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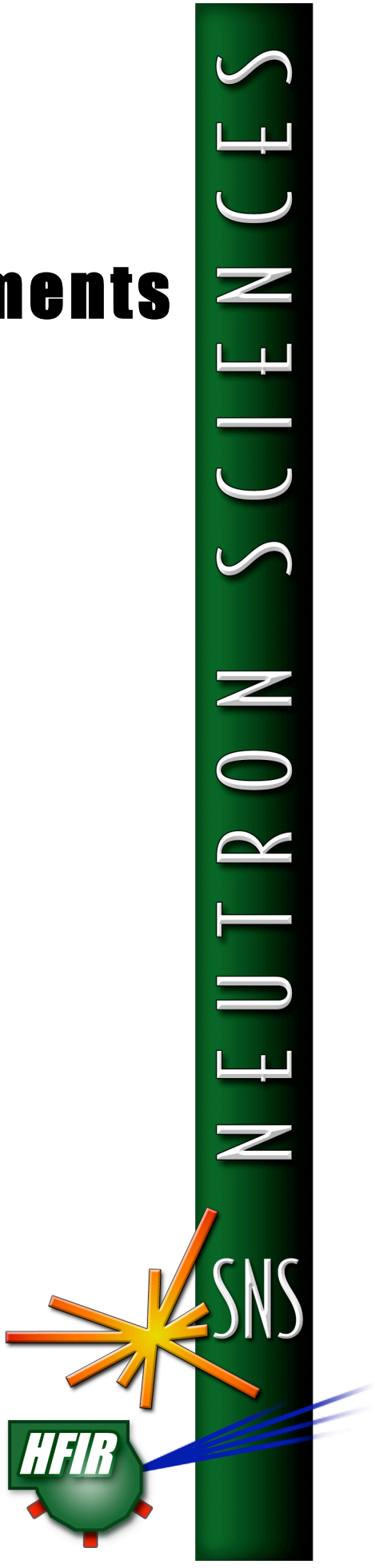
Policy for Use of Instruments in the Neutron Sciences Directorate

April 2007



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POLICY FOR USE OF INSTRUMENTS IN THE NEUTRON SCIENCES DIRECTORATE

A. E. Ekkebus

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POLICY FOR USE OF INSTRUMENTS IN THE NEUTRON SCIENCES DIRECTORATE

April 2007

A. E. Ekkebus
User Outreach Coordinator

4/18/2007
Date

J. L. Trimble
Leader,
Neutron Science User Program

4-18-07
Date

I. S. Anderson
Director,
Neutron Scattering Science Division

4/23/07
Date

T. E. Mason
Associate Laboratory Director,
Neutron Sciences Directorate

4/23/07
Date

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1. PREAMBLE

The High Flux Isotope Reactor (HFIR) and the Spallation Neutron Source (SNS) are U.S. Department of Energy (DOE) facilities at Oak Ridge National Laboratory (ORNL) with the mission of world-class research in neutron science. Staff of both facilities will safely plan, construct, upgrade, operate, and maintain these world's leading neutron-scattering facilities for studying the structure and dynamics of materials using neutrons. Both facilities will number among the world's finest scientific user facilities and will be operated in full compliance with the environmental, safety, and health policies of the DOE Office of Science.

As part of ORNL's Neutron Sciences Directorate, the requirements set forth in all plans and policies/procedures will be consistent with the *ORNL Standards Based Management Systems (SBMS)*. SBMS is a web-based system that provides a point of access to all the requirements necessary for ORNL staff and others at the ORNL site to safely and effectively perform their work. SBMS translates laws, orders, directives, policies, and best practices into laboratory-wide subject areas and procedures.

This document describes the overarching policies on the use of the HFIR and SNS as science research facilities. For the purposes of this document, the term "experiment" refers to any scientific or technical experiment, or other use of the beamlines of these facilities. The term "user" refers to any individual or group whose goal is to utilize one or both of these facilities. The "principal investigator" is the lead proposer of the experiment.

2. SAFETY

It is the goal of these facilities to create and maintain a safe and ecologically sound research environment for its users. These facilities and their users shall give highest priority, and take all reasonable measures, to protect the health and ensure the safety of HFIR and SNS users and visitors, ORNL personnel, and the public, and to prevent accidental damage to property and the environment. Facility operations shall never be given a higher priority than personnel safety.

To achieve these goals, all users and individuals conducting activities at the HFIR or SNS under the auspices of the user program shall comply with the environmental, safety, and health (ES&H) policies and practices set forth in the Policies and Procedures of the facilities. Noncompliance by users may lead to shutdown of their experiments or exclusion of individuals from experimental areas at the discretion of the managers of the facilities.

