

Management System: Project Management		
Subject Area: Critical Decision and Change Control Management		
Procedure: Critical Decision 4, Approve Start of Operations or Project Completion		
Issue Date and Revision Number: 2/26/15, Rev. 3 (GENERAL REVISION)	Lead Subject Matter Expert: Sue Smiley	Management System Owner: Terry Brennan

1.0 Applicability

This procedure applies to all U.S. Department of Energy (DOE), Office of Environmental Management (EM), Consolidated Business Center (EMCBC) and EM “Small Sites” staff who must seek approval to transition from construction to operations or (for most EM projects) approval of project completion, for a capital asset project with a Total Project Cost (TPC) greater than \$10 million. Requirements for Acquisition Executive (AE) approval of Critical Decision 4 (CD-4, Approve Start of Operations or Project Completion) are defined in DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets, and vary depending upon the TPC. Refer to DOE G 413.3-16A, Project Completion/Closeout Guide, for additional information on non-mandatory approaches for implementing CD-4 (as well as Post-CD-4/Project Closeout) requirements in DOE O 413.3B.

The Director of the EMCBC is the line manager for all Small Sites, and also serves as the AE for Small Site capital asset projects that have a TPC under \$100 million. Federal Project Directors (FPD) and project management support staff for such capital asset projects should review this procedure prior to pursuing AE approval of CD-4. The EMCBC procedure SAP-OCE&PMS-413.3B-B-04 (Managing the Project Transition/Closeout Phase) complements this procedure for CD-4.

A separate EMCBC procedure, SAP-OCE&PMS-413.3B-A-05 (Consolidated Business Center Acquisition Advisory Board [CBCAAB]), describes the administrative process for obtaining EMCBC Director approval of all Critical Decisions (except CD-0 [Approve Mission Need]), where approval authority cannot be delegated lower than the Assistant Secretary for Environmental Management (EM-1). The CBCAAB can also provide review and oversight for the development of CD-4 deliverables for proposed projects at any Small Site (regardless of

TPC), as a precursor to submission of such materials to the acquisition advisory board at EM Headquarters (the EMAAB, chaired by EM-1) or at DOE Headquarters (the Energy Systems Acquisition Advisory Board [ESAAB], chaired by the Secretarial Acquisition Executive [SAE], the Deputy Secretary of DOE).

This procedure is consistent with the EM Enterprise Requirements System (EMERS) Functional Area Description for Project Management, the associated Subject Area for Critical Decision Management, and the following subsidiary procedures:

- Procedure 5 (Obtaining CD-4, Approve Start of Operations or Project Completion)
- Procedure 6 (Processing Approvals for EMAAB and ESAAB).

2.0 Required Procedure

The AE approval of CD-4 documents a project's achievement of project completion criteria defined in the Project Execution Plan and the approval of transition to operations (if applicable), as well as marks the completion of the Project Execution Phase. The approval of CD-4 is predicated on the readiness to operate and/or maintain the system, facility, or capability. The AE approving CD-4 must clearly specify the scope accomplished, the TPC, Key Performance Parameters (KPP) met, and the completion date as it relates to the original baseline at CD-2 (Approve Performance Baseline) as well as the latest approved baseline change.

Transition and turnover does not necessarily terminate all project activity; rather, it marks a point at which the "operations" organization assumes responsibility for operation and maintenance (O&M) of activities that had previously been performed under the EM project. For EM projects, the term "operations" can be loosely interpreted to mean return of a site to the DOE Landlord (e.g., DOE Office of Science [SC] or the National Nuclear Security Administration [NNSA]) so that the Landlord can perform long term surveillance and maintenance (LTS&M) activities (the terms O&M and LTS&M are frequently used interchangeably). LTS&M activities can include such things as operating a groundwater pump & treat facility or monitoring the integrity of a landfill cap; long-term groundwater monitoring; protection of natural, cultural or historic resources; and serving as the custodian for Government-owned records.

Major items to be approved in the process toward CD-4 approval include verification that KPP and Project Completion Criteria have been met, issuance of a Project Transition to Operations Plan, and assessment of the project's Readiness to Operate.

In 2014, the DOE Office of Acquisition Management (OAPM) approved a policy change to be incorporated in the next revision of DOE O 361.1 (Acquisition Career Management Program). The change pertains to turnover of the FPD on a project nearing the end of the execution phase. A junior FPD may be appointed to oversee the remaining work and prepare the request for CD-4 approval. The appointment request must be approved by the DOE Certification Review Board (CRB) for the Project Management Career Development Program (PMCDP), and the FPD must be formally appointed by the Program Secretarial Officer (i.e., EM-1). This policy change allows seasoned FPD to transition to new projects; it also provides junior FPD the opportunity to

broaden their skills, and ensures appropriate and continued FPD oversight is maintained during the project’s transition from execution to transition/closeout.

