

# Look back and glance ahead

Fulvia Pilat

LSD Resource Meeting

June 27 , 2012

# Glance back 2 weeks

## OPERATIONS

- **PEPPo** continued running 2 shift/day, will end Thursday June 28 (tunnel lock-ups going generally well)
- **Beam studies** will follow.
- We enter the shut-down proper as CEBAF will not run until the 12 GeV commissioning, to start in Fall 2013
- **Reduced MCC coverage** for C100 testing and FEL run

## ACCELERATOR

- EA **network survey** completed, NL work continues
- **Removal**

2R	magnets being removed
2S	ready for stand removal
1S	vacuum disconnects
1R	girders removed, all stands removed
First pass arc magnets removed	
- **Cryomodules**

2L22	starting cool-down
2L23	commissioning continues

# Glance back - continued

## HALLS

- De-installation work continues in **A, B** and **C**, installation in **D**
- S&A monuments completed in Hall D line to Tagger area

## FACILITIES /CIVIL

- Support of **evacuation of TestLab** and **move to TLA** (target end of this week...likely not happening, impact on Test Lab demo and resumption of SRF capabilities in cavity, cryomodule, and testing capabilities)
- 40MVA to 22MVA tie line - manhole pump out and conduit installation continues

## FEL

- Getting ready to get back to **operations** (RF testing yesterday)

# Schedule Progress

- Progress to the **end of May 2012** was analyzed
- Summary spreadsheet (Schedule Folder → Progress) on **activities** and **resources**

F	G	H	I	J	K	L	M	N	O	P	Q	
Float less than 22 days; activities planned to start per baseline but did not start (but if had float of >22 days --> no schedule impact)												
1.3.4 Beam Transport	1.3.5 Extraction	1.3.6 IC&S	1.5 Hall D	1.6.1.1.3 BSY (Civil)	1.23 Acc Maint	1.24.1 Hall A	1.24.2 Hall B	1.24.3 Hall C	1.26 Conventional Facilities (FML)		1.27 FEL	1.28 ESH&Q
on schedule or even early for removal activities	delay in some work, but plenty of float	on schedule or even early	delay in some work, but plenty of float	behind, but plenty of float	no issues	behind, but plenty of float	HDICe removal moved out a little - but no major impacts	Decommissioning and removal of QWeak (1.24.3.7) --> BUT need info from 12GeV Hall C as the float is relative to end of 6GeV Hall C De-installation work.	40MVA to 22MVA line looks good Headers and setting of tower - need to look at logic for header work.  CHL#1 cooling tower submittals behind  HVAC roof design one month behind but shortened construction duration to make up  Tunnel penetration design specs design but shortened procurement cycle & submittal review		Changes made in progress sheet for Admiral WBS - needs a CR to clean up because its delayed 2 months (but has float)	no issues





- It will be updated every month for each schedule progress cycle
- We discussed at last week LSD Thursday meeting
- Next progress will be collected at the end of **this week**
- First **CCB Meeting** tomorrow

## 8 weeks look ahead (30,000 miles)



- **CHL-1 warm up** begins August 1, ends Aug 15 (end of **C100 testing, FEL run**)
- **Test Lab** demolition
- Continuation of removal and installation in the **tunnel**
- Completion of **Arc 1 & 3** disconnects, magnets & girder removal
- Start Arc 1 & 3 **magnet rework**
- Continue work in **Hall D**, CLAS removal in **Hall B**
- Completion of G2P removal **Hall A**
- **Qweak** decommissioning and removal, **SOS** dipole removal complete



# June 2012 Events

	Date	Location	Event
	06/13/2012	Test Lab T-Trench area	Employee was using a drill to screw angled plastic strips backed with weather stripping to the tools in order to seal the gap between the cleanroom wall and the process tools. Employee was diagnosed with tennis elbow and placed on restricted duty.
	06/13/2012	Experimental Staging Building	Employee stated "While assisting with lowering a load, I adjusted the wooden cribbing for the load and received a splinter in my finger." Employee was diagnosed with a splinter to right index finger. The splinter was removed, the finger was cleansed and examined. Occupational Medicine then applied over the counter antibiotic ointment and band-aid. Employee has returned to work , regular duty.
	6/13/2012	Hall B	Employee reported frequent use of wire cutters has caused hand discomfort.
	06/14/2012	Behind the Test Lab Addition	Last Thursday morning a rupture disk on the LN2 tank outside of the Test Lab burst. No personnel were exposed. This tank valves were tested and both passed. As a precautionary measure, the valves and the disks are being replaced.