An experiment will not be performed [including as part of an Instrument Development Team (IDT), Partner User, or a proprietary experiment] unless there are adequate safeguards for protection of the health and safety of the user, facility staff, and protection of the environment and the facility. Awareness of hazards and training are important components of the safety program. Both HFIR and SNS will identify a local contact for each experimental team who wishes to use either the HFIR or SNS; this person or his delegate will assist the experimental team in preparing and performing the experiment.

HFIR and SNS will provide required personal protection equipment that is not user-specific, such as safety glasses and safety hats, to users to enable the user to access work at the instrument. The user is responsible for individualized personal protection equipment required for the safe operation of their experiment, such as prescription safety glasses, steel-toed shoes, or regular clothing for daily use by users for the conduct of their experiment.

All user-supplied equipment, including sample environments and samples, must be identified during the proposal process (including as part of an IDT, Partner User, or a proprietary experiment). This equipment will be reviewed and/or tested by HFIR or SNS to determine if it has been built to acceptable standards, hazards have been mitigated, and it can be operated in a safe manner; a UL-approval or equivalent is the standard. An Experiment Safety Review will be conducted for each experiment.

Each user is responsible for his behavior, including adherence to all ES&H concepts and practices and HFIR and SNS policies and procedures. The principal investigator will ensure that all members of

the user team follow the policies and procedures of the respective facility and have been adequately trained in the hazards of their experiment. The facility or laboratory space manager for the work or research areas ensures all work adheres to and follows HFIR or SNS policies and procedures.

3. IDT OR PARTNER USER PROGRAMS

An IDT or Partner User must use its allocated beam time for advancement of its science program, and it must select a review process for these experiments from options provided by the Neutron Scattering Science Division (NSSD) Director. The effectiveness of the science program conducted with beam time at the facility will be periodically reviewed as noted in *General Policies for User Access to Instruments in the Neutron Sciences Directorate.* Typically these reviews will occur every three years after the instrument becomes available for General Users, and will terminate at ten years unless otherwise specified in the Memorandum of Agreement with the IDT or Partner User. The reviews will examine the research performed through the beam time allocation process, the publications, and other research output. If the review indicates this is an inadequate science program, consequences up to, and including, a reduced allocation or an elimination of beam time to the IDT or Partner User may result.

All activities conducted by the IDT or Partner User will reinforce the goals of these ORNL facilities to create and maintain a safe and ecologically sound research environment for its users. There is no difference in the safety policies between General User experiments and those conducted as IDT, Partner User, or proprietary experiments.

All experiments conducted under an IDT or Partner User allocation will be reviewed for feasibility, safety, and science as described above. The final decision on performing all experiments will be made by the Director, NSSD.

Everyone using IDT or Partner User allocated beam time or conducting IDT or Partner User-supported experiments will respond to all requests for surveys and user satisfaction.

If the IDT or Partner User is contributing to the support of operations, the level of financial support will be equivalent to the support provided by facility-supported instruments to the General User for 24hr/day operation whenever the facility is producing neutrons. This includes, but is not limited to, support for local instrument contacts, for data analysis and interpretation, for sample handling and sample environment, and for training.

4. EXPERIMENTAL REVIEW PROCESS

All experiments will be reviewed for feasibility, safety, and quality of science.

Feasibility reviews will be conducted by HFIR and SNS instrument scientists familiar with the capabilities of the instrument. These reviews will determine if the proposal is technically feasible and allowed by policies of the facilities.

Science reviews will be conducted by external peer reviewers to determine if the proposal is judged to be scientifically worthy of beam time.

Safety reviews will be conducted for all experiments to be carried out at either facility, including those of IDTs, Partner Users, or proprietary research. Safety reviews will examine the techniques, equipment, and samples described in the proposal, and identify required training and/or mitigating strategies to ensure the experiment is conducted in a manner acceptable to the facility.

The final decision on performing all experiments will be made by the NSSD Director.

5. USER AGREEMENTS

Access to the Oak Ridge user facilities such as the HFIR or SNS is a twofold process: the review and approval of the user's proposal and an executed agreement between the user institution and UT-Battelle, the managing contractor of ORNL. User facilities such as the HFIR and SNS give scientists and engineers from organizations such as industry, universities, and other national laboratories access to expensive, unique, sophisticated facilities and equipment at ORNL. Work at user facilities may be conducted on a nonproprietary or proprietary basis. ORNL's Technology Transfer and Economic Development Office executes a user agreement with the user institution. This User Facility Agreement, which can be either proprietary or nonproprietary, stipulates the terms and conditions (including disposition of intellectual property) for the interaction. A master User Agreement signed by the user institution is a prerequisite for hands-on work at the HFIR or SNS, and must be completed prior to arrival at HFIR or SNS or participation in any research activities. Each user agreement has an Appendix A [to be completed prior to arrival by the user institution] that identifies the relevant subject area, and an Appendix B that lists general individual user responsibilities, and must be signed on arrival by the individual user. A Memorandum of Understanding or Agreement is not an acceptable substitute for a user agreement.