General steps related to obtaining CD-4 are listed in DOE O 413.3B, Appendix A, Section 4.e, Table 2.4. The below table provides additional detail to accomplish all required steps.

<p>Step 1</p>	<p>Determine the Critical Decision-4 (CD-4) Approving Official, per below, based on total project cost (TPC):</p> <table border="1" data-bbox="542 571 1425 1056"> <thead> <tr> <th data-bbox="542 571 946 632">Total Project Cost</th> <th data-bbox="946 571 1425 632">Approval Authority</th> </tr> </thead> <tbody> <tr> <td data-bbox="542 632 946 693">TPC < \$100M</td> <td data-bbox="946 632 1425 693">EMCBC Director</td> </tr> <tr> <td data-bbox="542 693 946 827">100M ≤ TPC < \$400M</td> <td data-bbox="946 693 1425 827">Assistant Secretary for Environmental Management (EM-1)</td> </tr> <tr> <td data-bbox="542 827 946 924">\$400M ≤ TPC < \$750M</td> <td data-bbox="946 827 1425 924">Under Secretary for Performance and Management</td> </tr> <tr> <td data-bbox="542 924 946 1056">TPC ≥ \$750M</td> <td data-bbox="946 924 1425 1056">Deputy Secretary (S-2), i.e., the Secretarial Acquisition Executive (SAE)</td> </tr> </tbody> </table> <p>For Critical Decision approvals above EM-1, review EMERS Procedure 6 (Processing Approvals for EMAAB and ESAAB) as well as DOE Office of Acquisition and Project Management (OAPM) Standard Operating Procedure (SOP) for ESAAB dated July 2014. The OAPM procedure includes a timeline for obtaining Critical Decisions.</p> <p>NOTE: EM projects requiring the Under Secretary’s approval are handled the same at the Field level as those requiring the SAE’s approval. The OAPM is responsible for assisting Under Secretaries with review of proposed Critical Decisions, and each Under Secretary may establish requirements (formal or informal) for conducting an Acquisition Advisory Board-like process. However, at this point in time, formal procedures are in place for the EMAAB and ESAAB only.</p>	Total Project Cost	Approval Authority	TPC < \$100M	EMCBC Director	100M ≤ TPC < \$400M	Assistant Secretary for Environmental Management (EM-1)	\$400M ≤ TPC < \$750M	Under Secretary for Performance and Management	TPC ≥ \$750M	Deputy Secretary (S-2), i.e., the Secretarial Acquisition Executive (SAE)
Total Project Cost	Approval Authority										
TPC < \$100M	EMCBC Director										
100M ≤ TPC < \$400M	Assistant Secretary for Environmental Management (EM-1)										
\$400M ≤ TPC < \$750M	Under Secretary for Performance and Management										
TPC ≥ \$750M	Deputy Secretary (S-2), i.e., the Secretarial Acquisition Executive (SAE)										
<p>Step 2</p>	<p>The FPD determines if an exception to DOE O 413.3B requirements for CD-4 may be warranted.</p> <p>If the FPD believes no exceptions are warranted, proceed directly to Step 3 below.</p>										

	<p>If the FPD believes an exception is warranted:</p> <ol style="list-style-type: none"> a. The FPD makes a recommendation and appeal for appropriate exceptions to the AE. b. The AE communicates the decision to grant or deny the exception request, via memorandum to the FPD. c. If the exception is denied, the FPD may collaborate with the Integrated Project Team (IPT) on a revised strategy, and make a follow-up appeal to the AE until a conclusive decision regarding exceptions is issued. <p>NOTE: If the FPD believes an exception to DOE O 413.3B requirements is warranted, he/she should include this in the Tailoring Strategy for the project. An initial Tailoring Strategy is developed prior to AE approval of CD-1 (Approve Alternative Selection and Cost Range), and is typically included in the Preliminary Project Execution Plan (PEP). The FPD prepares a final PEP and Tailoring Strategy prior to AE approval of CD-2 (Approve Performance Baseline) and, if warranted, prior to AE approval of CD-3 (Approve Start of Construction). A single update to the PEP and Tailoring Strategy is typical, in the case of a combined CD-2/3 approval.</p> <p>Refer to Step 2a below for a case where an exception may be warranted.</p>
<p>Step 2a</p>	<p>Exception for use of Simultaneous (i.e., Phased) Critical Decisions:</p> <p>In some cases, a “phased” CD-4 approach (e.g., CD-4a / CD-4b) is used if a project has components that will be ready for operation before the entire project is ready for full operations; however, the phased approach may be used in other situations as necessary. The decision to use a phased CD-4 approach is determined early in the project, by the Program Office, FPD, and the EM Office of Acquisition and Project Management (EM-50), and is first noted in the Mission Need Statement, Acquisition Strategy, and Preliminary Project Execution Plan.</p> <p>A project requiring a phased CD-4 may have the following schedule:</p> <ul style="list-style-type: none"> • CD-4a, Approve Start of Initial Operations • CD-4b, Approve Start of Full Operations <p>NOTE: The ESAAB (or EMAAB or CBCAAB, depending on delegated authority) review and approval process for a phased CD-4 is similar to that for a traditional CD-4. Separate ESAAB (or EMAAB or CBCAAB) meetings, as appropriate, will be required for each phase of the proposed CD-4, since it may be several months between the “a” and “b” phases.</p>
<p>Step 3</p>	<p>The FPD determines which Acquisition Advisory Board (AAB) is appropriate (i.e., CBCAAB, EMAAB, ESAAB), based upon the TPC for</p>

