

**U.S. Department of Energy
Office of Project Assistance and Assurance (EM-11)
Standard Operating Procedure (SOP)**

Title: EM-11 Office of Environmental Management Standard Operating Procedure, Validation of Project Readiness for Approval for Operations Critical Decision-4

EM ORG: EM-11 SOP #: 004

Revision #: 2

Effective Date: 9/30/11

- 1) **POLICY:** This Environmental Management (EM) procedure provides the process to be followed at Headquarters (HQ) and the Field organizations to obtain Critical Decision (CD)-4, Approve Start of Operations or Project Completions.
- 2) **OBJECTIVES:** The purpose of this procedure is to establish EM-11, Federal Project Director (FPD) and site Federal Employee's responsibilities before recommending to the Director of EM-11 that a project is ready for CD-4 approval by the Acquisition Executive (AE). This procedure only applies to projects governed by Department of Energy (DOE) Order 413.3B, Program and Project Management for the Acquisition of Capital Assets.
- 3) **CANCELLATIONS:** This SOP cancels SOP 004 Revision 1, April 4, 2011.
- 4) **APPLICABILITY:** The provisions of this procedure will apply to EM-11 employees and Field organizations responsible for project management. AE authority for projects with a Total Project Cost (TPC) less than \$100M was delegated to the EM site managers at each of the large sites (Richland, Office of River Protection, Savannah, Idaho, Oak Ridge, Carlsbad and Portsmouth and Paducah Project Office). The Consolidated Business Center (CBC) was delegated AE authority for all EM capital asset projects with TPC less than \$100M at the small sites and the National Nuclear Security Administration (NNSA) sites. [NOTE: The CBC delegation rescinded the May 27, 2010 determination that AE authority, including CDs, for projects with a TPC or EM TPC of less than \$20M resides with the EM manager at each site.] For these projects, each site manager and the CBC shall provide EM-11 verification that DOE Order 413.3B requirements were met and shall submit copies of the signed Site-level CD-4 approval memorandum for the record (not for headquarters-level AE signature).
- 5) **REFERENCES:**
 - a) DOE Order 413.3B, Program and Project Management for the Acquisition of Capital Assets, dated November 29, 2010.
 - b) DOE G 413.3-16, Project Transition/Closeout (CD-4), dated September 24, 2008.
 - c) Memorandum, D. Chung to Distribution, Office of Environmental Management Operations Program Management, dated April 21, 2010.
 - d) Development of Site Transition Plan, Use of the Site Transition Framework, and Terms and Conditions for Site Transition, memorandum from Director, Office of Legacy Management to Assistant Secretary, Office of Environmental Management, dated February 15, 2005.

- e) Terms and Conditions for the Transition of Completed Environmental Projects from EM to the NNSA, memorandum, James A. Rispoli, Assistant Secretary, Environmental Management and Bruce Scott, Associate Administrator, Infrastructure and Environment, dated September 5, 2006.
 - f) Office of Science and Environmental Management Terms and Conditions for Site Transition, dated February 9, 2006.
 - g) Root Cause Analysis Contract and Project Management, Corrective Action Plan, dated July 2008.
 - h) Standard Operating Policy and Procedure (SOPP) #41, Capital Asset Project Critical Decision Approval Process, dated April 2011.
 - i) Site-specific memoranda for Delegation of AE Authority for Capital Asset Projects with a Total Project Cost of less than \$100M dated February/March 2011.
 - j) Memorandum, I. Triay to Distribution, Determination of Acquisition Executive Authority for Projects with a Total Project Cost or Environmental Management Total Project Cost of less than \$20M, dated May 27, 2010.
- 6) **CONTACT:** Lowell Ely, Director, Office of Project Assistance and Assurance, EM-11, 301-903-6821, Lowell.Ely@em.doe.gov

7)

