

Management System: [Worker Safety and Health](#)

## Subject Area: Personal Protective Equipment and Respirators

 [VIEW/PRINT ALL \(No Exhibits and Forms\)](#)

Effective Date: **Mar 31, 2016** ([Rev 12.0](#))

Periodic Review Due: **Mar 31, 2021**

Subject Matter Expert:  
[Robert Selvey](#)

Management System Executive:  
[Ed Nowak](#)

Management System Steward:  
[Gail Mattson](#)

### Introduction

This subject area provides an overview of the BNL Personal Protective Equipment (PPE) Program and sets forth the elements to implement the OSHA regulatory requirements in Title 29 of the Code of Federal Regulations Part 1910.132-140.

When controlling workplace stressors, the process for determining feasible and effective controls should be based on the following hierarchy of controls. Control methods at the top of the list are potentially more effective and protective than those at the bottom:

- Elimination;
- Substitution;
- Engineering controls;
- Administrative controls;
- Personal protective equipment.

The best controls are those that eliminate the hazard. Next are those that control the source or shield the worker from the source. Next is work planning that limits a worker's exposure to the source. Finally, the least desirable approach is controlling exposure at the worker's location, especially the use of protective equipment worn by the worker.

This subject area supports other subject areas that have requirements on personal protective equipment.

The requirements in this subject area are required for "mandatory" uses of PPE (i.e., when PPE is required to control exposure levels for regulatory compliance or is mandated by a management decision). When workers request to use personal protective equipment in situations where the use is not required, the use is considered "voluntary". Voluntary use is allowed if PPE does not increase the exposure to hazards. The requirements and guidance in this subject area are optional (i.e., non-mandatory) for "voluntarily" PPE use. Some examples of voluntary use

include: a worker wears earplugs around a noise source that does not exceed regulatory limits; a worker uses a dust mask while mowing grass to prevent allergy symptoms from grass clippings.

## Contents

<b>Section</b>	<b>Overview of Content</b> (see section for full process)
<a href="#"><u>1. Determining Area-Based Personal Protective Equipment Requirements</u></a>	<ul style="list-style-type: none"><li>• Determine the predominant hazards of area.</li><li>• Select PPE for hazards of area.</li><li>• Post PPE required for entry into area.</li></ul>
<a href="#"><u>2. Planning for Use of Operation-Based Personal Protective Equipment</u></a>	<ul style="list-style-type: none"><li>• Initiate requirements from Work Planning &amp; Control Subject Area.</li><li>• Select specific PPE for job/activity.</li><li>• Select only equipment that meets its design specifications.</li></ul>
<a href="#"><u>3. Obtaining, Procuring, and Purchasing Personal Protective Equipment</u></a>	<ul style="list-style-type: none"><li>• Procure PPE.</li><li>• Obtain prescription eye protection equipment that meets design specifications.</li><li>• Obtain safety shoes that meet design specifications.</li></ul>
<a href="#"><u>4. Using, Maintaining, Storing, and Disposing of Personal Protective Equipment</u></a>	<ul style="list-style-type: none"><li>• Complete required PPE training.</li><li>• Inspect PPE to verify its integrity before using equipment.</li><li>• Wear, clean, maintain, and store PPE according to training and subject area requirements.</li><li>• Dispose of PPE.</li><li>• Report any problems using PPE or suggest improvements.</li></ul>

## 5. Use of Respiratory Protection Equipment by Contractors

- Ensure the contractor complies with Section 15 of the BNL HASP template.
- Ensure the contractor prepares and follows a written Respiratory Protection Program that meets all applicable requirements.
- Ensure the contractor complies with the T&C and 0900 Construction Specifications (or equivalent).
- Specify compliance with requirements in bid package.
- Require submission of Respiratory Protection Program.
- Monitor implementation of program.
- Document respiratory protection elements and equipment specs in writing to ensure compliance.
- Maintain documentation for each worker.
- Complete respiratory training.
- Submit completed Non-BNL Employee Respirator Medical Approval Form to respirator fit tester.
- Obtain fit testing or provide documentation of equivalent fit testing.
- Supply respirator equipment.
- Inspect equipment and perform user seal check.
- Return used mask to respirator issuer.

## 6. Oversight of Personal Protective Equipment and Respiratory Protection Programs

- Provide daily supervision of PPE and respirator use.
- Conduct and document inspection of High Risk PPE (A1 & A2) upon receipt.
- Conduct and document inspections of respirators used or emergencies.
- Periodically review contractor's record of their respiratory protection program.
- Provide periodic surveillance of BNL

## Respiratory Protection Program.

### [Definitions](#)

### **Exhibits**

[Area-Based Personal Protective Equipment \(PPE\) Requirements](#)

[Operation-Based Personal Protective Equipment \(PPE\) Requirements](#)

[OSHA Requirements on Respirator Cleaning](#)

[Requirements for Filtering Facepiece Respirator Use](#)

[Requirements for Respirators Used for Emergency Situations](#)

### **Forms**

[Area-Based PPE Certification Form](#)

[BNL Employee Respirator Medical Approval Form](#)

[Non-BNL Employee Respirator Medical Approval Form](#)

[Notification of Respirator Use By A Contractor](#)

[Operation-Based Protective Clothing Selection Form](#)

[Respirator Cleaning Facility Inspection Record](#)

[Respirator Selection Form](#)

[Respiratory Protection Program Periodic Oversight Record](#)

[Voluntary Use of Respirators When Not Required By Regulations Record](#)

## **Training Requirements and Reporting Obligations**

This subject area contains the following training requirements (see the [BNL Training and Qualifications](#) website):

- Chemical Protective Clothing User Training (HP-OSH-157)
- Heat Stress Prevention (TQ-HEATSTRESS)
- Respirator - Air Purifying and Powered Air Purifying (HP-IND-301-W)
- Respirator - Airline (TQ-AIRLINE-RESP)
- Respirator- Filtering Facepiece (TQ-FILTERRESP).

This subject area does not contain reporting obligations.

