

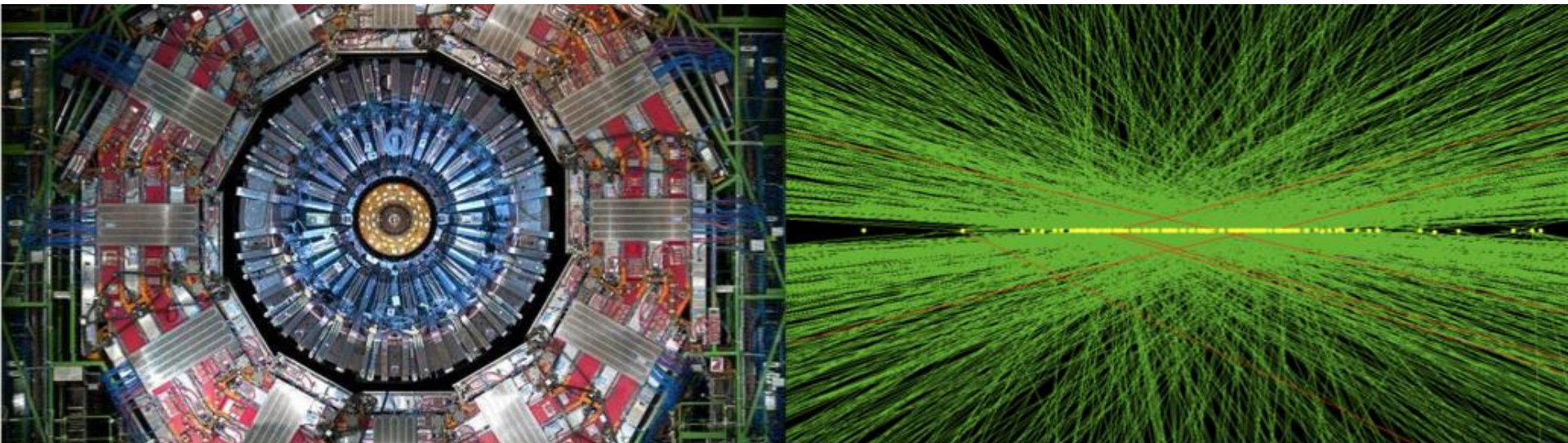


B07: DOE Order 413.3B documentation review and process

Vaia Papadimitriou

CD-1 Director's Review

March 20, 2019





Outline

- Biographical Sketch
- Introduction
- Status of DOE O 413.3B documentation
- Review and approval process for documents
- Response to recommendations from previous Reviews
 - Recommendations from the June 2018 IPR
- Additional controlled documents
- Summary



Biographical Sketch

Charge #5

- **Senior Scientist** at Fermilab since August, 2003 (Particle Physics and Accelerator Divisions).
- U.S. CMS HL-LHC Upgrade **Deputy Project Manager** since July, 2018.
- LBNE/LBNF Beamline **Project Manager** for 8.5 years (2009-2018).
- **Assistant/Associate Division Head** of Accelerator Division for 3/8.5 years (2006-2018).
- **Professor of Physics** for 11 years at TTU, followed by 3 years as Adjunct Professor (1994-2008). PI/co-PI of successful DoE research proposals. Reviewer of scientific proposals for past 19 years.
- **34 years of experience** in the design, construction, operation, data/physics analysis and management of **particle physics experiments and of accelerators/beamlines** (E731-Kaon, CDF, CDF-II, Fermilab Accelerator Complex, LBNE/LBNF/DUNE, CMS).
- **Certificates** from Booth School of Business on **management and leadership training**.
- B. Sc., M. Sc., and PhD in **Physics**; L. M. Lederman Fellow at FNAL.



