PHENIX

Technical Support 2007

PHENIX
WEEKLY PLANNING

1/4/2007

Don Lynch

PHENIX

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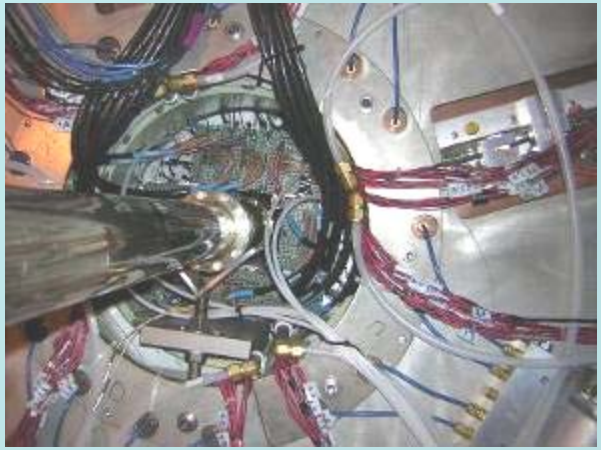
Commissioning in Progress



HBD Electronics Cooling

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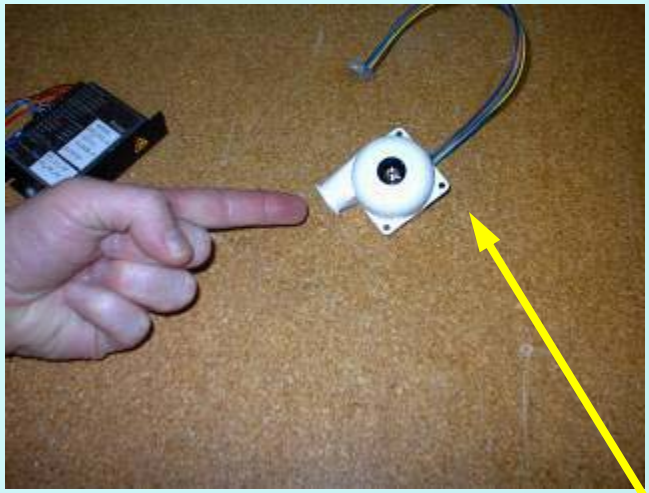

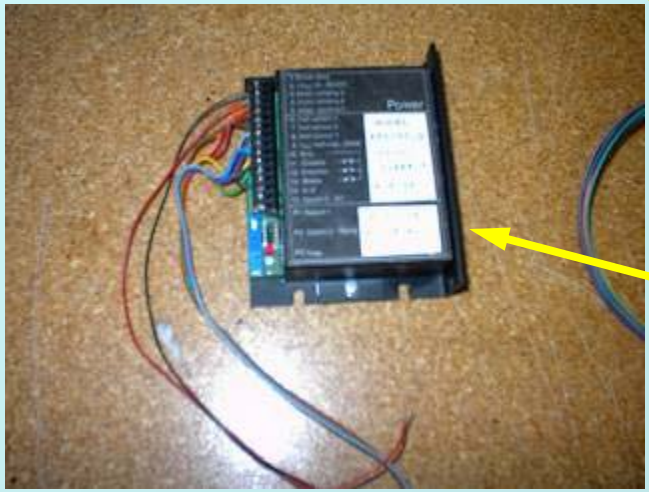

Blower

Speed Controller

Still Needed for Approval to Operate:

- Where will fan(s) be mounted? – CM base "cubby hole" fan model and specs to be forwarded to Safety
- Written design and operation description and– To be forwarded to Safety
- Order for 5 blowers & drivers (4 +1 spare) is in the works 1 set Received, 3 sets shipped 12/18, 1 set back ordered.

