

Change Control Management

DOE G 413.3-20

Project Management Programs

December 2022

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Project Management Document Hierarchy

Agency/DOE Policy/Guidance

Federal/National Level Policy/Guidance

OMB Circular A-11: Part 7

Capital Programming Guide: References EIA-748 for EVMS Requirements

FAR Part 34: Major System Acquisition

General Describes Acquisition Policy and Procedures to OMB Circular A-109 and OMB A-11

FAR Part 34.2: Earned Value Management System

Describes policies and procedures for EVMS in major acquisitions defined in OMB A-11, Part 7

FAR Part 52.234-4: Earned Value Management System

Establishes compliance the Earned Value requirements of EIA-748

SAE International EIA 748™

Earned Value Management System

DOE EM Program Management Protocol

DOE-PM-SOP- Current Version

PM EVMS ECRSOP Compliance Assessment Guide

DOE 413.3B Current Version

Program and Project Management for the Acquisition of Capital Assets

DOE 413.3-1

Managing Design and Construction Using Systems Engineering

DOE 413.3-5A

Performance Baseline

DOE 413.3-7A

Risk Management

DOE G 413.3.9A

Project Reviews for Capital Asset Projects

DOE 413.3-10.B

Integrated Project Management Using the EVMS

DOE 413.3-12

Project Definition Rating Index

DOE 413.3-15A

Project Execution Plans

DOE 413.3-18A

Integrated Project Team Guide for formation and implementation

DOE 413.3-20

Change Control Management

DOE 413.3-21A

Cost Estimating Guide

Field Office/TOC Contract/ Contractor Policy/Guidance

Tank Operations Contract - DE-AC27-08RV14800
Performance-Based Cost-Plus-Award Fee Contract

TFC-PLN-84
Tank Operations Contract Project Execution Management Plan

TFC-PLN-147
TOC Project Controls System Description

RPP-PLAN-62858
TOC Project Execution Plan for TSCR, Tank Farm Upgrades, and Waste Feed Delivery

Tank Operations Contract

Purpose

The purpose of this guide is to describe effective change control management processes for use in the execution of capital asset projects and their associated contracts. These processes include controlling contract and project changes as integral, synchronized activities over the project lifecycle.

This guide provides a suggested framework for identifying and managing project changes through applying the requirements of DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets, dated 11-29-2010. It also shows how this framework integrates with contract change management processes in accordance with the Federal Acquisition Regulation (FAR) and the Department of Energy Acquisition Regulation (DEAR).

The change control processes should help the Integrated Project Team (IPT) to systematically follow the steps for evaluation and approval of contract and project changes each when applicable to the project, in an integrated manner so that project baselines and contracts, from performance, cost, schedule, budget, and contract management perspectives, remain aligned. **The guide provides clarification guidance about the differences in change management for projects performed under M&O and Non-M&O contracts.**

The role of DOE change control boards (CCB) and their structure are described. In addition, supplements to the Guide provide some examples of procedures adapted from existing procedures used at various DOE sites. **This guide also provides interface actions between DOE and the contractor.** The suggested processes described in the guide should assist in setting forth the decision-making flow by listing the potential steps to be taken and who should be involved in those steps.

The guide is for use by all DOE elements and as such attempts to meet the needs of many stakeholders. The Guide is written primarily for use by the Federal Project Director (FPD) contracting officer (CO), and other members of the IPT, in managing the project. Others are encouraged to use the guide as appropriate. Each project and contract may have different needs. **Change control processes and procedures, along with the CCB structure, should be tailored as needed for effective management.**

Further, the content of this guide generally will not apply to the Office of Science projects. Programs may establish other methods for managing contract and project change control more suitable to their types of projects. These other change control methods and procedures should be clearly stated in the project's Project Execution Plan (PEP) and/or the Contract Management Plan (CMP), as appropriate. The IPT should have an established, documented change control process to follow.

In this guide where reference is made to contracts it is referring to the DOE Prime Contract, and not prime contractor's subcontracts, unless otherwise clearly stated.

Scope

This guide may be used by all DOE offices and the National Nuclear Security Administration (NNSA), their respective field operations, operations' contractors, and subcontractors as specified in their respective contracts.

This guide provides acceptable change control processes for all project phases and may also be useful in managing groups of projects or programs and site-level change control activities. Tailoring should be applied based on project complexity, size, and duration and the skills of available personnel in change control management.

The FPD, with support from the IPT which includes the CO, recommends the level of project change control management tailoring in the PEP which is approved by the acquisition executive (AE). Similarly, the CO, with support from the IPT which includes the FPD, describes any tailoring of contract change control management in the approved CMP, when this situation applies. **For sites with multiple projects under a single contract, the site manager may establish change control methods for the multiple projects by issuing site instructions that would be documented in the PEPs.** Tailoring is discussed in Section 6.0 of this guide.

This guidance is intended to meet, but is not limited to, the following objectives:

- **Identify, plan, and initiate performance baseline (PB) requirements subject to change control.**
- **Identify the project change control management processes.**
- **Provide guidance** for integration of project baseline changes and contract changes
- **Identify the steps** necessary to facilitate the implementation of those processes.
- **Suggest membership, roles, and responsibilities for the IPT and change control boards (CCBs).**

The processes presented in this guide are based upon a number of assumptions:

- **Logical planning**, including the establishment of a measurable baseline
- **Compliance** with Federal and Departmental policies and procedures
- **Well-trained Federal project and contracting personnel** working together to meet contract and project objectives
- **Approved** project and contract performance **baselines**
- **Management information systems that provide the data necessary for a project team to implement sound decisions.**

Change Control Process Overview

A mature and rigorous, integrated contract and project change control process is a very important element of DOE's management framework and activities. **A key goal of contract and project change control is to ensure PB thresholds are not exceeded.**

Integrated change control is an important management process that

- 1) ascertains **when a change is required**;
- 2) ensures that the required **change is agreed upon**;
- 3) manages the actual change **when and as it occurs**;
- 4) ensures that the **contract remains aligned with the project**; and,
- 5) identifies **who approves the changes at the various scope, cost, and schedule thresholds**. Formal change control includes not only the decision-making framework for assessing, negotiating, and implementing project and contract changes, but also includes management and performance tracking systems, authorization and control levels, budgeting and financial management, and contract and project documentation.

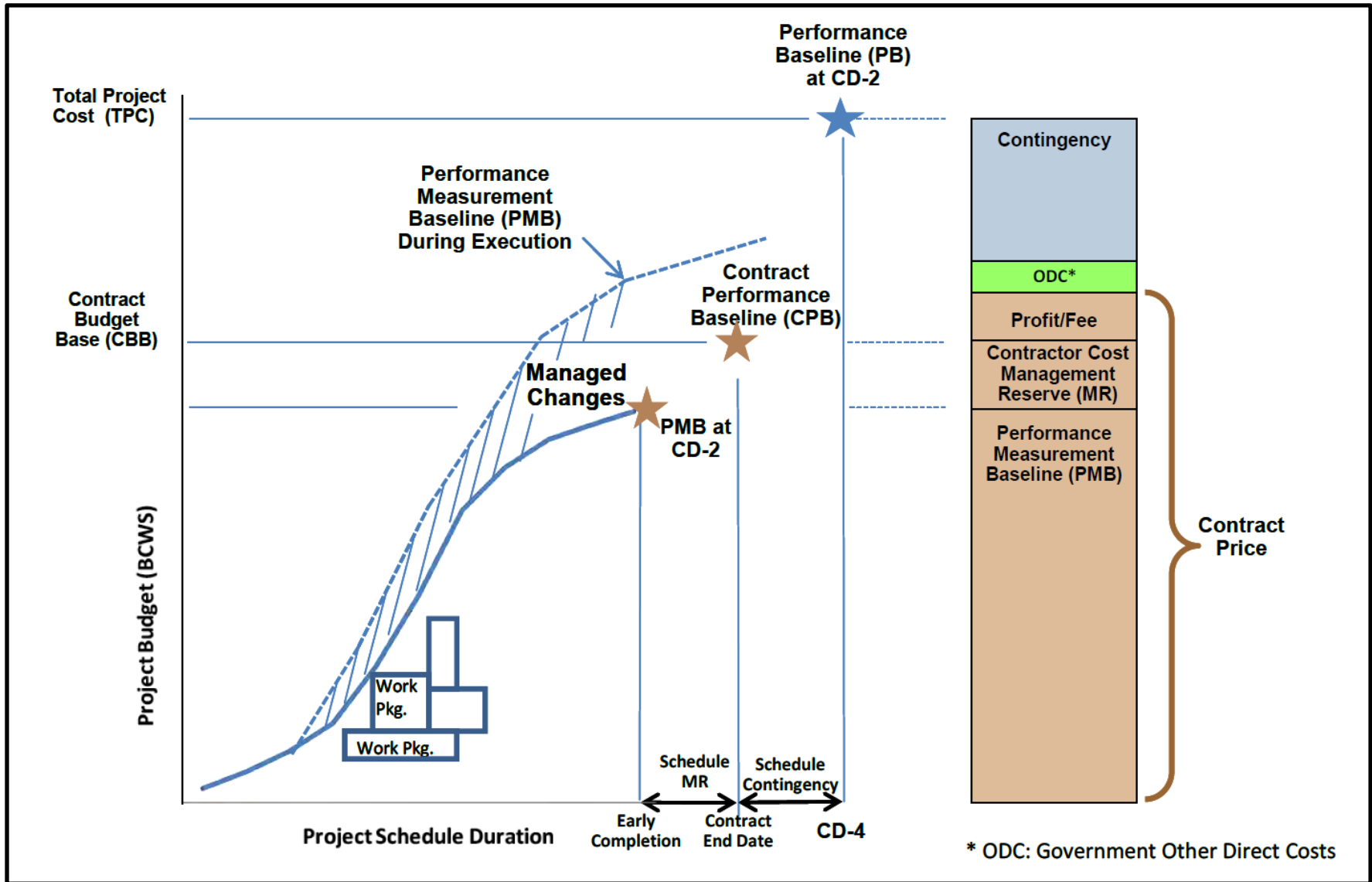
Project baseline changes include changes to any component of the PB as well as the Performance Measurement Baseline (PMB). The **“Project and Contract Performance Baselines—Key Terms and Relationships” illustration (below) shows the components of the contract and the PB.** Since projects are executed through contracts, project changes may require contract changes.

