

**Charge for Director's Preliminary Review  
of  
Fermilab's Super NuMI (SNUMI) Plan  
November 14-16, 2006**

Fermilab has prepared a "Super NuMI" (SNUMI) Plan for upgrading the proton accelerator complex in support of our neutrino-based research program following the cessation of Tevatron operations at the end of this decade. The goal for the SNUMI era is the delivery of at least 1 MW beam power onto the neutrino production target, based on effective utilization of accelerator facilities that will become available after the end of collider Run II.

The primary purpose of this Director's Review is to establish a preliminary baseline for Phase I of the plan (aimed at 700 kW), and to establish a viable strategy for Phase II (aimed beyond 1 MW). Within this context the committee will be asked to assess all aspects of the SNUMI Plan: technical performance goals and implementation strategy, cost estimate, schedule, and management structure.

The Phase I of the SNUMI effort is considered a "campaign" in the sense of the Run II Luminosity Upgrade and Proton Plan campaigns. That is the Phase I of SNUMI is not a "project" in the formal sense of a DOE project. However, selected project management techniques will be used in managing the campaign.

Phase II maybe considered a "project" in the formal sense of a DOE project. It is recognized that this review is being conducted at a very early stage of Phase II of the SNUMI project, thus it is a "preliminary" review and material presented will not be developed to the level of sophistication or detail of a more mature project.

As part of this assessment the questions listed in Attachment 1 of this charge should be addressed. The Director's Review Committee is asked to present findings, comments, and recommendations in a closeout session with the SNUMI team, AD Management, and Fermilab Management at the end of the review and in a written report soon thereafter.

Charge for the Director's Preliminary Review of the SNUMI Plan  
Attachment 1

Phase I Questions:

Technical

- Are the physics requirements that SNUMI addresses appropriately stated?
- Have these physics requirements been translated into accelerator technical performance requirements / specifications?
- Are the design features of the defined elements of SNUMI documented in a Conceptual Design Report, Design Handbook, or other appropriate manner?
- Are the prototype plans and decision paths appropriate for the less well-developed elements?
- Do the elements of SNUMI address the performance requirements / specifications? Are the designs of these elements reasonable?

Cost

- Has a Work Breakdown Structure (WBS) been developed?
- Do the cost estimates for each WBS element have a sound basis and are they reasonable?

Schedule

- Is there a schedule for the project?
- Are the activity durations reasonable for the assumed resources?
- Has the schedule been "resource loaded?"
- Has the schedule been developed with contingency or slack included?
- For the less well-developed technical elements have decision milestones been included in the schedule?

Management

- Is there an appropriate management organizational structure in place or proposed to accomplish the design and construction?
- Have responsibilities been assigned or have they been proposed?
- Is there a Project Management Plan outlining the organizational structure, summarizing the technical, cost and schedule (including milestones) baselines, and setting forth the change control procedures and reporting processes that will be used?
- 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 SNUMI?

Phase II Questions:

- Does the design concept for Phase II support the objective of delivering at least 1 MW beam power onto the neutrino production target?
- Is the strategy for Phase II viable and does it support the implementation of Phase II in the timeframe presented?