



Jefferson Science Associates, LLC

800 Change Control

**Project Control System Manual
Revision 4**



800 Change Control

- A. The Change Control process delineated in this section is to be used for requesting, reviewing, and documenting changes to the approved project baseline for projects conducted at the Jefferson Laboratory. Baseline changes may occur as a result of contractual modifications, application of undistributed budget, use of contingency/management reserve funds, replanning, or formal reprogramming. Managing change to the project baseline is crucial to ensure the project's work scope, schedule, and cost do not spiral out of control. Changes to baseline documents should be minimized and are normally approved only in the interest of work scope changes, design adequacy, reliability, performance, cost reduction, or safety/environmental considerations.
- B. The purpose of the Change Control process is to ensure that:
- The cost, schedule, and technical impacts of the proposed changes are developed and considered by all affected parties.
 - The collected evaluations are considered in the approval or rejection of the proposed changes.
 - All affected parties are informed of proposed changes and their dispositions.
 - Baseline documentation is controlled and updated as appropriate to reflect approved changes.
 - Action on proposed changes occurs deliberately, but without undue delay and without interfering disproportionately with project progress.
- C. The stated goals of the Change Control process are:
- To anticipate, recognize, and predict changes to the approved project baseline
 - To prevent unauthorized or unintended deviations from the approved project baseline
 - To evaluate and understand the technical, schedule, cost and safety/quality assurance impacts of each change to the approved project baseline
 - To identify, understand, and control the consequences of changes to the approved project baseline
 - To ensure each change is evaluated, reviewed, and dispositioned at the proper authority level

801 Change Control Process

- A. The Change Control process allows the project team to identify, evaluate, approve, and document proposed changes to the project baseline. The process



is initiated with the generation of a Change Request. The Change Request is the formal mechanism for proposing and assessing a change, waiver, or deviation to the project. After an evaluation of the Change Request, an approval is granted at an appropriate level and the Change Request becomes a Change Order for implementation. The Change Order is expeditiously communicated to affected parties and incorporated in the project baseline documentation. The Change Control process is accomplished in three phases: the Request Phase, the Review Phase, and the Documentation Phase. The Request Phase is where the Change Request originates and appropriate classification is determined. For the Review Phase, an assessment of the proposed Change Request is accomplished and approval is obtained from the appropriate authority level. Approved changes are implemented and Integrated project baseline documents are revised in the Documentation Phase.

- B. During the course of project execution, errors in accounting and cost/schedule databases can occur. Integrity of the Performance Measurement Baseline is vital to a clear understanding of project status. Retroactive changes to the performance measurement data are to be avoided. Action should be taken promptly when errors are identified and will be controlled by the Project Management & Integration Division (PM&I). Adjustments can be made to correct accounting and data entry errors and do not require instituting the formal change request process. These adjustments will not be made to historical project data, only for the current and future accounting periods.

801.1 Request Phase

- A. The Change Control process begins with the generation of a Change Request form (Exhibit 25). Any project team member can initiate a change to the project technical, schedule, and cost baselines by completing the Change Request form in electronic format. (Project changes as a result of customer direction, such as a change in funding levels or project scope, are called directed changes. These directed changes will be initiated by the Project Manager and approved by the Project Customer before implementation). The originator fills out the Identification, and Description and Justification, sections of the Change Request. The Change Request is then submitted to a member of the project Change Control Board (normally the one most affected) for consideration. Upon concurrence, the Change Control Board member signs the Change Request and assigns an appropriate person(s) to accomplish the Change Impact Assessment. The Change Impact Assessment section records the potential impacts of the proposed change to the project baseline and addresses safety/quality concerns. The impacts of not approving the change are also included. The assessment is to be all-inclusive and thorough to ensure the consequences of implementing (or not implementing) the proposed change are fully understood.



- B. After the Change Control Board member has concurred with the Change Request, PM&I enters the Change Request into the Change Request Log (Exhibit 26). Change Requests are numbered sequentially (scheme: FY - sequence #, e.g., 08-001) in order of receipt for tracking purposes. Any budget changes with an impact to project contingency are categorized as either “In-Scope” or “New Scope.” The Change Request Log is updated each time there is a change to the status of a Change Request. When the status of a Change Request is updated, PM&I will notify all Associate Project Managers and Control Account Managers connected with that WBS level and send a notice to each member of the project Change Control Board for informational purposes only. The affected Control Account Manager will coordinate inputs to the Change Request form and, if appropriate, draft a revised Control Account Plan reflecting impacts due to the proposed change.
- C. If PM&I concurs with the classification level assigned by the Control Account Manager, the Change Request form is signed and the Change Request Log is updated. PM&I also produces the Change Request Summary Report (Exhibit 27). For Class 1-2 and Class 3 Change Requests (see the next section for Class definitions), PM&I distributes the Change Request to members of the Change Control Board. The Change Request is placed on the agenda for the next board meeting. The Change Request then enters the Review Phase of the Change Control process.

