



SRC New User Safety Orientation Booklet

Revised February 13, 2012

**University of Wisconsin-Madison
Kegonsa Research Campus
3731 Schneider Drive
Stoughton, WI 53589-3097
Phone: (608) 877-2000
FAX: (608) 877-2001**

Important Phone Numbers

Emergency (Fire - Police - Ambulance)	911
UW Department of Police and Security	264-2677
UW Safety Department	265-5000
SRC Accelerator Operator on Duty	877-2002
KRC Safety Manager	877-2157
Safety Manager Cell Phone	225-2761
SRC On-Duty Cell Phone	575-6152

SRC phone numbers use 877- as a prefix. The SRC area code is (608).

Bruce Neumann	SRC Safety Manager	2157	225-2761(c)
Mike Fisher	SRC Building Manager	2148	274-6730(h)
Jon Young	SRC Computer Support	2235	514-4044(h)
Tai-Chang Chiang	SRC Assistant Director of Research Support		217-333-2593
Katherine Spencer	SRC Administrative Assistant	2134	
Rick Keil	SRC Operations Group Leader	2176	575-6152(c)
Joseph Bisognano	SRC Executive Director	2163	246-0178(h) 225-2937(c)

(h) = Home phone number

(c) = Cell phone number

SRC and Safety Related Websites

SRC's homepage

<http://www.src.wisc.edu>

SRC SafetyWeb-safety manual/booklet, links, MSDS search engine

http://www.src.wisc.edu/safety/Safety_WEB.html

SRC online "SRC Experiment Form"

http://www.src.wisc.edu/user_info/forms/experiment/default.html

SRC online Radiation Safety Course

http://www.src.wisc.edu/safety/radiation_safety_course.htm

SRC MSDS/SDS Database

SRC NET-You must be on site in order to access these

<http://www.src.wisc.edu/intranet/msds/>

<http://www.src.wisc.edu/intranet/sds/>

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The *SRC New User Orientation Booklet* is provided to new Users and workers of SRC as an introduction to the SRC and as a supplement to the *KRC Safety Policies and Procedures Manual*. **Please reference the *KRC Safety Policies and Procedures Manual* for additional information as needed.**

ACCESS TO THE FACILITY

Normal office hours are Monday through Friday, 8:00 am-4:30 pm. See the secretary for a key to the building if you will need access at other times. All keys are to be returned to the secretary upon departure.

From 0800 – hours Monday – 0800 hours Saturday, a SRC Operator is on duty.

CHECK-IN AND SET-UP PROCEDURES FOR USERS

Users are asked to submit a “SRC Experiment Form” at least one month prior to beginning work. Forms are located on the shelf beneath the SRC Staff and User mailboxes or may be submitted electronically from the SRC website or the SRC SafetyWeb page. Information required on the form includes:

- PI’s Name
- Requested Beamline
- Experiment Run Dates
- Participating Experimenters (New Users must be designated)
- Samples AND Chemicals being brought to or used at SRC
- Any Hazardous Equipment that may be used
- Person submitting the form

All Users are to be checked-in by the Operator on Duty (OOD). The OOD will ask the User to complete an information form. The online *Radiation Safety Training Course* must be completed as well. Following the check-in and completion of the online *Radiation Safety Training Course*, personnel will receive a clip-on name badge. Due to

extremely low radiation levels, radiation badges are not required while in the Aladdin vault. Visitors may be escorted by registered personnel (SRC Staff and registered Users); however, the Aladdin Tour Policy rules must be followed.

Material Safety Data Sheets (MSDS)/ Safety Data Sheets (SDS) are on file for all hazardous materials used at SRC. You must submit a MSDS/SDS for any and all chemicals you will be bringing to SRC. Please contact the KRC Safety Manager with questions or for assistance.

No equipment may be assembled or plugged in by a User until the User has checked in.

New Users and staff are asked to read the *SRC Safety Orientation Booklet* before beginning work. All personnel are required to complete a quiz after they complete the safety orientation. This quiz must be returned to the KRC Safety Manager.

New Users and staff are required to complete the online *Radiation Safety Training Course* found at:

http://www.src.wisc.edu/safety/radiation_safety_course.htm

Please contact the KRC Safety Manager regarding:

- storage of any hazardous materials to be used;
- concerns regarding User equipment, i.e., mechanical or electrical;
- use of gas cabinets for hazardous gases.