Revision	Affected Page/Section	Changes
1	1/2	Order reference changed from 3A to 3B
	1/4	Site delegation for projects changed from less than \$20M to less than \$100M. Site submittal of the CD-4 approval package to HQ is for the record (not AE signature).
	3/9a, iv	Include reference to OECM website address displaying draft templates for CD-4 memo and package
	5/Attachment A	Updated the checklist to be consistent with DOE Order 413.3B
2	4/9c,i	Editorial changes
	Attachment C	Order reference changed from 3A to 3B
3	2/5	Include reference to site-specific Delegation memoranda
	2/5	Include reference to the now rescinded determination memorandum
	3/9a, iv	Delete reference to now obsolete OECM website address displaying draft template for CD-4 memo and package
	3/9a, v (new)	New insertion to address required documentation submittals for Site-level CD-4 approvals
	Attachment B	Deleted Summary Template and Inserted new Attachment B, CD-4 Approval Request Memorandum Template
	Attachment C	Inserted a new Attachment C, CD-4 Approval Decision Memorandum Template and renamed following flowchart Attachments "D" and "E"

8) **ABBREVIATIONS AND ACRONYMS:**

- a. Acquisition Executive – AE
- b. Critical Decision – CD
- c. Environmental Management – EM
- d. Federal Project Director – FPD
- e. Headquarters – HQ
- f. Key Performance Parameter – KPP
- g. National Nuclear Security Administration – NNSA
- h. Office of Engineering and Construction Management – OECM
- i. Office of Legacy Management – LM
- j. Office of Science – SC
- k. Point of Contact – POC
- l. Project Execution Plan – PEP
- m. Quality Assurance – QA
- n. Standard Operating Procedure – SOP

9) **ROLES AND RESPONSIBILITIES:** For projects where the CD-4 approval authority is the Secretarial Acquisition Executive (S-2), the project team is required to undergo the Environmental Management Acquisition Advisory Board (EMAAB) and Energy System Acquisition Advisory Board (ESAAB) decision-making processes. For projects where the CD-4 approval authority is the Under Secretary, only the EMAAB process is required. Required roles and responsibilities associated with the EMAAB and ESAAB processes are provided in Standard Operating Policy and Procedure (SOPP) #41, Capital Asset Project Critical Decision Approval Process, signed May 2011. The roles and responsibilities below should be supplemented with those from SOPP#41, as applicable.

a) Federal Project Director:

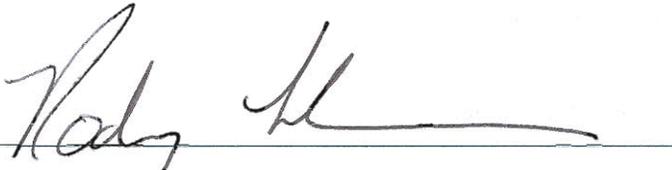
- i) Declare the project is complete when the scope of work and/or Key Performance Parameters (KPPs) included in the CD-2 approval memorandum and approved Project Execution Plan (PEP) is met. If additional project work scope is not included in the CD-2 approval memorandum or PEP is required to meet a regulatory and local commitment, it should be managed as a separate project consistent with the requirements in DOE Order 413.3B.
- ii) Prepare and submit to EM-11 the required CD-4 documentation outlined in DOE Order 413.3B, Program and Project Management for Acquisition of Capital Assets, DOE G 413.3-16, Project Transition/Closeout (CD-4) and as required by the AE. A checklist is provided in Attachment A. Tailoring should be applied as necessary considering project size, complexity, cost and risks as outlined in DOE Order 413.3B
- iii) Work with the Office of Legacy Management (LM), NNSA or Office of Science (SC) site coordinators, when applicable, to transfer land and/or facilities for operations or long-term stewardship. The terms and conditions for transitioning activities to LM, NNSA and Science are included in Section 5 of this document, references d, e and f, respectively. This effort should be started early in the CD-4 process and should be completed prior to CD-4 approval or no later than six months after CD-4 approval, including updating the Facilities Information Management System (FIMS) database

to reflect ownership status change for real property. Additional information can be found in DOE Order 430.1B, Real Property Asset Management, or <http://fimsinfo.doe.gov>.

