobilization Plant (WTP) Contract includes design, construction and commissioning of a vitrification facility that will convert radioactive tank wastes into glass logs for long-term storage. The WTP is being constructed on the Hanford Site Central Plateau.

### Contracts Managed by DOE-RL

- Energy Savings Performance Contract (ESPC) includes steam service to support heating and other operations at 200 Area facilities. The contract may include energy conservation measures, such as upgrading lighting systems, pumping systems, automation systems, heating, ventilation, and air conditioning system; and adding utility monitoring and control systems.
- Hanford Site Occupational Medical Services Contract provides occupational health services to personnel at Hanford including medical monitoring and qualification examinations, human reliability testing, and records management.
- Plateau Remediation Contract (PRC), when awarded, will include completion of the Plutonium Finishing Plant (PFP) project; non-Tank Farm waste disposal activities: groundwater monitoring and remediation; facility and waste site characterization, surveillance and maintenance, regulatory document preparation, and remediation.
- Mission Support Contract (MSC), when awarded, will provide DOE-RL, DOE-ORP, and their contractors with the infrastructure and site services necessary to accomplish the Site mission.
- Project Hanford Management Contract (PHMC) includes cleanup and support activities, with the exception of DOE-ORP scope, at the Hanford Site. This scope will be included in the MSC and the PRC, when the contracts are awarded.

- River Corridor Closure Contract (RCCC) includes closing the Hanford Site River Corridor through deactivation, decontamination, decommissioning, and demolishing excess facilities; placing former production reactors in an interim safe and stable condition; remediating waste sites and burial grounds; and transitioning the River Corridor to long-term stewardship.

Another DOE Office -- the Pacific Northwest Site Office (PNSO), a component of the DOE Office of Science -- oversees the science and technology mission operated by the contractor-operated Pacific Northwest National Laboratory (PNNL). PNNL is an Office of Science multi-program laboratory that conducts research and development activities, including technology programs related to the Hanford cleanup mission.

In addition to the cleanup mission, DOE leases Hanford land to non-DOE entities, such as the Laser Interferometer Gravitational Wave Observatory (LIGO), and the State of Washington, which in turn leases the land to US Ecology, Inc., a private firm that operates the Hanford Site burial grounds for commercial low-level waste. DOE also leases land to Energy Northwest (a consortium of public utility companies) that oversees the Northwest's only operating commercial nuclear power reactor, the *Columbia Generating Station*. None of these operations is associated with the Federal cleanup work at Hanford.

### C.1.2 Contract Purpose and Overview

The purpose of this Contract is to furnish safe, compliant, cost-effective and energy-efficient services to further the DOE-ORP mission to store, retrieve and treat Hanford tank waste, store and dispose of treated waste, and to close the Tank Farm waste management areas to protect the Columbia River. The Contractor has the responsibility for determining the specific methods and approaches for accomplishing all work. This Contract applies performance-based contracting approaches; expects the Contractor to innovate and implement techniques that maximize performance efficiencies and scope completion and minimizes the description of how to accomplish the scope of work. The Contractor shall optimize base load facility operating and maintenance costs to maximize mission performance.

### C.1.3 Scope Summary

The TOC<sup>1</sup> workscope is divided into seven (7) Contract Line Item Numbers (CLINs) as follows:

#### ***CLIN 1 – Base Operations***

- Transition. Transition all ongoing Tank Farm workscope.
- Safe, Compliant Operations. Maintain and operate the Tank Farms, 242-A Evaporator, and supporting Tank Farm infrastructure. Perform all required project support functions (project management, integrated safety management, security and emergency services, interactions, interface management).
- Analytical Laboratory Support. Operate and maintain the 222-S Laboratory Complex to support analysis activities performed under a separate DOE-ORP contract.

---

<sup>1</sup> Hereafter, TOC may represent the Contract or the Contractor, as applicable.



### **CLIN 2 – Single-Shell Tank (SST) Retrieval and Closure**

- Single-Shell Tank Retrieval. Design, procure, permit, construct/fabricate, and operate SST retrieval systems that remove waste from the SSTs and transfer it to the Double Shell Tanks (DSTs) or treatment systems.
- Single-Shell Tank Farm (Waste Management Area) Closure. Perform waste management area closure activities in accordance with Site-wide integrated closure strategies.

### **CLIN 3 – Waste Treatment and Immobilization Plant (WTP) Support**

- Treatment Planning, Waste Feed Delivery, and WTP Transition. Provide integrated system planning for the DOE-ORP mission and perform project planning, system upgrades/replacements, and operations to accomplish waste feed delivery to treatment facilities. Plan for the turnover of completed WTP facilities.
- WTP Operational Readiness. Conduct a continuing, in-process evaluation of WTP operational readiness to promote contractor understanding of and planning for future WTP operations, verify that there are no deficiencies that would preclude successful Contractor operations, and support the safe and efficient turnover of completed WTP facility(ies).
- Immobilized High-Level Waste (IHLW) Storage and Shipping Facility Construction. Modify the Canister Storage Building and/or design, construct, commission, and operate a separate interim storage facility for IHLW canisters from WTP and a shipping facility to prepare IHLW and spent nuclear fuel (SNF) canisters for shipment to a permanent repository.
- Upgrade and Operate the Effluent Treatment Facility (ETF). Assume responsibility for the ETF, complete upgrade design and permitting, perform upgrades, and operate ETF.

### **CLIN 4 – Supplemental Treatment**

- Demonstration Bulk Vitrification System (DBVS) Construction and Operations. Procure, construct, and operate a pilot scale one line Low Activity Waste (LAW) bulk vitrification plant for testing to determine the effectiveness of this treatment technology.
- Extended Demonstration Bulk Vitrification System Operations. Following successful DBVS operations, re-permit, modify and perform extended operations of the DBVS.
- Supplemental Treatment Design. Commence design, permitting, and safety analysis for supplemental treatment facilities to vitrify LAW.
- Supplemental Treatment Construction and Operations. Complete designs and permits, and construct and operate supplemental treatment facilities to vitrify LAW.
- Transuranic Tank Waste Treatment and Packaging. Design, construct, and operate a transuranic (TRU) tank waste treatment, packaging, characterization, and storage system for contact-handled (CH) TRU tank waste.

### **CLIN 5 – Early Feed and Operation of the WTP Low Activity Waste (LAW) Facility**

- Tank Selection, Retrieval, Pretreatment and Feed Delivery Design. Commence design, permitting, and safety analysis for selected DST and SST waste retrieval, pretreatment and feed delivery directly to the WTP LAW Facility.
- Retrieval, Pretreatment and Feed Delivery Construction and Operations. Complete designs and permits, and construct and operate systems for selected tank waste retrieval, pretreatment and feed delivery directly to the WTP LAW Facility.
- LAW/BOF/LAB Operations. Operate the completed WTP LAW, Balance of Plant Facilities (BOF), and Laboratory (Lab) facilities to vitrify pre-treated LAW from the Tank Farms.

### **CLIN 6 – Pension and Welfare Plans**

- Hanford Employee Retirement and Benefit Plan Management. Sponsor, manage, and administer both the Hanford incumbent employee pension and benefit plans and the non-incumbent market-based retirement and benefit plans.
- Legacy Pension and Benefit Plan Management. Sponsor, manage, and administer pension and other benefit plans for retired contractor employees associated with work at other designated DOE sites.

While this work scope identified below is already included in the Contract, the specific scope has been identified for acceleration through the use of American Recovery and Reinvestment Act (ARRA) funds.

### **CLIN 7 – American Recovery and Reinvestment Act (ARRA) Workslope**

- ARRA workslope under Sub-CLIN 1.2 - Safe, Compliant Operations. Maintain and operate the Tank Farms, 242-A Evaporator, and supporting Tank Farm infrastructure. Perform all required project support functions (project management, integrated safety management, security and emergency services, interactions, interface management).
- ARRA workslope under Sub-CLIN 1.3 - Analytical Laboratory Support. Operate and maintain the 222-S Laboratory Complex to support analysis activities performed under a separate DOE-ORP contract.
- ARRA workslope under Sub-CLIN 2.1 - Single-Shell Tank (SST) Retrieval. Design, procure, permit, construct/fabricate, and operate SST retrieval systems that remove waste from the SSTs and transfer it to the Double Shell Tanks (DSTs) or treatment systems
- ARRA workslope under Sub-CLIN 3.1 - Treatment Planning, Waste Feed Delivery, and WTP Transition. Provide integrated system planning for the DOE-ORP mission and perform project planning, system upgrades/replacements, and operations to accomplish waste feed delivery to treatment facilities. Plan for the turnover of completed WTP facilities.

- ARRA workscope under Sub-CLIN 3.3 - (Reserved)
- ARRA workscope under Sub-CLIN 3.4 - Upgrade and Operate the Effluent Treatment Facility (ETF). Assume responsibility for the ETF, complete upgrade design and permitting, perform upgrades, and operate ETF.

#### C.1.4 Life-Cycle Mission Summary

The DOE-ORP River Protection Project (RPP) is composed of two major scopes of work performed by two separate contractors. The WTP contractor will design, construct, and commission the WTP for treating the Tank Farm waste. The TOC shall be responsible for planning, managing, and executing the Tank Farm project, sub-projects, operations and other activities as described in this *Statement of Work*. To accomplish the RPP mission, the TOC must interface with other Hanford Site contractors for necessary services and work coordination. General objectives are to perform the work within the established budget profile, reduce hazards to the workers, the public, and the environment, and to significantly reduce program life-cycle costs and schedules.

The life-cycle objectives (including this Contract term and beyond) of the RPP mission are as follows:

- Maintain safe tank waste storage until waste is retrieved.
- Retrieve waste from all 149 SSTs and transfer to DSTs or treatment facilities.
- Retrieve waste from all 28 DSTs to deliver waste feed to the tank waste treatment facilities (WTP and supplemental treatment).
- Operate treatment facilities.
- Store and disposition treated waste products in accordance with the WTP schedule and the RPP System Plan to support RPP mission completion.
- Implement effective supplemental treatment technologies that will increase DST space availability and operate with the WTP to accomplish tank waste treatment.
- Prepare interim stored IHLW and packaged TRU waste for shipment to the appropriate repositories.
- Treat and dispose of secondary waste streams.
- Dispose of immobilized low activity waste (ILAW) on-site in near-surface disposal facilities.
- Characterize vadose zone contamination related to the Tank Farms and associated facilities, and perform barrier installations and soils remediation in coordination with the Hanford Site groundwater program.
- Close Waste Management Areas including SSTs, DSTs, Tank Farm facilities, ancillary equipment, and remediated soils.
- Decommission WTP and supplemental treatment facilities and equipment after mission completion.

### C.1.5 Facility Description

The Tank Farm system facilities are located in the 200 East Area, 200 West Area, and 600 Area of the Hanford Site. The Tank Farm system facilities comprise the SST farms, the DST farms, and associated support facilities, systems, and transfer equipment. The Tank Farm system includes 177 single- and double-shell tanks; double-contained receiver tanks; catch tanks; waste transfer pipelines and associated equipment used in waste transfers (e.g., diversion boxes and valve pits); miscellaneous inactive storage facilities; waste-handling and storage facilities; miscellaneous support and administrative facilities; in-tank, out-of-tank, and liquid transfer monitoring systems; associated ancillary equipment; and soils. Additional Tank Farm related facilities include the 242-A Evaporator, and the 222-S Analytical Laboratory. A detailed Hanford Site structures list is provided in the Section J Attachment entitled, *Hanford Site Structures List* and a detailed waste site list is provided in the Section J Attachment entitled, *Hanford Site Waste Assignments List*.

### C.1.6 Organization of the Statement of Work

This *Statement of Work* is divided into five sections, with Section C.1 containing the background, contract purpose and overview, scope and organization of the *Statement of Work*; Section C.2, *Description of Project Performance Requirements*; Section C.3, *Description of Project Support Performance Requirements*; Section C.4, *Government-Furnished Services and Information*; and Section C.5, *Summary of Contract Deliverables*.

Figure C.1-2, River Protection Project (RPP) Mission

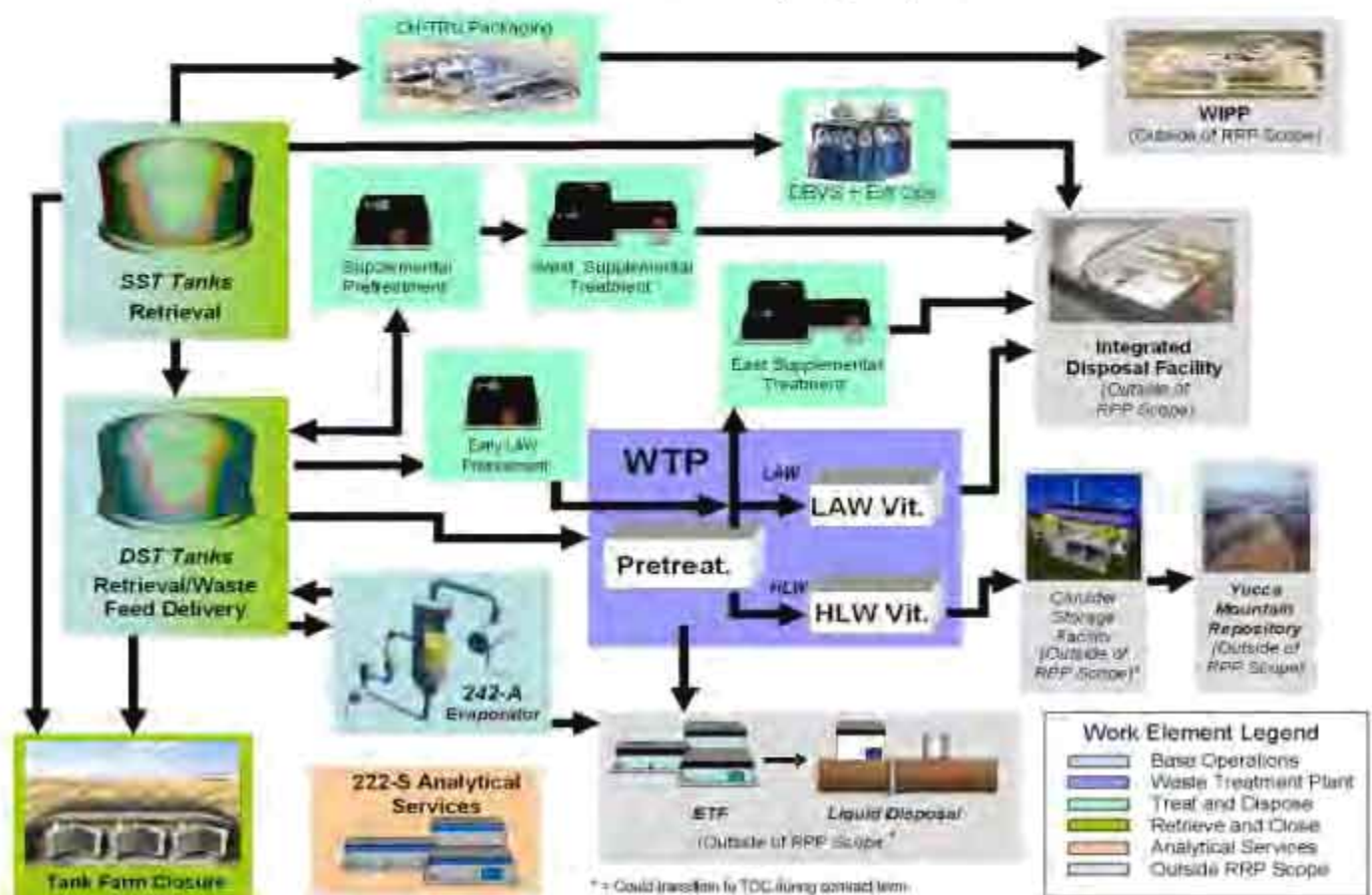
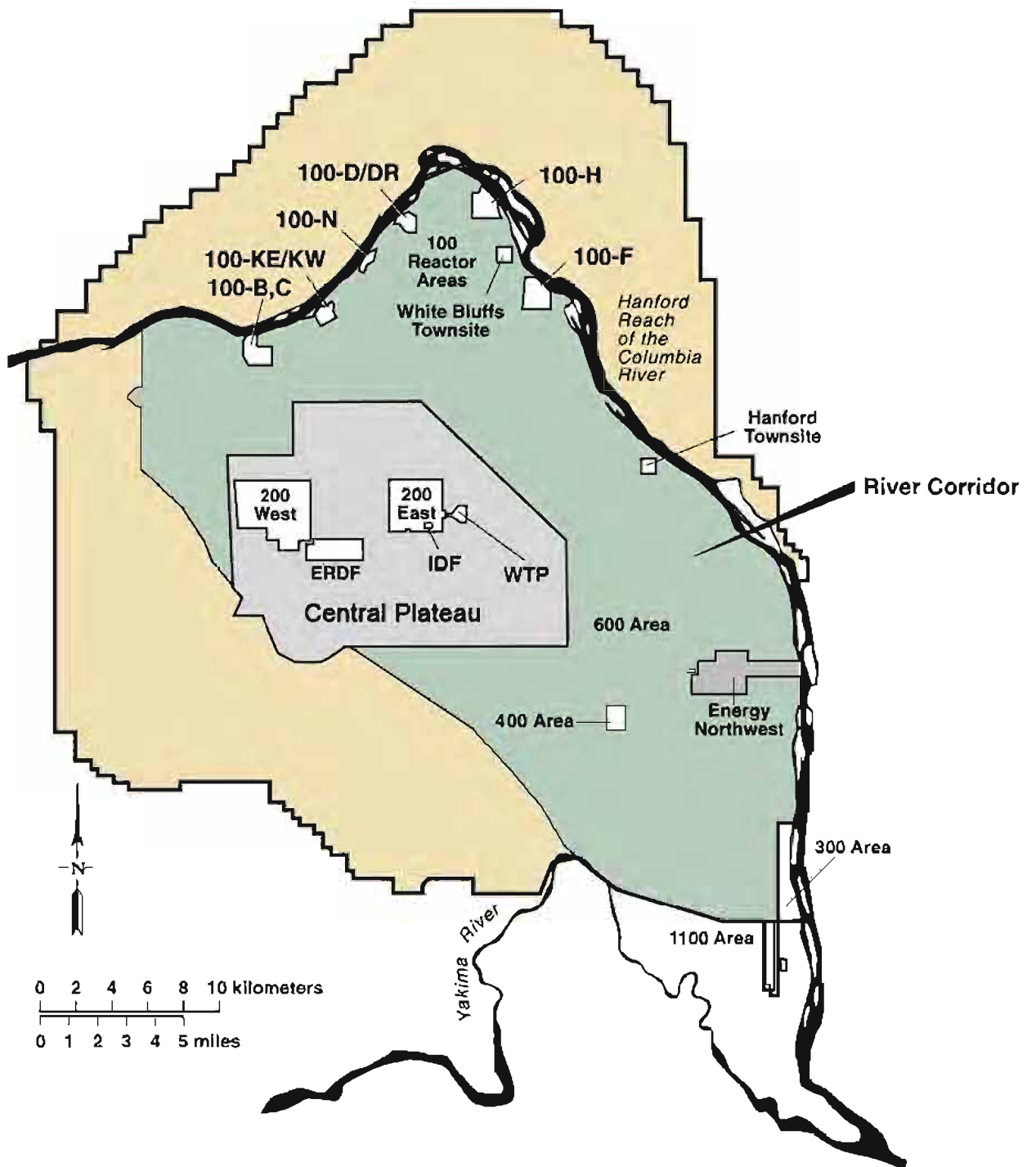




Figure C.1-3, Hanford Site (TOC activities located in the 200 West and 200 East Areas)



## C.2 DESCRIPTION OF PROJECT PERFORMANCE REQUIREMENTS

Consistent with DOE-ORP authorization, the Contractor shall perform the following major activities which are divided into six CLINs and the respective sub-CLINs. DOE-ORP will authorize performance of the individual Sub-CLINs in accordance with the Section B Clauses entitled, *Item(s) Being Acquired* and *DOE Authorization of Work*.

