

## Advanced Beamlines for Biological Investigations with X-rays (ABBIX) Project Quarterly Report – 4Q FY11

**DATE: submitted on 26 October 2011**

### 1. Project Schedule

Conceptual Design Review	Planned: 1Q FY12	Actual:
Preliminary Design Review, Baseline	Planned: 4Q FY12	Actual:
Final Design Review, Approve Construction	Planned: 2Q FY13	Actual:
Complete Integrated Testing Without Beam	Planned: 4Q FY15	Actual:
Complete Project Closeout	Planned: 3Q FY16	Actual:

#### Short term (3-month) schedule

- CDR document, associated cost range, schedule, and other required project documents
  - Final draft Planned: Aug. 31 Actual: Aug. 31
  - Distribution to Internal Review committee Planned: Nov. 4 Actual:
- LIX/AMX/FMX Advisory Committee meeting Planned: Oct. 20-21 Actual: Oct. 20-21
- Internal Conceptual Design Review Planned: Nov. 9 Actual:
- External Conceptual Design Review Planned: Nov. 29-30 Actual:

### 2. Technical Objectives: 3 beamlines installed and ready for commissioning with X-ray beam

#### Planned NIH beamlines

FMX – Frontier Macromolecular Crystallography at an Undulator Beamline

AMX – Flexible Access Macromolecular Crystallography at an Undulator Beamline

LIX – A High-brightness X-ray Scattering Instrument for Life Science Applications

### 3. Assumed Funding Profile

(\$M)	FY10	FY11	FY12	FY13	Total
IDs/FEs	12.0	0.0	0.0	0.0	12.0
Beamlines	0.0	23.4	5.5	4.1	33.0
Total	12.0	23.4	5.5	4.1	45.0

### 4. Progress:

- Draft beamline sections of the Conceptual Design Report, for FMX/AMX (jointly) and LIX, were completed by August 31
- MOUs between the BNL Photon Sciences Directorate and the BNL Biology Department covering project effort by interim beamline leaders for FMX (Bob Sweet) and AMX (Dieter Schneider) were completed in September 2011
- Permanent beamline leader (WBS Level 2 manager) positions, one for AMX/FMX and one for LIX, have been posted and applications are being received
- Project management activities in this quarter:
  - Project name determined: Advanced Beamlines for Biological Investigations with X-rays (ABBIX) Project
  - WBS structure extended to level four.
  - M&S cost estimates refined in the project Cost Estimate Database, based on vendor cost estimates and quotes wherever possible
  - Formulation of Project Management Plan

- Insertion devices:
  - Planned acquisition strategy for two IVU21 undulators, for AMX and FMX, is via exercising an option for additional units in the SRX (NSLS-II project beamline) undulator procurement, ongoing at end of FY11
  - Planned acquisition strategy for the IVU23 undulator for LIX is via joint procurement with the ISR (NEXT project beamline) undulator procurement, to begin in FY12
- AMX/FMX and LIX ad hoc beamline advisory committees have been formed and the first, tandem, meetings were held at BNL on Oct. 20-21, 2011.

#### **5. Issues and Risks:**

- Until permanent project scientific staff are hired, some of the effort for conceptual design and preparation of cost and schedule estimates will come from existing resources in the Photon Sciences Directorate. This might incur some negative impact on performance of NSLS operations in FY12.
- In order to support preliminary design efforts in FY12, a significant ramp up of qualified manpower for the NIH beamlines project is needed within the next 6 months.

#### **6. Action Items and Decisions:**

- Draft Conceptual Design Report and draft Project Management Plan to be submitted to internal Conceptual Design Review Committee by Nov. 4
- Interviews for the permanent beamline leader (WBS Level 2 manager) positions, one for AMX/FMX and one for LIX, need to be conducted in 1QFY12, with a goal of filling these positions by 2QFY12.
- Two engineering positions need to be opened soon, one for FMX/AMX and one for LIX.