For clarity, one should be careful when discussing —baseline changes since the term is often used interchangeably to refer to changes to the PB or the PMB. The terms PB and PMB are different.

The original PB is established and documented at critical decision (CD)-2 approval and represents the Department’s top-line commitment to deliver the project’s defined scope by a particular date (CD-4) at a specific cost.

The PMB is a subset of the PB and is used to manage project cost and schedule using the Earned Value Management System (EVMS). Refer to DOE G 413.3-10, EVMS, for further clarification of these terms.

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The PB includes the contractor-controlled PMB, contractor-controlled Management Reserve (MR), and DOE-controlled contingency. The cost components also include any other Government direct costs (ODCs), not to be confused with contractors' other direct costs, and the maximum contractor's profit/fee (if applicable). The scope of work in the PB is generally quantified at the highest level by Key Performance Parameters (KPPs). **The PB also includes the Total Project Cost (TPC) and the project completion (CD-4 approval) date.** A preliminary baseline may be established prior to CD-2 approval and for internal project tracking. The approach and principles described herein may be used for this preliminary baseline management.

Project baseline changes include

- movement of budget **within control account** constraints (no contract change)
- movement of budget **between control accounts**, within PMB constraints (no contract change)
- movement of **undistributed budget into control accounts** (no contract change)
- movement of **MR into control accounts** (no contract change)
- movement of **cost or schedule Contingency into contract performance baseline (CPB) (CPB=PMB+MR) (contract change for Non-M&O contract)**

- establishment of new performance measurement baseline exceeding CPB as the result of failure to meet original objectives, with no change in scope (**Over Target Baseline**) (possible contract change)
- project schedule changes, possibly resulting in an **Over Target Schedule** (possible contract change).
- **KPP changes** (possible contract change)
- **increased Total Project Cost (TPC)** (possible contract change)

To keep a project on-track, a manager monitors and controls changes at each control account, and keeps a keen eye on performance, future planning packages, and emerging risks (threats and opportunities). **The manager takes proactive steps through the established project and contract change control process to re-plan future work as appropriate.**

For projects executed under Non-M&O contracts, a baseline change may also require a contract change. To ensure that the contract remains —aligned with the project, the process for making contract changes is integrated with the project change process so that the contract reflects the changes in the project plan. Some baseline changes may be within the contractor's control is so stipulated in the contract statement of work and planned to be accomplished within the CPB.

Other changes, such as changes to contract scope, cost, or schedule or the use of DOE contingency, require approval of the Government and a modification to the contract, which should be negotiated prior to approval of the project change. Only the Contracting Officer is empowered to execute contract modifications on behalf of the Government. Change orders may also be issued for directed changes. **For change orders issued but not yet negotiated the work is considered authorized unpriced work (AUW) and should be tracked accordingly.**

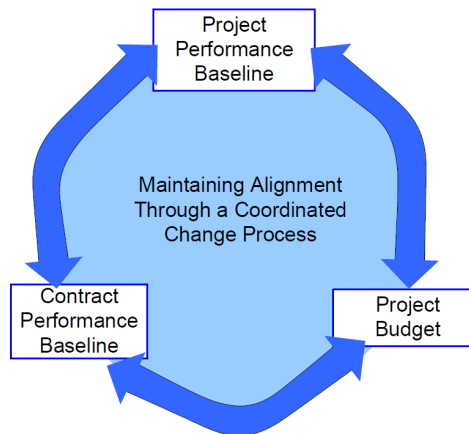
For projects executed under an M&O contract, contract changes are infrequent because the M&O contract statement of work is usually broad and the changes clause allows significant flexibility when issuing change orders. Where more than one project is managed under a single contract, each project should have a CPB established.

Project and contract performance management are two key processes for successful project execution. The **third key process for successful execution is maintaining the project within the approved budget.** If changes occur or are expected that will cause the project budget to be exceeded, the FPD and program office management should determine if additional funds are available and the funding source prior to approval of the project or contract change.

Reduction in project scope which does not impact the project's KPPs should first be considered to stay within budget. Otherwise, changes to the performance baseline may necessitate additional budget authorization and a revised funding profile. Congressional notification may be required.

If the project costs grow without scope changes, the CO, with input from the FPD and IPT, may authorize the establishment of an Over-Target Baseline (OTB) budget and/or schedule. An OTB is used for planning, control, and performance measurement of authorized work to improve managerial control over the execution of the remaining work in a project. It may be necessary to execute a cost growth modification to a contract to obligate additional funding without adjusting work scope.

The illustration below provides a visual depiction of the interrelation of the three key elements—project and contract performance baselines, and the project budget—to ensure project alignment.



Change Control Boards

The AE should ensure that the project team has established an integrated DOE contract and project CCB as specified in the PEP, including approval authority levels. A formal charter should be included in the PEP or as a separate, standalone document. The CCB functions to support the project management and contract management decisions by the approval authority. **The CCB should conduct special board meetings to review specific project or contract change proposals.** CCB members, as part of the IPT, may participate in regular project reviews.

The CCB should include a representative from all major internal stakeholder groups that could be affected by the project and play a role in the success of its implementation, such as **CO, technical representatives, safety, quality assurance, program representative, contracting officer's representative (COR), and chief financial officer or representative.** Several stakeholders in one or more functional areas may be needed for additional analyses or reviews, in order to help provide the necessary information to the CCB to support decision making. **The contractor is not a member of the DOE CCB.**

At sites with multiple projects under the same contract a contract-level or site-level CCB may be more appropriate to support the FPD, CO, and site management in review of contract and project changes.

Project Changes

As required by DOE O 413.3B, the project's preliminary PEP, which is approved by the AE at Critical Decision (CD)-1 (and updated and revised for CD-2), should provide approval thresholds specifying the control each organizational element has over project baseline change approval and the project change control process.

Project change approval thresholds for changes within the approved performance baseline range from the contractor to the AE. **The AE may delegate all change control authority within the PB to the Program Manager, Site or Field Office Manager, FPD, or others as specified in PEP. The SAE and US or NNSA Administrator are the approval authority for scope, schedule, and cost changes to the PB for both major system (MS) projects and non-MS projects as defined in DOE O 413.3B.** The US may delegate change approval authority through a formal memo to the PSO.

Project changes can range from minor design improvements, to design evolution, or to major impacts in the project baseline due to directed changes. Some **examples of project changes are listed below:**

- A project's **design requirements change due to new program input** requiring a significant redesign.
- Due to design changes, the **project schedule is projected to delay the completion date given in the approved PB** by seven months after the approved completion date.

- Detailed safety analysis reveals that the ventilation system should be upgraded to a higher safety category.
- More piping is required for a system than was estimated at CD-2 as part of the normal project design development.