The Contractor shall plan and perform the work under this Contract in accordance with the Section H Clause entitled, *Environmental Responsibility*, which requires compliance with current and future milestones in the TPA.

Table C.5, *Summary of Contract Deliverables*, provides a list of the deliverables described throughout this *Statement of Work*, including the due dates for the original submittals, and where applicable, the timing of required updates to these documents.

Title	Sub-CLINs	Activities
<b>CLIN #1 Base Operations</b>	1.1	Transition
	1.2	Safe, Compliant Operations
	1.3	Analytical Laboratory Support
<b>CLIN #2 Single-Shell Tank (SST) Retrieval And Closure</b>	2.1	Single-Shell Tank Retrieval
	2.2	Single-Shell Tank Farm (Waste Management Area) Closure
<b>CLIN #3 Waste Treatment and Immobilization Plant (WTP) Support</b>	3.1	Treatment Planning, Waste Feed Delivery, and WTP Transition
	3.2	WTP Operational Readiness
	3.3	Immobilized High-Level Waste (IHLW) Storage and Shipping Facility Construction
	3.4	Upgrade and Operate the Effluent Treatment Facility (ETF)
<b>CLIN #4 Supplemental Treatment</b>	4.1	Demonstration Bulk Vitrification System (DBVS) Construction and Operations
	4.2	Extended Demonstration Bulk Vitrification System Operations
	4.3	Supplemental Treatment Design
	4.4	Supplemental Treatment Construction and Operations
	4.5	Transuranic Tank Waste Treatment and Packaging
<b>CLIN #5 Early Feed and Operation of the WTP Low Activity Waste (LAW) Facility</b>	5.1	Tank Selection, Retrieval, Pretreatment and Feed Delivery Design
	5.2	Retrieval, Pretreatment and Feed Delivery Construction and Operations
	5.3	(Reserved)
	5.4	LAW/BOF/LAB Operations
<b>CLIN #6 Pension and Welfare Plans</b>	6.1	Hanford Employee Retirement and Benefit Plan Management
	6.2	Legacy Pension and Benefit Plan Management
<b>CLIN #7 American Recovery and Reinvestment Act (ARRA) Workslope</b>	7.1	ARRA workslope under Sub-CLIN 1.2 - Safe, Compliant Operations
	7.2	ARRA workslope under Sub-CLIN 1.3 - Analytical Laboratory Support
	7.3	ARRA workslope under Sub-CLIN 3.1 - Treatment Planning, Waste Feed Delivery, and WTP Transition
	7.4	ARRA workslope under Sub-CLIN 3.3 – (Reserved)
	7.5	ARRA workslope under Sub-CLIN 3.4 - Upgrade and Operate the Effluent Treatment Facility (ETF)
	7.6	ARRA workslope under Sub-CLIN 2.1 - Single-Shell Tank (SST) Retrieval.

## C.2.1 CLIN #1 – Base Operations

### C.2.1.1 Sub-CLIN 1.1: Transition

#### General Scope:

The Contractor shall transition all ongoing TFC workscope; transition any subcontract work that the Contractor elects (or is directed by DOE) to continue under an existing subcontract with the TFC; complete workforce transition in accordance with the requirements of Section H Clause entitled, *Special Contract Requirements*; and deliver a completed *Transition Plan* and *Transition Agreement*.

#### Detailed Scope and Requirements:

The Contractor shall:

- Submit a *Transition Plan* for DOE-ORP approval (Deliverable C.2.1.1-1) that includes a description of transition activities, involved organizations, and the transition schedule. The *Transition Plan* shall include a draft *Transition Agreement* to document completion of *Transition Plan* activities during the *Transition Period*.
- Coordinate directly with prime contractors, subcontractors, and DOE-ORP to finalize the *Transition Agreement*.
- Develop the inter-contractor ordering and financial agreements as defined by the Section J Attachment entitled, *Hanford Site Services and Interface Requirements Matrix* that are necessary to support Transition and Contract performance. The Contractor shall be responsible for the costs incurred or to be recovered under these agreements.
- Identify any material differences in the systems, facilities, waste sites, property, and services described in this *Statement of Work* and in the Section J Attachments entitled, *Supplemental Work Description Tables*, *Hanford Site Structures List*, and *Hanford Waste Site Assignment List*, versus the actual project status. The Contractor shall submit a *Statement of Material Differences* (Deliverable C.2.1.1-2) for DOE-ORP approval.
- Submit fundamental project management, environmental, safety, health, quality, security, and interface program documents as described in the *Statement of Work* within 60 days of Notice to Proceed. Key deliverables required during Transition are listed in Section C.5, entitled, *Summary of Contract Deliverables*.
- Conduct a joint reconciliation of the government property inventory with the predecessor contractor. This information shall be used to provide a baseline for the succeeding contract and for closeout of the predecessor contract.
- Support DOE-ORP in-process verification of Contract transition, provide weekly written *Transition Status Reports* (Deliverable C.2.1.1-3) to DOE-ORP for information, and be accountable for all work performed under this Contract at the end of the *Transition Period*.
- Submit a final *Transition Agreement* (Deliverable C.2.1.1-4) for DOE-ORP approval that includes the signatures of all contractor Transition parties or successor contracts.

During the Transition Period and prior to assuming control and responsibility for Safeguards and Security (SAS) responsibilities, the Contractor shall be subject to a DOE-ORP SAS initial survey conducted in accordance with DOE Manual (M) 470.4-1, *Safeguards and Security Program Planning and Management*. The results of the survey shall be documented and form the basis

for DOE-ORP authorization for the TOC to assume SAS responsibilities, in particular, responsibility for SNM. Following the survey, the Contractor shall assume responsibility for all applicable SAS resources, materials, facilities, documents, and equipment.

Upon completion of transition, the Contractor shall operate under the existing baseline or as modified at the unilateral discretion of DOE-ORP until the Contractor's initial baseline submittal is approved by DOE-ORP.

### **C.2.1.2 Sub-CLIN 1.2: Safe, Compliant Operations**

#### Background:

The Hanford Tank Farms System consists of underground radioactive waste storage tanks, waste transfer systems, infrastructure and related facilities including the 242-A Evaporator. The 177 underground tanks, ranging in size from 55,000 to 1,160,000 gallons in capacity are grouped into 18 tank farms. The Tank Farms are a Hazard Category 2 nuclear facility and the Documented Safety Analyses (DSA), Technical Safety Requirements (TSRs), operations specifications documents, environmental permits, and current operating procedures define the necessary controls for safe operations.

#### General Scope:

The Contractor shall maintain and operate the Tank Farms, 242-A Evaporator, and supporting Tank Farm infrastructure.

For the assigned workscope, the Contractor shall establish and implement the necessary programs and processes for:

- Project Management (Section C.3.1);
- Integrated Safety Management System (ISMS) (Section C.3.2);
- Security and Emergency Services (Section C.3.3);
- Interactions (Section C.3.4); and
- Interface Management (Section C.3.5).

#### Detailed Scope and Requirements:

##### ***Base Cost Reduction***

The Contractor shall seek to improve the effectiveness and efficiency of Tank Farm operations and maintenance in order to maximize budgeted funds directed to tank waste retrievals and treatment.

The Contractor shall evaluate the requirements basis and collaborate with DOE-ORP, regulators, and other Hanford Site contractors to develop innovative compliance methods that promote safe storage and cleanup work accomplishment.

### ***SST System Management***

The Contractor shall operate and maintain the SST system and ancillary facilities to safely store tank waste and facilitate tank waste retrieval and component closure. The Contractor shall perform non-destructive testing and evaluation of SSTs and miscellaneous underground storage tanks to assure continued tank integrity commensurate with the waste contained in each tank and the associated risk.

### ***DST System Management***

The Contractor shall integrate with the WTP contractor, and operate the DST system to maintain acceptable waste feed specifications for future waste feed delivery to the WTP while optimizing use of available DST space to facilitate SST waste retrieval and in-tank treatment to preserve tank integrity and improve waste feed characteristics.

### ***Maintenance***

The Contractor shall perform calibrations, maintenance and required equipment installations to assigned facilities in support of the RPP mission with a prioritization that provides the best value to DOE-ORP.

### ***Upgrades***

The Contractor shall plan and execute Tank Farm and related facilities upgrade sub-projects, as necessary, to support safe, reliable, and compliant storage, and tank waste retrieval, staging, delivery, and treatment efforts.

### ***DST Integrity/Life Extension***

The Contractor shall maintain DST waste within TSR chemistry specifications to minimize tank corrosion. Chemistry specifications shall be evaluated to optimize tank protection while minimizing waste generation and resultant vitrified waste form volume. The Contractor shall perform non-destructive testing and evaluation of tanks to meet *Resource Conservation and Recovery Act of 1976* (RCRA) requirements, status tank corrosion, and assure continued tank integrity.

### ***Sampling & Characterization***

The Contractor shall maintain a ready-to-serve waste tank sampling and sample transportation capability. The Contractor shall perform tank waste sampling and characterization to support safe storage and evaporator operations, and to preserve tank integrity. Sampling and characterization activities for tank waste retrieval, tank closure, treatment planning and waste feed delivery are included in their respective sub-CLINs.

### ***Receipt of Wastes***

The Contractor shall maintain the necessary equipment and receive waste from other Hanford Site facilities, as required, to support the Hanford Site cleanup mission.

### ***Evaporator Operation***

The Contractor shall operate the 242-A Evaporator in support of DST space management, waste retrieval, and feed delivery activities. The Contractor shall perform evaporator maintenance and upgrades, as necessary, to support the RPP mission.

### ***Secondary Wastes***

The Contractor shall perform detailed planning and implementation of activities to support packaging and treatment for disposal of secondary liquid and solid wastes generated in the Tank Farms and assigned facilities.

### ***WTP Infrastructure Support***

The Contractor shall be responsible for coordinating, planning and paying for the WTP contractor requirements for infrastructure, utility, and service support from the MSC and the PRC.

### ***Vent and Balance Service***

The Contractor shall perform cost-effective/efficient vent and balance services (primarily high efficiency particulate air (HEPA) filter testing) for RPP facilities and the balance of the Hanford Site.

### ***Project Management***

The Contractor shall implement and maintain Tank Farm and assigned facility project management processes as further described in Section C.3.1, *Project Management*. Where appropriate, the Contractor shall integrate these projects with the Hanford Site-wide programs coordinated by the MSC.

### ***Integrated Safety Management System***

The Contractor shall implement and maintain a Tank Farm and related facility ISMS that includes environment, safety, health, and quality programs as described in Section C.3.2, *Integrated Safety Management System*. Where appropriate, the Contractor shall integrate these programs with the Hanford Site-wide programs coordinated by the MSC.

### ***Security and Emergency Services***

The Contractor shall implement and maintain Tank Farm and assigned facility safeguards, security, and emergency preparedness programs as described in Section C.3.3, *Security and Emergency Services*. Where appropriate, the Contractor shall integrate these programs with the Hanford Site-wide programs coordinated by the MSC.

### ***Interactions***

The Contractor shall implement and maintain processes for interactions with Defense Nuclear Facilities Safety Board (DNFSB), Native Tribal Governments, regulators, advisory boards, stakeholders, and the media as described in Section C.3.4, *Interactions*.

## ***Interface Management***

In cooperation with other Hanford Site contractors, the Contractor shall establish interface management processes to assure effective control of technical, administrative, and regulatory interfaces as further described in Section C.3.5, *Interface Management*. Development and compliance with interface control documents (ICDs) between the Contractor and the WTP contractor are described separately in Section C.2.3.1.

### **C.2.1.3 Sub-CLIN 1.3: Analytical Laboratory Support**

#### **Background:**

The 222-S Laboratory Complex in the 200 West Area of the Hanford Site is the primary Hanford Site laboratory for analysis of highly radioactive samples. The Analytical Services Production Contractor (ASPC), under contract to DOE-ORP through 2010, performs analytical services; however, the TOC shall operate and maintain the laboratory facility. The laboratory is a Hazard Category 3 nuclear facility and contains hot cells and equipment to perform analysis of solid, liquid and gaseous samples. The ASPC maintains its own ISMS, Quality Assurance Plan, and Assurance System Description, but relies on the TOC for nuclear safety, radiation protection, and any other facility-related support. The ASPC is required to annually perform approximately 25,000 inorganic, organic, and radionuclide analyses. The ASPC will perform these analyses on approximately 3,000 intermediate to high level radioactive and/or hazardous waste samples received from multiple locations and contractors on the Hanford Site.

#### **General Scope:**

The Contractor shall operate and maintain the 222-S Laboratory Complex to support analysis activities performed by the ASPC.

#### **Detailed Scope and Requirements:**

#### ***Integrated Planning***

The Contractor shall coordinate with the ASPC to develop integrated Hanford Site-wide analysis plans, data quality objectives, and provide process and analytical technology support.

The Contractor shall document the interfaces in a mutually-approved *Administrative Interface Agreement with the Analytical Services Production Contractor* (Deliverable C.2.1.3-1) and submit to DOE-ORP for information.

The Contractor shall interface with the ASPC to develop sample analysis rates and waste generation estimates to allow the Contractor and other Site contractors to plan sample analysis expenditures.

#### ***Instrumentation & Equipment***

The Contractor shall provide analytical instrumentation and support equipment to ensure capability, capacity, storage, and reliability are available to support Hanford Site cleanup schedules.



### ***Radiological Safety***

The Contractor shall provide radiological protection program support and radiological control technician services to the ASPC. The ASPC work shall be performed in accordance with the Contractor's Radiation Protection Program.

### ***Waste Management***

The Contractor shall manage, treat, store or dispose of wastes generated by the ASPC.

### ***Transportation***

The Contractor shall transport Tank Farm-related samples to the 222-S Analytical Laboratory.

Other Hanford Site contractors are responsible for transportation of their samples to the 222-S Analytical Laboratory.

### ***Regulatory Authorization & Compliance***

The Contractor shall develop, evaluate, and maintain authorization basis documentation, environmental permitting, and other regulatory compliance documentation and perform the necessary compliance activities.

### ***Maintenance***

The Contractor shall provide maintenance, routine calibrations, repairs and engineering functions.

### ***Upgrades***

The Contractor shall plan and execute upgrades to the 222-S Laboratory Complex to support safe, reliable, and compliant operations.

## **C.2.2 CLIN #2 – Single-Shell Tank (SST) Retrieval and Closure**

### **C.2.2.1 Sub-CLIN 2.1: Single-Shell Tank Retrieval**

#### **Background:**

The 149 SSTs contain a mixture of liquid, sludge and saltcake; pumpable liquids have been removed. Tank wastes are retrieved to support waste treatment and Tank Farm closure.

#### **General Scope:**

The Contractor shall design, procure, permit, construct/fabricate, and operate the SST retrieval system(s) used to remove waste from SSTs and transfer the waste to pretreatment/treatment systems, or to the DST system for eventual treatment.

#### **Detailed Scope and Requirements:**



### ***Integrated Retrieval Planning and Implementation***

The Contractor shall develop, submit for DOE-ORP approval, implement, and maintain an *Integrated SST Retrieval Plan* (Deliverable C.2.2.1-1) that describes waste treatment, closure objectives, and near-term SST retrieval commitments.