4 X BD² Electronics Cooling

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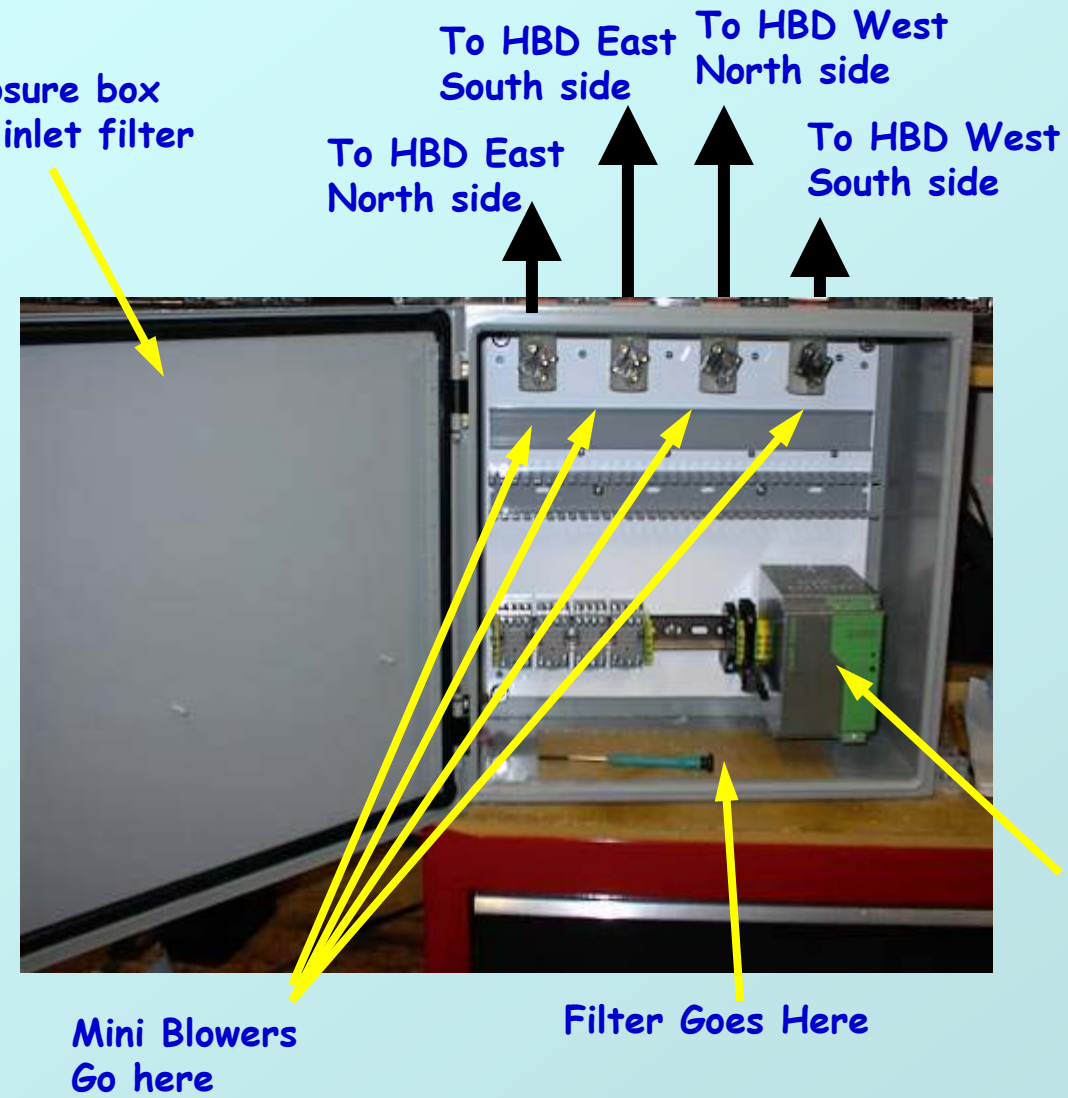
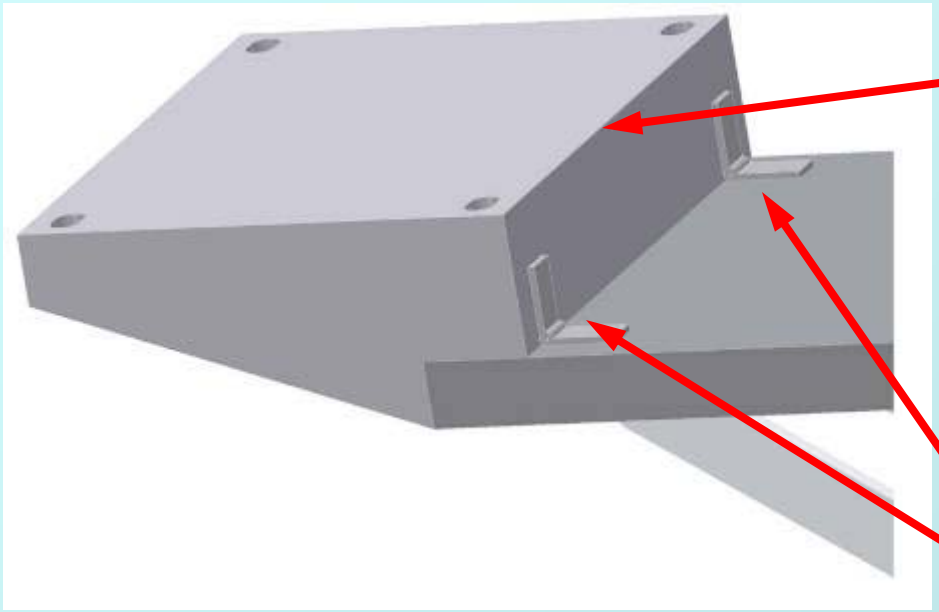


