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B61 System FY 2013 August Report

September 5, 2013

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LANL Program Status – August 2013

LANL B61 System August FY13

B61 Stockpile Systems Project Total

G

Technical Performance (Status against Milestones)

G

IHE Material Characterization/Modeling Activities: Material model selection and development of parameters for the engineering baseline are in progress. All IHE samples have been fabricated and delivered. Small-scale bucket tests and deflagration-to-detonation transition tests have been completed. Permeability tests are to be completed by the end of FY 2013. Funding shortfalls have paused all hot fragment impact and ratchet growth work. Requirements will be refined as the baseline model matures.

B61-7 Rebuild: All four replacement units now reside at Pantex. Note that as a result of the anomalous unit incident, there is a possibility of LANL sending another CSA for reacceptance.

JTA Modernization: DJTA1 test was completed at TRR. DJTA2 has been completed and shipped to SNL (test scheduled for October).

Surveillance: JTA 492 August test was successful; the unit was radiographed by LANL. 492 D&I has been pushed out to FY 2014.

G

Schedule

G

L2 milestones are on track and being supported to meet FY13 grading criteria. LANL monthly reports will contain LANL proposed milestones for FY14.

Completed	Blue
Scope/cost/schedule satisfactory	Green
Minor problem with scope/cost/schedule	Yellow
Significant problem with scope/cost/schedule	Red

G

Issues /Concerns (Yellow or Red Milestones or other concerns not related to milestone)

G

LANL is waiting on hardware from SNL; SNL states that there is no plan to conduct a hydro test in FY 2013 or FY 2014.

G

Six scheduled onionskin tests at Pantex have been carried over into FY 2014.

R

As a result of funding shortfalls, none of the four CSA D&Is planned at Y-12 will occur this FY. As a result, LANL is lacking surveillance data for Alt 357 CSAs.

LANL Program Status – August 2013

G	L2 Milestone (Status)
G	<p>4565 – Complete B61 Development Studies/Capability Improvements IAW Directive Documents for FY13 All Development Studies/Capability documents are lead by SNL.</p> <ul style="list-style-type: none"> Complete JTA Modernization (JTAM) project deliverables per JTAM Project Plan and High-Level Schedule. Hardware shipment deliverables to meet DJTA1 and DJTA2 hardware shipments from KCP to Pantex and SNL have been met. Other planned deliverables and PCD are on track.
G	<p>4566 – Complete B61 Weapon Maintenance Activities for Annual Assessment IAW Directive Documents All maintenance activities are on track.</p> <ul style="list-style-type: none"> Deliver parts necessary to complete other critical components exchanges IAW LLC PCD requirements—LANL PA. Complete all planned Mod 7 rebuild activities as defined in PCD—PCD has been revised to account for the impact of the Anomalous Unit (AU). Phase 1 of 2 AU walkdowns completed this July. (To meet rebuild quantity shortage, a Mod 7 repair unit requiring NES study is tentatively planned for September 2013.) Two of six Mod 7 rebuild units have been built. Provide support to NG replacement activities as required—LANL is planning to proceed with developing center-case assembly procedures. Fabrication activities are completed. SNL is reporting design issues and thus does not expect to have NGs ready to install until FY 2014. Issue the Annual Assessment Report and the Director's Annual Assessment Letter—POG review occurred on 05/17/2013, and SAGSAT briefing occurred on 06/05/2013. On track to complete by the end of this FY.
G	<p>4567– Complete B61 Weapon Surveillance Activities for IAW Directive Documents All weapon surveillance activities are on track.</p> <ul style="list-style-type: none"> Provide test support for JTAs 914—test completed February 2013—and 492—test completed August 2013. LANL support with radiography also completed. Complete D&Is on JTA 914—JTA 914 D&I scheduled September 2013; pending—possible tooling issue identified that may impact disassembly. Pantex requesting flexibility in schedule. More will be known by next month. (Note: NNSA is considering changing this grading criterion.) Complete all LANL component surveillance activities—LANL PA. Complete all SNL LCTP activities—Not a LANL activity; SNL only.

LANL Program Status – August 2013

G	L2 Milestone (Status) (cont.)
	<p>4569 – Provide NNSA Nuclear Bombs Division (or successor organization) with monthly program status reports for the B61 System.</p> <p>All reporting activities are on track.</p> <ul style="list-style-type: none"> ☐ Submit monthly report between the 5th and 10th working day of the following month. ☐ Report shall include a financial summary at the level of WIAL and SAL levels. ☐ Report shall provide a status on recent achievements and upcoming milestones. ☐ Report shall provide a site self assessment of the L2 milestones. ☐ Report shall be sent directly to the Nuclear Bombs Federal Program Manager and the B61 Program Engineer.
G	<p>4703 – Identify and complete continuous activities necessary for supporting current/future assessments for the B61.</p> <p>All continuous activities are on track.</p> <ul style="list-style-type: none"> ☐ Provide nuclear explosive package (NEP) surveillance information for FY 2015 cycle work to SNL by October 31, 2012, for inclusion in Weapon Cycle Selection letter—Completed. Cycle 115 selections chosen and communicated to SNL via e-mail. Final notice of selection was delivered to SNL on November 15, 2012. ☐ Issue Cycle Selection surveillance information (identifying requirements for all system- and component-level assessments) via BC document to PAs and NNSA by July 2013 for all cycles starting in FY 2014—BC1K0144 document has been released. ☐ Continue development of Primary and Secondary baseline models—LANL Physics. Completed; briefing to LANL Director in July 2013. ☐ Document in an LA report constitutive equations and proposed implementation plan to support the IHE modeling efforts—Ongoing; on track to complete by close of FY 12013. ☐ Update relevant documents needed to ensure timely fielding of the Mod 3 and Mod 11 gas fills. (H1616 Authorization, Table of Life, Top-Level System Drawings)—Completed; shipment to military expected in calendar year 2014.

LANL Program Status – August 2013

Performance Objective: Nuclear Weapons Mission (PO-1)

Performance Objectives	PO-1	<u>Contributing Factors</u> (PO1) Accomplish work within the budget profile, scope, cost, schedule, and risk negotiated with program sponsors and partners. (PO1) Execute product development and deliveries in the life extension programs.
	PO-1	<u>Site Specific Outcomes</u> (PO1) N/A
		<u>Very Good/Outstanding Accomplishments</u> <ul style="list-style-type: none"> • Completed Conceptual Gate Review (September 19, 2012). • Center bomb case thermal conditional experiments in the firing vessel complete at DARHT (October 2012). <ul style="list-style-type: none"> – Supports all B61 gas cavity hydros fired at STS temperature extremes. • Six PBX 9502 scaled bucket tests that mimic a WR configuration were fired to support abnormal thermal environment modeling (October 2012). • Completed B61-4 gas cavity hydro fire (ambient). • Completed Subsystems and Component Conceptual Design Gate (January 2013). • Time = 0 pit material cast at TA-55. • Supporting Anomalous Unit Project Team at Pantex. • Successfully completed B61-4 gas cavity hydro test at DARHT (thermal conditioned/hot) (July 2013).