A Cleanroom and Chemical Room are available for Users to prepare samples, use a fume hood, or clean UHV parts.

****USERS WILL NOT BE ALLOWED ONLINE UNTIL THE ABOVE CONDITIONS ARE MET****

New personnel must attend a safety orientation. The safety orientation consists of an explanation of KRC safety policies, emergency procedures, and a brief tour of the facility. Contact the KRC Safety Manager (x 2157) prior to or upon arrival for scheduling.

KRC SAFETY POLICY

Users, KRC employees and all other personnel at KRC are responsible for conducting work in a manner that will ensure the health and safety of personnel, preserve the environment, and comply with University of Wisconsin, municipal, state of Wisconsin, and United States regulations. KRC requires that all personnel integrate health, safety, and environmental concerns into their work; know and comply with KRC safety policies and procedures; and ensure that their operation is safe and without hazard to Users, KRC employees, and all other personnel at the KRC. ***“Safety is Everyone’s Responsibility.”***

The *KRC Safety Policies and Procedures Manual* is available to all staff, Users and other personnel at KRC and also on the SRC web page. Please refer to the manual for questions concerning safety rules for operations at KRC.

ALARMS

Alarms at SRC include **vault evacuation** sirens used to alert personnel prior to an injection, and **emergency alarms**.

Emergency-fire alarm (fire and chemical emergency) is signaled by a loud bell. When personnel hear this loud bell, they are to immediately evacuate to the PSL parking lot.

Tornado/Severe Weather:

A "Tornado Warning" means a tornado has actually been sighted in the area. The emergency sirens will sound a steady tone for three minutes or longer if there is any danger in the immediate area.

When tornado/severe weather warning sirens sound, an SRC Operator or KRC supervisor will announce over the PA system, "tornado warning. Seek the nearest tornado shelter." The Experiment Prep Area of the lower level of the SRC Building is the designated tornado shelter for SRC. At PSL, the designated tornado shelter is the east hallway in the PSL High Bay Lab Area. Personnel working in KRC office trailers should report immediately to the nearest shelter area and remain there until the "All Clear" signal has been given.

The **vault evacuation** siren is a two-stage pulsing siren located on the east-central side of the Aladdin vault. This siren is activated during the vault lockout process and gets progressively louder as time lapses. Everyone should leave the vault immediately when this siren is activated.

EMERGENCY PROCEDURES

Emergency Procedures are posted throughout the KRC. These include procedures for medical, fire and chemical emergencies. All emergencies are to be reported to **911**. The designated assembly point for evacuations is the PSL parking lot. Emergency exits from the Aladdin vault include the two main vault doors and the two west vault doors (at the stairs). The complete Emergency Procedures Plan may be read in the *KRC Safety Policies and Procedures Manual*.

An emergency phone is located in the PSL building front entry.

MEDICAL EMERGENCY:

- Determine if emergency assistance needed after first determining that it is safe to approach the victim
- Call 911 to report the incident (don't hang up until told to do so by the operator)
- Please provide first aid if able
- Automated External Defibrillators (AEDs) are located in SRC First Aid Locker and the PSL First Aid Room
- Remain with victim until help arrives

CHEMICAL SPILLS

FIRE or LARGE-SCALE HAZARDOUS CHEMICAL SPILL:

- Large Scale: >5L or greater than 1.5 gallons of milk
- Pull the fire alarm
- Evacuate the building and go to the designated meeting area
- Call 911 from a different building or cell phone and provide a detailed description of the emergency
- Do **NOT** attempt to contain a large or hazardous chemical spill
- Do **NOT** reenter the building until emergency personnel permit it

SMALL SCALE HAZARDOUS or NONHAZARDOUS CHEMICAL SPILL:

- Small Scale: 300 ml or about the size of a soda can and does not endanger others or the environment outside of the building
- Contain the spill. Prevent personnel from entering the spill site
- Contact the KRC Safety Manager to obtain assistance
- Spill kits are located in the SRC Chemical Room (under the sink) and in the SRC Chemical Storage Building
- Use proper personal protective equipment when cleaning up the spill

CHEMICAL SPILL ON PERSON:

- Flush immediately** with water for a **minimum** of 15 minutes
- Remove any contaminated clothing
- If chemical **spill to eye** occurs, use eyewash for **minimum** of 15 minutes

- If burning occurs, continue flushing with water
- Use proper personal protective equipment before assisting any contaminated person
- Seek medical attention for all contamination and injuries

DESIGNATED MEETING AREAS

Emergency—Fire Alarm

- Exit the building and meet in the **northeast corner of the PSL parking lot**, just west of the SRC driveway.

