

MHATT/XOR, APS Sector 7

Environment, Safety and Health Plan

March 24, 2005.

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Section 1 MHATT/XOR, APS Sector 7 Safety Policies

1.0 Purpose

MHATT/XOR is committed to ensuring that all sector activities are conducted in a safe and environmentally sound manner. This plan describes the Sector 7 safety program that is implemented to fulfill this commitment

1.1 Scope

To ensure that all activities at Sector 7 are conducted in a safe and environmentally sound manner, this plan defines 1) the standards to be followed by the users and staff, and 2) the responsibilities within the sector's organization.

1.2 References

All activities at Argonne National Laboratory - East (ANL-E) will conform to the requirements of the documents listed below, except as provided for by variances or APS procedures. All of the following are available through the Sector 7 Safety Coordinator.

1. ANL-E Environment, Safety and Health Manual
2. APS User Policies and Procedures
3. ANL-E Hoisting and Rigging Manual
4. ANL-E Transportation Safety Manual
5. ANL-E Waste Handling Procedures Manual

1.3 General Policies

1) Failing to conform with this plan may result in sanctions and/or the loss of access to the APS and Sector 7 facilities.

2) Any person has the authority to stop activities that are deemed to be unsafe or environmentally unsound. In addition, the sector management acknowledges that the APS has the authority to order a halt to Sector 7 activities that the APS, or other entities with oversight responsibilities, deem unsafe or not in compliance with APS and ANL requirements.

3) Sector 7 will comply with the current version of the APS Policy and Procedure for configuration control of shielding systems. No safety system under configuration control is to be modified without sector 7 and APS approval. (Refer to the APS User Policies and Procedures for the complete policy and procedure for configuration control of shielding system).

4) Sector 7 will cooperate with the APS to facilitate the oversight responsibilities of the APS, ANL and the DOE.

5) Sector 7 will adhere to the APS experiment safety review program. The program will be kept current with the relevant APS policies and procedures, including those set forth in Technical Updates, User Policies and Procedures, and AOD Division Director memoranda covering the subject.

6) Experimenters shall identify to the Sector 7 Experiment Safety Review Panel the potential hazards associated with their activities and hazardous materials to be used in experiments at the APS. No experiment shall proceed without an approved and posted Experiment Hazard Control Plan (EHCP) and Experiment Authorization Form (EA) generated from a properly approved APS Experiment Safety Assessment Form (ESAF).

7) New or modified equipment and unreviewed activities must be approved by the XOR Director, or designee, prior to energizing the equipment or the start of work. Before the initiation of any change in the sector's operation that might reasonably be thought to increase the risk of adverse impact on the APS facilities, the environment or any person, the sector will obtain the written approval of the APS Operations Division Director, or designee.

8) Sector 7 will maintain a list of current safety assignments (Appendix A) and will update this plan to keep it consistent with the scope of all sector activities. The assignment list will be reviewed at least annually and the plan biannually with updates provided to the APS User Safety Officer.

1.4 Sector 7 Specific Policies.

There are no specific policies at this time.

Section 2 – Sector 7 Safety Organization & Responsibilities

The XFD **Director** has oversight responsibility for safety for all XOR sectors. He appoints the Laser Control Area Supervisors in XOR, and performs safety walkthroughs.

The XOR **Director** has line responsibility for safety for all Sector 7 activities at ANL and for ensuring that this plan is implemented. The Director is also responsible for evaluating and responding in a graded manner to non-conformances with this plan.

The XFD **ES&H** coordinator provides safety oversight of Sector 7. He or she conducts periodic safety inspections of the beamlines and LOM laboratories. He or she conducts accident investigations and recommends corrective actions.

The **Sector 7 Manager** is appointed by the XOR Director and is in charge of managing the safe day to day operation of Sector 7. The manager reports to the XOR Director and is responsible for implementing and overseeing conformance with this safety plan.

