

## Post Beam Checklist - Extended Maintenance

Date \_\_\_\_\_ Time \_\_\_\_\_

Last Revised: 08 May 2018

**This checklist will be performed when the maintenance period is expected to last more than 2 weeks**

Person(s) Completing Checklist \_\_\_\_\_

**\*\*\*\*\* BE MINDFUL OF AND OBEY ALL POSTED RADIATION SIGNS AND BOUNDARIES\*\*\*\*\***

### ***Power supplies:***

#### **L-HRS Magnets**

- \_\_\_\_\_ Remotely set Q1 to 0 amps.
- \_\_\_\_\_ Remotely set Q2 to 0 amps.
- \_\_\_\_\_ Remotely set Q3 to 0 amps.
- \_\_\_\_\_ Remotely set Dipole to 0 amps.

#### **R-HRS Magnets**

- \_\_\_\_\_ Remotely set Q1 to 0 amps.
- \_\_\_\_\_ Remotely set Q2 to 0 amps.
- \_\_\_\_\_ Remotely set Q3 to 0 amps.
- \_\_\_\_\_ Remotely set Dipole to 0 amps.

### ***Target:***

- \_\_\_\_\_ Install protective guards on target chamber and spectrometers entrance windows.

**\*\*\*\*\*Important: DO NOT BLEED UP TARGET CHAMBER... Get approval from Target Group before doing any work on chamber or CELL RUPTURE might result\*\*\*\*\***

### ***Spectrometers:***

#### **L-HRS**

- \_\_\_\_\_ Cold cathode reading \_\_\_\_\_ Convectron \_\_\_\_\_ Turbo RPM \_\_\_\_\_ Turbo current \_\_\_\_\_
- \_\_\_\_\_ Close spectrometer turbo valve. Switch located in rack 1H71B01
- \_\_\_\_\_ Turn off spectrometer turbo and unplug its fans. Controller is located in rack 1H71B01
- \_\_\_\_\_ Turn off spectrometer turbo backing pump and vented to atm. **Ensure turbo has spun down before shutting off backing pump.**
- \_\_\_\_\_ Turn off spectrometer cold cathode gage located in rack 1H71B01
- \_\_\_\_\_ Leave spectrometer convectron gage ON located in rack 1H71B01
- \_\_\_\_\_ Install exit window guards and VDC covers
- \_\_\_\_\_ Bleed up spectrometer vacuum to atm. Valve located on turbo manifold near dipole entrance

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## **R-HRS**

- \_\_\_\_\_ Cold cathode reading \_\_\_\_\_ Convectron \_\_\_\_\_ Turbo RPM \_\_\_\_\_ Turbo current \_\_\_\_\_
- \_\_\_\_\_ Close spectrometer turbo valve. Switch located in rack 1H72B01
- \_\_\_\_\_ Turn off spectrometer turbo and unplug its fans. Controller is located in rack 1H72B01
- \_\_\_\_\_ Turn off spectrometer turbo backing pump and vented to atm. **Ensure turbo has spun down before shutting off backing pump.**
- \_\_\_\_\_ Turn off spectrometer cold cathode gage located in rack 1H72B01.
- \_\_\_\_\_ Leave spectrometer Convectron gage **ON** located in rack 1H72B01
- \_\_\_\_\_ Install exit window guards and VDC covers
- \_\_\_\_\_ Bleed up spectrometer vacuum to atm. Valve located on turbo manifold at dipole entrance

## **L-HRS Magnets**

### *Q1:*

- \_\_\_\_\_ Ensure 0 current status on local readout
- \_\_\_\_\_ Turn off power to power supply and main disconnect switch. Lock out main disconnect with an administrative lock

### *Q2:*

- \_\_\_\_\_ Ensure 0 current status on local readout
- \_\_\_\_\_ Turn off power on power supply and main disconnect switch. Lock out main disconnect with an administrative lock

### *Q3:*

- \_\_\_\_\_ Ensure 0 current status on local readout
- \_\_\_\_\_ Turn off power on power supply and main disconnect switch. Lock out main disconnect with an administrative lock

### *Dipole:*

- \_\_\_\_\_ Ensure 0 current status on local readout
- \_\_\_\_\_ Turn off power on power supply and main disconnect switch. Lock out main disconnect with an administrative lock

## **R-HRS Magnets**

### *Q1:*

- \_\_\_\_\_ Ensure 0 current status on local readout
- \_\_\_\_\_ Turn off power to power supply and main disconnect switch. Lock out main disconnect with an administrative lock

### *Q2:*

- \_\_\_\_\_ Ensure 0 current status on local readout
- \_\_\_\_\_ Turn off power on power supply and main disconnect switch. Lock out main disconnect with an administrative lock

### *Q3:*

- \_\_\_\_\_ Ensure 0 current status on local readout

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\_\_\_ Turn off power on power supply and main disconnect switch. Lock out main disconnect with an administrative lock

## *Dipole:*

\_\_\_ Ensure 0 current status on local readout

\_\_\_ Turn off power on power supply and main disconnect switch. Lock out main disconnect with an administrative lock

## **Beam Line**

\_\_\_ Make note of the following cold cathode readout located in rack # 1H75B20

VCG1C20 \_\_\_\_\_ VCG1P01 \_\_\_\_\_ VCG1P02 \_\_\_\_\_ VCG 1P03 \_\_\_\_\_

Moller Turbo \_\_\_\_\_ Girder Turbo \_\_\_\_\_

\_\_\_ Call MCC and ask them to command all beamline valves to the CLOSED position.

VBV1C20, VBV1C20A, VBV1H00, VBV1H00A, VBV1H00B, VBV1H04B & VBV1H04C

\_\_\_ Ensure all beamline valves are in the closed position.

\_\_\_ Ensure all local beam line switches are in the OFF/CLOSED position. Turn beam line valve control key switch to maintenance. These switches are located in rack 1H75B20

\_\_\_ Unplug valves upstream and downstream of target chamber

\_\_\_ Turn off Moller turbo and fan. Controller is located on top of Raster safe

\_\_\_ Turn off Moller turbo backing pump and vent to atm. **Ensure turbo has spun down before shutting off backing pump.**

\_\_\_ Turn off beamline girder turbo and fan. Controller is located in rack 1H75B09

\_\_\_ Turn off beamline girder turbo backing pump and vent to atm. **Ensure turbo has spun down before shutting off backing pump.**

\_\_\_ Exit beamline Convector gage reading \_\_\_\_\_. Located in rack 1H75B04

\_\_\_ Turn off exit beamline turbo and fan. Controller is located in rack 1H75B04.

\_\_\_ Turn off exit beamline turbo backing pump and vent to atm. **Ensure turbo has spun down before shutting off backing pump.**

\_\_\_ Turn off exit beamline Convector gage located in rack 1H75B09.

## **Dump**

\_\_\_ Unplug diffuser cooler motor and unplug cooling fan

\_\_\_ Visually inspect area for water leaks

## **Hall**

\_\_\_ Inspect power supply platforms, spectrometers, and the rest of the Hall, looking for water leaks and cryogenic plumes

\_\_\_ Contact DC Power Group to make sure Moller Quads are turned off

\_\_\_ Unplug and lock-out the three Moller power supplies located in rack # 1H75B13

\_\_\_ Turn off and lock-out Moller box power supply near roll-up door.

\_\_\_ Make HALOG entry:

“Checklist Complete and Target Window and spectrometer Guards are installed”

“The tech on call at shutdown is \_\_\_\_\_”

Note any outstanding issues not completed on the checklist.

Note any special requirements or restrictions