Tornado / Severe Weather

-Exit vault, shop, offices, trailers, outside and other areas and report to the nearest tornado/severe weather shelter. At **SRC**, the designated tornado/severe weather shelter is the **Experiment Preparation Area**. At **PSL**, the designated tornado/severe weather shelter is located in **hallway just off of the north side of the High Bay Lab Area**. *If in a trailer or outside, leave immediately and head for the nearest tornado/severe weather shelter at SRC or PSL.*

Vault Evacuation

- Exit the vault

USING KRC PHONES

Persons placing an internal phone call need only dial the last four digits. To place calls to Stoughton or Madison, dial 9-xxx-xxxx. Any long distance calls require a phone authorization number* [see below] or use of a personal calling card.

To page personnel, simply dial “5” and announce “Joe Smith, please dial xxxx.” If the phone system fails due to a power failure, three phones in the SRC building will continue to work: at the SRC Machine Shop entrance, in the SRC lobby, and the cell phone in the SRC entry.

The phone number to use in case of emergency is **911**. Emergency phone numbers are posted the by phones in the Aladdin vault.

PROJECT NUMBER/TELEPHONE AUTHORIZATION NUMBER

A five digit project number is needed whenever charges are being made to your project or account. This includes: stockroom, purchasing, telephone calls, copying, or PSL services. To open a project/account, you will need to see Ruth Drage, or Mark Faber at PSL. The accounting office is to receive a purchase order, letter of authorization, an internal requisition or some other form authorizing expenditures before the project can be activated.

*To place long distance telephone calls and to send faxes, you will need to obtain a telephone authorization number from Ruth Drage (2241). After you dial the number you wish to call, a tone will sound. At this time you enter your telephone authorization number.

USING KRC'S STOCKROOM

The KRC Stockroom is located in the PSL building. The stockroom door is located on the east side of the building. The stockroom maintains laboratory, office, computer, and electronics supplies which may be purchased by Users.

As a user you will need a project number. A check-out slip with your name, project number to be charged, date, and item you check out is to be completed. If you can't find an item that you need, or have any questions, please ask the stockroom personnel.

When items you have arranged for shipment to KRC arrive, they are placed on the metal shelves adjacent to the KRC Stockroom. Your name will be written on the package, indicating it may be picked up. Chemicals are placed in one of the two chemical cabinets beneath the metal shelves. A copy of the purchase order will be placed on the cabinet door.

USING KRC'S PURCHASING DEPARTMENT

Items not on hand at either SRC or PSL may be purchased through the KRC Purchasing Office. You will need an established account with a current project number. Requisition forms can be found in the SRC secretarial office, PSL purchasing office and stockroom. Completed forms are submitted to the purchasing department located in the PSL building. If you need assistance, see the purchasing staff. Purchases will be delivered to the stockroom (PSL building).

BEAMLINER USERS' FORM

On each beamline is a "Beamline Users' Form" which is to be completed. All persons working at the beamline should enter their names, affiliation, time present at SRC and local phone number. The person responsible for the experiment should enter his or her name and the above mentioned information at the top of the form and ensure that all Users in the group sign in.

CHEMICAL HAZARD LABELS and MATERIAL SAFETY DATA SHEETS

National Fire Protection Association (NFPA) or Hazardous Materials Information System (HMIS) chemical hazard labels are placed on hazardous materials. With either system, the hazard colors are similar: blue is for health information, red is for flammability information and yellow is for reactivity information. The hazard numbering is similar also: 0-minimal hazard; 1-slight hazard; 2-moderate hazard; 3-serious hazard; 4-severe hazard. The *KRC Safety Policies and Procedures Manual* discusses the chemical hazard labeling system.

All chemicals and containers must be labeled. In addition to the chemical name, each chemical or chemical container must have the **owner's name** and the **date** the chemical was introduced to SRC listed.

The SRC/KRC Safety Manager must be notified of any chemicals brought to KRC. This is typically done by declaration on the SRC Experiment Form.

A Material Safety Data Sheet (MSDS)/Safety Data Sheet (SDS) is a document provided by the manufacturer of a hazardous material. MSDS/SDS provides information about the material or its components. Federal Law requires KRC to have a MSDS/SDS for each hazardous material located at this facility. If you are unfamiliar with MSDS/SDS, it is recommended that you read the *KRC Safety Policies and Procedures Manual*.

