

LBNE Reconfiguration Engineering/Cost Working Group 6th Meeting

May 18, 2012

Present Committee Members:

- Jim Strait, FNAL (deputy chair)
- Bruce Baller, FNAL
- Mike Headley, SURF
- Elaine McCluskey, FNAL
- Christopher Mauger, LANL
- Vaia Papadimitriou, FNAL
- Bob O'Sullivan, FNAL
- Tracy Lundin, FNAL

Present Invitees:

- Jeff Dolph, BNL (LBNE Systems Engineer) - today's secretary
- Joel Sefcovic, FNAL (LBNE project controls for CF)
- Jim Stewart, BNL (LBNE (former) WCD project manager)

Other Invitees:

- Tim Wyman, FNAL (LBNE Near Site CF)
- Mike Dinnon, FNAL
- Milind Diwan, BNL

Draft Agenda:

News, Report writing (Jim Strait)

Brief reports on status of cost estimating - 5 (FIVE) minutes each

- Far Detector (Bruce)

- Beam (Vaia)

- Near Detector (Christopher)
- Conventional Facilities (Tracy and Elaine)
- Current Summary (Jim)

Meeting:

The following link is to this meeting event. It contains references and details of presented material: <http://lbne2-docdb.fnal.gov:8080/cgi-bin/DisplayMeeting?conferenceid=500>

1. Jim Strait – Refers to web site listed above. Eli states \$750M is a soft limit. Does the Steering Committee know of this “soft limit”? Unknown, but likely heard the same thing. EC meeting yesterday – beam and underground detector at Homestake was consensus. Collaboration would argue this in SC with its members. CERN open meeting on neutrino strategy European strategies are all over the map with no general consensus on the future of their HEP neutrino program. LAGUNA confidence level is conflicting among key individuals. Invite CERN to Aspen PAC? Coordination was made. Invitation was made and Carlo Rubio accepted Jim’s invitation to full participation in LBNE. Larger LAr detector at Grand Sasso, was it discussed? Yes, Andre Rubio presented and baseline length was debated. A little progress was made toward European collaboration.
2. Report writing – Jim Strait
 - a. docdb#5968 is the first draft as posted on 5/18/12
 - b. reading through draft
 - c. emphasis on quality/maturity of engineering designs
 - d. Conventional Facilities should probably be broken out from Tech Systems because of differing philosophy of cost development.
 - e. Stage 1 plus Stage 2 costs more than if all was done in one stage is understood by all. Stage 2 costs will be less refined than our developed Stage 1 costs.

- f. Physics WG does not reflect staging scenarios and SC has not provided guidance on staging scenarios
- g. Emphasis on references because text should be only ten pages and details in the references
- h. References should be made only as “available on request”
- i. Reference design cost estimate and base cost estimate and scope changes need to be described
- j. L2’s to write their own sections
- k. Assignments made and new draft outline posted to 5968

3. 5 minute reports from subprojects

- a. Bruce – surface storage tank changes is extent of recent changes adding refrigeration on surface, further developed tank estimate from another project FLAIR, linear fit of scaling, contingency remains 50%. Photon detection system is re-introduced. Milind – write-up needed about surface detector viability. Milind will ask Steven to write. Christopher, same topic, will find someone to write ND part of this.
- b. Vaia – in 5949 are files that are up-to-date. Identification of scenarios for NuMI horns for LBNE Homestake. Risks have been identified and committee and readers should need to read and understand the risks. Jim to make an estimate on risk contingency based on the risks discussed
- c. Tracy – summary of last couple of days in Minneapolis to correct flawed cost models for headframe and shafts for Soudan. Significant cost reductions have been made to the Soudan model; in process of cleaning up sheets for Soudan 5kt and 17kt at-depth scenarios. 33kt scenarios in development, but the priorities are in question and will be evaluated when going through Jim’s summary. Joel’s last day is Thursday and Bob taking over. Document posted for re-scoping is described. Homestake costs at 5969

d. Christopher – last week options for other than were all or nothing there were six options. Ash River option ND was not feasible; however, on axis ND is viable. The 3 LBNE options have costs that have been adjusted over the past week. Six year durations have been used. Real costs for the gas targets are now available. Concerns for changes required to NuMI hall to fit in LAr ND and Straw Tube Tracker which would require a strip of hall plus additional excavation. There are plates installed over existing sumps to allow rigging larger component installations down the MINOS shaft. CF estimates have not been posted yet, but should be posted today.

4. Quick review of Jim's cost spreadsheet