	<p>the project, and reviews requirements for gaining the appropriate AAB review of the CD-4 package and subsequent AE approval of CD-4:</p> <ul style="list-style-type: none"> • See EMCBC procedure for the CBCAAB process (for projects with a TPC under \$100 million); • See EMERS procedure for Processing Approvals for EMAAB and ESAAB (for projects with a TPC of \$100 million or greater); • Also see OAPM Standard Operating Procedure (SOP) for ESAAB, dated July 2014.
Step 4	<p>The FPD, with support from the Integrated Project Team (IPT) and the responsible Mission Unit, completes the prerequisites for gaining the appropriate AAB review of the CD-4 package and subsequent AE approval of CD-4 (see DOE O 413.3B, Appendix A, Section 4.e [Table 2.4] for a complete list).</p> <p>Notable requirements include:</p> <ul style="list-style-type: none"> • Verify that KPP and Project Completion Criteria defined in the Project Execution Plan (PEP) have been met. • Issue a Transition to Operations Plan (TOP), if required. The TOP may be included as part of the PEP. • Conduct formal assessment of project’s Readiness to Operate, if required. • Complete any Nuclear Facility Safety requirements (e.g., Operational Readiness Review [ORR], Readiness Assessment [RA], Documented Safety Analysis, Safety Evaluation Report), if required. <p>NOTE 1: See EMERS Procedure 5 (Obtaining CD-4, Approve Start of Operations or Project Completion) and DOE G 413.3-16A (Project Completion/Closeout Guide) for additional information on the CD-4 process.</p> <p>NOTE 2: At DOE sites where EM is responsible for Legacy cleanup, EM should begin site transition planning activities, in consultation with the DOE Landlord, no later than three years before the planned date of transition of long term surveillance and maintenance (LTS&M) activities to the DOE Landlord. At sites where achievement of CD-4 is predicated on successful accomplishment of both the physical remediation work and site transition planning requirements, the FPD must be cognizant of requirements imposed by EM and DOE Landlord “terms and conditions”</p>

	<p>agreements pertaining to the Site Transition process. For further information, refer to EMCBC Procedure SAP-OCE&PMS-413.3B-B-08 (Essential Steps to Site Transition).</p>
<p>Step 5</p>	<p>Prepare the CD-4 Approval Package.</p> <p>When all CD-4 prerequisites are complete, the FPD and Mission Unit Contact will prepare a package to brief the AE. The package should include a checklist of how all DOE O 413.3B requirements have been met (see NOTE below); a presentation (e.g., PowerPoint file) built around the Performance Baseline (PB) and the project’s readiness to proceed with operations or project completion; and a draft CD-4 Approval Memorandum. The FPD should provide the EM Office of Project Assessment (EM-53) with an electronic copy of all CD-4 prerequisites for reference purposes.</p> <p>Metrics for project “success” include completing the project within the original approved scope (i.e., KPP have been met), within 110% of the original approved TPC (i.e., TPC established at CD-2), and as impacted by a Directed Change.</p> <p>NOTE: DOE O 413.3B defines a Directed Change as: <i>A change caused by some DOE policy directives (such as those that have force and effect of law and regulation), regulatory, or statutory action and is initiated by entities external to the Department, to include external funding reductions.</i></p> <p>The CD-4 Approval Package should discuss, at a minimum:</p> <ul style="list-style-type: none"> • Achievement of Project Scope, KPP and any other Project Completion defined at the time the original baseline was established (i.e., at CD-2); • Expected final TPC at the time CD-4 is approved. The expected TPC should be inclusive of all project costs, i.e., final to-date and forecasts of prime contractor adjustments; non-contract costs; contingency; and expected Post-CD-4 and Project Closeout costs. The final TPC reported at CD-4 will be further refined as the Project Transition/Closeout Phase draws to an end. • Schedule performance, including verification that the CD-4 completion date established at CD-2 approval has/has not been met. <p>NOTE: The EMCBC maintains a Critical Decision Requirements Checklist (MS Word template) that can be used to document a project’s readiness for CD-2/3 (or any other Critical Decision). However, the checklist can also be used for development of a Tailoring Strategy, which serves as a forward-looking tool of planned DOE O 413.3B deliverables.</p>

