



... for a brighter future

APS/User Monthly Operations Meeting

J. Murray Gibson

April 30, 2008



U.S. Department
of Energy



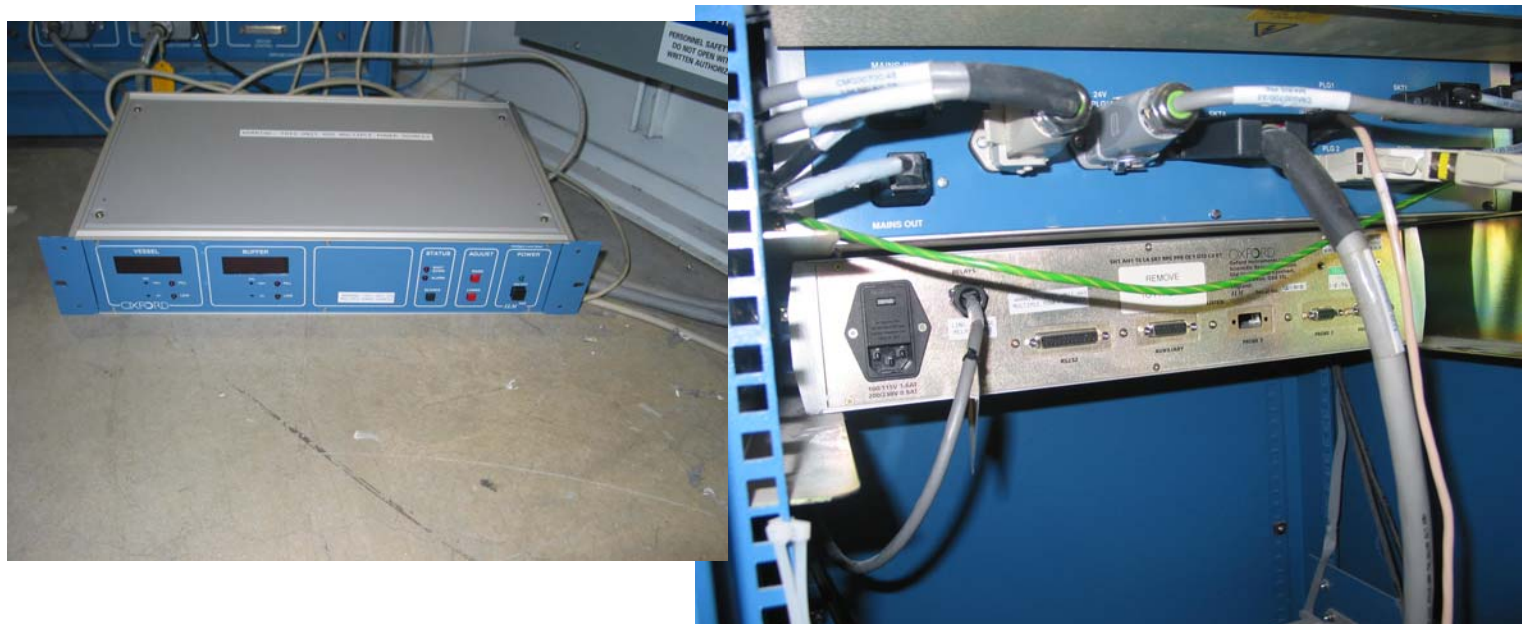
A U.S. Department of Energy laboratory
managed by The University of Chicago

Agenda

- 2:30 p.m. Refreshments
- 2:45 p.m. APS Update – Murray Gibson
- 3:05 p.m. ISM Verification - Tom Barkalow
- 3:20 p.m. Theory and Computing Sciences Building - Mary Spada
- 3:45 p.m. Adjourn

Electrical near miss incident while “swapping out” a cryopump control unit on an APS sector