## **External/Internal Requirements**

Requirement Number	Requirement Title
--------------------	-------------------

<a href="#">10 CFR 830, Subpart A</a>	Energy, Nuclear Safety Management, Quality Assurance Requirements
<a href="#">10 CFR 851</a>	Worker Safety and Health Program
<a href="#">29 CFR 1910</a>	Labor/Occupational Safety and Health Standards
<a href="#">29 CFR 1926</a>	Labor/Safety and Health Regulations for Construction
<a href="#">ANSI Z 49.1</a>	Safety in Welding, Cutting and Allied Processes
<a href="#">ANSI Z 87.1; ANSI/ISEA Z 87.1</a>	Occupational and Educational Personal Eye and Face Protection Devices [1968:IBR 29 CFR 1926.102; 1968, 1989 & 2003: IBR 1910.113, 133, 252]
<a href="#">ANSI Z 88.2</a>	Respiratory Protection
<a href="#">BSA Contract No. DE-SC0012704 - Clause C.4</a>	Statement Of Work
<a href="#">BSA Contract No. DE-SC0012704 - Clause H.27 (ACT)</a>	Non-Federal Agreements for Commercializing Technology (Pilot) (ACT)
<a href="#">BSA Contract No. DE-SC0012704 - Clause H.3</a>	Contractor Assurance System
<a href="#">O 151.1C</a>	Comprehensive Emergency Management System
<a href="#">O 414.1D Admin Chg 1 (May 8, 2013)</a>	Quality Assurance

<a href="#">OSHA 3352-02 (2009)</a>	OSHA: Assigned Protection Factors for the Revised Respiratory Protection Standard [2009][IBR 1910.134]
<a href="#">P 456.1</a>	Secretarial Policy Statement on Nanoscale Safety

## References

29 CFR 1910.132 140, Personal Protective Equipment

ANSI/ISEA 101: American National Standard for Limited-Use and Disposable Coveralls - Size and Labeling Requirements

ANSI/ISEA 107: American National Standard for High Visibility Safety Apparel and Headwear

ANSI/ISEA 207: American National Standard for High-Visibility Public Safety Vests

ANSI Z41: American National Standard for Personal Protection-Protective Footwear

ANSI Z87.1: American National Standard for Occupational and Educational Eye and Face Protection

ANSI Z89.1: American National Standard for Industrial Head Protection

ANSI Z359: American National Standard for Fall Protection

ASTM 2413 Standard Specification for Performance Requirements for Foot Protection

ASTM F 1117: Standard Specification for Dielectric Footwear

[Animal Research](#) Subject Area

[Asbestos](#) Subject Area

BNL [Hazard Validation Tool](#), [Safety and Health Services](#) website

[BNL Supplier Nonconformance \(BSNC\) Reporting and Tracking System](#), [Procurement and Property Management](#) website (\*Limited Access)

[BNL Training and Qualifications](#) website

[Beryllium](#) Subject Area

[Biosafety in Research](#) Subject Area

[Bloodborne Pathogens](#) Subject Area

[Chemical Safety](#) Subject Area

[Compressed Gas Cylinders and Related Systems](#) Subject Area

[Cryogenics Safety](#) Subject Area

[Diving Safety](#) Subject Area

[Electrical Safety](#) Subject Area

[Emergency Preparedness](#) Subject Area

[Entry and Egress for Areas Controlled for Radiological Purposes](#) Subject Area

[Explosives Safety](#) Subject Area

[Fall Protection](#) Subject Area

[Fire Safety](#) Subject Area

[Graded Approach for Requirements](#) Subject Area

[Guidance on Chemical Protective Gloves and Suit Selection Process](#), [ESH Guide: Chemicals, Safety and Health Services](#) website

[Guidance on Disposable Gloves: "Splash Protection & Incidental Contact" for laboratory and fine work detail](#), [ESH Guide: Personal Protective Equipment and Respirators](#), [Safety and Health Services](#) website

[Guidance on Hard Hat Styles, Manner of Use, and Replacement](#), [ESH Guide: Personal Protective Equipment and Respirators](#), [Safety and Health Services](#) website

[Guidance on Lab Coats: Selecting, Obtaining, Using, Storing, and Cleaning](#), [ESH Guide: Personal Protective Equipment and Respirators](#), [Safety and Health Services](#) website

[Guidance on "Splash Protection & Incidental Contact" for laboratory and fine detail work](#), [ESH Guide: Chemicals, Safety and Health Services](#) website

[Guidance on the Required & Recommended PPE Design](#), [ESH Guide: Personal Protective Equipment and Respirators](#), [Safety and Health Services](#) website

[Heat and Cold Stress](#) Subject Area

[IH72200 Respirator Selection for Non-Radiological Hazards, SHSD Standard Operating Procedures and Controlled Documents/Records](#)  
page, [Safety and Health Services](#) website

[Inspections and Acceptance](#) Subject Area

[Job Assessment Form \(JAF\)](#), [Occupational Medicine Clinic](#) website

[Laser Safety](#) Subject Area

[Lead](#) Subject Area

[Lifting Safety](#) Subject Area

[Marine Safety](#) Subject Area

NFPA 1992: Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials Emergencies

[NIOSH National Personal Protective Technology Laboratory \(NPPTL\)](#), [Certified Equipment List \(CEL\)](#) page, [Searchable Certified Equipment List](#)

[Noise and Hearing Conservation](#) Subject Area

[PCB Management](#) Subject Area

[Pressure Safety](#) Subject Area

[Radiological Control Manual](#) Program Description

[Radiological Control Division \(RCD\) Standard Operating Procedures](#)

[Requirements Management](#) Subject Area

[Safety & Health Services Division \(WS&H/Facility Safety\) 5-yr Assessment Plan](#), [Safety and Health Services Division](#) website

[Safety Shoe and Eyeglasses Office extension 2864](#), [Procurement and Property Management](#) website

[Signs, Placards, and Labels for Environmental, Safety and Health \(ESH\) Hazards](#) Subject Area

[Using Controlled Substances in Research](#) Subject Area

[Walking and Working Surfaces](#) Subject Area

[Work Planning and Control for Experiments and Operations](#) Subject Area

\*Access Limited to BNL Staff and Authorized non-BNL Staff

## **Standards of Performance**

All staff and users shall identify, evaluate, and control hazards in order to ensure that work is conducted safely and in a manner that protects the environment and the public.

All staff and users shall ensure that they are trained and qualified to carry out their assigned responsibilities, and shall inform their supervisor if they are assigned to perform work for which they are not properly trained or qualified.

---

The only official copy of this file is the one on-line in SBMS.

Before using a printed copy, verify that it is the most current version by checking the *effective date*.

---

| [SBMS Home Page](#) | [Subject Areas](#) | [Changes](#) |

Management System: [Worker Safety and Health](#)

Subject Area: [Personal Protective Equipment and Respirators](#)

## 1. Determining Area-Based Personal Protective Equipment Requirements

Effective Date: Mar 31, 2016

Subject Matter Expert: [Robert Selvey](#)

Management System Executive: [Ed Nowak](#)

### Applicability

This information applies to Environmental Safety & Health Coordinators, Cognizant Space Managers, Research Space Managers, Safety & Health Representatives, Environmental Safety & Health Representatives, or other personnel that a line organization assigns to maintain the Area-based PPE portion of the Hazard Information Placards.