The Contractor shall incorporate retrieval planning into the overall *RPP System Plan* (See Section 2.3.1).

### ***Retrieval Technologies***

The Contractor shall develop technologies to improve the efficiencies and equipment reliability for retrieving saltcake, hard heel, and other wastes from SSTs; determine technology limitations, retrieval efficiencies, safety and environmental concerns, and cost impacts for SST retrieval systems; and evaluate alternative retrieval technologies and leak detection methods for SSTs.

### ***Process Controls***

The Contractor shall establish the necessary process controls and perform required tank waste sampling and characterization to prevent transfer line and equipment degradation, preserve DST integrity, and prevent flammable gas issues and other potential safety and environmental concerns.

### ***Retrieval Execution***

The Contractor shall provide SST retrieval system(s), and transfer waste to the DST system or pretreatment/treatment systems to support treatment schedules.

The Contractor shall design, procure, permit, construct and/or fabricate, test, start-up and operate SST retrieval and transfer system(s) that efficiently achieve the waste removal goals.

### ***Cold Test Facility Operation***

The Contractor shall manage, maintain and operate the Cold Test Facility to support personnel training, development and testing of retrieval technologies and tank sampling technologies, and to support testing and technology development.

### ***Vadose Zone Characterization & Corrective Measures***

The Contractor shall perform Tank Farm vadose zone sampling, characterization, and corrective measures (in coordination with the PRC) to integrate these activities and drive efficiencies in the Hanford Site groundwater program. The TOC shall provide support to the lead contractor (PRC) for the groundwater/vadose zone program.

#### **C.2.2.2 Sub-CLIN 2.2: Single-Shell Tank Farm (Waste Management Area) Closure**

##### **Background:**

There are 149 underground SSTs, ancillary equipment, and contaminated soil, aggregated into seven (7) waste management areas that require remediation and closure.

General Scope:

The Contractor shall perform waste management area closure activities in accordance with Hanford Site-wide integrated closure strategies.

Detailed Scope and Requirements:

***Integrated Closure Planning and Implementation***

The Contractor shall develop, submit for DOE-ORP approval, implement, and maintain an *Integrated SST Waste Management Area Closure Plan* (Deliverable C.2.2.2-1).

The Contractor shall incorporate closure planning into the overall *RPP System Plan*.

***Regulatory Acceptance***

The Contractor shall obtain regulatory approval for component and/or waste management area closure activities through regulator approval of necessary permits and authorization documents that demonstrate compliance with state and federal rules/regulations.

***Physical Closure***

The Contractor shall design, construct, and operate equipment and systems necessary to support the work specified in the regulatory closure documents.

The Contractor shall demonstrate technologies and gather data to support closure decisions.

**C.2.3 CLIN #3 – Waste Treatment and Immobilization Plant (WTP) Support**

**C.2.3.1 Sub-CLIN 3.1: Treatment Planning, Waste Feed Delivery, and WTP Transition**

Background:

High level and low activity portions of tank waste must be reliably provided to the WTP and other waste treatment equipment and facilities in time to support hot commissioning and operation. The existing DST system does not have the capability to retrieve, blend, and transfer wastes to the treatment facilities.

General Scope:

The Contractor shall provide integrated system planning for the RPP mission, incorporating the results from other integrated planning tools for SST retrievals, closures, and for waste feed delivery.

The Contractor shall perform waste feed delivery, including project planning, Tank Farm upgrade and new equipment installations, and operations to accomplish pretreatment (if needed), blending, mixing, retrieval and transfer of tank waste to support optimized and reliable feed delivery to the waste treatment facilities.

The Contractor and the WTP Contractor shall jointly develop a transition plan for safe and efficient transition of the operational WTP facilities to the Contractor.

#### Detailed Scope and Requirements:

##### ***Planning Models***

The Contractor shall maintain the Hanford Tank Waste Operation Simulator (HTWOS) model and use the model to evaluate alternative cases to optimize RPP system performance and provide a technical basis for the approved *Performance Measurement Baseline* described in Section C.3.1.2, *Project Scope, Schedule, and Cost Baseline*. The key assumptions and inputs associated with this HTWOS model shall be submitted to DOE-ORP for approval.

The Contractor shall assist DOE-ORP in making the HTWOS model available for independent analysis of RPP System Planning.

##### ***RPP System Planning***

The Contractor shall develop, submit for DOE-ORP approval, and maintain the *River Protection Project System Plan* (Deliverable C.2.3.1-1) and subsequent planning documents that describe the technical planning for optimizing tank retrieval sequence, waste feed delivery, treatment strategies, storage, disposal options and operations, tank closure, and mission completion projections. The *System Plan* shall consider effectiveness of the overall treatment system, including selection of waste feeding the WTP versus supplemental treatment options, and recycle streams and secondary waste streams. The Contractor shall conduct related planning, such as technology roadmapping, identification of technology needs, reductions to Tank Farm cost and risk, and streamlining of work processes.

The Contractor shall update the *System Plan*, as required, to reflect significant changes in mission strategies and to remain consistent with the *Performance Measurement Baseline* (See Section C.3.1.2.1). The key assumptions and inputs associated with this *System Plan* shall be submitted to DOE-ORP for approval prior to revision of the *System Plan*. All revisions of the *System Plan* shall be submitted to DOE-ORP for approval.

##### ***Integrated Waste Feed Delivery Planning***

The Contractor shall prepare, submit for DOE-ORP approval, and implement an *Integrated Waste Feed Delivery Plan* (Deliverable C.2.3.1-2) to provide optimum and reliable pretreatment (if needed), blending/mixing, retrieval and delivery of feed to DOE-ORP treatment facilities. This Plan shall include the needs of commissioning, near-term, and long-term operations; necessary studies, testing, and infrastructure installation; and projected waste transfer/pretreatment operations.

The Contractor shall ensure that the *Integrated Waste Feed Delivery Plan* is integrated with the *RPP System Plan*.

##### ***Retrieval & Transfer System Upgrades***

The Contractor shall design, procure, and install DST retrieval and transfer system upgrades in support of Tank Farms activities, including in-tank treatment, waste staging, waste feed delivery to treatment systems, and optimizing use of DST space.

### ***Waste Pretreatment and Staging, DST Retrieval, and Feed Delivery Operations***

The Contractor shall operate and maintain the DST retrieval and feed delivery systems including in-tank treatment/pretreatment and blending/mixing systems to maximize the waste treatment system efficiency.

The Contractor shall perform sampling and characterization of DST waste as required to support feed delivery planning.

### ***Tank Waste Inventory Management***

The Contractor shall maintain the electronic and physical systems necessary to manage the tank waste inventory, including the:

- Tank Waste Information Network System (TWINS) database;
- Best Basis Inventory (BBI) – updated quarterly to account for tank waste transfers and data from sampling;
- Archive sample storage in the 222-S Laboratory; and
- WTP feed sampling.

### ***WTP Interface***

The Contractor shall:

- Assist DOE-ORP (as lead) and the WTP contractor in developing and implementing an *Interface Management Plan*.
- Assist the WTP contractor in the developing, implementing, and updating Interface Control Documents (ICDs) which define the scope of each interface and required deliverables.

### ***IHLW Storage and Disposition Planning***

The Contractor shall perform system planning and baseline management activities for IHLW storage and disposition, and shall assist DOE-ORP in their interface with the DOE Office of Civilian Radioactive Waste Management. The IHLW system planning shall be integrated into the *RPP System Plan*.

### ***WTP Transition Plan***

The Contractor and the WTP contractor shall jointly develop a *WTP Facility Transition Plan* (Deliverable C.2.3.1-3) that describes the strategy, schedule and requirements for safe, efficient, and sequential transfer of the WTP facilities, associated workforce, and all activities that support operations from the WTP contractor to the Contractor. The Plan shall identify, at a minimum, each facility, the proposed schedule for facility turnover, and provide a checklist of requirements to be completed to ensure that the facilities can be safely transitioned and operated by the Contractor. The Plan shall provide for the flexibility of early and/or extended operations of any of the WTP facilities during the Transition Period.

The Contractor shall submit the *WTP Facility Transition Plan* to DOE-ORP for approval at the completion of the WTP contractor certification of WTP cold commissioning.

### ***WTP LAW/BOF/LAB Facility Transition Plan***

If the DOE-ORP directs early feed and operation of the WTP LAW/BOF/LAB facilities, the Contractor and the WTP contractor shall jointly develop a *WTP LAW/BOF/LAB Facility Transition Plan* (Deliverable C.2.3.1-4). The Contractor shall submit the *WTP LAW/BOF/LAB Facility Transition Plan* to DOE-ORP for approval at the completion of WTP contractor certification of WTP LAW/BOF/LAB cold commissioning.

### **C.2.3.2 Sub-CLIN 3.2: WTP Operational Readiness**

#### Background:

The WTP Pretreatment facility, HLW facility, LAW facility, Analytical Laboratory (LAB), and Balance of Facilities (BOF) will be used to treat and immobilize the tank waste. The WTP is currently under construction and scheduled to perform start-up testing, cold commissioning, and hot commissioning under a separate contract during the Contract performance period.

#### General Scope:

The Contractor shall conduct a continuing in-process evaluation of WTP operational readiness to promote Contractor understanding of and planning for future WTP operations, verify that there are no deficiencies that would preclude successful Contractor operations, and support safe and efficient turnover of completed WTP facility(ies). DOE will require that the WTP Contractor certify that performance requirements are met, and DOE will independently accept the WTP facility(ies).

#### Detailed Scope and Requirements:

The Contractor shall develop a *WTP Operational Readiness Plan* (Deliverable C.2.3.2-1) detailing a time-phased approach for evaluation of WTP operational readiness to:

- Promote Contractor understanding of and planning for future WTP operations;
- Perform a continuing, in-process evaluation on WTP operability at a component, system, and facility basis;
- Verify that the WTP is ready to transition to Contractor operations; and
- Support safe and efficient Contractor acceptance of WTP facility(ies).

The Contractor shall submit the *WTP Operational Readiness Plan* to DOE-ORP for approval.

The Contractor shall report its evaluation of WTP operability in a *Semi-annual WTP Operational Readiness Evaluation* (Deliverable C.2.3.2-2). The evaluation will address each of the five (5) topical areas shown below for each of the WTP facilities (Pretreatment, HLW, LAW, LAB, and BOF).

#### Topical Areas:

- Process flowsheet viability;
- Reliability, availability, maintainability, and inspectability;

- Training and testing activities; and
- Cold and hot commissioning.

In the *Semi-annual WTP Operational Readiness Evaluation*, the Contractor shall document its technical basis to verify that the WTP is ready for transition to Contractor operations and that there are no deficiencies that would preclude successful Contractor operations. The responsible corporate official with knowledge of the basis for the evaluation, identified in Section H Clause entitled, *Responsible Corporate Official*, shall sign each of the *Semi-annual WTP Operational Evaluations*.

### **C.2.3.3 Sub-CLIN 3.3: Immobilized High-Level Waste (IHLW) Storage and Shipping Facility Construction**

#### Background:

IHLW produced by the WTP will be stored on-site until shipment to an off-site repository. A Canister Storage Building (CSB), with three below grade vaults, is in operation. One of the three vaults currently provides interim storage for spent nuclear fuel canisters. The other two vaults are empty and require modifications to be able to accept up to 880 IHLW canisters. Project design to modify the two empty vaults is complete, but modifications have not begun.

#### General Scope:

The Contractor shall design, construct, commission, and operate a storage facility for IHLW canisters to support WTP production of IHLW. Based on the availability of an off-site repository, the Contractor shall design, construct, commission and operate a Hanford Shipping Facility for IHLW and SNF.

#### Detailed Scope and Requirements:

##### ***Hanford Shipping Facility and IHLW Interim Storage***

The Contractor shall:

- Define and evaluate alternatives for location of the Hanford Shipping Facility, and the amount and location of on-site interim storage. The Contractor shall prepare a *Hanford Spent Nuclear Fuel and Immobilized High Level Waste Interim Storage Alternatives Analysis* (Deliverable C.2.3.3-1) and submit to DOE-ORP for information.
- Design a Hanford Shipping Facility that is capable of:
  - Receiving IHLW and SNF transportation casks on railroad cars from the off-site repository;
  - Removing and opening the casks;
  - Placing IHLW and SNF canisters into the casks,
  - Closing the casks and remounting them on the railcars; and
  - Staging the loaded railcars for return to the off-site repository.
- Complete modifications to the CSB and/or construction of a separate interim storage facility and ensure that the facility is ready for operation prior to WTP commencement of IHLW production.

- Complete construction of the Hanford Shipping Facility with capability to ship at a rate of 600 canisters per year. Actual shipping rates will be determined by the DOE Office of Civilian Radioactive Waste Management in accordance with the Integrated Acceptance Schedule.
- Prepare to operate the Hanford Shipping Facility in accordance with DOE-ORP direction (to be provided post-award) derived from the *Memorandum of Agreement for Acceptance of Department of Energy Spent Nuclear Fuel and High-Level Radioactive Waste*. Contractor responsibilities will include:
  - Loading IHLW and SNF canisters into transportation casks in accordance with procedures provided by DOE Office of Civilian Radioactive Waste Management;
  - Performing routine and incidental maintenance of transportation casks and equipment; and
  - Providing procedures, equipment and supplies, and personnel training for both Contractor and DOE staffs in the handling and maintenance of the SNF and IHLW canisters, as well as storage facilities and transportation equipment.

### ***ILAW and IHLW Transport***

The Contractor shall design and procure the necessary equipment and arrange for transportation of ILAW, IHLW, and unique waste forms from WTP and supplemental treatment facilities to their respective on-site disposition or storage locations.

#### **C.2.3.4 Sub-CLIN 3.4: Upgrade and Operate the Effluent Treatment Facility**

##### General Scope:

The Contractor shall assume responsibility for the 200 East Area ETF and LERF, and complete upgrade designs and permitting, perform facility upgrades, and operate the ETF and LERF.

##### Detailed Scope and Requirements:

The Contractor shall assume responsibility for the 200 East Area ETF and LERF from the PRC in accordance with the DOE-ORP approved *ETF/LERF Transition Plan*.

The Contractor shall complete ETF and LERF upgrade designs and permitting, and perform facility upgrades to enable the facilities to receive and treat anticipated waste stream volumes and types.

The Contractor shall maintain the facilities in a ready-to-serve status, function as a service provider for other site contractors, and coordinate with waste generators to develop annual waste volume projections for DOE-ORP review.

The Contractor shall operate the LERF and ETF to receive liquid waste that meets applicable waste acceptance criteria.

The Contractor shall treat liquid wastes and dispose of liquid and solid wastes in accordance with DOE directives, regulations, and discharge permits.



## **C.2.4 CLIN #4 – Supplemental Treatment**

### **C.2.4.1 Sub-CLIN 4.1: Demonstration Bulk Vitrification System (DBVS) Construction and Operations**

#### **Background:**

Bulk vitrification is the tank waste treatment technology currently selected for testing and development at Hanford. Alternative technologies are being tested at other DOE Sites. Selection of the Hanford Site technology is dependent on the performance of the DOE options under development. The DBVS has been sited and designed. Laboratory, engineering, and production-scale testing continues to be conducted.

#### **General Scope:**

The Contractor shall complete an evaluation of DBVS design; procure, build, and operate a pilot scale one-line bulk vitrification plant; and conduct plant and waste form performance testing to determine the effectiveness of the treatment technology.

#### **Detailed Scope and Requirements:**

##### ***DBVS Planning***

The Contractor shall evaluate the current design and pre-construction testing for acceptability.

The Contractor shall develop a *DBVS Construction, Testing, and Operations Plan* (Deliverable C.2.4.1-1) for DOE-ORP approval. The Plan shall include, but not be limited to, pre-construction testing of pilot plant systems, pilot plant construction, construction acceptance and operational testing, and operations including waste form and plant performance evaluation.

##### ***DBVS Execution***

The Contractor shall procure, build, test, start up, and operate the DBVS. Plant and immobilized waste form performance data shall be collected to support a decision by DOE on supplemental LAW treatment technologies.

The Contractor shall develop a *DBVS Pilot Plant and Vitrified Waste Form Performance Test Plan* (Deliverable C.2.4.1-2) for DOE-ORP approval.

The pilot plant shall be capable of testing waste processing under radioactive conditions, demonstrate the effectiveness of joule-heated melting utilizing Hanford radioactive tank waste, and provide design, construction, and operations lessons learned and training that could minimize technical and schedule risks for the production-scale bulk vitrification system.

The Contractor shall document the results of the DBVS pilot plant operational performance and the primary waste packages and vitrified waste forms environmental performance in a *DBVS Pilot Plant and Vitrified Waste Form Performance Results* report (Deliverable C.2.4.1-3) and submit the report to DOE-ORP for review. The report shall document performance data to include, but not limited to:



- DBVS pilot plant unit processing duration, and melter throughput, availability, and reliability while processing radioactive waste streams;
- Operational resource requirements and total operating efficiency;
- Equipment availability input to production plant;
- Maintenance and critical spares information;
- Quantification of the bounds of glass composition envelopes;
- Primary waste packages and vitrified waste forms environmental performance comparison to the waste acceptance criteria of the Hanford Site Integrated Disposal Facility (IDF);
- Secondary waste streams including off-gases and liquids environmental performance and volume quantification;
- Critical permitting data for the production-scale project;
- Identification of optimization in technology application, startup, operations, and process control for a production facility;
- Validation of whether off-gas treatment system consistently performs to meet or exceed (i.e., performs better than) regulatory requirements; and
- Operation of the vitrified waste package core sampling system.

### **Quality Assurance**

The Contractor shall ensure that analytical laboratory analyses conducted on the DBVS waste feed, primary waste packages, vitrified waste forms, and secondary waste forms meet the quality requirements of the *Hanford Analytical Services Quality Assurance Requirements Document*.

