

## **6MSD Weekly Scheduling Meeting**

Wednesday @ 8:15, MCC Conference Room

August 31, 2011

- 1) Glance Back and 2-Week Look Ahead (F. Pilat)..... 10 mins
- 2) PMI Report (P. Collins) ..... 5 mins
- 3) Critical Path Service Provider Reports..... 25 mins
  - (a) Alignment (Curtis)
  - (b) Installation/Alignment (Wilson)
  - (c) HPRF (Kimber)
  - (d) EESIC (Garza)
- 4) Hall Status Reports (W. Kellner) ..... 10 mins
- 5) Special Topics: None ..... 0 mins
- 6) Safety Report: (M. Logue)..... 5 mins
- 7) Meeting Recap and Action Items (All)..... 5 mins



# **6MSD: Glance back & look ahead**

Fulvia Pilat

6MSD Meeting  
August 31, 2011

# Progress Wed Aug 24 – Wed Aug 31

Weeks: **16** down, **11** to go (~7 to ops start-up)

## Highlights:

- Survived **Irene** almost unscathed (that is, other than schedule delays...)

## Areas of concern:

- **C100-1** delay test schedule in tunnel
- **C100-2** delay of overall test schedule (TestLab and tunnel)
- **Civil construction:** pre-existing + Irene-related delays
- G2P schedule
- FEL: gun repair, waiting on 2K cool-down
- LCW delays?
- Problems CTF

# CCB Report – no news

- ***NO CRs & NTFs have been submitted, reviewed, and approved this week***
- ***CR/NTF in the pipeline***
- ***[Hall C Moeller Quad \(CR\)](#) – The Moeller quad that is used for the Qweak program has a problem and must be removed for repair or to make room to move the other installed quad into position. N. Wilson is developing the schedule. More details to come in one week.***
- ***CR/NTF Placeholders***
- ***[Tunnel Penetrations Repair \(CR\)](#) - Captures additional detailed scope for the repair work on defined penetrations. A&E final design drawings for the repair work reviewed by FML 2. CR will be updated and resubmitted for repair (prototype) for existing penetrations (to be defined based on accelerator lock up schedules).***
- ***[System Testing/Hot Checkout/Restart Operations Plan \(CR/NTF\)](#) - M. Spata is leading the preparation and planning for overall testing, hot checkout and restoration of operations for the 6 GeV run. The plan will be presented and reviewed **August 31<sup>st</sup>**.***
- ***[Hall C Ion Chamber/Dump Work \(CR\)](#) - Hall C ion chamber and dump work being reviewed by engineering division and accelerator operations for scope. Draft plan led by A. Freyberger has been submitted. The area is still too "hot" for entry per RadCon***
- ***[Modification of C100-1 and C100-2 installation and testing schedule](#). Meeting held August 18, new schedule based on the shortening of installation time for C100-2: based on experience for C100-1 plus better inter-group coordination***

# 4 weeks look ahead

- **C100-2** acceptance tests in TestLab + installation
- **C100-1** tests in SLinac
- **SAB LCW** complete
- PSS certifications injector → **injector** in beam permit
- Start of **FEL IR run**
- **BSY** Penetration construction continues
- **ESR** Cool-down for end-station support, HDice cool-down
- **RF** installation & testing continues
- **Peppo installation**, tight...still possible.
- Hall-A **G2P**, septum and target installation
- Hall-B: Installation, cool-down of HD-ice target

# 4 week look ahead – heated topics

## C100-1 and C100-2 schedule

Continues to accumulate delays

## Civil work schedule

Held meeting last week. Rebecca agreed to provide projected completion dates.  
Accumulated additional delays from Irene.