This section applies to work areas at the BNL Upton site only. It does not apply to:

- Areas that have no occupational hazards (see the [Guidelines](#) section below on hazards). Excluded areas typically include offices, conference rooms, lunch/break rooms, copier rooms, and office supplies storage rooms.
- Construction and renovation sites. Follow the site's Health and Safety Plan regarding personal protective equipment (PPE) use and postings.
- Radiological hazards posted areas. Consult the [Entry and Egress for Areas Controlled for Radiological Purposes](#) Subject Area and the [Radiological Control Manual](#) Program Description.

### Required Procedure

Follow these steps for evaluating the hazards of an area to determine the required area-based PPE.

<b>Step 1</b>	Determine and select the area-based PPE for an area the pre-determined areas in the <a href="#">Hazards &amp; Risks Assessments/PPE</a> certifications list in the <a href="#">Hazard Validation Tool</a> . If an area is not listed in the <a href="#">Hazards &amp; Risks Assessments/PPE</a> certifications list, contact the <a href="#">PPE &amp; Respirator Subject Matter Expert</a> to have an area evaluated.
<b>Step 2</b>	Use the BNL <a href="#">Hazard Validation Tool</a> to generate a Hazard Information

	<p>Placard/Emergency Information Placard.</p> <ul style="list-style-type: none"> <li>• Post the placard at <b><u>primary entrances</u></b> to areas with area-based PPE requirements.</li> <li>• Post <b><u>secondary entrances</u></b> as needed to ensure occupants and visitors entering areas are informed of the PPE requirements of an area. Placarding secondary entrances is not needed when there is electronic key access, a locked entrance, or a work planning document that includes area-based PPE requirements.</li> </ul>
<b>Step 3</b>	<p>Periodically review the adequacy of area postings and staff compliance with entry requirements during oversight activities such as Tier 1 Inspections, Safety Observations, and Line Organization Self-Assessments.</p>

## Guidelines

Area-based PPE placarding is targeted at informing typical occupants, staff and trades who enter an area to perform work. Guests and visitors are not expected to have un-escorted access to areas with hazards. Doors that are locked under the control of the occupants are considered access control for visitor and non-routine entrants to an area. If an unlocked point of entry is readily accessible and likely to be entered by un-escorted visitors, the entrance should be posted with the applicable area-based PPE requirements.

The hazards of an area include biological agents, chemicals, unbound nanomaterial, and physical hazards (burns, cuts, abrasions, projectiles, and crush from dropped parts). The SME documents the certification of area-based PPE based on these hazards in the [Hazards & Risks Assessments/PPE](#) certifications in the [Hazard Validation Tool](#). The SME enters the area-based PPE certifications into the [Hazard Validation Tool](#) for new areas as needed.

## References

BNL [Hazard Validation Tool](#), [Safety and Health Services](#) website

[Entry and Egress for Areas Controlled for Radiological Purposes](#) Subject Area

[Radiological Control Manual](#) Program Description

---



Management System: [Worker Safety and Health](#)

Subject Area: [Personal Protective Equipment and Respirators](#)

## 2. Planning for Use of Operation-Based Personal Protective Equipment

Effective Date: Mar 31, 2016

Subject Matter Expert: [Robert Selvey](#)

Management System Executive: [Ed Nowak](#)

### Applicability

This information applies to BNL staff, guests, and users who plan operations where personal protective equipment (PPE) is required.

### Required Procedure

Follow these steps for use of PPE and respirators on-site.

<b>Step 1</b>	<p>Work Planners initiate the requirements from the <a href="#">Work Planning and Controls for Experiments and Operations</a> Subject Area. Select the specific PPE for the operations (job/activity) from one of the following:</p> <ul style="list-style-type: none"><li>• Specific PPE requirements in work planning documents;</li><li>• Specific subject area for a hazard;</li><li>• The exhibit <a href="#">Operation-Based Personal Protective Equipment (PPE) Requirements</a>;</li><li>• The exhibit <a href="#">Requirement for Filtering Facepiece Respirator Use</a>;</li><li>• The exhibit <a href="#">Requirements for Respirators Used for Emergency Situations</a>.</li></ul> <p>If not covered by the above sources of requirements, then complete an <a href="#">Operation-Based Protective Clothing Selection Form</a> and/or <a href="#">Respirator Selection Form</a>. Add specified equipment into the PPE section in work planning documents.</p>
<b>Step 2</b>	<p>The Facility Support Representative or Safety &amp; Health Representative supporting the work determines the appropriate respiratory protective equipment using the following:</p> <ul style="list-style-type: none"><li>• Safety and Health Services procedure <a href="#">IH72200 Respirator Selection for Non-</a></li></ul>

	<p><a href="#">Radiological Hazards</a> and completes a <a href="#">Respirator Selection Form</a> to specify the type of face-piece, cartridge, End-of-Service Life Indicator and/or cartridge change-out schedule;</p> <ul style="list-style-type: none"> <li>• Radiological Control Division procedure FS-SOP-4002 Selection and Issuance of Respiratory Protection for Radiological and Nuclear Hazards on the <a href="#">FS Standard Operating Procedures</a> page.</li> </ul>
<b>Step 3</b>	<p>Owners of respirators that will be used in emergency situations must develop controls on the use, inspection, and maintenance of the equipment to ensure that adequate quality, quantity, and flow of breathing air is provided to users. Refer to the exhibit <a href="#">Requirements for Respirators Used for Emergency Situations</a>.</p>
<b>Step 4</b>	<p>Workers who use chemical protective equipment complete training based on the following:</p> <ul style="list-style-type: none"> <li>• Workers who use splash gloves: Hazard Communication (HP-IND-200) or Laboratory Standard (HP-IND-220) for those who use gloves for chemical protection from hazardous concentrations of chemicals.</li> <li>• Workers who use chemical protective immersion gloves and impervious full body suits: Chemical Protective Clothing User Training (HP-OSH-157) for those required to don body protective clothing and gloves in hazardous operations. It is recommended for all PPE users.</li> </ul> <p>See the <a href="#">BNL Training and Qualifications</a> website for courses.</p>
<b>Step 5</b>	<p>Workers who use respirators complete annual training based on the following requirements:</p> <ul style="list-style-type: none"> <li>• Respirator - Voluntary User (TQ-RESP-VOLUNTARY): users of filtering facepieces and half mask air purifying-respirators (APRs) on a voluntary basis. The <a href="#">Voluntary Use of Respirators When Not Required By Regulations</a> form documents the conveyance of required instructions for voluntary users. Submit the completed form to your Training Coordinator for entry into BTMS. Retain signed form for three years.</li> <li>• Respirator - Filtering Facepiece Respirators (TQ-FILTERING-RESP): users (required) of filtering facepiece respirators (dust masks); recommended for voluntary users.</li> <li>• Respirator - Air Purifying &amp; Powered Air Purifying (HP-IND-301-W): all users (required and voluntary) of half face and full face mask air purifying respirators.</li> </ul>

