

Hi All,

Below is the plan that was discussed at May 20th meeting:

- 1.) Starting time when commercial power will be lost is 7:00 am. (Saturday June 20th, 2009) - both substations will be turned off.
- 2.) Maintenance will first focus on Feeder 49, substation 1 and 2, and in parallel, the south side panels, PHP-D0-2, PHP-D0-10, etc. The emergency power diesel generator will run, powering EM circuits. This is the upper right side in the single line drawing (434389, attached).
- 3.) After the above work is completed, it will be powered up to allow operations to start the helium expansion engines and recover the helium refrigerator. The south side of DAB, the outback, and the operations technician portakamp will have power.
- 4.) Maintenance then shifts to Feeder 49, substation 1 side (substation 1 locked out). This is the left side in the single line drawing.
- 5.) After the substation 1 side is completed and commercial power is restored, Lonnie Huitt (LRP 630-266-1179, cell 630-659-6970) will notify Mike Matulik (LRP 630 266-0551, cell 630-399-7289)
- 6.) Mike Matulik will move the power cord plugs for the VLPC lid heaters, Platform UPS, and HVAC PLC UPS from emergency power to commercial power outlets.
- 7.) When done, Mike Matulik notifies Lonnie Huitt. Lonnie will then cut power (lock out 400 Amp breaker from commercial power) and the diesel generator supplied power to the emergency power transfer switch in utility room 303.
- 8.) Preventive maintenance on the transfer switch and all EM panels happen in parallel. Hopefully this work can be completed in one hour's time. Commercial power remains on during this time.
- 9.) After the PM on the emergency power transfer switch and EM panels is completed, the commercial power supply to the transfer switch is restored. Likewise, the diesel generator is also put back on-line. Mike Matulik moves the power plug for the VLPC lid heaters/Platform UPS back into the emergency power outlet.
- 10.) Lonnie Huitt will confirm with Mike Matulik that work is complete. Electrical maintenance work is expected to be completed by 15:00. The operations group finishes any recovery items.

Thanks to all parties involved in this planning.

Mike Sarychev

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Post Script notes.

Responsible parties for D-Zero are Mike Matulik (LRP 63-266-0551, cell 630 399-7289), Mike Sarychev (LRP 630-218-4294, cell 847-400-4463), Pete Simon (LRP 888-244-9534), and the ops shifter, John Najdzion (cryo control room - x2849, LRP 630-314-5199). Jim Fagan and Bob Barger will be present as well. Pete will post notices on the doors to notify D-Zero occupants of the outage. Mike Sarychev will post a D0news. Mike Sarychev will arrive early and prepare the cryogenic system for the outage. The super conducting solenoid will be kept at liquid helium

temperature. VLPC cryostats will be warmed up to 50 K. Dispatch will be notified and ODH chassis will be bypassed prior to the outage.

Cryo and silicon and building operations will be recovered immediately after the outage. Detector electronics are left off until after Monday's AM outage and testing. MCH shunt trip test and Platform shunt trip test, and water leak detector testing will happen on Monday, June 22nd, after the 7:00-7:30 site wide outage.

The impact during the loss of emergency power (for less than 1 hour) is the following:

- A.) Cryogenic air system and Silicon air systems shut off. Air is supplied from the backup air tube trailer (about 6 hours reserve supplying both systems, therefore okay). Instrument air pressure regulator should be adjusted. Solenoid valve in room 215 silicon purge system) must be manually open to allow air flow from the trailer and not to use Nitrogen from bottles.
- B.) Loss of fans EF-6 & EF-7 and AHU-1 & AHU-2 fans. Collision hall is off limits during this time, all Supervised Access keys must be in. Collision hall becomes ODH class 1. If necessary, access to the CH is by ODH class 1 rules.
- C.) Loss of cryo system vacuum pumps. Will need to isolate some vacuum jackets, okay for 90 hours.
- D.) Cryo UPS supplies power for control systems (should be good for 1 hour).
- E.) Elevator has no power.
- F.) HVAC I/O bases lose power, HVAC PLC runs on small UPS which is put on commercial power.
- G.) Silicon chillers trip off. Silicon cooling flow stops. Silicon will warm about 5-10 C from it's current temperature at that time.

