

**LSD Bi-Weekly Resource Planning Meeting
Agenda**

31 October 2012

- Glance Back / 2-Week Look Ahead / Change-Control Board (CCB) Report (10 min) – F. Pilat
- Safety Report (5 min) – M. Logue
- Special Topic (5 min) – Tunnel ODH Status & Timing – W. Oren
- Key Service Provider & Project Lead Reports (25 min)
 - 12GeV Accelerator – L. Harwood
 - S&A – C. Curtis
 - Safety Systems – K. Mahoney
 - Halls – W. Akers
- Meeting Recap / Parting Shots (5 min) – F. Pilat

Glance back and look ahead

Fulvia Pilat

LSD Resource Planning Meeting

October 31, 2012

Glance back

- **Sandy** was luckily a non-event for us. Basically only impacts: planned work over last weekend and Monday
- **RECO TestLab continued delays:** impact on SRF work and plans, potential impacts of delaying CTF cool-down on cryo plans and resources (January: CHL-1, CHL-2 and HDR), and hence delaying the C100 tests
- We will hear today **reports** on 12 GeV accelerator, PSS, S&A, Halls, and Cryo
- **FEL:** CR was approved and will be part of October progress. Delays in funding may start to impact F100 and $\frac{1}{4}$ cryo work and plans
- **Facilities** work (other than TestLab) is progressing well
- LSD **Hall B** review still scheduled for November 14 but we hear of delays.

Schedule updates

- **September progress** analyzed and posted on the LSD web site. Summary: delays in cryogenics plans, TestLab and Halls. The **float** status will be a critical aspect of the upcoming re-baseline.
- **FEL** changes and **Hall C** changes (LSD review in October) will be part of the October progress.
- **October progress** sheets went out yesterday and need to be collected by **Friday November 2**.
- **Important to get the October progress collected and analyzed ASAP this month**, as it is needed as input to the re-baseline (next topic)

Re-Baseline process

Original plan for the shutdown: re-baseline every 5-6 months

Re-baseline-1 Review: **November 16, 2012**

Re-baseline-2 Review: **April 2013** (include RECO/Commissioning plan)

Re-baseline goals:

- Revisit **LSD overall plan**, re-plan major activities and logic (beyond single CR' s)
- Update **scope of work**: add/remove activities captured by LSD schedule
- Look critically at **float**
- Assign MUST/SHOULD/LIKE

Re-baseline-1 Review

Review goals

- Present a new plan that accomplishes “**must**” activities and as much “**should**” possible while maintaining acceptable **float**
- Respond to **recommendations** from May Review
- Address Risk, Safety

Review input

- Progress as of end of October (spreadsheet / EV data)
- Proposed LSD changes and resources analysis

Schedule implementation

- New baseline implemented in Primavera by December so that December progress can be collected on new baseline

Re-Baseline Timeline

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
21	22	23	24	25 Start of LSD RE-baseline	26	27
28	29	30 LSD Progress sheets out to PMs	31	1 – November Meeting on re-baseline ("Laundry lists") 12GeV progress collection	2 LSD Progress sheets due to PMI 12GeV progress collection	3
4	5 12GeV progress collection	6	7 12GeV progress information to Pat	8	9 LSD progress done	10
11	12 Risk registry update	13	14 12GeV Hall B installation plan review ? dry run	15 pre-brief info to review panel	16 MONT REVIEW	17

Schedule: Test Lab Limited Operations November & December 2012

- **October 31**
 - Conduct of Operations draft submitted by SRF to Facilities Management & EHS&Q
- **November 9 (target date) / November 16 (milestone)**
 - Review of document by FM, EHS&Q, Mortenson
 - Approval of COO by all parties
- **Starting November 12 (target) / November 19 (milestone)**
but not before COO approval
 - Cryo Team starts **clean up** (1 week), then **cool down** (1 week) Finish **November 26 or 30**
 - CMTF Team completes Controls and RF recovery, moves C100-6 into CMTF, prepares C100-6 for acceptance testing (three weeks) Finish **December 3**
 - VTA Team completes clean up, performs leak check, starts controls (**two weeks**)
- **November 21** Mortenson completes Test Cave Concrete Infill (Wall and Hole)
- **December 3** **C100-6 cool-down** in CMTF
- **December 10** **C100-6 Acceptance Testing** (four weeks) Finish **January 25**



== Good Day!