CHEMICAL USE

You **MUST** notify the KRC Safety Manager of all chemicals brought to the SRC. If ordering chemicals for shipment to SRC, notification is to be sent to the KRC Safety Manager. Incoming chemicals will not be released for use until the KRC Safety Manager has received notification and approves their release.

Gas cabinets must be used if performing experiments using hazardous gases, i.e. toxic or flammable gases. Contact the KRC Safety Manager if a gas cabinet is needed.

CHEMICAL ROOM

The Chemical Room is the room designated for hazardous chemical work. It is located across from the northeast Aladdin vault door.

Acetone, ethanol, AZE, and deionized water are provided. Common acids: nitric; acetic; hydrochloric; hydrofluoric; and sulfuric may be found beneath the fume hood. There is also a nitrogen line. Aqueous UHV cleaning detergents, Citranox and Ridoline, are stored in carboys. Users of the Chemical Room are responsible for knowing the safety rules of the Chemical Room and complying with them. Personnel are responsible for their equipment and chemicals. Personnel are required to clean the work area when finished. Any materials abandoned in the Chemical Room will be immediately disposed. All containers (flasks, beakers, etc.) must be labeled with their contents, ownership, date, and

an NFPA/HMIS label. Chemical goggles and gloves must be worn at all times when handling chemicals.

CHEMICAL STORAGE BUILDING

No User chemicals may be kept in the vault or storage area. All chemicals are to be stored in the Chemical Storage Building when not in use. The Chemical Storage Building is located on the south side of the SRC main building. Users may be assigned space in the Chemical Storage Building for storage of chemicals.

No experiment procedures, preparations, or chemical transfers are permitted in the Chemical Storage Building.

Please arrange for storage space with the KRC Safety Manager.

CLEANING UHV PARTS

SRC provides ultrasonic baths, organic solvents, and aqueous detergents for personnel to clean UHV parts. Two stations are set up in the Chemical Room. Instructions for using the baths are posted above each cleaning station. The first station consists of AZE, acetone, and ethanol. The second station uses aqueous detergents, consisting of Ridoline and Citranox. A final bath in ethanol is recommended. If you have any questions, contact the KRC Safety Manager.

EATING AND/OR DRINKING POLICY

Eating and/or drinking is allowed only in designated areas. Designated eating/drinking areas include the main level of the Aladdin Building, the break area on the lower level of the Aladdin Building, office trailers, and the SRC Machine Shop Office.

ELECTRICAL SAFETY

Electrical equipment may pose the greatest hazard to persons at SRC. Unsafe high voltage power supplies and ion pumps may cause an

electrocution. To avoid this hazard, **all electrical equipment** is to be in excellent working condition, frayed electrical cords are to be replaced, the equipment must be grounded according to accepted practices, and all connections should be protected from physical contact and be mechanically secured. Concerns regarding User equipment will be forwarded to the SRC Safety Officer.

When working on electrical equipment, the Lockout/Tagout rule must be followed. Power cords are to be unplugged, and all hardwired equipment is to have the breakers turned off, with locks or tags attached to the breaker or equipment to prevent personnel from re-energizing the equipment. Locks and tags may only be applied by Authorized Persons. Most of the SRC staff, including the Operator on Duty, Engineering Group personnel, the KRC Safety Manager, and some users are trained as Authorized Persons. Those affected by lockout/tagout are called Affected Persons. An Affected Person is someone whose job or duties requires them to operate or use equipment on which servicing or maintenance is being performed under lockout/tagout conditions, or someone whose job or duties requires them to work in an area in which such servicing or maintenance is being performed. Affected persons **MAY NOT** apply or remove locks and tags.

Users and non-KRC personnel are not allowed to perform repairs on KRC equipment. Notify the Beamline Manager if KRC equipment needs repair.

Please read the *KRC Safety Policies and Procedures Manual* for further electrical equipment safety policy.

HUMAN SUBJECT/TISSUE PROTOCOL APPROVAL

Use of human tissue or subjects at SRC is to comply with University of Wisconsin human subjects policies. Information regarding human subject protocol approval may be obtained from the KRC Safety

Manager. **IMPORTANT!** This approval is necessary to ensure that federal and UW policies for use of human specimens are followed. Please ensure adequate time before your scheduled experiment to obtain approval.