- iv) For Headquarters-level CD-4 Approvals: Prepare and submit to EM-11 director a memorandum requesting CD-4 approval by the AE (Attachment B). Also provide a copy of a completed requirement checklist, see Attachment A. (NOTE: Submit only Table 2.4 of the requirement checklist in Attachment A to EM-11 with the CD-4 approval request; Table 2.5 of the checklist should be submitted to EM-11 after Post CD-4 Approval and Project Closeout activities are completed.) The memorandum should also address the site's plan to complete all post CD-4 requirements within 12 months after CD-4 approval and to provide verification to EM-11 upon completion of those requirements. Also prepare and submit to EM-11 a draft approval memorandum to be forwarded to the AE for signature wherein the draft memorandum provides a status of project completion and explicitly lists the final/actual project costs, completion date, completed work scope and completed KPPs relative to the original cost, schedule, scope and KPP targets that were approved and established at CD-2 approval. See Attachment C for a template of a CD-4 Approval Memorandum. DOE's Departmental Success Metrics goals as documented by the Root Cause Analysis Contract and Project Management, Corrective Action Plan, dated July 2008 are:
 - (1) For Capital Asset Line Item Projects, projects will be completed at CD-4 within the original approved scope baseline and within 10 percent of the original approved cost baseline (CD- 2), unless otherwise impacted by a directed change.
 - v) For Site-level CD-4 Approvals: Submit to EM-11 a copy of the signed Site-level CD-4 Approval Memorandum. The signed memorandum must include a status of the project's completion and explicitly list the final/actual project costs, completion date, completed work scope and completed KPPs relative to the original cost, schedule, scope and KPP targets that were approved and established at CD-2 approval. See Attachment C for a template of a CD-4 Approval Memorandum. Also provide a copy of a completed requirement checklist, see Attachment A. (NOTE: Submit only Table 2.4 of the requirement checklist in Attachment A to EM-11 with the newly signed CD-4 approval memorandum; Table 2.5 of the checklist should be submitted to EM-11 after Post CD-4 Approval and Project Closeout activities are completed.)
 - vi) Keep EM-11 Site/Project Liaison and EM management apprised of the schedule of submittal for CD-4 package and brief EM and other organizations as necessary.
 - vii) Update Project Assessment Reporting System (PARS) II including uploading CD-4 package and uploading final Earn Value Management System (EVMS) data.
- b) Director, Office of Project Assistance and Assurance, EM-11:
 - i) Approve procedures for verifying projects are ready for CD-4.
 - ii) Monitor effectiveness of CD-4 approval process.
 - c) EM-11 Construction Team or Other Than Capital Asset Team:
 - i) Before a project is either ready for turnover for operation or the cleanup/D&D has been accomplished it is necessary to track progress of the site towards developing a

- CD-4 package for submittal to and approval of the AE. (Note: contract closure will be coordinated by the Office of Acquisition and Contract Management (EM-80).)
- ii) Contact the appropriate project personnel (POCs) to inquire whether they require assistance: (1) defining what needs to be included in the CD-4 package and (2) determining what the package should look like when it leaves the site to be approved at headquarters. The check list in the Attachment A should be sent to the site POC as a starting point for ongoing discussions between HQ and the site no less than three months before the anticipated CD-4 request.
 - iii) Ensure that EM-11 is included in the distribution for the drafts of the CD-4 package no later than two months before physical work is to be completed so that any major comments can be addressed before the final is submitted. By maintaining cognizance of the documents, EM-11 will be in a good position to be the advocate for the package when it is officially submitted by the site.
- d) EM-11 Policy Baseline Management Team:
- i) Develop or update policy for the CD-4 approval process. Attachment D and Attachment E include summary level outlines of the process.
 - ii) Coordinate HQ efforts to process CD-4 Package for approval.
 - iii) Review site CD-4 documents for consistency and compliance with policy.

Approved By: Rodney Lehman

Signature: 

Name and Title: Rodney Lehman, Acting Director of Project Assistance and Assurance, EM-11

Date: 10/12/2011

**SOP #: 004
Attachment A**

**Requirement Checklist for CD-4 Completion
VERBATIM REQUIREMENTS CHECKLIST FOR CD-4
IN ACCORDANCE WITH DOE ORDER 413.3B**

CD-4, Approve Start of Operations or Project Completion

CD-4 is the achievement of the project completion criteria defined in the PEP, the approval of transition to operations, and it marks the completion of the execution phase. The approval of CD-4 is predicated on the readiness to operate and/or maintain the system, facility, or capability. Transition and turnover does not necessarily terminate all project activity. In some cases, it marks a point known as Beneficial Occupancy Date (BOD) at which the operations organizations assume responsibility for starting operations and maintenance. The Secretarial Acquisition Executive (SAE) or AE approves CD-4 upon notification from the project team that all project completion criteria defined in the PEP have been met. The document signed by the SAE or AE approving CD-4 must clearly specify the scope accomplished, the TPC, KPPs met, and the completion date (month and year) as it relates to the original CD-2 performance baseline and latest approved baseline change. The date the SAE or AE signs the document represents the CD-4 completion date. Table 2.4 lists the requirements needed to attain CD-4.

