

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT D CODE	PAGE OF PAGES 1 33
2. AMENDMENT/MODIFICATION NO. 0358	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
6. ISSUED BY Savannah River Operations U.S. Department of Energy Savannah River Operations P.O. Box A Aiken SC 29802	CODE 00901	7. ADMINISTERED BY (If other than Item 6)	CODE
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) SAVANNAH RIVER REMEDIATION LLC Attn: Jeffrey J. Bair Savannah River Site Building 766-H Aiken SC 29808		(x)	9A. AMENDMENT OF SOLICITATION NO.
CODE 808376193		FACILITY CODE	9B. DATED (SEE ITEM 11)
		x	10A. MODIFICATION OF CONTRACT/ORDER NO. DE-AC09-09SR22505
			10B. DATED (SEE ITEM 13) 12/08/2008

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)

No change in Accounting and Appropriation Data

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. Clause I.95 FAR 52.243-2 Changes-Cost Reimbursement (Aug 1987) ALT II & ALT III (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.)

See Page 2.

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

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Charlene Smith	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	16C. DATE SIGNED 9/4/2015

SF30 Block 14

- A. The purpose of this modification is to re-state Modification 347. This modification provides clarification on changes to the contract base period and the contract option period. This modification also provides clarifications and changes to the work activities specified in Modification 347 and adds some additional work requirements. These requirements represent the planned work requirements for the pre-priced option period of July 1, 2015 through June 30, 2017. These revisions are being made under the authority of the contract clause contained in Section I, entitled "Changes - Cost Reimbursement (Aug 1987) – Alternate II (Apr 1984) & Alternate III (Apr 1984)."
- B. SRR is not required to perform the following base-period tasks/projects as defined in the Contract Performance Baseline (CPB) Revision 1 dated August 6, 2010:
- Closure Authority Public Meetings
 - Tank 10 Closure – Annulus Cleaning & Isolation/Grout Prep Design
 - Tank 14 Closure – Balance of Plant Design & Installation for ECC
 - SRR Interface Support to DOE Contractors
 - Tank 3 Closure—Bulk Waste Removal, Heel Removal and Closure
 - Tank 4 Closure—Heel Removal and Closure
 - Tank 9 Closure—Bulk Waste Removal, Heel Removal and Closure
 - Tank 11 Closure—Heel Removal and Closure
 - Tank 23 Closure—Bulk Waste Removal, Heel Removal and Closure
 - Tank Closure Common Equipment
 - Enhanced Chemical Cleaning (ECC) Unit 1 Train 1
 - ECC Unit 2
 - Control Room Consolidation
 - Blend & Feed Tank 24
 - Saltstone PA Revision
 - Water Separation from Decon Frit
 - ARP/MCU Flushing
- C. Consistent with other contract terms and conditions and pending definitization of this change, the Contractor is authorized to incur costs Not-To Exceed (NTE) \$30 million (as separate CLINs) for work activities estimated to be above the pre-priced option, as defined in the Interim CPB dated June 18, 2015.

The following activities are added to Section C.1.1 of the contract:

- Tank 26 – infrastructure preparation activities to remove sludge waste for feed to DWPF
- Tank 35 – infrastructure preparation activities to remove sludge waste for feed to DWPF

- Tank 14 Closure
- Tank 12 Closure
- Tank 10 Cesium Removal – Prepare Statement of Work for the subcontract, Prepare and Issue RFP/EOI, and Evaluate Vendor Proposals
- Large Tank Strike

The following activities are added to Section C.1.2.1 of the contract:

- Alternate Reductant
- SEFT to SME Modifications
- Lab Waste Handling
- Melter 3 Storage Box
- Melter 4 Assembly
- DWPF Dry Frit

The following activity is added to Section C.1.2.3 of the contract:

- Continue to Operate ARP/MCU during the option period

The following activities are added to Section C.1.2.4 of the contract:

- Enhanced Low Activity Waste Determination (ELAWD) Dry Feeds
- Balance of Plant (BOP) and Project Support (Phase II)

The following activities are added to Section C.1.2.4.2 of the contract:

- SDU 7 – CD 0/Conceptual Design/CD-1
- SDU 7 –Design (TEC)

The following activity is added to Section C.1.3.2 of the contract:

- Interim Canister Storage – Double Stack

The following activities are added to Section C.1.3.4 of the contract:

- SWPF General Support – SWPF OPC 2; SRR Support for SWPF (OPC 1); Titanium Dioxide (TiO₂) Testing
- SDI East West Transfer Line and Piping for MCU Continued Operations, including Tie-Ins
- SDI Blend & Feed Tanks (Waste Tank 49H, Tank 21H) and Tank 49 Piping for MCU Continued Operations, including tie-ins
- SDI DWPF Modifications

The following activity is added to Section C.2.6 of the contract:

- Proposal Preparation including Program Support and Legacy Pension Allocations

D. Section H. 50 (b) Performance Requirements is revised in accordance with Attachment 1.

- E.** Section H.62 – “Cost Reporting for the Environmental Cost Analysis System (ECAS)” is added. (Attachment 2)
- F.** Section H.63 – “Integrated Work Control Systems and Reporting Requirements” is added. (Attachment 3)
- G.** Section J – Appendix R – “Data Requirements for the Environmental Cost Analysis System (ECAS)” is added. (Attachment 4)
- H.** Section J – Appendix S- “Integrated Work Control Systems and Reporting Requirements” is added. (Attachment 5)
- I.** The work described in this modification shall be performed using funds obligated under CLIN 0002 in accordance with FAR 52.232-22 Limitation of Funds.
- J.** FAR 52.243-6 Change Order Accounting (APR 1984) is hereby invoked. The Contractor shall assert its rights to an adjustment under this clause by submitting a proposal no later than August 19, 2015. Previous Contracting Officer direction regarding proposal costs of NTE \$200,000 remains in effect.
- K.** This modification is expected to be definitized in accordance with the following schedule:

SRR submits proposal to DOE	08/19/15
DOE reviews proposal/obtains EMHCA approval	09/30/15
Negotiations Begin	10/01/15
SRR submits Certificate of Current Cost or Pricing Data	10/07/15
Bilateral Execution of contract modification	10/16/15
SRR submits BCP aligning interim baseline w/contract mod	10/30/15
DOE integrated baseline review	11/13/15
Option CPB established: Contract & Baseline aligned	12/01/15
- L.** No fee shall be paid to the contractor for work under this change order for the changed work, including provisional fee, prior to definitization.
- M.** The contractor’s proposal shall include a revised Small Business Subcontracting Plan.

- N.** The contractor may invoice costs for both changed work and other work in the same invoice. However, the contractor shall separately identify costs in its invoices that pertain to the changed work.

- O.** All other terms and conditions remain unchanged.

ATTACHMENT 1

Contract Clause H.50 Performance Requirements and Commitments

Performance Requirements		Original H.50 Commitments	Revision of H.50
1.	Operationally close old-style tanks		
	a. Operationally close 15 old-style tanks (independent of SWPF processing)	a. By the end of Basic Term	a. 4 old-style tanks closed by end of Basic Term.
	b. Operationally close 22 old-style tanks	b. By end of Option 1 (if exercised)	b. 6 old-style tanks closed by end of Option 1.
		c. By the end of FY11	Complete
2.	Implement Enhanced Chemical Cleaning for liquid waste tank cleaning	By end of January 2011	Delete – ECC startup will occur outside of contract due to reduced funding
3.	Consolidate all remaining F Area sludge waste into Tank 26	By end of Option 1 (if exercised)	Delete. Remaining F-Area Sludge will not be consolidated in Tank 26 (relative to SWPF start)
4.	Produce DWPF Canisters		
	a. Produce 1,945 canisters at DWPF	a. By the end of Basic Term	a. Produce 1,257 canisters by the end of the Basic Term.
	b. Produce 2,715 canisters at DWPF	b. By end of Option 1 (if exercised)	b. Produce 1,536 canisters by the end of Option 1.
5.	Improve DWPF Canister Waste Loading		
	a. Achieve and sustain 36 weight percent	a. Beginning with Sludge Batch 6	a. Status: Complete.
	b. Achieve and sustain 40 weight percent	b. By end of FY 2011	b. Delete – Installation of DWPF enhancements aligns with SWPF tie-ins which will occur after the completion of Option 1
6.	Reduce DWPF recycle stream generation	Reduce by 1.25 million gallons per year	Delete – Installation of DWPF enhancements aligns with SWPF tie-ins which will occur after the completion of Option 1
7.	Improve ARP/MCU operations		
	a. Improve throughput rate	a. Achieve 4 gallons per minute throughput rate	Status: Complete.
	b. Increase Cs-137 decontamination factor (DF)	b. Achieve average DF of 200	Status: Complete.
8.	Enable batch transfers of LLW from ETF directly to Saltstone	Complete LW facility modifications to enable first batch transfers of LLW from ETF directly to Saltstone by FY 2012	Status: Complete

Performance Requirements		Original H.50 Commitments	Revision of H.50
9.	De-couple and protect SWPF from being shut down by a:		
	a. DWPF outage	a. Provide at least 21 days of surge capacity for SWPF strip effluent prior to SWPF startup	a. Delete. No longer required based on contract directed change (CMD-10-150).
	b. Saltstone Facility outage	b. Provide at least 45 days of Decontaminated Salt Solution lag storage prior to SWPF startup	b. Status: Complete.