Checklist from 413.3B for CD-1 approval

| TOTAL PROJECT COST (TPC) | | Less than \$400M to \$100M |
|--|---|---|
| DECISION / REQUIREMENTS ¹ / APPROVAL ² | | |
| CD-1--APPROVE ALTERNATIVE SELECTION AND COST RANGE | | SC-1 |
| PRIOR TO CD-1--CONCEPTUAL DESIGN | Approve Acquisition Strategy | ★ Reviewed by SC-28 Approved by SC-2 |
| | Approve Preliminary Project Execution Plan (PEP) | ★ Reviewed by SC-28 Approved by SC-2 |
| | Appointment of the Federal Project Director (FPD) | SC-1 |
| | Approve Integrated Project Team (IPT) | SC-2 |
| | Develop a Risk Management Plan | Project |
| | Comply with the One-for-One Building Space Replacement | Project |
| | Complete a Conceptual Design | ★ Project |
| | Document High Perf. & Sustainable Bldg. & Sustainable Env. Stewardship considerations | Project |
| | Conduct a Conceptual Design Review | Team external to project |
| | Complete a Conceptual Design Report | Project |
| | Prepare a Preliminary Hazard Analysis Report | ★ Site Office or Lab |
| | Develop and Implement an Integrated Safety Management Plan | ★ Site Office or Lab |
| | Establish Preliminary Quality Assurance Program (QAP) | ★ Site Office or Lab |
| | Identify general Safeguards and Security requirements for the recommended alternative | ★ Site Office or Lab |
| | Complete National Environmental Policy Act (NEPA) Strategy by issuing a determination (i.e., EIS, EA) | ★ Site Office or Lab |
| Conduct Independent Project Review or External Independent Review | ICE or ICR by APM with SC-28 | |
| Update PDS, or other funding documents for MIE and OE projects, and OMB 300s, if applicable. | SC-AD | |

<https://science.energy.gov/opa/processes-and-procedures/>



Checklist from 413.3B for CD-1 approval

Charge #7

| TOTAL PROJECT COST (TPC) | | Less than \$400M to \$100M |
|--|---|---------------------------------------|
| DECISION / REQUIREMENTS ¹ / APPROVAL ² | | |
| CD-1--APPROVE ALTERNATIVE SELECTION AND COST RANGE | | SC-1 |
| PRIOR TO CD-1--CONCEPTUAL DESIGN | Approve Acquisition Strategy | Reviewed by SC-28 Approved by SC-2 |
| | Approve Preliminary Project Execution Plan (PEP) | Reviewed by SC-28 Approved by SC-2 |
| | Appointment of the Federal Project Director (FPD) | SC-1 |
| | Approve Integrated Project Team (IPT) | SC-2 |
| | Develop a Risk Management Plan | Project |
| | Comply with the One-for-One Building Space Replacement | Project |
| | Complete a Conceptual Design | Project |
| | Document High Perf. & Sustainable Bldg. & Sustainable Env. Stewardship considerations | Project |
| | Conduct a Conceptual Design Review | Team external to project |
| | Complete a Conceptual Design Report | Project |
| | Prepare a Preliminary Hazard Analysis Report | Site Office or Lab |
| | Develop and Implement an Integrated Safety Management Plan | Site Office or Lab |
| | Establish Preliminary Quality Assurance Program (QAP) | Site Office or Lab |
| | Identify general Safeguards and Security requirements for the recommended alternative | Site Office or Lab |
| | Complete National Environmental Policy Act (NEPA) Strategy by issuing a determination (i.e., EIS, EA) | Site Office or Lab |
| | Conduct Independent Project Review or External Independent Review | ICE or ICR by APM with SC-28 |
| Update PDS, or other funding documents for MIE and OE projects, and OMB 300s, if applicable. | SC-AD | |

([CMS-doc-13517](#))

Owned by DOE

**Acquisition Strategy
for the
High Luminosity Large Hadron Collider (HL-LHC)
Compact Muon Solenoid (CMS)
Detector Upgrade Project**

