

**I. Work requester fills out this section.**

Standing Work Permit

Requester J. SHEA Date: 1/17/03 Ext. 3454 Dept/Div/Group: PO / PHENIX  
 Other Contact person (if different from requester): \_\_\_\_\_ Ext. \_\_\_\_\_  
 Work Control Coordinator PETE KROON Start Date 1/17/03 Est. End Date 1/23/03  
 Brief Description of Work: SEE ATTACHED

Building 1008 Room IR Equipment LADDER Service Provider \_\_\_\_\_  
HAND TOOLS

**2. WCC, Requester/Designee, Service Provider, and ES&H (as necessary) fill out this section or attach analysis.**

**ES&H ANALYSIS**

**Radiation Concerns**  None  Activation  Airborne  Contamination  Radiation  Other \_\_\_\_\_  
 Special nuclear materials involved, notify Isotope Special Materials Group  Fissionable materials involved, notify Laboratory Criticality Officer

**Safety Concerns**  None  Ergonomics  Transport of Haz/Rad Material  
 Adding/Removing Walls or Roofs  Confined Space\*  Explosives  Lead\*  Penetrating Fire Walls  
 Asbestos\*  Corrosive  Flammable  Magnetic Field\*  Pressurized Systems  
 Beryllium\*  Cryogenic  Fumes/Mist/Dust\*  Material Handling  Rigging/Critical Lift  
 Biohazard\*  Electrical  Heat/Cold Stress  Noise\*  Toxic Materials\*  
 Chemicals\*  Excavation  Lasers\*  Non-ionizing Radiation\*  Vacuum  
 Oxygen Deficiency\*  Other \_\_\_\_\_

\*Does this work require medical clearance or surveillance from the Occupational Medicine Clinic?  Yes  No

**Environmental Concerns**  None  Work impacts Environmental Permit No. \_\_\_\_\_  
 Atmospheric Discharges (rad/non-rad)  Land Use  Soil activation/contamination  Waste-Mixed  
 Chemical or Rad Material Storage or Use  Liquid Discharges  Waste-Clean  Waste-Radioactive  
 Cesspools (UIC)  Oil/PCB Management  Waste-Hazardous  Waste-Regulated Medical  
 High water/power consumption  Spill potential  Waste-Industrial  Underground Duct/Piping  
 Other \_\_\_\_\_

Waste disposition by: \_\_\_\_\_

**Pollution Prevention (P2) / Waste Minimization Opportunity:**  None  Yes

**FACILITY CONCERNS**  None

Access/Egress Limitations  Electrical Noise  Potential to Cause a False Alarm  Vibrations  
 Configuration Control  Impacts Facility Use Agreement  Temperature Change  Other \_\_\_\_\_  
 Maintenance Work on Ventilation Systems  Utility Interruptions

**WORK CONTROLS**

**Work Practices**

None  Exhaust Ventilation  Lockout/Tagout  Spill Containment  Other \_\_\_\_\_  
 Back-up Person/Watch  HP Coverage  Posting/Warning Signs  Time Limitation  
 Barricades  IH Survey  Scaffolding-requires inspection  Warning Alarm (i.e. "high level")

**Protective Equipment**

None  Ear Plugs  Gloves  Lab Coat  Safety Glasses  
 Coveralls  Ear Muffs  Goggles  Respirator  Safety Harness  
 Disposable Clothing  Face Shield  Hard Hat  Shoe Covers  Safety Shoes  Other \_\_\_\_\_

**Permits Required** Permits must be valid when job is scheduled.

None  Cutting/Welding  Impair Fire Protection Systems  
 Concrete/Masonry Penetration  Digging/Core Drilling  Rad Work Permit-RWP No. \_\_\_\_\_  
 Confined Space Entry  Electrical Working Hot  Other \_\_\_\_\_

**Dosimetry/Monitoring**

None  Heat Stress Monitor  Real Time Monitor  TLD  
 Air Effluent  Noise Survey/Dosimeter  Self-reading Pencil Dosimeter  Waste Characterization  
 Ground Water  O<sub>2</sub>/Combustible Gas  Self-reading Digital Dosimeter  Other \_\_\_\_\_  
 Liquid Effluent  Passive Vapor Monitor  Sorbent Tube/Filter Pump

**Training Requirements** (List below specific training requirements)

RA20 ACCESS TRAINING  
FALL PROTECTION OR PHENIX AWARENESS READ AND ACKNOWLEDGE

Based on analysis above, the Walkdown Team determines the risk, complexity, and coordination ratings below.