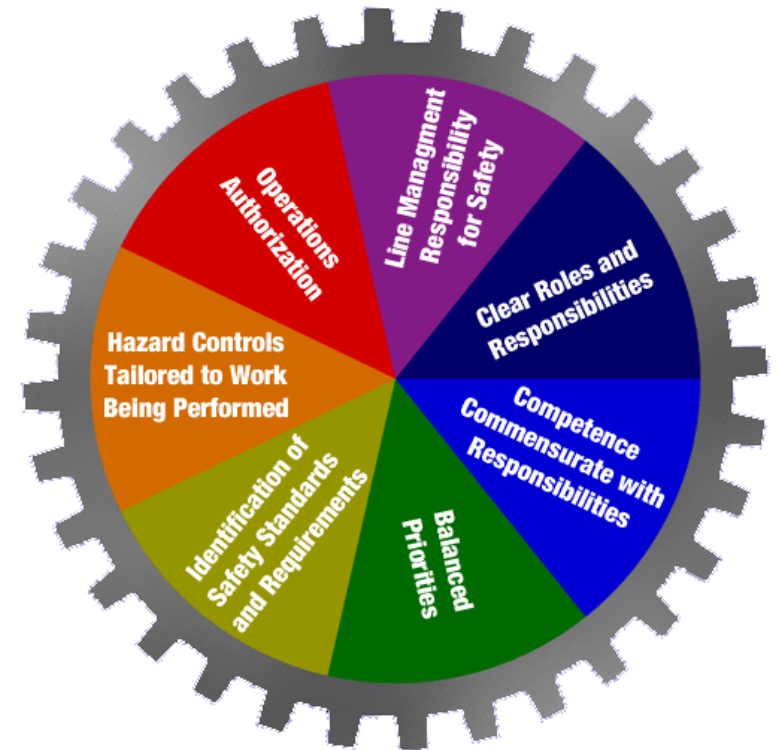
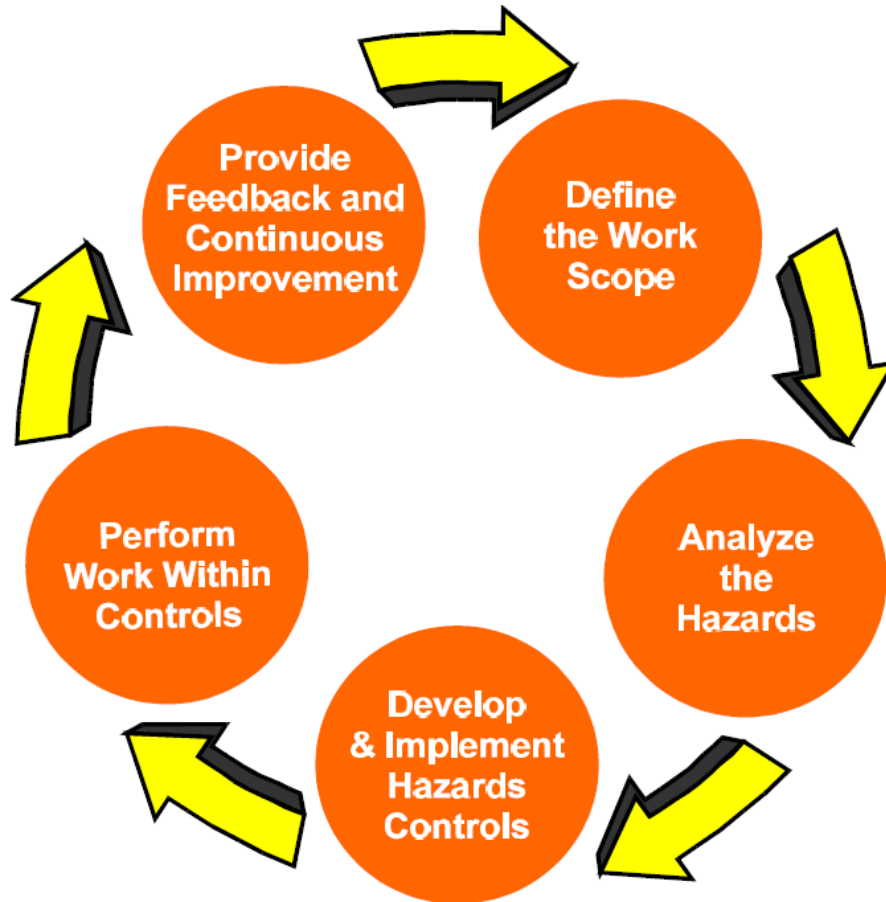
- Person on beamline staff planned to swap out unit – no electrical work should have been required – found unidentified 2nd power source to relays - went ahead to do unauthorized electrical work to remove wires – assumed 24V – found 208V after disconnecting wires with a screwdriver



Among the lessons learned...

