

See "Instructions for Filling out the Work Permit" contained in the Work Planning and Control for Experiments and Operations Subject Area.

1. Work request WCC fills out this section. Standing Work Permit

Requester: P. Gianotti	Date: 9/7/2016	Ext.: 3815	Dept/Div/Group: PO/PHENIX
Other Contact person (if different from requester): Carter Biggs			Ext.: 7515
Work Control Coordinator: P. Giannotti		Start Date: 9/7/2016	Est. End Date: 12/31/2016
Brief Description of Work: Remove & Repurpose WC (includes disassembly and disposition of electronics, utilities and structural components)			
Building: 1008	Room: IR and AH	Equipment: entire MMS	Service Provider: PHENIX and CAD techs and F&O personnel

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

ESSH ANALYSIS										
Radiation Concerns		<input type="checkbox"/> None	<input checked="" type="checkbox"/> Activation	<input type="checkbox"/> Airborne	<input type="checkbox"/> Contamination	<input type="checkbox"/> Radiation	<input type="checkbox"/> NORM	<input type="checkbox"/> Other		
<input type="checkbox"/> Special nuclear materials involved, notify Isotope Special Materials Group				<input type="checkbox"/> Fissionable/Radiological materials involved, notify Laboratory Nuclear Safety Officer						
Radiation Generating Devices:		<input type="checkbox"/> Radiography	<input type="checkbox"/> Moisture Density Gauges	<input type="checkbox"/> Soil Density Gauges		<input type="checkbox"/> X-ray Equipment				
Safety and Security Concerns		<input type="checkbox"/> None	<input type="checkbox"/> Explosives	<input type="checkbox"/> Transport of Haz/Rad Material		<input type="checkbox"/> Pressurized Systems				
<input type="checkbox"/> Adding/Removing Walls or Roofs	<input type="checkbox"/> Critical Lift	<input type="checkbox"/> Fumes/Mist/Dust*		<input type="checkbox"/> Magnetic Fields*		<input type="checkbox"/> Railroad Work				
<input type="checkbox"/> Asbestos*	<input type="checkbox"/> Cryogenic	<input type="checkbox"/> Heat/Cold Stress		<input type="checkbox"/> Nanomaterials/particles*		<input checked="" type="checkbox"/> Rigging				
<input type="checkbox"/> Beryllium*	<input checked="" type="checkbox"/> Electrical	<input type="checkbox"/> Hydraulic		<input type="checkbox"/> Noise*		<input type="checkbox"/> Silica*				
<input type="checkbox"/> Biohazard*	<input checked="" type="checkbox"/> Elevated Work	<input type="checkbox"/> Lasers*		<input type="checkbox"/> Non-ionizing Radiation*		<input type="checkbox"/> Security Concerns				
<input type="checkbox"/> Chemicals/Corrosives*	<input type="checkbox"/> Excavation	<input checked="" type="checkbox"/> Lead*		<input type="checkbox"/> Oxygen Deficiency*		<input type="checkbox"/> Suspect/Counterfeit Items				
<input type="checkbox"/> Confined Space*	<input type="checkbox"/> Ergonomics*	<input checked="" type="checkbox"/> Material Handling		<input type="checkbox"/> Penetrating Fire Walls		<input type="checkbox"/> Vacuum				
Ladder Access Required: <input checked="" type="checkbox"/> Portable Ladder <input type="checkbox"/> Fixed Ladder- Status/Restrictions:										
* Safety Health Rep. Review Required		<input type="checkbox"/> Haz, Rad, Bio Material Exceed DOE 151.1-C Levels - Contact OEM				<input type="checkbox"/> Other				
Environmental Concerns				<input type="checkbox"/> None		<input type="checkbox"/> Work impacts Environmental Permit No.				
<input type="checkbox"/> Atmospheric Discharges (rad/non-rad/GHG)		<input type="checkbox"/> Land Use Institutional Controls		<input type="checkbox"/> Soil Activation/contamination		<input type="checkbox"/> Waste-Mixed				
<input type="checkbox"/> Chemical or Rad Material Storage or Use		<input type="checkbox"/> Liquid Discharges		<input type="checkbox"/> Waste-Clean		<input checked="" type="checkbox"/> Waste-Radioactive				
<input type="checkbox"/> Cesspools (UIC)		<input type="checkbox"/> PCB Management		<input type="checkbox"/> Waste-Hazardous		<input type="checkbox"/> Waste-Regulated Medical				
<input type="checkbox"/> High water/power consumption		<input type="checkbox"/> Spill potential		<input type="checkbox"/> Waste-Industrial		<input type="checkbox"/> Historical Environmental Hazards				
Waste disposition by: <input type="checkbox"/> Other										
Pollution Prevention (P2)/Waste Minimization Opportunity: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes				Environmental Preferable Products Available: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes						
FACILITY CONCERNS		<input checked="" type="checkbox"/> None		<input type="checkbox"/> Intermittent Energy Release						
<input type="checkbox"/> Access/Egress Limitations		<input type="checkbox"/> Electrical Noise		<input type="checkbox"/> Potential to Cause a False Alarm		<input type="checkbox"/> Vibrations				
<input type="checkbox"/> Credited Controls (Use USI Process)		<input type="checkbox"/> Impacts Facility Use Agreement		<input type="checkbox"/> Temperature Change		<input type="checkbox"/> Other				