30 V, 10 Amp Power Suply
(~1.5 Amps per blower)

CM Lift Table



Hinges on wing steps
Structural Analysis needed

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Remaining Schedule

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	Start	Complete
TOF West, RXNP, MPC N		
Electronics Installation/Commissioning	in progress	12/30/06
HBD		
HBD preamp cooling system	10/1/06	12/30/06
(temporary LN2 system in-place)		
Electronics Installation/Commissioning	11/1/06	12/30/06
Crane Inspection	12/27/06	12/28/06
MuID commissioning	1/8/07	1/15/07

Remaining Schedule (cont'd)

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	Start	Complete
Pink Sheeting & Blue Sheeting	Done	Done
Move MMS full North	Done	Done
Rebuild Rolling door	Done	Done
Close rolling door	Jan 8	Jan 8
Start Flammable Gas Flow & 2 man watch shif	Jan 9	Jan 9
All Up Commissioning/ Cosmic Ray Run /	RS+1 D	RS+3 W
Install beam pipe collar	RS-1 W	RS-2 D
RHIC Cooldown Begins	RS	RS
Beam in yellow ring	RS+1 W	RS+1 W
Beam in blue ring	RS+2 W	RS+2 W
RHIC beam conditioning	RS+3 W	RS+3 W
Shutdown Concluded/Start of Physics Run	RS+3 W	RS+3 W

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PHENIX Annual Safety Review Follow Up: Action Items

- Inspect and approve the new access to the PHENIX bridge platform. (Etkin/ Cirnigliaro, done)
- Carry out the pink sheeting of all racks. (Haggerty / Giannotti, Nov. 16, 2006) (done)
- Carry out the Blue Sheeting (CAS, Pearson, done)
- Add to the Blue sheeting the requirement that the new PHENIX crash button should be tested annually (Pearson done)
- Provide the new flammable gases leak rates (Pisani, Dec 30, 2006)
- Review and approve the new TOFW re-circulating gas system (Etkin Jan. 15, 2006)
- For the HSB gas transparency system check that the associated electrical systems are NRTL certified. (Giannotti, Dec 30, 2006)
- Update the PHENIX sweep procedures (Sampson, done?)
- Determine if additional crash cords are required on the new platforms (Asher Etkin and PASS, done)
- Provide J. Levesque the manufacturer's flammability rating of the PHENIC bridge cover or mat. (Lynch, Dec. 15, 2006) (done and approved)
- Review the proposed HBD electronics cooling. (Pearson / Makdisi, done?)
- Review the SEU (single event upset) test. (Makdisi done?)

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PHENIX Annual Safety Review Follow Up: Action Items

General:

- Update the PHENIX ECR. (Essendelft, Dec. 30, 2006) (done)
- Carry out a magnetic safety review and measure the magnetic field on the bridge platform (Cirnigliaro / Pearson, Dec. 30, 2006) (done)
- Update the PHENIX emergency procedure. (Franz / Makdisi, done?)
- A walk through of the PHENIX detector prior to introduction of flammable gas. (Makdisi, done)
- Update the documented work procedures. (O'Brien / Lynch, Feb 1, 2007)
- Establish trained PHENIX watch shifts. (O'Brien, Jan. 9, 2007)

Infrastructure Work

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CAD/RHIC PHENIX infrastucture related mechanical and electrical support

Roof leak repairs	*?*
Door Latch maintenance for security	*Requested*
Run 7 prep support	*On-going*