== First Aid Injury
*Click on symbol in calendar for details



== Recordable Injury
*Click on symbol in calendar for details








== Other Noteworthy Events
*Click on symbol in calendar for details

To Date:
First Aid: 9
Recordable: 3
DART: 2



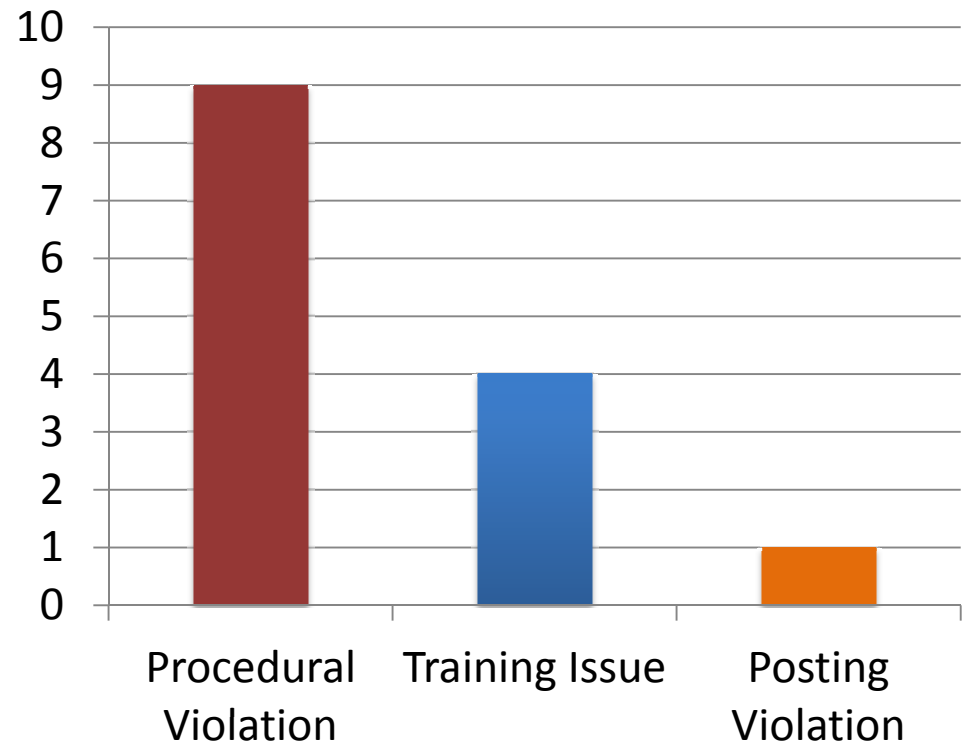
September 2012 Events

	Date	Location	Event
	10/12/12	SAB	While moving a flammable locker, the locker shifted causing employee to scrape left hand on the stake body truck
	10/16/12	ESB	We were trying to lift the load cell with the help of a lifter, when the load cell slipped away and dropped into my hands lacerating hand and straining thumb
	10/17/12	Hall C	While performing a survey at the Hall C truck ramp, brushed across some rebar and cut leg
	10/18/12	In front of MCC	While tightening a bolt on a golf cart battery with a wrench, right arm touched the battery hold-down bolt and gave worker a slight shock
	10/24/12	Hall D	After working under a solenoid cryo box, employee stood up and soon there after experienced sudden onset of severe low back pain.

Analysis of Control By-Pass Events






- 13 events from Jan-Sept 2012 involving by-pass of controls
 - 1 involved an engineered control
 - 12 events involved administrative controls
 - Does not include recent events involving PSS systems
- Conclusion:
Administrative controls do not receive the same level of respect as engineered controls

Events Involving By-Passing of Administrative Controls




BACK-UP SLIDES




June 2012 Events

	Date	Location	Event
	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.
	6/13/2012	Hall B	Employee reported frequent use of wire cutters has caused hand discomfort.
	06/27/2012	CHL 2	Employee was installing a standard chain wheel kit on one of the transfer lines behind Building 8. As he was removing a bolt, the bolt broke, causing the ratchet to slip and hit the contractor in his tooth. The contractor's right incisor was chipped.
	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.


July 2012 Events

	Date	Location	Event
	7/11/12	Hall D	Two workers were drilling through a compressor test stand. They discovered a sheet of lead between 2 layers of insulation. Work was immediately stopped and IH contacted. No uptake of lead occurred,

August 2012 Events

	Date	Location	Event
	08/09/2012	Hall B	During a site visit to Hall B, 2 employees and 3 contractors entered a radiologically controlled area without dosimetry. This violated our policy and procedure and the event is currently under investigation.
	08/16/2012	CHL #2	Employee brushed against a pipe that had a sharp burr on it. The employee was diagnosed with superficial laceration to right arm. The area was cleansed and a over the counter antibiotic ointment and band-aid was applied. The employee returned to regular duty.
	08/24/2012	Hall C	An employee was injured while assisting with moving a concrete piece in Hall C (SOS Shield house). The employee completed the move when they stepped backwards and lost their footing causing their left ankle to roll. The employee was sent off-site for a further evaluation and was diagnosed with a left ankle sprain, given a prescription, and placed on restrictions until cleared by a physician for regular duty.

September 2012 Events

	Date	Location	Event
	09/27/12	South Linac	While moving particle boards, employee pinched his left index finger, resulting in superficial laceration.