	<ul style="list-style-type: none"> <li>• Respirator - Airline Respirator (TQ-AIRLINE-RESP): all users of hood, helmet, half face and full face mask respirators from compressor or fixed location airline sources.</li> <li>• Respirator - Self-Contained Breathing Apparatus (TQ-SCBA-C) and (TQ-SCBA-P): all users of SCBA. Training is provided by the line organization or outside training provider.</li> <li>• Respirator Fit Test and Familiarization Practical (HP-IND-317): users (required) of half face and full face mask APRs or powered air purifying-respirators (PAPRs) and filtering facepieces; available for voluntary users.</li> <li>• Respirator - Escape Devices: all users of emergency escape devices. Training is by the line organization or outside training provider.</li> <li>• Respirator Issuers (HP-IND-313): those who issue respiratory protective equipment.</li> </ul> <p>See the <a href="#">BNL Training and Qualifications</a> website for courses.</p>
<b>Step 6</b>	<p>Workers obtain medical approval for workers required to use respirators (mandatory use). The <a href="#">Environmental Safety and Health (ESH) Coordinator</a> and Supervisor initiate medical approval to wear the respirators by</p> <ul style="list-style-type: none"> <li>• Completing and submitting the <a href="#">BNL Employee Respirator Medical Approval Form</a> or the equivalent in the online <a href="#">Job Assessment Form (JAF)</a> to the Occupational Medicine Clinic (OMC); and</li> <li>• Completing an OMC <a href="#">Job Assessment Form (JAF)</a> indicating the conditions requiring respiratory protection.</li> </ul> <p>See the <a href="#">Occupational Medicine Clinic</a> website for instructions.</p>
<b>Step 7</b>	<p>Workers who use tight fitting facepiece respirators complete annual fit testing from the BNL Respirator Fit Tester for the appropriate type of respiratory protection equipment. Fit testing is required for the following</p> <ul style="list-style-type: none"> <li>• Mandatory use of filtering facepiece respirators (FFR);</li> <li>• Mandatory use of half face and full face mask air purifying, airline, and SCBA respirators.</li> </ul> <p><b>Note:</b> Fit testing is not required, but will be provided upon request, for voluntary use of FFR and half facepiece APR respirator users.</p>

## Guidelines

Consult the [Guidance on Disposable Gloves: "Splash Protection & Incidental Contact" for laboratory and fine work detail](#) on the [ESH Guide: Personal Protective Equipment and Respirators](#) for the recommended way to use disposable gloves when handling chemicals.

## References

[BNL Training and Qualifications](#) website

FS-SOP-4002 Selection and Issuance of Respiratory Protection for Radiological and Nuclear Hazards, [FS Standard Operating Procedures](#) page, [Radiological Control Division](#) Web site

[Guidance on Disposable Gloves: "Splash Protection & Incidental Contact" for laboratory and fine work detail](#), [ESH Guide: Personal Protective Equipment and Respirators](#), [Safety and Health Services](#) website

[IH72200 Respirator Selection for Non-Radiological Hazards](#), [SHSD Standard Operating Procedures and Controlled Documents/Records](#) page, [Safety and Health Services](#) website

[Job Assessment Form \(JAF\)](#), [Occupational Medicine Clinic](#) website

[Work Planning and Controls for Experiments and Operations](#) Subject Area

---

The only official copy of this file is the one on-line in SBMS.

Before using a printed copy, verify that it is the most current version by checking the *effective date*.

---

| [SBMS Home Page](#) | [Top of Subject Area](#) | [Instructions](#) | [Changes](#) |

Management System: [Worker Safety and Health](#)

Subject Area: [Personal Protective Equipment and Respirators](#)

### 3. Obtaining, Procuring, and Purchasing Personal Protective Equipment

Effective Date: **Mar 31, 2016**

Subject Matter Expert: [Robert Selvey](#)

Management System Executive: [Ed Nowak](#)

#### Applicability

This information applies to BNL staff, guests, and users who plan work where personal protective equipment (PPE) will be used.

#### Required Procedure

<b>Step 1</b>	Obtain unrestricted PPE (e.g., non-prescription safety glasses, gloves, disposable suits & clothing, lab coats, face shields, hard hats, ear plugs, ear muffs) from the BNL store room, e-Procurement, purchase order, PeopleSoft requisition, or BNL credit card. The equipment must meet the specifications in the exhibit <a href="#">PPE Descriptions and Design Requirements Standards</a> . There are no restrictions on the method of obtaining unrestricted PPE.
<b>Step 2</b>	Obtain restricted PPE listed below (categorized as ESSH&Q Risk Level A2 [Major] or A1 [Critical], as described in the <a href="#">Graded Approach for Requirements</a> Subject Area) via BNL Stores or by obtaining approval from the appropriate SME: <ul style="list-style-type: none"><li>• Fall Protection: harnesses, lanyards, and accessories;</li><li>• Respiratory Protection: breathing air compressors, hoods and Grade D breathing air cylinders. Compressed breathing air must meet the requirements for Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989.</li><li>• Electrical Safety: electrical flash suits and gloves;</li><li>• Chemical Safety: Level A chemical protective suits.</li></ul>

<b>Step 3</b>	<p>Obtain prescription safety glasses, that meet the current design specifications in ANSI Z87.1 by ordering using the electronic web for: <a href="#">Safety Glasses Authorization - BNL Form #2211</a>. Prescription safety glasses are selected, sized, and picked up at the Safety Glass and Safety Shoe Program Offices in Building 30.</p> <p>When the safety glasses available from the Safety Glass and Safety Shoe Program Office cannot fulfill a special need, purchase prescription safety glasses:</p> <ul style="list-style-type: none"> <li>• With a web requisition.</li> <li>• With petty cash reimbursement if approved by the Department/Division financial administrator.</li> </ul>
<b>Step 4</b>	<p>Obtain safety shoes via E-Procurement. Select the catalog <i>Saf-Gard Safety Shoe Company</i> and purchase a <i>Safety Shoe Voucher</i>. Shoes are picked up at the Safety Glass and Safety Shoe Program Office in Building 30.</p> <p>When the safety shoes available from the Safety Glass and Safety Shoe Program Office cannot fulfill a special need, purchase safety shoes:</p> <ul style="list-style-type: none"> <li>• With a BNL credit card only after obtaining approval of the Credit Card Program Administrator.</li> <li>• With petty cash reimbursement if approved by the Department/Division financial administrator.</li> </ul>
<b>Step 5</b>	<p>Obtain respiratory protection equipment as follows:</p> <ul style="list-style-type: none"> <li>• Filtering Facepieces (Dust Masks) from BNL Store Room, Purchase Order, BNL credit card, or e-Procurement.</li> <li>• Respirator cartridges from the BNL store room, e-Procurement, PeopleSoft requisition, or BNL credit card.</li> <li>• Respirator elastomeric facepieces (full face and half face) by contacting a BNL Approved Respirator Issuer (see the <a href="#">Definitions</a> section). BNL Approved Respirator Issuers supply the respirator equipment specified on the <a href="#">Respirator</a></li> </ul>

