



NOvA Working Group Meeting

February 15, 2006

2:00 – 4:00 PM

Snake Pit

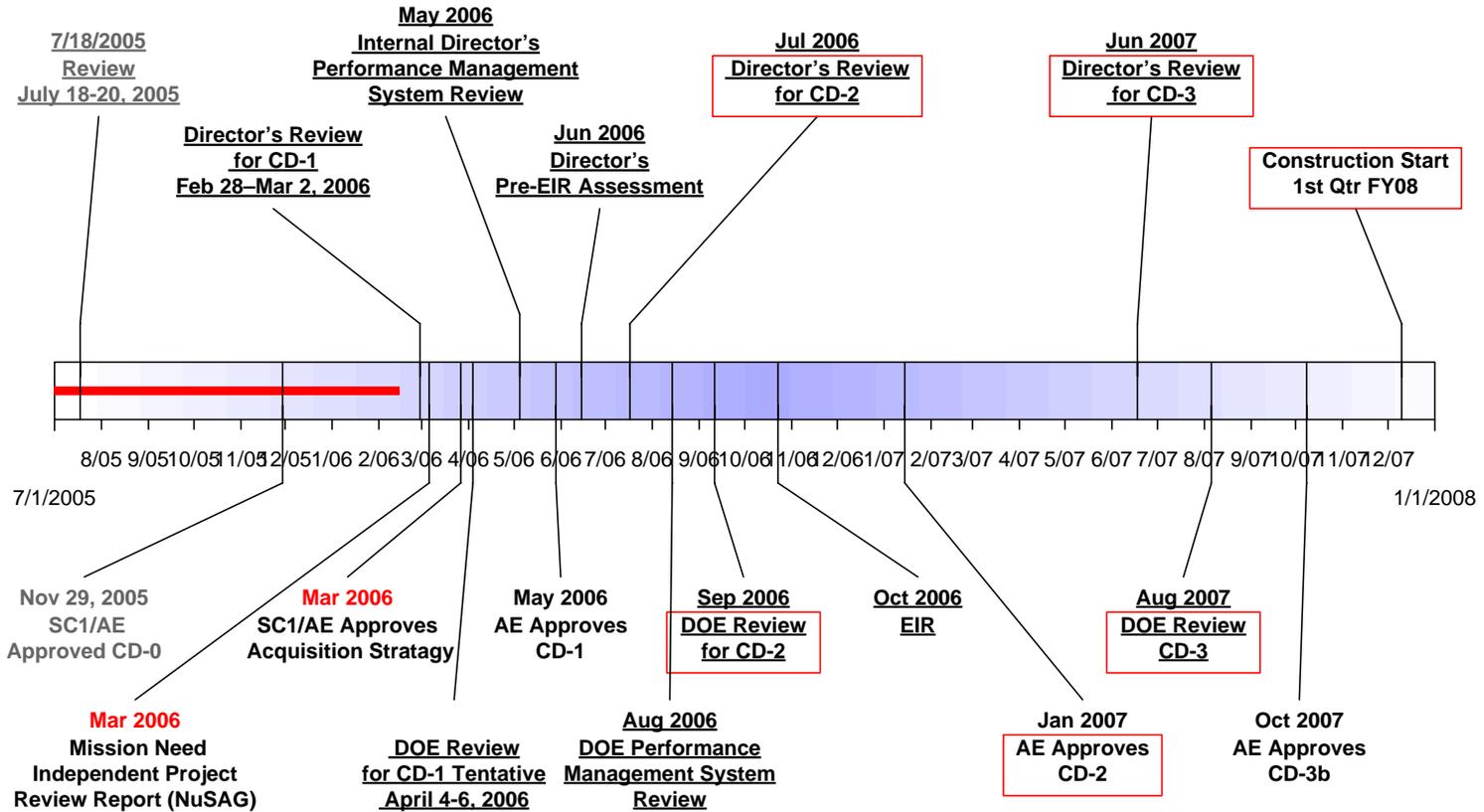
Agenda

- 1) Feedback on interchanges between the Directorate and OHEP [Mont]
 - a) FY07 Budget Update; PED Funding; (PED) Data Sheet for Design
 - b) Update on Building Strategy; Who Builds; Who Owns
- 2) Review NOvA Timeline [Ed Temple]
- 3) NOvA Progress Report and Status on Preparation of Project Documents [John Cooper/Ron Ray]
- 4) Status Overall Environmental Assessment Activities [Keith Schuh/John Cooper]
- 5) Design-Build Discussion [John Cooper/ Mike Procario]
- 6) Discuss CD-1 Director's Review [Ed Temple/John Cooper/All]
 - a) Preparations by NOvA Team
 - b) Charge
 - c) Agenda
 - d) Reviewers
 - e) Review Webpage
 - f) Approach to Cost Estimate and Cost Range
- 7) Status of Action Items [John Cooper]