The above examples of changes require approval at levels ranging from the SAE to the contractor. For a typical change the contractor or the FPD prepares a baseline change proposal (BCP). A BCP may be further categorized by the impact of the change such as a deviation to the PB, a change using contingency, or one using management reserve (MR). The table below shows the approval authorities for the various levels of changes.

These example tables could be used in a project PEP with specific cost and schedule values tailored to the project. The PEP includes or references the project change control organizational elements and the roles and responsibilities for each organizational member. At the SAE level, the ESAAB assists the SAE in reviewing the change. For some projects and sites, a CCB may be established and chaired by the site manager or designee. For some sites, this site-level CCB may replace the FPD level CCB especially when many projects are managed at a program level under a single contract.

Change Approval Authority for Project Changes

Approval Authority	BCP Type	Project Change Thresholds
SAE—Deputy Secretary	Deviation (change to PB)	<ul style="list-style-type: none"> • Approve: <ul style="list-style-type: none"> ○ TPC increase in excess of the lesser of \$100M or 50% (cumulative) of the original CD-2 cost baseline. ○ Any change in scope and/or performance that affect the ability to satisfy the mission need or are not in conformance with the current approved PEP and PDS • Endorse: Reduction in funding adversely affecting approved funding profile • Notify (SAE and OECM) of: <ul style="list-style-type: none"> ○ Any PB deviation (approved TPC, CD-4 date, or any performance and scope parameters that can not be met) ○ CD-4 schedule change of 12 months or more from original PB; post CD-2 projects terminated, or projects no longer meeting Department objectives.
Under Secretary/ NNSA Administrator <i>May be delegated to PSO</i>	Deviation (change to PB)	<ul style="list-style-type: none"> • Approve: <ul style="list-style-type: none"> ○ PB changes below the SAE level ○ Any slippage of the CD-4 date.
Acquisition Executive <i>May be delegated to Site Manager or FPD</i>	Contingency (change within PB)	<ul style="list-style-type: none"> • Approve: <ul style="list-style-type: none"> ○ Any change to the PEP ○ Use of Contingency up to the approved TPC or CD-4 date for managing DOE owned Risks
Contractor Project Manager (PM)	MR (change within CPB)	<ul style="list-style-type: none"> • Approve: <ul style="list-style-type: none"> ○ Use of MR for managing Contractor Risks ○ As specified in the Contract

Baseline Change vs. Variance Guidance

Once the PMB is established, changes are expected and the project team should anticipate them. Internal adjustments to plans for future actions are a normal management process as events happen, variances occur, and situations change (ANSI EIA-748). **The premise of Earned Value Management is to identify current and potential variances and use that information to proactively mitigate impact by taking action.** Depending on the circumstances and as allowed by the PEP, ANSI/EIA-748, and the contractor's EVMS documentation, the FPD may decide to attempt to eventually mitigate the circumstances causing potential or actual negative variances through various means such as increased productivity or efficiency on future work. **Reasons for variances may include**

- **Contractor performance that is different from the baseline plans**
- Contractor **rework**
- **Increase in cost to complete work assigned due to estimating error**
- **Additional work required to complete assigned scope due to estimating or planning errors**
- **Normal material and contract pricing variations**
- Additional time to complete work assigned due to **estimating inaccuracy**
- **Other estimating errors**

In situations where excessive variances mask the ability to adequately assess current performance and take mitigating actions, the Contractor, in consultation with the DOE, may propose rebaselining. Rebaselining is the general term used for describing a major realignment of the performance measurement baseline to improve the correlation between the work plan and the baseline budget, scope, and schedule. Rebaselining does not add or change existing scope of work, it merely changes how and when it may be accomplished within the constraints of the existing contract. Rebaselining may refer to either replanning or reprogramming.

- Replanning is a realignment of schedule or reallocation of budget for remaining effort within the existing constraints of the contract. In this case, the total allocated budget (TAB) does not exceed the CBB, nor is the schedule adjusted to extend beyond the contractually defined milestones. Replanning activities include the movement of budget within a control account, between the control accounts, and application of MR.

Reprogramming is a comprehensive replanning of the remaining performance management baseline that results in a total budget and/or total schedule in excess of contractual requirements. If the situation arises whereby available budgets for the remaining work are insufficient to ensure valid performance measurement, ANSI/EIA-748 provides for a comprehensive reprogramming of the remaining PMB that results in an Over Target Baseline (OTB) and/or an Over Target Schedule (OTS) that exceeds the contract target cost or work is scheduled beyond the contract completion date. An OTB is for performance measurement purposes and does not relieve the contractor of contractual schedule and cost commitments. It can restore much needed control to a contract that has had poor execution or an unrealistic plan for the remaining work. The key benefits of a reprogramming are an executable and achievable baseline plan, renewed buy-in from the project team, meaningful performance indicators, and restored confidence.

Because OTB budgets and schedules do not supersede contract values and schedules and are implemented solely for planning, controlling, and measuring performance on already authorized work, a contract modification is generally not needed; however, **in most cases the CO must authorize the contractor's use of OTB.** If the new schedule results **in an OTS situation, both parties must recognize that the existing contract milestone schedule still remains in effect for purposes of contract administration and execution.** The new dates in the OTS are for performance measurement purposes only and do not represent an agreement to modify the contract terms and conditions.

The CO will need to issue a cost growth modification to obligate additional funding without adjusting work scope. These modifications are for funding only, not performance measurement budget. **A cost growth modification does not authorize a contractor to increase the budget at completion (BAC) by the amount of the modification.** In situations when contract changes are resulting from both additional scope and cost overrun, the contract modifications should clearly delineate the cost and schedule associated with each category of change.

MR is controlled by the contractor and is applied to the PMB via BCP during replanning efforts. The purpose of MR is to provide for budget associated with work that is within the overall contract scope but not within the scope of an existing control account due to unanticipated events that cannot be predicted, such as underperformance, planning errors, technical re-directions, or rate increases. **MR is not used to offset accumulated overruns or under-runs and it is not a contingency budget used for new scope outside the contractual statement of work.**

When new scope is added or removed, the budget associated with the scope moves as well. An example would be a change to the project scope issued by DOE. **Contingency is controlled by the FPD and is applied via appropriate contract and BCP actions to add new scope to, or change requirements of, the project** as stated in the contractor's work scope.

Application of contingency requires a contract modification and does not automatically entitle the contractor to additional fee/profit if done for other than new scope or a requirements change, nor does application of MR or contingency to the PMB erase past variances.

Rebaselining is done via a BCP to adjust the PMB to provide a basis for more meaningful project performance assessment and reporting. **Application of MR or contingency to the PMB only affects the future portion of the baseline**; such use **does not eliminate past variances** due to difference between performance and the approved baseline plan. OECCM—via its monthly assessment of Project Assessment and Reporting System (PARS) II data, other relevant project documentation, and discussions with the FPD, IPT, or program personnel—assesses the impacts of these variances and PMB adjustments on the overall project PB in the monthly project status and assessment report.

Some **examples of events that prompt project baseline changes where MR or DOE contingency may be used are listed below**. The application of MR or contingency will depend on the contractor's responsibility as stated in contract requirements and scope of work.

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- **Changes in scope** (valid use of DOE contingency and requires a contract modification with a modified statement of work and with budget commensurate with scope either added to or deleted from the CBB)
- **Unusually severe weather**, e.g., hurricane (valid use of DOE contingency)
- **Unfavorable market conditions** (valid use of MR)
- **Design development** (valid use of MR)
- **Technical and programmatic risks realized** (valid use of MR or contingency depending on the risk owner)
- **Material and price variations outside normal range** due to unusual, unexpected market conditions (usually covered as risks—valid use of MR or contingency depending on the risk owner).

Sources of Project Changes

Changes to projects may occur from many sources as discussed in the following subsections. **Project changes do not always require a contract change.**

Configuration Management (Design Evolution)

The goal of configuration management is to ensure and document that project facility, structures, systems, subsystems, and components, as well as supporting documentation, interface physically and functionally. This process also ensures that the project's configuration agrees with the performance objectives defined in the technical baseline and that schedule and cost baselines are established, approved, and controlled. **As part of the design process, a code of record is established as part of the project design requirements.** These requirements are controlled using configuration management processes.

The FPD should initiate a configuration management system early and ensure the delivery of complete as-built documents at the close of the project. Configuration management control begins with baselining requirements and ends with project completion activities. **The project configuration management system includes a design input, design requirement, and facility configuration control system.** A change to the facility configuration may become a source of a project baseline change.

Risk Management Process

The risk management process is a continuous process throughout the project.