801.2 Review Phase

- A. The Review Phase is dictated by the Classification level of the Change Request. Changes are classified according to the extent that they impact the project baseline. The Classification and Approval Authority levels are determined by use of the criteria listed in Exhibit 28.
- B. Class 1-2 Change Request: This classification of Change Request requires the approval of the Project Customer. The Change Control Board evaluates the Change Request and provides a recommendation to the Project Manager. The Project Manager reviews the Change Request before forwarding to the customer for approval which may include a Baseline Change Control Board review. After receiving the customer approval, the Project Manager reviews the action directed by the customer. PM&I updates the Change Request Log and the Change Request process enters into the Documentation Phase.
- C. Class 3 Change Request: This classification of Change Request requires the approval of the Project Manager. The Change Control Board evaluates the Change Request and provides a recommendation to the Project Manager. Based on the recommendation, the Project Manager approves/disapproves the Change Request. Upon approval, PM&I updates the Change Request Log and the Change Request process enters into the Documentation Phase.



- D. Class 4 Change Request: This classification of Change Request requires the approval of the Associate Project Manager. Once PM&I concurs with the Classification level, the Change Request goes to the Associate Project Manager for approval. Upon approval, PM&I updates the Change Request Log and the Change Request process enters into the Documentation Phase.
- E. Class 5 Change Request: This classification of Change Request only requires the approval of the Control Account Manager. Once PM&I concurs with the Classification level, the Change Request goes to the Control Account Manager for approval. Upon approval, PM&I updates the Change Request Log and the Change Request process enters into the Documentation Phase.
- F. During the review process, any disapproved Change Request is sent back to the affected Control Account Manager who will consult with the originator to determine any further action.

801.3 Documentation Phase

- A. The Documentation Phase is where the project baseline is revised and the approved change is implemented. Once the Change Request documents have been signed by the proper level of authority, the Change Request becomes a Change Order. For changes to the project's technical design or scope, the Associate Project Manager is responsible for ensuring the relevant technical documentation is revised to reflect the change. PM&I is responsible for revising cost/schedule baseline documents for changes impacting these project baselines. When appropriate, a new project baseline will be generated for each approved Change Request. This action will improve traceability between the Change Request and the Schedule and Cost Management Systems.
- B. Once the baseline documents are revised, PM&I updates the Change Request Log and the appropriate Control Account Manager implements the Change Order.

802 Exhibits

- 25. Change Request Form
- 26. Change Request Log
- 27. Change Request Summary Report
- 28. Change Request Classifications



Exhibit 25. Change Request Form

		Change Request Form	
<u>12 GeV Upgrade</u>			
Project Name			
Identification			
Change Request # █	Title █		
WBS # █	Date (m/d/yy) █	Date Required (m/d/yy) █	
Originator Name █			
Item Name █		Drawing/Spec # █	
Vendor Name █		Purchase Order # █	
Status			
Change Request Status (Drop Down List) New			
Description and Justification			
<u>Description of Proposed Change</u> (Note: Show costs as both direct and burdened values.) █			
<u>Justification of Proposed Change</u> █			
Change Control Board Member Concurrence █		Impact Assessment Assigned To █	
M:\12GeVUpgrade\12GeVcostbook\APM Input\12 GeV Upgrade Change Requests\12 GeV Upgrade Change Request Form (BLANK)-1.doc			



Change Impact Assessment

<u>Technical Impacts</u> █
Name(s) █
<u>Schedule Impacts</u> █
Name(s) █
<u>Cost Impacts</u> █
Name(s) █
<u>Quality/Safety Impacts</u> █
Name(s) █

Classification Level

Classification (Drop Down List) Class 5	
Control Account Manager █	Associate Project Manager █
PM&I Approval █	

Recommendation and Disposition

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Change Control Board Review (if required)

CCB <input style="width: 20px;" type="text"/>	Date (m/d/yy) <input style="width: 20px;" type="text"/>
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Final Approval

Class 5

Control Account Manager <input style="width: 20px;" type="text"/>	Date (m/d/yy) <input style="width: 20px;" type="text"/>
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Class 4

Associate Project Manager <input style="width: 20px;" type="text"/>	Date (m/d/yy) <input style="width: 20px;" type="text"/>
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Class 3

Project Manager <input style="width: 20px;" type="text"/>	Date (m/d/yy) <input style="width: 20px;" type="text"/>
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Class 1-2

Project Customer <input style="width: 20px;" type="text"/>	Date (m/d/yy) <input style="width: 20px;" type="text"/>
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Continuation Page

A large, empty rectangular box with a thin black border, intended for a continuation of text or a diagram. In the top-left corner of this box, there is a small, solid grey square.