LSD: Linac & Hall D Transport Line ODH “Status”

Will Oren (Reporter)

Oct 31, 2012

North (&South??) Linac ODH Status

– **Currently:**

- ODH 0 everywhere
- Penetrations can be opened without changing postings or placing a temporary ODH monitor

– **Status will change 1-2 weeks from now:**

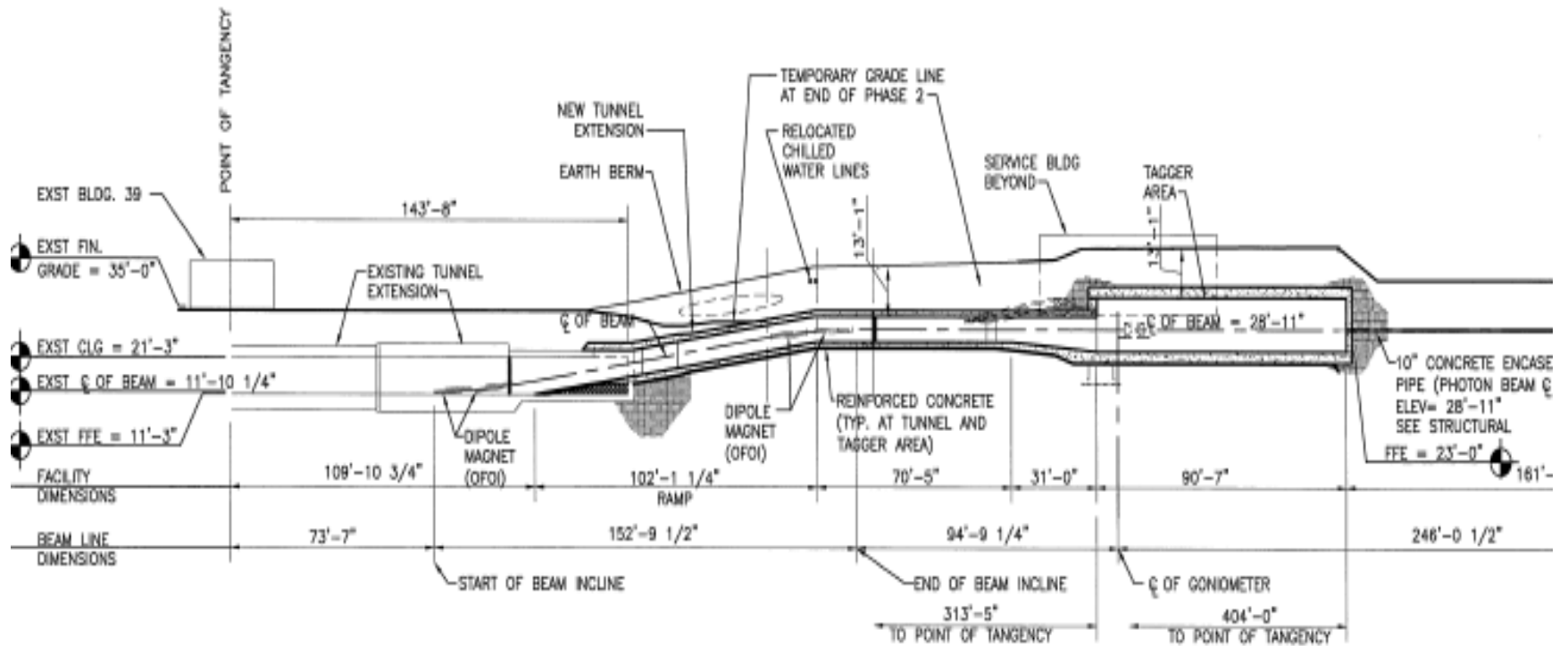
- Status change happens as soon as helium gas begins to flow to support CTF operations and distribution system cleanup.
- Standard ODH rules as in the years past:
 - ODH 1 at the ceiling & behind cryomodules
 - ODH 0 in the aisle & up to 3' below the ceiling.
- Status updates will be distributed the at 8:00 mtg, 1:30 maintenance mtg mailing list, etc...

Hall D Transport Line & Tagger Area ODH

– Currently:

- ODH Analysis is complete
- Sources of helium gas that can cause an ODH:
 - Gaseous helium from CHL to Hall D refrigerator
 - Underflow of the N. Lintel in the event of a spill in the N. Linac
- Driving terms for the analysis:
 - The seven 30k gal helium gas tanks at CHL
 - The helium inventory in the N. Linac