New DOE Safety Requirements

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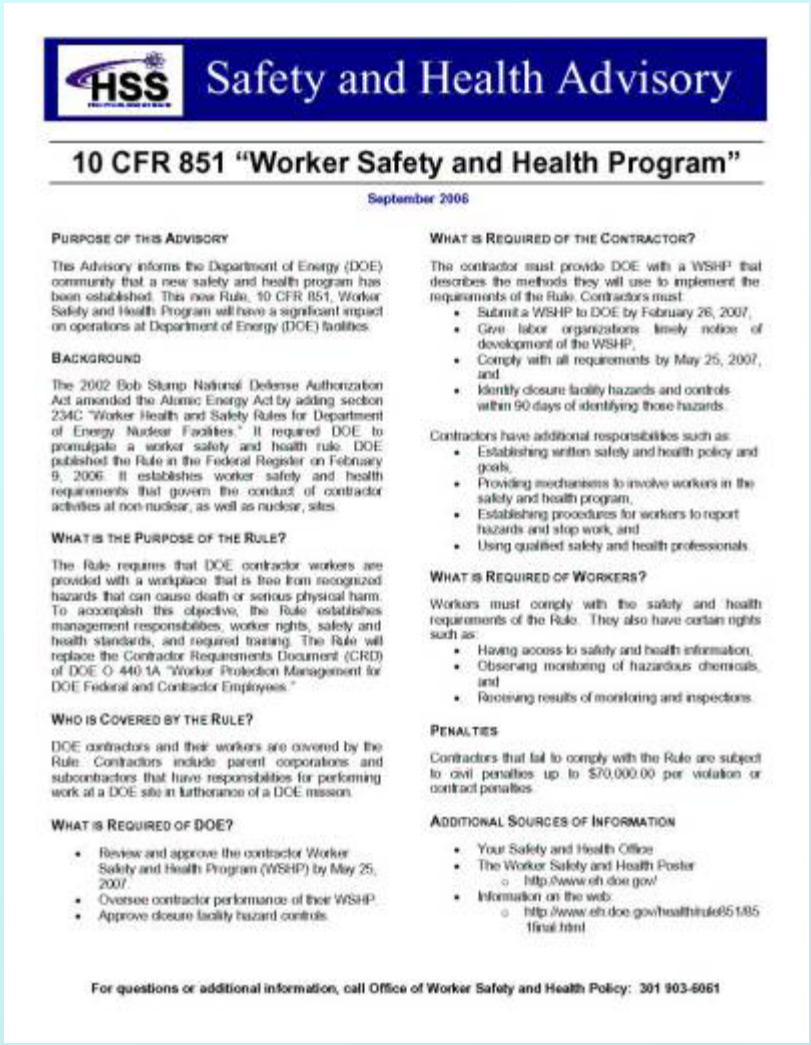

HSS Safety and Health Advisory

10 CFR 851 "Worker Safety and Health Program"

September 2006

PURPOSE OF THIS ADVISORY

This Advisory informs the Department of Energy (DOE) community that a new safety and health program has been established. This new Rule, 10 CFR 851, Worker Safety and Health Program will have a significant impact on operations at Department of Energy (DOE) facilities.

BACKGROUND

The 2002 Bob Stump National Defense Authorization Act amended the Atomic Energy Act by adding section 234C "Worker Health and Safety Rules for Department of Energy Nuclear Facilities." It required DOE to promulgate a worker safety and health rule. DOE published the Rule in the Federal Register on February 9, 2006. It establishes worker safety and health requirements that govern the conduct of contractor activities at non-nuclear, as well as nuclear, sites.

WHAT IS THE PURPOSE OF THE RULE?

The Rule requires that DOE contractor workers are provided with a workplace that is free from recognized hazards that can cause death or serious physical harm. To accomplish this objective, the Rule establishes management responsibilities, worker rights, safety and health standards, and required training. The Rule will replace the Contractor Requirements Document (CRD) of DOE O 440.1A "Worker Protection Management for DOE Federal and Contractor Employees."

WHO IS COVERED BY THE RULE?

DOE contractors and their workers are covered by the Rule. Contractors include parent corporations and subcontractors that have responsibilities for performing work at a DOE site in furtherance of a DOE mission.

WHAT IS REQUIRED OF DOE?