## Integrated plan for Operations Start-Up

**Review TODAY, August 31, 1:30 pm in F113**

## SAB LCW completion

Some delays crept up

# “End game”

## END GAME:

- **Start-up plan** (review today) establishes **process** and **duration**
- Need to define **start date** (depending on activities on critical path)
- Need to define **end date** (start of physics production)

Many constraints: 6MSD Lab and 12 GeV deliverables (MUSTs), money, 6 GeV physics program, etc. → **optimize**

## Proposed process:

- Work-out alternative scenarios
- 6MSD Team + others to analyze pros/cons
- 6MSD Coordinator to propose a plan (with alternatives) to Lab Leadership
- Decision and implementation

Started with a discussion meeting yesterday



# PM&IP

6MSD 8/31/11 Weekly Progress Meeting  
(8/26/11 Data)  
Report #16

# PM&IP

- Schedule Issues: Hall D Phase 3 Tunnel Extension is ~21 Days behind schedule. (Nov. 9<sup>th</sup> completion date)
- C100-1 In Tunnel Testing and C100-2 Testing in CTF
- Hall A Septum Platform Parts Issues...
- LCW Systems coming back on line
- Hurricane & Earthquake impacts are being assessed.
- Resource issues: Survey & Alignment 19 Sept – 26Sept

# PM&IP

- Other Schedule Information at [https://www.jlab.org/6MSD Integrated Schedule/SCHEDULES/](https://www.jlab.org/6MSD_Integrated_Schedule/SCHEDULES/)
  - **Four Week Look Ahead** - Shows all activities that have started that are not complete and any activities due to start in the next four weeks
  - **Critical Path** – Shows all MUST activities that have 2 days or less float.
  - **Schedule Variance** - Shows all MUST activities that are not 100% complete and that the Start/Finish dates have slipped by at least 5 days.

# Shutdown Work Summary

**Organization:** Alignment

**Name:** Chris Curtis

**Date:** 31st Aug, 2011

## Last Week

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

- HD-Ice target initial alignment completed.
- Q-Weak optics target fiducialized.
- Hall D control re-survey ongoing.
- Hall D network checks after earthquake
- Arc magnet checks after earthquake
- Hurricane preparation

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

- G2p harp fiducialization delayed due to possible interference problem.

## Ongoing Shutdown Work

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**Table 1: Next Week's Work** ( green = no concerns; yellow = some concerns; red = serious concerns)

Project & Customer	Status	Completion	Tasks	Comments/Concerns
12 Gev Arcs	X	TBD	Alignment of re-installed dipoles in west and east arcs.	Step 2B in west arc to start next week.
Hall A - G2P	X	TBD	Harp fiducialization.	Waiting for harp. Due shortly.
Hall D		Before solenoid	Re-measure control in the hall.	Transfer through penetrations.
12 Gev		TBD	Re-align 45 MeV dump	Possibly later this week.

**Table 2: Other Upcoming Work** (green = no concerns; yellow = some concerns; red = serious concerns)

Project & Customer	Status	Completion	Tasks	Comments/Concerns
12 GeV Arcs	X	TBD	Dipole re-alignment. Will continue on north part of west and east arcs shortly.	On hold.
PEPPo	X	October	Alignment of PEPPo components	End of shutdown?
Q-Weak	X	????	Target alignment	Started fiducialization.
HD-Ice	X	Early September	Align target	Initial alignment completed early.
FEL	X	Early September	Wiggler alignment	No update
12 GeV Linacs	X	Mid? September	SL25 cryomodule	
Hall D	X	Mid September	Solenoid alignment	Scope has increased.

**New Work Requests Requiring Schedule Changes:**

- Hall D network tie through penetration.