- Don't make assumptions – ask questions and stop when work goes outside scope
- DEEI inspections will provide a further barrier
 - Oxford equipment already being addressed

ANL ISM Audit is approaching in July



DOE Review

- Positive feedback (consistent with the UC reviews of 2007)
 - World-class accelerator performance, R&D
 - Scientific output of APS excellent and growing
 - Excellent staff on beamline and accelerator/engineering side
 - CAT->XOR transitions going well
 - *challenges include limited resources and damaged partnerships*
- Recommendations
 - Develop a five-year plan, with users, for essential needs re: accelerator and beamlines
 - Reduce workload on beamline scientists and accelerator staff, leaving more time for research. Until budget increases, this requires reducing scope.
 - Develop a bottoms-up budget exercise within APS
 - Increase engagement of the SAC in strategic planning

Issue - need to improve internal and user communications and strengthen user involvement in strategic planning

Planning for APS Renewal and Upgrade (APS2020)

- Developing a plan for APS renewal (5-10 years)
 - Will include beginning of major accelerator upgrade as component
 - We solicited proposals
 - *Received over 40 proposals from beamlines, 46 from accelerator side*
 - *Will be made public*
 - Next step is to collect and prioritize these based on scientific themes
 - *Expect a matrixed approach, both science and technique*
 - Will fold in options for long-term machine upgrade
- Workshop October 20-21: Scientific Advisory Committee will advise on priorities
- Aim for a document by the end of the calendar year
- Plan to lay out plans and timeline for process at Users Week



Highlights of Users Week

Sunday May 4	Monday May 5	Tuesday May 6	Wednesday May 7	Thursday May 8	Friday May 9	
	Exhibits 8:00 - 5:00	Exhibits 8:00 - 5:00	Exhibits 8:00 - 5:00			
	Registration 7:30 - 5:00	Registration 8:30 - 5:00	Registration 8:30 - 5:00	Registration 8:30 - 5:00		
Exhibitor Set-up 11:00 - 3:00 Registration 1:00 - 4:00	Opening Session <i>Lect. Hall,</i> 8:30 - 11:45 <ul style="list-style-type: none"> • DOE Perspective • APS Update • CNM Update • EMC Update 	WK01 A1100 8:55 - 12:15 Diffraction Studies of Structural and Mechanical Properties WK02 Lect. Hall 9:00 - 12:00 SAXS and SANS Applications in Nano Materials and Nano Biology WK03 E1100/E1200 8:45 - 12:00 Scientific Advances in Inelastic X-Ray Scattering WK04 A5000 9:00 - 12:00 Software for Challenging Cases in Macromolecular Crystallography	CNM Plenary & Science Session <i>Lect. Hall,</i> 8:45 - 12:00	WK05 contd. E1100/E1200 8:45 - 12:30 WK06 contd. <i>Lect. Hall</i> 9:00 - 12:30 WK07 A1100 9:00 - 12:00 Nanoscale Phenomena near Phase Transitions WK08 Bldg. 360, L119 9:00 - 12:00 Scattering and Spectroscopic Studies of Materials in High Magnetic Fields WK09 A5000 9:00 - 12:00 Scientific Applications of Nuclear Resonant Scattering	CNM Short Courses <i>Bldg. 440 Gallery</i> Satellite Workshops <ul style="list-style-type: none"> • Mössbauer A5000 • Short Pulse E1100 	
	Lunch <i>Tent</i> 12:00 - 1:30	Lunch <i>Tent</i> 12:00 - 1:30	Lunch <i>Tent</i> 12:00 - 1:30	Lunch <i>Tent</i> 12:00 - 1:30		
	APS Science Session <i>Lect. Hall</i> 1:15 - 4:45 APS election results announced	WK01 contd. A1100 1:45 - 5:00 WK02 contd. <i>Lect. Hall</i> 1:10 - 5:00 WK03 contd. E1100/E1200 1:10 - 4:40 Wk04 contd. A5000 1:30 - 4:30	EMC Science Session A5000 1:30-4:30 ASSI A1100 1:30-4:30	WK05 E1100-E1200 1:00 - 5:15 Emergent States at Interfaces of Complex Oxides: What Can Be Learned from Local Probes? WK06 Lect. Hall 1:30 - 4:45 Nanoscale Heterostructures	WK07 contd. A1100 1:30 - 4:30 WK08 contd. <i>Bldg. 360, L119</i> 1:15 - 5:00 WK09 contd. A5000 1:30 - 5:00 WK10 Lect. Hall 1:25 - 4:45 In-situ Surface Science: Growth and Properties of New Materials WK11 E1100/E1200 1:00 - 5:00 Synchrotron Radiation in Pharmaceutical Science: Freeze Drying and Other Applications	CNM Short Courses <i>Bldg. 440 Gallery</i> Satellite Workshops <ul style="list-style-type: none"> • Mössbauer A5000 • Short Pulse E1100
"Bernal's Picasso" <i>Lect. Hall</i> 3:30 - 5:00 Exhibitor Expo and Reception <i>401 Atrium & 402 Gallery</i> 5:00 - 6:30	APS Poster Session and Reception Bldg. 437 5:00 - 6:30 Sub-Ångstrom Microscopy and Microanalysis Facility Reception Bldg. 216 Lobby 5:00 - 6:30	APS/EMCCNM Tours Meet 401 Atrium 44:45 - 5:45	CNM/EMC Poster Session and Reception <i>Bldg. 440 Gallery & Terrace</i> 4:45 - 6:30			
	Beamline Advisory Group Meetings	Banquet <i>Shedd Aquarium</i>	APS PUC Dinner/Meeting <i>Guest House</i>			

