

Advanced Photon Source Upgrade Update

Jim Kerby

APS Users Monthly Meeting
26 September 2012

Long Lead Procurement Lehman Review Outcome

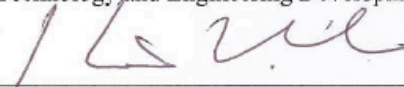
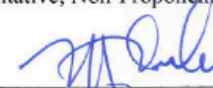
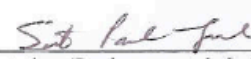
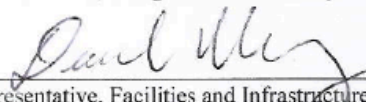
- Following the **August 16** Review, Lehman Committee recommended Long Lead Procurement for RIXS and ASL
- **August 30**: Energy Systems Acquisition Advisory Board met and approved Long Lead Procurement for RIXS and ASL
- What does this mean in practice:
 - Project has funds to proceed with procurement of the approved RIXS scope (FE components, enclosures, vacuum chambers and undulators) in FY12 and FY13
 - Per current funding profile the Project does NOT have funds to start with ASL in FY13. Should funds become available, the Project has DOE's concurrence to proceed



Advanced Photon Source Upgrade
At Argonne National Laboratory
CD-3A ESAAB – Equivalent Review

Recommendations:

The undersigned “Do Recommend” (Yes) or “Do Not Recommend” (No) approval of CD-3a, for the Technology and Engineering Development Facility as noted below.

 _____ ESAAB Secretariat, Office of Project Assessment	<u>8-30-12</u> Date	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
_____ Representative, Non-Proponent SC Program Office	_____ Date	Yes <input type="checkbox"/> No <input type="checkbox"/>
 _____ Representative, Office of Budget	<u>8-30-12</u> Date	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
 _____ Representative, Environmental, Safety and Health Division	<u>8-30-12</u> Date	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
_____ Representative, Safeguards and Security Division	_____ Date	Yes <input type="checkbox"/> No <input type="checkbox"/>
 _____ Representative, Facilities and Infrastructure Division	<u>8/30/12</u> Date	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Approval:

Based on the information presented above and at this review, Critical Decision-3A, Approve Long Lead Procurement, is approved and authorized to proceed with the procurements for RIXS and ASL. If additional FY13 MIE funds become available for ASL, the LLP is approved for the DOE FPD (with BES concurrence) to the limit of \$12.4M.



Hutch Enclosure
Procurement
Process will start
within a week



Director's CD-2 Review

- Dates: September 11-13, 2012
- Chair: Ed Temple
- Number of reviewers: 20
- Number of presentations: 42

Important Preparation for the DOE CD-2 Baseline Review in December AND a Laboratory Performance Measure for FY2012