DRAFT NOvA Project Timeline for Critical Decisions & Reviews

Updated 14-Feb-06



Note:
Text in Red indicates change from prior version



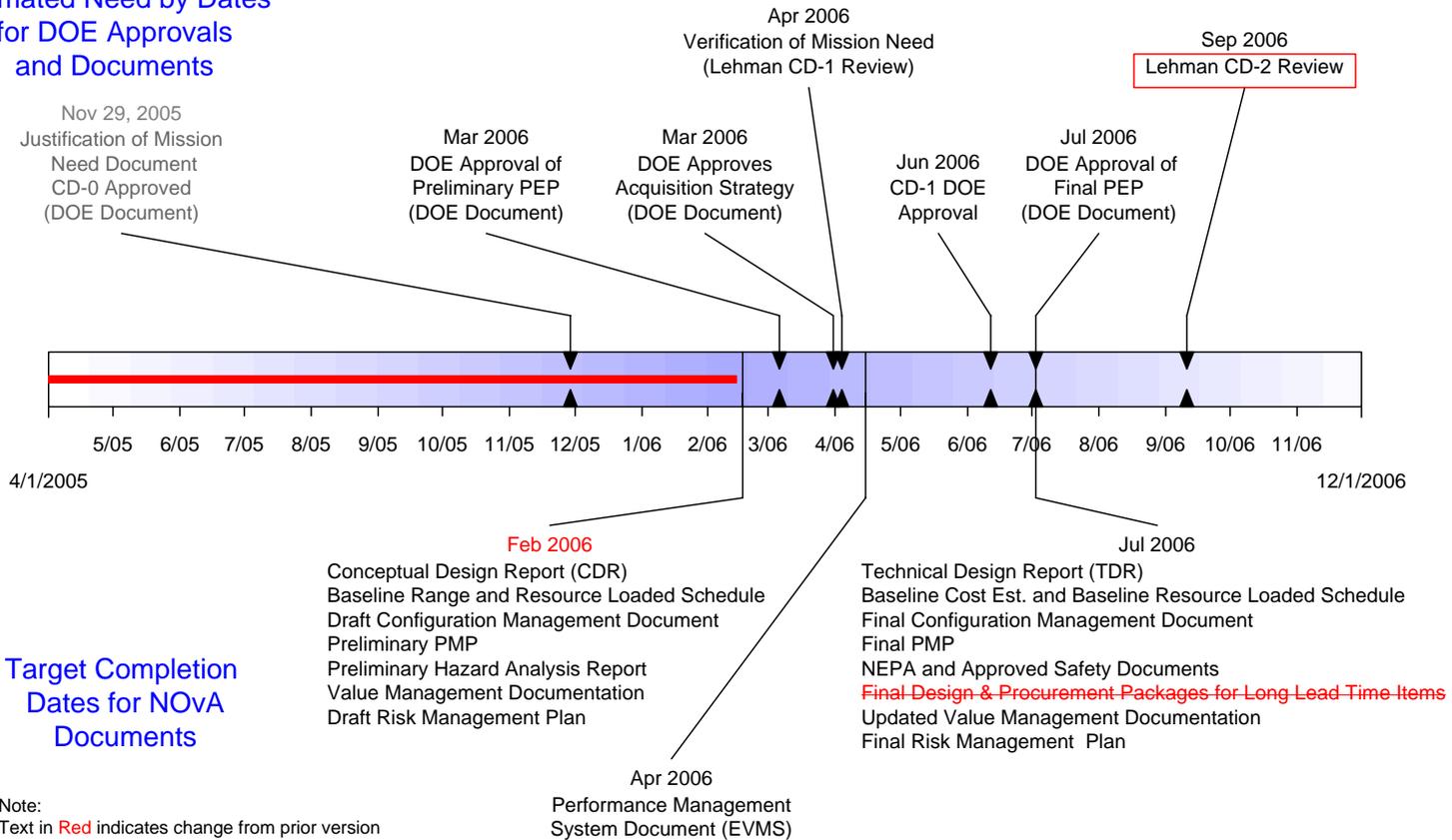
NOvA Project

Draft Critical Design Prerequisites

Updated 14-Feb-06



Estimated Need by Dates for DOE Approvals and Documents



New Draft CD-1 Review Charge

This charge is for the Committee to conduct a Director's CD-1 Review of the proposed NOvA project at Fermilab. The review is to assess the project's efforts at meeting the requirements for DOE to approve CD-1. CD-1 is defined as "Approve Alternative Selection and Cost Range". As part of this assessment the questions listed in Attachment 1 of this charge should be addressed. Additionally the committee is to review and comment on Project's response and actions taken on the recommendations from the Director's Preliminary Review of NOvA on July 18-20, 2005. Constructive comments on presentation content, format, and style are also requested.

