



**RESPONSE TO DOE TECHNICAL, COST,  
SCHEDULE, AND MANAGEMENT REVIEW  
of the EBIS PROJECT**

**July 25-27, 2005**



A DOE Technical, Cost, Schedule, and Management review of the EBIS Project was held at Brookhaven National Laboratory from July 25-27, 2005. The following gives responses to the review recommendations, updated as of March 20, 2006.

## **DOE Recommendations and Responses**

- Generate a detailed cost comparison between operation with Tandem Van de Graaff accelerators and the new EBIS-based pre-injector and submit to agencies by January 31, 2006.

**This cost comparison has been submitted to both DOE and NASA.**

- Assess the project schedule and cost to determine whether the prototype EBIS could be maintained as a test stand and as a source of hot spares.

**Several components procured for the prototype EBIS as part of the R&D will be used on the RHIC EBIS. (Primarily the electron collector and high voltage isolation transformers). If spares for these are procured in the future in support of operations, these spares can be used for occasional operation of the Test EBIS. In lieu of this, the Test EBIS can be operated at ground potential by reinstalling the original electron collector. This would be sufficient for most beam development activities.**

- Ensure the availability of the RF amplifier for the RFQ testing prior to the next annual review.

**Planning for this is in progress.**

- Integrate the Building 930 addition proposed by the laboratory into the project schedule with appropriate milestones.

**The tentative schedule for the building addition has been integrated into the EBIS project schedule. This will be updated as the detailed schedule for the addition is developed.**

- Perform an analysis to optimize the schedule, by considering:

- requesting that National Aeronautics and Space Administration (NASA) deduct the advanced Fiscal Year (FY) 2005 \$0.5 million from FY 2008 instead of FY 2006;

**Done. NASA has agreed.**

- accelerating the LINAC and dipole procurements by phase funding and

**This is still under consideration as the cost and schedule are being updated.**

- optimizing the contingency profile with respect to the planned obligation profile and in the context of project risks.

**This is still under consideration.**

- Track the DOE Project Engineering Design (PED) separately from DOE Construction funds.

**Done. Separate accounts for PED are now set up.**

- Work with the Nuclear Physics (NP) program office to ensure that the costing of scientists on the project is in-line with current practices.

Done.

- Increase the PED manpower in FY 2006 in order to improve the probability of succeeding with the CD-2 & 3 milestones in 4QFY 2006. This is not an increase in the Total Project Cost (TPC) but only a correction to the labor profile.

Done. Almost all PED is now planned to be completed in FY'06. This fits with the DOE funding for FY'06.

- Incorporate the agreed-upon CD-4 deliverables and performance specifications into the PPEP prior to CD-1 request.

Done.

- Strengthen project management, for example by better defining the roles and responsibilities (including those of the project integrator) and increased level of effort of key personnel.

The responsibilities of the "project integrator" have been defined. The level of effort for key management personnel will be increased in the updated cost estimate.

- Change the PPEP Baseline Change Control (BCC) table to address TPC.

Done.

- Implement DOE program guidance regarding management approach in project documentation.

Done. DOE and NASA scope and funding are separated in the appropriate documents, as per the DOE guidance.

- The project office, in coordination with the Federal Project Director (FPD), needs to proactively begin preparations for the External Independent Review (EIR) (point of reference: CFN EIR March 2004).

Done. The project office, working with the FPD, has developed a list of required documents, and a schedule for document preparation and review. The project office has also received guidance and reviewed EIR-related documents from FNPB and CFN.