**ES&H Risk Level:**  Low  Moderate  High  
**Complexity Level:**  Low  Moderate  High  
**Work Coordination:**  Low  Moderate  High

If using the permit when all hazard ratings are low, only the following need to sign:

\_\_\_\_\_  
WCC DATE  
 \_\_\_\_\_  
Service Provider DATE  
 \_\_\_\_\_  
Authorization to start Departmental Sup/WCC/Designee DATE

**3. Both work requester and service provider coordinate on work plan (use attachments for detailed plans)**

Work Plan (procedures, timing, equipment, and personnel availability need to be addressed LOCKOUT OR TIE OFF THE DRIFT CHAMBER HIGH VOLTAGE AND POST A WATCH  
ERECT AND SECURE TWO 10 FT EXTENSION LADDERS - SIDE BY SIDE  
BETWEEN THE TOP OF THE CENTRAL MAINSTAY OUTRIGGERS AND THE  
RICH VESSEL ON THE CURFACE, TIE OFF THE LADDERS TO THE  
FRAME OF THE DRIFT CHAMBERS. ACCESS THE ELECTRONICS OF THE  
DRIFT CHAMBER FROM THE LADDERS. USING THE 12T CRANE, POSITION THE EYE  
OF A SWING ABOVE THE WORK AREA. LOCKOUT THE CRANE. THE WORKER WILL BE HARMSER  
7 LINES A WATCH SHALL BE PRESENT DURING THE WORK.

7 LINES  
 INSECT  
 102  
 1551

IF CABLES ARE ATTACHED DISCONNECTED OR REMOVED THE  
 LOW VOLTAGE WILL BE TURNED OFF WITH A WATCH POSTED.

Special Working Conditions Required: \_\_\_\_\_

Operational Limits Imposed: \_\_\_\_\_

Post Work Testing Required: \_\_\_\_\_

Job Safety Analysis Required:  Yes  No

Walkdown Required:  Yes  No

**Reviewed by:** Primary Reviewer will determine the size of the review team and the other signatures required based on hazards and job complexity. Primary Reviewer signature means that the hazards and risks that could impact ES&H have been identified and will be controlled according to BNL requirements.

Title	Name (print)	Signature	Life #	Date
Primary Reviewer	P. Keaton	<i>[Signature]</i>	17500	1/17/03
ES&H Professional	C PEARSON	<i>[Signature]</i>	15248	1/17/2003
Other	_____	_____	_____	_____
Work Control Coordinator	_____	_____	_____	_____
Service Provider	_____	_____	_____	_____

Review done:  in series  team

**4. Job site personnel fills out this section.**

Note: Signature indicates personnel performing work have read and understand the hazards and permit requirements (including attached permits).

Job Supervisor	Contractor Supervisor
Workers <i>[Signature]</i> Life # <i>16221</i>	Workers _____ Life # _____
_____	_____
_____	_____

Workers are encouraged to provide feedback on ES&H concerns or on ideas for improved job work flow. Use feedback form or space below.

**5. Departmental Job Supervisor, Work Control Coordinator/Designee**

Conditions are appropriate to start work: (Permit has been reviewed, work controls are in place and site is ready for job.)

Name \_\_\_\_\_ Signature \_\_\_\_\_ Life # \_\_\_\_\_ Date \_\_\_\_\_

**6. Departmental Job Supervisor, Work Requester/Designee determines if Post Job Review is required.  No  Yes**

Post Job Review (Fill in names of reviewers)

Name \_\_\_\_\_ Signature \_\_\_\_\_ Life # \_\_\_\_\_ Date \_\_\_\_\_  
 Name \_\_\_\_\_ Signature \_\_\_\_\_ Life # \_\_\_\_\_ Date \_\_\_\_\_

**7. Worker provides feedback.**

Worker Feedback (use an attached sheet if necessary)

**8. Work Control Coordinator (authorizing dept.) checks quality of completed permit and ensures the work site is left in an acceptable condition.**

Closeout  
 Name \_\_\_\_\_ Signature \_\_\_\_\_ Life # \_\_\_\_\_ Date \_\_\_\_\_  
 Comments \_\_\_\_\_

Drift Chamber repair in the PHENIX Experimental Hall (bldg. 1008) January 17, 2003

Attachment for "Description of Work" for Work Permit # 11/17/03

Troubleshoot Drift Chamber electronics from extension ladder set up between the central magnet (CM) and carriage. The drift chamber, Pad Chambers, and TEC contain their normal flammable gas mixtures. Two ladders will be secured side by side between the CM outrigger and the RICH outside the CM shield ring. There is no access to the DC, PC, or TEC gas windows from this location. Drift Chamber high voltage will be off and either locked out or a watch posted. The 12 ton building crane will be positioned to place the eye of a sling above the work area, then locked out. A harness will be worn and clipped to the sling while the work is being preformed.

Work will involve inspection of connections, measurement of low voltage test points, and possible removal of circuit boards for repair. The low voltage supplies deliver 48V DC to each test point and are straight line current limited (voltage drops to 0) at 10 amps. They can deliver a maximum of 50mJ into a short circuit. The low voltage will be turned off before removal of any circuit boards.

After the work is completed the ladders and sling will be removed and the crane returned to its normal parking place.

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