Approval of CD-1 by DOE officials is based on a Conceptual Design documented in Conceptual Design Report (CDR) for the project. A preliminary baseline range for the cost, schedule and scope are to be defined at this point in the project. Some additional documents that support the CD-1 determination are a Preliminary Project Execution Plan (PEP), a Preliminary Project Management Plan (PMP) and the Preliminary Hazard Analysis report. The technical part of the review will focus on the conceptual designs for the Detector and Building/Site. It will answer the questions, will these designs meet the requirements and specifications and are the designs sound. The cost, schedule and scope ranges are usually based on an initial set of documentation such as the following: WBS – Work Breakdown Structure, WBS Dictionary, BOE – Basis of Estimate documentation, risk and contingency analyses, RLS – Resource Loaded Schedule, and time phased funding and cost profiles. The committee is asked to review each of these items, for quality, completeness, and accuracy. Furthermore, the committee is asked to review and assess the quality of and comment on the additional formal project management documentation required for CD-1 approval.

New Draft CD-1 Review Charge (continued)

Fermilab and NOvA are planning for CD-3 approval to allow construction to start the first quarter of FY2008. To achieve this goal NOvA will need a DOE CD-2 Review by the fall of 2006. To advance the development of NOvA's Preliminary & Final Design effort and Value Management activities, PED (Project Engineering and Design) Funds are being requested to start in FY2007. ~~Additionally, LLP (Long Lead Procurement) Funds may be pursued for significant activities that impact the critical path.~~ Therefore, the committee is asked to comment as appropriate on NOvA's status regarding readiness "plans for utilizing PED Funding." Again, appropriate constructive comments on what remains to be done are requested.

Finally, the committee should present findings, comments, and conclusions at a closeout meeting with NOvA's and Fermilab's management and provide a written report soon after the review.

New Draft CD-1 Review Charge (continued)

Technical

- Are the requirements that form the basis for the design and engineering phase of the project clearly documented?
- Does the conceptual design satisfy the performance requirements?
- Has a Conceptual Design Report (CDR) been developed that includes a clear and concise description of the alternatives analyzed, the basis for the alternative selected, how the alternative meets the approved mission need?
- Has the Project employed value management as early as possible in the project development and design process so recommendations can be included in the planning and implemented without delaying the progress of the project or causing significant rework of completed designs?
- Has the Project identified specific standards which include codes, standards, regulations, and needed discipline (electrical, mechanical, nuclear, fire, radiation control, etc.) requirements to procure, fabricate, construct, inspect, and test the components, subsystems, and systems?
- Can the conceptual design be built? Does the design meet the technical specifications? Is it a reasonable design?

New Draft CD-1 Review Charge (continued)

Cost

- Does the conceptual design report and supporting documentation adequately justify the stated cost range and project duration?
- Has the project developed a life-cycle cost estimate that includes costs for research and development, construction, operations and decommissioning.?
- Do the cost estimates for each WBS (or cost) element have a sound documented basis and are they reasonable?
- Does an obligation profile exist?
- Has the project established a realistic cost estimate for the work associated with performing Preliminary Design, Final Design and Value Management activities to request an appropriate level of PED (Project Engineering and Design) Funds?

New Draft CD-1 Review Charge (continued)

Schedule

- Does the Project's Work Breakdown Structure (WBS) define the total scope of the project as a product-oriented family tree composed of hardware, software, services, data, facilities and other components?
- Is a schedule developed and resource loaded?
- Are the activity durations reasonable for the assumed resources?
- Is the schedule duration feasible for the resources assigned to accomplish the tasks?
- Does the schedule contain appropriate levels of milestones, sufficient quantity of milestones for tracking progress and do they appear to be achievable?
- Does the schedule include activities for design reviews, which include assessment of the designs readiness for procuring prototypes and preproduction materials?
- Has the activities associated with the Preliminary Design, Final Design and Value Management activities been appropriated identified in the schedule so they can be properly tracked if PED funds are used?