6. ACCESS

ORNL is a U.S. Department of Energy national laboratory; access to ORNL is controlled by DOE and DOE policies. Acceptance of an experiment proposal does not imply approval for access.

Access will be provided to physical areas and information systems necessary for the conduct of the experiment. Access is dependent on successful completion of necessary training and receipt of approval for access from the appropriate facility or space manager. Access to physical areas requiring special training may be controlled by proximity cards. User access for all HFIR and SNS experiments will be administered by the Neutron Scattering Science User Office.

7. TRAINING

All users are required to successfully complete training needed to perform their experiment safely. Specific training requirements will be identified for facility access and for each instrument or user area, i.e., laboratories, preparation areas, etc. The facilities may require users to take periodic refresher training of some courses. Some of the training may be performance-based which will require users to successfully demonstrate their knowledge and skill in performing needed activities. Users will not be allowed to perform functions or access areas for which they have not successfully completed training and have been given approval for access. Selected training will be available electronically for users to take prior to their arrival at ORNL and the facility. The facilities will maintain training records of their users. Up to date training will be required for access to all facilities.

All users who are allocated beam time are expected to successfully complete training needed to perform their experiment safely.

8. FEES

In general, fees will not be charged for what are generally considered as regular and customary incidental supplies, use of equipment, or waste or sample disposal activities. Fees may be charged for

design and/or construction of a piece of equipment. Fees may be charged for sample or waste disposal depending on its nature.

Fees will be charged for proprietary work according to DOE and ORNL policies and the User Agreement covering the activity.

9. SAMPLE MANAGEMENT

All samples will be tracked at both HFIR and SNS and entered into their respective tracking system. Sample hazards must be identified in the proposal process; further review will be carried out during the experiment approval and review processes. A sample management plan must be proposed by the user and approved by the respective facility before the start of the experiment.

Both facilities will store the samples that arrive prior to the arrival of the users; users are responsible for shipping samples to the facility in accordance with relevant federal, state, and local laws and regulations, and applicable facility and ORNL policies and procedures. All samples will be surveyed for their level of radioactivity at the time of removal from the experimental apparatus and will be stored on-site if the level of activity prohibits their removal from the building. The facility will store the samples after the experiment until they can be safely shipped to the user. While at the facility, all samples will be managed and handled according to the Neutron Sciences Directorate's policies and procedures. If a user and/or user institution is unable to accept a sample after the experiment, special arrangements, up to and including payment of disposal or shipping fees, will need to be made according to established ORNL policies and procedures. Facility staff will determine when the samples and user-supplied equipment can be returned to users after completion of their experiment. Samples may only be stored at the facility for a limited period of time with explicit agreement from the NSSD ES&H Manager.

All wastes, including sample wastes, will be disposed of according to ORNL policies and procedures.

10. DATA POLICY

In nonproprietary experiments, short-term access to the experimental data during and after the experiment is determined by the principal investigator. Long-term access to data is determined by the user agreement.

For proprietary experiments, access to the data is determined by the user agreement.

11. EXPERIMENT REPORT AND SURVEYS AND PUBLICATIONS

After each experiment, the principal investigator will be required to complete a survey about satisfaction with the equipment and services provided to the users. Annually, each principal investigator will respond to an inquiry about the progress of the research performed at ORNL and publications or other activities resulting from ORNL-based research. Periodically, the Neutron Scattering Science User Office will request information on research progress to be included in reports to sponsors or user-related publications.

All users are required to respond in a timely manner to surveys by ORNL of its facilities, services, and productivity of users. These surveys are a vital part of ensuring quality for our users and also serve as feedback to our sponsors. A non-response to requests about productivity may result in denial of access to these facilities.

Users will credit ORNL in all publications resulting from experiments performed at these facilities. Publications, papers, patents, honors and awards and their citations will also be reported to the Neutron Scattering Science User Office to assist the facilities in recording the contributions of its users.

Publications written about research performed at these facilities must include an acknowledgment of support as follows:

"Use of the Oak Ridge National Laboratory was supported by the U.S. Department of Energy."

Authorship of publications based on research from these facilities should reflect the normal considerations of recognizing collaborations. The normal rules of collaborations have been discussed by many organizations, including the National Academy of Sciences and the American Physical Society. It is also important to take into account the considerable efforts of the instrument scientists in their role of designing, constructing, and/or operating the instrument and related facilities. To avoid misunderstanding, it is appropriate that the experiment proposer and colleagues at the host facility discuss recognition as co-author or other acknowledgement prior to the beginning of the experiment. ORNL expects publications of its staff (as either first author or co-author) to be reviewed internally prior to submission for publication.

Research and development shall be conducted and communicated in accordance with the highest scientific, professional, and ethical standards and in a manner that fosters mutual respect and enhances the reputation of the individual researcher, his/her colleagues, and ORNL as the institution of choice for addressing the DOE's, the Nation's, and society's most urgent and demanding scientific and technical challenges.

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