- Review and approve the contractor Worker Safety and Health Program (WSHP) by May 25, 2007.
- Oversee contractor performance of their WSHP.
- Approve closure facility hazard controls.

WHAT IS REQUIRED OF THE CONTRACTOR?

The contractor must provide DOE with a WSHP that describes the methods they will use to implement the requirements of the Rule. Contractors must:

- Submit a WSHP to DOE by February 26, 2007;
- Give labor organizations timely notice of development of the WSHP;
- Comply with all requirements by May 25, 2007, and
- Identify closure facility hazards and controls within 90 days of identifying those hazards.

Contractors have additional responsibilities such as:

- Establishing written safety and health policy and goals,
- Providing mechanisms to involve workers in the safety and health program,
- Establishing procedures for workers to report hazards and stop work, and
- Using qualified safety and health professionals.

WHAT IS REQUIRED OF WORKERS?

Workers must comply with the safety and health requirements of the Rule. They also have certain rights such as:

- Having access to safety and health information,
- Observing monitoring of hazardous chemicals, and
- Receiving results of monitoring and inspections.

PENALTIES

Contractors that fail to comply with the Rule are subject to civil penalties up to $70,000.00 per violation or contract penalties.

ADDITIONAL SOURCES OF INFORMATION

- Your Safety and Health Office
- The Worker Safety and Health Poster
  - http://www.eh.doe.gov/
- Information on the web:
  - http://www.eh.doe.gov/healthrule/851/851final.html

For questions or additional information, call Office of Worker Safety and Health Policy: 301 903-6061

Requirements are for DOE Contractors (e.g. BSA)

- Worker Safety Program
- Replaces older fuzzy rules
- Requires analyses of safety & documentation of analyses
- Specifically applies to
  - Construction safety
  - Fire protection
  - Firearms
  - Explosives safety
  - Pressure safety
  - Electrical safety
  - Industrial hygiene
  - Occupational medicine
  - Biological safety
  - Motor vehicle safety
- Fines up to $70K/day for non-compliance

Pressure Safety Requirements

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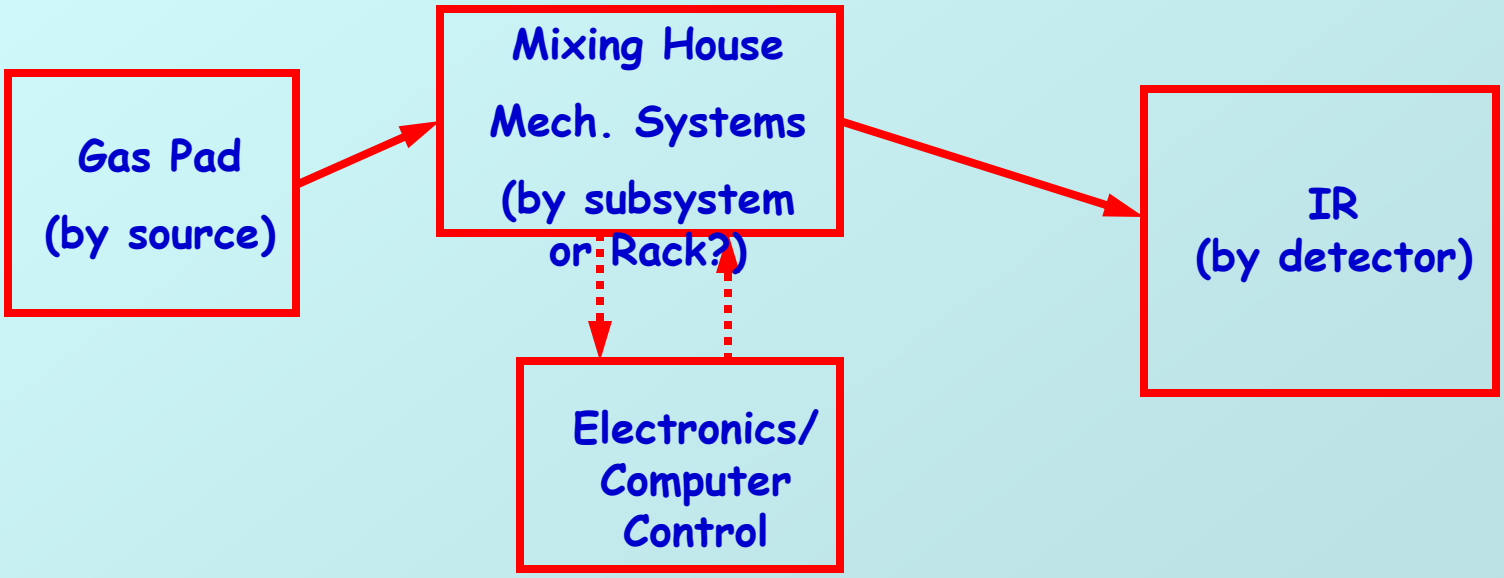
- By this afternoon (1/4/07 COB) identify basic information for each "pressure/chamber" system (system name, location, description, contact person and alternate, responsible group)
- By end of month (1/31/07) full system information to be provided
- Carter, Don & Rob to coordinate efforts