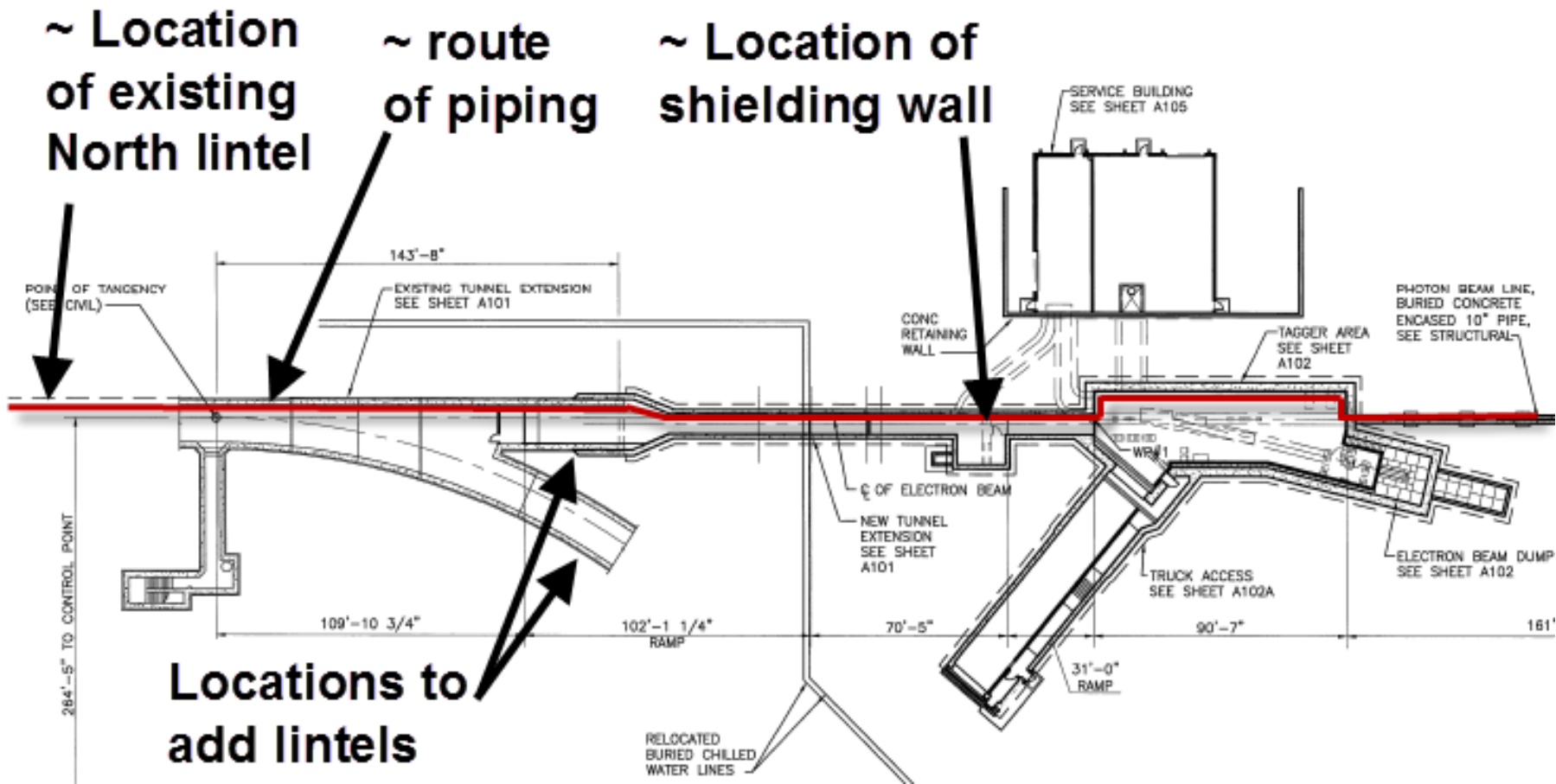
Hall D Transport Line & Tagger Area Layout



SITE SECTION

SCALE: 1/32" = 1'-0"

Hall D Transport Line and Tagger Layout



Hall D Transport Line & Tagger Area ODH

– Engineering Controls:

- 2 new lintels – E. Arc, entrance to Hall D tunnel
- Blockage of all penetrations leading from the tunnel/tagger enclosure to the service bldg
- “Green” wall is considered to be a sealed barrier.

– Administrative Controls:

- ODH monitors @ ceiling of tagger area, high point of tunnel west of wall, between the existing lintel and the new ones w/ audio/visual alarms
- Audio & visual alarms in the associated service buildings

Hall D Transport Line & Tagger Area ODH

- **ODH Classifications:**

- ODH 1

- The entire enclosure from the entrance to the Hall D transport tunnel to the shielding wall
- 3 feet from the ceiling and up from the N. Linac lintel to the new lintels
- The ceiling of the Hall D tagger area down to the transport tunnel ceiling elevation
- All areas where egress is difficult or takes >8mins.

Hall D Transport Line & Tagger Area ODH

– ODH Classifications:

- ODH 0

- From the N. Lintel to the new lintels where egress is not difficult and from the floor to 3' below the ceiling (like the Linacs)
- The tagger enclosure below the tunnel ceiling level and where egress is not difficult
- Tagger service building unless penetrations are open

– Timing

- ODH rules for Hall D Line and Tagger will take effect once gas starts to flow to Hall D fridge ~4-5 weeks.
- ODH system may not be fully completed so a **TOSP** may need to be instituted.