New Draft CD-1 Review Charge (continued)

Management

- Is there an appropriate management organization structure in place with the responsibilities defined and documented for the scope of work?
- Does the proposed project team have adequate management experience, design skills, and laboratory support to produce a credible technical, cost, and schedule baseline?
- Are ES&H aspects being properly addressed and are future plans sufficient given the project's current stage of development?
- Is the documentation required by DOE O 413.3 in order and ready for Approval of CD-1?
- Are there adequate staffing resources available or planned for this effort?
- Is there a funding plan available or proposed to meet the resource requirements to realize the project?
- Has Risk Management been performed which includes risks assessments on each potential design alternative as a factor in selecting which alternative is to be pursued?

Draft Review Agenda

Tuesday, Feb. 18

8:00 – 8:45 AM	45	Executive Session (Comitium, WH2SE)	Ed Temple
9:00 – 9:10 AM	10	Introduction (1 West for all Talks)	Hugh Montgomery
9:10 – 9:25 AM	15	Scientific Performance Requirements	Gary Feldman or Mark Messier
9:25 – 10:10 AM	45	Project Overview	John Cooper
10:10 – 10:40 AM	30	Project Cost Drivers	Ron Ray, Bob Cibic
10:40 – 10:55 AM	15	BREAK	
10:55 – 11:20 AM	25	Site and Building	Steve Dixon
11:20 – 11:50 AM	30	Scintillator	Stuart Mufson
11:50 – 12:05 PM	15	Fiber	Carl Bromberg
12:05 – 1:05 PM	60	LUNCH (WH2 Crossover)	
1:05 – 1:25 PM	20	PVC and Extrusions	Rich Talaga
1:25 – 1:55 PM	30	Extrusion Modules	Ken Heller
1:55 – 2:25 PM	30	Electronics and DAQ	Leon Mualem
2:25 – 3:10 PM	45	Near/Far Detector Assembly	Dave Ayres
3:10 – 3:25 PM	15	BREAK	

Draft Review Agenda (continued)

- 3:25 – 4:25 PM 60 BREAKOUT SESSIONS
- 1) Site and Building (Blackhole – WH2NW)
 - 2) Commodities - Scintillator, Fiber, PVC (1 North, WH1NW)
 - 3) Extrusion Module Production (Snakepit, WH2NE)
 - 4) Electronics and DAQ (Racetrack, WH7X)
 - 5) Far and Near Detector Assembly (1 East, WH1NE)
- 4:30 – 6:00 PM Executive Session (Comitium, WH2SE)

Draft Review Agenda (continued)

Wednesday, Mar. 1

8:00 – 8:30 AM	Cost and Schedule Executive Session (Comitium, WH2SE)	Ed Temple
8:30 – 10:30 AM	BREAKOUT SESSIONS 1) <u>Site and Building</u> (Blackhole – WH2NW) 2) <u>Commodities - Scintillator, Fiber, PVC</u> (1 North, WH1NW) 3) <u>Extrusion Module Production</u> (Snakepit, WH2NE) 4) <u>Electronics and DAQ</u> (Racetrack, WH7X) 5) <u>Far and Near Detector Assembly</u> (1 East, WH1NE) 6) <u>Management, Cost and Schedule</u> (Comitium, WH2SE)	
10:30 – 10:45 AM	BREAK (Outside Comitium, WH2SE)	
10:45 – 12:30 PM	BREAKOUT SESSIONS (Continued)	

Draft Review Agenda (continued)

12:30 – 1:30 PM	LUNCH (WH2 Crossover)
1:30 – 2:30 PM	NOvA Respond to Committee Questions from 1 st Day (Comitium, WH2SE)
2:30 – 4:00 PM	Executive Session (Comitium, WH2SE)
4:00 – 6:00 PM	Report Writing (Comitium, WH2SE)

Thursday, Mar. 2

9:00 – 2:00 PM	Closeout Dry Run with working lunch (Comitium, WH2SE)
2:00 PM	Closeout (1 West, WH1SW)

Review Team

- Karen Hellman
- Elaine McCluskey
- Linda Stutte
- Barry Miller
- Dmitri Denisov
- Heidi Schellman
- Jonathan Lewis
- Erik Gottschalk
- Richard Boyce
- Charlie Cooper
- Bill Boroski
- Mike Lindgren
- Dean Hoffer
- Ed Temple

Action Items

Carryover from Prior Meeting

- a) Understand Limitations on “Design Build” Chapter 16. [Mike Procario]
- b) Status EAW Contractor’s completion of final report for both sites. [Steve Dixon]
- c) Follow-up on request for space required for NOvA operations to be performed at Fermi Lab i.e. Liquid Scintillator Blending and early assembly prototype. [John Cooper]

New

- d) Revise Agenda and provide Breakout Sessions in afternoon for CD-1 Directors Review also reduce total amount of time for talks. [John Cooper]