



Fermilab

MINERvA Working Group Meeting

November 01 2005

1:00 – 2:30 PM

One East

Agenda

- 1) Feedback on interchanges between the Directorate and OHEP [Mont]
- 2) Discuss MINERvA Timeline[Ed]
- 3) Risk Management Presentation [Dean]
- 4) Status of Planning & Budgeting for infrastructure items installation in March shutdown (drip ceiling, MINOS PS & water skid) [Nancy]
- 5) Discuss Draft Review Charge, Potential Reviewers and Draft Agenda [Ed and All]
- 6) Status of development of MINERvA WBS and Resource Loaded Schedule [Debbie]
- 7) Present and discuss updated CD-1DOE Documentation (PMP, PEP, Acquisition Strategy) [Dave and All]
- 8) Status of Open Action Items from 12-October meeting:

From: [Kevin McFarland](#)
To: [Greg Bock](#)
Cc: [Deborah Harris](#) ; [Nancy Grossman](#) ; [James Strait](#) ; [L. Edward Temple](#) ; [Gina Rameika](#) ;
[Hugh Montgomery](#)
Sent: Monday, October 17, 2005 9:15 AM
Subject: Re: Minerva CD0 progress update

Hello Greg,

Thanks for the update and the heads up on the CD1 documentation.

> Mike, looking ahead, noted that one of the CD1 requirements is a
> consideration of alternatives. There aren't any good alternatives to the
> NuMI beam, so he is comfortable there. What he would like is an
> understanding of what alternatives for the detector you have considered.

> If you have anything all set it would be nice to send it. Mike thought it
> would be nice to chat with you, Kevin, about it as well. He will be in
> the office next week.

We don't have anything in the can on this, although I don't think it involves any new work. I'll take the lead on getting this document together, and I'll find out from Mike when he'd like to have it.

I assume the path for the document should be collaboration -> MINERvA working group (presumably the Oct 26th meeting if there is time) -> Procario, correct?

Best,
Kevin

From: [Hugh Montgomery](#)
To: ['John Peoples'](#) ; brenna@fnal.gov ; etemple@fnal.gov
Cc: ['Hugh Montgomery'](#) ; ['James Strait'](#) ; ['Greg Bock'](#)
Sent: Tuesday, October 18, 2005 6:15 PM
Subject: FW: DES CD-1

John, Brenna, Ed,

I failed to have a conversation with both Aesook and Mike, but did talk with Mike and got the attached e-mail follow up.

I believe this means we have to put together the appropriate package of documentation CDR etc, and send it off up the line.

We then should discuss from the point of view of the project, the need to do (or not) a Director's CD1 Review.

Such a move has a few positives:

- it might enhance OHEP confidence in the package.
- it is often a valuable opportunity for the project to get its feet wet in reviewing.

This is input to our project preparation planning.

Mont

From: Procario, Michael [<mailto:Michael.Procario@science.doe.gov>]
Sent: Tuesday, October 18, 2005 4:21 PM
To: 'Hugh Montgomery'
Subject: DES CD-1