ATTACHMENT 2

H.62 Cost Reporting for the Environmental Cost Analysis System (ECAS)

A. Applicability and Purpose

The Environmental Cost Analysis System (ECAS) provides an integrated system for accumulation, integration, analysis, and corporate access to actual costs and other relevant historical information from completed projects in an accessible format. ECAS is an “internet-accessible” database that contains descriptive project information, actual cost data, and both primary and secondary project or operational parameters. ECAS does not include proprietary or business sensitive data. ECAS has been developed with the flexibility to include costs for both Capital Asset Projects and Operating Activities with defined key performance parameters for specific EM Line item and Cleanup contracts.

The Contractor shall report project data for ECAS as stated herein. The report shall consist of a digital file readable by, or converted to, files in either Microsoft Excel® or Microsoft Access®. Project narrative information shall be submitted as a Microsoft Word® document. Contractor’s key performance parameters (KPPs) are achieved and reports shall be submitted within 30-days of achieving the KPP. Capital Asset Projects are required to have a closeout report at CD-4 per DOE O 413.3B. Contractor should provide a copy of the closeout report as a “pdf” file to EM-53, EM-53 will provide the file to the EMCBC for inclusion in ECAS..

B. The Environmental Cost Analysis System (ECAS)

ECAS is a SQL® database with eighty five discrete data fields designed to facilitate capture of project identification and descriptive information, product-oriented work breakdown structure (WBS) elements, work activities using a common EM corporate structure, cost data segregated by element of cost, primary project parameters based on the project type, and secondary project information designed to facilitate further project characterization and overall database reporting. The WBS, work activities per planning and work packages, and associated actual cost information is typically available directly from the contractor accounting system. Project identification and primary parameter information are often available from other project reporting information (e.g., key performance parameters (KPPs) and DOE Project Assessment and Reporting System (PARS II)). Project narratives, project parameters and secondary project characteristics are developed by personnel familiar with the work covered by the project.

Section B.1 through B.5 of this clause defines the information and format that the contractor is required to report for ECAS. Compliance with these provisions will be verified as part of the Performance Measurement Baseline (PMB) Validation associated with the each contract.

http://www.emcbc.doe.gov/Content/Office/ECASUsers_Manual_Rev0_3-15-10.pdf

B.1 Project Identification

EM has implemented a corporate work breakdown structure (CWBS) which is captured in ECAS. The CWBS standardizes the structure used to categorize like scopes of work, facilitate Analytical Building Blocks (ABB(s)) and comparative analyses and simplify budget preparation. The CWBS follows the EIA-748-C, *Earned Value Management Systems*, Section 3, for organization and definition of work, and allows EM to interface with site-specific work breakdown structures, maintain historical costs by Program Baseline Summary (PBS), and analyze the program using multiple attributes. Capital Asset Projects as defined in DOE O 413.3B, will be reported for entry in ECAS using the PARS II information at the project level. If lower level WBS items are included in PARS II reports, or, a site specific WBS is used than the PARS II or site information will be cross walked to apply the ECES structure for information below the project level for entry into ECAS. .

B.2 Site Work Break Structure (WBS)

The site WBS structure will interface with the EM CWBS in ECAS starting at “Site WBS Level 5”. This information captures data below the Project level in the WBS structure.

B.3 Work Activity

The work activity is the lowest level at which costs are typically collected (e.g., the control account, cost account, planning package, work package, etc.). The activity is normally accompanied with a descriptor and is a standard component of accounting systems. The requirement of this section is that the contractor assigns Environmental Cost Element Structure (ECES) codes to each work activity for which costs are collected. The ECES is a comprehensive hierarchical list of elements (tasks, items, or products) required to accomplish an environmental management project. ECES levels will be applied for all activities at or below the project level or at ECAS Level “_6_Comp_T_A_Elmnt”.

The American Society for Testing and Materials (ASTM) E2150, “Standard Classification for Life-Cycle Environmental Work Elements, Environmental Cost Element Structure (ECES)”, establishes the first two levels of the cost structure. The DOE Adjunct provides more detailed elements and definitions of the ECES at Levels 3, 4, and 5 that are needed to support DOE EM projects.

B.4 Cost Data

Cost data is entered into ECAS at the “_6_Comp_T_A_Elmnt” Level. Data should be provided at the lowest level identified in B.3. FAR Subpart 15.4 prescribes the cost and price negotiation policies and procedures for pricing negotiated prime contracts (including subcontracts) and contract modifications, including modifications to contracts awarded by sealed bidding. FAR Subpart 15.408, Table 15-2, “*Instructions for Submitting Cost/Price Proposals When Certified Cost or Pricing Data Are Required*” includes instructions applicable to data reported for ECAS. Direct cost data does not include general and administrative, or fee values.

B.4.1 Direct Cost

- *Labor* - Typical EM projects have a large percentage of costs attributable to labor. ECAS stores summary data as either “professional” or “craft” labor. Professional labor means all Fair Labor Standards Act (FLSA) “exempt” labor categories (i.e., Project Management, Scientist, Engineers, Project Controls, Scheduler, Miscellaneous technical Professionals, etc.). Craft labor means FLSA non-exempt labor categories (carpenters, electricians, plumbers, pipe fitters, laborer, equipment operators, etc.). Direct labor cost includes salaries and wages, payroll taxes and insurance, fringe benefit (paid time off, health care, etc.), and other site specific labor fringe markups, Total hours and total direct cost for professional and craft labor need to be reported for ECAS.
- *Material*- Provide a consolidated priced summary of individual material quantities included in the items being used in the project, including raw materials, parts, components, assemblies, and services to be produced or performed by others. Direct costs should include material, handling and/or delivery, and sales tax.
- *Equipment*- Provide a consolidated priced summary of individual equipment costs included in the items being used in the project (pumps, motors, cranes, control panels, transformers, engineered systems, etc.) including purchase and delivery cost, or rental cost as applicable, parts, components, assemblies, sales tax where applicable, and services to be produced or performed by others during equipment installation. Direct equipment costs that are allocated to a project should reflect hourly charges (cost of ownership or lease), FOGM, etc. Operating costs should be included in Labor cost.
- *Subcontract*- Subcontractor cost data must be accurate, complete and current as of the date of final price agreement given on the prime contractor's Certificate of Current Cost or Pricing Data. The prime contractor is responsible for updating a subcontractor's data. If a subcontractor meets the criteria as a “major” subcontractor as defined in each contract, than the subcontractor will be required to report costs to the same level of detail as the prime contractor.

B.4.2 Other Direct Cost Elements

List all other costs not otherwise included in the categories described above (e.g., special tooling, travel, computer and consultant services, preservation, packaging and packing, spoilage and rework, and Federal excise tax on finished articles).

B.4.3 General & Administrative Expense

“General and administrative (G&A) expense” means any management, financial, and other expense which is incurred by or allocated to a business unit and which is for the general management and administration of the business unit as a whole. G&A expense does not include those management expenses whose beneficial or causal relationship

to cost objectives can be more directly measured by a base other than a cost input base representing the total activity of a business unit during a cost accounting period.

B.4.4 “Indirect” Cost Elements

EM “project-type” work associated with specific, tangible efforts as captured in the ECAS projects is supported by numerous activities not directly associated with a given effort or project.. “Indirect cost” means any cost not directly identified with a single final cost objective, but identified with two or more final cost objectives or with at least one intermediate cost objective. “Indirect cost rate” means the percentage or dollar factor that expresses the ratio of indirect expense incurred in a given period to direct labor cost, manufacturing cost, or another appropriate base for the same period (see also “final indirect cost rate”).

B. 5 Non- Cost Data

Data collected in these fields is used to identify factors that may have an effect on costs. These can include type of facilities, contaminants, regulatory and stakeholder environments, technical issues, and other factors that may drive costs higher or lower. ECAS includes:

- Primary Parameters
- Waste Parameters
- Supplemental D&D Parameters
- Other Project Descriptors

Project narratives submitted with ECAS data should clearly explain how the reported direct and indirect costs are calculated and applied in the database.

ATTACHMENT 3

H.63 INTEGRATED WORK CONTROL SYSTEMS AND REPORTING REQUIREMENTS (July 2012)

A. Project Control System

The Contractor shall establish, maintain and use a work control system that accurately records and reports the contract performance against the requirements of the contract and accurately reflects the total estimated cost of the Contract exclusive of fee as stated in Section B of the Contract for the work scope and period of performance being authorized. The work control system shall be consistent with Department of Energy (DOE) and EM policies and guidance for capital asset projects and operations activities contained in Section J Attachment, J-9 "Integrated Contractor Work Control Systems and Reporting Requirements Clause," paragraphs A.1 and A.2. The Contractor shall submit a Project Controls System Description (PCSD) during the Contract Transition Period that documents the existence of the project controls system specified by this Contract.

The requirements of this clause are in addition to the applicable requirements of DOE Order 413.3B, Program and Project Management for the Acquisition of Capital Assets. The Contract Performance Baseline (CPB) should include and reflect the DOE 413.3B requirements, as applicable to the specific work and to the Contractor.

B. Baseline Development and Performance Reporting

The Contractor's planning and performance reporting processes should provide DOE with the supporting data for an independent assessment of the Contractor's work execution plan, basis of cost and schedule estimates for work packages and planning packages, measurement basis of progress reporting and change control process. The Contract Performance Baseline (CPB) represents the cost, schedule, and scope as it relates to the total estimated cost of the Contract exclusive of fee and any contract overrun as stated in Section B of the Contract for the work scope and performance period being authorized. The CPB includes all work identified in this Contract (including work defined as Capital Asset under DOE O 413.3B and that work defined as Operations Activities under DOE EM policies and guidance as set forth in Attachment J-9, "Integrated Contractor Work Control Systems and Reporting Requirements Clause," and this Contract).

The CPB cost and schedule allocations must be documented at a WBS level where work activities, their costs and schedule, are planned and controlled by the Contractor to demonstrate that the Contractor understands the complexity of work, and has put in place the planning and management processes and qualified personnel to execute the work in a safe and efficient manner

The CPB will be reviewed by DOE and must be approved by the Contracting Officer (CO). Once the CPB is approved, the Contractor shall follow the approved change

control process.

1. Initial and Interim Contract Performance Baseline Submittal

- a. Within the Contract Transition Period as defined in this Contract, the Contractor shall develop and submit for CO approval:
 - i. An Initial CPB1 for the Contract performance period that reflects the Contractor's cost proposal with any revisions resulting from negotiations leading to Contract award.
 - ii. An Interim CPB2 that provides work planning, measurement and management details as listed below to cover approximately the first 15 months³ of performance starting from the award date or Notice to Proceed as applicable. The Contracting Officer will notify the Contractor of the exact timeframe to be used for the Interim CPB. The Interim CPB shall include:
 1. Product-Oriented Work Breakdown Structure (WBS) and WBS dictionary;
 2. Integrated Resource Loaded Schedule at work-package level to track monthly performance for the interim period;
 3. Work Management Plan that includes Project Control System description, Change Control process description, Contractor's project team with roles and responsibilities; and
 4. Annual work plans covering the interim CPB planning period for operations activities.
 - b. If Contract modifications are negotiated within the Contract Transition Period, the Contractor shall incorporate these approved modifications into the Interim CPB. Subsequent modifications negotiated after the Contract Implementation Period will be incorporated in the Interim CPB through contract modification and baseline change approvals.
 - c. The Contractor shall immediately begin performance reporting against the Interim CPB as submitted to the Contracting Officer and before receiving approval of the
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1 Initial CPB is simply the baseline plan at Contract award. It should be the scope, cost and schedule as submitted with the contractor's proposal with any revisions resulting from negotiations leading to Contract award.

2 Interim CPB is generally required within 90 days from Contract award or Notice to Proceed and will cover the first approximately 15 months of the Task Order. The Interim CPB must match the scope and cost for this period in the Contract. When the Contract includes multiple projects and operations activities the Interim CPB allows tracking of the scope, cost and schedule for each CPB segment until the full CPB with its unique segments are in place.

3 The interim period will vary based on Contract award date by plus or minus 6 months, to align the end of interim period with the fiscal year. For a Contract award made on January 1, the interim period will be 21 months and for every month after that the interim period will be reduced by a month.

Interim CPB. If the Contractor is required to have a certified EVMS compliant with ANSI-EIA 748 (current version), the Interim CPB must have the necessary data elements to support EVMS certification requirements.

NOTE: If the Contractor's Initial CPB has the details described above for Interim CPB, the Contractor may request that the CO waive the separate submission requirement.

2. Full Contract Performance Baseline (CPB) Submittal

During the first six months after the Contract Transition Period, in addition to performing and reporting progress against the Interim CPB, the Contractor shall develop and submit for DOE approval by the DOE contracting officer detailed plans (See section J, Attachment J-9, "Integrated Contractor Work Control Systems and Reporting Requirements Clause," paragraph D.4.g – Typical Baseline Documents) for the entire contract scope and period of performance. These plans will include the development of the full CPB which may entail development of multiple CPB segments.

- a. During the first six months after the Contract Transition Period, the Contractor shall submit for approval by the CO, the full CPB¹ for the full scope of the Contract that is made up of CPB segments for each capital asset project and for each operations activity, and the required data to support EVMS reviews when EVMS is required. CPB segments shall be developed in accordance with applicable policy and guidance documents noted in Section J, Attachment J-9, "Integrated Contractor Work Control Systems and Reporting Requirements Clause," paragraphs A.1, A.2 and B.1.
- b. The Contractor shall provide monthly status reports regarding the CPB document preparation progress to the CO.
- c. The full CPB submittal shall include both a hard copy and electronic files.

3. CPB and Contract Alignment

It is critically important to DOE that the CPB remain aligned with the Contract, including any modifications, throughout the Contract period of performance. The Government shall withhold all provisional fee payments until the Contractor has

¹ The full Contract Performance Baseline (CPB) represents the cost, schedule, and the entire scope and entire period of performance as it relates to the total estimated cost of the Contract exclusive of fee as stated in Section B of the Task Order. Contract Budget Base (CBB) is the cost element of the CPB and equals the estimated cost of contract minus Fee (CBB=estimated cost of contract- fee/profit and cost overruns).

obtained CO's approval of the interim CPB when the interim CPB is expected or the full CPB when the full CPB is expected. Similarly, if at any time during contract performance the CPB is not aligned with the Contract all provisional fee payments will be withheld until alignment is re-established.

Contract Baseline Management

1. The approved CPB is the source document for reporting scope, cost and schedule performance. The CPB and changes to the CPB (initial, interim and full CPB) at all levels shall be managed using formal documented procedures as approved by the CO. The CPB does not replace or modify the Contract terms and conditions and does not create DOE obligations.
2. The CPB must remain aligned with the Contract. For the cost element, alignment means that the sum total cost of all CPB segments must equal total estimated cost of the Contract exclusive of fee and any contract overrun as stated in Section B of the Contract; for the schedule element, alignment means that the end date of full CPB schedule is the same as the contract end date; and for the scope element alignment means that the WBS dictionary supporting the full CPB includes all scope in the contract statement of work.
3. If a change to the Contract scope is required and is in accordance with the Changes clause, the Contractor shall submit the CPB change proposal concurrently with a request for Contract change proposal to the CO within 60 days. If the CO issues a unilateral or bilateral Contract modification, the Contractor shall submit a revised CPB in accordance with direction accompanying the Contract modification.

Any proposed changes to the CPB resulting from internal replanning or use of Management Reserve shall be provided to the CO for information and/or approval consistent with the change control procedures as approved by the CO as part of the full CPB documentation.

4. Reviews

- a. After completion of the Contract Transition Period and receipt of the Contractor's Initial and Interim CPB, DOE will complete its review to determine whether they meet the terms and conditions of the Contract. In cases where they don't meet the requirements, the Contractor shall submit a corrective action plan to the CO for DOE approval within 15 days of receipt of DOE's comments. All corrective actions shall be completed in the time-frames established in the approved corrective action plan.
- b. Due to the requirement for a certified EVMS, the Contractor shall begin earned value reporting no later than the end of the Contract Transition Period. The Contractor shall initiate discussions with the CO to schedule an EVMS certification review immediately after award or a Notice to Proceed is issued and when three months of earned value data is available (and no later than three months after the Contract Transition Period), the Contractor shall submit all documentation necessary to obtain EVMS certification in conformance with ANSI/EIA-748 standards. The Contractor shall provide the CO, or designated representative(s), access to any and all information and documents supporting the Contractor's project control and reporting system.
- c. After receipt by the CO of the Contractor's full CPB, DOE will review to determine whether the full CPB and required supporting documentation meet the terms and

conditions of the Contract. The Contractor shall submit a corrective action plan to the Contracting Officer for approval within 15 days of receipt of DOE's comments. All corrective actions shall be completed in the time-frames established in the approved corrective action plan.

5. Performance Reporting

The Contractor shall submit the Contractor's Monthly Performance Report to the CO with copy to the Office of Project Assessment at ContractorsMPR@hq.doe.gov not later than the eighth business day prior to the end of each calendar month. The report will provide the prior month's performance for each CPB segment and an update of the performance to date. Format, timing and manner of reporting will vary based on the type of work in the CPB segment. For the monthly reporting requirements for the various types of projects, contracts or operating activities, see the table in Section J, Attachment J-9, "Integrated Contractor Work Control Systems and Reporting Requirements" paragraph C, Performance Reporting.

The Contractor shall report the costs incurred in performance of the capital asset work or operations activity when these CPB segments are completed or at the end of the Contract in compliance with the Environmental Cost Element Structure (ECES), ASTM International Designation E: 2150-02 and in a format ready for incorporation into EM's Environmental Cost Analysis System (ECAS) database. The report should be provided to the Federal Project Director and the CO, with a copy provided to the EM Consolidated Business Center, Office of Cost Estimating & Project Management Support.

ATTACHMENT 4

PART III – LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS
SECTION J - LIST OF ATTACHMENTS
Appendix R - Data Requirements for the Environmental Cost Analysis System
(ECAS)

The following requirements apply to ECAS reporting required by H.XX. The Contractor shall report project data for ECAS which shall consist of a digital file readable by, or that can be converted to, files in either Microsoft Excel® or Microsoft Access®. Project narrative information shall be submitted as a Microsoft Word® document. Contractors shall submit ECAS reports in accordance with the schedule in H.XX.

ECAS is a SQL® database with eighty five discrete data fields designed to facilitate capture of project identification and descriptive information, work breakdown structure (WBS) elements, work activities using a common structure, cost data segregated by element of cost, primary project parameters based on the project type, and secondary project information designed to facilitate further project characterization and overall database reporting. Reporting details for each ECAS data elements are detailed in the following table. The ECAS User Manual contains additional details regarding ECAS and is available at:

http://www.emcbc.doe.gov/Content/Office/ECASUsers_Manual_Rev0_3-15-10.pdf

ECAS Data Fields

ECAS TERM		Description
Project Identification	WBS LEVEL 1	This is currently a default to "EM"
	WBS LEVEL 2	This is the EM Site where work is performed (i.e., ANL (Argonne National Lab), BNL (Brookhaven National Lab), INL (Idaho National Lab), OR (Oak Ridge), SR (Savannah River); RL (Richland), etc., etc., in accordance with the EM CWBS Structure). This is provided by DOE.
	WBS LEVEL 3	This includes the Site and Program Baseline Summary (PBS) identifier and is provided to the contractor by DOE.
	WBS LEVEL 4	The Unique Project ID established by EM consistent with the CWBS. In accordance with the Implementing Guidance Memorandum from EM-2 dated August 26, 2010, DOE EM has implemented a corporate work breakdown structure (CWBS). The CWBS follows the American National Standards Institute (ANSI) Standard 748-A, Section 3. DOE will provide the appropriate CWBS information to be used by the contractor.
	PROJECT NAME	This is typically, but not necessarily, the EM defined project name associated with the CWBS at the ECAS Project Level. ECAS projects are typically reported in PARS II and may be part of a parent project. The project name is provided by DOE and is unique to each ECAS project.
	PROJECT DESCRIPTION	Brief single paragraph describing the project identified and work scope completed and reported. This is developed by the contractor and should capture the start and end state for work completed under the contract.
	PARAMETER PROJECT TYPE	Identify whether the project being reported is one of (4) project types: <ul style="list-style-type: none"> • 1) "Building/ Structure D&D";

ECAS TERM		Description
		<ul style="list-style-type: none"> • 2)(ER) "Environmental Restoration"; • 3) or Nuclear Material Operations (NMO), or; • 4) (WMO) "Waste Management Operations" based on the work associated with the majority of costs for the particular project. <p>This is identified by the contractor.</p>
	PROJECT_TYPE_DETAIL	For D&D and Waste Management Projects: Specific types of buildings or structures decommissioned, or waste management or nuclear operations performed, as prescribed in the ECAS User's Manual.
	ER_TYPE	In-situ, ex-situ, buried, soil and groundwater; characterization, long term management and S&M
	ER_TYPE_DETAIL	Specific technologies or process used to address ER_TYPE, as prescribed in the ECAS User's Manual.
Site WBS Information	WBS LEVEL 5 THRU 8	These fields are used to store the site or contract specific WBS identifiers and represent drilling to three levels below the defined project level. These are unique to each site. The Work Activity resides at or below this level.
	WBS DESCRIPTION	This corresponds to the narrative description for the lowest WBS level identified. This is only used at ECAS Level " 6 Comp T A Elmnt" and is established by the contractor.
	ECAS_LEVEL	This refers to the level of the data being reported. Projects may be grouped based on their complexity into "parent" projects. All "parent" projects are reported as ECAS Level " 4 T A Proj"; All projects are reported at ECAS Level " 5 T A Proj"; All data reported which is part of a project is reported at ECAS Level " 6 Comp T A Elmnt"
	SUM_OR_CE	This refers to how the numeric data is derived. All ECAS Level "4 T A Proj" and " 5 T A Proj" information is calculated based on a summation of lower level elements. ECAS Level " 6 Comp T A Elmnt" entries are direct contractor entries.
	SUBPROJECT_NAME	This field is optional and is used to identify subprojects typically represented as a phase, or other portion of an ECAS Level " 5 T A Proj" project and will depend on how these projects are executed.
	PHASE_START_DATE	This reflects the start date of the work being reported from the contract in the following format "mo/day/year" or "xx/xx/xxxx"
	PHASE_END_DATE	This reflects the end date of the work being reported from the contract in the following format "mo/day/year" or "xx/xx/xxxx"
Environmental Cost Element Structure (ECES)	ECES_LEVEL_1	<p>ECES level 1 represents the project life cycle (LC) phase per ASTM 2150. The ASTM 2150 LC definitions do not correlate directly to the Project Life Cycle Phases "CD-0 thru CD-4" that are spelled out in DOE O 413.3B. The ECES phase will vary depending on how the project is executed. If each phase is a discreet procurement action then:</p> <ul style="list-style-type: none"> • Phase "1"-Assessment Phase: This phase includes the assessment and inspection of the site, and preparation of site inspection report. Specific activities comprise of the following. <ul style="list-style-type: none"> • CERCLA Preliminary Investigation/Site Investigation (PA/SI) • RCRA Facility Assessment (RFA)

ECAS TERM	Description
	<ul style="list-style-type: none"> • Preliminary Planning for waste and special material operations • Pre-Decommissioning actions and planning • Phase “2” –Studies: This phase includes characterization, investigations, risk assessment, development and evaluation of treatment or remedial options, and treatability studies. For example, the CERCLA Remedial Investigation and Feasibility Studies (RI/FS), RCRA Facility Investigation/Corrective Measure Study (RFI/CMS), and Pre-conceptual Design/Research and Development are conducted in this phase. • Phase “3” -Design phases: This phase consists of engineering design and pre-construction activities of treatment or remediation alternatives. Examples of phase three activities include: CERCLA Remedial Design (RD), RCRA - Design portion of Corrective Measures, Waste Management facility design, and decommissioning and dismantlement design. • Phase “4” -Capital Construction: This phase includes construction of selected treatment or remediation alternatives. Phase 4 costs also include start-up and testing, but exclude all operations. Examples of items in this phase include: CERCLA Remedial Action (RA), RCRA Corrective Measure activities, Waste Management Facility construction, and D&D construction. • Phase “5” -Operations and Maintenance: This phase includes all operations and maintenance activities for the selected treatment or remediation alternatives. Phase 5 ends when clean-up or waste treatment goals are met. Examples of tasks for this phase include: CERCLA technology or remediation operations and maintenance; RCRA facility O&M; Waste Management facility O&M, and D&D O&M. • Phase “6” -Long Term Surveillance and Maintenance: Phase 6 starts when operations have ceased or maintenance of a shut-down facility begins. Examples of phase 6 elements include: post closure surveillance and long term monitoring and on-site storage/disposal facility. • “8” is used for Cross Cutting for program management where costs cannot be segregated into discreet projects. Phase 8 is not an environmental life-cycle element. This Phase is meant to capture program wide or cross-cutting costs that cannot be readily separated into a specific project. This element is also used to indicate those cost that are expended over all the life-cycle phases of a project. <p>For most EM Capital Asset projects, ECES Level 1 should equal “4” as the typical CD-2/3 Capital asset project includes study, design, construction, and start-up operation and maintenance for the first year. Contractor shall identify the appropriate ECES Level 1.</p> <p>Operations activities (i.e., ER treatment system operations or</p>