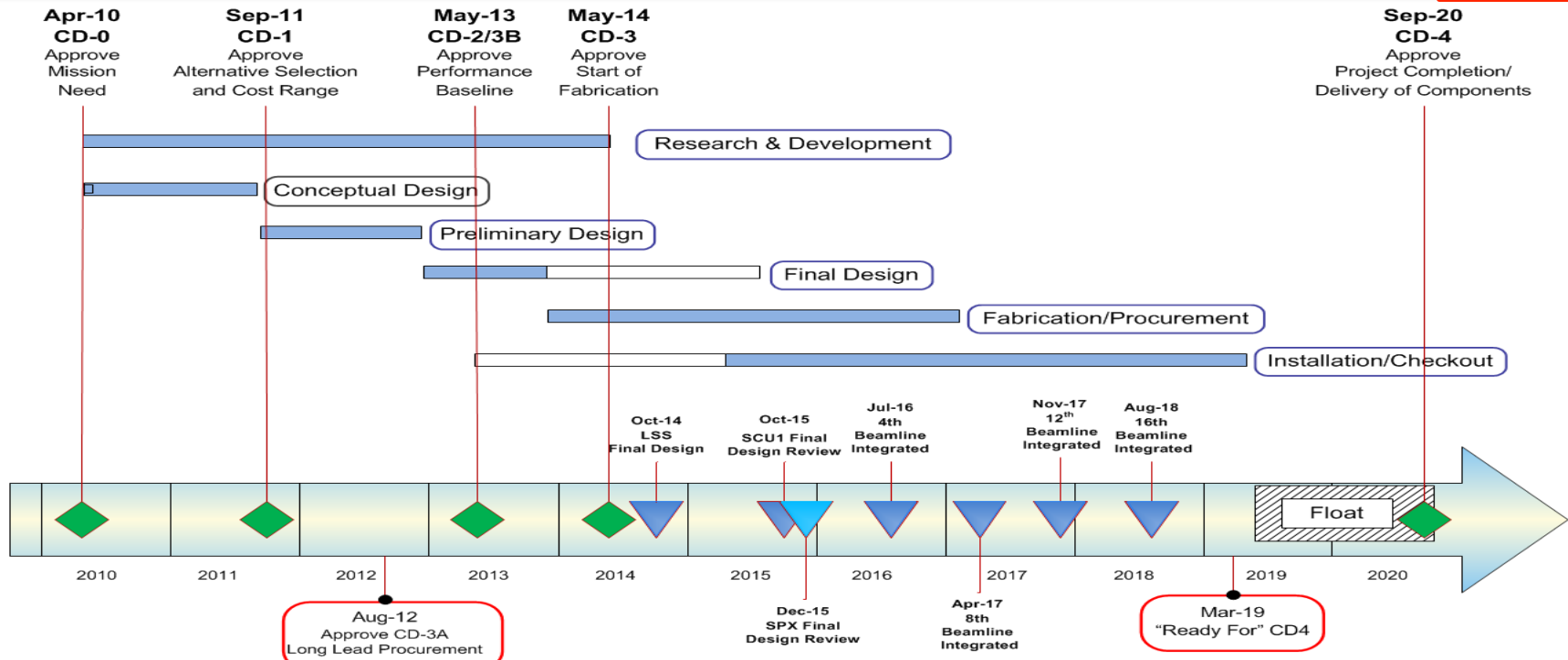
Director's CD-2 Review

Thank You!

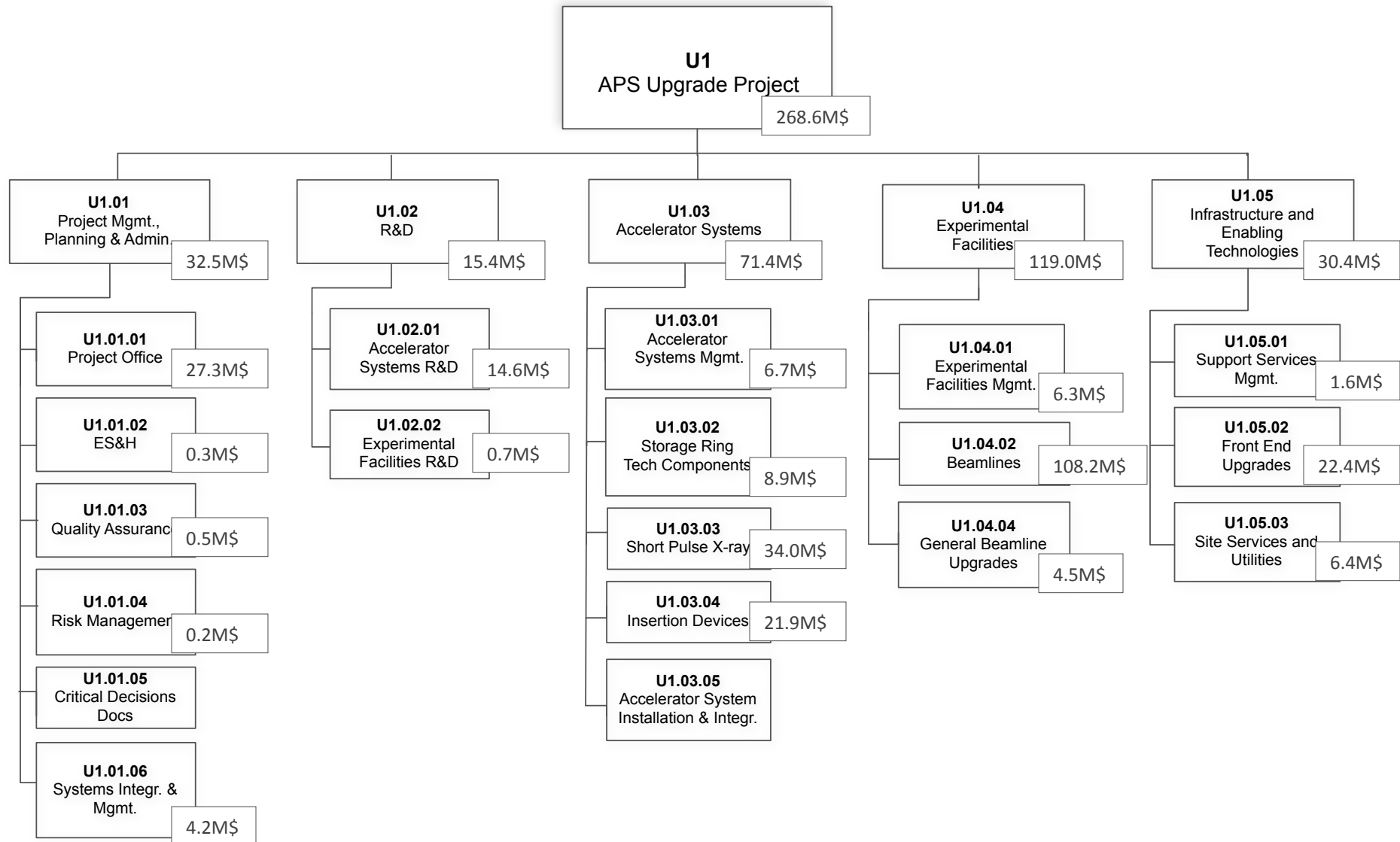


Funding Profile and Schedule Including LLP

	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	F19	FY20	Total
(OPC)	\$1M	\$7.5M										\$8.5M
(MIE)			\$20M	\$20M	\$38M	\$69.5M	\$103M	\$99M	\$33M			\$382.5M
Total Funding Profile	\$1M	\$7.5M	\$20M	\$20M	\$38M	\$69.5M	\$103M	\$99M	\$33M	\$0	\$0	\$391M