Project # 402

at

Fermi National Accelerator Laboratory
Batavia, IL

Office of High Energy Physics
Office of Science
U.S. Department of Energy

Date Approved: _____

Month/Year

Total Project Cost Range: \$142.6M to \$183.1M

CD-0 Approval Date: 4/13/2016

March 2019

Checklist from 413.3B for CD-1 approval


Charge #7

| TOTAL PROJECT COST (TPC) | | Less than \$400M to \$100M |
|--|---|---------------------------------------|
| DECISION / REQUIREMENTS ¹ / APPROVAL ² | | |
| CD-1--APPROVE ALTERNATIVE SELECTION AND COST RANGE | | SC-1 |
| PRIOR TO CD-1--CONCEPTUAL DESIGN | Approve Acquisition Strategy | Reviewed by SC-28 Approved by SC-2 |
| | Approve Preliminary Project Execution Plan (PEP) | Reviewed by SC-28 Approved by SC-2 |
| | Appointment of the Federal Project Director (FPD) | SC-1 |
| | Approve Integrated Project Team (IPT) | SC-2 |
| | Develop a Risk Management Plan | Project |
| | Comply with the One-for-One Building Space Replacement | Project |
| | Complete a Conceptual Design | Project |
| | Document High Perf. & Sustainable Bldg. & Sustainable Env. Stewardship considerations | Project |
| | Conduct a Conceptual Design Review | Team external to project |
| | Complete a Conceptual Design Report | Project |
| | Prepare a Preliminary Hazard Analysis Report | Site Office or Lab |
| | Develop and Implement an Integrated Safety Management Plan | Site Office or Lab |
| | Establish Preliminary Quality Assurance Program (QAP) | Site Office or Lab |
| | Identify general Safeguards and Security requirements for the recommended alternative | Site Office or Lab |
| | Complete National Environmental Policy Act (NEPA) Strategy by issuing a determination (i.e., EIS, EA) | Site Office or Lab |
| | Conduct Independent Project Review or External Independent Review | ICE or ICR by APM with SC-28 |
| Update PDS, or other funding documents for MIE and OE projects, and OMB 300s, if applicable. | SC-AD | |

(CMS-doc-13092)

Owned by DOE

Preliminary PEP
HL-LHC CMS



U.S. DEPARTMENT OF ENERGY | Office of Science

**Preliminary Project Execution Plan
for the
High Luminosity Large Hadron Collider (HL-LHC)
Compact Muon Solenoid (CMS)
Detector Upgrade Project**

Project # 402

at
Fermi National Accelerator Laboratory
Batavia, IL

Office of High Energy Physics
Office of Science
U.S. Department of Energy

June 2019



Checklist from 413.3B for CD-1 approval

Charge #7

| TOTAL PROJECT COST (TPC) | | Less than \$400M to \$100M |
|--|---|---------------------------------------|
| DECISION / REQUIREMENTS ¹ / APPROVAL ² | | |
| CD-1--APPROVE ALTERNATIVE SELECTION AND COST RANGE | | SC-1 |
| PRIOR TO CD-1--CONCEPTUAL DESIGN | Approve Acquisition Strategy | Reviewed by SC-28 Approved by SC-2 |
| | Approve Preliminary Project Execution Plan (PEP) | Reviewed by SC-28 Approved by SC-2 |
| | Appointment of the Federal Project Director (FPD) | SC-1 |
| | Approve Integrated Project Team (IPT) | SC-2 |
| | Develop a Risk Management Plan | Project |
| | Comply with the One-for-One Building Space Replacement | Project |
| | Complete a Conceptual Design | Project |
| | Document High Perf. & Sustainable Bldg. & Sustainable Env. Stewardship considerations | Project |
| | Conduct a Conceptual Design Review | Team external to project |
| | Complete a Conceptual Design Report | Project |
| | Prepare a Preliminary Hazard Analysis Report | Site Office or Lab |
| | Develop and Implement an Integrated Safety Management Plan | Site Office or Lab |
| | Establish Preliminary Quality Assurance Program (QAP) | Site Office or Lab |
| | Identify general Safeguards and Security requirements for the recommended alternative | Site Office or Lab |
| | Complete National Environmental Policy Act (NEPA) Strategy by issuing a determination (i.e., EIS, EA) | Site Office or Lab |
| Conduct Independent Project Review or External Independent Review | ICE or ICR by APM with SC-28 | |
| Update PDS, or other funding documents for MIE and OE projects, and OMB 300s, if applicable. | SC-AD | |