	<p><a href="#">Selection Form</a> or by Radiological Control Division procedures for radiological and nuclear hazards.</p> <p>Respiratory Protective equipment must be on the NIOSH NPPTL Certified Equipment List or approved in another BNL Respiratory Protection Program Administrator certification process.</p> <p>Purchasing new models of respirators (that require fit testing) must be approved by the BNL Respiratory Protection Program Administrator.</p>
--	--

## Guidelines

For guidance on the descriptions and proper design of PPE, consult [Guidance on the Required & Recommended PPE Design](#) in the [ESH Guide: Personal Protective Equipment and Respirators](#).

For details on lab coat availability, consult the [Guidance on Lab Coats: Selecting, Obtaining, Using, Storing, and Cleaning](#) in the [ESH Guide: Personal Protective Equipment and Respirators](#).

Reusable half and full face respirator masks will be provided in the following order:

- Decontaminated and sanitized respirator masks will be re-issued when available.
- New respirators will be obtained from the BNL stores when available.
- New respirators will be ordered via a PeopleSoft requisition submitted to the [Personal Protective Equipment and Respirators](#) Subject Matter Expert for approval.

29 CFR 1910.136 incorporates by reference ASTM F2412-05 Standard Test Methods for Foot Protection, F2413-05 Standard Specification for Performance Requirements for Protective Footwear and ANSI American National Standard for Personal Protection - Protective Footwear (ANSI Z41-1999). Any of these designations on safety shoes is acceptable.

Consult the [Safety Shoe and Eyeglasses Office extension 2864](#) document on the [Procurement and Property Management](#) website for hours of operation in Building 30 (Brookhaven Center).

## References

[Graded Approach for Requirements](#) Subject Area

[Guidance on Lab Coats: Selecting, Obtaining, Using, Storing, and Cleaning](#), [ESH Guide: Personal Protective Equipment and Respirators](#), [Safety and Health Services](#) website

[Guidance on the Required & Recommended PPE Design](#), [ESH Guide: Personal Protective Equipment and Respirators](#), [Safety and Health Services](#) website



Management System: [Worker Safety and Health](#)

Subject Area: [Personal Protective Equipment and Respirators](#)

## 4. Using, Maintaining, Storing, and Disposing of Personal Protective Equipment

Effective Date: Mar 31, 2016

Subject Matter Expert: [Robert Selvey](#)

Management System Executive: [Ed Nowak](#)

### Applicability

This information applies to staff, guests, and users who wear protective equipment, or to those who are responsible for activities that involve the use of personal protective equipment (PPE).

### Required Procedure

<b>Step 1</b>	Ensure workers are knowledgeable on the proper donning/doffing, use, and limitations of the PPE to be used to protect them from the hazards.
<b>Step 2</b>	<p>Check PPE to verify its integrity before using the equipment according to training and manufacturer's instructions. Check equipment before donning.</p> <ul style="list-style-type: none"><li>• Respirators: Check the face seal, valves, cartridges, and straps. Perform a user seal check on respirators at each donning.</li><li>• Gloves and suits: Check for leaks, tears, and signs of degradation.</li><li>• Hard hats: Inspect for signs of damage or excessive wear. Replace if damaged or deteriorating. Replace after any event involving significant impact from a dropped object or impact with a hard surface.</li><li>• Bicycle helmets: Replace after any event involving head impact in an accident.</li></ul> <p>If PPE is defective, do not use it. If the equipment is defective because of a supplier-related defect, then notify Procurement and Property Management (PPM) through the <a href="#">BNL Supplier Nonconformance (BSNC) Reporting and Tracking System</a>.</p>

<p><b>Step 3</b></p>	<p>During a job, task, or project requiring PPE or during entry into an area requiring PPE, properly wear and maintain the PPE and respirators in the manner specified in</p> <ul style="list-style-type: none"> <li>• Manufacturers' recommendations for use of their specific equipment, if provided;</li> <li>• Training classes and web courses;</li> <li>• Fit testing instruction and familiarization period; and</li> <li>• Written and oral work planning and instructions such as <ul style="list-style-type: none"> <li>○ <a href="#">Operation-Based Protective Clothing Selection Form</a>;</li> <li>○ <a href="#">Respirator Selection Form</a>;</li> <li>○ Work permits, Experimental Safety Reviews, Standard Operating Procedures; and</li> <li>○ Subject area requirements.</li> </ul> </li> </ul> <p>Wear appropriate PPE for protection from the hazards of the area as posted on the <a href="#">Hazard Information Placard/Emergency Information Example</a> in the <a href="#">Signs, Placards, and Labels for Environmental, Safety and Health (ESH) Hazards</a> Subject Area.</p>
<p><b>Step 4</b></p>	<p>Handle and store respirators and contaminated personal protection equipment between uses during the day (i.e., during work breaks) according to manufacturer's instructions, applicable regulatory requirements for regulated areas, training, and the <a href="#">Operation-Based Protective Clothing Selection Form</a>. Decontaminate or properly dispose of PPE at the end of use each day.</p> <p>Clean respirators in a manner that meets the requirements in the OSHA Respirator Standard 29 CFR 1910.134 Appendix B-2. See the exhibit <a href="#">OSHA Requirements on Respirator Cleaning</a>.</p> <ul style="list-style-type: none"> <li>• For <b>Radiological Hazards</b>: Contact the Facility Support Representative for guidance.</li> <li>• For <b>Non-radiological Hazards</b>: Decontaminate the exterior of the respirators. Store respirators in a sanitary manner (plastic bag or case) in a contamination-free area. Return the used mask in the storage bag to the BNL Approved Respirator Issuer according to the instructions and schedule listed on the <a href="#">Respirator Selection Form</a>.</li> </ul>
<p><b>Step 5</b></p>	<p>Dispose of PPE and respirator cartridges according to guidance from the <a href="#">Waste Management Representative</a> or <a href="#">Environmental Compliance Representative</a>.</p>
<p><b>Step 6</b></p>	<p>Provide feedback on potential program improvements or problems. Inform the</p>

Supervisor, <a href="#">ESH Coordinator</a> , <a href="#">Facility Support Representative</a> , <a href="#">Safety &amp; Health Representative</a> , or the <a href="#">PPE and Respiratory Protection SME</a> of any problems using the PPE or respirators and any suggestions for improvements to the BNL program.
--

## Guidelines

Guidelines on preventing heat stress when wearing PPE that covers all or most of the body are provided in the web-based training module Heat Stress Prevention (TQ-HEATSTRESS) (see the [BNL Training and Qualifications](#) website) and the [Heat and Cold Stress](#) Subject Area.