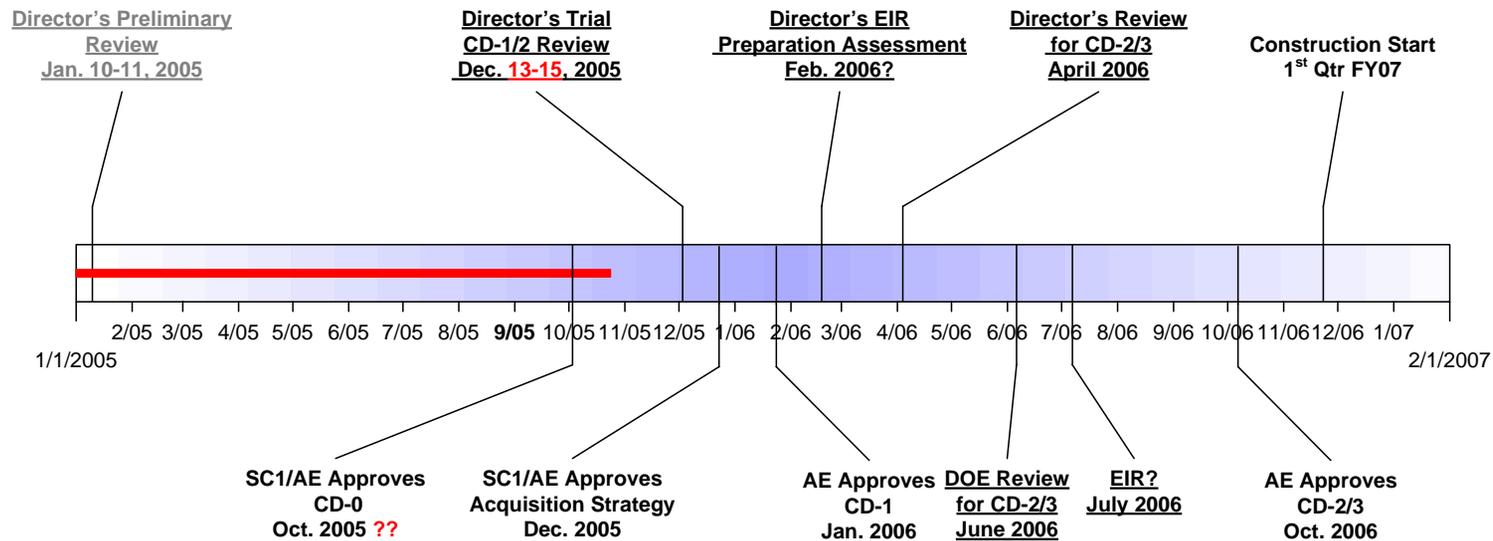
I spoke to Aesook about DES and CD-1. Calling for a CD-1 review is at our discretion, but we do not plan to do Lehman CD-1 reviews for projects at the \$20 million level. It looks like we will be concentrating on \$100 million and up for now. Of course there will be paperwork required for CD-1 as we discussed.