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Trailer Work Areas

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10 CFR Parts 850 & 851 Final Rule Implementation Plan
Pressure and Vacuum System Information Request

(Use one form per System)

10 CFR Part 851 WS&H Program Department/Division Information Request	Part 851 Rules & Regulation	Response
Pressure System Name:		
Location (Bldg./Room):		
Description:		
Organization	Contact (Name/Extension)	Date
Code of Record - Design and Fabrication		
Is the Pressure System subject to an ASME Code or a Building Code? If so, which Code/Date? **Note**: See Attachment 1 for a list of Codes referenced in 10CFR851 that BNL is required to comply with. **Note:** Please refer to the 10CFR851 Pressure System definition in this body of this Memo.	Appendix A.4(b)	
Was the system designed, fabricated, and tested in accordance with the Code of Record requirements?	Appendix A.4 (a), (b)	
Is the design/fabrication/testing documented? If yes: • What kind of information is available (e.g., design drawings, system specifications, vendor catalog information, pressure test records, etc.)? • Where is the system documentation maintained?	Appendix A.4(b)	

1

10 CFR Parts 850 & 851 Final Rule Implementation Plan
Pressure and Vacuum System Information Request

10 CFR Part 851 WS&H Program Department/Division Information Request	Part 851 Rules & Regulation	Response
When National Consensus Codes are not applicable, (because of pressure range, vessel geometry, use of special materials, etc.), 10CFR851 requires equivalency to ensure a level of safety equal to ASME or applicable local codes. For these pressure systems: • Were design drawings, sketches and calculations reviewed and approved by a qualified independent design professional (i.e., professional engineer) or documented organization peer review? • Were qualified personnel used to perform examinations and inspection of materials, in-process fabrications, non-destructive testing, and acceptance testing? • Are documentation, traceability, and accountability maintained for each pressure vessel or system, (including design, pressure conditions, initial acceptance testing/inspection?	Appendix A.4 (c)	

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10 CFR Parts 850 & 851 Final Rule Implementation Plan
Pressure and Vacuum System Information Request

10 CFR Part 851 WS&H Program Department/Division Information Request	Part 851 Rules & Regulation	Response
Pressure System Operation and Maintenance Requirements		
How does your Department/Division ensure that Pressure Systems continue to conform to the Code of Record? e.g., are policies and procedures in place to ensure that Code requirements for inspection, maintenance, repair and operation by trained and qualified personnel? Please describe the types and frequencies of these activities. How are the requirements managed? How are the results documented? Where is this documentation maintained?	Appendix A.4 (a)	
For those systems without a Code of Record, are documentation, traceability, and accountability maintained for each pressure vessel or system, (including, pressure conditions, periodic testing/ inspection, operation, repair and maintenance)?	Appendix A.4 (c)	

3

10 CFR Parts 850 & 851 Final Rule Implementation Plan
Pressure and Vacuum System Information Request

10 CFR Part 851 WS&H Program Department/Division Information Request	Part 851 Rules & Regulation	Response
Specific System Questions		
Does the pressure vessel have an ASME Code Stamp?		
Does the pressure system: • Have internal or external pressure exceeding 15 psi? • Have an inside diameter, width, height, or cross-section diagonal exceeding 6 inches, with no limitation of length of vessel or pressure? • A water system with design temperature and pressure greater than 210F and 300 psi? Note: If any of the above is yes, then ASME Codes apply.	Implementation Verification	
Does the pressure system exceed 3,000 PSI? Note: If yes, then ASME Codes may not apply (Discuss with the Pressure Safety SME).	Implementation Verification	
Is the pressure vessel installed with pressure relief devices? Are the relief devices ASME compliant so that the pressure is prevented from rising more than 10% or 3 psi, which ever is greater, above the maximum allowable working pressure?	Implementation Verification	
Piping: • Is the design of interconnecting piping documented? Does the design of the interconnecting piping comply with ASME Code? • Has the design been reviewed by qualified individuals?	Implementation Verification	