Baseline changes may result from the risk management process. First, when a risk is identified, a risk-handling action may be developed to reduce the risk. Second, **the risk-monitoring process may result in a new project scope strategy or a modified risk-handling action.** A third source of **baseline changes is a realized risk that results in the use of MR or contingency.** If these activities represent added scope to the project PMB, a baseline change should be processed, and, if applicable, a contract change processed in parallel. Refer to DOE G 414.3-7A for further information on the risk management process.

Project Trend Process

The FPD should have a forward-looking process to identify potential issues that may become project changes. Many projects use a trend process to provide this forward-looking process. The Trend Process provides a formal, early warning method to identify and track possible deviations from the project baseline. The trend may be a projection of increased costs based on experience to date, a known future project change, or increased pricing. **Typically, any contractor or IPT member may identify and document a trend.** The trend goes through a review process to determine its validity and impact on the project, if any. **The trend may ultimately result in a baseline change.**

External Project Changes

External changes result from events outside the control of the project team. Examples of external events that typically result in a baseline change to the project are **changes in congressional funding, external regulation, and programmatic mission. External changes normally result in directed project changes.**

Directed Project Changes

Directed changes are caused by DOE policy directives (such as those that have the force and effect of law and regulation), regulatory, or statutory actions and are initiated by entities external to the Department, to include external funding reductions. Directed change decisions are reviewed and verified by OECM and OMB and follow the appropriate baseline management process.

Project Performance Baseline Change Process

The following steps describe the typical process for making changes to the contractor-controlled PMB and, in some instances, may result in changes to the PB. It should be noted that these steps are necessary but not sufficient when the change involves a contract modification. **The process described below is generally applicable no matter the level of change approval authority required.** As the approval level moves up the chain of command, additional materials, briefings, etc. may be required.

- 1. Initiating a BCP: When a** Control Account Manager (CAM) observes or is presented with a **potential scope, schedule, or budget change the CAM notifies the Project Manager (PM).** The CAM works **with Project Controls** to define the impacts of the proposed change. The CAM **then submits a change**, using a BCP Form, to the Project Manager. Project Controls staff generates and maintains a current BCP Log, assigns a BCP number, and summarizes the schedule and/or budget impact of the proposed change.

2. **Preparation of BCP Package:** The CAM, supported by Project Controls, is responsible for the preparation, accuracy, and completeness of each BCP package, which contains the documents to support proposed budget and/or schedule change(s). Each BCP is:

- Prepared using standard templates and formats.
- Tailored for the level and complexity of the change.
- Reviewed for consistency, completeness, correctness, and appropriate routing by Project Controls before submittal to the CCB.

The BCP should document information, including the following:

- **Scope Change:** This is an addition, deletion, or transfer of work scope to/from a body of formally authorized work represented in one or more control accounts and affected WBS elements.
- **Budget Change:** The budget of a given element of authorized work, which is currently planned in a future portion of the PMB, is newly estimated to be different than the budget originally associated with that work. In such a case, there have been no changes in requirements or objectives of the work. Typically, there are no activities added to or deleted from the PMB schedule.
- **Schedule Change:** Project priorities or unforeseen events may result in re-sequencing of project activities which may cause a change in the timing and/or definition of controlled or earned value milestones.

Consequence of Not Approving: If appropriate, the **project manager (PM) attaches an impact statement to the BCP package explaining the consequence of not approving the BCP.**

Budget Source Impact: The PM, with the assistance of Project Controls, attaches a cost impact statement to the BCP package when budget is requested, returned, and/or transferred. This report shows the financial impact of the proposed change by WBS. **This information is relevant when MR or Contingency is requested or returned or when budget (and scope) is transferred.** This information is reflected on the BCP form and entered in the BCP Log when a BCP number is obtained. When scope is moved between groups or in the schedule, the corresponding budget will accompany it, resulting in a scope and budget transfer.

A typical BCP package includes:

a. Reason/Justification (The driver of change typically falls into one of the following categories):

- **Design Development:** Normal design development may result in significant scope and schedule changes for future work within and between control accounts. MR may be required to cover the changes. DOE contingency should not be used to cover normal design development changes when there have been no changes in requirements or objectives of the work.
- **Risk Mitigation:** During the normal process of risk identification, monitoring and control, additional risk mitigation actions may be identified which may add scope and schedule to the PMB. MR or Contingency may be required to cover newly identified risk mitigation actions, depending on the risk.
- **Realization of Risk:** Additional scope and schedule may be required if a risk is realized. MR or contingency and/or additional project TPC funding may be required, depending on the risk event.
- **External changes:** Changes external to the project such as regulation changes, directed scope or schedule changes, reduced budgets, economic uncertainties, etc. may require scope and schedule changes. Normally, additional funds are added to the project to cover additional scope and schedule, i.e. neither original project MR nor contingency is used to cover external changes

Improved planning of future activities within the PMB: As a project progresses, more optimal planning of future activities may be accomplished to incorporate better understood pricing and productivity, construction re-sequencing, changes in subcontracting strategies, etc., or to simply optimize the remaining work schedule. This action normally does not result in the use of MR or contingency.

Poor performance: When performance deviates from the baseline plan to the point where the remaining work plan is unusable as a performance management tool, the future work is re-planned. This action typically will require MR and/or contingency or even additional TPC funding to cover cost and schedule increases above the current plan for future work. Reduction in the contractor's fee usually accompanies this action. In some cases, more extensive contract actions may take place such as contract termination.

- b. **Schedule Milestone Impact Statement:** The PM, with the assistance of Project Controls, provides a print-out of the schedule to reflect the Project Milestones that are affected if the BCP requires a Milestone revision. **Proposed schedule revisions are indicated on PMB schedule printouts provided by Project Controls to reflect the pending milestone and date changes with before and after versions.** These are **entered into PMB schedule if/when the action is approved.**
- c. **Management Reserve, Contingency, Undistributed Budget or Additional Budget Requirement:** **The PM,** with support from Project Controls, indicates if the impact of the change will result in a request for expenditure of project Management Reserve, Contingency, Undistributed Budget or Additional Budget. **The PM decides whether to process the baseline change or allow the affected CAMs to carry variances.** Any changes to the project and **use of any management reserve, contingency, undistributed budget or additional budget is approved and implemented following the baseline change control process documented in the PEP.** These change **approvals are documented in the BCP including the applicable supporting documents and all changes are documented on a Change Control Log.** The Change Control log includes undistributed budget, management reserve, contingency, performance measurement baseline, and contract budget base information.
- d. **WBS Affected:** The **CAM indicates the Work Breakdown Structure (WBS) elements affected as a result of the change. If the change impacts other control accounts, the CAM notifies the PM and other affected CAMs to ensure all issues are brought forward prior to approval of the change.**

3. BCP Approval and Disposition:

- a. **If the BCP approval is within the contractor's authority, the CAM obtains signatures from Project Controls, and submits the BCP package to the PM.** After resolving inputs received from the PM, the BCP can be approved, approved with changes, disapproved, or returned for revisions, with notification to the FPD.
- b. **If the BCP action is outside the contractor's authority, the CAM obtains signatures from Project Controls, others, as necessary, and the PM.** The contractor **submits the BCP to the FPD** (and CO, if a contract change is contemplated) **for DOE action**. If approved for DOE action, such as authorization to access DOE Contingency, the change documentation is transmitted in accordance with the contract management procedures to the DOE Contracting Officer (or the designated DOE official for M&O contracts). **Changes that require DOE approval are reviewed by an appropriate CCB that includes both contract and project personnel.** For Non-M&O contracts, an Independent Government Cost Estimate (IGCE) is always needed when the change involves additional scope to be incorporated into the contract. **In addition, depending upon the magnitude of the change an Independent Project Review (IPR), an External Independent Review (EIR), and congressional notification may also be needed.** The FPD prepares briefing materials for CCB meetings, including briefings for pre-ESAAB and ESAAB meetings.

- c. **Contract Change:** For projects under Non-M&O contracts, a normal part of the BCP evaluation and approval is to evaluate and determine early if a contract change will also be needed. **When the project change also involves a contract change, the steps for preparing and approval of contract change documentation should proceed in parallel with project change control process. Contract changes should be negotiated prior to requesting approval of a BCP.** If the change is external to the project, a contract change may be needed even for some projects under an M&O contract. Contract modifications should not be definitized until after the AE approves the BCP.
4. **Updating the PMB: The CAM updates all affected documents that reflect scope, schedule, and budget information and assures that these updates are consistent with the approved BCP and contract modification, if required.** This is accomplished in a timely manner, **typically within 30 days.** Once done, Project Controls completes the BCP log to indicate when the updates were made and by whom. The contractor submits an update for PARS II reflecting the change.