Mike



DRAFT MINERvA Project Timeline for Critical Decisions & Reviews

Updated 24-Oct-05



Note:
Items marked in Red indicates change from prior version



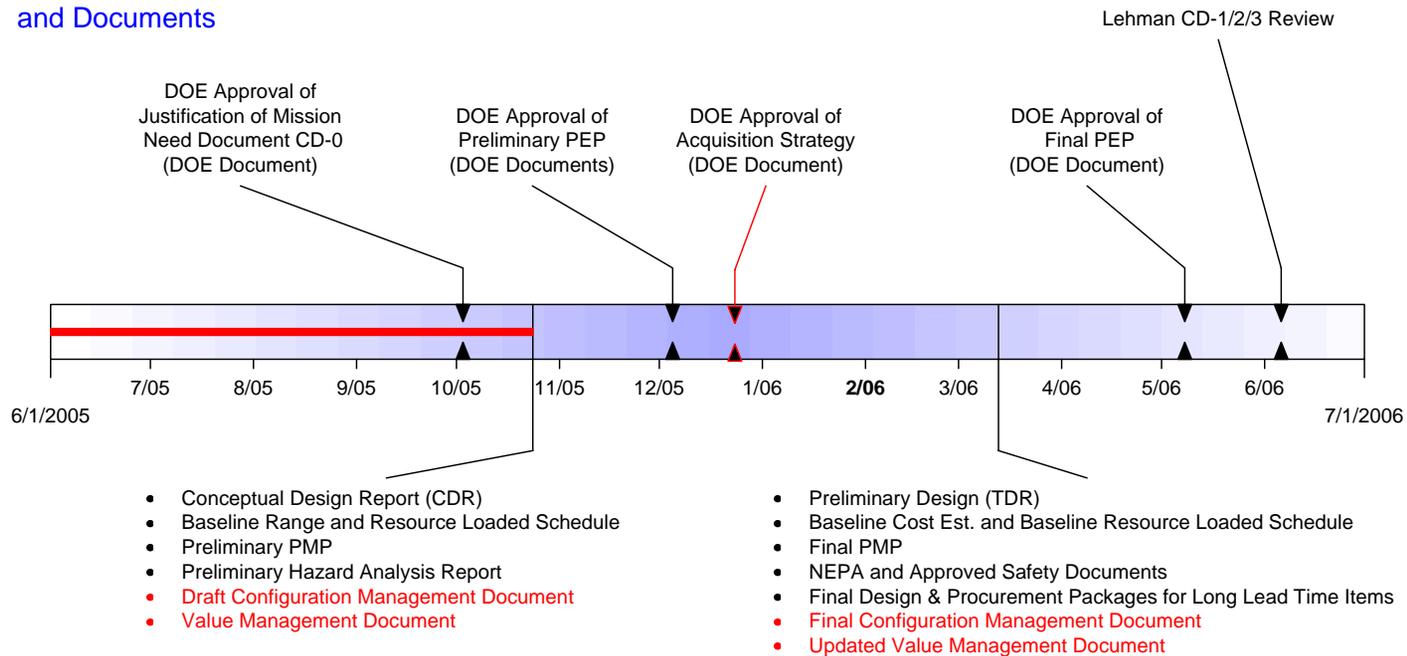
MINERvA Project

Draft Critical Design Prerequisites

Updated 15-Sep-05



Estimated Need by Dates for DOE Approvals and Documents



Target Completion Dates for MINERvA Documents

Note:
Items marked in Red indicates change from prior version

Draft Review Charge

This charge is for the Committee to conduct a Director's CD-1 / Trial CD-2 Review of the proposed MINERvA project at Fermilab. The review is to assure that all the requirements have been met for DOE to approve CD-1 and to assess and comment on the level of readiness of the project to meet the CD-2 requirements. As part of this assessment the questions listed in Attachment 1 of this charge should be addressed. Additionally the review committee is to review and comment on Project's response and actions taken on the recommendations from the Director's Preliminary Review of MINERvA on January 10-11, 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* for the project, a *cost and schedule baseline range*, and some additional project management documents. The technical part of the review will focus on the conceptual designs for the Detector. It will answer the questions, **will these designs meet the requirements and specifications and are the designs sound.** *The cost and schedule ranges are usually based on a detailed 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.*

Fermilab and MINERvA are planning for CD-2/3 approval and begin construction in the first quarter of FY2007. To achieve this goal MINERvA will need a DOE CD-2/3 Review in the summer of 2006. Therefore, the committee is asked to *comment as appropriate on MINERvA's status regarding readiness to "establish a baseline budget."* 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 MINERvA's and Fermilab's management and provide a written report soon after the review

Draft Review Charge (cont.)

Technical

- Are the physics requirements clearly stated and documented?
- Have these physics requirements been translated into technical performance requirements / specifications?
- Have alternative designs been considered and reasons for selecting one alternative over another documented and deemed reasonable?
- Can the design be built? Does the design meet the technical specifications? Is it a reasonable design?

Cost

- Is the Work Breakdown Structure (WBS) appropriate for the project scope?
- Do the cost estimates for each WBS (or cost) element have a sound documented basis and are they reasonable?
- Does an obligation profile exist?

Schedule

- Is the schedule well 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, preproduction and production materials?

Draft Review Charge (cont.)

Management

- Is there an appropriate management organizational structure in place to accomplish the design and construction?
- Is the organization structure well documented, responsibilities defined and appropriate for the scope of work?
- 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 a Risk Assessment been performed, mitigations identified, actions taken and do they seem appropriate?