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This Week/ Next Week

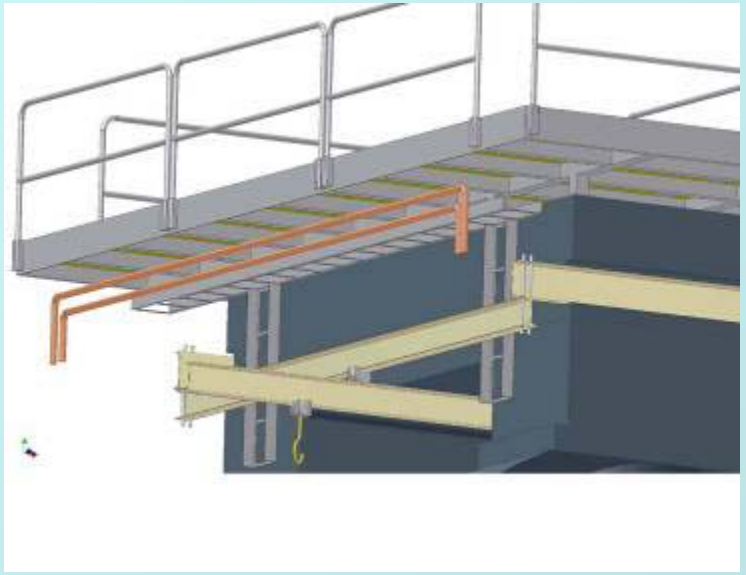
- Bowl Games (Monday New Year's Holiday)
- HBD, TOF W, RXNP, MPC N electronics commissioning
- HBD $(BD)^2$ [=$H(BD)^3$?] fabrication/test/installation
- PHENIX Procedure review continued
- Prepare for run 6.9 → 7
- Interlocks for CM Lift table [Up is done, Down is in progress], wing hinges

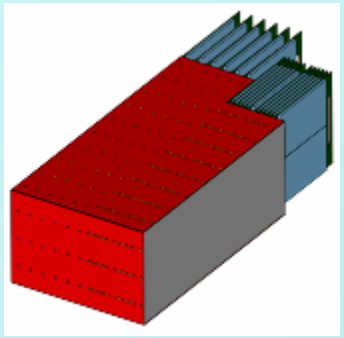
Looking Ahead

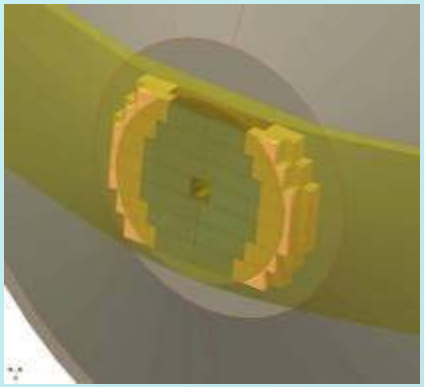
Technical Support 2007

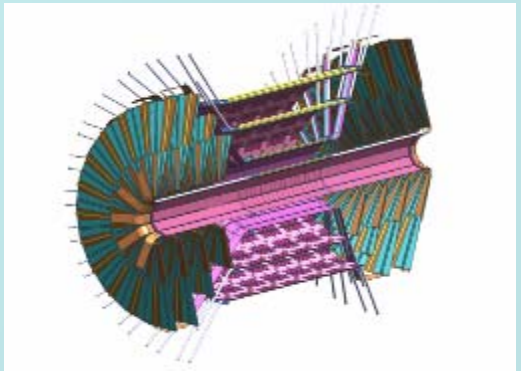
What's up for this year and beyond

- New CM Crane
- New Beam pipe design
- Muon RPC trigger design
- VTX/FVTX design
- NCC design
- MuTr upgrade
- Infrastructure improvements









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New Business

Get your requests in early for shutdown 2007 work

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Where To Find PHENIX Technical Info

Links for the weekly planning meeting slides, long term planning, pictures, videos and other technical info can be found on the web site:

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm