

PERSONAL PROTECTIVE EQUIPMENT

RHIC PROJECT

Personal Protective Equipment (PPE) shall be worn by all personnel in areas identified below. Existing areas are identified; however, transient conditions may require PPE in other areas and operations.

I. PPE REQUIRED IN THE PROJECT IS AVAILABLE TO EMPLOYEES from the BNL Supply and Materiel Division. Some PPE is maintained in the RHIC ES&H Office.

II. EYE PROTECTION

- A. Safety Glasses with side shields are required to provide protection from frontal impact and high velocity particles and where Ranges B or C electrical power and/or systems pressurized to greater than 100 psig are in use in the machine shops, technician shops, machinery rooms, and all testing and assembly areas. One or more of these eye hazard areas exist in RHIC Buildings 197, 820, 832, 835, 902, 903, 905, 924, 933, 934, 935, 944, 945, 1002B, 1004B, 1005H, 1005R, 1005S, 1006, 1006B, 1008, 1008B, 1010A and 1012A. Safety glasses are required in all RHIC facilities when engaged in "working hot" electrical jobs.
- B. The Project shall provide the basic issue plastic frame glasses. If the employee desires additional features; i.e., tinted lenses, metal frames, they shall be requested at their own expense.
- C. Ventilated impact goggles or chippers goggles are required to provide protection from dust and small flying particles when engaged in, or working near, any activity that can create these hazards in any RHIC facility. They are required when chipping or using belt sanders, grinding wheels, or wire wheels.
- D. 1. Splash goggles or combination splash goggles and full face shield are required to provide protection from chemical splash hazards wherever hazardous chemicals are employed in RHIC facilities. Spray hoods are present in Buildings 197, 820, 835, 902, 903, and 905. The full face shield is required when transferring cryogenics at any RHIC facility.

2. Safety glasses with side shields may be used instead of the eye protection required under C.1., for protection against solvent splashes where the solvents do not produce a toxic, allergic, or corrosive hazard and where the temperature of the solvent does not present a hazard to the eyes.
- E. Welder's goggles, hoods, or tinted safety glasses with side shields are required for protection from reflected welding light, glare, and welding flash hazards in the preapproved welding areas or welding/cutting permit areas when such work is in progress. There are preapproved areas in RHIC Buildings 902, 905, 924, 935, 1002B, 1004B, 1006B and 1012B.
- F. Laser infrared and ultraviolet filtering goggles for protection against these lights are required in the areas of the Project where these devices are utilized. The RHIC does not have any in use at this time.

III. HEARING PROTECTION

- A. Administrative Requirements
 1. The ES&H Coordinator shall post signs in areas requiring hearing protection, schedule annual training for affected employees, and coordinate the Hearing Conservation Program.
 2. The Supervisor shall identify areas needing a noise survey, engineering controls, administrative controls, or hearing conservation. The S&EP Division shall characterize these areas.
- B. Ear Protector Plugs and/or Ear Muffs are required in the following areas when the equivalent noise level is above the daily allowable noise limitation of 85 dB(A) for 8 hours:

Compressor Rooms in Buildings 902 and 1005H

IV. RESPIRATORY PROTECTION

- A. Administrative Requirements
 1. Respirators shall be issued only to persons who have been trained and possess a valid BNL Respirator Authorization Card.
 2. The S&EP Division shall determine the type of respirators required in each area.

3. The ES&H Coordinator shall coordinate the Respiratory Protection Program, including assisting Project employees with procedures to obtain BNL Respirator Authorization Cards.
 4. The Supervisors shall identify areas for review by the S&EP Division to determine whether respiratory protection is required.
- B. Particulate respirators are required to provide protection from solid or liquid particles in air, such as dust, fog, fume, mist, smoke, or spray.
- C. Cartridge type air purifying respirators are required when using or working near operations employing organic vapors, acids or other air pollutants in any RHIC facility.
- D. Air purifying radio isotope respirators are required to provide protection from airborne constituents in RHIC. There are no current practices in RHIC resulting in airborne radiological hazards.
- E. Self-contained breathing apparatus is required to provide protection in atmospheres immediately dangerous to life or health for chemical emergencies in the Project.
- F. Self-rescue escape packs and Personal Oxygen Monitors are required for access into ODH Class I Areas.

V. HEAD PROTECTION

- A. Hard hats are required to provide protection from rigging operations, overhead conveyors, piping protruding into the work path, construction, and from overhead falling objects in the following areas in the Project:

Fabrication, assembly and test areas of Buildings 820, 832, 835, 902, 905, 924, 935, 945, 960, 1002,* 1005H, 1005R, 1006,* 1008,* 1010*

*Visitors to the collision halls and adjacent assembly buildings; i.e., persons who are not specifically authorized to work there, must be escorted by authorized personnel and must wear hard hats at all times during hours when work is being performed in the area.

VI. FOOT PROTECTION

- A. Safety toe shoes are required to provide protection where heavy materials are manually carried, rolled, or pushed; where heavy materials are moved by vehicle or

hoist; and where sharp objects can be kicked in construction, assembly and testing areas in the Project.

- B. Impervious boots, slip resistant soles on shoes or other footwear may be required for specialized tasks at the discretion of the ES&H Coordinator.

VII. HAND PROTECTION

- A. Abrasion resistant gloves are required to provide protection from rough or sharp objects in the Project if the assigned task can be dangerous or injurious to the hands.
- B. Electrical linemen gloves are required to provide protection from electrical hazards around high voltage electrical lines over 600 V in areas in the Project where these voltages may be encountered. No RHIC personnel are authorized to be "working hot" over 600 volts.
- C. Electricity resistant gloves are required to provide protection from lower electrical voltages in RHIC facilities if authorized to be performing Class B or Class C "working hot" functions.
- D. Cold and frost-bite gloves are required to provide protection from extreme cold hazards such as pouring of cryogens.
- E. Appropriate chemical resistant gloves are required to provide protection from chemical absorption. Check with the S&EP Representative to assure that the appropriate type gloves are used with each chemical.

VIII. MISCELLANEOUS PROTECTION

- A. A face shield must be worn as a minimum by personnel working near the magnet coil curing presses in Building 924 when presses are hot.
Note: Side and end of shields must be in place on the curing press.
- B. The ES&H Coordinator has reviewed the need for additional personal protection equipment in the Project and has found no other protection necessary at this time. Keep him/her apprized of any new chemical or other hazard introduced into the facilities so that it may be reviewed for possible PPE requirements.

APPROVED _____
Satoshi Ozaki
RHIC Project Director

7/1/98
DATE _____