Potential Reviewers

MINERvA Suggestions

- Frederico Sanchez Scibar (resident in Spain)
- Chris Walter Scibar also (Duke)
- Andrew Vandemuller/Steve Kuhlman Clear Fibers
- Carol Lang/Alfons Weber/Nathaniel Tagg PMT's
- Julie Whitmore/Hogan Nguyen Electronics
- Dave Pushka Steel & Infrastructure
- John Anderson ES&H and Electronics
- Martha Heflin/John Cassidy ES&H
- Don Geesaman/Jen-Chieh Peng (UIUC) Nuclear Physics Representative
- Mike Lindgren/Gina Rameika Management and General
- Greg Bock/Mike Crisler General and continuity from
January 2005 review committee
- Sacha Kopp General

Potential Reviewers

- Directorate's Jan. 2005 Preliminary Reviewers
 - Mike Andrews
 - Greg Bock
 - Alan Bross
 - Mike Crisler
 - Dean Hoffer
 - Marc Kaducak
 - Robert McKeown
 - Rich Stanek
 - Ed Temple

Draft Review Charge from MINERvA

Day 1

8:00-8:45 Executive Session
8:45-9:00 Introduction
9:00-9:30 Physics Requirements Overview
9:30-10:00 Detector Overview
10:00-10:45 Project Overview
10:45-11:00 BREAK
11:00-11:30 WBS 1: Scintillator Extrusions
11:30-12:00 WBS 2 & WBS 4: WLS Fiber and Clear Fiber Cables
12:00-12:30 WBS 3: Scintillator Plane Assembly
12:30-1:30 LUNCH
1:30-2:00 WBS 5: PMT Acquisition and Testing
2:00-2:30 WBS 6: PMT Boxes and Light Injection
2:30-2:45 BREAK
2:45-3:15 WBS 7: DAQ and Electronics
3:15-3:45 WBS 8: Outer Detector Frame, Absorbers, Stand
3:45-4:00 BREAK
4:00-4:30 WBS 9: Module Assembly
4:30-5:00 (WBS 11): Installation & Infrastructure
5:00-6:30 Executive Session
7:00 Dinner at Chez Leon

Draft Review Charge from MINERvA (cont.)

Day 2

8:00 - 12:00 Technical/Cost/Schedule/Management Breakout Sessions

- WBS 1, 2 & 4 Scint. & Fiber
- WBS 3, 8 & 9 Module/Plane, Detector Parts Assembly
- WBS 5, 6 & 7 PMT's, PMT Boxes and Electronics & DAQ
- Management/Cost/Schedule/ I&I

12:00-1:00 LUNCH

1:00-2:30 Continue Breakout Sessions

2:30-3:00 BREAK

3:00-4:30 Executive Session

4:30-6:00 Begin Writing Report

Day 3

8:00-11:00 Continue Writing Report

11:00-1:00 Dry Run of closeout (and working lunch)

1:00-2:00 Finish writing report

2:00-3:00 upload report sections

3:00-4:00 Closeout w/MINERvA and Fermilab Management

Action Items

NEW:

- a) Debbie, Nancy, Ron, Kevin, Jorge to work with Ed/Dean on setting up Director's review (draft charge, agenda, committee). (IN PROGRESS)
- b) Dave/Nancy/Debbie need to meet with Greg/Steve to discuss change control (WE MET WITH GREG AND ARE NEARLY READY TO TALK TO STEVE)
- c) Nancy to give comments to Dave on latest draft of PMP and PEP for the Project Team.(DONE)
- d) Project should check MSP more closely to clearly get all I&I tasks into WBS 11 and also look to see which of these tasks could be done with FNAL labor just as well as University labor. (NOTE DONE)
- e) TJ to look at MINERvA monthly report template and see how he might change it for quarterly DOE reports. Check with Steve Webster. Do we have internal monthly reports and then DOE Quarterly reports? Perhaps the format is the same for both (if it is not too hard)?
- f) Dave Boehnlein will draft a strawperson "Acquisition Plan" up for MINERvA by the next meeting. (IN PROGRESS)
- g) Dean will address "Risk identification, quantification and mitigation" at the next meeting.
- h) NOVA has a draft configuration control document that Ed will send us in about a week.
- i) PM to look to set up a system to communicate changes to important documents under change control to managers. (TO DO, CAN DOCDB DO ANY OF THIS?)

OLD:

- j) PM to discuss with Steve W. what type of cost reporting/reporting we need to do once we have CD-0. (SEE ITEM E ALSO)