Guidance on wearing short pants during hot weather is presented in [Guidance on Short Pants in Hot Weather](#) in the [ESH Guide: Personal Protective Equipment](#).

Recommendations on hard hats are presented in [Guidance on Hard Hat Styles, Manner of Use and Replacement](#) in the [ESH Guide: Personal Protective Equipment](#).

Recommendations on lab coats are presented in [Guidance on Lab Coats: Selecting, Obtaining, Using, Storing, and Cleaning](#) in the [ESH Guide: Personal Protective Equipment and Respirators](#).

## References

[BNL Supplier Nonconformance \(BSNC\) Reporting and Tracking System, Procurement and Property Management](#) website (\*Limited Access)

[BNL Training and Qualifications](#) website

[Graded Approach for Requirements](#) Subject Area

[Guidance on Hard Hat Styles, Manner of Use and Replacement, ESH Guide: Personal Protective Equipment, Safety and Health Services](#) website

[Guidance on Lab Coats: Selecting, Obtaining, Using, Storing, and Cleaning, ESH Guide: Personal Protective Equipment and Respirators, Safety and Health Services](#) website

[Guidance on Short Pants in Hot Weather, ESH Guide: Personal Protective Equipment and Respirators, Safety and Health Services](#) website

[Heat and Cold Stress](#) Subject Area

[Signs, Placards, and Labels for Environmental, Safety and Health \(ESH\) Hazards](#) Subject Area

---

The only official copy of this file is the one on-line in SBMS.

Before using a printed copy, verify that it is the most current version by checking the *effective date*.

---

| [SBMS Home Page](#) | [Top of Subject Area](#) | [Instructions](#) | [Changes](#) |

Management System: [Worker Safety and Health](#)

Subject Area: [Personal Protective Equipment and Respirators](#)

## 5. Use of Respiratory Protection Equipment by Contractors

Effective Date: Mar 31, 2016

Subject Matter Expert: [Robert Selvey](#)

Management System Executive: [Ed Nowak](#)

### Applicability

This information applies to BNL contracting organizations and contractors who use respiratory protection equipment on-site.

### Required Procedure

[5.1 Respiratory Protection Programs by Non-construction Contractors Using Their Own Program](#)

[5.2 Respiratory Protection Programs by Non-construction Contractors Using Their Own Program](#)

[5.3 Contractors Operating within the BNL Respiratory Protection Program](#)

### 5.1 Respiratory Protection Programs on Construction Projects

<b>Step 1</b>	The BNL organization contracting the services of a contractor ensures the contractor complies with Section 15 of the BNL HASP (Health and Safety Plan) template. If needed, have the contractor's update their HASP.
<b>Step 2</b>	The BNL organization contracting the services of a contractor ensures the contractor prepares and follows a written Respiratory Protection Program that meets all the requirements in OSHA 29 CFR 1910.134 (29 CFR 1926.103) and ANSI Z88.2 requirements.
<b>Step 3</b>	The BNL organization contracting the services of a contractor ensures the contractor complies with the T&C (Terms & Conditions) and 0900 Construction Specifications (or equivalent).

## 5.2 Respiratory Protection Programs by Non-construction Contractors Using Their Own Program

Operations involving Contractors maintaining their own Respiratory Protection Program at the BNL site follow these steps for the mandatory and voluntary use of respiratory protection equipment on-site.

<p><b>Step 1</b></p>	<p>The BNL organization contracting the services of a contractor (who will operate a respiratory protection program for non-BNL staff)</p> <ul style="list-style-type: none"> <li>• Specifies in the bid package that the contractor must comply with OSHA 29 CFR 1910.134 (29 CFR 1926.103) and ANSI Z88.2 requirements;</li> <li>• Requires the contractor to submit a written Respiratory Protection Program (or equivalent) to BNL when submitting the bid. The Respiratory Protection Program may be included as part of the Health &amp; Safety Plan.</li> <li>• Monitors the implementation of the respiratory protection program by the contractor. Inspects respirator usage and contractor on-site cleaning facilities at start-up and at least annually. See the section <a href="#">Oversight of Personal Protective Equipment and Respiratory Protection Programs</a>.</li> <li>• Stops work by contractors that fail to comply with their written program.</li> </ul> <p><b>Note:</b> If the scope of a project that was initiated without the need for respiratory protection changes and necessitates respiratory protection, hazardous operations must be stopped and restarted only after the contractor has instituted a BNL-approved program.</p>
<p><b>Step 2</b></p>	<p>The contractor documents their respiratory protection elements and equipment specifications in writing to ensure compliance with OSHA 29 CFR 1910.134 (29 CFR 1926.103) and ANSI Z88.2 requirements, including</p> <ul style="list-style-type: none"> <li>• Types of respirators, face-pieces, cartridges, End-of-Service Life Indicators, and cartridge change-out schedule based on the hazards present in the work area;</li> <li>• Processes to ensure respirators are properly worn, inspected, maintained, cleaned and stored throughout the project;</li> <li>• Processes to ensure that adequate quality, quantity, and flow of breathing air is provided for atmosphere-supplying respirators to users. Compressed breathing air must meet the requirements for Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989, including:</li> </ul>