Contract Changes

Projects are executed through contracts. If a project change necessitates a change to the contract, **the CO acting within the scope of his/her authority is the only one empowered to execute a contract modification.** For non-M&O contracts, a project change may require a contract modification, depending on the extent of the change. **Changes affecting the contract-defined scope, cost, or schedule will require a contract modification.** Throughout this guide, the term contract refers to DOE prime contracts, not prime contractor subcontracts unless otherwise stated.

Of the many different contract types, DOE uses M&O and non-M&O contracts. Supplement 1, Table S1-4 highlights the key differences of the two contract types, including major differences related to change control.

For M&O contracts if the CO determines a contract change is required, DEAR (Section 970.5243-1, Changes) and the Changes clause in the contract cover the change process.

Contract Modifications for Non-M&O Contracts Including True-Up

Contract and project performance may be impacted by things not covered in the contract or that exceed limits set in the contract. Examples of the types of things that may impact contract and project performance are:

- differing site conditions,
- constructive changes,
- inclement weather,
- heightened security requirements, or
- other unforeseen situations.

Contract true-up is an instance of contract change that becomes necessary for newly awarded contracts to account for changed conditions since issuance of solicitation.

Where the contract includes FAR 52.243-7, "Notification of Changes", **the contractor has the responsibility to submit a Notification of Change, in accordance with the contract. If considered valid by the CO, a contract modification will be negotiated and executed. If the CO does not agree that the contractor is entitled to a change, the contractor may submit a claim.** After the CO reviews the claim and makes a final decision that denies the contractor's claim, then the contractor may appeal the CO's final decision to a board of contract appeals or the Federal Court.

In some situations, the Government may initiate changes to a project/contract. In these situations, the FPD and contractor will work with the CO to describe the required changes and a request for proposal will be sent to the contractor. In optimal situations the negotiation for such changes will be completed prior to the contractor performing the changed work. In situations that require immediate action on the part of the contractor, a Change Order must be issued if the contract scope is added to, deleted, or otherwise changed. The Change Order is issued unilaterally and should be definitized at a later date, normally not later than 180 days after issuance. When a Change Order is issued the CO should develop a definitization schedule and set a Not-to-Exceed amount in order to limit the Government's risk. A Change Order means a written order, signed by the contracting officer, directing the contractor to make a change that the Changes clause authorizes the contracting officer to order without the contractor's consent. **Contract modifications, including Change Orders are processed on Standard Form (SF) 30.**

When a Change Order is issued and the change is expected to exceed \$100,000, the CO should require the contractor to maintain separate cost accounts for the change so that actual costs can be used to the degree possible when negotiating the change. FAR 52.243-6, Change Order Accounting, allows for this segregation of costs.

Contract changes are governed by the applicable sections of the FAR (Part 43, Contract Modifications). DOE Order 413.3B requires that prior to approval of a baseline change by the AE, the FPD should:

- coordinate with the Contracting Officer to **identify the specific contract changes** that may be required,
- **develop an Independent Government Cost Estimate** (refer to FAR 36.203 and FAR 15.406-1),
- **establish a schedule** for receipt of a contractor's proposal(s),
- **obtain audit support**, and
- **ensure the timely** analysis, negotiation, and execution of contract modification(s) that comply with regulatory and statutory requirements.

After approval of a BCP by the AE, the previously negotiated contract change should be definitized.

The contract change process is implemented in parallel and coordinated with the project change process. **A Government/contractor negotiated price should be developed prior to approval of a performance baseline change.**

DOE G 413.3-20 – cont'd

Contracts for projects subject to DOE Order 413.3B require the contractor to develop and deliver to DOE a PMB. There is a direct correlation between the contract estimated cost and the project PMB. **The contract price equals the contract estimated cost and available fee. The contractor's PMB plus management reserve equals the contract total estimated cost also referred to as the Contract Budget Base (CBB).** The contractor cannot change the CBB, schedule, or statement of work (SOW) that it agreed to in the original award by simply submitting or updating the project's PMB.

A contract management plan (CMP) (see DOE Acquisition Guide, Chapter 42.5) provides the road map for administering and monitoring key elements of contract performance. A sound CMP should clearly outline

- (1) the roles and responsibilities of key DOE officials,
- (2) key contract milestones and other performance requirements,
- (3) processes for ensuring that the rights and remedies of the parties remain operational, and
- (4) an effective contract change control process.

Upon notification of the need for a change to the contract, either through a proposed BCP or a notification submitted by the contractor in accordance with the Notification of Changes clause, **the CO should work closely with the FPD to determine whether a change to the contract is, in fact, necessary.**

Only changes to the statement of work (SOW) that have been vetted through the formal CCB process should be implemented by contract modification. Depending on the urgency of the required change, the CO should make a determination about issuing a Change Order or pre-negotiating the change.

Time permitting, **pre-negotiated changes are the most preferred method for changing a contract.** Not all changes approved by the CCB will result in a change to the contract. **It is imperative that all stakeholders understand prior to approval of BCPs whether a contract change is required. Changes to project PMBs or the receipt of a revised PMB from a contractor do not constitute a contract change or a baseline change proposal.**

COs should:

- not issue unpriced change orders unless absolutely necessary
- always:
 - Be alert to potential change issues and circumstances
 - Insist on proof of entitlement and demonstration of quantum in REA negotiations
 - Follow DOE and FAR procedural requirements for cost analysis and negotiation
 - Include ceiling prices and definitization schedules where unpriced change orders are issued.
 - Insist upon delivery of clearly & definitively itemized detail pertaining to any changes affecting cost, scope and/or schedule.

FAR Part 43 identifies two types of modifications that can be executed by the contracting officer: unilateral and bilateral modifications.

Unilateral Modifications are changes to the contract signed only by the contracting officer.

Government contracts will usually contain a "Changes" clause permitting the Contracting Officer to make [see FAR 43.103(b)] unilateral changes (signed only by the Contracting Officer) in order to make

- **administrative changes**;
- **issue change orders within the scope of the contract** and in accordance with the terms of the specific "Changes" clause of the contract;
- **make changes authorized by other clauses** (the Property clause, Options clause, or Suspend of Work clause); and
- **issue termination notices** are typical examples.

Administrative changes are changes in payment office, or appropriation data. Change Orders are unilateral modifications specifically authorized by a Changes clause in the contract. A number of contract clauses anticipate unilateral changes by the contracting officer. The Government Property clause, Options clauses, and Suspension of Work clause are typical examples.

It is important to note that Change Orders are usually consummated in two documents: the change order and a supplemental agreement reflecting the resulting equitable adjustment in contract terms.

The Change Order is unilaterally issued.

The second supplemental agreement is a bilaterally signed modification, referred to as the "definitization modification", representing the negotiations conducted and agreed upon by the contractor and the government.

In very rare cases, **should the parties not be able to reach an agreement, the CO has the unilateral right to definitize the equitable adjustment, leaving the Contractor with recourse under the Contract Disputes Act.** For obvious reasons, it is considered beneficial to reach an agreement and definitize the equitable adjustment bilaterally.

Bilateral Modifications are signed by both the contractor and the contracting officer. The contractor signs bilateral modifications prior to the Government Contracting Officer.

Bi-lateral modifications are **often referred to as supplemental agreements because that is exactly what they represent, additional agreements to be incorporated in and made a part of the original contract.**

Bilateral modifications [FAR 43.103(a)] are used to make negotiated equitable adjustments resulting from the issuance of a change order, definitive letter contracts, and reflect other agreements of the parties modifying the terms of contracts.

Generally, changes to any of the terms and conditions of the contract, other than unilateral modifications described above, should be accomplished bilaterally. This includes revisions or additions to contract clauses, special contract requirements, DOE orders list, etc.

Equitable adjustments required as a result of unilateral modifications under clauses other than the changes clause are also incorporated in this manner. So too are the results of annual Performance Evaluation Management Plans on Cost plus Award Fee Contracts.

Contract True-Up

At times, the scope of the contract SOW that was established in a solicitation may change due to a delay in the award of the contract or the amount of work that the incumbent contractor actually completed versus the work that was projected to be completed at the time the solicitation was issued. In this case, **the CO should require the contractor to identify the differences in the scope within 60 to 90 days of contract award.** Once the differences are verified, **the CO, with support from the FPD, should request that the contractor submit both technical and cost proposals addressing the differences. This process has been referred to as a "true-up."** **Following are the key steps for executing a True-Up modification:**

1. **Identify differences in scope** from what was specified in the solicitation and issue a performance work statement reflecting changes
2. **Follow the six-step contract change process**, starting with requesting contractor's proposal that identifies changes related to true-up and prices them. Any other changes, such as new work, deleted work are priced separately.