**Permits Not Already in Hand (hot work, lifting, blind penetrations):**

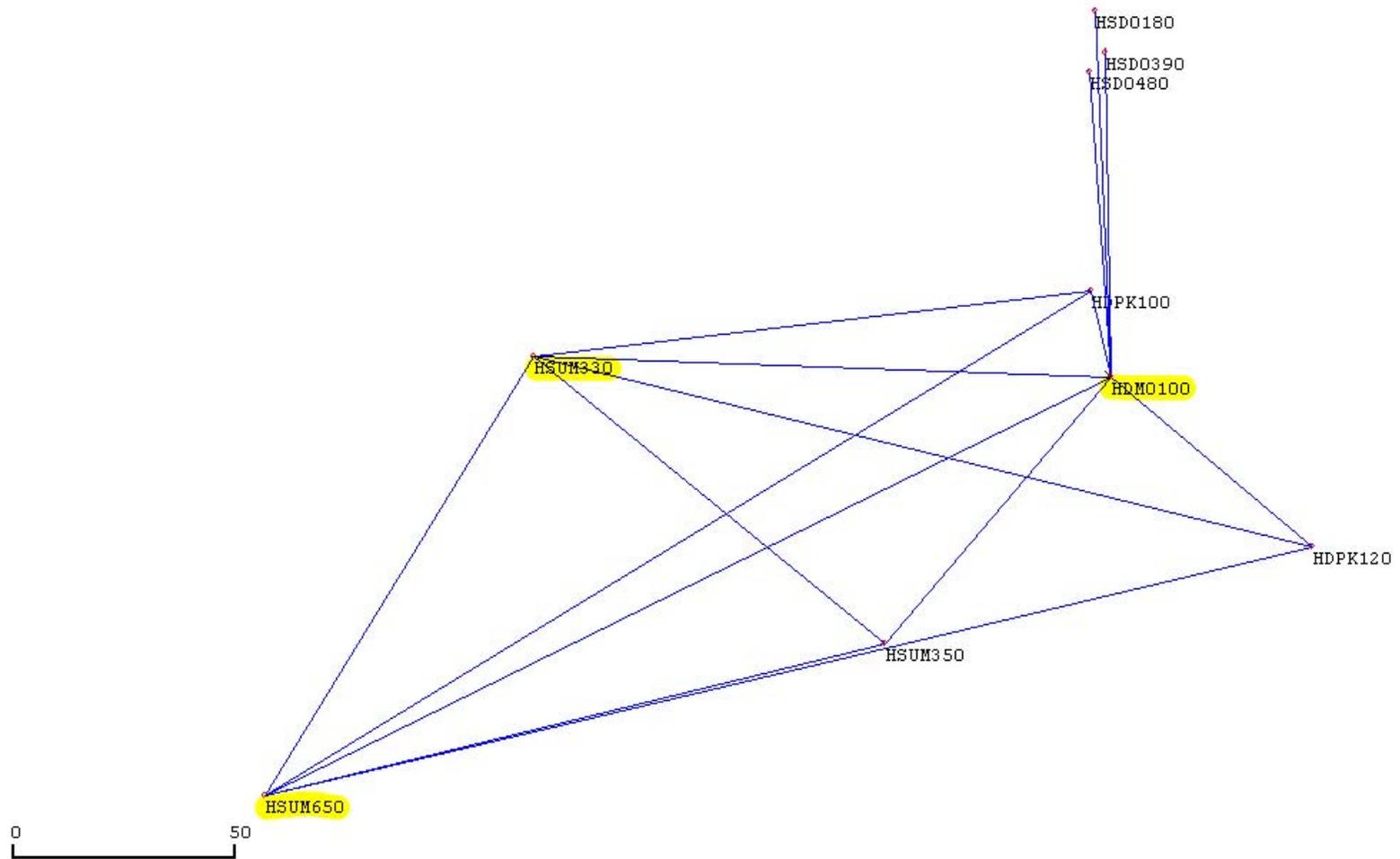
- None

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

- Possible issues in September if scope increases, or work bunches up.

**Staffing Outlook:**

- Not much scope for increasing manpower.