### **Technical Recommendation**

The Contractor shall make a technical recommendation on the viability of bulk vitrification as a LAW treatment technology for application on a production-scale based on the pilot plant operational performance, primary waste packages and vitrified waste forms environmental performance, and secondary waste forms environmental performance data.

The Contractor shall submit a *Recommendation on the Viability of the Bulk Vitrification Waste Treatment Technology* report (Deliverable C.2.4.1-4) to DOE-ORP for approval.

### **Comparative Analysis**

The Contractor shall perform a comparative analysis of the bulk vitrification technology to alternative technologies (e.g., steam reforming, cast stone, a second WTP ILAW facility, and any other viable technologies) based on the pilot plant operational performance, vitrified waste form and secondary waste form performance. The Contractor shall provide assistance as determined by DOE-ORP during the DOE independent, expert review of its comparative analysis process and results.

The Contractor shall submit a *Comparative Analysis of Supplemental Treatment Technologies* report (Deliverable C.2.4.1-5) to DOE-ORP for review.

### **Re-permit Recommendation**

Upon completion of the DBVS mission at its present site, the Contractor shall evaluate system performance results and submit a recommendation to DOE-ORP to either decommission the DBVS pilot plant and return the site to grade, or negotiate with Washington State regulators to re-permit the facility for an additional treatment mission.

The Contractor shall submit a *Recommendation to Re-Permit DBVS* report (Deliverable C.2.4.1-6) to DOE-ORP for approval.

### ***Disposal***

The Contractor shall design and procure the transportation equipment and arrange for transportation of the vitrified waste packages to the appropriate on-site disposal location, in accordance with the facility waste acceptance criteria and regulatory requirements.

### ***Decommission***

If the DBVS will not be modified for extended operations, then the Contractor shall decommission the DBVS facility in accordance with approved plans and permitting requirements.

## **C.2.4.2 Sub-CLIN 4.2: Extended Demonstration Bulk Vitrification System Operations**

### **Background:**

When the DBVS has completed its mission as a pilot plant, and if proven successful, DOE-ORP may direct the Contractor to upgrade the pilot plant so that it may be permitted to process additional tank waste.

### **General Scope:**

The Contractor shall permit, modify, and perform extended operations of the DBVS.

### **Detailed Scope and Requirements:**

#### ***Permit***

The Contractor shall re-permit the DBVS for further service.

The Contractor shall meet RCRA Part B permit and radioactive mixed waste processing requirements.

The Contractor shall assume a lead role in negotiations with the regulators to develop the RCRA Part B Permit modification.

#### ***Pilot Plant Modification***

The Contractor shall develop an 80 percent (%) probability cost and schedule estimate to refit the pilot plant to meet RCRA Part B permit and radioactive mixed waste processing requirements,

and submit a *Cost and Schedule Estimate for the Extended Operations of the Demonstration Bulk Vitrification System* report (Deliverable C.2.4.2-1) to DOE-ORP for approval.

The Contractor shall:

- Modify the pilot plant for further service and identify candidate tanks for processing.
- Design and fabricate components and systems, and perform construction activities to install and upgrade the pilot plant, as necessary, for the plant to meet RCRA Part B permit and radioactive mixed waste processing requirements.
- Revise the existing waste feed acceptance specification consistent with the design modifications and waste forms to be processed.
- Submit for DOE-ORP approval an *Extended Operations of the DBVS Final Design Modifications and Feed Acceptance Specifications* report (Deliverable C.2.4.2-2).

### ***Extended Demonstration Bulk Vitrification System Operations***

The Contractor shall develop sampling and analysis plans for the plant waste feed, primary waste packages and vitrified waste forms, and secondary waste forms, and submit an *Extended Operations of the DBVS Sampling and Analysis Plan* (Deliverable C.2.4.2-3), to DOE-ORP for approval.

The Contractor shall perform extended operations of the DBVS and ensure that the waste feed meets feed acceptance specifications and the immobilized products meet the standards for on-site disposal under DOE, RCRA, and Ecology permit requirements.

The Contractor shall operate the plant and ensure that all effluent vapor and liquids and all secondary waste streams meet on-site disposal requirements. The Contractor shall perform solid/liquid separation and waste feed pretreatment necessary to meet the waste feed requirements.

### ***Quality Assurance***

The Contractor shall ensure that analytical laboratory analyses conducted on the waste feed, primary waste packages, vitrified waste forms, and the secondary waste forms meet the requirements of the *Hanford Analytical Services Quality Assurance Requirements Document*.

### ***Decommission***

Upon completion of extended DBVS operations, the Contractor shall decommission and demolish the DBVS facility in accordance with approved plans and permitting requirements.

## ***Disposal***

The Contractor shall arrange for transportation of the vitrified waste packages to the appropriate on site disposal location.

### **C.2.4.3 Sub-CLIN 4.3: Supplemental Treatment Design**

#### **Background:**

Depending on future waste treatment decisions, DOE-ORP may direct the Contractor to permit and commence design on supplemental LAW treatment capacity.

#### **General Scope:**

The Contractor shall perform the necessary activities to permit and commence design of additional supplemental treatment capacity for low activity tank waste.

#### **Detailed Scope and Requirements:**

The Contractor shall commence design, permitting, and safety analysis activities up through Critical Decision 2, *Approve Performance Baseline*, for LAW treatment facilities in accordance with the requirements of DOE Order (O) 413.3A, *Program and Project Management for Acquisition of Capital Assets*. Plant treatment capacity shall meet the requirements determined by the planning models and RPP System Plan described in Section C.2.3.1, Treatment Planning and Waste Feed Delivery.

The Contractor shall design treatment processes to ensure that the treated waste meets the standards for on-site disposal under DOE, RCRA, and Ecology permit requirements.

The Contractor shall develop treatment waste feed acceptance specifications consistent with the design and waste forms to be processed. The design shall incorporate solid/liquid separation and waste feed pretreatment necessary to meet the waste feed acceptance specifications.

### **C.2.4.4 Sub-CLIN 4.4: Supplemental Treatment Construction and Operations**

#### **Background:**

Depending on future waste treatment decisions, DOE-ORP may direct the Contractor to complete design and construction of supplemental LAW treatment capacity.

When supplemental treatment construction is completed, it may be advantageous for DOE to direct transition and/or operation of the supplemental LAW treatment capacity.

#### **General Scope:**

The Contractor shall construct additional supplemental treatment capacity for LAW.

**Detailed Scope and Requirements:**

The Contractor shall complete design and permitting, and procure and construct supplemental LAW treatment capacity. The plant(s) shall receive LAW feed from SSTs and DSTs.

Plant treatment capability shall meet the requirements determined by the planning models and *RPP System Plan* described in Section C.2.3.1, *Treatment Planning and Waste Feed Delivery*.

Treated waste shall meet the standards for on-site disposal under DOE, RCRA, and Ecology permit requirements.

The Contractor shall perform solid/liquid separation and waste feed pretreatment necessary to meet the waste feed acceptance specifications.

**C.2.4.5 Sub-CLIN 4.5: Transuranic Tank Waste Treatment and Packaging**

**Background:**

The Hanford Transuranic (TRU) Tank Waste Project was initiated to provide supplemental treatment of TRU tank waste. Project and equipment status is documented in RPP-PLAN-25638, Revision 0, *Transuranic Waste Project Standby Report*. Significant portions of the retrieval and treatment systems are currently used in other Tank Farm projects.

Regulatory documentation including the Waste Isolation Pilot Plant (WIPP) Class III RCRA permit modification, the RCRA Part B permit modification, the U.S. Environmental Protection Agency (EPA) Compliance Recertification Application, and appropriate *National Environmental Policy Act of 1969* (NEPA) documentation are in development.

**General Scope:**

The Contractor shall design, permit, construct, and operate a TRU tank waste packaging, characterization, and storage system for CH-TRU tank waste.

**Detailed Scope and Requirements:**

***CH-TRU Packaging System***

The Contractor shall permit, design, construct and operate a CH-TRU waste treatment and packaging system for TRU tank waste retrieved from selected SSTs.

***WIPP Certification***

The Contractor shall perform the WIPP-required characterization and support PRC in certification activities to demonstrate acceptability of the CH-TRU tank waste packages for disposal at WIPP.

### **CH-TRU Temporary Storage**

The Contractor shall arrange for transportation of the CH-TRU waste packages to the PRC for storage pending shipment to WIPP.

## **C.2.5 CLIN #5 – Early Feed and Operation of the WTP Low Activity Waste Facility (LAW)**

### Background:

Depending on future waste treatment decisions, DOE-ORP may direct the Contractor to pursue actions to allow the WTP LAW Facility to begin vitrifying pretreated tank waste prior to the projected complete WTP hot start. Startup of the WTP LAW Facility will require early startup of the WTP LAB and the BOF on the WTP site, as well as modifications to other Hanford Site infrastructure (i.e., ETF). Construction work would continue on the WTP Pretreatment and HLW facilities with the construction zones cordoned off from the operational facilities.

When WTP Pretreatment and HLW facilities are completed, it may be advantageous for DOE to direct transition and/or operation of these WTP capabilities to support early feed and operation of the WTP LAW facility.

### **C.2.5.1 Sub-CLIN 5.1: Tank Selection, Retrieval, Pretreatment and Feed Delivery Design**

#### General Scope:

The Contractor shall perform the activities necessary to permit and commence design of tank waste retrieval, pretreatment and waste feed delivery equipment and facilities to provide pretreated waste to the WTP LAW facility.

#### Detailed Scope and Requirements:

The Contractor shall identify the waste tank retrieval, staging, conditioning, pretreatment, and feed delivery sequences to provide waste feed delivery to the WTP LAW facility while optimizing the later waste feed retrieval and delivery processes for subsequent startup of the entire WTP complex. These planning sequences shall be documented and approved by DOE-ORP as described in the Sub-CLIN entitled, *Treatment Planning, Waste Feed Delivery, and WTP Transition*.

The Contractor shall commence design, permitting, and safety analysis activities up through Critical Decision 2, *Approve Performance Baseline*, for the waste tank retrieval; waste staging, conditioning, and pretreatment; feed delivery equipment and facilities; and secondary waste stream treatment (including modifications to the ETF) in accordance with the requirements of DOE O 413.3A, *Program and Project Management for Acquisition of Capital Assets*.

The Contractor shall produce a design to provide waste feed to the WTP LAW facility that meets the waste acceptance criteria in the WTP contract as described in the ICDs between the WTP and the TOC.

The Contractor shall compare early startup of the WTP LAW facility versus other treatment options for LAW – considering projected life-cycle costs, waste treatment schedules, waste form

performance, environmental and program risks, and impacts to other Hanford mission activities. The Contractor shall incorporate the analysis results into the *RPP System Plan*.

The Contractor shall interface with applicable Hanford Site contractors to ensure treatment planning includes planning for impacts and for the necessary modifications to projected Site services and waste management functions and facilities including ETF and the Liquid Effluent Retention Facility (LERF). The Contractor shall submit for DOE-ORP approval an *ETF/LERF Transition Plan* (Deliverable C.2.5.1-1) detailing the turnover of the ETF and LERF to the TOC.

#### **C.2.5.2 Sub-CLIN 5.2: Retrieval, Pretreatment and Feed Delivery Construction and Operations**

##### General Scope:

The Contractor shall complete design and permitting, and procure, construct and operate tank waste retrieval, pretreatment, waste feed delivery, and secondary waste treatment equipment and facilities to provide pretreated waste to the WTP LAW facility.

##### Detailed Scope and Requirements:

The Contractor shall complete designs and permits; and procure and construct the waste tank retrieval; waste staging, conditioning, and pretreatment; feed delivery equipment and facilities; and secondary waste stream treatment to provide waste feed delivery to the WTP LAW facility.

The Contractor shall operate the equipment and facilities to stage pretreated waste and to provide waste feed to the WTP LAW facility that meets the waste acceptance criteria in the WTP contract as described in the ICDs between the WTP and the TOC.

#### **C.2.5.3 Sub-CLIN 5.3: (Reserved)**

#### **C.2.5.4 Sub-CLIN 5.4: LAW/BOF/LAB Operations**

##### General Scope:

The Contractor shall transition, manage, maintain, and operate the WTP LAW/BOF/LAB facilities to produce Immobilized Low Activity Waste (ILAW) for delivery to the on-site disposal facility.

##### Detailed Scope and Requirements:

##### ***Operating Specifications***

The Contractor shall submit the *WTP LAW Facility Operating and Product Specifications* (Deliverable C.2.5.4-1) concurrent with the *WTP LAW/BOF/LAB Facility Transition Plan* to DOE-ORP for approval. The specifications document shall include:

- ILAW container requirements and filled container limitations;
- Container fill and constituent requirements;
- Waste form sampling; and

- ILAW container handling and shipping to the approved on site disposal location.

### **WTP Facility Transition**

Once each operational WTP facility(ies) is accepted by DOE-ORP under the WTP contract, the Contractor shall begin the transfer of the operational facility(ies), necessary operations and maintenance workforce, and all activities that support operations between the WTP contractor and the Contractor.

The Contractor shall coordinate directly with all other Hanford Site contractors that support an interface with the WTP facility(ies) and submit for DOE-ORP approval a *Transition Agreement* with the signatures of all involved parties.

The Contractor shall conduct a self-assessment of each facility(ies) transfer, support DOE-ORP verification of each transfer, and be accountable for WTP facility(ies) operation following transfer.

### **LAW/BOF/LAB Operations**

The Contractor shall manage, maintain, and operate the WTP LAW/BOF/LAB facilities to produce containers of ILAW. Each container shall be routed through the complete process and equipment system, including level measurement, sampling as required, inert fill (as required), lid closure, decontamination, and placement in position for shipment.

The Contractor shall arrange for transportation of the ILAW containers to the appropriate on-site disposal location in accordance with the facility waste acceptance criteria and regulatory requirements.

## **C.2.6 CLIN #6 – Pension and Welfare Plans**

### **C.2.6.1 Sub-CLIN 6.1: Hanford Employee Retirement and Benefit Plan Management**

The Contractor will have certain responsibilities regarding sponsorship, management and administration of pension and other benefit plans for certain active and retired contractor employees at the Hanford Site. The requirements and scope of these responsibilities are set forth in the Section H Clause entitled, *Employee Compensation: Pay and Benefits* and the Section H Clause entitled, *Post-Contract Responsibilities for Pension and Other Benefit Plans*.



### **C.2.6.2 Sub-CLIN 6.2: Legacy Pension and Benefit Plan Management**

The Contractor will have certain responsibilities regarding sponsorship, management and administration of pension and other benefit plans for certain retired contractor employees associated with work at different DOE Sites. The requirements associated with these responsibilities are set forth in the Section H Clause entitled, *Employee Compensation: Pay and Benefits* and the Section H Clause entitled, *Post-Contract Responsibilities for Pension and Other Benefit Plans*.

### **C.2.7 CLIN #7 – American Recovery and Reinvestment Act (ARRA) Workscope**

The workscope identified in CLIN 7 is not new scope. The work identified in Sub-CLIN 7.1, 7.2, 7.3, and 7.4 is scope that is already part of Sub-CLIN(s) 1.2, 1.3, 3.1, and 3.3 identified above. CLIN 7 and associated Sub-CLIN(s) has been developed solely for the purpose of identifying the scope contemplated and provide for a method of tracking funds received as part of the American Recovery and Reinvestment Act (ARRA). See Section J, attachment J.15, *American Recovery and Reinvestment Act (ARRA) Milestones and Performance Measures*, for specific major ARRA program milestones, milestone dates, required evidence of achievement, and performance measures/metrics.

#### **C.2.7.1 Sub-CLIN 7.1: ARRA workscope under Sub-CLIN 1.2 - Safe, Compliant Operations**

##### General Scope:

The Contractor shall maintain and operate the Tank Farms, 242-A Evaporator, and supporting Tank Farm infrastructure.

For the assigned work scope, the Contractor shall establish and implement the necessary programs and processes for:

Project Management (Section C.3.1);  
Integrated Safety Management System (ISMS) (Section C.3.2);  
Security and Emergency Services (Section C.3.3);  
Interactions (Section C.3.4); and  
Interface Management (Section C.3.5).

##### Detailed Scope and Requirements:

#### ***SST System Management***

The Contractor shall operate and maintain the SST system and ancillary facilities to safely store tank waste and facilitate tank waste retrieval and component closure. The Contractor shall perform non-destructive testing and evaluation of SSTs and miscellaneous underground storage tanks to assure continued tank integrity commensurate with the waste contained in each tank and the associated risk.

### ***DST System Management***

The Contractor shall integrate with the WTP contractor, and operate the DST system to maintain acceptable waste feed specifications for future waste feed delivery to the WTP while optimizing use of available DST space to facilitate SST waste retrieval and in-tank treatment to preserve tank integrity and improve waste feed characteristics.

### ***Maintenance***

The Contractor shall perform calibrations, maintenance and required equipment installations to assigned facilities in support of the RPP mission with a prioritization that provides the best value to DOE-ORP.

### ***Upgrades***

The Contractor shall plan and execute Tank Farm and related facilities upgrade sub-projects, as necessary, to support safe, reliable, and compliant storage, and tank waste retrieval, staging, delivery, and treatment efforts.

### ***DST Integrity/Life Extension***

The Contractor shall maintain DST waste within TSR chemistry specifications to minimize tank corrosion. Chemistry specifications shall be evaluated to optimize tank protection while minimizing waste generation and resultant vitrified waste form volume. The Contractor shall perform non-destructive testing and evaluation of tanks to meet Resource Conservation and Recovery Act of 1976 (RCRA) requirements, status tank corrosion, and assure continued tank integrity.

### ***Sampling & Characterization***

The Contractor shall maintain a ready-to-serve waste tank sampling and sample transportation capability. The Contractor shall perform tank waste sampling and characterization to support safe storage and evaporator operations, and to preserve tank integrity. Sampling and characterization activities for tank waste retrieval, tank closure, treatment planning and waste feed delivery are included in their respective sub-CLINs.

### ***Evaporator Operation***

The Contractor shall operate the 242-A Evaporator in support of DST space management, waste retrieval, and feed delivery activities. The Contractor shall perform evaporator maintenance and upgrades, as necessary, to support the RPP mission.

### ***Secondary Wastes***

The Contractor shall perform detailed planning and implementation of activities to support packaging and treatment for disposal of secondary liquid and solid wastes generated in the Tank Farms and assigned facilities.

### **C.2.7.2 Sub-CLIN 7.2: ARRA workscope under Sub-CLIN 1.3 – Analytical Laboratory Support**

#### **General Scope:**

The Contractor shall operate and maintain the 222-S Laboratory Complex to support analysis activities performed by the ASPC.

#### **Detailed Scope and Requirements:**

##### ***Instrumentation & Equipment***

The Contractor shall provide analytical instrumentation and support equipment to ensure capability, capacity, storage, and reliability are available to support Hanford Site cleanup schedules.

##### ***Maintenance***

The Contractor shall provide maintenance, routine calibrations, repairs and engineering functions.

##### ***Upgrades***

The Contractor shall plan and execute upgrades to the 222-S Laboratory Complex to support safe, reliable, and compliant operations.

### **C.2.7.3 Sub-CLIN 7.3: ARRA workscope under Sub-CLIN 3.1 – Treatment Planning, Waste Feed Delivery, and WTP Transition**

#### **General Scope:**

The Contractor shall provide integrated system planning for the RPP mission, incorporating the results from other integrated planning tools for SST retrievals, closures, and for waste feed delivery.

The Contractor shall perform waste feed delivery, including project planning, Tank Farm upgrade and new equipment installations, and operations to accomplish pretreatment (if needed), blending, mixing, retrieval and transfer of tank waste to support optimized and reliable feed delivery to the waste treatment facilities.

The Contractor and the WTP Contractor shall jointly develop a transition plan for safe and efficient transition of the operational WTP facilities to the Contractor.

#### **Detailed Scope and Requirements:**

##### ***Integrated Waste Feed Delivery Planning***

The Contractor shall prepare, submit for DOE-ORP approval, and implement an *Integrated Waste Feed Delivery Plan* (Deliverable C.2.3.1-2) to provide optimum and reliable pretreatment

(if needed), blending/mixing, retrieval and delivery of feed to DOE-ORP treatment facilities. This Plan shall include the needs of commissioning, near-term, and long-term operations; necessary studies, testing, and infrastructure installation; and projected waste transfer/pretreatment operations.

The Contractor shall ensure that the *Integrated Waste Feed Delivery Plan* is integrated with the *RPP System Plan*.

### ***Retrieval & Transfer System Upgrades***

The Contractor shall design, procure, and install DST retrieval and transfer system upgrades in support of Tank Farms activities, including in-tank treatment, waste staging, waste feed delivery to treatment systems, and optimizing use of DST space.

### ***Waste Pretreatment and Staging, DST Retrieval, and Feed Delivery Operations***

The Contractor shall operate and maintain the DST retrieval and feed delivery systems including in-tank treatment/pretreatment and blending/mixing systems to maximize the waste treatment system efficiency.

The Contractor shall perform sampling and characterization of DST waste as required to support feed delivery planning.

### ***Tank Waste Inventory Management***

The Contractor shall maintain the electronic and physical systems necessary to manage the tank waste inventory, including the:

- Tank Waste Information Network System (TWINS) database;
- Best Basis Inventory (BBI) – updated quarterly to account for tank waste transfers and data from sampling;
- Archive sample storage in the 222-S Laboratory; and
- WTP feed sampling.

### ***IHLW Storage and Disposition Planning***

The Contractor shall perform system planning and baseline management activities for IHLW storage and disposition, and shall assist DOE-ORP in their interface with the DOE Office of Civilian Radioactive Waste Management. The IHLW system planning shall be integrated into the *RPP System Plan*.

#### **C.2.7.4 Sub-CLIN 7.4: (Reserved)**

**C.2.7.5 Sub-CLIN 7.5:** ARRA workscope under Sub-CLIN 3.4 - Upgrade and Operate the Effluent Treatment Facility (ETF).

#### **General Scope:**

The Waste Treatment Plant is anticipated to produce a liquid effluent from the processing of High and Low Activity waste. This effluent is expected to contain low levels of radioactive and hazardous components that will need to be treated before final disposal. ETF is currently envisioned to be used as the treatment facility with final disposal occurring at the Integrated Disposal Facility.

Detailed Scope and Requirements:

The contractor shall:

- Initiate test program to determine a final secondary waste form that will be acceptable for disposal at the Integrated Disposal Facility (IDF). This waste form will need to meet long term performance objects that will be included in the IDF's Waste Acceptance Criteria.
- Perform crucible and small scale melter testing to enhance the low activity glass formulations retention of technetium (Tc) and other contaminants of concern. This testing is anticipated to reduce the requirements on the secondary waste form for final disposal at IDF.

**C.2.7.6 Sub-CLIN 7.6: ARRA workscope under Sub-CLIN 2.1 Single-Shell Tank Retrieval**

General Scope:

The Contractor shall design, procure, permit, construct/fabricate, and operate the SST retrieval system(s) used to remove waste from SSTs and transfer the waste to pretreatment/treatment systems, or to the DST system for eventual treatment.

Detailed Scope and Requirements:

***Retrieval Technologies***

The Contractor shall develop technologies to improve the efficiencies and equipment reliability for retrieving saltcake, hard heel, and other wastes from SSTs; determine technology limitations, retrieval efficiencies, safety and environmental concerns, and cost impacts for SST retrieval systems; and evaluate alternative retrieval technologies and leak detection methods for SSTs.

***Vadose Zone Characterization & Corrective Measures***

The Contractor shall perform Tank Farm vadose zone sampling, characterization, and corrective measures (in coordination with the PRC) to integrate these activities and drive efficiencies in the Hanford Site groundwater program. The TOC shall provide support to the lead contractor (PRC) for the groundwater/vadose zone program.

**C.3 DESCRIPTION OF PROJECT SUPPORT PERFORMANCE REQUIREMENTS**

The following Sections define the programs that must exist to safely and effectively perform the cleanup mission in the Hanford Tank Farms and related facilities. Beginning with Project

Management and progressing through Integrated Safety Management, Environmental, Safety, Health and Quality (ESH&Q), Security and Emergency Services, Interactions, and Interface Management, these programs shall be conducted in an integrated manner that protects the workers, public, and environment while enabling efficient cleanup.

### C.3.1 Project Management

The Contractor shall provide all management and technical information to:

- Meet the requirements of DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets* and DOE M 413.3-1, *Project Management for the Acquisition of Capital Assets*;
- Support the budget formulation activities including but not limited to emerging work items list; budget formulation input (including Integrated Priority List); fall limited budget update submission; budget scenario development; and budget presentations (such as public and regulatory briefings, etc.);
- Meet the data requirements of the DOE Integrated Planning; Accountability and Budgeting System;
- Ensure transparency in project performance and efficiency in project execution;
- Support audits, evaluations, and external technical reviews; and
- Support other DOE-ORP performance assessments and information needs.

The Contractor shall ensure that all project management information developed under this Contract is accessible to DOE-ORP electronically.

#### C.3.1.1 Project Integration and Control and Earned Value Management

The Contractor shall prepare and submit for DOE-ORP approval a *Project Execution Plan (PEP)* (Deliverable C.3.1.1-1) consistent with the PEP requirements in DOE O 413.3A and DOE M 413.3-1. The PEP shall describe the approach for managing and controlling all activities necessary to execute this Contract and shall focus on Contractor policies, methods, and approach to project integration of scope, schedule and cost information.

The Contractor shall provide, as an attachment to the PEP, a *Project Control System Description* that complies with the requirements of DOE O 413.3A, DOE M 413.3-1, and *American National Standards Institute (ANSI)/Electronic Industries Alliance (EIA)-748-A-1998 Earned Value Management Systems (EVMS)*.

The *Project Control System Description* shall describe the management processes and controls that shall be used to implement an EVMS, manage and control work, and complete Contract requirements. The *Project Control System Description* shall include:

- The baseline development process and the hierarchy of documents that shall be used to describe and maintain the *TOC Project Performance Measurement Baseline (PMB)* (See Section C.3.1.2.1, *Performance Measurement Baseline*);
- The process the Contractor intends to use for earned value management, change control, configuration control, interface control, and document control;
- The organizational breakdown structure, including roles and responsibilities of each

- major organization and identification of key management personnel; and
- A list of project software the Contractor proposes to use for project control.

The Contractor shall have the EVMS evaluated against the ANSI standard by a qualified, independent third party chosen by the DOE Office of Engineering and Construction Management (DOE-OECM). Upon successful completion of the evaluation, DOE-OECM will certify the Contractor's EVMS as compliant with the ANSI standard. Subsequent to the initial evaluation and certification, DOE-OECM may at any time require the Contractor to repeat the evaluation and certification process. The Contractor shall provide all necessary support to conduct the initial and any subsequent evaluations and closure of all corrective actions.

The Contractor shall flow down the EVMS requirements in accordance with the Section I Clause entitled, *FAR 52.234-4, Earned Value Management System*.

Upon DOE-ORP approval of the PEP, the Contractor shall fully implement the *Project Control System Description*. The Contractor shall obtain Contracting Officer approval prior to implementing materially significant changes to the PEP. The Contractor shall provide DOE-ORP with access to all pertinent records, data, and plans for purposes of initial approval, approval of proposed changes, and the ongoing operation of the project control system.

### **C.3.1.2 Project Scope, Schedule, and Cost Baseline**

#### **C.3.1.2.1 Performance Measurement Baseline**

The Contractor shall develop and maintain a TOC Project Performance Measurement Baseline (PMB). The PMB is a life-cycle integrated and traceable technical scope, schedule, and cost baseline that encompass all activities to execute the requirements of this Contract, integrate the WTP scope and schedule, and complete the River Protection Project mission.

The PMB shall include the following:

- Technical Scope. The following baseline documents shall be viewed collectively as the technical scope for the PMB:
  - The Contract Section C, *Statement of Work*;
  - The *River Protection Project System Plan*;
  - Waste site and facility lists;
  - Approved Interface Control Documents (ICDs);
  - Work Breakdown Structure (WBS) dictionary sheets required to a WBS level to be determined post-award by DOE-ORP;
- Schedule at a WBS level to be determined post-award by DOE-ORP; and
- Time-phased life-cycle cost estimate.



The PMB shall comply with the following requirements:

- The scope, cost and schedule shall be linked through use of the WBS provided by DOE-ORP or as otherwise approved by DOE-ORP. The WBS shall encompass all activities required in this Contract and provide the basis for all project control system components, including estimating, scheduling, budgeting, and project performance reporting. Control accounts within the WBS shall be identified.
- The baseline and management thereof shall comply with; *ANSI/EIA-748-A-1998 Earned Value Management Systems (EVMS)*, DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets*, and DOE M 413.3-1, *Project Management for the Acquisition of Capital Assets*.
- The PMB schedule shall:
  - Include all significant external interfaces, all TPA milestones, other regulatory and DNFSB commitments, and Government-Furnished Services and Information (GFS/I) dependencies.
  - Be an integrated, logical network-based plan that correlates to the WBS, is vertically traceable to the EVMS control accounts, and successfully aligns the Tank Farm Project schedule with the WTP schedule. The schedule shall be capable of summarizing from control accounts to higher WBS levels.
- A working level schedule(s) shall be developed for the execution year plus 6 additional months. The working level schedule(s) shall be integrated with the PMB and able to provide earned value reporting in compliance with *ANSI/EIA-748-A-1998 Earned Value Management Systems (EVMS)*.
- The PMB cost estimate shall include project resource plans, detailed resource estimates, basis of estimates, budgetary requirements, and identification of direct costs, indirect costs, management reserve, and fee.
- The method used to determine earned value shall be identified for each control account.
- The PMB shall be accessible to DOE-ORP at any time through access to electronic files.
- The PMB shall integrate with the:
  - Financial systems(s);
  - Budget formulation;
  - Regulatory, DOE, and Congressional commitments; and,
  - Performance milestones including contract performance incentives and other performance measures established by DOE-ORP.

#### **C.3.1.2.2 Performance Measurement Baseline Submittals**

The Contractor shall develop and submit an initial *TOC Project Performance Measurement Baseline* (Deliverable C.3.1.2.2-1) to DOE-ORP for approval. The PMB submittal shall include both hard copies and electronic files for the:

- WBS and WBS dictionary sheets at the level in which the costs are collected and cross referenced to the corresponding Contract CLIN number;
- Time-phased cost estimate at a WBS level to be determined post-award by DOE-ORP;
- Basis of estimate at a WBS level to be determined post-award by DOE-ORP; and



- Time-phased resource-loaded schedule at a WBS level to be determined post-award by DOE-ORP.

The Contractor shall provide the WBS, WBS dictionary data, and the basis of estimate data in either Microsoft Word® or Microsoft Access® format. Cost data shall be provided in Microsoft Access® or Excel® format and the schedule shall be provided using the current version of Primavera Systems, Inc., Enterprise for Construction® software unless agreed to otherwise by DOE-ORP.

The Contractor shall provide additional data that may be required by the MSC for development of the Hanford Site-wide life-cycle baseline.

The Contractor shall support the DOE-ORP External Independent Review and Energy Systems Acquisition Advisory Board (ESAAB) review of the initial submittal of the PMB and follow-on reviews of required updates.

#### **C.3.1.2.3 Performance Measurement Baseline Change Control Process**

The PMB change process shall be sufficiently rigorous and disciplined to ensure that the PMB is accurate, up to date and capable of providing meaningful data and information.

The Contractor shall:

- Develop and submit for DOE-ORP approval, a *TOC Project Performance Measurement Baseline Change Control Process* document (Deliverable C.3.1.2.3-1), with change authorities consistent with the approved *Project Execution Plan* and DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets*.
- Implement the *Project Baseline Change Control Process* with the PMB used as the reference for all baseline changes.

#### **C.3.1.3 Project Performance Reporting**

The Contractor shall provide DOE with the necessary project performance information to support budget planning, execution, and reporting; project planning and execution; audit and evaluation; and other DOE performance assessment and information needs.

##### **C.3.1.3.1 Monthly Performance Report**

The Contractor shall submit a *Monthly Performance Report* (Deliverable C.3.1.3-1) representing the prior month's performance and transmit it to DOE-ORP for review by the last Tuesday of each month.

The Monthly Performance Report shall be a written report that includes, but is not limited to, the following:

- Project manager narrative assessment.
- Significant accomplishments and progress towards completion of project goals and objectives.

- Major issues including actions required by the Contractor and DOE-ORP;
- Analysis of funds expenditure, with projections for the Project by fiscal year and life of the Contract.
- Evaluation of safety performance (including ISMS metrics and all recordable injuries, lost-time injuries, and near-misses).
- Business structure information to demonstrate ongoing compliance with the requirements of the Section H clause entitled, *Self Performed Work*.
- Project Baseline Performance including:
  - Earned value management system information using the following OMB Contract Performance Report formats (DID-MGMT-81466):
    - Format 1, DD Form 2734/1, Mar 05, *Work Breakdown Structure*;
    - Format 2, DD Form 2734/2, Mar 05, *Organizational Categories*;
    - Format 3, DD Form 2734/3, Mar 05, *Baseline*;
    - Format 4, DD Form 2734/4, Mar 05, *Staffing*; and
    - Format 5, DD Form 2734/5, Mar 05, *Explanations and Problem Analysis*.
  - Stated baseline schedule, which reflects progress against the baseline and includes critical path analysis, performance trends, variance discussion(s), and potential issues related to TPA or DNFSB milestones.
  - Contract estimates-to-complete.
  - A change control section that summarizes the scope, technical, cost, and/or schedule impacts resulting from any implemented actions; and that discusses any known or pending baseline changes and use of management reserve.
- Project Risk Assessment including identification of critical risks, actions planned, and actions taken to address those risks, potential problems, impacts, and alternative courses of action, including quality issues, staffing issues, assessment of the effectiveness of actions taken previously for significant issues, or the monitoring results of recovery plan implementation. The Project Risk Assessment shall also identify the engineering and technology to reduce the risk and uncertainty with the project.
- Actions required by DOE-ORP including GFS/I and DOE-ORP decisions.

#### **C.3.1.3.2 Project Review Meetings**

The Contractor shall participate in a monthly contract/project review with DOE-ORP and be prepared to address any of the information in the monthly report, as well as other information requested by DOE-ORP. A weekly contract or project status meeting shall be conducted at DOE request to provide interim updates and address issues.

#### **C.3.1.4 Risk Management**

The Contractor shall implement a risk management process in compliance with the PEP, DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets*; and, DOE M 413.3-1, *Project Management for the Acquisition of Capital Assets*.

Risk and decision management activities shall be coordinated on a continuing basis with DOE-ORP (as lead), the WTP contractor, and the other Hanford Site contractors. Contractor risk analysis information pertaining to “cross-cutting” decisions shall be communicated to DOE-ORP, the WTP contractor, and other Hanford Site contractors, including agreement as to who should be the lead for managing each risk.

The Contractor shall provide a *Risk Management Plan* (Deliverable C.3.1.4-1) to DOE-ORP for approval. In the *Risk Management Plan*, the Contractor shall identify the management reserve required to adequately address contractor-controlled risks.

### **C.3.1.5 Design, Procurement, Construction, and Acceptance Testing**

This Section applies to all capital asset construction activities performed as part of executing this Contract. In the context of this Section, the terms “acceptance testing” and “acceptance” refer to the Contractor’s testing and acceptance of Tank Farm-related systems and equipment. The Contractor shall provide the necessary documents to support the critical decision process in DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets*.

#### **C.3.1.5.1 Project Design**

- **Design Authority:** The Contractor shall act as the design authority unless otherwise determined in accordance with DOE O 413.3A, with duties to include developing design solutions, preparing all design media and documentation, maintaining the design basis, and performing design reviews.
- **Design Standards:** The Contractor shall submit for DOE-ORP approval a list of the standards to be used in the design of facilities and equipment. The Contractor shall ensure that the project’s design meets all applicable standards, and that the list of applicable standards is maintained under configuration control. The Contractor shall integrate safety into the design process.
- **Design Reviews:** The Contractor shall conduct periodic design, constructability, and operability reviews. When directed by DOE-ORP, the Contractor shall facilitate independent DOE design reviews in support of the requirements of DOE O 413.3A, to demonstrate that the project will perform its intended functions and meets requirements. The Contractor shall provide the design at the end of the three (3) design stages (conceptual, preliminary and final), or as otherwise directed by DOE, for DOE review. The Contractor shall resolve any comments resulting from these reviews with DOE-ORP.
- **Release for Construction:** Upon receipt of Critical Decision 3, *Approve Start of Construction*, and resolution of DOE comments, DOE-ORP will authorize the Contractor to release the design for construction.

### C.3.1.5.2 Procurement, Construction, and Acceptance

The Contractor shall prepare and submit a *Procurement, Construction, and Acceptance Testing Plan* (Deliverable C.3.1.5.2-1) for DOE-ORP approval and update the Plan as required after initial submission. The Plan shall include:

- Description of procurements, construction bids, and work packages;
- Construction management;
- Construction site management;
- Acceptance testing; and
- Descriptive linkage to the *Project Execution Plan* and the *Integrated Safety Management System Description*.

The Contractor shall procure all required material and equipment through the preparation of bid packages and solicitations; evaluating, awarding, and managing subcontracts; accepting subcontractor materials and equipment; and verifying subcontractor acceptance tests.

The Contractor shall submit a *Purchasing System* (Deliverable C.3.1.5.2-2) for DOE-ORP approval in accordance with the Section I Clause entitled, *Subcontracts*.

The Contractor shall certify to DOE-ORP that construction has been initiated.

The Contractor shall maintain a construction inspection system and acceptance testing system, perform inspections and testing, and ensure that the work performed under the Contract conforms to Contract requirements. The Contractor shall maintain complete inspection and testing records and make them available to DOE-ORP. DOE-ORP may elect to use independent acceptance inspectors to participate in acceptance testing and system turnover. The Contractor shall develop and submit an integrated *Construction and Acceptance Testing Program* (Deliverable C.3.1.5.2-3) to DOE-ORP for approval that includes the following elements:

- Verification and approval of all vendor's shop drawings to assure conformity with the approved design and working drawings and specifications;
- Acceptance test plans and procedures for on-site Contractor/subcontractor inspection of construction workmanship, compliance with design drawings and specifications, management of the design construction changes, and criteria for acceptance of fabricated and constructed items;
- Integrated construction acceptance test plans and inspection of construction to assure adherence to approved working drawings and specifications.

The Contractor shall prepare for DOE-ORP review and approval an *As-built Program Description* (Deliverable C.3.1.5.2-4). The as-built process and associated procedures shall identify:

- Description of the as-built process, including the role of DOE-ORP and the operations contractor. The operations contractor shall participate in acceptance of the as-built design, following construction, and commissioning.
- Drawing series to be as-built.

- Document control process for maintaining as-built.
- Procedures for modification of the as-built.

During the construction and acceptance phase, the Contractor shall remain current on the process and facility as-built program. The Contractor shall report the status of the as-built program in accordance with the process defined in the *Procurement, Construction, and Acceptance Testing Plan*.

The Contractor shall provide all necessary labor, equipment, materials, test equipment, spare parts sufficient to maintain all structure, systems, and components in an operable condition, and other related resources for the acceptance testing program.

DOE-ORP, and other Hanford Site contractor staff identified by DOE-ORP, shall be invited to participate in all construction project overview activities. Construction overview activities include any meeting that discusses significant issues associated with the establishment, development, and/or progress of the construction activities.

The Contractor shall certify to DOE-ORP that facility acceptance has been completed. Completion of facility acceptance is defined when all components and systems associated with the facility have been installed, functionally tested and the facility design as-built documents are complete in accordance with the *Procurement, Construction, and Acceptance Testing Plan*. Facility acceptance shall require acceptance of components and systems, including as-built design drawings.

The Contractor shall provide CD-4 documentation in accordance with DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets* and DOE Office of Environmental Management guidance.

### **C.3.2 Integrated Safety Management System**

The Contractor shall establish and maintain a single, project-wide Integrated Safety Management System (ISMS) in accordance with the requirements of the Section I Clause entitled, *Integration of Environmental, Safety and Health into Work Planning and Execution*, Section I Clause entitled, *Laws, Regulations, and DOE Directives*; and the Section B Clause entitled *Conditional Payment of Fee, Profit and Other Incentives*.

The ISMS Description shall describe how ESH&Q is integrated into the contractor's work planning and execution process; clearly communicate the roles, responsibilities, and authorities of line managers; hold line managers accountable for the performance of work in a manner ensuring protection of workers, the public, and the environment; and ensure quality work and products.

The Contractor shall develop and submit for DOE-ORP approval an *Integrated Safety Management System Description* (Deliverable C.3.2-1), for ISM Phase I and Phase II Verification to be performed at a later date. The Contractor shall update the ISMS Description and obtain DOE-ORP approval annually or as required to reflect changing conditions and contractor responsibilities. The ISMS Description shall include an integrated Environmental Management System (EMS) developed pursuant to the DOE O 450.1, *Environmental Protection Program*. The Contractor shall provide this EMS to the MSC.

In accordance with the DOE M 450.4-1, *Integrated Safety Management System Manual*, the Contractor shall develop and submit an *Authorization Agreement (AA)* (Deliverable C.3.2-2) to DOE-ORP for approval. The AAs are the mechanism whereby DOE-ORP and the Contractor jointly clarify and agree to the key conditions for conducting work safely, effectively, and efficiently for Hazard Category 2 and 3 nuclear facilities. The Contractor shall update the AA and obtain DOE-ORP approval annually or as required to reflect changing conditions and contractor responsibilities.

The Contractor shall flow the applicable ISMS/ESH&Q requirements down to all levels of self-performed work and all tiers of subcontracted work performance, and promptly identify and correct areas of non-compliance and performance concerns on self-performed and subcontracted levels of work performance.

The Contractor shall pursue continuous improvement through the establishment, tracking, and annual updating of *ISMS/ESH&Q Performance Objectives, Measures, and Commitments* (Deliverable 3.2-3).

### **C.3.2.1 Environmental Regulatory Management**

The Contractor shall establish an environmental program which is compliant with applicable laws, regulations, DOE directives (including DOE O 450.1, *Environmental Protection Program*), and the Section H Clause entitled, *Environmental Responsibility*.

The Contractor shall provide MSC with the necessary support for MSC to:

- Develop an inclusive Site-wide Environmental Management System (EMS) Program Management Plan that complies with DOE O 450.1;
- Perform Site-wide environmental permits/licenses responsibilities, including maintenance, application and reporting;
- Track, trend, and evaluate all Site-wide enforcement actions, compliance issues, and regulatory inspections conducted and planned at the Hanford Site;
- Provide site-wide Tri-Party Agreement (TPA) Technical Support to DOE; and
- Establish, manage, and maintain integrated Hanford Site Administrative Records and Public Information Repository.

The Contractor shall submit for DOE-ORP approval, an *Environmental Protection and Compliance Plan* (Deliverable C.3.2.1-1), which describes the current environmental protection and compliance framework, proposed changes to this framework, and the proposed approach to maintain compliance with the TPA and other regulatory permits and requirements throughout the duration of the Contract. The Contractor shall update the *Environmental Protection and Compliance Plan* and obtain DOE-ORP approval, annually or as required to reflect changing conditions and contractor responsibilities.

The Contractor shall manage its facilities, waste management units, and operable units to assure compliance with environmental requirements and agreements. The Contractor shall integrate their environmental permitting and regulatory compliance activities with the Hanford Site-wide permitting and compliance framework maintained by the MSC, including but not limited to the *Hanford Air Operating Permit* and the *Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit (WA7890008967)*.

The Contractor shall interface with the MSC and other designated contractors in providing



legally and regulatory required air and liquid effluent and near facility environmental monitoring data. The Contractor shall collect, compile, and/or integrate air and liquid effluent monitoring data from operations and activities under their control. The Contractor shall compare the monitoring data with regulatory and/or permit standards applicable to their activities and/or operations and provide the data and analyses to the MSC or other designated contractors for use in preparing the mandatory state and Federal environmental reports for the Hanford Site, including the *Hanford Site Environmental Report*.

The Contractor shall integrate NEPA and RCRA required activities into the CERCLA process for the Central Plateau wherever appropriate. The Contractor shall prepare the technical information required for any additional NEPA analyses and/or documentation that may be required.

The Contractor shall provide all necessary support to DOE-ORP in executing its owner role with regulators and stakeholders in the preparation, submission, and approval of regulatory and supporting documentation required to complete the work under this Contract.

The Contractor is assigned lead responsibility for coordination with the regulators to develop an optimum regulatory approach for all work under this Contract. As part of this responsibility, the Contractor is encouraged to propose changes to the regulatory approach, including changes to current regulatory end-points to establish risk-based end-states that maintain protection of human health and the environment; and innovations to regulatory strategies and processes that improve total performance. The Contractor shall consult with DOE-ORP as an owner in advance of any proposed change to the regulatory approach.

#### **C.3.2.2 Nuclear Safety**

DOE will execute its nuclear safety responsibilities in accordance with DOE O 410.1. The Contractor shall adopt existing DOE-ORP-approved nuclear safety basis (e.g., Documented Safety Analysis (DSA) and Technical Safety Requirements (TSR)) documentation for the assigned Hazard Category 2 and 3 nuclear facilities

The Contractor shall maintain, implement and improve the nuclear safety basis documents and comply with the TSR for its assigned Hazard Category 2 and 3 facilities in accordance with 10 CFR 830, Subpart B, *Safety Basis Requirements*.

For new Hazard Category 1, 2 and 3 nuclear facilities or major modifications to nuclear facilities, the Contractor shall develop safety basis documents up to and including a Preliminary Documented Safety Analysis (PDSA) to support construction and a DSA and TSRs to support operations that incorporate the expectations identified in DOE Guide 421.1-2, *Implementation Guide For Use in Developing Documented Safety Analyses To Meet Subpart B Of 10 CFR 830*, and DOE Guide 423.1-1, *Implementation Guide For Use In Developing Technical Safety Requirements*. The Contractor shall integrate nuclear safety into the design process.

As required by 10 CFR 830.203, *Unreviewed Safety Question Process*, the Contractor shall submit an *Unreviewed Safety Question Process* procedure (Deliverable C.3.2.2-2) that incorporates the expectations identified in DOE G 424.1-1A, *Implementation Guide for Use in Addressing Unreviewed Safety Question Requirements*, to DOE-ORP for approval.

The Contractor shall ensure that the safety-related structures, systems, and components relied upon to meet the requirements of the nuclear safety basis documents are identified and

maintained with appropriate to their classification sufficient reliability to enable timely performance of mission work in the assigned facilities.

The Contractor shall instill a Nuclear Safety Culture at all levels of the workforce in accordance with applicable Institute of Nuclear Operations (INPO) standards.

### **C.3.2.3 Worker Safety and Health**

The Contractor shall implement a worker safety and health program that reduces or prevents occupational injuries, illnesses, and accidental losses by providing workers with a safe and healthy workplace. This program shall implement a structured, standards-based approach to planning and control of work including identification and implementation of worker safety and health standards and requirements that are appropriate for the work to be performed and for identifying and controlling related hazards, while facilitating the effective and efficient delivery of work. The program shall meet the requirements of 10 CFR 851, *Worker Safety and Health Program*.

The Contractor shall develop and submit for DOE-ORP approval a 10 CFR 851-compliant *Worker Safety and Health Program* (Deliverable C.3.2.3-1). The Contractor shall update the Program and obtain DOE-ORP approval, as required, to reflect changing conditions and contractor responsibilities. The Worker Safety and Health Program shall address the Worker Safety and Health Functional Areas described in Appendix A to 10 CFR Part 851.

The Contractor shall promote a "Safety Conscious Work Environment" and "Human Performance Improvement" environment in which safety issues are promptly identified and effectively resolved, and in which employees are free to raise safety issues free of recrimination, harassment, intimidation, or other actions that induce peer pressure to not raise safety issues or otherwise create an environment where safety issues are not identified and resolved.

The Contractor shall document and implement a Radiation Protection Program as required by 10 CFR Part 835.101, *Radiation Protection Programs*. The Contractor shall develop and submit for DOE-ORP approval a *Radiation Protection Program* (Deliverable C.3.2.3-2). The Contractor shall obtain DOE-ORP approval for updates to the Program, as required.

The Contractor shall develop and implement a *Chronic Beryllium Disease Prevention Program* in accordance with 10 CFR Part 850, *Chronic Beryllium Disease Prevention Program*. The Contractor shall submit the *Chronic Beryllium Disease Prevention Program* (Deliverable C.3.2.3-3) for DOE-ORP approval and obtain DOE-ORP approval for updates to the program, as required.

The Contractor shall empower workers through active pursuit of employee involvement in work planning and control, and through implementation of the tenets of the DOE Voluntary Protection Program (VPP). The Contractor shall support and facilitate transition and maintenance of this achievement by the workforce until such time as the Contractor can apply for recognition as a new entity.



#### C.3.2.4 Quality

The Contractor shall develop, submit for DOE-ORP approval, and implement a *Quality Assurance Program Description* (Deliverable C.3.2.4-1) that describes the overall implementation of DOE quality assurance (QA) requirements. The QAP shall be applied to all (not just ES&H) work performed by the Contractor. The Contractor shall obtain DOE-ORP approval for *Quality Assurance Program Description* updates as required.

The *Quality Assurance Program Description* shall implement the requirements of:

- 10 CFR 830 Nuclear Safety Management, Subpart A, *Quality Assurance Requirements*;
- DOE O 414.1C, *Quality Assurance*;
- DOE/CBFO-94-1012, *DOE Carlsbad Field Office, Quality Assurance Program Description*, Revision 8, for WIPP-related activities;
- DOE/RW-0333P, *DOE Office of Civilian Radioactive Waste Management, Quality Assurance Requirements and Description*, Revision 18, for activities related to disposal at Yucca Mountain; and
- ASME NQA-1-2004 (or latest edition and addenda), *Quality Assurance Requirements for Nuclear Facility Applications*, as the national consensus standard for TOC workscope implementing QA Criteria of 10 CFR 830 Subpart A and O 414.1C. The Contractor shall implement Parts I and II of the NQA-1 standard and indicate within the QA Program those portions of NQA-1 Parts III and IV that are applied to Contractor's workscope. If additional standards are required to address unique/specific work activities, the standards shall be identified within the Contractor's QA Program.

The Contractor shall develop, submit for DOE-ORP approval, and implement an *Assurance System Description* (Deliverable C.3.2.4-2) to identify and address program and performance deficiencies, opportunities for improvement, provide the means and requirements to report deficiencies to the responsible managers and authorities, establish and effectively implement corrective and preventive actions, and share lessons learned across all aspects of the workscope. The Contractor shall annually update and re-submit the *Assurance System Description* to DOE-ORP for approval.

The Contractor shall use a "zero-threshold" issue reporting system to capture, in one system, the issues raised across all Contractor organizations and working levels.

#### C.3.2.5 Event Reporting and Investigation

The Contractor shall report all environmental, safety, and health events and information as required in DOE M 231.1-1A, *Environment, Safety, and Health Reporting*; DOE O 450.1, *Environmental Protection Program*; and DOE O 5400.5, *Radiation Protection of the Public and the Environment*. The Contractor shall flow down the applicable reporting requirements to all levels of self-performed work and all tiers of subcontracted work performance. The Contractor shall consolidate all information and serve as a single point of reporting to DOE for all environmental, safety, and health events and information associated with the Contractor's workscope.

The Contractor shall support all Type A and Type B accident investigations for accidents on all self-performed and subcontracted levels of work performance, as required in DOE O 225.1A, *Accident Investigations*. The Contractor shall establish and maintain readiness to respond to an accident; respond to all accidents; mitigate potential accident consequences; assist in preserving,

collecting, and processing information and evidence from the scene of the accident; and provide all necessary support required to investigate the accident and support an accident investigation board.

The Contractor shall develop and maintain an effective Lessons Learned Program to capture lessons learned from both internally and externally identified deficiencies and good practices. The Lessons Learned Program shall be rigorous and comprehensive such that the Contractor can demonstrate actions taken to address significant occurrences from both inside and outside of the DOE complex. Lessons learned information should be targeted and made available to the personnel in the Contractor's organization actually conducting the type of work involved and most able to benefit from the information.