The true-up should be negotiated as any other contract modification. The **true-up should be completed in a timely fashion and should not wait for the submission or validation of the contractor's project performance measurement baseline.**

Contract Scope Considerations

Changes within the General Contract Scope

A Contracting Officer is only authorized to make a change to the contract that is within the scope of the contract. Scope determinations fall within the purview of the Contracting Officer, who makes the determination with the assistance of technical personnel and legal counsel. **The Changes clause provides the Government with the unilateral right to make certain changes within the general scope of the contract.**

More specifically, such areas include designs, specifications, place of performance, and methods for packing and shipping are identified as candidates for unilateral change and are, as such, within the general scope of the contract.

Cost Overruns and Over-Target Baseline

Because OTB budgets and schedules do not supersede contract values and schedules and are implemented solely for planning, controlling, and measuring performance on already authorized work, a contract modification is generally not needed; however, in most cases the CO must authorize the contractor's use of OTB. If the new schedule results **in an OTS situation, both parties must recognize that the existing contract milestone schedule still remains in effect for purposes of contract administration and execution.** The new dates in the **OTS are for performance measurement purposes only and do not represent an agreement to modify the contract terms and conditions.**

The CO is part of the OTB process and should authorize use of OTB/OTS on the project, with input from the FPD. The key steps are:

- **Acknowledge and authorize** the development of OTB/OTS by the contractor
- **Agree on an action plan** for development and implementation of the OTB/OTS that addresses:
 - **Establishing a consensus** on the remaining scope
 - **Conducting a full assessment** of all aspects of the project and contract including performance issues and identification of contract amendments to tighten performance variance thresholds and sets triggers for subsequent contract evaluations
 - **Identify if a contract change or PB change is contemplated**
- **Conduct OTB review**
- **CO concurs with implementation.**

The OTB/OTS Handbook, provides a sample concurrence memo taken form the OTB/OTS Handbook.

A cost growth modification to a contract involves obligating additional funding without adjusting work scope. These modifications are for funding only, not performance measurement budget. A cost growth modification does not authorize a contractor to increase the BAC by the amount of the modification. Execution of a cost growth modification to cover an overrun does not automatically mean the use of an OTB is warranted.

Changes Outside the General Contract Scope

When the Contracting Officer determines that a proposed change is outside the scope of the contract, this constitutes a new procurement, thus full and open competition is required pursuant to FAR Part 6, unless circumstances permitting other than full and open competition exist pursuant to FAR 6.3.

In addition, unilateral changes that fundamentally alter the original purpose or magnitude of the original contract can leave the contractor without a contractual remedy for increased cost, profit, or time required to perform the contract effort.

Contract Change Approval Authority

In addition to the project and program review and approval process for Project Changes, those requiring a contract modification should comply with the policies and guidance established by the Senior Procurement Executive (SPE) for approval of contract actions prior to execution. The SPE's review and approval of contract actions is accomplished through the Business Clearance Review (BCR) process. The BCR process is performed for the SPE by the Acquisition Planning and Liaison Division (APLD). The review and approval requirements are set forth in Acquisition Guide (AG)

The SPE delegates specific authorities to individuals who are designated as the Head of a Contracting Activity (HCA). An HCA establishes review and approval procedures for a contracting activity and implements an independent review function. The HCA may approve contract actions within their respective delegated authority level. Those actions exceeding their authority should be reviewed in accordance with local procedures and cleared through the BCR process. However, the SPE may waive the requirement for BCR in which case approval authority is delegated to the HCA.

Approval authority for contract modifications will generally follow the model set forth in the table below, however, projects and contracting officers should verify the most current policies, procedures, and thresholds rather than relying on this table which is provided for purposes of illustration.

Contract Modification Approval Authority

Approval Authority	Contract Modification Approval Thresholds
Senior Procurement Executive	<p>The Acquisition Planning and Liaison Division (APLD) performs the Business Clearance Review (BCR) function for the SPE and reviews contract modifications that meet any of the following criteria (funding modifications are excluded):</p> <ul style="list-style-type: none"> a. Contract modifications that exceed the delegated authority for an HCA. For non-Power Marketing Administration contracting activities, this threshold is currently at \$50 million; b. Any contract modification for which the estimated value exceeds both 20% of the original contract value and \$10 million (for non-Power Marketing Administration offices); or c. Any modification to a contract originally approved by Headquarters, regardless of the estimated value, that involves a significant restructuring of contract terms and conditions (e.g., contract type, deviations/modification of standard clauses).
HCA	<p>Through the established independent review function, the HCA may approve:</p> <ul style="list-style-type: none"> a. Contract modifications that are within the delegated authority of the HCA (currently at \$50 million for non-Power Marketing Administration contracting activities) provided that the modification does NOT result in either <ul style="list-style-type: none"> • An increase in the estimated value exceeding both 20% of the original contract value and \$10 million (for non-Power Marketing Administration offices) or • A significant restructuring of contract terms and conditions (e.g., contract type, deviations/modification of standard clauses). b. Contract modifications that have been waived for BCR by APLD.
Contracting Officer	Contract modifications that are within the delegated authority of the CO.

FAR Changes Clauses

The FAR currently includes more than a dozen variations of the contract Changes clause applicable to various types and kinds of contracts. Each identifies what can be changed, the equitable adjustment that will result and the contractor's obligation to claim the equitable adjustment in a reasonable time. **The clauses also address the contractor's obligation to continue performance of the contract as changed.**

Evaluation of Contractor Proposals

Defense Contract Audit Agency (DCAA) Guidelines for Acceptable Contractor Proposals

Proposals should be evaluated for adequacy within seven days after receipt so that corrective action can be taken immediately.

If the proposal is so deficient that an examination cannot be performed, recommend to the Contracting Officer that the proposal be returned to the contractor without audit until such time as an adequate proposal is received. This approach is intended to permit the efficient use of audit resources.

Change Order Pricing

Contract modifications, including changes that could be issued unilaterally, should be priced before their execution if this can be done without adversely affecting the interest of the Government (FAR 43.102(b)). If a significant cost increase could result from a contract modification and time does not permit negotiation of a price, at least a ceiling price should be negotiated and specified in the change order.

FAR Part 15 Cost Analysis Requirements

The cost analysis and cost or pricing data requirements of FAR 15 apply to contract modifications as well as to initial awards. In fact, where competitive pricing is available on initial award, the level of effort for the cost evaluation may be somewhat less than in a post award modification situation, due to the fact that only one proposal is received and evaluated. **Whether evaluating a proposal submitted under one of the clauses discussed previously, or an REA alleging a constructive change, the Contracting Officer should comply with these requirements prior to modifying the contract to definitize the equitable adjustment.**

Price v. Cost Analysis

The FAR recognizes both price analysis and cost analysis as appropriate methods for evaluating contractor proposals. Cost analysis is used to evaluate the reasonableness of individual cost elements when cost or pricing data are required. **Price analysis should be used to verify that the overall price offered is fair and reasonable.**

According to FAR 15.403-4(a)(1)(iii), Cost or Pricing Data are required prior to accomplishing the modification of any sealed bid or negotiated contract (whether or not cost or pricing data were initially required) expected to exceed the cost or pricing data threshold (currently \$700,000)... Price adjustment amounts should consider both increases and decreases (e.g., a \$200,000 modification resulting from a reduction of \$500,000 and an increase of \$300,000 is a pricing adjustment exceeding \$700,000). **Wherever Cost or Pricing Data are required, the contractor shall execute a Certificate of Current Cost or Pricing Data effective on the date of agreement on price.**

Request for Equitable Adjustment

Requests for Equitable Adjustment (REA), in the general sense, are requests from a contractor to seek equitable relief as a result of changes that cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work under the contract.

These changes may have been expressly ordered by the Government under the Changes clause, may have resulted from the operation of other clauses, or may be related to a constructive change.

Whatever their form and origin, REAs are requests to the Contracting Officer to adjust the contract in an —equitable way. REAs should be initiated by a Contractor per the Notification of Changes clause(s) included in the contract.

If the contract includes the Notification of Changes clause and an REA is submitted without a Notification of Changes being received first, **the CO should ensure the contractor complies with the terms of the clause and require the contractor to submit the required notification.**

Elements of an REA include:

- 1) Proof of entitlement to an adjustment based on a Government act or failure to act,
- 2) Damages in the form of an increase in the cost or time of performance,
- 3) A causal link between the act or failure to act and the damages, and
- 4) Proof of the amount of the damages.