✓ Done

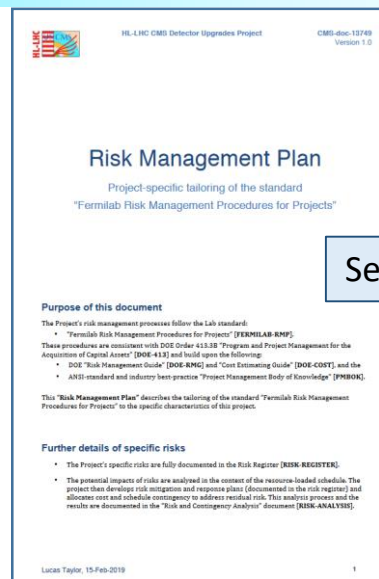
✓ Done

- FPD: Robert Caradonna
- Deputy FPD: Alan Harris
- IPT Membership discussed within the pPEP ([CMS-doc-13092](#))

Checklist from 413.3B for CD-1 approval

Charge #7

| TOTAL PROJECT COST (TPC) | | Less than \$400M to \$100M |
|---|---|---------------------------------------|
| DECISION / REQUIREMENTS ¹ / APPROVAL ² | | |
| CD-1--APPROVE ALTERNATIVE SELECTION AND COST RANGE | | SC-1 |
| PRIOR TO CD-1--CONCEPTUAL DESIGN | Approve Acquisition Strategy | Reviewed by SC-28 Approved by SC-2 |
| | Approve Preliminary Project Execution Plan (PEP) | Reviewed by SC-28 Approved by SC-2 |
| | Appointment of the Federal Project Director (FPD) | SC-1 |
| | Approve Integrated Project Team (IPT) | SC-2 |
| | Develop a Risk Management Plan | Project |
| | Comply with the One-for-One Building Space Replacement | Project |
| | Complete a Conceptual Design | Project |
| | Document High Perf. & Sustainable Bldg. & Sustainable Env. Stewardship considerations | Project |
| | Conduct a Conceptual Design Review | Team external to project |
| | Complete a Conceptual Design Report | Project |
| | Prepare a Preliminary Hazard Analysis Report | Site Office or Lab |
| | Develop and Implement an Integrated Safety Management Plan | Site Office or Lab |
| | Establish Preliminary Quality Assurance Program (QAP) | Site Office or Lab |
| | Identify general Safeguards and Security requirements for the recommended alternative | Site Office or Lab |
| Complete National Environmental Policy Act (NEPA) Strategy by issuing a determination (i.e., EIS, EA) | Site Office or Lab | |
| Conduct Independent Project Review or External Independent Review | ICE or ICR by APM with SC-28 | |
| Update PDS, or other funding documents for MIE and OE projects, and OMB 300s, if applicable. | SC-AD | |



See also talk by L. Taylor – P09

- Risk Management Plan: [CMS-doc-13749](#)
- We follow the Fermilab Risk Management Procedures for Projects subject to 413.3B: [PPP-doc-65](#)
- Risk Register(DOE): [CMS-doc-13480](#) , which is the input for the document below
- Risk and Contingency Analysis (DOE): [CMS-doc-13481](#)



Checklist from 413.3B for CD-1 approval

Charge #7

| TOTAL PROJECT COST (TPC) | | Less than \$400M to \$100M |
|---|---|---------------------------------------|
| DECISION / REQUIREMENTS ¹ / APPROVAL ² | | |
| CD-1--APPROVE ALTERNATIVE SELECTION AND COST RANGE | | SC-1 |
| PRIOR TO CD-1--CONCEPTUAL DESIGN | Approve Acquisition Strategy | Reviewed by SC-28 Approved by SC-2 |
| | Approve Preliminary Project Execution Plan (PEP) | Reviewed by SC-28 Approved by SC-2 |
| | Appointment of the Federal Project Director (FPD) | SC-1 |
| | Approve Integrated Project Team (IPT) | SC-2 |
| | Develop a Risk Management Plan | Project |
| | Comply with the One-for-One Building Space Replacement | N/A Project |
| | Complete a Conceptual Design | Project |
| | Document High Perf. & Sustainable Bldg. & Sustainable Env. Stewardship considerations | N/A Project |
| | Conduct a Conceptual Design Review | Team external to project |
| | Complete a Conceptual Design Report | Project |
| | Prepare a Preliminary Hazard Analysis Report | Site Office or Lab |
| | Develop and Implement an Integrated Safety Management Plan | Site Office or Lab |
| | Establish Preliminary Quality Assurance Program (QAP) | Site Office or Lab |
| | Identify general Safeguards and Security requirements for the recommended alternative | Site Office or Lab |
| Complete National Environmental Policy Act (NEPA) Strategy by issuing a determination (i.e., EIS, EA) | Site Office or Lab | |
| Conduct Independent Project Review or External Independent Review | ICE or ICR by APM with SC-28 | |
| Update PDS, or other funding documents for MIE and OE projects, and OMB 300s, if applicable. | SC-AD | |