-----Original Message-----

**From:** Michael Sarychev [mailto:sarychev@fnal.gov]

**Sent:** Friday, May 15, 2009 10:12 AM

**To:** Michael Sarychev; Greg Gilbert; sprosty@fnal.gov; richberg@fnal.gov

**Cc:** 'Russ Rucinski'; d0rc@fnal.gov; tmartin@fnal.gov; matulik@fnal.gov; 'Anthony J. Kanyok'; Bill Shull; Lonnie Huitt

**Subject:** RE: Feeder 49 maintenance - correction

Due to some scheduling conflicts, our meeting time will move to 2:00 PM May 20th, and the conference room will be "5th Dimension" - DAB 5th floor corner.corner. Sorry for any possible inconvenience.

Mike Sarychev

-----Original Message-----

**From:** Michael Sarychev [mailto:sarychev@fnal.gov]

**Sent:** Friday, May 15, 2009 9:26 AM

**To:** Greg Gilbert; sprosty@fnal.gov; richberg@fnal.gov

**Cc:** 'Russ Rucinski'; d0rc@fnal.gov; tmartin@fnal.gov; matulik@fnal.gov; 'Anthony J. Kanyok'; Bill Shull; Lonnie Huitt

**Subject:** RE: Feeder 49 maintenance

Hi All,

I reserved a conference room on 6th floor of DZero building (right in the corner) for Wednesday, May 20th, 13:30. See you there.

Thanks,

[Mike Sarychev](#)

-----Original Message-----

**From:** Greg Gilbert [mailto:[gilbert@fnal.gov](mailto:gilbert@fnal.gov)]

**Sent:** Thursday, May 14, 2009 4:04 PM

**To:** 'Michael Sarychev'; [sprosty@fnal.gov](mailto:sprosty@fnal.gov); [richberg@fnal.gov](mailto:richberg@fnal.gov)

**Cc:** 'Russ Rucinski'; [d0rc@fnal.gov](mailto:d0rc@fnal.gov); [tmartin@fnal.gov](mailto:tmartin@fnal.gov); [matulik@fnal.gov](mailto:matulik@fnal.gov); 'Anthony J. Kanyok'; Bill Shull; Lonnie Huitt

**Subject:** RE: Feeder 49 maintenance

Michael:

Sounds good. It looks like the soonest that all of we FESS/Ops folks are available is Wednesday May 20<sup>th</sup> anytime between 1330hrs and 1500 hrs. Please advise.

Greg

**From:** Michael Sarychev [mailto:[sarychev@fnal.gov](mailto:sarychev@fnal.gov)]

**Sent:** Thursday, May 14, 2009 11:00 AM

**To:** [sprosty@fnal.gov](mailto:sprosty@fnal.gov); [richberg@fnal.gov](mailto:richberg@fnal.gov); [gilbert@fnal.gov](mailto:gilbert@fnal.gov)

**Cc:** Russ Rucinski; [d0rc@fnal.gov](mailto:d0rc@fnal.gov); [tmartin@fnal.gov](mailto:tmartin@fnal.gov); [matulik@fnal.gov](mailto:matulik@fnal.gov)

**Subject:** Feeder 49 maintenance

Hi Greg, Rich and Sue,

There is a planned feeder 49 power outage tentatively scheduled for June 20th (during the long shutdown). The duration is 8 hours. As you might recall from the past shutdowns, this power outage badly affects our cryogenic system, if all 8 hours the whole Dzero building would have no power (and no back up generator for our control system). We need to minimize the refrigerator's downtime, since we need to keep our superconducting solenoid and VLPC cryostats cold. The solenoid have a bad joint inside, and thermo cycling might lead to the loss of the solenoid, and consequently terminate Dzero experiment and the whole Tevatron program. Back in 2007 (and 2006 also) we met together before the shutdown and developed a plan how to handle it. We did it in three steps, so the refrigerator was off for only two hours, and the generator was serviced when the commercial power was back. This is a really serious matter that might affect the Lab's HEP program. Let's meet together again and discuss how we will handle this power outage. I could reserve a conference room at D0 at the time that is convenient for you.

Thanks,

Mike Sarychev

x5526