## ARC MAGNET CHECKS

Targets Measured: 119

Dipoles Measured: 29

Quads Measured: 9

	DZ	DX	DY	Vector
MAX:	0.00010	0.00026	0.00027	0.00032
MIN:	-0.00027	-0.00017	-0.00010	

Targets:	119	Diff > 0.2	15	12.6%
Magnets:	38	Diff > 0.2	6	15.8%

# Shutdown Work Summary

**Organization:** MSINST

**Name:** Neil Wilson

**Date:** 8/24/11

## Last Week

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

- East Arc North Beam Line Installed, Pumped Down & Leaked. Missing sections for access into NE Stub.
- Hurricane Irene Preparations, Clean Up & Restoration.
- West Arc North Tightness Checks.
- East Arc North – Hose Installation
- NL22 CPS set in place

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

- Spare Q-Weak Quad Disassembly

## Ongoing Shutdown Work

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**Table 1: Next Week's Work** ( green = no concerns; yellow = some concerns; red = serious concerns)

Project & Customer	Status	Completion	Tasks	Comments/Concerns
12GeV	X <span style="background-color: #d9ead3;"> </span> <span style="background-color: #fff2cc;"> </span> <span style="background-color: #f4cccc;"> </span>		Dipole Hook Up	East Arc North Tightness Checks.
12GeV	X <span style="background-color: #d9ead3;"> </span> <span style="background-color: #fff2cc;"> </span> <span style="background-color: #f4cccc;"> </span>		Fabricating Headers for Klystron	Working
12GeV	X <span style="background-color: #d9ead3;"> </span> <span style="background-color: #fff2cc;"> </span> <span style="background-color: #f4cccc;"> </span>		45 MeV Dump Shielding	Dump Set.
Hall D	X <span style="background-color: #d9ead3;"> </span> <span style="background-color: #fff2cc;"> </span> <span style="background-color: #f4cccc;"> </span>		LCW Piping Installation	Re-Starting
Hall C	X <span style="background-color: #d9ead3;"> </span> <span style="background-color: #fff2cc;"> </span> <span style="background-color: #f4cccc;"> </span>	X	Q-Weak Quad Repair/Swap	Working
Hall A G2P	X <span style="background-color: #d9ead3;"> </span> <span style="background-color: #fff2cc;"> </span> <span style="background-color: #f4cccc;"> </span>		Installation Support	Electronics Bunker, FZ's LCW, Girder
6GeV	X <span style="background-color: #d9ead3;"> </span> <span style="background-color: #fff2cc;"> </span> <span style="background-color: #f4cccc;"> </span>		Swapping Out Vacuum Valves	On Going-Maint.

**Table 2: Other Upcoming Work** ( green = no concerns; yellow = some concerns; red = serious concerns)

Project & Customer	Status	Completion	Tasks	Comments/Concerns
12GeV	X		Fabricating Headers for Klystron Racks & CPS's	Manifolds on Site
12GeV	X		SL 24 & 25 Warm Region Girder	After C100-2
12GeV	X		LCW System Valve Alignment	As LCW Systems come on line & are cleaned up
12GeV	X		Tagger Building SEG Block Staging	
FEL	X		Wiggler Installation	Awaiting Delivery Date Confirmation
PEPPo	X		Installation Support	
G2P	X		Continuing Installation Support	Upside down Girder, FZ's LCW, etc.
6GeV	X		Re-Establish LCW Flow	Access into Tunnel?
6GeV	X		Vacuum Valve Limit Switch Replacement & Vac. Support.	

**New Work Requests Requiring Schedule Changes:**

- None

**Permits Not Already in Hand (hot work, lifting, blind penetrations):**

- None

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

- None.

**Staffing Outlook:**

- None

# Shutdown Work Summary

**Organization:** HPRF

**Name:** Andrew Kimber

**Date:** 31 August 2011

## Last Week

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

- Commissioning of 2L24
  - Klystron 2L24-1 replaced due to potential instabilities. We will try to reproduce the problem with the new tube.
- Installation/testing of 2L25
  - Cable/signal checkout continues
  - Solenoid control cable installed
  - Waveguide installed in tunnel (opportunistic)
- Installation of 2L23
  - LCW manifold assembly complete
  - Cabling 90% complete (waiting for solenoid PSU's (2 weeks), klystrons (??))
  - LLRF chassis installed but need firmware
- Installation of 2L22/26
  - Card cages are checked out ready for installation
- CPS installed in 1L22

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

- Hurricane prep and restoration (lost ~2 days)
- Klystrons for 2L23 late (5 due the end of August)
- *'streamlined Zone infrastructure' (IOC's, network, screens)*
  - Healthy discussion Tuesday, list of tasks, owners, a path forward...