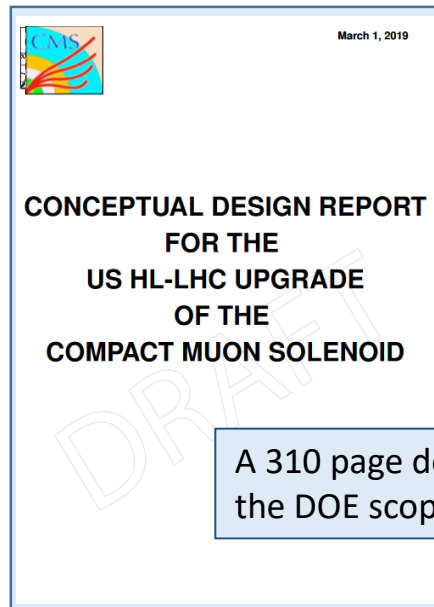
Held technical reviews of the conceptual design for all L2 subprojects: [Outer Tracker CMS-doc-13406](#), [Endcap Calorimeter CMS-doc-13464](#), [Trigger/DAQ CMS-doc-13410](#), [MIP Timing Detector CMS-doc-13698](#))



Checklist from 413.3B for CD-1 approval

Charge #7

| TOTAL PROJECT COST (TPC) | | Less than \$400M to \$100M |
|---|---|---------------------------------------|
| DECISION / REQUIREMENTS ¹ / APPROVAL ² | | |
| CD-1--APPROVE ALTERNATIVE SELECTION AND COST RANGE | | SC-1 |
| PRIOR TO CD-1--CONCEPTUAL DESIGN | Approve Acquisition Strategy | Reviewed by SC-28 Approved by SC-2 |
| | Approve Preliminary Project Execution Plan (PEP) | Reviewed by SC-28 Approved by SC-2 |
| | Appointment of the Federal Project Director (FPD) | SC-1 |
| | Approve Integrated Project Team (IPT) | SC-2 |
| | Develop a Risk Management Plan | Project |
| | Comply with the One-for-One Building Space Replacement | Project |
| | Complete a Conceptual Design | Project |
| | Document High Perf. & Sustainable Bldg. & Sustainable Env. Stewardship considerations | Project |
| | Conduct a Conceptual Design Review | Team external to project |
| | Complete a Conceptual Design Report | Project |
| | Prepare a Preliminary Hazard Analysis Report | Site Office or Lab |
| | Develop and Implement an Integrated Safety Management Plan | Site Office or Lab |
| | Establish Preliminary Quality Assurance Program (QAP) | Site Office or Lab |
| | Identify general Safeguards and Security requirements for the recommended alternative | Site Office or Lab |
| Complete National Environmental Policy Act (NEPA) Strategy by issuing a determination (i.e., EIS, EA) | Site Office or Lab | |
| Conduct Independent Project Review or External Independent Review | ICE or ICR by APM with SC-28 | |
| Update PDS, or other funding documents for MIE and OE projects, and OMB 300s, if applicable. | SC-AD | |