In order to prove entitlement to an equitable adjustment, a contractor must prove that the underlying change was directed by someone with actual authority to make the change.

Negotiation of Equitable Adjustments

Negotiations should be conducted either prior to or as soon as possible after the initiation of the change.

Changes clauses require the contractor to continue performance of the contract as changed by the Government **even if the contractor and government do not come to agreement on an equitable adjustment.** This ensures that the Government is not faced with a lack of progress in meeting its needs. **Payment for affected items delivered may be withheld until unit prices have been adjusted as part of the equitable adjustment, increasing pressure on the contractor to negotiate.**

The contractor is incurring actual costs, but **until the adjustment is consummated, the contractor assumes the risk that its actual costs will not be accepted as reasonable.** As this actual cost increases, so does the pressure to negotiate.

The clauses that provide for equitable adjustment also provide for a unilateral contracting officer decision if no agreement can be reached.

Six-Step Contract Change Process for Non-M&O Contracts

The following six step process describes a recommended contract change order process for DOE prime contracts. COs may establish formal Government Contract Change Boards for major construction projects and environmental cleanup contracts. For additional details, refer to the Contract Change Order Administration of Department of Energy Prime Contracts memorandum, April 1, 2008 contracts memorandum, Supplement 5 in this Guide.

- 1. If the Government needs to make a change in the scope of the contract that affects the estimated contract cost, fee (if any), delivery schedule, or option periods, the CO should issue a change order.** The general areas a CO may direct a change are stated in applicable Changes clause cited in the contract. The proper procedure for implementing a contract change is for **the CO after ensuring all internal processes and procedures have been followed to issue a request for proposal to the contractor with a 30-day response time for submission of the proposal.**
- 2. The impacts for each contract change should be individually evaluated and documented by the CO** with the assistance of technical personnel. **An IGCE is required.** It should be completed prior to receipt of the contractor's proposal. **After receipt of the contractor's proposal, the CO ensures that a technical evaluation and cost analysis, including audit and field pricing support when required, is performed and documented.**

DOE G 413.3-20 – cont'd

3. **Before negotiating with the contractor, the CO should prepare a pre-negotiation plan** (FAR 15.406.1 Pre-negotiation Objectives). After contract negotiations are complete, but **before executing the contract modification, the CO obtains a Certificate of Current Cost or Pricing Data per FAR 15.403-4(b)(2)** unless an exception applies per FAR 15.403-1(b) or is waived by the HCA (FAR 15.403-1(c)(4)). **Certified cost or pricing data is required where there is any pricing adjustment.** Any request for a waiver of the requirement to submit certified cost and pricing data should present information and a solid case to support the action sufficient to withstand the scrutiny of internal and external reviews and be within the HCA's delegated procurement authority. **For actions that exceed the HCA's delegation, the HCA is required to obtain prior approval from the Office of Contract Management (MA-62).**
4. **The results of the negotiations are documented with a post-negotiation memorandum** (FAR 15.406-3, Documenting the Negotiation). **After the appropriate approval** by the AE, S-3 or S-2 or their designees for the action, **the CO should implement a bilateral contract modification using Standard Form 30 (SF 30), Amendment of Solicitation/Modification of Contract**, for all changes that includes release language per FAR 43.204, Administration.

DOE G 413.3-20 – cont'd

5. **Bilateral modifications** (supplemental agreements) **are signed by the CO and the contractor before the initiation of any changed work.** They are used to (1) **implement pre-negotiated supplemental agreements,** (2) **make negotiated equitable adjustments** resulting from the issuance of a change order, (3) **definitize letter contracts,** and (4) **reflect other agreements of the parties modifying the terms of the contract.**

6. **In certain urgent circumstances, issuing an undefinitized or unpriced change order may be necessary.** In these exceptional instances, **the CO may unilaterally direct by contract modification using SF-30 an immediate change within the general scope of the contract.** The changed contractual requirement should be **limited to the minimum effort required to satisfy the requirement while a proposal is prepared, analyzed, and negotiated.** This method should be used when implementation of the change is urgent due to mission requirements or necessary to minimize implementation costs when delay in incorporating the change could dramatically increase implementation costs.

When a change order is issued, the CO sets a ceiling price for the changed contractual requirements. The ceiling price should be separately identified in the unpriced change order from the pricing structure of the basic contract. The CO may consider utilizing FAR 52.243-6, Change Order Accounting, for changes expected to exceed \$100,000 for visibility into actual costs incurred pending definitization. The process of definitizing an unpriced change order requires a second modification. This second modification definitizes the initial change order. The CO definitizes the change as soon as practicable. The change order process, culminating in a contractor/Government agreement, should not exceed 180 days. Contract change orders and REAs, including the associated contract fee, should be negotiated to the extent possible prior to the incurrence of significant costs.

The CO determines if an audit is required. If required, the CO coordinates with the FPD, contractor, and audit organization for the audit.

Change Control under M&O Contracts **An M&O contract is an agreement under which the Government contracts for the operation, management, or support, on its behalf, of a Government-owned or -controlled research, development, special production, or testing establishment wholly or principally devoted to one or more major programs of the contracting Federal agency. The M&O contract is governed by FAR 17.6 and the DEAR and has unique allowable cost provisions and a broad definition of work.** The CO determines whether the potential modification is within the general scope of the contract. **M&O contracts, because of their broad definitions of work, are less likely to require a contract modification, but the potential for a modification still exists and should be reviewed.**

The M&O contract change process is defined by the DEAR Part 970. The broad scope and size of a typical M&O contract results in relatively fewer contract changes due to project baseline changes. Most project baseline changes can be handled through the budget management process without a contract change. However, **if a contract change is required, the process is similar to the non-M&O contract change process.** Some notable differences from the non-M&O contract change process are as follows:

- The **early involvement of the CO in the project baseline change process is not as critical.**
- Because **the M&O contractor accounting and business systems are integrated with DOE, the Defense Audit Agency (DCAA) audit of costs covered by the baseline change request is not required.**

Budget Profile Changes

Improved project and financial management integration strengthens project stability and reduces risk. **It is the Department policy that in approving the funding profile for the life cycle of the project, acquisition executives determine that the proposed funding stream is affordable and executable within the program's capital and operations budget portfolio.** Any changes to the approved funding profile that negatively impacts the project should be endorsed by the acquisition executive, who may not be the Program Budget Officer. **Prior to endorsement by the acquisition executive, the Chief Financial Officer (CFO) and OECM are notified of any proposed project funding profile changes so that the CFO can verify that the funding profile is covered within the President's budget.**

Funding changes made by the program office as a result of changing program priorities **are not considered directed changes.**

DOE Order 413.3B requires that the SAE must endorse any reduction in funding that adversely affects the project's approved funding profile for all non-Major System Projects and previously approved SAE BCP actions. OECM shall be notified of these funding decrements.