Table 2.4 CD-4 Requirements¹ - Prior to CD-4				
Prior to CD-4	Approval Authority²	Completed		Comments
		YES	NO	
Verify that <u>KPP</u> and <u>Project Completion Criteria</u> have been met and that mission requirements have been achieved. The FPD will verify and document the scope accomplished, TPC, KPPs met, and the completion date as it relates to the original CD-2 performance baseline and the latest approved baseline change.	FPD			
Issue a <u>Project Transition to Operations Plan</u> ³ that clearly defines the basis for attaining initial operating capability, full operating capability, or project closeout, as applicable. The plan will include documentation, training, interfaces, and draft schedules. (Refer to DOE G 413.3-16.)				
For non-nuclear projects, conduct a formal assessment of the project's <u>Readiness to Operate</u> , as appropriate. Determine the basis for DOE acceptance of the asset and if the facility or area can be occupied from both a regulatory and a work function standpoint. Establish a beneficial occupancy/utilization date for the facility and/or equipment.				
Finalize the <u>Hazard Analysis Report</u> for facilities that are below the Hazard Category 3 threshold as defined in 10 CFR Part 830, Subpart B.	Field Org.			

Table 2.4 CD-4 Requirements (Continued)				
Prior to CD-4 (Continued)	Approval Authority²	Completed		Comments
		YES	NO	
Revise the <u>Environmental Management System</u> in accordance with DOE O 450.1A, as appropriate.				
If applicable, complete and submit <u>Contractor Evaluation Documents</u> to the AE, the appropriate PSO, OPAM, and OECM in accordance with FAR 42.15.				
<i>Conduct an <u>Operational Readiness Review (ORR)</u> or <u>Readiness Assessment (RA)</u> for Hazard Category 1, 2, and 3 nuclear facilities in accordance with DOE O 425.1D and DOE-STD-3006-2010.</i>				
<i>Prepare the <u>Documented Safety Analysis</u>³ with Technical Safety Requirements for Hazard Category 1, 2, and 3 nuclear facilities. (Refer to 10 CFR Part 830, Subpart B.)</i>	SBAA via the SER			
<i>Prepare a <u>Safety Evaluation Report (SER)</u> based on a review of the Documented Safety Analysis and Technical Safety Requirements for Hazard Category 1, 2, and 3 nuclear facilities. (Refer to 10 CFR Part 830, Subpart B.)</i>	SBAA			
<i>For nuclear facilities, the Code of Record will be included as part of the turnover documentation from a design and construction phase contractor to the operating phase contractor; from an operating phase contractor to the decommissioning phase contractor; and when a change in contractor occurs during any single life-cycle phase and is maintained under configuration control.</i>				
Prepare submittals for EMAAB and ESAAB processes as applicable (see EM SOPP#41 for detailed requirements). Coordinate with assigned Project Liaisons and EMAAB Secretariat Administrator from the EM Office of Project Assistance and Assurance (EM-11).	SAE and/or PSO			

Table 2.5 CD-4 Requirements¹ – Post CD-4 Approval/ Project Closeout Requirements				
Post CD-4 Approval				
Submit all CD documents to OECM.				
Finalize PARS II reporting (including earned value data).				
Within 90 days, submit Lessons Learned regarding project execution and facility start-up to PSO and OECM.				
Within 90 days, submit an Initial Project Closeout Report.				
Prior to Project Closeout				
Perform final administrative and financial closeout.				

Prepare the final Project Closeout Report once all project costs are incurred and invoiced and all contracts are closed. The report includes final cost details as required to include claims and claims settlement strategy where appropriate. (Refer to DOE G 413.3-16.)				
Complete and document achievement of Facility Sustainment goals (e.g., LEED Gold, LEED Silver, etc.), as applicable, via an independent third-party entity within one year of facility occupancy in accordance with EO 13423, Section 2(f), EO 13514, Section 3, and DOE O 430.2B.				
Establish and/or update the property record in the Facilities Information Management System (FIMS) for all construction of or modifications to real property. Adjust the site's Ten Year Site Plan. (Refer to DOE O 430.1B.)				
<p>NOTES:</p> <ol style="list-style-type: none"> 1. Documents and reports are not intended to be stand-alone and may be combined. 2. Where no approval authorities are noted, authorities are established through other directives or the Program Offices (e.g., Functions and Requirements Assignment Matrix). 3. For Environmental Management Clean-up Projects, refer to 29 CFR 1910.120. 				