A 310 page document covering the DOE scope of the Project

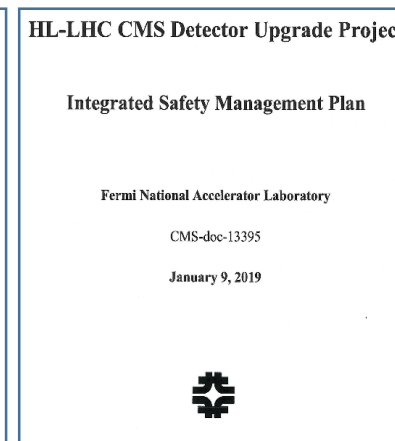
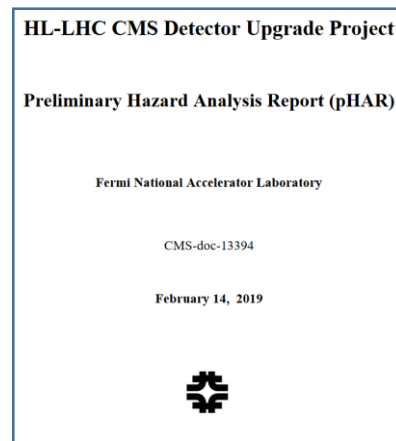
Conceptual Design Report:
[CMS-doc-13151](#)



Checklist from 413.3B for CD-1 approval

Charge #7

| TOTAL PROJECT COST (TPC) | | Less than \$400M to \$100M |
|---|---|---------------------------------------|
| DECISION / REQUIREMENTS ¹ / APPROVAL ² | | |
| CD-1--APPROVE ALTERNATIVE SELECTION AND COST RANGE | | SC-1 |
| PRIOR TO CD-1--CONCEPTUAL DESIGN | Approve Acquisition Strategy | Reviewed by SC-28 Approved by SC-2 |
| | Approve Preliminary Project Execution Plan (PEP) | Reviewed by SC-28 Approved by SC-2 |
| | Appointment of the Federal Project Director (FPD) | SC-1 |
| | Approve Integrated Project Team (IPT) | SC-2 |
| | Develop a Risk Management Plan | Project |
| | Comply with the One-for-One Building Space Replacement | Project |
| | Complete a Conceptual Design | Project |
| | Document High Perf. & Sustainable Bldg. & Sustainable Env. Stewardship considerations | Project |
| | Conduct a Conceptual Design Review | Team external to project |
| | Complete a Conceptual Design Report | Project |
| | Prepare a Preliminary Hazard Analysis Report | Site Office or Lab |
| | Develop and Implement an Integrated Safety Management Plan | Site Office or Lab |
| | Establish Preliminary Quality Assurance Program (QAP) | Site Office or Lab |
| | Identify general Safeguards and Security requirements for the recommended alternative | Site Office or Lab |
| Complete National Environmental Policy Act (NEPA) Strategy by issuing a determination (i.e., EIS, EA) | Site Office or Lab | |
| Conduct Independent Project Review or External Independent Review | ICE or ICR by APM with SC-28 | |
| Update PDS, or other funding documents for MIE and OE projects, and OMB 300s, if applicable. | SC-AD | |



pHAR complete, reviewed, approved ([CMS-doc-13394](#))


ISM complete, reviewed, approved ([ICMS-doc-13395](#))

See also talk by T. J. Sarlina – PM B02

Checklist from 413.3B for CD-1 approval

Charge #7

| TOTAL PROJECT COST (TPC) | | Less than \$400M to \$100M |
|---|---|---------------------------------------|
| DECISION / REQUIREMENTS ¹ / APPROVAL ² | | |
| CD-1--APPROVE ALTERNATIVE SELECTION AND COST RANGE | | SC-1 |
| PRIOR TO CD-1--CONCEPTUAL DESIGN | Approve Acquisition Strategy | Reviewed by SC-28 Approved by SC-2 |
| | Approve Preliminary Project Execution Plan (PEP) | Reviewed by SC-28 Approved by SC-2 |
| | Appointment of the Federal Project Director (FPD) | SC-1 |
| | Approve Integrated Project Team (IPT) | SC-2 |
| | Develop a Risk Management Plan | Project |
| | Comply with the One-for-One Building Space Replacement | Project |
| | Complete a Conceptual Design | Project |
| | Document High Perf. & Sustainable Bldg. & Sustainable Env. Stewardship considerations | Project |
| | Conduct a Conceptual Design Review | Team external to project |
| | Complete a Conceptual Design Report | Project |
| | Prepare a Preliminary Hazard Analysis Report | Site Office or Lab |
| | Develop and Implement an Integrated Safety Management Plan | Site Office or Lab |
| | Establish Preliminary Quality Assurance Program (QAP) | Site Office or Lab |
| | Identify general Safeguards and Security requirements for the recommended alternative | Site Office or Lab |
| Complete National Environmental Policy Act (NEPA) Strategy by issuing a determination (i.e., EIS, EA) | Site Office or Lab | |
| Conduct Independent Project Review or External Independent Review | ICE or ICR by APM with SC-28 | |
| Update PDS, or other funding documents for MIE and OE projects, and OMB 300s, if applicable. | SC-AD | |