ECAS TERM	Description
<p style="text-align: center;">ECES_LEVEL_2</p>	<p>Waste Management operations) will use ECES Level 1 equal to 5. Surveillance and Maintenance or Long-term Management projects/programs will use ECES Level 1 equal to 6.</p>
	<p>ECES level 2 represents a major work element under the LC Phase. These elements will usually correlate with a WBS element and typically include:</p> <ul style="list-style-type: none"> • “.01” is used for Program Management Support and Infrastructure, • “.02” is used for “Project Management and Support”, • “.03” is used for “Preparation of Plans and Specifications”, • “.04” is used for “Project Studies and Design”, • “.05” is used for “Site Work”, • “.06” is used for “Surveillance and Maintenance” • “.07” is used for “Investigations and Monitoring/ Sample collection” • “.08” is used for “Sample Analysis” • “.09” is used for “ Sample Management/Data Validation/Data Evaluation” • “.10” is used for “Treatability/Research And Development” • “.11” is used for “Treatment Plant/Facility/Process” • “.12” is used for “Storage Facility/Process” • “.13” is used for “Disposal Facility/Process” • “.14” is used for “Ordnance And Explosives (OE) Removal And Destruction” • “.15” is used for “Drums/ Tanks/ Structures/ Miscellaneous Removal/ Abatement” • “.16” is used for “Air Pollution/Gas Collection And Control” • “.17” is used for “Surface Water/ Sediments Containment, Collection, And Control” • “.18” is used for “Groundwater Containment, Collection, Or Control” • “.19” is used for “Solids/S Oils Containment (E.G., Capping/ Barrier) Collection Or Control” • “.20” is used for “Liquid Waste/ Sludge (E.G., UST/AST) Containment, Collection, Or Control” • “.21” is used for “IN-Situ Biological Treatment” • “.22” is used for “EX-Situ Biological Treatment” • “.23” is used for “IN-Situ Chemical Treatment” • “.24” is used for “EX-Situ Chemical Treatment” • “.25” is used for “IN-Situ Physical Treatment” • “.26” is used for “EX-Situ Physical Treatment” • “.27” is used for “IN-Situ Thermal Treatment” • “.28” is used for “EX-Situ Thermal Treatment” • “.29” is used for “IN-Situ Stabilization/Fixation/ Encapsulation” • “.30” is used for “EX-Situ Stabilization/Fixation/Encapsulation” • “.31” is used for “Facility Decommissioning And Dismantlement” • “.32” is used for “Material Handling/Transportation” • “.33” is used for “Disposal”

ECAS TERM	Description
	<ul style="list-style-type: none"> • “.34” is used for “Air Emission and Off-Gas Treatment” • “.91, .92, .9x, etc.” Is used for an element not otherwise identified in the ECES structure.
	<p>The ECES has also identified lower elements in Level 3 through 6 which allow for drilling down to specific work activities under the major element identified in ECES Level 2. All projects entered into ECAS should have data at least to ECES Level 3 and contractor accounting systems should capture data to at least this level. Because of the ECES structure, D&D (under .31 “Facility Decommissioning And Dismantlement”) projects will require codification to at least Level 4. Waste Management projects/programs (under .11 “Treatment Plant/Facility/Process”) will likewise require codification to at least ECES Level 4. The complete list of ECES codes in the DOE Adjunct to ASTM 2150 is available through the EMCBC Office of Cost Estimating & Project Management Support, Applied Cost Engineering (ACE) Team site at:</p> <p>“ http://www.emcbc.doe.gov/Office/ACETeam”</p> <p>Users should go to the listed internet and select the “ECES Download” tab. Additional information is also available at this location regarding ECES levels and definitions, and the DOE Adjunct.</p> <p>Use the “Other” element ending with the value “.9x” under the application ECES code if a work activity does not have a direct corollary, and renumber the “.9x” to the next available unique number.</p>
	<p>ECES_DESCRIPTION</p> <p>This field is used to capture the ECES description of the lowest ECES level captured as stated in the “All Level” listing of ECES codes.</p>
<p>Labor Hours and Cost Data</p>	<p>BUDGET_HOURS</p> <p>This should represent the total budget labor hours per the approved Contract Performance Baseline (CPB) for the project.</p>
	<p>BUDGET_COST</p> <p>This should represent the total estimated cost per the approved Contract Performance Baseline (CPB) for the work completed for the project under the contract.</p>
	<p>PROF_LABOR_HOURS</p> <p>These are the actual total hours for “non-craft” labor used during performance of the contract. These will include hours for both FLSA “exempt” and “non-exempt” employees and can also include employees covered under collective bargaining agreements. Hours for all employees not otherwise designated as “craft” labor should be included here.</p>
	<p>PROF_LABOR_COST</p> <p>This is the total “fully burdened” cost for all “PROF_LABOR_HOURS” reported. This generally excludes profit or fee, and indirect costs applied to labor that are captured in other fields.</p>
	<p>CRAFT_LABOR_HOURS</p> <p>These are the actual total hours for “craft” labor used during performance of the contract. Craft labor typically falls under Davis-Bacon Act requirements, is typically FLSA “non-exempt”, and at most EM sites are also affected by collective bargaining agreements. Hours for all employees not otherwise designated as “professional” labor should be included here.</p>

ECAS TERM		Description
	CRAFT_LABOR_COST	This is the total “fully burdened” cost for all “CRAFT_LABOR_HOURS” reported. This generally excludes profit or fee, and indirect costs applied to labor that are captured in other fields.
Non-Labor Elements of Cost	MATERIALS_SUPPLIES_COST	Prime Contractors and Major subcontractors are required to report their hours charged to the project per the contract by element of cost. This field reflects all costs charged for materials and supplies consumed during the completion of work under the contract.
	EQUIPMENT_RENTAL_COST	Prime Contractors and Major subcontractors are required to report their hours charged to the project per the contract by element of cost. This field reflects all costs charged for equipment rental during the completion of work under the contract.
	PROF_SERVICES_HOURS	Major subcontractors are required to report their hours charged to the project per the contract. This field reflects all hours charged for professional services by major subcontractors.
	PROF_SERVICES_COST	This field reflects all labor and non-labor costs completed by a subcontractor providing professional services that are charged to the project.
	CONST_SUBCONT_HOURS	Major subcontractors are required to report their hours charged to the project per the contract. This field reflects all hours charged for worked performed by major subcontractors.
	CONST_SUBCONT_COST	This field reflects all labor and non-labor costs completed by a subcontractor, or completed work other than professional services that are charged to the project.
	FUEL_UTILITIES_COST	Prime Contractors and Major subcontractors are required to report their hours charged to the project per the contract by element of cost. This field reflects all costs charged for fuel and utility costs incurred during the completion of work under the contract.
	OTHER DIRECT COSTS	Prime Contractors and Major subcontractors are required to report their hours charged to the project per the contract by element of cost. This field reflects all costs charged for other direct costs not otherwise captured during the completion of work under the contract.
	GENERAL_ADMIN	“General and administrative (G&A) expense” means any management, financial, and other expense which is incurred by or allocated to a business unit and which is for the general management and administration of the business unit as a whole.
	PROFIT_OVERHEAD_COST	This field reflects the profit or fee paid to the contractor attributable to completion of the work required under the contract. This cost should be the portion allocated to each reportable project.
	CALC_OR_ACTUAL	Actual reported costs is required, and the contractor should identify whether or not the “GRAND_TOTAL_COST” is calculated from summing lower level costs reported, or is based on actual reported costs.
	COST_PEDIGREE	The best sources of data are original documents and databases, such as cost accounting databases that were used to develop the actual costs reported to DOE. The validity of such data is considered to be at the highest level. Even so, it should be confirmed against contractual documents to ensure that it represents the correct scope of work. This should be identified

ECAS TERM	Description
	as "high, medium, or low" based majority of costs meeting these criteria
Indirect Costs	INDIRECT_DISTRIBUTED_COST_L5 ECAS "Distributed" costs consist of management or support costs that the site has collected that is applicable to a specific ECAS Project or subproject. These costs may also be distributed across elements of the project.
	INDIRECT_DISTRIBUTED_COST_L4 These "Distributed" costs consist of management or support costs that the site has collected at a level above the ECAS Project or subproject (i.e., it is "distributed" over several projects). These costs are most easily addressed as costs that may be pro-rated against direct costs in ECAS Projects or subprojects.
	INDIRECT_DISTRIBUTED_COST_SITE "Indirect cost" means any cost not directly identified with a single final cost objective, but identified with two or more final cost objectives or with at least one intermediate cost objective. "Indirect cost rate" means the percentage or dollar factor that expresses the ratio of indirect expense incurred in a given period to direct labor cost, manufacturing cost, or another appropriate base for the same period (see also "final indirect cost rate").
	INDIRECT_DISTRIBUTED_COST_WASTE "Waste costs" consist of the costs of on-site waste management, on-site treatment/ transportation, and disposal costs for those wastes generated by an ECAS Project. In most multi-project DOE sites a central materials disposition or waste management organization handles the waste generated by an EM project. The purpose is to treat the waste disposition cost as a project cost allocated appropriately to the correct ECAS project
Primary Parameters	PARAMETER_UOM This field captures the primary parameter unit of measure and is reported at ECAS level "_5_T_A_Proj". Facility D&D projects will have a primary parameter of square feet (SF) for the gross square feet of the facility. Waste type projects will have volumetric parameter (cubic feet (CF), cubic meter (m ³), cubic yards (yd ³), etc.). Environmental Restoration type projects will have a volumetric parameter, or a flow rate, etc.
	PARAMETER_VALUE Quantity or numeric value of primary parameter
	PRINCIPAL_CONTAMINANT Acids/Caustics, Asbestos, Fuels, Herbicides, Metals, Multi-contaminant, perchlorate, pesticides, Poly Chlorinated Biphenyls (PCBs), Radiation (High, Low, Transuranic(TRU)), Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Other
Waste Parameters	PARAMETER_UOM As above
	WASTE_OR_MATERIAL_TYPE Mixed, Contact handled (CH), Remote handled (RH), Transuranic (TRU), Low Level Waste (LLW), High Level Waste (HLW), Hazardous (HAZ), Sanitary Waste, Spent Nuclear Material (SNM), Spent Nuclear Fuel (SNF), PCBs, Non-Hazardous (Non-Haz), etc.
	PCKG_TYPE "Bulk; Containerized-general, small-medium-large box; Cask (HLW); Liquid-Tank, HIC; Drum; B25; Overpack; Other
	DISP_TRTMT No Treatment, Treatment at Origin, Treatment at Disposal facility
	DISP_FAC_REG None; Treatment at Origin; Treatment at Disposal Facility
Supplemental	BUILDING_TYPE B_Typ_1- (SF) Transite, non-rad, contaminated, coal/oil/steam

ECAS TERM		Description
D&D Parameters		plant; office building; non-contaminated equipment; other. B_Typ_2 -(SF) Pu Storage; Small Reactor; LLW Tanks w/ and w/o sludge; Low level lab; Generic rad facility (GRF); GRF plus loose contamination; solid waste packaging; contaminated equipment; water storage (pkg. waste); other. B_Type-3 – (SF) Reactor (Weapons/commercial; Spent Nuclear Fuel (SNF)-reprocessing; Plutonium/ Enriched Uranium Processing; Remote/Semi-remote waste treatment; HLW Tanks w/ and w/o sludge; Other
	CONSTRUCTION_TYPE	Number of stories-below grade surface, above grade surface, high bay facility, multi-story no levels, Other
	STRUCTURE_TYPE	Masonry exterior walls; brick & glass; Metal; prefabricated/modular; reinforced concrete; steel frame-siding; wood frame-siding
	FSA_TYPE	Specific types of Functional Space Area related to a D&D subproject, as prescribed in the ECAS User's Manual.
	FSA_CMLX	Complexity (high, Medium, low)
Project Descriptors	MGMT_CMLX	Management Complexity (High, Medium, low)
	TECH_CMLX	Technical Complexity (High, Medium, low)
	REG_CMLX	Regulatory Complexity (High, Medium, low)
	PUB_CMLX	Public or Stakeholder Complexity (High, Medium, low)
	PL_ALL	Protection (PPE) Level: A-E; Graded, based on OSHA standards
	ER_CMLX	Environmental Restoration Complexity (High, Medium, low)
	GW_CMLX	Groundwater Complexity (High, Medium, low)
	SW_CMLX	Surface Water Complexity (High, Medium, low)
	SOIL_CMLX	Soil Complexity (High, Medium, low)
	ECO_CMLX	Ecological Complexity (High, Medium, low)
	WET_WILD	Wetlands/ Wildlife Complexity (High, Medium, low)
	HIST	Historical/ Archaeological Complexity (High, Medium, low)
	MEDIA_ST	Media Interest Complexity (high, Medium, low)

ATTACHMENT 5

PART III – LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS
SECTION J - LIST OF ATTACHMENTS
Appendix S - Integrated Work Control Systems and Reporting Requirements
Clause (April 2014)

The following Environmental Management (EM) policies and guidance apply to Section H, Integrated Contractor Work Control Systems and Reporting Requirements.

A. Project Control System

1. Capital Asset Projects:

- a. DOE Order 413.3B, Program and Project Management for the Acquisition of Capital Assets, dated November 29, 2010 and its associated Guides
- b. DOE Work Breakdown Structure Handbook, August 16, 2012
- c. Primavera Project Manager version P6 (or most current version) for scheduling activities to ensure standardization
- d. American National Standards Institute, Earned Value Management System Guidelines ANSI/EIA-748-C, dated June 2007 (or most current version).
- e. Contract Performance Reports in the following seven formats unless specified otherwise. For instructions on how to fill the forms refer to DI-MGMT-81861 (item A.3.f.).
 - i. Format 1, DD Form 2734/1, March 05, Work Breakdown Structure
 - ii. Format 2, DD Form 2734/2, March 05, Organizational Categories
 - iii. Format 3, DD Form 2734/3, March 05, Baseline
 - iv. Format 4, DD Form 2734/4, March 05, Staffing; and
 - v. Format 5, Form Number: N/A , Explanations and Problem Analysis
 - vi. Format 6, Form Number: N/A, Integrated Master Schedule
 - vii. Format 7, Form Number: N/A, Electronic History and Forcast File
- f. Data Item Description, DI-MGMT-81468, Contract Funds Status Report (CFSR) or equivalent
- g. Contractor Project Performance (CPP) Upload Requirements for Project Assessment and Reporting System (PARS II), Version 1.7, dated June 25, 2011 (or most current version)
 - i. Interconnection Security Agreement for Project Assessment and Reporting System (PARS II), Version 1.6, dated June 30, 2010 (or most current version).
 - ii. PARS II New Contractor Information for Interconnection Security Agreement, V1.0, November 18, 2010 (or most current version).
- h. EM's Environmental Cost Analysis System (ECAS) User's Guide (The Guide is located at <http://apps.emcbc.doe.gov/ecas/> for registered ECAS users.)

2. Operations Activities:

- a. Office of Environmental Management's Operations Activities Protocol, dated March 15, 2012
 - b. DOE Work Breakdown Structure Handbook, August 16, 2012
 - c. Primavera Project Manager version P6 (or most current version) for scheduling activities to ensure standardization
 - d. If Earned Value Management System (EVMS) is required, American National Standards Institute, Earned Value Management System Guidelines ANSI/EIA-748-B, dated June 2007 (or most current version) (If EVMS is not required see paragraph C. Performance Reporting table, Operation Activities.)
 - e. Contract Performance Reports in the following five formats unless specified otherwise. For instructions on how to fill the forms refer to DI-MGMT-81861 (item A.3.f.)
 - i. Format 1, DD Form 2734/1, March 05, Work Breakdown Structure
 - ii. Format 3, DD Form 2734/3, March 05, Baseline; and
 - iii. Format 5, Form; N/A , Explanations and Problem Analysis
 - iv. Format 6, Form: N/A, Integrated Master Schedule
 - v. Format 7, Form: N/A, Electronic History and Forcast File
 - f. Data Item Description, DI-MGMT-81468, Contract Funds Status Report (CFSR) or equivalent
 - f. Integrated Planning, Accountability, and Budgeting System – Guidance Documents, dated June 2011 (or most current version).
3. **Other Documents:** The following documents provide background and context for planning and reporting requirements in Section H, Integrated Contractor Work Control Systems and Reporting Requirements:
- a. Federal Acquisition Regulation (FAR) and Department of Energy Acquisition Regulation (DEAR)
 - b. DOE Acquisition Guide
 - c. Office of Environmental Management Corporate Work Breakdown Structure, November 9, 2011
 - d. Work Breakdown Structures, MIL-STD-881C
 - e. Data Item Description, DI-MGMT-81334D, Contract Work Breakdown Structure
 - f. Data Item Description, DI-MGMT-81861, Integrated Program Management Report (IPMR), June 20, 2012 (<http://www.cms.gov/Research-Statistics-Data-and-Systems/CMS-Information-Technology/EarnedValueManagement/Downloads/IPMR-DID.PDF>)
 - g. IPMR Final Implementation Guide, Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD AT&L) Performance Assessments and Root Cause Analyses (PARCA), January 24, 2013
 - h. Over Target Baseline and Over Target Schedule Guide, OUSD AT&L (PARCA), December 5, 2012
 - i. Environmental Cost Element Structure (ECES), ASTM International Designation E: 2150-02 DOE Adjunct to ASTM 2150-02

B. Baseline Development and Performance Reporting

6. Contract Performance Baseline Submittal

- a. Contract Performance Baseline (CPB) segments for performance planning, tracking and reporting will generally map to level 4 of the Corporate Work Breakdown Structure (CWBS) (see paragraph A.3.c.) but may be tailored, as negotiated by CO and contractor, when combining or further disaggregation maximizes efficiency for performance planning, tracking and reporting.
- b. The full CPB and CPB segments must reflect the requirements of the Contract SOW, identify key milestones and performance metrics (regulatory, DOE, and incentive) and be consistent with the estimated cost or target cost (excluding fee/profit and cost overruns) in Section B of the contract as agreed to by the contractor and the Government.
- c. CPB segment(s) for capital asset projects must meet applicable requirements of DOE Order 413.3B to support the development of the Performance Baseline (PB) (See Section D, Baseline Terms for definition) by DOE for Acquisition Executive (AE) approval.
- d. CPB segment(s) for operations activities will consist of detailed work plans for current and succeeding fiscal years; at a minimum, planning level work plans are required for the remainder of the Contract period of performance. CPB for operations activities will include a Management Plan that documents contractor's process for work planning and management including change control, performance tracking and reporting systems and methods. The Management Plan will also document any assumptions, regulatory requirements, safety and quality assurance management, risk management, milestones and metrics, budget profile, roles and responsibilities of the contractor's integrated management and support team.
- e. WBS will start for each CPB segment at the CWBS level 4, and further broken down into appropriate elements for planning, budgeting, scheduling, cost accounting, work authorization, measuring progress, and management control. The WBS must be extended to the level necessary for management action and control based on the complexity of the work (See H. Clause, Section B, Baseline Development and Performance Reporting). WBS and WBS dictionary sheets or scoping narratives will be at the level at which costs are collected. The WBS submittal shall include a cross-reference of the WBS elements to the CPB segment and CLIN consistent with the Contract Line Item Number Assignment against Contract Structure.
- f. The Initial CPB is the baseline plan that must be submitted at Contract award. It shall be 100% aligned with the scope, cost and schedule as submitted with the contractor's proposal with any revisions resulting from negotiations leading to Contract award. The Interim CPB is generally required within 90 days from contract award or Notice to Proceed and will cover the first approximately 15 months of the Contract.

- g. The Interim CPB must match the scope and cost for this period in the Contract. When the Contract includes multiple projects and operations activities the Interim CPB allows tracking of the scope, cost and schedule for each CPB segment until the full CPB with its unique segments are in place.
- h. The full CPB will subsume the Interim CPB as currently approved in its entirety. An Interim CPB is required to be submitted during the Contract Transition Period that will cover the first approximately 15 months of the Contract (See Section D.4.a. for more details. The full CPB will be an extension of the Interim CPB that includes any modifications approved up to the time when the full CPB is submitted.

C. Performance Reporting

CPB Segment	Reporting Requirement
<p>Capital Asset Projects where EVMS is required</p>	<p><u>Post Critical Decision (CD-2):</u> Monthly Performance Report will include Contract Performance Reports (CPR) formats 1 through 7 and a Contract Funds Status Report (CFSR). The reports shall be consistent with paragraph A.1. The CPR data shall accurately reflect how work is being planned, performed, and measured and shall be consistent with the actual Contract status. The reports will include the earned value analysis of the prior month, and Format 5 Variance Analyses are required for Control Accounts (CA) with current or cumulative cost or schedule variances exceeding thresholds established by the CO.</p> <p>[Note: PARS II is the central repository for key Departmental-level project information.</p> <p>No later than the <u>last workday of every month</u> Earned Value (EV) data is provided from contractor's systems directly into PARS II. The data must be current as of the closing of the previous month's accounting period. DOE 413.3B requires EV reporting into PARS for projects with Total Project Cost (TPC) > \$20M.</p> <p><u>Pre CD-2:</u> The monthly Performance Report will include narrative description of scope accomplished, cost incurred versus plan (CPB) and status of CPB milestones and deliverables.</p>
<p>Capital Asset Projects where EVMS is not</p>	<p>Monthly Performance Report will include narrative description of scope accomplished, cost incurred versus plan (CPB), any related impacts and corrective</p>

required	action, and status of CPB milestones and deliverables.
Operations Activities	<p>Monthly Performance Report will include narrative description of scope accomplished, progress on corporate and Contract specific performance metrics, costs incurred versus CPB plan, any related impacts and corrective action, and status of CPB milestones and deliverables.</p> <p>If the Contract requires EV reporting, the contractor's Monthly Performance Report for each CPB segment will include Contract Performance Reports (CPR) formats 1, 3, 5, and 6.</p> <p>If the CPB segment consists primarily of Level of Effort (LOE) activities, the status report will tabulate planned versus actual cost by major functions as agreed to between the contractor and the CO.</p> <p>[<u>Note</u>: IPABS is the central repository for EM planning and performance data. Contractor Monthly Performance Report is used by the site or field office to enter the monthly performance data into IPABS.]</p>

D. Baseline Terms

DOE and EM use baseline terms to communicate Contract and project status. Therefore it is critical for contractors working on DOE contracts to understand and use consistent terminology to promote effective communication and performance. The following definitions and explanations are provided to ensure a common understanding and clarification of Contract language consistent with the requirements of DOE O 413.3B.

1. Contract Performance Baseline (CPB)

- (a) The Contract Performance Baseline (CPB) represents the cost, schedule, and the entire scope and entire period of performance as it relates to the total estimated cost of the Contract exclusive of fee and any contract overruns as stated in Section B of the Contract. Contract Budget Base (CBB) is the cost element of the CPB and equals the Estimated Cost (excluding fee and cost overrun,). (See D, Baseline Terms, 2.(b) figure 1),

Many EM contracts include multiple capital asset projects as well as multiple operations activities. The CPBs for each capital asset project and each operations activity in a contract that has multiple projects and operations activities are called CPB segments. Contract segments may be pre-defined in a Contract as CLINs, but may also be identified later during Contract execution as the work execution approach becomes

clearer and the contractor and DOE mutually agree to further sub-divide (“chunk”) larger activities or projects into more manageable segments. The full CPB for a Contract with multiple projects and operations activities is the sum of all the CPB segments.

EM has put in place a Corporate Work Breakdown Structure for its entire program scope. See reference document listed in paragraph A.3.c. Level 4 of the CWBS are the Activity Building Blocks (ABBs). The CPB segments may map to one or more ABBs, but an ABB can only be part of one CPB.

- (b) Performance Measurement Baseline (PMB) is the baseline cost that encompasses all contractor project work packages and planning packages, derived from summing all the costs from the Work Breakdown Structure (WBS). Management Reserve (MR), contingency, fee, and DOE direct costs are not part of the Performance Measurement Baseline. The PMB is the benchmark used within EVM systems to monitor project (and Contract) execution performance in the Contract. A PMB must be in place and under configuration control for capital asset projects past CD-2.