	<ul style="list-style-type: none"> <li>○ Oxygen content (v/v) of 19.5-23.5%;</li> <li>○ Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;</li> <li>○ Carbon monoxide (CO) content of 10 ppm or less;</li> <li>○ Carbon dioxide content of 1,000 ppm or less; and</li> <li>○ Lack of noticeable odor.</li> </ul> <ul style="list-style-type: none"> <li>• Facilities/provisions for cleaning that meet OSHA Respirator Standard 29 CFR 1910.134 Appendix B-2. See the exhibit <a href="#">OSHA Requirements on Respirator Cleaning</a>.</li> </ul> <p><b>Note:</b> Documentation may be incorporated in a <a href="#">Work Permit Form</a> (see the <a href="#">Work Planning and Control for Experiments and Operations</a> Subject Area), which specifies the appropriate type of respiratory protection equipment.</p>
<b>Step 3</b>	<p>Contractor maintains the following documentation for each worker wearing respiratory protective equipment:</p> <ul style="list-style-type: none"> <li>• Employee Respirator Medical Approval by a licensed health care provider;</li> <li>• Employee training on the use and limitation of the respiratory equipment to be used;</li> <li>• Quantitative Fit Testing on the equipment to be used.</li> </ul>
<b>Step 4</b>	<p>Two weeks prior to beginning work requiring respiratory protection, the contractor notifies the SHSD Construction Safety Engineer of the use of respirators via the form <a href="#">Notification of Respirator Use by a Contractor</a>.</p>

### 5.3 Contractors Operating within the BNL Respiratory Protection Program

Operations involving non-BNL staff using BNL supplied respiratory protection equipment, follow these steps for the mandatory use of respiratory protection equipment on-site.

<b>Step 1</b>	Workers complete respiratory protection training. See the <a href="#">BNL Training and Qualifications</a> website for courses. Equivalent training is required annually.
<b>Step 2</b>	Supervisor submits a completed <a href="#">Non-BNL Employee Respirator Medical Approval Form</a> to the BNL Respirator Fit Tester before or at the time of fit testing. The BNL Respirator Fit Tester reviews the form for completeness and sends a copy to the Office of Training and Qualification.
<b>Step 3</b>	Workers obtain fit testing from the BNL Respirator Fit Tester for the appropriate type

	of respiratory protection equipment or provide documentation of equivalent fit testing on the equipment BNL is providing.
<b>Step 4</b>	<p>The Facility Support Representative or Safety &amp; Health Representative supporting the work determines the appropriate respiratory protective equipment using the following:</p> <ul style="list-style-type: none"> <li>• Safety and Health Services procedure <a href="#">IH72200 Respirator Selection for Non-Radiological Hazards</a> and completes a <a href="#">Respirator Selection Form</a> specifying the type of face-piece, cartridge, End-of-Service Life Indicator and/or cartridge change-out schedule; and</li> <li>• Radiological Control Division procedure FS-SOP-4002 Selection and Issuance of Respiratory Protection for Radiological and Nuclear Hazards on the <a href="#">FS Standard Operating Procedures</a> page.</li> </ul>
<b>Step 5</b>	A BNL Approved Respirator Issuer supplies the respirator equipment specified on the <a href="#">Respirator Selection Form</a> .
<b>Step 6</b>	Workers inspect the face seal, valves, cartridges, and straps before each donning of the equipment and perform a user seal check at each donning of the equipment. Workers properly wear, maintain, and store the equipment during the job, task, or project in the manner specified in training, fit testing, and on the <a href="#">Respirator Selection Form</a> .
<b>Step 7</b>	Workers return the used mask to the BNL Approved Respirator Issuer according to the instructions and schedule listed on the <a href="#">Respirator Selection Form</a> .

## References

[BNL Training and Qualifications](#) website

FS-SOP-4002 Selection and Issuance of Respiratory Protection for Radiological and Nuclear Hazards, [FS Standard Operating Procedures](#) page, [Radiological Control Division](#) website

[IH72200 Respirator Selection for Non-Radiological Hazards](#), [SHSD Standard Operating Procedures and Controlled Documents/Records](#) page, [Safety and Health Services](#) website

[Work Planning and Control for Experiments and Operations](#) Subject Area

---



Management System: [Worker Safety and Health](#)

Subject Area: [Personal Protective Equipment and Respirators](#)

## 6. Oversight of Personal Protective Equipment and Respiratory Protection Programs

Effective Date: **Mar 31, 2016**

Subject Matter Expert: [Robert Selvey](#)

Management System Executive: [Ed Nowak](#)

### Applicability

This information applies to the ESH Directorate, BNL line organizations, BNL contracting organizations, and contractors who have workers who wear protective equipment or who are responsible for activities that involve the use of personal protective equipment (PPE).

High risk personal protective equipment (PPE) is categorized as ESSH&Q Risk Level A2 (Major) or A1 (Critical) as described in the [Graded Approach for Requirements](#) Subject Area. The high risk equipment includes:

- Fall protection: harnesses, lanyards, and accessories;
- Respiratory protection: breathing air compressors, masks and hoods;
- Electrical Safety: Electrical flash suits and gloves;
- Chemical Safety: Level A chemical protective suits.

### Required Procedure

<b>Step 1</b>	Supervisors provide oversight of the proper use of respirators and the status of the worker's physical condition to wear a respirator (facial hair, scarring, changes in body weight).
<b>Step 2</b>	BNL line organizations provide daily supervision of the use of PPE and respirators.
<b>Step 3</b>	BNL line organizations conduct and document inspections of High Risk PPE (A1 & A2) upon receipt for compliance with regulatory mandated design specifications requirements and the <a href="#">Inspections and Acceptance</a> Subject Area requirements.  Line organization establish a program to inspect and maintain A1 & A2 PPE with a limited service/shelf life according to the requirements recommended by the manufacturer or set in a BNL Subject Area (e.g., NFPA 70E, Electrical Safety:

	<p>expiration date of gloves).</p> <p>If PPE is defective, do not use it. If A1 &amp; A2 equipment is defective because of a supplier-related defect, then notify Procurement and Property Management (PPM) through the <a href="#">BNL Supplier Nonconformance (BSNC) Reporting and Tracking System</a>.</p>
<b>Step 4</b>	<p>BNL line organizations conduct and document inspections of respirators used for emergencies as per the exhibit <a href="#">Requirements for Respirators Used for Emergency Situations</a>.</p>
<b>Step 5</b>	<p>BNL contracting organizations periodically review contractor's record of their respiratory protection program.</p>
<b>Step 6</b>	<p>Contractors provide daily supervision of the use of PPE and respirators. Conduct formal inspections of respirator usage, storage and on-site cleaning facilities at start-up and at least monthly. Document inspections using the <a href="#">Respirator Cleaning Facility Inspection Record</a> and <a href="#">Respiratory Protection Program Periodic Oversight Record</a>, or equivalent.</p>
<b>Step 7</b>	<p>The Safety and Health Services Division's <a href="#">Respiratory Protection Program Administrator</a> provides periodic surveillance of the BNL Respiratory Protection Program. The frequency is set in the <a href="#">Safety &amp; Health Services Division (WS&amp;H/Facility Safety) 5-yr Assessment Plan</a>.</p>

## References

[BNL Supplier Nonconformance \(BSNC\) Reporting and Tracking System](#), [Procurement and Property Management](#) website (\*Limited Access)

[Safety & Health Services Division \(WS&H/Facility Safety\) 5-yr Assessment Plan](#), [Safety and Health Services Division](#) website

[Graded Approach for Requirements](#) Subject Area

[Inspections and Acceptance](#) Subject Area

Before using a printed copy, verify that it is the most current version by checking the *effective date*.