LASER SAFETY

Most lasers in use at SRC are nonhazardous lasers used for alignment. Simple precautions are in place for safe use of these lasers. Class 3R, 3B, and 4 lasers require advanced precautions. Please read the *KRC Safety Policies and Procedures Manual* for our complete laser safety policy.

OVERHEAD CRANE USE

Prior to using an overhead crane, Users or staff must take an Overhead Crane Safety class. Personnel shall not work alone when using an overhead crane, except as described in the *Working Alone Policy/Two Person Rule*. Be aware of crane use in the area. The electric motors on the overhead cranes can cause interference to data collection so contact all persons conducting research near you before using the cranes. Do not walk through areas where work using a crane is occurring. Special precautions are necessary when using the south overhead crane that moves above the CNTech Cleanrooms. Please read the *KRC Safety Policies and Procedures Manual* for further information on the crane safety policy.

PERSONAL PROTECTIVE EQUIPMENT AND SAFETY EQUIPMENT

Personal protective equipment (PPE) is provided for your use. Items provided include goggles, gloves, chemical aprons and arm shields, slip-on toe and metatarsal guards, hard hats, fall protection equipment, etc. Everyone at KRC must wear appropriate protective equipment for the task, per KRC safety policy. Please refer to the *KRC Safety*

Policies and Procedures Manual for detailed information on the PPE policies.

Personal protective equipment is located in both the Chemical Storage Building and the Chemical Room. For assistance in finding the proper equipment, see the KRC Safety Manager.

Other types of safety equipment are located in the Chemical Storage Building, Chemical Room, CNTech Cleanroom, and throughout the buildings and Aladdin vault.

FIRST AID

A first aid locker, containing a selection of first aid supplies, can be found in the SRC Experiment Preparation Area. Automated External Defibrillators (AEDs) are located in the SRC First Aid Locker and in the PSL First Aid Room.

First aid kits located throughout KRC, including numerous kits in the Aladdin vault.

BLOODBORNE PATHOGENS

Bloodborne pathogens are microorganisms that are present in blood, tissue, blood products, other potential infectious materials (OPIM)--defined by the Centers for Disease Control and Prevention (CDC) as: semen, vaginal secretions, cerebrospinal fluid, pleural fluid, peritoneal fluid, pericardial fluid, amniotic fluid, synovial fluid, breast milk (not all authorities agree), and saliva in dental procedures.

While there are other bloodborne diseases, those of primary concern are hepatitis due to either hepatitis B virus (HBV) or hepatitis C virus (HCV) and acquired immunodeficiency syndrome (AIDS) due to the human immunodeficiency virus (HIV).

When exposed to bloodborne pathogens, as defined above, Universal Precautions shall be exercised. Universal Precautions means that all

blood or other potentially infectious material will be considered infectious regardless of the perceived status of the source individual.

Sharps containers are located in every bathroom, the clean room, and the chemical room. Please place all metal/glass sharps contaminated with human fluid into these containers. DO NOT place them in the trash.

UNIVERSAL PRECAUTIONS

Universal Precautions means taking the following steps at the scene of an emergency to protect yourself first:

1. Cover your mucous membranes, such as your mouth, eyes, and nose.
2. Cover all cuts, scrapes, and broken skin with a bandage or gauze.
3. Don't touch objects that could be contaminated.
4. Prevent direct contact with sharp objects such as broken glass, jagged metal, needles, or anything that could puncture your skin.
5. Clean and decontaminate any surface areas that became contaminated with blood or bodily fluids with an approved agent or a solution of 1 part bleach to 10 parts water.
6. If you are exposed to bloodborne pathogens, **SEEK MEDICAL ATTENTION** and report any exposure.

RADIATION SAFETY AND MAGNETIC FIELDS

SRC radiation shielding and exclusion devices are so designed to keep radiation doses as low as reasonably possible. Radiation monitoring of SRC personnel working and performing research in the Aladdin vault and the CNTech Annex has been performed for over 20 years. The results of the personnel radiation monitoring have always shown minimal to no exposure to radiation. In early 2009, radiation studies were conducted to verify the historic minimal radiation levels.