# June 2012 Events

	Date	Location	Event
	06/20/2012	Building 36	An unauthorized 208 volt, 30 Amp 4 wire cable with a male plug at one end and exposed wires (pigtail) at the other end, had been left plugged into a de-energized power source on the evening of June 19, 2012. Lock Tag & Try was not applied to power source before leaving for the evening. At approximately 10:00 am the following morning, an operator turned on the power supply, and the exposed wires arced and shorted, opening the breaker to the power supply and the electrical panel that fed it.
	06/20/2012	East ARC 2 Service Building #	Employee called to report that they were stung on his right elbow by a wasp. No treatment rendered and the employee returned to work regular duty.



# Cumulative Trauma

- Can result from repetitive exposure when there is lack of acclimatization to specific work activity
- Fatigue → Discomfort → Diffuse inflammation → Localized inflammation like tendonitis and/or tenosynovitis
- Early intervention is key:
  - Self-limitation
  - Job and task rotation
  - Right tools for task
  - Workplace ergonomic evaluation by Dr. Chandler
  - Report to OccMed signs of discomfort



# Shutdown Work Summary

**Organization:** 12GeV Beam Transport/Accel RSRSR

**Name:** Michael Bevins

**Date:** 6/27/12

## Last Two Weeks

---

### Work That Went Better Than Expected:

- East Recombiner (ER) pedestals, stands ceiling & floor plate removal
- West Spreader & West Recombiner dipole & girder removal
- East Spreader LCW & Vac disconnects
- Girder rebuild effort (ER 17 of 21 done, WS 5 of 15 done)
- ARC 1 dipoles removed, ARC 3 dipoles 1/3 removed
- Hall D alignment network monument installation
- East Extraction Vac disconnects
- East Recombiner magnet refurbishment(XN and XD completed)
- Measurements conducted on the first two ER dipoles (XN and XD).
- ARC 1 dipole refurbishment (two ready for measurement)

### Work That Went Slower Than Expected, Delays, and Issues:

- Dipole machining had a slow start... working through Rad controls
  - Containment device for 'machined chips' has been installed/ RadWkr II training sched for today

## Ongoing Shutdown Work

**Upcoming Work (3-6 weeks from now)** ( green = no concerns; yellow = some concerns; red = serious concerns)

Project	Status	On Schedule?	Tasks	Comments/Concerns
12GeV BT/RSRSR	X <span style="background-color: #d9ead3;"> </span> <span style="background-color: #fff2cc;"> </span> <span style="background-color: #f2dede;"> </span>	Ahead	S/R Removal	WR & Injection line removal, WS stand removal & ES dipole & girder removal
12GeV BT	<span style="background-color: #d9ead3;"> </span> x <span style="background-color: #fff2cc;"> </span> <span style="background-color: #f2dede;"> </span>	Yes	Magnet Rework	Getting Rad controls in place to machine the more activated magnets
12GeV BT	x <span style="background-color: #d9ead3;"> </span> <span style="background-color: #fff2cc;"> </span> <span style="background-color: #f2dede;"> </span>	Ahead	East 1&3 ARC Dipole Refurb	Fill work for magnet measurement
12GeV BT	x <span style="background-color: #d9ead3;"> </span> <span style="background-color: #fff2cc;"> </span> <span style="background-color: #f2dede;"> </span>	Yes	Girder Rebuilds	Complete ER and continue WS & WR rebuilds
12GeV BT	x <span style="background-color: #d9ead3;"> </span> <span style="background-color: #fff2cc;"> </span> <span style="background-color: #f2dede;"> </span>	Ahead	Hall D Shield Walls	Remove temp SEG wall in tagger, begin moveable wall installation

### New Work Requests Requiring Schedule Changes:

- None

### Significant Problems Pending (delays, technical issues, resource issues, scheduling):

- None

### Staffing Outlook:

- No issues

# Shutdown Work Summary

**Organization:** SRF

**Name:** John Hogan

**Date:** 27-June-2012

## Last Two Weeks

---

### Work That Went Better Than Expected:

- N/A

### Work That Went Slower Than Expected, Delays, and Issues:

- Commissioning SL22 delayed due to JT seal issue; Commissioning planned to be complete in July