### **C.3.3 Security and Emergency Services**

#### **C.3.3.1 Safeguards and Security**

##### **C.3.3.1.1 Safeguards and Security Program Management**

The Contractor shall coordinate and interface with the MSC and its subcontractors who provide safeguards and security (SAS) services (e.g., Hanford Site access control, security police officers, vulnerability analysis).

The Contractor shall perform the following SAS program management functions:

#### ***SAS Program Planning, Oversight, and Administration***

The Contractor shall identify and coordinate their SAS operational planning activities with MSC operational planning activities on a Hanford Site-wide basis.

The Contractor shall provide SAS technical, cost, and schedule performance information to the MSC.

#### ***Security Conditions (SECON)***

The Contractor shall conform to and comply with the DOE SECON system. The Contractor shall comply with any protective measure requirements that may be implemented in the event of a crisis or emergency, and/or in response to a malevolent or terrorist threat to any or all DOE facilities, assets, and personnel.

#### ***Site Safeguards and Security Plan and Other SAS Plans***

The Contractor shall provide information to the MSC in support of maintaining the Hanford Site Safeguards and Security Plan and other SAS plans.

#### ***Vulnerability Assessments***

The Contractor shall provide the necessary operational and technical expertise in support of the preparation of vulnerability assessments, security analyses, and special SAS studies and evaluations as identified by the MSC for the Hanford Site.

#### ***Design Basis Threat (DBT)***

The Contractor shall implement SAS actions, procedures, and/or processes as assigned by DOE that are necessary to comply with DOE DBT requirements. Overall DBT implementation actions and/or plans shall be consolidated and prepared by the MSC and approved by the DOE.

### ***Performance Assurance***

The Contractor shall provide information to the MSC to support preparation of the Hanford Site-wide Performance Assurance Program Plan as part of the *Site Safeguards and Security Plan*.

### ***Surveys, Reviews, and Assessments***

The Contractor shall provide operational and technical expertise, when requested, to support SAS surveys, reviews, assessments and/or SAS performance tests (e.g., force-on-force exercises) that are conducted by the MSC and/or DOE for SAS program elements. The Contractor shall identify, implement, and close corrective actions for TOC deficiencies in accordance with the SAS corrective action management programs.

### ***Facility Clearance and Registration***

The Contractor shall submit all required information to the MSC for facility clearance and registration actions.

### ***SAS Training***

The Contractor shall identify SAS training needs for TOC staff and shall arrange, fund, and schedule training in accordance with applicable requirements.

### ***SAS Awareness***

The Contractor shall comply with the requirements of the Hanford Security Awareness Program.

The Contractor shall maintain awareness of Hanford Site wide security issues/topics and incorporate them into the Contractor's internal practices and procedures, as appropriate.

The Contractor shall implement supplementary SAS awareness activities and/or briefings (e.g., at staff and safety meetings) in coordination with Site-wide policies.

### ***Classified Visits***

The Contractor shall submit required information to the MSC for Classified visits. The Contractor's Classified Visits Program or process shall ensure that only persons with the appropriate access authorizations and need-to-know receive access to classified information or matter in connection with visits involving the release or exchange of classified information or matter.

### ***Deviations***

The Contractor shall identify, evaluate, and submit deviations to SAS requirements to DOE.

The Contractor shall coordinate with the MSC prior to submitting deviations to DOE. Deviation requests shall be applicable and unique to the project/program scopes of work, and submitted only when other means to meet requirements would not meet DOE's SAS program objectives.

### ***Incidents of Security Concern***

The Contractor shall develop and implement procedures and processes consistent with DOE requirements for addressing incidents of security concern.

The Contractor shall provide information and facility access to the MSC for investigation of security incidents. The Contractor shall develop and implement corrective actions. The Contractor shall provide information to MSC to support the administration of the Hanford Site Security Infraction Program.

#### **C.3.3.1.2 Physical Security**

The Contractor shall comply with the MSC security plans and DOE security plans/requirements.

The Contractor shall support the MSC in the development or updating of facility asset protection agreements for TOC facilities and shall conduct operations consistent with the agreements.

The Contractor shall submit, through MSC for DOE review and approval, any SAS arrangements or changes prior to operations commencing, or changing operations, or configurations that might alter the performance of existing SAS systems (e.g., limited/protected area boundaries, physical security configurations and associated hardware [sensors/cameras], patrol coverage and responses, safeguards methods or boundaries, entry/access control systems/procedures).

#### **C.3.3.1.3 Protective Forces**

The protective forces function is comprised of select security elements (armed personnel, specialized equipment, tactical procedures, etc.) associated with physically protecting people and property on the Hanford Site. The MSC is responsible for all protective forces activities; however, there are many areas of facility operations management that interweave. The MSC Protective Forces function serves DOE, all Hanford Site contractors, and in particular facilities possessing critical safeguards and security interests (e.g., special nuclear material (SNM)).

The Contractor shall support and integrate operational/business activities in conjunction with MSC Protective Forces in use at Hanford for the physical protection of SNM, classified materials, industrial assets, and mitigation and deterrence of radiological and toxicological sabotage events.

The Contractor shall manage their activities consistent with DOE-RL and DOE-ORP approved risk and vulnerability assessments, the *Site Safeguards and Security Plan*, and other security plans and facility asset protection requirements coordinated by the MSC that involve the use of Protective Forces.

#### **C.3.3.1.4 Information Security**

The Information Security program encompasses the identification and protection of sensitive and classified information and matter. The Information Security scope shall include, but is not limited to: Classification, Classified Matter Protection and Control, Sensitive Information Management (e.g., OOU), and Operations Security (OPSEC)

The Contractor shall perform the following information security functions:

### ***Operations Security***

The Contractor shall:

- Participate in and support Hanford Site-wide OPSEC Working and Awareness groups and perform the necessary management and support functions required for an effective OPSEC program.
- Provide support to the MSC OPSEC assessments of all Hanford Site facilities having Category I SNM and OPSEC reviews of all Hanford Site facilities that have the potential to process or store classified or sensitive information.
- Support the annual Site OPSEC threat assessment and preparation of the annual OPSEC plan.

### ***Classified Matter Protection and Control***

The Contractor shall:

- Develop and maintain a system of procedures, facilities, and equipment to identify, protect, and control classified matter that is being generated, received, transmitted, used, stored, reproduced, or destroyed in accordance with DOE directives.
- Be responsible for asset protection reviews for facilities that contain classified matter and, in conjunction with the MSC, maintain an updated list of security containers, locations, and custodians.
- Continuously reduce unneeded classified matter; and report and support investigation of any and all potential or actual compromise of classified information.

### ***Classification and Unclassified Controlled Nuclear Information (UCNI) Program***

The Contractor shall:

- Nominate a sufficient number of Derivative Classifiers and Reviewing Officials to be trained and approved by the MSC.
- Have appropriate classification and/or UCNI topical guidance available to organizations that are potential generators of classified and/or UCNI information.
- Provide for receipt and storage of classified documents from the MSC Classified Document Control Center.
- Interface with the MSC and other on-site contractor management, as necessary, to inform employees of subject areas of a sensitive and/or potentially classified nature.
- Be subject to the direction of the MSC Classification Officer.

### ***Official Use Only (OUO)***

The Contractor shall manage and implement an OUO information program consistent with the common Hanford Site-wide OUO information program policies including the following:

- Provide OUO education and awareness for all staff, and

- Review TOC documents released to the public or assigned a formal document number for OOU content.

### ***Critical Infrastructure***

The Contractor shall maintain TOC information systems that are critical to the Hanford Site mission and shall protect these systems from internal and external threats in conjunction with the MSC SAS program.

### **C.3.3.1.5 Personnel Security**

The MSC manages and conducts a centralized Personnel Security program for the Hanford Site on behalf of DOE.

The Contractor shall perform the following personnel security functions:

#### ***Access Authorization (Clearance) Processing***

The Contractor shall:

- Request and obtain personnel security clearances and badges, including "Special Access" (e.g., SIGMA) from the MSC. The Contractor shall support the MSC in downgrading and terminating clearances, as required.
- Support the MSC's processes for obtaining security badges, keys, proximity cards, etc., from terminating employees and support the MSC in removing such individuals from automated access control systems.
- Provide MSC pre-employment/pre-clearance suitability investigations information to the MSC for TOC prospective and current employees.

#### ***Workplace Substance Abuse Programs***

The Contractor shall comply with requirements outlined in 10 CFR 707, *Workplace Substance Abuse Programs (WSAP) at DOE Sites*.

#### ***Unclassified Foreign National Visits and Assignment (FNVA)***

The Contractor shall:

- Notify the MSC of potential foreign visitors or employees, prepare and submit security plans to the MSC for foreign national visitors to the Hanford Site before approval of the visit/assignment.
- Require FNVA training for Contractor personnel who host FNVA's.
- Conduct FNVA in compliance with approved security plans.

### **Foreign Travel**

The Contractor shall administer Official Foreign Travel in accordance with DOE O 551.1B, *Official Foreign Travel*, including submittal of projections of potential foreign travel, and all official foreign travel requests packages to DOE-ORP for review and subsequent submittal to DOE-HQ for approval in accordance with established timeframes, prior to any official foreign travel.

### **C.3.3.1.6 Nuclear Material Control and Accountability**

The MC&A scope involves many metric tons of accountable nuclear material (i.e., Other, Source, and SNM) in various locations on the Hanford Site. The nuclear material attractiveness and quantities encompass the entire range described in DOE requirements (e.g., Category IVE highly radioactive spent nuclear fuel, to Category I quantities of plutonium in a variety of chemical forms and isotopic amounts). The MSC manages and conducts a centralized MC&A program for the Hanford Site on behalf of DOE.

The Contractor shall perform the following MC&A functions:

- Assign an individual that will serve as the Contractor's MC&A single point-of-contact, independent of line operations, with the responsibility and authority to affect implementation of MC&A requirements. This individual shall work with the Hanford Site MC&A management official within the MSC to provide oversight of accountable nuclear material in possession of the TOC.
- Support the MSC in preparation and maintenance of a Hanford Site-wide MC&A plan, administration of treaty related activities (e.g., IAEA), performing safeguards occurrence investigation and reporting, scheduling of periodic inventories consistent with the Contractor's project work schedules.
- Identify personnel requiring MC&A training provided by the MSC and coordinate training schedules with the MSC.
- Conduct on-the-job MC&A training specific to TOC facilities and systems.
- Request from the MSC:
  - Final authorization to move, ship, process, or store nuclear materials, including approval of shipper/receiver plans;
  - Final approval of Material Balance Area (MBA) Custodians; and
  - Final determination of MBA categorizations; and
  - Final approval of MC&A-related implementing procedures.
- Respond to MSC or DOE calls related to the MC&A program.

The Contractor's MC&A program shall include coordinating and integrating all aspects of implementation with the MSC. The Contractor shall utilize the MSC for, but is not limited to:

- MC&A requirement interpretation with overall responsibility for the MC&A program;
- Training and qualification of all personnel performing MC&A functions (with the exception of specific facility/system on-the-job MC&A training);
- Nuclear materials accounting and reporting requirements for all nuclear materials both active and inactive (e.g., "V-RIS") and be responsible for the official nuclear material inventory, including discrepancy reconciliation;
- Statistical Services;



- Purchasing, regulating, and managing MC&A-controlled forms and tamper indicating devices; and
- Nuclear materials measurement system approvals and measurement system control requirements for all MC&A nuclear materials measurement activities (e.g., monitoring measurement control information; collecting and analyzing measurement control information; calculating control limits and monitoring equipment performance against those limits, etc.).

The Contractor shall integrate MC&A requirements with other plans, projects/programs, and activities at all life-cycle stages and inform the MSC of such. The Contractor shall proactively take into account MC&A requirements, systems, and technologies in the planning, design, construction, and operation of new or renovated DOE facilities and activities.

#### **C.3.3.1.7 Cyber Security**

Unclassified computing at Hanford is conducted on the Hanford Local Area Network (HLAN). The HLAN is the central electronic communications network that provides computing infrastructure to DOE and the majority of the prime contractors and their subcontractors. The MSC manages and conducts a centralized cyber security program for the Hanford Site on behalf of DOE.

Classified computing at the Hanford Site is conducted on individual systems and isolated networks that are not inter-connected nor connected to the Internet.

The Contractor shall manage and execute cyber security responsibilities consistent with DOE requirements and the MSC centralized cyber security program to provide for confidentiality, integrity, and availability of cyber security components and information such that there is no degradation of performance, disruption or compromise of the cyber security system, including impacts to the users.

The Contractor shall coordinate and interface with the MSC regarding activities involving unclassified and classified information processing and use consistent with the *Office of the Under Secretary of Energy Program Cyber Security Plan (PCSP)*, *EM Program Security Plan (PSP)*, and DOE-approved *Hanford System Security Plan(s) (SSP)*.

#### ***Classified Cyber Security***

The Contractor shall:

- Identify all computers used by the Contractor, or any tier subcontractor, that process classified information.
- Ensure all computers used for classified processing are certified and accredited and properly de-commissioned when no longer required.
- Develop and maintain specific administrative procedures and hardware/software security measures to:
  - Ensure that all classified computers used to process classified information can protect that information against loss, improper use, compromise, or unauthorized alteration or modification of classified information as required by DOE directive.
  - Comply with the *Hanford Master Classified Information Systems Security Plan*.
  - Train users of classified computer systems on cyber security requirements.



- Support the DOE-RL Information Systems Security Operations Manager (ISOM) and/or MSC, as required, to facilitate resolution of classified computer systems security issues and associated incident reporting.

### ***Unclassified Cyber Security***

The Contractor shall:

- Ensure that all systems used for unclassified processing are certified and accredited.
- Report all cyber security incidents as required by DOE directive.
- Develop and maintain specific administrative procedures and hardware/software security measures to:
  - Ensure all computers used for processing sensitive unclassified information can protect that information against loss, improper use, compromise, or unauthorized alteration or modification of information as required by DOE directive.
  - Ensure all users are provided information security awareness training.

### ***Telecommunications***

The Contractor shall comply with Hanford Site procedures and policies regarding activities involving Communications Security (COMSEC), protected distribution systems, and TEMPEST/Transmission Security programs of Telecommunications Security.

#### **C.3.3.2 Emergency Services**

##### **C.3.3.2.1 Fire Services**

As an independent contractor, the MSC manages and conducts the Fire Services for the Hanford Site. This includes wild land fire, structural fire, and ambulance emergency response. Also included, are activities, such as, hazardous material and chemical/biological/ radiological emergency response, pre-fire planning, site-wide respiratory protection services, and the testing and maintenance of life safety fire protection systems in designated facilities.

The Contractor shall support facility access to the MSC fire services personnel, and notify the Fire Department of work activities, events, and incidents that may require Fire Services involvement and/or response (e.g., medical assistance, hazardous or radiological emergency help, etc.).

##### **C.3.3.2.2 Emergency Operations**

#### ***Emergency Management Program***

The MSC establishes and maintains a centralized Emergency Operations Program and the Hanford Site-wide Emergency Preparedness (EP) Program for the Hanford Site on behalf of DOE-RL. The EP Program is responsible for the Hanford Emergency Operations Center (EOC), develops and maintains emergency plans and procedures, performs hazard surveys and assessments, reviews hazard assessments for all facilities at Hanford, and supports Hanford Site-wide EP training and drills.

The Contractor shall develop and maintain an Emergency Management Program as described in DOE/RL-94-02, *Hanford Emergency Management Plan* for structures and waste sites under its control. The Contractor's Emergency Management Program shall be consistent with DOE requirements and the centralized EP Program. The Contractor's program shall establish processes and instructions for all Contractor EP activities. Because of the potential for the Contractor to become the event contractor as defined in the *Hanford Emergency Management Plan*, the Contractor shall maintain a 24-hour per day, 7-days per week, capability to staff the required facility specific emergency response organization positions within 60 minutes of receipt of notification from the Occurrence Notification Center of a Hanford Site emergency.

### ***Radiological Assistance Program (RAP)***

The MSC manages the Region 8 Radiological Assistance Program (RAP) on behalf of DOE-RL. The Region 8 RAP is responsible for Alaska, Oregon, and Washington and other Regions, as directed by DOE-Headquarters. The RAP mission is to provide first-responder radiological assistance to protect the health and safety of the general public and the environment; assist DOE program elements, and other Federal, state, Tribal and local agencies in the detection, identification and analysis, and response to events involving the use of radiological/nuclear material. The RAP provides 24-hour a day radiological response capabilities. The RAP teams consist of DOE/DOE contractor personnel who perform radiological assistance duties as part of their normal employment or as part of the terms of the contract between their employer and DOE. The MSC will require augmentation of RAP response team personnel, equipment, and expertise as delineated in workscope arrangements with the Contractor and other Hanford Site contractors or off-site vendors.

The Contractor shall provide qualified personnel, technical expertise, equipment, and support to the DOE Region 8 RAP to ensure maintenance and staffing of emergency teams with the ability to respond under the direction of DOE National Nuclear Security Administration (NNSA) and the U.S. Department of Homeland Security.

The Contractor shall establish an agreement with the MSC detailing the specific services to be provided by the Contractor in support of the Region 8 RAP.

The Contractor shall:

- Provide personnel, trained and qualified as RAP Team Members, and additional supervisory or management members as directed, to support the MSC's RAP duties as delineated in its contract with DOE;
- Perform routine scheduled tasks to maintain equipment and RAP team readiness;
- Participate in meetings, working groups, drills, and exercises;
- Provide technical expertise to the RAP team as requested;
- Respond to declared emergencies as a RAP team member;
- Participate in no-notice activations; and
- Maintain fitness for duty, as requested.

