

## PHYSICS DEPARTMENT RULES EVERYONE MUST KNOW – February 2007

All individuals performing work at BNL are required to obtain a guest or permanent appointment before beginning work.

Radioactive materials, chemicals, and equipment may not be brought into the Department without prior notification.

All Employees must take General Employee Training (GET), Stop Work Training, Emergency Planning and Response Training, Environmental Protection Training, Cyber Security Training, Security Program and Responsibilities for New Employees Training, and a Department Specific Briefing.

All Guests and Visitors working at BNL must take the Guest Site Orientation, Cyber Security Training (if access to computer networks is required) and a Department Specific Briefing.

Radiation Worker Training is required for unescorted access to Controlled Areas, Radiological Buffer Areas, Radioactive Materials Areas and Radiation Areas. GERT only allows you to enter controlled areas unescorted. Training waiver forms are available and a waiver may be granted for an escorted person.

All safety training must be completed before the work that depends on that training begins.

Working in a laboratory area requires some additional training (Hazard Communications, Lab Standard, or User Training).

Clothing worn in labs must reflect the level of hazard (sandals and open-toed shoes are generally not permitted). Safety shoes and safety glasses must be worn when required and are available on site.

Personal Protective Equipment (PPE) is available for authorized users and is available on site – glasses (including prescription glasses) with side shields and safety shoes. A valid account number is needed.

You are **NOT ALLOWED** to use Machine Shops, Cranes or Forklifts unless you get training before you use them. Authorized users are posted where this equipment is located. **YOU MUST BE ON THE AUTHORIZED USER LIST TO USE THE MACHINE SHOP OR OPERATE THE CRANE OR FORKLIFT.**

You are **NOT ALLOWED** to use Cryogenics or Compressed Gases unless you get the training before you use them.

You are **NOT ALLOWED** to perform any Electrical work above 50 VDC or VAC without additional training and PPE. Operating a circuit breaker requires proper PPE. **YOU MUST BE ON THE AUTHORIZED USER LIST TO WORK ABOVE 50 VOLTS.**

You are **NOT ALLOWED** to use Class IIIb or Class IV Lasers unless you get training and an eye exam before you use them. Authorized Users are posted at each lab where these are used. **YOU MUST BE ON THE AUTHORIZED USER LIST TO OPERATE THE LASER.**

Hazard Placards are placed outside each laboratory to inform you of the hazards in that lab so if you don't want to or should not be exposed to something you don't have to.

All labs and offices should be kept locked when you're not in them especially after hours and on weekends.

Mariette Faulkner (ext. 4064) is the Physics Department's Affirmation Action Representative. She works along with Physics Department Administration to enhance opportunities for the career advancement of our diverse work force. She is available to all department personnel to ensure the fair application of established EEO and personnel laws, policies, procedures, and practices at the Laboratory.

### Chemical Information You Should Know

BNL maintains a site-wide chemical inventory in the BNL Chemical Management System (CMS). The CMS is your link to the Material Safety Data Sheets (MSDSs) that are available for all materials used at the Laboratory. Learn to use the CMS as your first source of chemical information.

**Chemicals cannot be purchased with a BNL credit card.** All chemicals ordered through BNL are bar coded on arrival. Chemicals are sometimes available free of charge from the CMS chemical exchange.

You must notify the Department Safety Office before you bring chemicals or hazardous materials on site so that your plans to use them can be reviewed and the container bar coded.

**If you need to have a chemical bar coded, you can contact the [CMS Team](#) or use the on-line form.**

**If you transfer ownership of or move a bar coded chemical container to another location, you must fill out a Chemical Transfer Sheet or use the on-line form.**

Any laboratory use of chemicals requires the user to take *IND 200, Hazard Communication* or *IND 220, Laboratory Standard. Hazardous Waste Generator* training is required for use of hazardous chemicals. Use of carcinogens requires the user to take *IND 220 Laboratory Standard*. There is also training for using *Lead in the Workplace* and *Methylene Chloride* all available from the [Training Web Site](#).

The custodian of a multipurpose chemical cabinet must take *IND 220, Laboratory Standard* and be familiar with the list of Incompatible Chemicals.

Chemicals **must be** disposed of properly since they can damage the environment. If you are not sure what to do, look for guidance from the "How do I manage this waste stream?" web page. An **unofficial** list of OSHA Regulated Chemicals is available on the web.

**When you empty a bar-coded container, or get rid of it as hazardous waste, you must remove the bar code and affix it to a Bar Code Removal Sheet or use the on-line form.**

## Rules for Working with Radioactive Sources in the Physics Department

All sources must be under the control of a TRAINED Source Custodian.

You are required to stay within the Administrative Control Limits established by the Physics Department.

All sources must be inventoried and tracked with the source inventory physically verified (exempt – annually, non-exempt – semiannually) by the source custodian & reported to the ES&H Coordinator.

Sources may only be purchased after signoff by the ES&H Coordinator.

A source can only be in an appropriately posted area and must have a Radioactive Source or Radioactive Material Tag with it at all times. Wear a TLD badge when using any source, follow posting rules, and sign the source out/in of the source box when removing/returning it.

The Physics Department is monitoring the individual dose for each employee, guest, and visitor and will look to work with those who receive appreciable exposures in order to review the work being done in an effort to reduce exposure.

Notify RCD Technician for posting before moving a source into another area or before moving a source into or out of a building. A Radiation Worker Permit (RWP) is required for the use of strong sources (potential for > 100 mRem/yr.). In addition, other sources that are in specially designed rigs may not be taken apart and used without contacting RCD Technician since exposures can be considerably higher and a RWP may be needed.

Immediately report to RCD Technician or [Department Safety and Training Office](#), any non-compliance regarding sources.

## Basic ALARA Principles That Apply to Everyone at BNL

### Any Hazard Exposure Must:

- Have a Net Benefit (there has to be a good reason for **any** exposures)
- Be **As Low As Reasonably Achievable (ALARA)**
- Be Within Limits

All work **must** be reviewed for safety. Experimental Safety Reviews and Work Control are the methods used. In addition, Radiation Work Permits are used for specifically reviewing work in Radiation Areas and work around radioactive materials. Make sure your project is reviewed before you begin and that you follow all rules, regulations, and postings.

If you have any questions on radiological regulations or radiation dose rates or if you wish to be certain that a task is being conducted in a manner to assure that **As Low As Reasonably Achievable (ALARA)** Guidelines are maintained, contact the ALARA Coordinator.

**For any further information contact the Safety & Training Office, Room 1-43, ext. 2585.**