<input type="checkbox"/> Configuration Management		<input type="checkbox"/> Maintenance Work on Ventilation Systems		<input type="checkbox"/> Utility Interruptions						
WORK CONTROLS										
Work Practices										
<input type="checkbox"/> None		<input type="checkbox"/> Exhaust Ventilation		<input checked="" type="checkbox"/> Lockout/Tagout		<input type="checkbox"/> Spill Containment		<input type="checkbox"/> Security (see Instruction Sheet)		
<input checked="" type="checkbox"/> Back-up Person/Watch		<input checked="" type="checkbox"/> HP Coverage		<input type="checkbox"/> Posting/Warning Signs		<input type="checkbox"/> Time Limitation		<input type="checkbox"/> Other		
<input type="checkbox"/> Barricades		<input type="checkbox"/> IH Survey		<input type="checkbox"/> Scaffolding-requires inspection		<input type="checkbox"/> Warning Alarm (i.e. "high level")		<input type="checkbox"/> Electrical Inspection Required		
Personal Protective Equipment										
<input type="checkbox"/> None		<input type="checkbox"/> Ear Plugs		<input checked="" type="checkbox"/> Gloves, as necessary		<input type="checkbox"/> Lab Coat		<input checked="" type="checkbox"/> Safety Glasses, where req'd		
<input type="checkbox"/> Coveralls		<input type="checkbox"/> Ear Muffs		<input type="checkbox"/> Goggles		<input type="checkbox"/> Respirator*		<input type="checkbox"/> Safety Harness		
<input type="checkbox"/> Disposable Clothing		<input type="checkbox"/> Face Shield		<input checked="" type="checkbox"/> Hard Hat, when Crane used		<input type="checkbox"/> Shoe Covers		<input checked="" type="checkbox"/> Safety Shoes, as req'd	<input type="checkbox"/> High visibility cloths/vest	<input type="checkbox"/> Other
Permits Required (Permits must be valid when job is scheduled.)										
<input checked="" type="checkbox"/> None		<input type="checkbox"/> Cutting/Welding		<input type="checkbox"/> Impair Fire Protection Systems						
<input type="checkbox"/> Concrete/Masonry Penetration		<input type="checkbox"/> Digging/Core Drilling		<input type="checkbox"/> Rad Work Permit-RWP No						
<input type="checkbox"/> Confined Space Entry		<input type="checkbox"/> Electrical Working Hot		<input type="checkbox"/> Other						
Dosimetry/Monitoring										
<input checked="" type="checkbox"/> None		<input type="checkbox"/> Heat Stress Monitor		<input type="checkbox"/> Real Time Monitor		<input type="checkbox"/> TLD				
<input type="checkbox"/> Air Effluent		<input type="checkbox"/> Noise Survey/Dosimeter		<input type="checkbox"/> Self-reading Pencil Dosimeter		<input type="checkbox"/> Waste Characterization				
<input type="checkbox"/> Ground Water		<input type="checkbox"/> O ₂ /Combustible Gas		<input type="checkbox"/> Self-reading Digital Dosimeter		<input type="checkbox"/> Other				
<input type="checkbox"/> Liquid Effluent		<input type="checkbox"/> Passive Vapor Monitor		<input type="checkbox"/> Sorbent Tube/Filter Pump						
Training Requirements (List specific training requirements)										
Work screening has identified the following as the reason for permitted work:				When work is categorized as worker planned work and a permit is used only the following signatures are required: (Although allowed, there is no need to use back of form)						
<input checked="" type="checkbox"/> ESSH				WCC: _____		Date: _____				
<input checked="" type="checkbox"/> Complexity				Service Provider: _____		Date: _____				
<input type="checkbox"/> Work Coordination				Authorization to start: _____		Date: _____				
<input type="checkbox"/> Permit Not Required (Sections 3 through 7 optional)				(Department/Division, or their equivalent, Sup/WCC/Designee)						

3. Both work requester and service provider contribute to work plan (use attachments for detailed plans)

Work Plan (procedures, timing, equipment, scheduling, coordination, notifications, and personnel availability need to be addressed in adequate detail): West Carriage disassembly of utilities, racks, cables & cable tray, piping, working surfaces, flow distribution devices and small support structures (less than ~50 lbs) will be performed as worker planned work with close coordination between workers, work supervisors and work control coordinators on a daily basis. A separate procedure for disassembly of large structural components will be planned separately as coordinated by PHENIX and CAD work control coordinators. In addition the following detector subsystem removal and repurpose will be controlled by separate work permits as follows: MPC-Ex South (SDD-2016-011), MPC South (SDD-2016-012), MuTr Station 1 South (SDD-2016-013), MuTr Station 2&3 South (SDD-2016-014). All parts, components, services, subassemblies, etc., removed from the MMS, including the structural components of the MMS itself, will be screened by BNL HP for activation and dispositioned appropriately