## Ongoing Shutdown Work

---

**Upcoming Work (3-6 weeks from now)** ( green = no concerns; yellow = some concerns; red = serious concerns)

Project	Status	On Schedule?	Tasks	Comments/Concerns
Cryomodules	X <span style="background-color: #fff3cd;">yellow</span> <span style="background-color: #f8d7da;">red</span>		SL23 Commissioning	Finishing up
Cryomodules	X <span style="background-color: #fff3cd;">yellow</span> <span style="background-color: #f8d7da;">red</span>		SL22 CoolDown & Commissioning	
Cryomodules	X <span style="background-color: #fff3cd;">yellow</span> <span style="background-color: #f8d7da;">red</span>		Moving C100-07 into North Linac	Staged for install after cryo work
Cryomodules	X <span style="background-color: #fff3cd;">yellow</span> <span style="background-color: #f8d7da;">red</span>		Injector CM shuffle	Good coordination needed

### New Work Requests Requiring Schedule Changes:

- N/A

### Significant Problems Pending (delays, technical issues, resource issues, scheduling):

- N/A

### Staffing Outlook:

- Stable

# Shutdown Work Summary

**Organization:** Alignment

**Name:** Chris Curtis

**Date:** 27 June, 2012

## Last Two Weeks

---

### Work That Went Better Than / As Expected:

- Completed network tie between Tagger area and Hall D.
- Hall A sieve slit and dump as-found. Moller detector fiducialized.
- Hall D collimator fiducialized.
- Hall C target, BPM, region 2 chamber as-found started.
- Granite pier alignment in Test Lab Addition.

### Work That Went Slower Than Expected, Delays, and Issues:

- Accelerator network survey ongoing - slightly slower than expected.
- FEL Dark Light cube – requirements not fully understood.

## Ongoing Shutdown Work

---

**Upcoming Work (3-6 weeks from now)** ( green = no concerns; yellow = some concerns; red = serious concerns)

Project	Status	On Schedule?	Tasks	Comments/Concerns
12 Gev Accel	x <span style="background-color: #d4edda;"> </span> <span style="background-color: #fff3cd;"> </span> <span style="background-color: #f8d7da;"> </span>	Started 18 Jun	Full re-survey of all monuments in the accelerator.	Continuing.
Hall C – Q Weak	x <span style="background-color: #d4edda;"> </span> <span style="background-color: #fff3cd;"> </span> <span style="background-color: #f8d7da;"> </span>	Started 21 Jun	Target, tungsten plug, chamber as-found surveys	Started.
12 Gev S/R	x <span style="background-color: #d4edda;"> </span> <span style="background-color: #fff3cd;"> </span> <span style="background-color: #f8d7da;"> </span>	Later than sched.	Layout bolt locations of stands	Data being processed
12 Gev Arcs	x <span style="background-color: #d4edda;"> </span> <span style="background-color: #fff3cd;"> </span> <span style="background-color: #f8d7da;"> </span>	2 Jul	“Rough” alignment of west arc.	Final beamline positions received.
12 Gev Accel	x <span style="background-color: #d4edda;"> </span> <span style="background-color: #fff3cd;"> </span> <span style="background-color: #f8d7da;"> </span>	July?	R100 / OL04 cryomodule shuffle	Details and timing to be determined.

**New Work Requests Requiring Schedule Changes:**

- Test Lab Addition pier alignment. Hall B CTOF light guide inspections.

**Significant Problems Pending (delays, technical issues, resource issues, scheduling):**

- Busy period at the moment. Having to delay some work.

**Staffing Outlook:**

- OK.

# Shutdown Work Summary

**Organization: Safety Systems**

**Name: Henry Robertson**

**Date: 27 June, 2012**

## **Last Two Weeks**

---

### **Work**

- Test and verify the communication between CAEN powers supplies and EPICS
- Testing new Ion Chamber pulse counting method
- PSS BCM – procurements, fabrication, and assembly of chassis and PCBs
- N. Linac RF Interface – Terminated and connected all trunk cables in Zones 22-26. Installed cables and innerduct in zone 12 PSS racks (ready for termination).
- Installed new Magnet Interface chassis in N. Access Bldg. and started procurement of cables and conduit

### **Work That Went Better Than Expected:**

- Documentation and removal of BLMs in Spreader/Recombiner regions
- Removal of QWeak specific PSS equipment
- 

### **Work That Went Slower Than Expected, Delays, and Issues:**

- PSS commissioning and configuration management of new C-100 HPAs – not in anyone's scope of work
-