Due to the documented history of minimal to no radiation exposure to individuals working and performing research in the SRC Aladdin vault, the University of Wisconsin-Madison Office of Radiation Safety has

determined that no radiation exposure hazards exist in the Aladdin vault during beam time when the vault is open. Therefore, radiation dosimeters are no longer issued to SRC users, SRC staff members who spend minimal time in the Aladdin vault and CNTech Annex, and visitors. This change in policy is affirmed by the radiation codes found in Wisconsin DHS 157.25(2)(a), which require radiation monitoring of adults who are likely to receive, in one year, a dose in excess of 10% of the occupational dose limit. Ten percent of the adult occupational dose limit is 500 mrem per year, and personnel working in the Aladdin vault and CNTech Annex at the SRC typically receive a radiation dose equivalence of less than 25 mrem per year. This is considerably lower than the 20 mRem/week exposure which the US Department of Energy considers an acceptable limit for radiation workers.

The National Science Foundation (NSF) requires the SRC to obtain personal information on staff and users. Therefore, staff and users must see the Operator on Duty (OOD) to complete a personal data form. The Operator on Duty will then issue a name badge to all SRC users and SRC staff members who spend minimal time in the Aladdin vault. The name badge will contain an expiration date. At that time, you will need to see the OOD to once again verify your personal information and obtain a new name badge.

Radiation dosimeters will continue to be issued to SRC staff that work primarily in the Aladdin vault and in particular those who work near the Aladdin storage ring.

Magnetic fields can interfere with cardiac pacemakers. Pacemakers can be switched by magnetic fields as low as 14 gauss. Therefore, persons with pacemakers are not allowed in the Aladdin vault without first speaking with the SRC Safety Manager.

Rules for working in the vault:

1. NEVER LOOK AT THE BEAM!!

2. Stay outside of chained areas. SRC uses yellow/magenta chain to indicate the areas which are off limits to Users.
3. Evacuate vault when an injection is announced.
4. DO NOT TAMPER WITH RADIATION SHIELDING, INTERLOCKS, EXCLUSION DEVICES OR SIGNS.
5. Persons with PACEMAKERS are not allowed in the Aladdin vault without first speaking with the safety manager.

Please read the *KRC Safety Policies and Procedures Manual* for further radiation safety policy.

INJECTION PROCESS

Injection means placing electrons into the storage ring. Ten minutes prior to injection, an announcement is made to evacuate the vault and the north vault door is closed. Sirens begin a few minutes later. This indicates that KRC personnel and Users should begin to leave the vault. The Operator on Duty will make a sweep for personnel. The south vault door is closed upon completion of the interlock system and the sweep of personnel. Prior to closing the south door, the OOD turns off the overhead lights in the vault. At this time, wall lights come on along the vault outer walls outside of the ring. If any individual becomes locked in the vault, they should depress a red Emergency Stop button located along the vault walls beneath the wall lights.

SRC ALADDIN VAULT LOCK-OUT POLICY

There have been numerous instances of personnel entering the Aladdin vault after the injection has been announced and the vault lockout has begun, and in some instances personnel have even gone past the Operator into the area of the vault that has already been swept. These situations cause a distraction for the Operator and this could result in personnel being forgotten or overlooked and increases the possibility of someone becoming locked in the vault. Therefore, to ensure the safety of all personnel the following policy has been established:

1. When the injection announcement is made, people are to finish up what they are doing and exit the vault, not wait for the operator to ask them to leave.
2. No one is to enter the vault once the lockout has begun.
3. No one is allowed to go past the operator during the lockout. If you forgot something you'll have to wait until after the injection. Injections are scheduled at the same time every day and staff and users need to plan around this. Going back to get something or do something is a distraction and the operator could forget about you and lock you in. Making the operator wait holds up the injection and everyone is delayed because of these actions. The operators are to provide names of anyone who goes past them during a lockout to the SRC Safety Manager.

SRC ALADDIN VAULT POLICY ON SLEEPING

Due to the nature of the research conducted at the Synchrotron Radiation Center (SRC), visiting researchers (users) often spend long periods of time working on their research and running experiments in the Aladdin vault. Working these long and non-traditional hours can cause extreme fatigue, sleepiness, and even involuntary sleep. Many safety factors come into play when someone falls asleep in the vault. For example, there is the potential for injury should a sleeping person fall from an elevated platform or sleep through an injection or fire alarm. SRC Operations has primary responsibility for sweeping the vault prior to injections and ensuring no User is left in the vault during an injection, but the potential for a fall or sleeping through a fire alarm still exists. We need Users' help to make the laboratory environment as safe as reasonably possible.

