MICE Work List – w/c 18th January 2016

SS Pressure Heaters

- Mapping of software for reading pressures and controlling set points from E5AC unit via RS-485 interface. Ongoing J. Wilson E5AC software allowed pressures to be read back, and set points set. P.Hanlet asked for the location within the E5AC memory registers of various data, J. Wilson provided this list.
- SSD CX11 temperature sensor is now been read and interlocked via CX12 drawings to be updated. SSU sensors to be checked.

SS Interlocks and sensors

- SSU temperature sensors believed to have poor calibration: CX5, CX6, CX8, CX9, SD12 and SD 19. Ongoing. P. Hanlet provided with resistances from May 2015 to assist in mapping sensors correctly.
- SSD temperature sensors believed to have poor calibration: CX5, CX6, CX7, CX8, CX9, CX3 and CX4. Ongoing. P. Hanlet provided with resistances from May 2015 to assist in mapping sensors correctly.
- E5AC ON signal to control system requires commissioning. P. Owens to verify control system function. System must then be commissioned.
- SSD temperature interlock read from SD8 is now read from CX13. This has been updated in the drawings, however P. Owens should verify GUI displays information.
- Helium level interlocks must only turn off when lower level gauge is low, currently it trips on higher or lower level low.
- Change over water solenoids for SS diode absorbers trays to be connected and commissioned.

SS Quench Detector rack

- Equipment has been sent to FNAL for modification must be reinstated when it returns.

SS Anti-icing

- Air blower system in place to circulate air close to feedthroughs, these needs to be captured within our drawings.
- Self-regulating Trace heating to be installed, power must be provided and alarm handling shall be done via the canbus. Drawings shall be produced and technician effort should be provided to A. Bross
- Obsolete 24V fans cannot be removed until air blowers have been fitted and tested.

SS Magnet protection changes

- DCCTs identified, location and integration must be designed and then the units can be installed and tested. (DCCT head, controller and interface unit supplied by FermiLab)
- SSU charging diodes configured to unipolar operation (Sandor to confirm)
- SSU absorber diodes configured to unipolar operation
- SSD charging diodes configured to unipolar operation

- SSD absorber diodes configured to unipolar operation
- SSU charging switch installed in both positive and negative PSU outputs (Contactor not solid state) – control interface needs to be updated, installed and tested
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- SSU dump resistor installed (Supplied by FermiLab) - May require the magnet cable termination block to be modified
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- Testing of PSU controller into 0.5 ohm parallel load, with magnet to verify operation.
- E-stop circuit to be designed and implemented. (Procedure issued by DL, but needs to be re-assessed and approved by FermiLab once SS circuit mods agreed)

Vacuum

- Backing line scroll pumps. Require commissioning
- RS 232 to additional turbo's on SSD and SSU. System to be commissioned.
- Hard wired connection to prevent magnet PSU's from turning on when turbo pumps are running must be provided.
- The pneumatic valves (installed to replace the hand valves) need to be wired and commissioned.
- Vacuum control station 9 blister, 8904 modules must be moved up to make way for additional canbus module, required for turbo interlocking.
- Set of drawing shall be provided of the vacuum control station 9 rack.

Oxygen depletion systems

- Requirement of 7th Beacon and Klaxon within the hall to be discussed. Update
- Request to implement readback of oxygen depletion system in the control system. Verification of exactly what information is required and how this can be achieved.

FC interlocks

- Earth fault drawing to be updated.
- E-stop circuit to be designed and implemented. (Awaiting SS review, combined system)
- Review of FC cable numbers.

FC quench detection rack

- Data logger upgrade. Ongoing awaiting information from J. Wilson.
- Trend data for FC Data logger

FC PSU

- Optimisation of PSU stability parameters.
- Check of spurious quench trip hypothesis. Cut power to power supply and observe controller operation.

FC anti-icing heaters

- Air blower system in place to circulate air close to feedthroughs, this needs to be captured within our drawings

FC #1 cooling channel modification

- Manufacture and fit mounting bracket for voltage tap and load cell interface boxes.
- Manufacture and fit voltage tap and load cell interface boxes.
- Rerun and fit additional DC magnet cables to FC to permit polarity changeover at DC link box.
- Connect load cell, voltage taps and temperature sensors cables.
- Calibrate Lakeshore 218's for FC #1 sensor map.
- Replace Load cell amplifiers for FC #1 in RRM2.
- Verify correct orientation of voltage taps to quench detection system.
- Commission load cell amplifier and temperature sensor readback.
- Verify correct DC connections for Solenoid and Flip-mode of FC #1.

EMR

- Remove cables and tray work to reposition EMR. Survey to be carried out and cable management to be advised by EMR responsible person.
- Fit plinth to rack. Ongoing

Tracker

- Wiener PSU installation and commissioning.
- Test and prove contactors
- Vesda smoke detector termination and commissioning

AC distribution

- Update Power distribution records
- RR2 to be updated in HevaComp
- Records of testing to be made available.
- Warming of trunking close to compressors to be investigated.

Decay Solenoid

- Progress repair and delivery of PSU from FuG.
- Installation and commissioning of repaired PSU.
- Diodes required for QD battery back-up.
- Temperature instrumentation upgrade.

Hydrogen System

- Cabinet door cut out and Perspex fitted in second rack
- Hydrogen Level interface relays

- Hydrogen level sensing commissioning
- Cryocooler for LH2 system moved from Vacuum control station 9 rack to H2 control room information to the control system is not available in new location, request to resolve.

Misc

- 60Hz inverter required for Sumitomo compressor units
- Cat5e cable to SW corner of Hall for environmental control. P.Hanlet to advise
- Oxygen monitors in tracker nitrogen purge line, need serial cable to RR1.