Budget uncertainty

APS FY 2009 Long Range Operations Schedule

Run 2008-03				Run 2009-01				Run 2009-02			
Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
1	1 4 →	1	1	1	1	1	1	1	1	1	1
2	2 4 →	2	2	2	2	2	2	2	2	2	2
3	3 4	3 4 →	3	3	3	3	3	3	3	3	3
4	4	4 4 →	4	4	4	4	4	4	4	4	4
5	5 1 →	5 4 →	5	5	5	5	5	5	5	5	5
6	6 1 →	6 4 →	6	6	6	6	6	6	6	6	6
7	7 1 →	7 4 →	7	7	7	7	7	7	7	7	7
8	8 1 →	8 4 →	8	8	8	8	8	8	8	8	8
9	9 1 →	9 4	9	9	9	9	9	9	9	9	9
10	10 1 →	10	10	10	10	10	10	10	10	10	10
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12	12 1 →	12	12	12	12	12	12	12	12	12	12
13	13 1 →	13	13	13	13	13	13	13	13	13	13
14	14 1 →	14	14	14	14	14	14	14	14	14	14
15	15 1 →	15	15	15	15	15	15	15	15	15	15
16	16 1 →	16	16	16	16	16	16	16	16	16	16
17	17 1 →	17	17	17	17	17	17	17	17	17	17
18	18 1	18	18	18	18	18	18	18	18	18	18
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28	28	28	28	28	28	28	28	28	28	28	28
29	29 4 →	29	29	29	29	29	29	29	29	29	29
30	30 4 →	30	30	30	30	30	30	30	30	30	30
31	31 4 →	31	31	31	31	31	31	31	31	31	31

User Operation in standard lattice
 User Operation in Reduced Horizontal Beam Lattice (RHB)

Top-Up Operations is standard unless indicated in fill pattern

SOM Periods
 1 Hybrid Fill - (singlet)
 4 324 Singlets - Non Top-Up

Fill pattern is 24 singlets unless otherwise indicated by number

Machine Studies
 Maintenance
 Shifts set aside for Studies/ Machine Intervention as Needed

Weekends
 Lab Holidays
 Anticipated Extension of Maintenance Period due to Budget Limitations

04/30/2008