Shutdown Work Summary

Organization: 12 GeV Accelerator

Name: Harwood

System	Tasks
Cryomodules	C100-9 and C100-10 on assembly rails; C100-6 & C100-8 ready for CMTF
Power	Cabling continues. Working shunts and NL RF
Cryogenics	CHL2: Vendors done. Most personnel shifted to HDR; trying to get ready for TL cooldown TL: Ready for cryomodule installation HDR: Continue fab and install; solenoid can installed, using OT; piping going into tunnel; stands are up
Beam Transport	HD "green door": ~2/3 complete ER girders in and dipoles going in with 2A align complete on installed; TR girders coming out (fill); WR floor/ceiling plates grouted, stands 50% assembled; ES stands aligned; WS floor/ceiling plates installed, BCOMs coming out East arcs: vacuum pipes installed in south Girder rebuild: ER, WS, OL/OR, WR, & ES done; D beamline 70% done OL/OR girders 2A align complete; vac install underway S/R dipole rework continues; substantially complete except for BCOMs; 1 st BCOM re-assembled
I&C/Safety	Continued upgrade to NL PSS and ODH mod in NE corner. Continued fab of diagnostics; install of diagnostics ongoing

Work That Went Better Than Expected: BT ahead

Work That Went Slower Than Expected, Delays, and Issues: Cryo on hairy edge

Ongoing Shutdown Work

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

System	Tasks	Status			On Schedule ?	Comments/Concerns
Cryomodules	Test cm's maybe (CMTF?)	X	X	X	late	TEDF recovery problems
Power	Pull/terminate cables where possible	X	X	X	Y	
	Continue RF zone installation	X	X	X	Y	
Cryogenics	Do connections for CHL2	X	X	X	Slightly behind	
	Continue fab and install of HDR	X	X	X	Tight!	Holding....barely
Beam Transport	Continue S/R work in all corners	X	X	X	ahead	
	Continue dipole and girder rework	X	X	X	Y	
	Complete HD tunnel shield wall	X	X	X	Y	
	Lay out Extraction floor/ceiling plates	X	X	X	ahead	
I&C/Safety	Continue upgrade to NL PSS & NE ODH	X	X	X	Y	Delaying to support TL work; Looks like tagger bldg may be ODH1
	Continue fab & install of diagnostics; review of BPM electronics	X	X	X	Y	

Schedule Changes:

- Further BT adjustments to keep work centers busy
- CHL2 completion will be delayed because of shift of personnel to HDR and HDTL
- Likely delay of C100-3 commissioning due to delayed NL cooldown; last January start pushes completion to August
- C100-6 testing likely delayed to ~Dec 1
- Delay of NL PSS due to shift of resources to get TL systems up

Scope Changes:

- Circulator replacement (timing not certain)

Significant Problems Pending (delays, technical issues, resource issues, scheduling): Cryo; Cryomodules; PSS/ODH

Staffing Outlook: Short for Cryo work; could use additional in Safety Systems

Shutdown Work Summary

Organization: Alignment

Name: Chris Curtis

Date: 31 Oct, 2012

Last Two Weeks

Work That Went Better Than / As Expected:

- South Linac final alignment completed.
- C-100 cryomodule fiducialized.
- Line D bolt layout completed.
- East arc alignment for hookup continuing.
- QR / QK girders fiducialized in east recombiner.

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

- NW corner: 0L/0R/1L girders aligned. Minor problems.
- Measurement of arc cartridge locations started. Range of adjustment is an issue.

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 Arcs	x yellow red		Arc cartridge measurements	Ongoing
12 Gev Arcs	x yellow red		East arc initial (2A) alignment	Ongoing
12 Gev S/R	x green red		1R initial (2A) alignment	Now fiducialized
12 Gev	x yellow red		Bolt layout in Extractor	
12 Gev S/R	x green red		1S step 2A align	
12 Gev S/R	x green red		2R stands	

Project	Status	On Schedule?	Tasks	Comments/Concerns
Hall A	x		Moller / Compton alignment	Next few weeks, as parts are available
12 Gev Arcs	x		Final (2B) alignment in the arcs	EES have to complete hookups
FEL	x		Layout & misc. alignment	Starting in next few weeks

New Work Requests Requiring Schedule Changes:

-

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

- Cartridge adjustment range – as above.

Staffing Outlook:

- OK.

Shutdown Work Summary

Organization: EES/Safety Systems Group

Name: Kelly Mahoney

Date: 31 October, 2012



Last Two Weeks

Work That Went Better Than Expected:

- FEL Certification Complete
- Hall D ODH System install Nearing Completion
- North Linac PSS installation and Electrician Support

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

- Test Lab PSS Recovery delays. Access to facility and equipment is on an hour-to-hour basis.