WBS Organization



APS Upgrade Scope

WBS 1.02/03: Accelerator and X-ray Source Upgrades

- Short Pulse X-rays (SPX) by transverse rf deflection
- Increased beam stability and 150 mA operation
- 2 Superconducting undulators
- 5 Revolver undulators
- 3 Planar undulators
- 3 Polarizing undulators
- 3 Long straight sections (8 m)

WBS 1.04: Experimental Facilities

- 8 New beamlines
- 6 Beamline upgrades
- 6 Beamline relocations
- High heat load upgrades to beamline optics

WBS 1.05: Infrastructure and Enabling Technologies

- 15 New front ends
- 7 Renovated front ends
- Physical infrastructure for Wide Field Imaging beamline
- Next generation beam position monitors



Charge to the Director's Review Committee

1. Project Scope: Is the project's scope and specifications sufficiently defined to support the established cost and schedule performance baseline? Is the preliminary design sound and likely to meet the technical performance requirements in the Mission Need Statement?
2. Cost and Schedule: Are the cost and schedule estimates, including life cycle costs, credible for this stage of the project to establish the project performance baseline; and do they include adequate scope, cost and schedule contingency?
3. ES&H/QA: Are the Environment, Safety & Health, and Quality Assurance requirements being properly addressed given the project's current stage of development?
4. Management: Is the project being properly managed at this stage? Does the project organization possess the leadership and staff with sufficient technical expertise and experience to successfully execute the proposed baseline?
5. Prerequisites: Have all of the prerequisite activities and documents necessary to support CD-2 approval been completed? Is the project ready for CD-2?
6. Recommendations: Have the recommendations from past reviews been appropriately addressed?



Executive Summary Recommendations

Management

- Recommendations
 - Focus on filling critical additional staffing needs
 - Perform the planned additional refinements to the proposed scope, cost, and schedule baseline (including processing the first two or three PCRs as planned) in preparation for the planned DOE CD-2 Review in December
 - Our overall assessment is that the Project team is on track for a successful CD-2 Review in December.

The Next 3 months

- Continue the ICE / ICR process
- FY13 Staffing Setup
- Continued scrubbing of all BOE information and plans
- EVMS utilization and reporting
- Consideration of Pending PCRs
- Continued refinement of Project Scope

L. ICE Schedule to Include Deliverable

Figure 2 – ICE Schedule

<u>Activity</u>	<u>Schedule</u>
<u>ICE Scope Contract Requirements Schedule:</u>	
On-site or teleconference project introductory/background meeting	27 Aug 12
Draft Estimating/Data Collection Plan (Inc est. method for each WBS element)	29 Aug 12
Draft Estimating/Data Collection Plan Review Comments (DOE APM & OPA)	31 Aug 12
Final Estimating Plan	5 Sep 12
Preliminary Design Documents/Drawings submittal due	10 Sep 12
- Conventional Facility (or like) portion of preliminary design	
Conventional Facility (CF) Kickoff Meeting w/ Contractor (ANL)	21 Sep 12
CF Preliminary Design ICE submittal	5 Oct 12
Site Provides Project Cost & Collection Plan Data	8 Oct 12
CF Preliminary Design Cost Estimate Reconciliation Meeting w/ Contractor (ANL)	15 Oct 12
Technical Systems Component Cost Review (ANL) w/ Contractor	16-18 Oct 12
Submit Draft ICE (CF with Technical component) Report	7 Nov 12
- Include Sensitivity and Risk Analysis	
Draft ICE Report Factual Accuracy Check (DOE APM, OPA, BES and FPD)	12-16 Nov 12
Factual Accuracy Comment Reconciliation (during OPA IPR at ANL)	4-6 Dec 12
ICE/ICR Review Comments Due	11 Dec 12
Submit Final ICE/ICR Report	14 Dec 12
Documentation CD/DVD with ICE/ICR electronic records	19 Dec 12

PCR #1 – RIXS (CD-3A)

PCR #2 – R&D Replan + Jlab (short term view)

PCR #3 – SPX Production Re-plan

PCR #4 – Detectors (Bradford)

PCR #5 – Nano Focusing Optics

PCR #6 – Experimental Facilities R&D

PCR #7 – Detector – S3DD

PCR #8 – 32ID High Speed Imaging Relocation

PCR #9 – Switchable canting on 1-ID

PCR #10 - Switchable canting 20-ID for WFI



Summary

- Thanks again for all your efforts leading to the success of the Director's Review

We are looking forward to similar success in December!