## Ongoing Shutdown Work

**Table 1: Next Week's Work** (green = no concerns; yellow = some concerns; red = serious concerns)

Project & Customer	Status	Completion	Tasks	Comments/Concerns
12GeV HPRF	x	ongoing	Support CM commissioning 2L24	
12GeV HPRF	x	9/2/11	2L25 test into shorts	Slightly later than plan, but with ~2 weeks of float
12GeV HPRF	x	Late Aug, (klystron dependent)	2L23 installation continues	LCW manifolds, klystrons (3 on site, 5 due by end of month). Network/software install underway
12GeV HPRF	x	ongoing	2L22/26 installation continues	

**Table 2: Other Upcoming Work** (green = no concerns; yellow = some concerns; red = serious concerns)

Project & Customer	Status	Completion	Tasks	Comments/Concerns
12GeV HPRF	x	Mid Sep	Tunnel Waveguide and cabling install	
12GeV HPRF	x	Mid Sep	2L23 Test into shorts complete	Klystron dependent
12GeV HPRF	x	Aug/Sep	2L22/2L26 installation	

### New Work Requests Requiring Schedule Changes:

- n/a

### Permits Not Already in Hand (hot work, lifting, blind penetrations):

- n/a

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

- 2 FA units to be shipped ~~Sep 16<sup>th</sup>~~ End of September – manufacturing issues. HOM's from 2L21 may have to be used on 2L24/5 depending on further delays.

### Staffing Outlook:

- Good

# Shutdown Work Summary

**Organization:** EESIC

**Name:** Omar Garza

**Date:** 8-31-11

## Last Week

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### Work That Went Better Than Expected:

- System Restores (Hurricane)
- Hall A G2P Beamline BPMs (14)

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

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## Ongoing Shutdown Work

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**Table 1: Next Week's Work** ( green = no concerns; yellow = some concerns; red = serious concerns)

Project & Customer	Status	Completion	Tasks	Comments/Concerns
Hall C Cavity Electronics	X	Design 2-Ch. PCB Layout	Chassis Fabrication, Brd. Assembly, Test	Going Well
Hall A Low Current BPM Electronics	X	Design 4-Ch. PCB Layout	PCB layout, Procure, Assemble, Test	Going Well
12Gev SRF Vacuum Instrumentation	X	SL24,25,23	Checkout/Testing	Going Well

**Table 2: Other Upcoming Work** ( green = no concerns; yellow = some concerns; red = serious concerns)

Project & Customer	Status	Completion	Tasks	Comments/Concerns
12Gev SRF DECARAD Instrumentation	X	Brd. Design	Prototype Testing, Tube Enclosures Chassis Mods	Fabrication in Progress
Ops AIPBSY (I to V) Module	X	Module Design	Procure PCBs Assembly, Testing	Software
Hall A G2P Harp Motor Driver Chassis Design	X	Chassis, PCB Board	Prototype testing, Verifying firmware	Addnl. Eng Support Assigned, Software

**New Work Requests Requiring Schedule Changes:**

- 

**Permits Not Already in Hand (hot work, lifting, blind penetrations):**

- 

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

- Engineering resource for G2P Harps, 12Gev HPA Intlks, Decarad

**Staffing Outlook:**

-

# Work Summary

Organization: Hall A

Name: Folts

Date: 8/31/11

## Last Week

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Work That Went Better Than Expected:

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

- Target stand parts

## Ongoing Shutdown Work

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**Table 1: Next Week's Work** ( green = no concerns; yellow = some concerns; red = serious concerns)