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

Project	Status	On Schedule?	Tasks	Comments/Concerns
Hall D/Tagger ODH	X	Y	Complete Equipment Installation in Hall D. Start Hall D Tagger Ramp Install Start Tagger Vault Layout.	Hall D Installation 95% complete. Tagger Vault will be ODH 1
Test Lab – CMTF	X	N	Recover PSS and ODH Systems. Re-establish AC power. Certify CMTF PSS.	ODH sensors and alarms on-line. AC power requirements identified. Access remains an issue.
Test Lab – VTA	X	N	Recover PSS. Upgrade Interlocks. Certify VTA PSS.	Baseline PSS powered up and OK. Ready to start upgrades. Access remains an issue.
North Linac PSS Upgrade	X	N	Upgrade PSS; Incorporate Hall D transport line. Install PSS components.	Certification rescheduled for Jan '13. Cabling for tunnel devices in place. Starting installation of devices.
MPS	X	N	Order MPS components for Fy'14 startup.	BLM HVPS and VME cards on order.
Flood Recovery	X		Continue assessment. Repair critical infrastructure. Cost estimates to Facilities.	Evidence of significant corrosion of rack wiring. Hall C ODH components on order.
FEL Support	X	Y	Support FEL startup and operations.	PSS Ready.

New Work Requests Requiring Schedule Changes:

- Test Lab Recovery will postpone PSS certification until mid-January '13.
- HDIce facility upgrades will require extension of ODH system.
- FEL Support for new equipment and configurations scheduled for 3rdQ FY13.
- **Hall C Flood Recovery FY 13 work - Stabilization.**