### **C.3.4 Interactions**

### C.3.4.1 External Affairs

External Affairs includes information and involvement programs to reach diverse external parties interested in Hanford (e.g. Tribal Nations, stakeholders, news media, elected officials and their staffs, local community officials and the public) with the status, challenges and objectives of the cleanup work. For all external constituencies, the Contractor shall anticipate specific areas of concern, interest, or controversy, and employ appropriate communication strategies that inform and involve.

The Contractor shall submit an *External Affairs Program Description* for DOE-ORP approval (Deliverable C.3.4.1-1) that provides a comprehensive description of the External Affairs Program, staffing, products and services, with an emphasis on innovative approaches to communications.

DOE-ORP retains the primary role in directing the timing, substance and form of public information and must approve all products and outreach.

For activities within the Contract scope, the Contractor shall:

- Maintain effective interactions with local, regional, national and international news media. Provide information and/or resources as requested in support of DOE-ORP media interactions.
- Work with DOE-ORP to inform and involve the Tribal Nations as part of cleanup decision making processes, in accordance with the DOE American Indian and Alaska Native Tribal Government Policy and implementation guidance. Support and coordinate with DOE-ORP on the ongoing technical staff interactions to ensure that affected Tribes can be involved early and often in proposed plans and activities.
- Inform and involve the public, citizens advisory boards, and other interested parties in proposed plans and activities. Provide strategy and resources for required public comment and outreach processes related to upcoming decision making (e.g., NEPA and CERCLA).
- Reach out to the communities affected by Hanford to provide information, answer questions, and gain feedback.
- Participate in tour planning and preparation, and make facilities and personnel available as requested by DOE-ORP. Visits to the project sites shall be part of ongoing communication and outreach activities.
- Provide MSC with current information related to the Contract scope to maintain the external Hanford website.
- Participate in meetings and briefings to update interested external parties on Contract activities when requested by DOE-ORP.
- Provide ongoing support to DOE-ORP in the preparation of communication materials, such as presentations, fact sheets, specialized graphics and charts, large posters, and up-to-date photography.
- Maintain a 24-hour per day, 7-days per week, capability to staff the communication functions/positions of the Hanford Emergency Operations Center within 60 minutes of receipt of notification from the Occurrence Notification Center of a Hanford Site emergency.

### C.3.4.2 External Review and Support

External Review and Support to DOE-ORP involves providing support during audits and assessments by entities having oversight responsibility for DOE-ORP and its contractors. These entities include:

- Defense Nuclear Facilities Safety Board (DNFSB);
- Government Accountability Office (GAO);
- DOE Office of Inspector General (OIG); and
- Other governmental and DOE oversight organizations.

The Contractor shall support DOE-ORP and the MSC in hosting staff from auditing and assessing organizations, providing required presentations, responding to information requests, and by providing required subject matter experts to respond to questions and information requests.

The Contractor shall:

- Support DNFSB oversight activities by:
  - Conducting activities in accordance with DOE commitments to the DNFSB, which are contained in DOE implementation plans and other DOE correspondence to the DNFSB.
  - Providing support for the preparation of DOE responses to DNFSB issues and recommendations that affect Contract scope.
  - Cooperating with the DNFSB and providing access to work areas, personnel, and information, as necessary.
  - Maintaining a document process in accordance with the DOE M 140.1-1B, *Interface with the Defense Nuclear Facilities Safety Board* (or current version).
  - Obtaining approval from DOE-ORP at least five (5) days in advance before committing to completion of actions to the DNFSB.
- Support GAO, OIG, and other governmental and DOE oversight activities by:
  - Providing subject matter expertise.
  - Cooperating with assessors and auditors, and providing access to work areas, personnel, and information.
  - Providing support during audits and assessments, including delivering information within a specified time, arranging briefings, preparing presentation materials, maintaining a record of documents provided in response to requests, and making this record available to DOE-RL and/or DOE-ORP, as requested.
- Provide knowledgeable single points-of-contact for each of the following:
  - DNFSB; and
  - OIG, GAO, and other assessing governmental and DOE oversight organizations (including the DOE Office of Enforcement).

### C.3.5 Interface Management

The Contractor shall provide input to MSC to facilitate MSC's development and maintenance of a *Hanford Site Interface Management Plan (Plan)*, which establishes and maintains interface management processes and agreements to assure effective control of technical, administrative, and regulatory interfaces.

The *Hanford Site Interface Management Plan (Plan)* shall provide the content for and processes to:

- Identify the various interfaces, define the scope of each interface, provide a brief description of the required deliverables (products, documents, procedures, services, etc.), define interface requirements, and cite applicable source documents for each interface;
- Implement changes to interface agreements through the appropriate change control process and, if necessary, contract changes; and
- Identify, track, and elevate issues for management review on a regular basis.

The *Plan* shall include:

- Organizational points of contact for participants and their responsibilities, and
- Associated controlling agreements (e.g., an MOA).

The *Plan* shall be signed by the MSC, PRC, and TOC. The MSC will submit the document to DOE for review and approval. The *Plan* shall be reviewed at least annually, and if updated, submitted to DOE for approval.

DOE shall be the exclusive authority for resolving disputes associated with any interface issues that cannot be resolved between parties in a timely manner. Costs associated with litigation arising from either the *Plan* or agreements made pursuant to the *Plan* shall not be allowable under this Contract.

The Contractor shall establish, appropriately document, and manage interfaces in accordance with the Section J Attachment entitled, *Hanford Site Services and Interface Requirements Matrix*.

#### ***Infrastructure and Services Alignment Plan and Annual Forecast of Services and Infrastructure***

The Contractor shall provide input to the annual update to the Hanford Site's *Infrastructure and Services Alignment Plan (ISAP)*. MSC develops, maintains, and updates the master ISAP, and submits the ISAP on an annual basis to DOE for approval. The Contractor shall concur or non-concur on the ISAP prior to MSC submittal to DOE.

The ISAP incorporates a strategic vision and describes the activities necessary to integrate MSC responsibilities with those of other Hanford Site (Mission) contractors, to right-size the infrastructure and services, and to maintain the capacity of infrastructure systems provided for the Site over its life-cycle. The ISAP identifies opportunities to re-engineer or replace systems as necessary (without negatively impacting the Mission Contractor's project schedules) in a timely and coordinated fashion. The ISAP also provides tactical-level information to successfully achieve MSC outcomes while minimizing the Site's life-cycle costs. The ISAP

includes an approach for taking advantage of new technologies and business practices that make good business sense from a cost and schedule perspective.

As necessitated by changes to the Hanford Site funding profile, MSC provides updates to the ISAP regarding the relative priority of work requirements. The Contractor shall provide input to the *Annual Forecast of Services and Infrastructure's* projection of needed utilities, services and infrastructure, which is incorporated into the ISAP.

***Hanford Site Services and Interface Requirements Matrix***

The Contractor shall provide input to the MSC to support the development of the annual update to the *Hanford Site Services and Interface Requirements Matrix*. Service provider and user interface requirements are identified in the Section J Attachment entitled, *Hanford Site Services and Interface Requirements Matrix*. Services are designated as either "mandatory" or "optional" for use by Hanford Site contractors and their subcontractors. MSC is responsible for submitting the *Hanford Site Services and Interface Requirements Matrix* to DOE with the annual ISAP. The Contractor shall concur on the Matrix prior to MSC submittal to DOE.

#### **C.4 GOVERNMENT-FURNISHED SERVICES AND INFORMATION**

DOE-ORP is committed to providing effective support to the Contractor throughout the period of Contract performance, and the Contractor may request that DOE-ORP consider providing additional GFS/I. To manage the GFS/I to be furnished under the Contract and to evaluate the additional GFS/I that may be required by the Contractor, the Contractor shall submit for DOE-ORP approval:

- *Government-Furnished Services and Information Request* (Deliverable C.4-1): 12-month advance projection of GFS/I to be furnished under the Contract and additional Contractor-requested GFS/I, prior to each fiscal year; and
- *Government-Furnished Services and Information Request -- Update* (Deliverable C.4-2): quarterly update to the projection of GFS/I to be furnished under the Contract and additional Contractor-requested GFS/I, prior to each quarter.

DOE-ORP will review the 12-month and quarterly advance projections. If DOE-ORP can support the additional Contractor-requested GFS/I, DOE-ORP will notify the Contractor within 30 days that the additional Contractor-requested GFS/I can be provided, and will provide the Contractor details regarding the DOE-ORP action(s). The supported GFS/I will be added to the Section J Attachment entitled, *Government-Furnished Services and Information*, as an DOE-ORP commitment to the Contractor.

If DOE-ORP cannot support a Contractor request, DOE-ORP will notify the Contractor within 30 days that the requested GFS/I cannot be provided, and there will be no DOE-ORP commitment to the Contractor to furnish the GFS/I.

For the additional Contractor-requested GFS/I, DOE-ORP will use its best efforts to meet these requests; however, in the event that DOE-ORP is unable, for any reason, to provide the Contractor with its requested additional GFS/I, the Contractor remains fully and solely responsible for obtaining the needed services and/or information in a timely manner and without any further recourse against DOE-ORP.

## C.5 SUMMARY OF CONTRACT DELIVERABLES

Table C.5, *Summary of Contract Deliverables* summarizes the specific products the Contractor shall submit to DOE-ORP, the type of action DOE-ORP will perform, the associated DOE response time, and the date/timeframe that the Contractor is required to submit the product.

Deliverables are considered Contractor endpoints, workscope completions, products, reports or commitments that shall be delivered to DOE-ORP.

The types of DOE-ORP action are defined as:

- Approve – The Contractor shall provide the deliverable to DOE-ORP for review and approval. DOE-ORP will review the deliverable and provide comments in writing. DOE-ORP comments will be discussed with the Contractor, and the Contractor shall provide written responses. The Contractor shall re-write the documents to incorporate all DOE-ORP mandatory comments. Once DOE-ORP approves a deliverable or document, the Contractor shall place it under change control and shall make no changes to that document without DOE-ORP approval.
- Review – The Contractor shall provide the deliverable to DOE-ORP for review and comment. DOE-ORP will have the option of reviewing the information and providing comment. The Contractor shall respond to all written comments.
- Information – The Contractor shall provide the deliverable to DOE-ORP for information purposes only. DOE-ORP will have the option of reviewing the information and providing comments. Such comments do not require resolution under the Contract.

Table C.5, *Summary of Contract Deliverables* does not include required deliverables identified in other Contract sections, DOE directives, Federal Regulations, or regulatory documents.



Table C.5, Summary of Contract Deliverables

Deliverable Number	Deliverable	DOE-ORP		Deliverable Due Date <sup>2</sup>
		Action	Response Time <sup>3</sup>	
C.2.1.1-1	Transition Plan	Approve	5 days	10 days after contract Notice to Proceed
C.2.1.1-2	Statement of Material Differences	Approve	30 days	60 days after contract Notice to Proceed
C.2.1.1-3	Transition Status Reports	Information	N/A	Weekly during Transition
C.2.1.1-4	Transition Agreement	Approve	15 days	75 days after contract Notice to Proceed
C.2.1.3-1	Administrative Interface Agreement with the Analytical Services Production Contractor	Information	N/A	60 days after contract Notice to Proceed with updates as required
C.2.2.1-1	Integrated SST Retrieval Plan	Approve	30 days	April 15, 2009 with annual updates
C.2.2.2-1	Integrated SST Waste Management Area Closure Plan	Approve	30 days	April 15, 2009 with annual updates
C.2.3.1-1	River Protection Project System Plan	Approve	30 days	April 11, 2009 with updates as required
C.2.3.1-2	Integrated Waste Feed Delivery Plan	Approve	30 days	July 30, 2009 with annual updates
C.2.3.1-3	WTP Facility Transition Plan	Approve	30 days	Upon completion of certification of WTP Cold Commissioning with updates as required
C.2.3.1-4	WTP LAW/BOF/LAB Facility Transition Plan	Approve	30 days	Upon completion of certification of WTP LAW/BOF/LAB Cold Commissioning with updates as required

<sup>2</sup> All days refer to calendar days. For the purposes of calculating deliverable due dates, the Notice to Proceed date is July 3, 2008.

<sup>3</sup> Number of calendar days for DOE-ORP to execute its GFS/I responsibilities to provide review, approval, and/or certification action on the deliverable following Contractor submission of an acceptable product; or DOE-ORP comments on the deliverable following Contractor submission of an unacceptable product that will require revision and re-submission for DOE-ORP review, approval, and/or certification action.

Deliverable Number	Deliverable	DOE-ORP		Deliverable Due Date <sup>2</sup>
		Action	Response Time <sup>3</sup>	
C.2.3.2-1	WTP Operational Readiness Plan	Approve	30 days	180 days after sub-CLIN Notice to Proceed
C.2.3.2-2	Semi-annual WTP Operational Readiness Evaluation	Approve	30 days	360 days after sub-CLIN Notice to Proceed with semi-annual updates
C.2.3.3-1	Hanford Spent Nuclear Fuel and Immobilized High Level Waste Interim Storage Alternatives Analysis	Information	N/A	180 days after sub-CLIN Notice to Proceed
C.2.4.1-1	DBVS Construction, Testing, and Operations Plan	Approve	30 days	180 days after contract Notice to Proceed
C.2.4.1-2	DBVS Pilot Plant and Vitrified Waste Form Performance Test Plan	Approve	30 days	360 days after contract Notice to Proceed
C.2.4.1-3	DBVS Pilot Plant and Vitrified Waste Form Performance Results	Review	30 days	90 days following completion of DBVS operations
C.2.4.1-4	Recommendation on the Viability of the Bulk Vitrification Waste Treatment Technology	Approve	30 days	120 days following completion of DBVS operations
C.2.4.1-5	Comparative Analysis of Supplemental Treatment Technologies	Review	30 days	360 days following completion of DBVS operations
C.2.4.1-6	Recommendation to Re-Permit DBVS	Approve	30 days	360 days following completion of DBVS operations
C.2.4.2-1	Cost and Schedule Estimate for the Extended Operations of the Demonstration Bulk Vitrification System	Approve	30 days	180 days following DOE-ORP approval of Deliverable C.2.4.1-6
C.2.4.2-2	Extended Operations of the DBVS Final Design Modifications and Feed Acceptance Specifications	Approve	30 days	360 days following DOE-ORP approval of Deliverable C.2.4.1-6
C.2.4.2-3	Extended Operations of the DBVS Sampling and Analysis Plan	Approve	30 days	360 days following DOE-ORP approval of Deliverable C.2.4.1-6
C.2.5.1-1	ETF/LERF Transition Plan	Approve	30 days	180 days after Notice to Proceed
C.2.5.4-1	WTP LAW Facility Operating and Product Specifications	Approve	30 days	Upon completion of certification of WTP LBL Cold Commissioning
C.3.1.1-1	Project Execution Plan	Approve	45 days	90 days after contract Notice to Proceed with updates as required

Deliverable Number	Deliverable	DOE-ORP		Deliverable Due Date <sup>2</sup>
		Action	Response Time <sup>3</sup>	
C.3.1.2.2-1	TOC Project Performance Measurement Baseline	Approve	45 days	June 30, 2009 with updates as required
C.3.1.2.3-1	TOC Project Performance Measurement Baseline Change Control Process	Approve	30 days	120 days after contract Notice to Proceed with updates as required
C.3.1.3-1	Monthly Performance Report	Review	N/A	Last Tuesday of each Month
C.3.1.4-1	Risk Management Plan	Approve	45 days	120 days after contract Notice to Proceed with updates as required
C.3.1.5.2-1	Procurement, Construction, and Acceptance Testing Plan	Approve	30 days	120 days after contract Notice to Proceed with updates as required
C.3.1.5.2-2	Purchasing System	Approve	30 days	120 days after contract Notice to Proceed with updates as required
C.3.1.5.2-3	Construction and Acceptance Testing Program	Approve	30 days	120 days after contract Notice to Proceed with updates as required
C.3.1.5.2-4	As-built Program Description	Approve	30 days	120 days after contract Notice to Proceed with updates as required
C.3.2-1	Integrated Safety Management System Description	Approve	30 days	60 days after contract Notice to Proceed with annual updates
C.3.2-2	Authorization Agreement	Approve	30 days	60 days after contract Notice to Proceed with annual updates
C.3.2-3	ISMS/ESH&Q Performance Objectives, Measures, and Commitments	Approve	30 days	60 days after contract Notice to Proceed with annual updates
C.3.2.1-1	Environmental Protection and Compliance Plan	Approve	30 days	60 days after contract Notice to Proceed with updates as required
C.3.2.2-1	Deleted (Mod 037)			
C.3.2.2-2	Unreviewed Safety Question Process	Approve	30 days	60 days after contract Notice to Proceed with updates as required

Deliverable Number	Deliverable	DOE-ORP		Deliverable Due Date <sup>2</sup>
		Action	Response Time <sup>3</sup>	
C.3.2.3-1	Worker Safety and Health Program	Approve	30 days	60 days after contract Notice to Proceed with updates as required
C.3.2.3-2	Radiation Protection Program	Approve	30 days	60 days after contract Notice to Proceed with updates as required
C.3.2.3-3	Chronic Beryllium Disease Prevention Program	Approve	30 days	60 days after contract Notice to Proceed with updates as required
C.3.2.4-1	Quality Assurance Program Description	Approve	30 days	60 days after contract Notice to Proceed with updates as required
C.3.2.4-2	Assurance System Description	Approve	30 days	60 days after contract Notice to Proceed with updates as required
C.3.4.1-1	External Affairs Program Description	Approve	30 days	60 days after contract Notice to Proceed, and updated annually (12/1)
C.4-1	Government-Furnished Services and Information Request	Approve	30 days	45 days prior to each fiscal year
C.4-2	Government-Furnished Services and Information Request – Update	Approve	30 days	30 days prior to each quarter