Integrated Project and Contract Change Processes

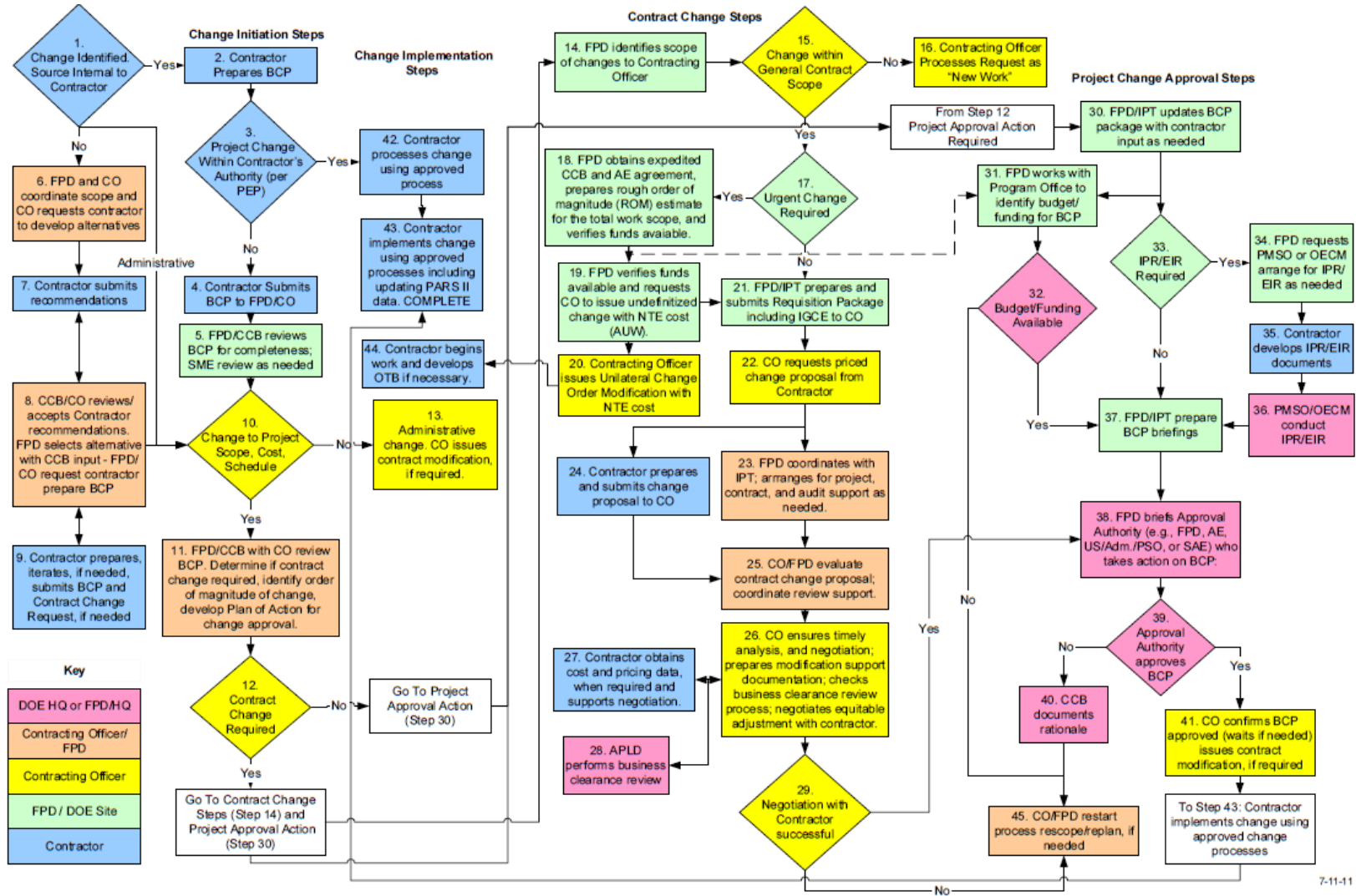
This section describes the recommended project and contract change control processes using flow charts to describe the steps in change control and identifying the integration of the project and contract processes.

The **“Overall Contract and Project Change Control Process (Non-M&O)”** provides a flow chart of the recommended change control process.

The **“Overall Change Control Process (M&O)”** provides the process flow chart for M&O contracts. Note that the positions described in the flow charts should be adapted as appropriate in an implementing project procedure.

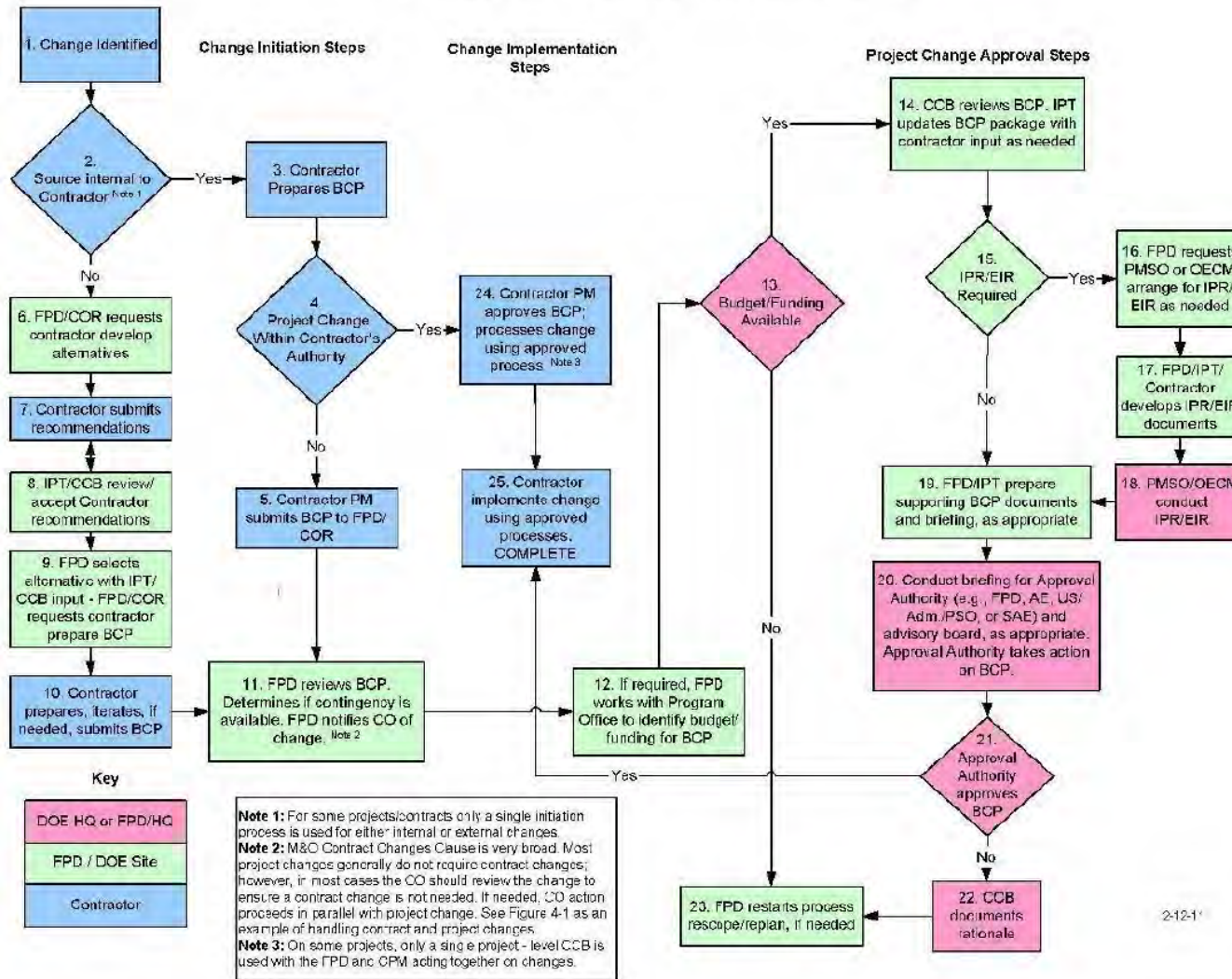
DOE G 413.3-20 – cont'd

Overall Contract and Project Change Control Process (Non-M&O)



DOE G 413.3-20 – cont'd

Overall Contract and Project Change Control Process (M&O)



Change Control Documentation

The change control processes lead to formal documentation that provide traceability, transparency, accountability of changes and ensure the integrity and alignment of the project and contract scope, cost, schedule and budget. The change documentation includes:

1. **Project Performance Baseline Change approvals** that may revise project scope, cost, schedule, or project budget.
2. **Project Execution Plan**
3. **Contract modifications** that may change contract scope, cost, deliverable schedule, fee/profit or other terms and conditions. M&O type contracts generally do not require contract modification. Changes to work being performed by an M&O can be communicated through simple work authorizations. DOE uses both types of contract vehicles. Refer to sections 3.3.1 and 3.3.3 regarding contract modifications.
4. **Performance Measurement Baseline changes that revise the project plan** e.g. change to allocation of budget or time for activities, adding new activities due to realized risks and application of management reserve or contingency
5. **Change Control Board meeting records or decision documents**

DOE G 413.3-20 – cont'd

6. **Change control log:** A change control log contains a record of all changes, including the amount of MR, contingency, and undistributed budget used, if any. Documents that may require updating as a result of the approved change are updated.
7. **Update PARS II:** The contractor submits update for PARS II database in accordance with applicable instructions.

Documents and records generated as a result should be suitable for reproduction and are signed and dated at the time of completion. Project Controls retains approved electronic copies.

Tailoring

The standard project and contract change control processes apply to most projects. Depending on the complexity, size, and duration of the project, the FPD and CO, in consultation with site and program management, may propose a modified-scope change control process. For small and short duration projects, a combined contractor and FPD project-level change control board may be appropriate with a single upper-level board for approval of project changes that fall outside the FPD's approval authority. As in any project change control process, **the planned process should be documented in the PEP, as required by DOE O 413.3B and approved by the AE.** For smaller projects, **the AE authority may be delegated to the PSO designee or site manager designee.**