Figure 1 HD Tagger Ramp PSS Installation

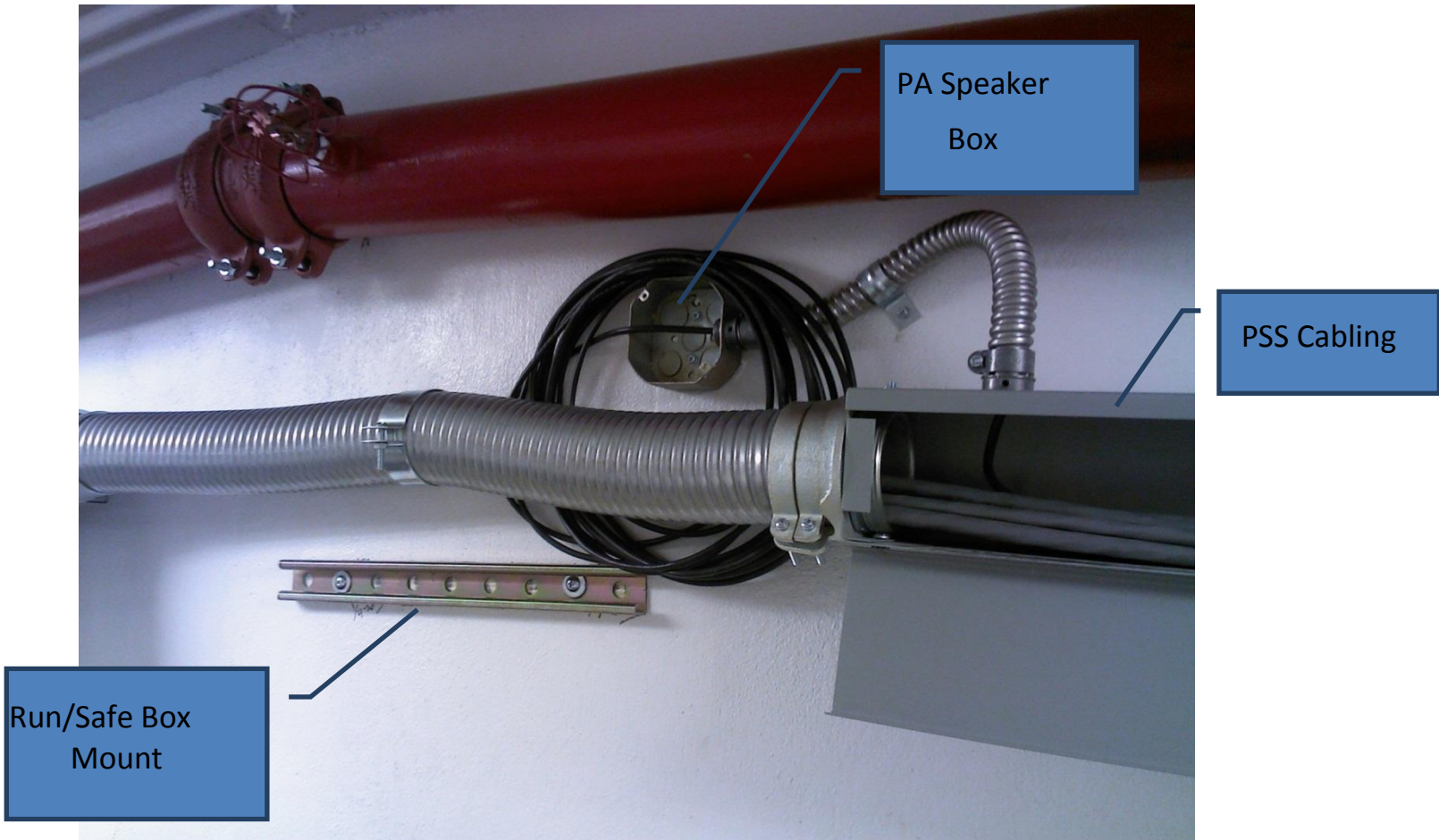


Figure 2 HD Tagger Ramp PSS Installation



Figure 3 Hall D ODH Sampling Monitor

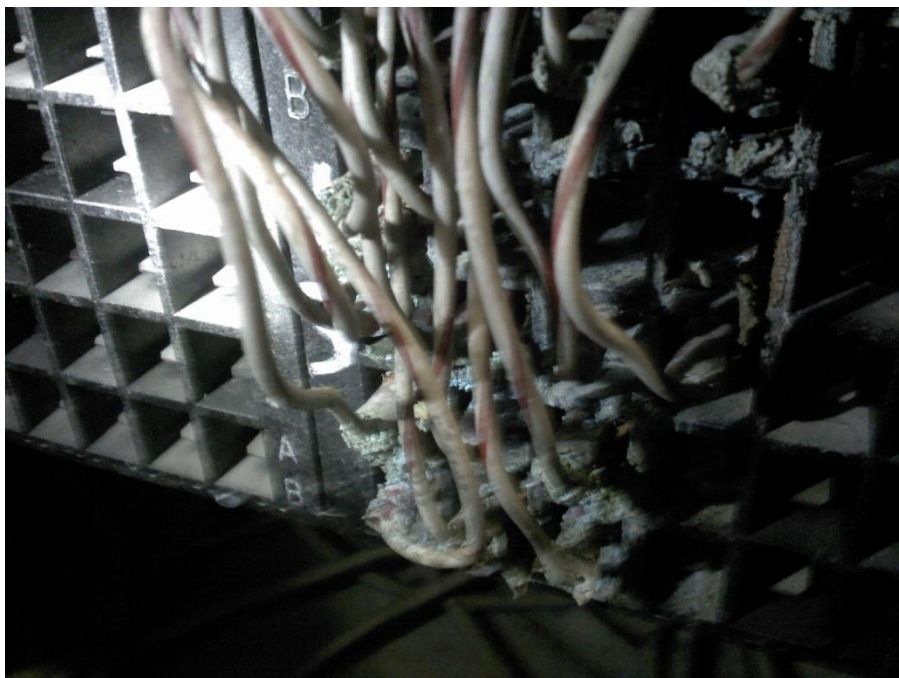


Figure 3 Hall C PSS Cross Connect Corrosion

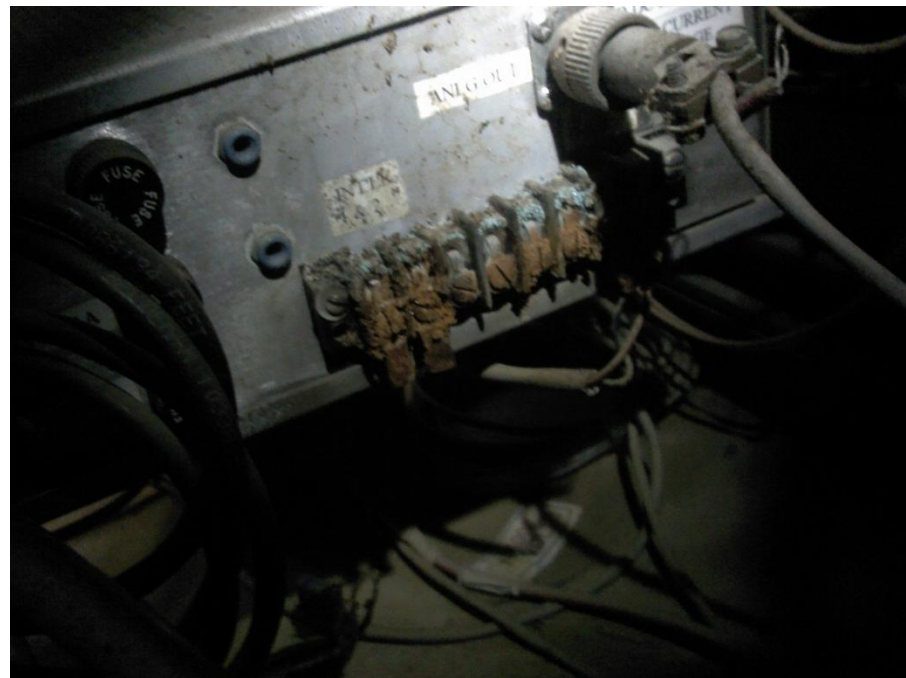


Figure 4 Hall C MPS Equipment Damage/Corrosion

CMTF PSS Recovery



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

- Test Lab Recovery schedule continues negative rate of change.
- Requirements for PSS rack protection and operations during MCC renovation not nailed down.
- Hall D Tagger Classified as ODH 1. Requires additional ODH monitoring.
- MPS implications of Hall B operating at up to 5uA – Under Study
- **Multiple incidents of work by several groups affecting PSS configuration.**
 - Need to ensure work planning identifies PSS infrastructure.
 - If PSS infrastructure encountered during work, pause and call K. Mahoney[7024], H. Robertson [7285], S. Suhring [7670], or Crew Chief on call [7045, 869-7050].

Staffing Outlook:

- SSG down two Engineer FTE. Thanks for support from Ops, EES I&C, EES Support, RadCon, and SRF.

Damage/Changes to PSS Functions During Long Shutdown



Shutdown Work Summary

Organization: Hall B

Name: Doug Tilles

Date: 10-31-12

Last Two Weeks

Work That Went Better Than Expected:




- Cable Removal

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

- Removal of Panel 2&3 TOF **Completed**

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
TOF removal	x		New base line	
South-clam removal	x		New base line Started 10-30-12 Start date 10-29-2012	Removal of South Clam Shell and Large Angle Calorimeters will be completed within 3 weeks.
Torus removal	x		New base line 1-15-2013	

New Work Requests Requiring Schedule Changes:

- Fire protection changes due to Rack placement

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

- TEDF setup for HTCC cleanroom Behind schedule
- Laser transfer to EEL for 12 GeV Behind schedule

Shutdown Work Summary

Organization: Hall C

Name: Walter Kellner

Date: 10-31-12

Last Two Weeks

Work That Went Better Than Expected:

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
6Gev	x 	y	Concrete cutting is complete, removing concrete is 50% complete	Work is on hold for ~ 1-2 weeks because of SOS prep work
6Gev	x 	y	Removing the SOS dipole and remaining 6 lead panels	Work is delayed by 2 days
6Gev	x 	y	Installing 2 SOS rails, removing the platform, stairs and hydraulic cylinders.	Prep work for shield hut doors removal

New Work Requests Requiring Schedule Changes:

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

Staffing Outlook:



Shutdown Work Summary

Organization: Hall D

Name: Tom Carstens

Date: October 31, 2012

Last Two Weeks

Work That Went Better Than Expected: None

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

Installation of the current leads inside the Solenoid Cryo Distribution Box.

I had estimated that this would take 3 days however it took twice as long which delayed the start both coil lead connection and the sensor wiring.

Ongoing Shutdown Work

Connect Distribution Can to Solenoid Magnet (expected to take 6 more weeks).

Complete the LCW flex lines for Solenoid power supply. (75% complete)

Install Pick-up Coils in Bore of Solenoid (90% completed)

Continue Building Solenoid Controls Rack (95% complete, testing continues)

Install BCAL Light Guides (on hold for lack of man-power until Dec 15th?)

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

Project	Status	On Schedule?	Tasks	Comments/Concerns
Connect Cryo Distribution Box to Solenoid Magnet	X		<ol style="list-style-type: none"> 1. Connect Current leads 2. Fab/test/install internal Lhe/LN2 piping 3. Assemble Solenoid Vacuum Panel 4. Install/connect/test sensor wiring 5. Fab/insulate/ install 80K shields 6. Install vacuum components 7. Pump down/leak check piping and vacuum spaces 	Tasks are on-going. Since much of the work is fab/assembly to match coils to box 7 more weeks is "best case" estimate.
Hall infrastructure needed for cool down	X		<ol style="list-style-type: none"> 1. Install Cable trays for power leads and magnet/cryo control cabling 2. Assist Cryo's installation of transfer line. 3. Set up Cool-down and magnet test area in Hall 	<p>Item 1 is started, but on hold for cable tray expected 19 Nov</p> <p>Item 2 has started, all three transfer line stands are in place</p>
Start of gluing/testing BCAL light guides (3840 total)	X		120 days behind scheduled start date 15 Dec	Delivery of light guides delayed start. Modified fixturing still untested meaning 12 weeks installation time is "best guess". Limited effect to overall schedule

New Work Requests Requiring Schedule Changes:

- None

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

- Because maximum effort will be to complete the Cryo Distribution Box and transfer line installation by Dec 15th, (two shifts until task is completed and cool down of the Solenoid starts) most of the other work will be delayed until this is complete.

Staffing Outlook:

- Have pulled technicians from the Forward Drift Chamber assembly to meet short term (Now until Dec 15th) “published” schedule.