The Sector 7 **Safety Coordinator** is appointed by the XOR Director and reports to the Sector Manager and XOR Director. The Sector 7 Safety Coordinator is to ensure that the sector staff and users have access to the ANL-E ESH Manual and the other identified standards and to assist MHATT/XOR members and users in meeting the requirements of these standards. He or she is in charge of the Experimental Safety Review Program for the sector. All other safety coordinators listed below report to the Sector 7 Safety Coordinator.

The Sector 7 **Electrical Safety Coordinator** is appointed by the XOR Director and is responsible for electrical safety and ensuring compliance with ANL electrical safety standards in all of the sector 7 facilities. The Electrical Safety Coordinator is to be aware of ANL ESH Manual defined electrical safety requirements as typically attained through completing ANL electrical safety and LOTO training.

The Sector 7 **Chemical Safety Coordinator** is appointed by the XOR Director and is responsible for chemical safety, including chemical waste management, and ensuring compliance with ANL and OSHA chemical safety standards in all of the sector facilities. The Chemical Safety Coordinator is also responsible for the proper use of the ANL Chemical Management System throughout the sector. The Chemical Safety Coordinator is to be aware of ANL ESH Manual defined chemical safety requirements.

The Sector 7 **Shipping Coordinator** is appointed by the XOR Director and is responsible for overseeing the safe transportation of materials to and from the Sector and ensuring compliance with ANL transportation safety standards. The shipping coordinator is to be aware of ANL transportation requirements as well as APS specific shipping and receiving requirements. The Shipping Coordinator will remain current in the APS transportation safety course.

The Sector 7 **Hoisting and Rigging Coordinator** is appointed by the XOR Director to supervise the safe operation of cranes and hoists throughout Sector 7. He or she is in charge of the inspection of all cranes and hoisting equipment and the training of the sector staff and users in the safe use of such equipment.

The Sector 7 **Experiment Safety Reviewers and Approvers** are appointed by the XOR Director and are responsible for ensuring that that the beamline can adequately and safely meet the needs of a specific experiment. They are also responsible for ensuring that all specific hazard controls are in place prior to the start of the experiment.

The Sector 7 **Sealed Source Custodian** is appointed by the XOR Director to track the use of all radioactive sealed sources for which they are responsible. The use of sealed sources at APS is restricted to people who have received proper radiological training. Sealed Source Custodians are also responsible for ensuring that all sealed sources are inventoried and leak-tested by APS Health Physics personnel every 6 months.

The Sectors 7 **Laser Control Area(LCA) Supervisor** is appointed by the XFD Division Director and is responsible for ensuring that a standard operating procedure is implemented for any class 3b or 4 lasers used and for ensuring that all authorized LCA users have completed the proper laser safety training and medical eye exam. The Laser Control Area Supervisors are responsible for notifying the ANL Laser Safety Officer and XFD ES&H Coordinator of any modifications to their laser set-ups. The LCA Supervisor also trains future Class 3b and 4 laser users about safe practices in the laser lab.

The Sector 7 **Lab Safety Captains** are appointed by the XOR Director. They report to the Safety Coordinator and are responsible for implementing and overseeing conformance with this Safety Plan in their laboratories. They are to ensure that users of the labs follow the safety policies and practices defined in the ANL-E ESH Manuals and the sector specific procedures. The Sectors 7 Lab Safety Captains are also responsible for correcting any safety deficiency cited by the XFD ES&H Coordinator during inspections of their facilities. The Sector 7 **Wet Lab Safety Captain** ensures the safe use of the chemical lab (432-D030) by the resident personnel and external users. The Sector 7 **Electronic Lab Safety Captain** ensures the safe use of the electronic lab (432-D020) by the resident personnel and external users.

The Sector 7 **LOM 432 Shop Coordinator** is appointed by the XOR Director and is in charge of the safe use of the local machine shop by the Sector 7 users and staff members. He or she trains and keep records of training of the machine shop, assists in keeping the shop safe and clean, inspects machine tools and guarding, and informs the 432 floor coordinator of any repairs and or maintenance of such items.