2. Baseline Terminology for Capital Asset Projects

- (a) Performance Baseline (PB) is the collective key performance, scope, cost, and schedule parameters, which are defined for all capital asset projects at Critical Decision (CD)-2 (See Figure 1). Performance Baseline includes the entire project budget (TPC including fee and contingency).

$$\text{PB} = \text{PMB} + \text{MR} + \text{Contingency} + \text{Fee} + \text{DOE Other Direct Cost (DOE ODC)}$$

- (b) CPB Segment for a Capital Asset project represents the contractor’s work plan for planning and executing a capital asset project as a stand-alone portion of the full CPB. Depending on the stage of a project with respect to its acquisition cycle, i.e. at CD-0 versus at CD-3, the CPB documents required to be submitted will vary. For example, the CPB for a project that is between CD-0 and CD-2 will include all applicable documents for the stage of the project as specified in DOE O 413.3B, and a plan to get to CD-2 through CD-4.

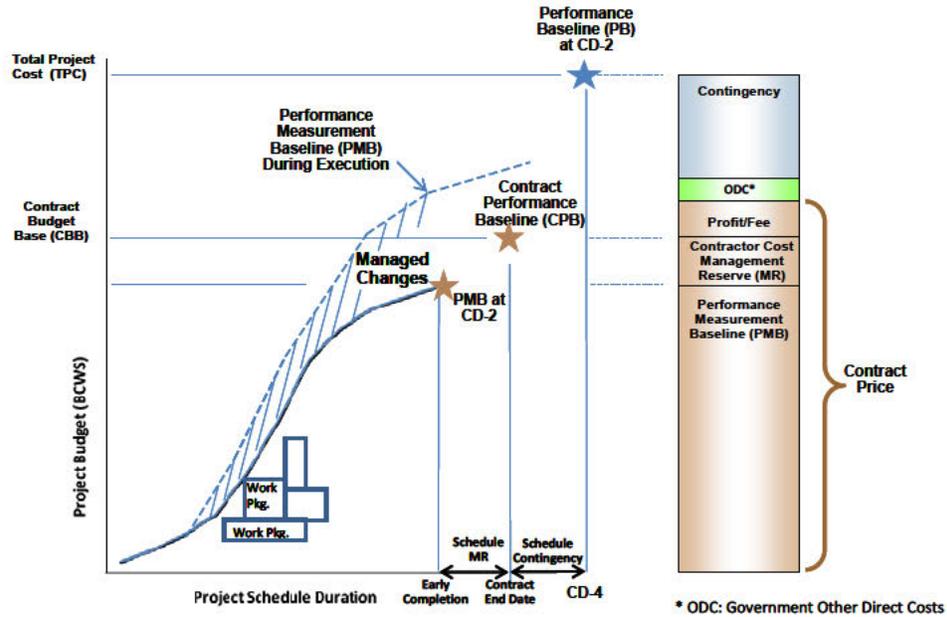


Figure 1 – Performance Baseline at Contract Award, Key Terms and Relationships for Capital Asset Projects

3. Baseline Terminology for Operations Activities

- (a) Fiscal Year Work Plans (FYWP): FYWPs are annual work plans that define the work scope to be accomplished in each fiscal year thru the Contract period of performance based on planned budget allocations. FYWP for each operations activity provides the scope, cost, schedule, performance metrics, milestones, assumptions, and risks associated with the operations activity. Even though the FYWP is a Federal document, it is based on the contractor’s CPB segment for the operations activity (See Figure 2 below).
- (b) CPB Segment for an Operations Activity: A CPB segment for an operations activity represents the contractor’s work plan for planning and executing an operations activity through the Contract period of performance in accordance with the requirements of the Operations Activities Protocol (See Paragraph A.2.a).

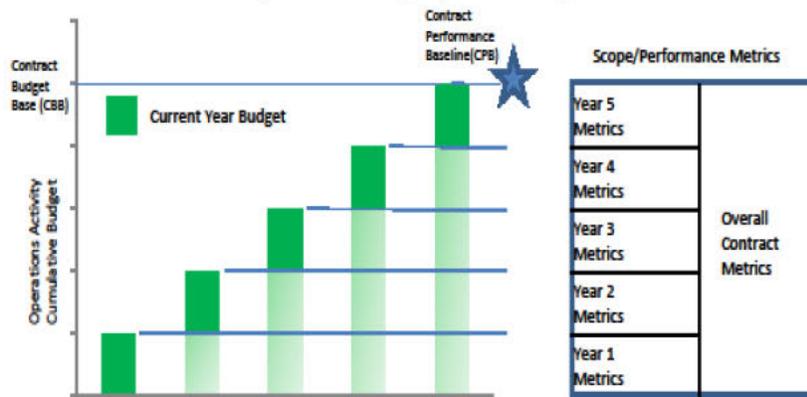


Figure 2 – Contract Performance Baseline for an Operations Activity

4. Other Baseline Terms

- (a) Contingency: For capital asset projects, contingency is the portion of the project budget that is available for risk uncertainty within the project scope, but outside the scope of the Contract. Contingency is budget that is not placed on the Contract and is included in the TPC. Contingency is controlled by Federal personnel as delineated in the Project Execution Plan (PEP).
- (b) Initial CPB is simply the baseline plan at Contract award. It should be the scope, cost and schedule as submitted with the contractor's proposal with any revisions resulting from negotiations leading to Contract award.
- (c) Interim CPB: An Interim CPB is generally required within 90 days from Notice to Proceed and will cover the first approximately 15 months of the Contract. The Interim CPB must match the scope and cost for this period in the Contract. When the Contract includes multiple projects and operations activities the Interim CPB allows tracking of the scope, cost and schedule for each CPB segment until the full CPB with its unique segments are in place.
- (d) DOE Other Direct Costs (ODCs): For capital asset projects, DOE ODCs are DOE costs attributable to the project that are outside of the Contract.
- (e) PBS Life Cycle Cost: In 1997, EM organized its entire cleanup program at each site into a corporate Project Baseline Summary (PBS) structure. EM formulates its annual budget request to Congress using the PBS structure and maintains configuration control of lifecycle cost estimates for each PBS. PBSs include costs for both capital asset projects and operations activities through completion of cleanup at each site.

PBS Life Cycle Cost =

$$\text{Prior actual costs} + \text{Sum of CBBs for current contract(s), Fee, Contingency, and Other DOE Costs} + \text{Estimate of cleanup work through completion}$$

- (f) Management Reserve (MR): MR is an amount of total contract budget and schedule withheld for management control purposes by the contractor. Management Reserve is not part of the Performance Measurement Baseline.

Note: MR is established after Contract award from within the Contract Budget Base (CBB) to effectively manage contract work scope. Also, MR is not a separately priced cost element in a contractor's cost proposal. The expectation is that the contractor's proposal takes into consideration any contractor-owned performance risks associated with delivery of the proposed scope of work. MR is necessary to effectively implement EVMS, as such if the contract requires EVMS reporting, each CPB segment must establish a risk informed MR no later than full CPB submittal. The use of MR should be tied to changes that have scope, schedule, and budget impact at the control account level in order to be compliant with ANSI/EIA 748 (current version).

(g) Typical Baseline Documents:

- i. WBS and WBS dictionary
- ii. Integrated Resource-Loaded Schedule with monthly Budgeted Cost of Work Planned when EV is required, supported by cost and schedule basis
- iii. Annual work plans for Operations Activities
- iv. Overall cost estimate with supporting basis of estimates
- v. Documentation of risks, assumptions, risk analysis, determination of a Management Reserve (MR) and a Risk Management Plan
- vi. Contractor's Project Management Plan including Change Control process

(h) Work Breakdown Structure (WBS): The WBS is a product-oriented hierarchical decomposition of the work required to accomplish the project objectives and produce the contractual deliverables. The WBS should subdivide the work into smaller, independent pieces of work; with each descending level of the WBS representing increasingly detailed definition of the planned project work. Contractor's WBS will flow down from Level 4 of EM's Corporate WBS1 (CWBS) - see reference document listed in paragraph A.3.c. The WBS provides the basis for all work control system components, including estimating, scheduling, budgeting, performing, managing, and reporting. Cost and schedule estimates should be developed using activity or commodity-based cost estimating techniques to facilitate review and approval by DOE.

¹ CPB segments for performance planning, tracking and reporting will generally map to level 4 of the CWBS but may be tailored, as negotiated by CO and contractor.