SOP #: 004
Attachment B

CD-4 Approval
Request Memorandum Template
Office of Environmental Management

MEMORANDUM FOR *[Insert Name of Acquisition Executive]*
[Insert Title of Acquisition Executive, for example "Manager"]

THROUGH: *[Insert Name of intermediate, as necessary]*
[Insert Title of intermediate, as necessary]
[Insert Office of intermediate, as necessary]

FROM: *[Insert Federal Project Director's name]*
FEDERAL PROJECT DIRECTOR
[Insert Project Name]

SUBJECT: Request for Approval of Critical Decision (CD)-4, Start of Operations
or Completion of *[Insert Project Name, Project Number and Project's*
Physical Location]

The work scope requirements and Key Performance Parameters for *[Insert Project Name]* have been completed. In accordance with the requirements of the Department of Energy (DOE) Order 413.3B, the attached checklist of requirements is submitted. Your approval of Critical Decision (CD)-4 is requested with submittal of this memorandum.

If you have any questions, please contact *[Insert name of point of contact (POC), POC Site location and POC's contact phone number.]*.

Attachment

cc: *[Insert Names of persons to be copied]*

SOP #: 004
Attachment C
CD-4 Approval
Decision Memorandum Template
Office of Environmental Management

MEMORANDUM FOR *[Insert Federal Project Director's name]*
 FEDERAL PROJECT DIRECTOR
[Insert Project Name]

FROM: *[Insert Name of Acquisition Executive]*
[Insert Title of Acquisition Executive, for example "Manager"]
[Insert Acquisition Executive's Office]

SUBJECT: Approval of Critical Decision (CD)-4, Start of Operations or
 Completion of *[Insert Project Name, Project Number and Project's Physical Location]*

REFERENCE: Memorandum from *[Insert FPD name]* to *[Insert Acquisition Executive Name]*, "Request for Approval of Critical Decision-4 for *[Insert Project Name, Project Number and Project's Physical Location]*," dated *[Insert memo's date]*

In accordance with the requirements of the Department of Energy (DOE) Order 413.3B and the *[Delegation of]* Acquisition Executive authority *[to the Environmental Management Site Manager]* for this project, I approve Critical Decision (CD)-4 for *[Insert Project Name]*.

The work scope requirements and Key Performance Parameters identified in the original CD-2/3 approval memorandum dated *[Insert date of original CD-2/3 approval memo]* and in the original Project Execution Plan dated *[Insert date of original Project Execution Plan]* were successfully completed on *[Insert date of actual physical completion of work scope]*. The actual cost of this project was *[Insert "less than", "equal to" or "greater than" as applicable]* the approved Total Project Cost at CD-2/3.