Special Working Conditions Required (e.g., Industrial Hygiene hold points or other monitoring)
None

Notifications to operations and Operational Limits Requirements:

Post Work Testing, Notification or Documentation Required:

Job Safety Analysis Required: Yes No

Review Done: in series team

Reviewed by: * Primary Reviewer signature (not required for Worker Planned Work) means that the Review Team members were appropriate for the work that was planned, the Team visited the job site, hazards and risks that could impact ESSH have been considered and controls established according to BNL requirements. In addition, this signature indicates that applicable JRAs, FRAs, as well as other planning documents have been reviewed and training requirements have been identified and recorded on this permit.

Title	Name (print)	Signature	Life #	Date
ES&H Professional				
F&O Facility Project Manager				
Service Provider				
Work Control Coordinator				
Safety Health Representative				
Research Space Manager				
Other				
Other				
Required Walkdown Completed				
*Primary Reviewer				

4. Job site personnel (Supervisor and workers) fill out this section.

Note: Signature indicates personnel performing work have read and understand the hazards and permit requirements (including any attachments) and all training required for this permit is current/complete. Job Supervisor/Contractor Supervisor signatures also includes verification that worker training required for this permit is current/complete.

Job Supervisor:		Contractor Supervisor:	
Workers:	Life#:	Workers :	Life#:

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

5. Department/Division, or their equivalent, Line Manager or 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:
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6. Worker provides feedback.

Worker Feedback (use attached sheets as necessary)

a) WCM/WCC: Are there any changes as a result of worker feedback? Yes No

Note: See Work Planning and Control for Experiments and Operations Subject Area section 2.6.

7. Post Job Review/Closeout: Work Control Coordinator (authorizing dept.) checks quality of completed permit and ensures the work site is left in an acceptable condition. (WCC can delegate clean up of job site to work supervisor.) The WCC ensures that the change process to update drawings, placards, postings, procedures, etc., is initiated, if necessary.

Name:	Signature:	Life#:	Date:
Comments:			

Removal and Repurposing (R&R) of the PHENIX West Carriage (WC), and comprising detector subsystems, support utilities and structural components

Introduction

The PHENIX Collaboration will remove and repurpose all components comprising the PHENIX West Carriage (WC) including the carriage structure and platforms, all detectors mounted on the East carriage, racks, cables, piping, flow distribution services and all other support structures and components attached to the CM carriages beginning during the 2016 PHENIX Removal and Repurposing (R&R) shutdown after run 16 and continuing after run 17. This document describes the work plan to remove and disposition (scrap, repurpose for future use, return to owner, etc.) these components. The disposition of these components will be determined by the PHENIX R&R manager and the disposition of these components will be recorded on the PHENIX R&R data base.

Disassembly Procedures

Removal of electronics Racks, detector utilities and small support structures

EC disassembly of utilities, racks, cables & cable tray, piping, working surfaces, flow distribution devices and small support structures (less than ~50 lbs) will be performed as worker planned work with close coordination between workers, work supervisors and work control coordinators on a daily basis. As each of these components are removed they will be scanned by BNL Health Physics (HP) for activation. Components found to be activated will be appropriately tagged and stored pending final disposition.

Removal of detector subsystems

Removal and repurposing of the following detector subsystems which are mounted on the EC will have separate dedicated work planning/work permits as follows:

Drift Chamber (DC) (west) – Work permit # SDD-2016-004

EM Cal, PbG1 (west)) – Work permit # SDD-2016-006

TOF West - Work permit # SDD-2016-017

RICH (west) - Work permit # SDD-2016-006

Aerogel - Work permit # SDD-2016-016

Removal of the WC Platforms

Removal and repurposing of the EC work platforms (all levels) will be worker planned work performed by BNL riggers and carpenters in coordination with PHENIX work control coordinator.

This work and/or similar work is performed every year as part of the PHENIX shutdown and is thus well understood by PHENIX technicians.

Disassembly of WC structural components

After all detectors, services, work platforms, etc. have been removed the major large structural components which comprise the base, the arms and the towers shall be disassembled using welders to cut the carriage into 3 large pieces: the base and arms and two towers. Details of the disassembly procedure are described in PHENIX WP # SDD-2016-023.

Work Permit Closeout

After completion of all work described above, those involved in the coordination and implementation of the work described shall provide appropriate feedback on the effectiveness of the work procedures described herein, any lessons learned during this work effort and any other relevant information that could be useful to refer to when performing similar work in the future. Such feedback will be documented in the closeout section of this work permit and/or on separate sheets attached hereto.