Project & Customer	Status	Completion	Tasks	Comments/Concerns
Septum magnet	<span style="background-color: #d9ead3;">x</span>	continuing		
G2P Target	<span style="background-color: #fff2cc;">x</span>	continuing	Assembling platform	Parts are an issue
G2P Target	<span style="background-color: #fff2cc;">x</span>	continuing	Assembling for testing	Delayed due to Q week priority
G2P	<span style="background-color: #fff2cc;">x</span>	continuing	Power supply installation	Final hookup
G2P beam dump	<span style="background-color: #fff2cc;">x</span>	On order	Assembly, pre survey, install	Delayed due to changes
Hall maintenance	<span style="background-color: #fff2cc;">x</span>	continuing	General repair and maintenance	
Beam line	<span style="background-color: #fff2cc;">x</span>	working	Harp controls work	I&C work load conflict (firmware)

- Hall B No concerns, working on vacuum pumps and detector
- Hall C No Concerns, Removal of lead/grout mix and decontamination of the SOS detector hut

# Shutdown Work Summary

**Organization:** Hall B

**Name:** Doug Tilles

**Date:** 9/1/2011

## Last Week

Start installation of R3S3 Steel work	100%
2C24 Viewer	90%

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

- HDice ongoing
- FWD Carriage plate installation

## Ongoing Shutdown Work

**Table 1: Next Week's Work** ( green = no concerns; yellow = some concerns; red = serious concerns)

Project & Customer	Status	Completion	Tasks	Comments/Concerns
<b>6 GeV repairs</b>	X			
Setup and pull Region 3 Sector 3 Drift chamber				
Cosmic test of Drift Chamber	X			
Electron Run Blower	X		Electron blower on going	
Fab Blower suction line	X		Pump on order Ongoing	

Project & Customer	Status	Completion	Tasks	Comments/Concerns
12GeV PCal windows in this week	X		ESB Building Ready for shipment	

**Table 2: Other Upcoming Work** (green = no concerns; yellow = some concerns; red = serious concerns)

Project & Customer	Status	Completion	Tasks	Comments/Concerns
• Region 3 S3 removal and repair	x		8-29-2011	
Warm HDice Alignment			Done	
Cool Down HDice			Sep 7	

**New Work Requests Requiring Schedule Changes:**

- HDice Hall Alignment Aug 23

**Permits Not Already in Hand (hot work, lifting, blind penetrations):**

- None needed Hot work complete

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

- None

**Staffing Outlook:**

- OK

# Shutdown Work Summary

**Organization:** Hall C

**Name:** Walter Kellner

**Date:** 08-31-2011

## Ongoing Shutdown Work

**Table 1: This Week's Work** ( green = no concerns; yellow = some concerns; red = serious concerns)

Project & Customer	Status	Completion	Tasks	Comments/Concerns
6Gev Q-weak	<span style="background-color: #d4edda;">green</span> <span style="background-color: #fff3cd;">yellow</span> <span style="background-color: #f8d7da;">red</span>		Disassemble and remove the downstream beam line and stainless steel bellows section	RWP/ ATLI's req'd
6Gev SOS	<span style="background-color: #d4edda;">green</span> <span style="background-color: #fff3cd;">yellow</span> <span style="background-color: #f8d7da;">red</span>	Started	Removal of lead/grout mix and decontamination of the SOS detector hut	IH decontamination approval/plan completed
	<span style="background-color: #d4edda;">green</span> <span style="background-color: #fff3cd;">yellow</span> <span style="background-color: #f8d7da;">red</span>			

**Table 2: Upcoming Work** ( green = no concerns; yellow = some concerns; red = serious concerns)

Project & Customer	Status	Completion	Tasks	Comments/Concerns
6Gev Q-weak	<span style="background-color: #d4edda;">green</span> <span style="background-color: #fff3cd;">yellow</span> <span style="background-color: #f8d7da;">red</span>	On hold	Reinstall main detector when repaired	Waiting for users to complete repair
	<span style="background-color: #d4edda;">green</span> <span style="background-color: #fff3cd;">yellow</span> <span style="background-color: #f8d7da;">red</span>			
	<span style="background-color: #d4edda;">green</span> <span style="background-color: #fff3cd;">yellow</span> <span style="background-color: #f8d7da;">red</span>			

SAD ES&H Report  
August 2011

