

**Advanced Beamlines for Biological Investigations with X-rays (ABBIX) Project
Quarterly Report – 3Q/4Q FY12**

DATE: submitted on 12 October 2012

1. Project Schedule

Conceptual Design Review	Planned: 1Q FY12	Actual: Jan. 17-18, 2012
Status Review		Actual: Jun. 26-27, 2012
Internal Technical, Cost/Schedule Review of LLPs	Tentative: 2Q FY13	
Final Design Review, Approve Construction	Tentative: 3Q FY13	
Complete Integrated Testing Without Beam	Planned: 4Q FY15	Actual:
Complete Project Closeout	Planned: 3Q FY16	Actual:

Short term (3-month) schedule

• Internal Preliminary Design Review	Planned: May 29	Actual: May 31, 2012
• Status Review		Actual: Jun. 26-27, 2012

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

Planned NIH beamlines

AMX – Flexible Access and Highly Automated Beamline for Macromolecular Crystallography
 FMX – Frontier Macromolecular Crystallography at an Undulator Beamline
 LIX – High-brightness Beamline for X-ray Scattering for Life Sciences

Assumed Funding Profile

Funding (\$M) by Fiscal Year	FY10	FY11	FY12	FY13	FY14	FY15	Total (\$M)
NIH ARRA funding for IDs/FEs (\$M)	\$12.0						\$12.0
NIH funding for beamlines (\$M)		\$23.4	\$5.5	\$4.1			\$33.0
NSLS-II funding for Common Beamline Systems (\$M)		\$0.1	\$1.0	\$1.4	\$0.5		\$ 3.0
Total Project Cost (\$M)	\$12.0	\$23.5	\$6.5	\$5.5	\$0.5		\$48.0

Cost and Staffing Report

	Current Period (1 month)		Cumulative to Date	
	Planned*	Actual	Planned*	Actual
As of September 2012				
Cost (\$)	--	\$176,585	--	\$2,083,534
Staffing (FTE-year)	--	1.0	--	11.0

*Planned values will be included once the project baseline is established

3. Progress:

- Status Review held at BNL June 26-27, 2012
 - Chaired by Mohan Ramanathan (APS/ANL)
 - Recommendations
 - completion of preliminary design and refinement of cost and schedule by late fall 2012
 - buildup of the project team, especially in the technical area
 - procurement of the LIX IVU as soon as possible
 - proceed with LIX monochromator and KB mirrors

- plan to place orders for FMX/AMX photon delivery system by late fall 2012
- Insertion devices
 - FMX and AMX (17-ID): two 1.5m-long IVU21 undulators, canted by 2 mrad, selected for procurement via options for two additional units in the SRX (NSLS-II project beamline) undulator procurement, March 2012.
 - LIX insertion device (16-ID): one 2.8m-long IVU23, located in the center of the insertion device straight section. All procurement documents prepared, September 2012.
- Staffing
 - Permanent beamline leader (WBS Level 2 manager) positions
 - LIX position filled February 1, 2012 (Lin Yang)
 - FMX/AMX position filled May 15, 2012 (Dieter Schneider)
 - Beamline scientist (2nd scientist) positions
 - LIX 2nd scientist position posted July 5, 2012
 - Mechanical engineering positions
 - First position filled June 4, 2012 (Mike Lucas)
 - Second position filled, starting November 2012 (Dileep Bhogadi)
- Design review sequence
 - June 2012 Status Review
 - Serves as technical portion of Preliminary Design Review
 - Internal Cost & Schedule review, to be held early in 2QFY13
 - Release funds for Long Lead Procurements (LLPs) on the basis of this review and the June 2012 technical review
 - Final Design Review, to be held in 3QFY13
 - Approve all remaining procurements and construction

4. Issues and Risks

- Internal Technical, Cost/Schedule Review of LLPs needs to be held prior to planned award date of Photon Delivery System procurements
- ABBIX project staff need to complete final design and refine cost & schedule in fall 2012, while proceeding with preparation of technical documents for ABBIX procurements

5. Action Items

- Post 2nd scientist position for FMX/AMX by end of calendar 2012
- Complete FMX/AMX Photon Delivery System procurement documents by the 1st week of November 2012 and put the package out for bid in January 2013
- Complete EESE (hutch) procurement documents in 1QFY13, for award in 3QFY13.
 - Two procurement packages, one for lead hutches, one for steel hutches
 - Consider joint procurement of hutches with NEXT project, to realize potential cost savings
- Schedule and hold Final Design Review in 3QFY13
- ABBIX project reporting frequency will switch to monthly beginning with the October 2012 report, to be sent in early November