CMS-doc-13093

Quality Assurance Plan for the U.S. CMS HL-LHC Project

Revision 5.1
January 15, 2019

CMS-doc-13093


Quality Assurance Plan complete, reviewed, approved ([CMS-doc-13093](#))

See also talks by T. J. Sarlina – PM B05 & C. Wilkinson – PM B06

Checklist from 413.3B for CD-1 approval

Charge #7

| TOTAL PROJECT COST (TPC) | | Less than \$400M to \$100M |
|--|---|---------------------------------------|
| DECISION / REQUIREMENTS ¹ / APPROVAL ² | | |
| CD-1--APPROVE ALTERNATIVE SELECTION AND COST RANGE | | SC-1 |
| PRIOR TO CD-1--CONCEPTUAL DESIGN | Approve Acquisition Strategy | Reviewed by SC-28 Approved by SC-2 |
| | Approve Preliminary Project Execution Plan (PEP) | Reviewed by SC-28 Approved by SC-2 |
| | Appointment of the Federal Project Director (FPD) | SC-1 |
| | Approve Integrated Project Team (IPT) | SC-2 |
| | Develop a Risk Management Plan | Project |
| | Comply with the One-for-One Building Space Replacement | Project |
| | Complete a Conceptual Design | Project |
| | Document High Perf. & Sustainable Bldg. & Sustainable Env. Stewardship considerations | Project |
| | Conduct a Conceptual Design Review | Team external to project |
| | Complete a Conceptual Design Report | Project |
| | Prepare a Preliminary Hazard Analysis Report | Site Office or Lab |
| | Develop and Implement an Integrated Safety Management Plan | Site Office or Lab |
| | Establish Preliminary Quality Assurance Program (QAP) | Site Office or Lab |
| | Identify general Safeguards and Security requirements for the recommended alternative | Site Office or Lab |
| | Complete National Environmental Policy Act (NEPA) Strategy by issuing a determination (i.e., EIS, EA) | Site Office or Lab |
| Conduct Independent Project Review or External Independent Review | ICE or ICR by APM with SC-28 | |
| Update PDS, or other funding documents for MIE and OE projects, and OMB 300s, if applicable. | SC-AD | |



CMS-doc-13755

Security Vulnerability Assessment Report
for the U.S. CMS HL-LHC Project

March 5, 2019

Security Vulnerability Assessment Report complete, reviewed, approved ([CMS-doc-13755](#))



Checklist from 413.3B for CD-1 approval

Charge #7

| TOTAL PROJECT COST (TPC) | | Less than \$400M to \$100M |
|--|---|---------------------------------------|
| DECISION / REQUIREMENTS ¹ / APPROVAL ² | | |
| CD-1--APPROVE ALTERNATIVE SELECTION AND COST RANGE | | SC-1 |
| PRIOR TO CD-1--CONCEPTUAL DESIGN | Approve Acquisition Strategy | Reviewed by SC-28 Approved by SC-2 |
| | Approve Preliminary Project Execution Plan (PEP) | Reviewed by SC-28 Approved by SC-2 |
| | Appointment of the Federal Project Director (FPD) | SC-1 |
| | Approve Integrated Project Team (IPT) | SC-2 |
| | Develop a Risk Management Plan | Project |
| | Comply with the One-for-One Building Space Replacement | Project |
| | Complete a Conceptual Design | Project |
| | Document High Perf. & Sustainable Bldg. & Sustainable Env. Stewardship considerations | Project |
| | Conduct a Conceptual Design Review | Team external to project |
| | Complete a Conceptual Design Report | Project |
| | Prepare a Preliminary Hazard Analysis Report | Site Office or Lab |
| | Develop and Implement an Integrated Safety Management Plan | Site Office or Lab |
| | Establish Preliminary Quality Assurance Program (QAP) | Site Office or Lab |
| | Identify general Safeguards and Security requirements for the recommended alternative | Site Office or Lab |
| | Complete National Environmental Policy Act (NEPA) Strategy by issuing a determination (i.e., EIS, EA) | Site Office or Lab |
| Conduct Independent Project Review or External Independent Review | N/A ICE or ICR by APM with SC-28 | |
| Update PDS, or other funding documents for MIE and OE projects, and OMB 300s, if applicable. | SC-AD | |