## Ongoing Shutdown Work

**Upcoming Work (3-6 weeks from now)** ( green = no concerns; yellow = some concerns; red = serious concerns)

Project	Status	On Schedule?	Tasks	Comments/Concerns
12GeV Accel	X		North Linac PSS Upgrade Installation of Boxduct in N. Linac Extension/Transport tunnel	
12GeV Hall D	X		Installation of Access Control HW ODH Equipment purchase	
SRF/VTA	X		Prevent Dewar Shield Movement when RF ON	
Source Group – Gun R&D	X		Reconfigure Injector for 130kV operation without North Linac PSS online.	Requires SCMB review.
12GeV MPS		X	Evaluate VME BLM card	Latest revision in hand. Requires validation testing.
PSS/MPS Scheduled Maintenance	X		ODH Calibration and configuration management	
PSS BCM			Rebuild test stand Redesign Kicker electronics	



**New Work Requests Requiring Schedule Changes:**

- Reconfigure Injector PSS to allow 130keV/c beam studies in July
- North Linac/Tagger ODH System
- 

**Significant Problems Pending (delays, technical issues, resource issues, scheduling):**

- BLMs are being damaged
- CAEN Power supplies selected for BLMs are being discontinued in lieu of new model. Requires new SW development. We have a first article loaner to use for SW development. (Issue shared with Physics Detector Group)
- 

**Staffing Outlook:**

- Major MPS work is back-burnered until engineer replacement hire. Trying to stick it out until October.



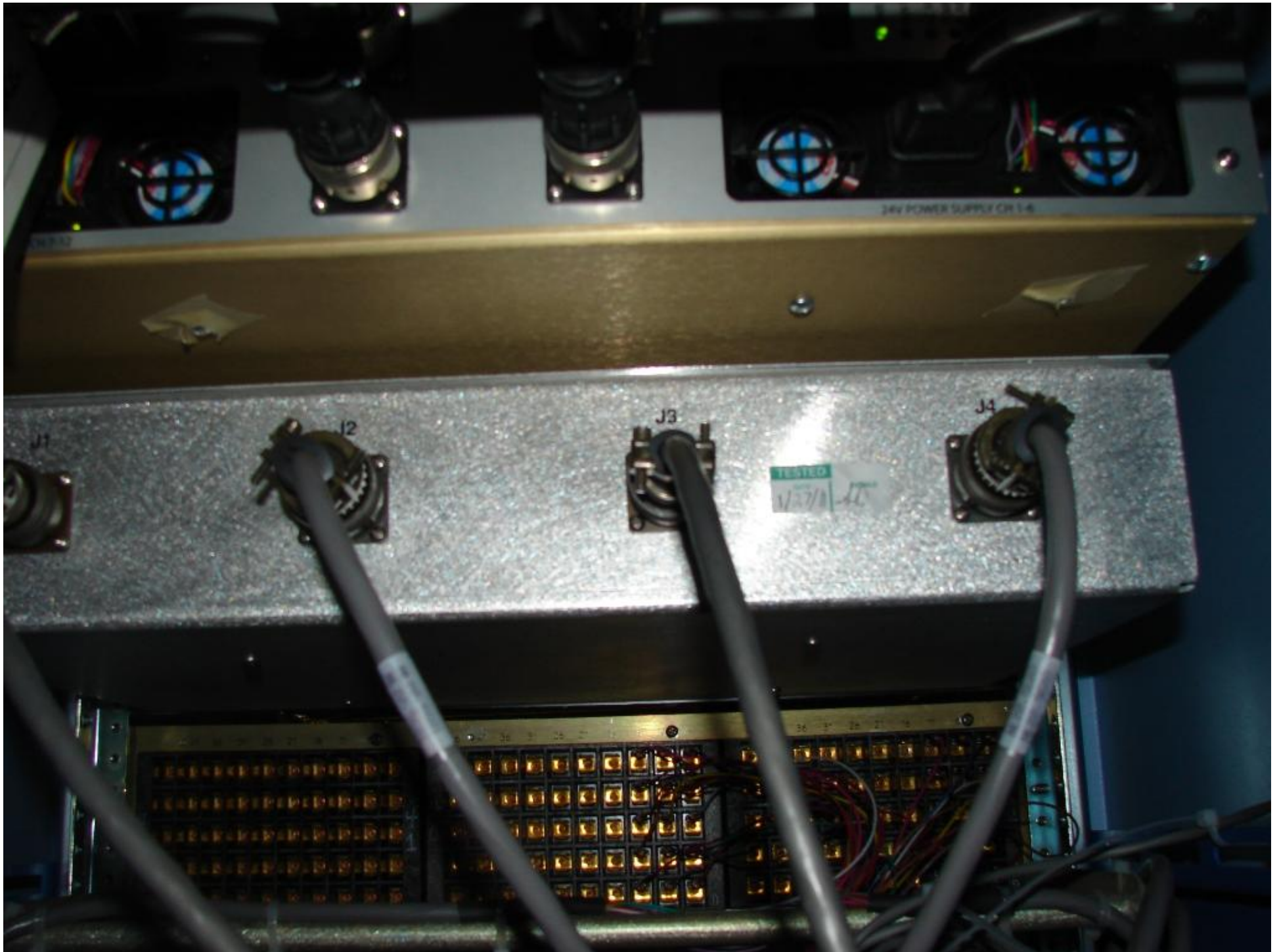












## PSS Configuration Control

PSS is an engineered system that mitigates hazards through implementation of safety functions