Appendix A - Safety Assignments & ESAF Approvers

Appendix A.1 MHATT/XOR Safety Assignments

Date: last revised March 24, 2005

Assignment	Person assigned/ alternate person
XFD Division Director	Efim Gluskin
XOR Director	Gabrielle Long
XFD ES&H Coordinator	Jeff Alicz
Sector 7 Manager	Eric Dufresne / Jin Wang
Sector 7 Safety Coordinator	Dohn Arms / Don Walko
Sector 7 Electrical Safety Coordinator	Dohn Arms / Eric Dufresne
Sector 7 Chemical Safety Coordinator	Eric Dufresne / Harold Gibson
Sector 7 Shipping Coordinator	Harold Gibson / Don Walko
Sector 7 Laser Control Area Supervisor	Eric Landahl
Sector 7 Hoist and Rigging Coordinator	Don Walko / Harold Gibson
Sector 7 Experiment Safety Reviewers and Approvers	Dohn Arms, Don Walko, Eric Landahl, Eric Dufresne.
Sector 7 Sealed Source Custodian	Eric Dufresne / Harold Gibson
Sector 7 Machine Shop Coordinator	Harold Gibson / Dohn Arms
D020 Electrical Laboratory Safety Captain	Dohn Arms
D030 Wet Laboratory Safety Captain	Don Walko

Appendix A.2

MHATT/XOR Personnel with Experiment Safety Approval Authority

As Director of XOR, I authorize the following personnel to conduct hazard evaluations of experimental activities, to specify required control measures, and approve such activities where specified controls have been implemented. (Upon updating this form, the sector administrator will provide a copy of the revised form to the APS User Safety Officer).

1. Dohn Arms
2. Don Walko
3. Eric Landahl
4. Eric Dufresne

[Name]

[Date]

[Signature]

Appendix B

Standard Procedures Used by MHATT/XOR

MHATT/XOR has evaluated the hazards that will be encountered in its operations, and, to mitigate these hazards the sector personnel and its users will follow the unmodified APS Standard Procedures listed below. (Links to these procedures can be found on the APS User Safety and Training web page http://www.aps.anl.gov/Safety_and_Training and more specifically http://www.aps.anl.gov/user/policy_procedures/. They are also linked on the Sector 7 guides of procedures <http://www.mhatt.aps.anl.gov/esh/procedures/>.)

Date: March 24, 2005

1. The Management of Hazardous Waste
2. APS Technical Update 23: Transportation of Small Quantities of Hazardous Materials.
3. Transporting Hazardous Materials
4. Hand Tool and Portable Power Tool Usage
5. Guideline for Personal Protective Equipment
6. Work Area Demarcation, Warnings, and Controls
7. Electrical Safety Work Practices
8. Management of Chemicals
9. Hoisting and Rigging Operations
10. LOM Shop Usage
11. APS User Safety Guide (ANL/APS/TB-23)
12. APS Experiment Hazard Classes for Experiment Activities at the Advanced Photon Source.

In addition, Sectors 7 will follow the guidelines listed on the APS Experiment Safety Approval Forms web page for beamline experiments detailed in the APS Hazard Classes document (See HC1-14 in http://www.aps.anl.gov/Safety_and_Training/Experiment_Hazard_Classes/)

Appendix C

MHATT/XOR Specific Procedures

MHATT/XOR has evaluated the hazards that will be encountered in its operations, and, to mitigate these hazards, the sector management has developed and will follow the procedures listed below. The titles of the procedures should be self-explanatory. These procedures are available on our web site at <http://www.mhatt.aps.anl.gov/esh/procedures/>.

Date: Last revised March 24, 2005.

1. Standard Operating Procedure for Laser Control Area in 7ID-D, version 6.0 November 2004.
2. Guidelines for the Management of Chemicals at Sector 7, version 1, October 2004.
3. Standard Operating Procedure for handling Li lenses (version 1.1 May 2001), and Standard Operating Procedure for disposing of Li at Sector 7 (March 2004).