



**COLLIDER-ACCELERATOR DEPARTMENT**

Title: Power Supply System Lockout Procedure for RHIC Service Building Work

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Group: Collider Power Supply

**Group Leader concurrence indicates procedure is still current.**

Group Leader: Donald Bruno *Signature on File* Date: 1/11/07

**This Procedure Must Be Reviewed By The Technical Supervisor Prior to use.  
If This Procedure Does Not Reflect Current Equipment/Processes  
Then Immediately Notify The Group Leader**

# Power Supply System Lock-Out Procedure for RHIC Service Building Work

This document will describe the lock-out procedure for locking out the RHIC blue and yellow ring IR power supplies and the RHIC main power supplies for RHIC service building work. Please note lock/key number in blank. Sign and date this form at the bottom when complete.

## **I. Main Power Supplies in 1004-B:**

- |   |  |
|---|--|
| 1 Turn off the Control Power Switch:<br>Front Panel following PS.<br>(PPE = class 0+) | PBDFT _____<br>PBDR _____<br>PBQFT _____<br>PBQR _____<br>PYDFT _____<br>PYQFT _____<br>PYQR _____<br>PYDR _____ |
|---|--|

Before locking out the 480V disconnects observe 480V on all three line to line voltages on the volt meters on the front of the power supplies. Next, make sure all of the lights are flashing on the voltage monitor gauges on the back of the p.s.

- |   |  |
|---|--|
| 2. Lock out the following 480V disconnect Switches:<br>(PPE = class 4)<br>(These have kirklocks, take key with you) | SBDFT _____<br>SBDR _____<br>SBQFT _____<br>SBQR _____<br>SYDFT _____<br>SYQFT _____<br>SYQR _____<br>SYDR _____ |
|---|--|

After you lock out the 480V disconnect switch make sure all three line to line voltages on the volt meters on the front of the power supplies read zero. Next make sure all of the lights are flashing are OFF on the voltage monitor gauges on the back of the p.s.

3. If necessary, contact Carl Schultheiss or Fred Orsatti for proper shutdown of the Output Circuit Compartments. The engineer watching over this lockout will determine if the OCC requires lockout. If the OCC does not need to be locked out step 3 can be skipped.

OCC \_\_\_\_\_

If Carl Schultheiss or Fred Orsatti cannot be reached, then turn off and lock out the following circuit breakers, (Panel P4BRP4 breakers PPE = class 0+)

In panel P4BRP4 lockout breakers:

13 Dipole Yellow OCC	_____
23 Quad Yellow OCC	_____
8 Dipole Blue OCC	_____
22 Quad Blue OCC	_____

Inside the main p.s. labeled PBDFT on the right hand side, lock out the following white 110Vac breakers (PPE = 0+):

- CB09 Blue Dipole Ramp Quad Ramp \_\_\_\_\_
- CB10 Yellow Dipole Ramp Quad Ramp \_\_\_\_\_
- CB11 Blue Dipole Flattop Quad Flattop \_\_\_\_\_
- CB12 Yellow Dipole FT Quad FT \_\_\_\_\_
- CB13 Yellow Quad OCC \_\_\_\_\_
- CB14 Blue Quad OCC \_\_\_\_\_
- CB15 Yellow Dipole OCC \_\_\_\_\_
- Blue Dipole OCC \_\_\_\_\_

Wait 2 minutes. In panel P4BRP4 lockout breakers (PPE = 2):

- 7, 9, 11 Dipole Yellow OCC Blower & Cooling Elements \_\_\_\_\_
- 2, 4, 6 Dipole Blue OCC Blower & Cooling Elements \_\_\_\_\_
- 16, 18, 20 Quad Blue OCC Blower & Cooling Elements \_\_\_\_\_
- 17, 19, 21 Quad Yellow OCC Blower & Cooling Elements \_\_\_\_\_

**II. Insertion Region Power Supplies:**

1. Bldg. 1004-B (PPE = 4):
  - a.) Lockout PSB1, Brkr. 2R \_\_\_\_\_
  - b.) Lockout PSB2, Brkr. 4 \_\_\_\_\_
  
2. Bldg. 1006-B (PPE = 4):

Using Cable Lock-out....

  1. Lock out PSB1, Bkr's 4 and 7, \_\_\_\_\_
  
3. Bldg. 1008-B (PPE = 4):

Using Cable Lock-out....

Lock out SWBD MDPB Bkr's 3L and 4, \_\_\_\_\_
  
4. Bldg. 1002-B (PPE = 4):

Using Cable Lock-out....

Lock out SWBD MDP, Bkr's 3L and 4, \_\_\_\_\_
  
5. Bldg. 1012-A (PPE = 4):

Lock out Main Disconnect S12 AIR 480 \_\_\_\_\_
  
6. Bldg. 1010-A :

Note: Power Down Dump Switch APC

Using Cable Lock-out....

  - a.) Lock out R10ADS2/R10ADS3, Blu Dump switch (PPE = 0+): \_\_\_\_\_
  - b.) Lock out R10ADS4/R10ADS5, Yel Dump switch (PPE = 0+): \_\_\_\_\_
  - c.) Lockout Main Disconnect S10AIR480 (PPE = 4) \_\_\_\_\_

All Keys Are To Be Placed In Lock Box Kept At Building 1004-B

Lock out performed by: \_\_\_\_\_ Date: \_\_\_\_\_

LIFE NUMBER: \_\_\_\_\_

Lock out performed by: \_\_\_\_\_ Date: \_\_\_\_\_

LIFE NUMBER: \_\_\_\_\_