Exhibit 25. Change Request Form (cont.)

Instructions for Change Request Form

(Note: Use the Continuation Page on last page of the Change Request form if more space is required. Label with section reference for any input to this page.)

Project Name: Self-explanatory.

Change Request #: This number will be filled in by PM&I. The forms will be numbered consecutively as they are received and will be entered into the Change Request Log.

Title: A brief descriptive title.

WBS #: Work Breakdown Structure Number(s) affected by the change.

Date: Originator enters the date for the submission of the Change Request.

Date Required: Originator enters the estimated date approval is needed to avoid adverse impacts on technical performance, schedule, cost or quality/safety.

Originator Name: Name of individual submitting the Change Request.

Item Name: Enter name of item or procedure (component, subassembly, assembly, system, test, etc.) to be changed.

Drawing/ Spec #: The drawing/specification number(s) of the drawing/specification (s) affected by the change.

Vendor Name: If the item has been purchased, or a subcontract issued, enter the vendor's name(s) here.

Purchase Order #: If a purchase order(s) has been issued for the item, enter the number(s) here.

Change Request Status: This field in the Change Request form is a drop-down list (New / Open / Deferred / Duplicate / Approved / Disapproved / Withdrawn). PM&I will update the status of the Change Request as it progresses through the procedure.

Description of Proposed Change: Describe the change requested. Use the continuation page, as required.



Justification for Proposed Change: Justify the proposed change. Describe the problem or defect that will be corrected by the proposed change. Indicate the experience that dictates the need for the change. Summarize the capability to make the change. Use the continuation page, as required.

Change Control Board Member Concurrence: The Change Control Board member who concurs with the proposed change signs this block. Note: A Change Control Board member may not concur on a Change Request originated by him/herself.

Impact Assessment Assigned To: The individual assigned to coordinate inputs to the Change Impact Assessment section of the Change Request is identified in this block.

Change Impact Assessment: Provide a statement of impact to technical performance, schedule, cost, quality/safety, and environment. Include the impact if the change is not approved. Use the continuation page, as required.

Name(s): Add the names of individual(s) who contributed and concurred to the pertinent assessment section.

Classification Level: The Classification field in the Change Request form is a drop-down list. Select Class 1, 2, 3, 4, or 5. The Control Account Manager, Associate Project Manager, and PM&I sign in the appropriate block.

Recommendation and Disposition: Recommendations and decisions concerning the Change Request are documented in this section. Use the continuation page, as required.

Change Control Board Review: Names of the board members in attendance are inserted in this block after review and recommendation by the board.

Final Approval: Based on the Change Request classification, the project customer or appropriate project member will sign in the designated signature block.



Exhibit 27. Change Request Summary Report

 FY 08 Change Request Summary Report Project Name _____ FY _____								
Classification	New	Open	Deferred	Duplicate	Approved	Disapproved	Withdrawn	Total
1-2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
%	0%	0%	0%	0%	0%	0%	0%	



Exhibit 28. Change Request Classifications

Classification*	Class 1-2	Class 3	Class 4	Class 5
Approval Authority	Project Customer Approval Required	Project Manager Approval Required	Assoc Project Manager Approval Required	Control Account Manager Approval Required
Technical Work Scope	Changes to work scope or performance requirements specified by the customer or included in the Mission Need approved by the customer	Changes to work scope or performance requirements that affect multiple APMs, but do not require customer approval	Changes to work scope or performance requirements that affect multiple CAMs, but do not affect other APMs	Changes to work scope or performance requirements that do not affect other CAMS
Schedule/ Milestones	Changes to Level 1-2 milestones that are under customer control	Changes to Level 3 milestones	Changes to Level 4 milestones	Changes to Level 5 milestones
Cost	Changes to the customer-approved Project Budget Base (TPC & TEC)	Changes that involve a transfer of work scope and its associated budget between APMs	Changes that affect multiple CAMs, do not affect other APMs	Changes that do not affect other CAMs

* Unless superseded by the Project Execution Plan