To address these concerns, SRC has established the following policy:

1. Although the SRC does not condone sleeping of any sort at the SRC, if a user feels him or herself becoming sleepy, they should exit the Aladdin vault and sit down at the table located

in the Experiment Preparation Area just outside the Aladdin vault. These chairs are padded and the person's presence will be obvious to all.

2. PI's should keep the health of their staff in mind and provide sufficient staffing to avoid dangerous levels of fatigue. Dozing off at the workstation is not an acceptable alternative to scheduled off hours during the day.
3. Intentionally sleeping on or under a beamline platform, on the mezzanine decks, or in any other secluded area is strictly forbidden and will result in a twenty-four-hour exclusion of the user in violation from the Aladdin vault for the first offense. A subsequent violation of this rule may result in forfeit of the remainder of the current beam time allocation.

The SRC Administration strongly urges all researchers to take periodic rest periods by returning to their place of lodging and obtaining sleep.

SRC MACHINE SHOP USE

SRC has a machine shop; however, the use of the machine shop is limited to authorized persons. Consult with the machine shop supervisor before beginning work, as Users are allowed to use certain tools, while machines are off limits. You may be required to demonstrate competency before being allowed to work in the machine shop. Follow all safe machine shop work practices. Safety glasses must be worn at all times while working in the machine shop and steel-toe safety shoes must be worn when working with heavy objects that may fall and injure your feet. Please read the *KRC Safety Policies and Procedures Manual* for further machine shop safety policy.

WASTE DISPOSAL

The KRC's chemical disposal policy is in the *KRC Safety Policies and Procedures Manual*. Before disposing chemicals, please refer to the *KRC Safety Policies and Procedures Manual*, *UW Chemical Safety and Disposal Guide*, or consult with the KRC Safety Manager. For

disposal of common wastes see the *KRC Safety Policies and Procedures Manual*, check for bulletin board postings, or contact the SRC Safety Manager.

Recycling is encouraged whenever possible. Specific requirements exist for items such as paper, glass, plastic, aluminum, copper and glass. Recycling containers for these various materials can be found in the Experiment Preparation Area. Recycling of other metals is also required and a metal recycling dumpster is located just south of the PSL building.

Specific regulations apply to Universal Wastes and the recycling of these items. Universal Wastes include recyclable batteries (lead-acid, nickel-cadmium, button silver oxide, lithium and lithium ion), recalled and other pesticides, mercury containing thermometers, thermostats, and electric lamps (e.g., fluorescent, high intensity discharge, neon, high pressure, sodium, metal halide and mercury vapor), other mercury containing equipment, antifreeze and used oil. Please see the safety officer if you have any of these items to dispose of.

WORKING ALONE

As part of the safety policy at the KRC, specific tasks require a minimum of two persons performing certain hazardous tasks. These tasks are listed in the *Working Alone Policy/Two Person Rule* which is posted on the SRC web and a copy is located on the desk located at the bottom of the stairway in the Experiment Preparation Area. Some of the tasks requiring two persons include certain overhead crane use, work with high powered electrical equipment, work with hazardous materials, use of scaffolds or ladders, and any other hazardous duties not mentioned. Please read over this policy if you intend to do any work alone.

On weekends, Staff and Users must sign-in on the sign-in sheet located on the desk described in the previous paragraph, and provide the

location within the SRC lower level where they intend to be working (a color-coded map is provided with the sign-in sheet). This is so personnel responding to an emergency will have a general idea of where to look for you, should you become injured, etc.

Due to the addition of cell phone antennas here at SRC, we have eliminated the need for two-way radios when working alone. If an emergency is to arise, please use one of the provided phones or a cell phone to call 911.

CRYOGENIC LIQUIDS

Liquid Nitrogen is the primary cryogenic liquid used at SRC. Eye protection, including a face shield, must be worn when handling cryogenic liquids. Gloves, which are impervious to cryogenic fluids and loose enough to toss off easily, must be worn.

The transfer of liquefied gases should not be attempted for the first time without the direct supervision and instruction by someone experienced in this operation. For assistance, contact the Operator on Duty or the SRC Safety Manager.

TELEVISION MONITORS

Television monitors are placed throughout the SRC building. These monitors list the existing beam energy and current, the Operator on Duty, and the weeks' schedule. It is a good idea to check the monitors regularly as they are also the source of other new and important information.