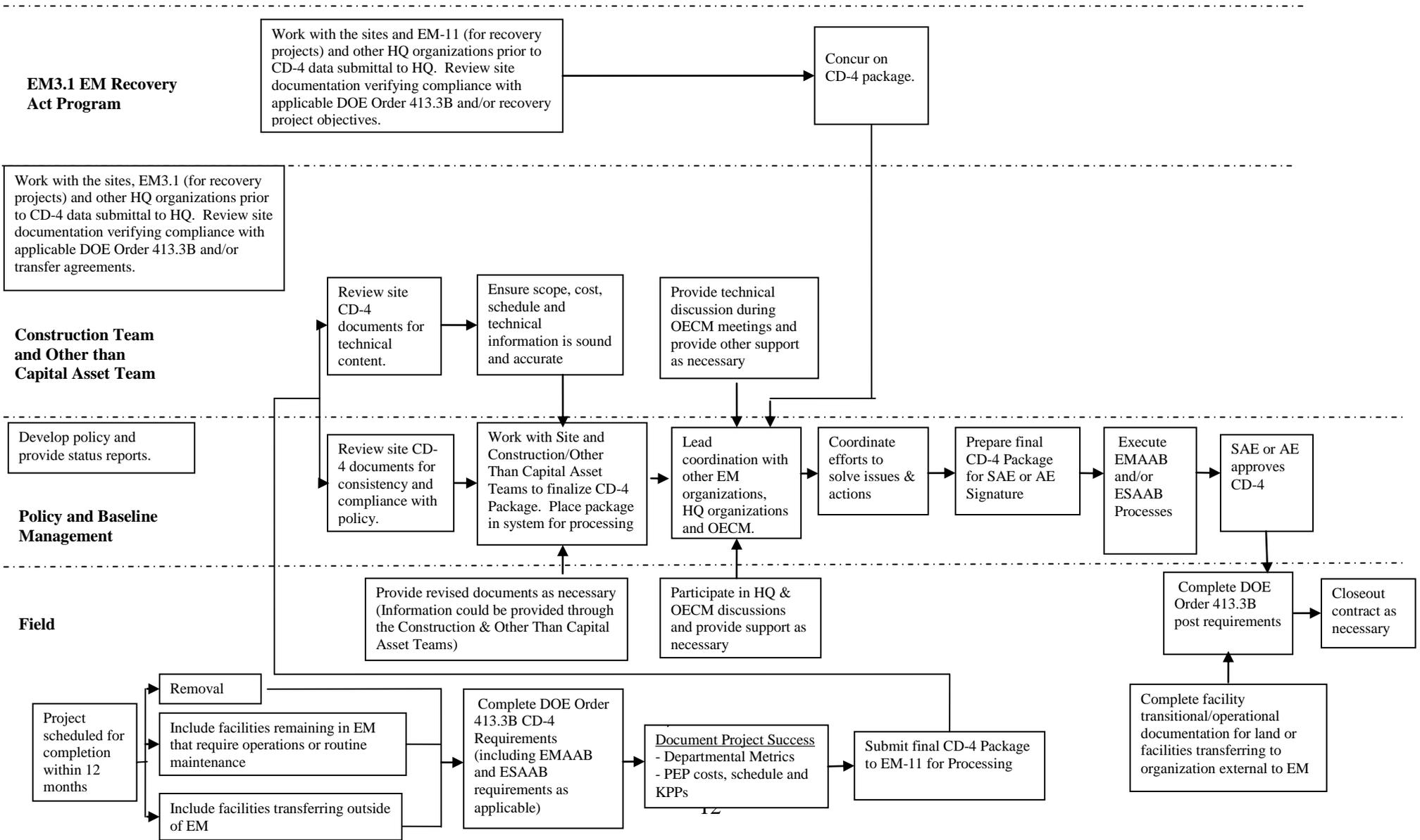
	Original CD-2/3 (original approved baselines)	CD-4 (actual performance)
Cost	<i>[Insert Total Project Cost at CD-2/3]</i>	<i>[Insert actual Total Project Cost at time of CD-4 request]</i>
Schedule	<i>[Insert Physical Completion Date at CD-2/3]</i>	<i>[Insert actual date of Physical Completion]</i>
Scope	<i>[Insert scope description at CD-2/3, for example, "Construct Disposal Cell per regulator approved design".]</i>	<i>[Insert "Same" if applicable, or detail difference if the scope accomplished at completion differed from scope baseline established at CD-2/3]</i>
KPPs	<i>[Insert list of Key Performance Parameters (KPPs) established at CD-2/3, for example, "Expand disposal capacity to increase a capacity to accept waste."]</i>	<i>[Insert "Same" if applicable, or detail difference if the KPPs accomplished at completion differed from the KPPs established at CD-2/3]</i>

In support of the CD-4 approval, the document referenced above includes a checklist of the completed requirements. In further support of the CD-4 approval, please finalize reporting in the Integrated Planning, Accounting, and Budgeting System (IPABS) and Project Assessment and Reporting System (PARS). This is to be accomplished within six weeks.

If you have any further questions, please contact *[Insert name of point of contact (POC), POC Site location and POC's contact phone number.]*.

cc: *[Insert Names of persons to be copied]*

SOP #: 004 – ATTACHMENT D
Projects with TPC ≥ \$100M (When AE Authority is at HQ Level)
EM-11 WORK PROCESS FOR PROCESSING CRITICAL DECISION-4 APPROVALS



SOP #: 004 – ATTACHMENT E
Project with TPC < \$100M (When AE Authority is at the Site Level)
EM-11 WORK PROCESS FOR PROCESSING CRITICAL DECISION-4 APPROVALS