National Environmental Policy Act (NEPA) review complete:
Categorical Exclusion issued on 01/12/2018
([CMS-doc-13483](#))



Responses to Review Recommendations

Related to Project Documentation

Charge #7

- See [CMS-doc-13604](#), Review Recommendations Tracking Document, which includes:
 - Answers to recommendations, comments, findings from the June 2018 IPR
 - Answers to recommendations from the November 2018 ESH&Q Review
 - Answers to recommendations from the November 2018 MTD Technical Review



Responses to the June 2018 IPR

Charge #7

- #24 (Management) – Review and revise required documentation to comply with the CD-1 minimum requirements ensuring that document control practices and revision control are properly applied throughout with approval or approval process defined and consistency in the project cost and schedule data.
 - All project documents have been reviewed/revised by the Project Office to ensure consistency.
 - Overlapping cost and schedule information in various project documents has been removed wherever possible to avoid inconsistencies; referencing other documents instead of repeating information (e.g. [CMS-doc-13723](#) on DOE cost and schedule assumptions).
 - A process has been established for owners and designated reviewers of documents to sign off on their documents using the CMS document database.



Responses to the June 2018 IPR

Charge #7

- #17 (Cost & Schedule) – Prior to seeking CD-1, work with DOE to define project funding profile guidance that supports the entire project scope, cost and schedule estimate, including Objective KPPs. **Update the Acquisition Strategy, Preliminary Project Execution Plan, and other relevant CD-1 documents to reflect this agreement.**
 - The Acquisition Strategy ([CMS-doc-13517](#)) and the Preliminary Project Execution Plan ([CMS-doc-13092](#)) have been updated by the Federal Project Director in collaboration with the Project.
 - All other relevant project documentation has been updated accordingly.

See also Plenary talks P02 and P09



Responses to the June 2018 IPR

Charge #7

- #18 (Cost & Schedule) – Prior to seeking CD-1, synchronize all documents to have consistency between project data points such as schedule dates, budget amounts, and WBS numbering.
 - All project documents have been reviewed/revise by the Project Office to ensure consistency. For example:
 - the “Cost Book” and the “Risk and Contingency Analysis” are up to date and have been verified to be mutually consistent
 - the project data information within the Acquisition Strategy and the Preliminary Project Execution Plan has been verified to be the same
 - Overlaps in documents have been removed wherever possible to avoid inconsistencies; referencing other documents instead of repeating information (e.g. [CMS-doc-13723](#) on DOE cost and schedule assumptions).
 - A formal sign-off of project documents has been instigated by using electronic signatures within the CMS document database.



Additional controlled documents

| Document Type | CMS Document # | Status |
|-------------------------------------|-------------------------------|--------------------|
| Project Management Plan | CMS-doc-13104 | In signing process |
| Procurement Management Plan | CMS-doc-13267 | approved |
| Systems Engineering Management Plan | CMS-doc-13194 | approved |
| Key Assumptions | CMS-doc-12919 | approved |
| Configuration Management Plan | CMS-doc-12907 | approved |
| Codes and Standards | CMS-doc-13717 | approved |



Summary

- All required project documents for CD-1 are in place, and at the appropriate level for this stage of the Project.
- Have addressed all relevant Review recommendations.
- We are ready to proceed to CD-1.