Step 6	<p>Obtain AE (or SAE) approval of CD-4, as appropriate.</p> <p>For projects with a TPC of \$750 million or greater (i.e., a Major System Project), proceed to Step 7 below.</p> <p>For projects with a TPC under \$750 million, proceed directly to Step 10.</p>
Step 7	<p>For a Major System Project, or a project that has been so designated:</p> <p>Prepare for the Pre-ESAAB Meeting.</p> <ol style="list-style-type: none"> a. When the CD-4 prerequisites are completed, the Mission Unit requests that EM-53 schedule a Pre-ESAAB meeting with OAPM. <p style="text-align: center;">NOTE: The Pre-ESAAB serves as a dry-run of the formal ESAAB meeting with the Deputy Secretary of Energy. The purpose of the Pre-ESAAB is to resolve comments and issues prior to the formal ESAAB meeting.</p> <ol style="list-style-type: none"> b. The FPD and EM Line Manager prepare a draft presentation and submit it to EM-53 one week prior to the Pre-ESAAB meeting for dissemination to all Pre-ESAAB participants. The Pre-ESAAB briefing is usually presented by the Program Associate Director, Program Manager, or FPD.
Step 8	<p>The Program Office briefs Senior Management.</p> <p>In parallel with scheduling a Pre-ESAAB meeting, the Mission Unit schedules a meeting with the Under Secretary and/or EM-1/EM-2, Mission Unit Deputy Assistant Secretary (DAS), and EM-53.</p> <p>NOTE: The purpose of this meeting is to brief senior-level management on the project's request for CD-4 and to determine the manager (Under Secretary, EM-1, Mission Unit DAS, FPD, other) who will make the presentation at the formal ESAAB meeting. The Mission Unit usually tries to schedule this briefing several days prior to the Pre-ESAAB meeting, as a courtesy to senior management and to receive senior management's perspective/comments on the draft presentation.</p>
Step 9	<p>Obtain ESAAB review and endorsement of CD-4.</p> <p>After briefing Senior Management and completing the Pre-ESAAB meeting:</p> <ol style="list-style-type: none"> a. The Mission Unit works with the Pre-ESAAB board members to resolve issues and answer inquiries prior to the formal ESAAB meeting.

	<p>b. When inquiries and issues are resolved to the extent possible and the briefing is finalized, the Program Associate Director forwards the finalized presentation to the ESAAB Secretariat and requests the ESAAB meeting for CD-4 be scheduled. Distribution includes the following individuals:</p> <ul style="list-style-type: none"> • Mission Unit DAS • EM-53 Contact • FPD • All others deemed appropriate by the Mission Unit <p>c. The OAPM confirms the Program’s readiness to proceed with the formal ESAAB meeting.</p> <p>d. The ESAAB Secretariat contacts the Mission Unit with the SAE’s next available meeting date, which is normally within two to three weeks of the request.</p> <p>e. Prior to the formal ESAAB meeting, the Mission Unit will:</p> <ul style="list-style-type: none"> • Determine who will make the CD-4 presentation at the ESAAB meeting (the presentation is usually given by the Under Secretary, EM-1, Mission Unit DAS or, in some cases, the Mission Unit Contact or FPD). • Determine the individuals who will participate in the ESAAB meeting (usually limited to five seats). • Advise EM-53 of the date of the ESAAB meeting. • Provide OAPM with the required number of hard copies of the final presentation at least one hour prior to the ESAAB meeting. • Provide a laptop computer and overhead projector for real-time, interactive presentation of the electronic CD-4 package during the ESAAB meeting. <p>f. After the ESAAB meeting, the Mission Unit makes any necessary changes to the draft CD-4 Approval Memorandum, per recommendations from OAPM.</p> <p>g. The Deputy Secretary of Energy either approves CD-4 or defers approval until questions and/or issues are resolved.</p> <p>NOTE: The Mission Unit will receive the final CD-4 approval memorandum from the Deputy Secretary within two weeks of the ESAAB meeting.</p>
<p>Step 10</p>	<p>For Non-Major System Projects (i.e., projects with a TPC under \$750 million):</p> <p>When the CD-4 prerequisites are completed, the Mission Unit requests that</p>