A safety function is an end-to-end action

Example:

When door opened in Power Permit Mode, shut down all High Voltage Power Supplies.

The following is NOT a safety function

When switch opens, remove Power Supply PERMIT.

Configuration control extends from the device or condition sensed to the final device that removes the hazard.

All actors in the safety function must perform their required role in order to mitigate a hazard

Most of the final devices are owned by one or more groups outside the SSG

# Shutdown Work Summary

**Organization:** Hall C

**Name:** Walter Kellner

**Date:** 06/27/2012

## Last Two Weeks

---

### Work That Went Better Than Expected:

All region III detectors are removed. Rate of removal of components by experimentalists has improved.

### Work That Went Slower Than Expected, Delays, and Issues:

## Ongoing Shutdown Work

---

**Upcoming Work (3-6 weeks from now)** ( green = no concerns; yellow = some concerns; red = serious concerns)

Project	Status	On Schedule?	Tasks	Comments/Concerns
Q-weak disassembly	x <span style="background-color: #d9ead3;">green</span> <span style="background-color: #fcf8e3;">yellow</span> <span style="background-color: #f2dede;">red</span>	Y	Region III shielding removal	On schedule
Q-weak disassembly	x <span style="background-color: #d9ead3;">green</span> <span style="background-color: #fcf8e3;">yellow</span> <span style="background-color: #f2dede;">red</span>	Y	Disconnect and remove Target	In progress
Q-weak disassembly	x <span style="background-color: #d9ead3;">green</span> <span style="background-color: #fcf8e3;">yellow</span> <span style="background-color: #f2dede;">red</span>	Y	Disassemble and removal of the region III main detector frame, rotator and concrete collimator	In progress, on schedule

### New Work Requests Requiring Schedule Changes:

None

### Significant Problems Pending (delays, technical issues, resource issues, scheduling):

None

### Staffing Outlook:

Adequate

# Shutdown Work Summary

**Organization:** Experimental Hall D

**Name:** Tom Carstens

**Date:** 06/27/2012

## Last Two Weeks

---

### Work That Went Better Than Expected:

All work proceeding as scheduled

### Work That Went Slower Than Expected, Delays, and Issues:

All work proceeding as scheduled

## Ongoing Shutdown Work

---

Assemble Collimator Cave Shield Wall

Test Thin Window Material

Install Pick-up Coil Fixture in Bore of Solenoid

Continue Building Solenoid Controls Rack

Continue Building Solenoid Controls cabling

**Upcoming Work (3-6 weeks from now)** ( green = no concerns; yellow = some concerns; red = serious concerns)

Project	Status	On Schedule?	Tasks	Comments/Concerns
Install Solenoid Cladding	X <span style="background-color: #d9ead3;">green</span> <span style="background-color: #fcf8e3;">yellow</span> <span style="background-color: #f2dede;">red</span>	Y		
Paint Solenoid	X <span style="background-color: #d9ead3;">green</span> <span style="background-color: #fcf8e3;">yellow</span> <span style="background-color: #f2dede;">red</span>	Y		
Assemble FCAL Platform	X <span style="background-color: #d9ead3;">green</span> <span style="background-color: #fcf8e3;">yellow</span> <span style="background-color: #f2dede;">red</span>	Y		



Project	Status	On Schedule?	Tasks	Comments/Concerns
Design/assemble BCAL gluing booth	X	Y		
Bonding Upstream Platform	X	Y		
Start of gluing/testing BCAL light guides (3840 total)	X	Y		All work is proceeding as planned, however the gluing will be using fixtures that have not yet been tested and verified. Potential problems could arise and should be regarded as a risk.
Start of electrical power installations	X	Y		The volume of other work being conducted may require that additional electricians be brought in. Once the work has started and actual progress can be evaluated this concern may be mitigated.

**New Work Requests Requiring Schedule Changes:**

- None

**Significant Problems Pending (delays, technical issues, resource issues, scheduling):**

- None

**Staffing Outlook:**

- Adequate