	an EMAAB (or CBCAAB, depending on delegated authority) meeting for CD-4 be scheduled. The request should be placed at least two weeks prior to the anticipated Board meeting date.
After AE (or SAE) approval of CD-4	
Step 11	The FPD, Program Manager and OAPM will finalize reporting (including earned value [EV] data) in the DOE Project Assessment and Reporting System (PARS II) database.
Step 12	The AE may discontinue Quarterly Project Reviews (QPR); however, he/she may request periodic status reports from the FPD until all Post-CD-4 requirements in DOE O 413.3B have been met.
Step 13	The FPD completes all applicable “Post-CD-4 approval” and “Project Closeout Requirements” deliverables identified in DOE O 413.3B, Appendix A, Section 4.e, (Table 2.4) and Section 4.f (Table 2.5), respectively. These tables include, among other things: completion of an Initial and Final Project Closeout Report and a Lessons Learned Report. Refer to EMCBC Procedure SAP-OCE&PMS-413.3B-B-04 (Managing the Project Transition/Closeout Phase) for further information.

3.0 References – Forms/Attachments/Exhibits

3.1 References

- DOE O 413.3B (Program and Project Management for the Acquisition of Capital Assets)
- DOE G 413.3-16A (Project Completion/Closeout Guide)
- EMCBC Procedure SAP-OCE&PMS-413.3B-B-04 (Managing the Project Transition/Closeout Phase)
- EMCBC Procedure SAP-OCE&PMS-413.3B-A-05 (CBC Acquisition Advisory Board)
- EM Enterprise Requirements System (EMERS), Functional Area Description for Project Management, Subject Area for Critical Decision Management, Procedure 5 (Obtaining CD-4, Approve Start of Construction or Project Completion) and Procedure 6 (Processing Approvals for EMAAB and ESAAB)
- DOE O 361.1 (Acquisition Career Management Program)
- Federal Project Director Assignment to Projects Approaching Critical Decision-4, Start of Operations or Project Completion (OAPM memorandum dated September 30, 2014)

- DOE Office of Acquisition and Project Management (OAPM) Standard Operating Procedure (SOP) for Energy Systems Acquisition Advisory Board (ESAAB), dated July 2014
- EMCBC Procedure SAP-OCE&PMS-413.3B-B-08 (Essential Steps to Site Transition)

4.0 Records Generated

Records generated through implementation of this procedure are identified as follows and are maintained by the Office of Cost Estimating and Project Management Support (OCE&PMS) in accordance with the EMCBC Organizational File Plan:

Records Category Code	Records Title	Responsible Organization	Quality Assurance (QA) Classification (Lifetime, Non-Permanent or Not Applicable)
ADM 16-01.4-A	ADMINISTRATIVE MANAGEMENT RECORDS, Baseline Management files Examples: Minutes from CBCAAB, EMAAB or ESAAB meetings	Office of Cost Estimating and Project Management Support	Not Applicable
ADM 16-05	ADMINISTRATIVE MANAGEMENT RECORDS, Project Control files Examples: FPD Appointment Memorandum Project Transition to Operations Plan Report on Readiness to Operate Final Hazard Analysis Report Final Nuclear Facility Safety documents CD-4 Requirements Checklist CD-4 Briefing Package CD-4 Approval Memo Final PARS II Monthly Report (electronic) Final Quarterly Project Review (QPR) package	Office of Cost Estimating and Project Management Support	Not Applicable

5.0 EMCBC Record of Revision

EMCBC RECORD OF REVISION

DOCUMENT TITLE: Subject Area Procedure: Critical Decision 4, Approve Start of Operations or Project Completion

If there are changes to the controlled document, the revision number increases by one. Indicate changes by one of the following:

- I Placing a vertical black line in the margin adjacent to sentence or paragraph that was revised.
- I Placing the words GENERAL REVISION at the beginning of the text.

Rev. No.	Description of Changes	Revision on Pages	Date
Rev. 0	Initial issue		12/16/11
Rev. 1	GENERAL REVISION		8/1/12
Rev. 2	GENERAL REVISION		5/1/13
Rev. 3	GENERAL REVISION (to meet CBC MS format requirements)		2/26/15