---

| [SBMS Home Page](#) | [Top of Subject Area](#) | [Instructions](#) | [Changes](#) |

## Definition: Personal Protective Equipment and Respirators

Term	Definition
air purifying-respirator (APR)	A respirator with an air-purifying filter or cartridge that removes specific air contaminants by passing ambient air through the air-purifying element.
atmosphere-supplying respirator	A respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.
authorized respirator selector	A person qualified, as per requirements of the Respiratory Protection Program Administrator, to select and specify the appropriate respiratory protection equipment based on an evaluation of the work environment.
BNL Approved Respirator Issuer	A person qualified, as per requirements of the Respiratory Protection Program Administrator, to issue respiratory protection equipment to BNL users.
emergency situation	Any occurrence, such as equipment failure, rupture of containers, or failure of control equipment that may result or results in an uncontrolled significant release of an airborne contaminant.
End-of-Service-Life Indicator (ESLI)	A system that warns the respirator user of the approach of the end of adequate respiratory protection, for example, that the sorbent is approaching saturation or is no longer effective.
filtering face piece	A negative pressure particulate respirator with a filter as an integral part of the face piece or with the entire face piece composed of the filtering medium (e.g., dust mask).
fit factor	A quantitative estimate of the fit of a particular respirator to a specific individual; it typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.
fit test	The use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.
high efficiency particulate air (HEPA)	A filter that is at least 99.97% efficient in removing monodispersed particles of 0.3 micrometers in diameter. The equivalent NIOSH 42 CFR 84 particulate filters are the N100, R100, and P100 filters.

high risk personal protective equipment (PPE)	<p>PPE categorized as ESSH&amp;Q Risk Level A2 (Major) or A1 (Critical) in the Graded Approach for Requirements Subject Area. The high risk equipment includes:</p> <ul style="list-style-type: none"> <li>• Fall protection: harnesses, lanyards, and accessories;</li> <li>• Respiratory Protection: breathing air compressors, masks &amp; hoods;</li> <li>• Electrical Safety: Electrical flash suits and gloves;</li> <li>• Chemical Safety: Level A chemical protective suits.</li> </ul>
immediately dangerous to life or health (IDLH)	An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.
licensed health care professional	An individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the health care services.
medical approval	The evaluation of the physical ability of a user to wear a respiratory protection device by a licensed health care provider.
negative pressure respirator	A respirator in which the air pressure inside the face piece is negative during inhalation for the ambient air pressure outside the respirator.
oxygen-deficient atmosphere	An atmosphere with oxygen content below 19.5% by volume.
personal protective equipment (PPE)	Clothing or equipment that is intended to protect the worker's body (including eyes, face, feet, hands, head, and hearing) from hazards capable of causing injury, illness, or impairment of any bodily function.
positive pressure respirator	A respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.
Powered Air-Purifying Respirator (PAPR)	An air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.
primary entrances	Doors that are normally unlocked during business hours through which unescorted personnel would likely enter. The front door and loading dock to buildings are examples of primary entrances. Within a building, the doorway from a main hallway is the primary

	entrance.
Respiratory Protection Program Administrator (RPPA)	A BNL employee designated to administratively oversee the Respiratory Protection Program and approve documentation of the mechanisms for compliance with applicable regulatory drivers.
secondary entrances	Doors entered only by the assigned occupants of a building or by visitors that are escorted. This includes: exterior doors that are locked during business hours, auxiliary exit doors from high-bays and experimental areas, laboratory emergency exits, and laboratory entrances through offices and service chases.
Self-Contained Breathing Apparatus (SCBA)	A respirator in which a clean air supply is carried by the wearer in a pressurized tank. SCBA is a positive pressure respirator and may be used in oxygen-deficient environments. The air supply is limited (typically 30-60 minutes).
Self-Contained Breathing Apparatus (SCBA)	A respirator in which a clean air supply is carried by the wearer in a pressurized tank. SCBA is a positive pressure respirator and may be used in oxygen-deficient environments. The air supply is limited (typically 30-60 minutes).
supplied air line respirator (SAR)	Air is brought into a mask from a remote location via an air line. Supplied air may be used for any contamination below the IDLH (Immediate Danger to Life and Health) level and in atmospheres that are oxygen deficient, if supplemented with an escape bottle. Supplied air is a positive pressure respirator. Supplied air requires an air line that can limit movement, and an escape bottle of air is usually required.
user	A person authorized via appropriate medical approval, training, and fit testing to wear a specified piece of respiratory protection equipment.
user seal check	An action conducted by the respirator user to determine if the respirator is properly seated to the face. The check is done by closing off either the inlet or exhaust of the mask and inhaling or exhaling to create a positive or negative pressure within the mask by which leakage could be detected. The check should be done following the respirator manufacturer's recommended user seal check method.

The only official copy of this file is the one on-line in SBMS.

Before using a printed copy, verify that it is the most current version by checking the *effective date*.

Management System: [Worker Safety and Health](#)

Subject Area: [Personal Protective Equipment and Respirators](#)

# Area-Based Personal Protective Equipment (PPE) Requirements

Effective Date: Mar 31, 2016

---

[Area-Based Personal Protective Equipment \(PPE\) Requirements](#) is provided as a PDF.

---

The only official copy of this file is the one on-line in SBMS.

Before using a printed copy, verify that it is the most current version by checking the *effective date*.

# Area-Based Personal Protective Equipment (PPE) Requirements

These are the minimum acceptable personal protective equipment (PPE) requirement for pre-determined areas. Additional PPE may be used by organizations without the SBMS PPE and Respirators Subject Matter Expert (SME) approval. Lessening these requirements requires concurrence of the SME on the Area-Based PPE Certification Form. Other types of areas may require area-based PPE as determined by the PPE and Respirators SME.

## 1. Area-Based PPE Requirements

Minimum PPE Requirements for an area, unless determined on a case-by-case basis by SME <sup>1,2,3</sup>						
Area	Predominant Hazard <sup>5</sup>	Long pants <sup>4</sup>	Lab coat <sup>5</sup>	Fully Enclosed Shoes <sup>6</sup>	Safety Toe Shoes <sup>7</sup>	Safety Glasses <sup>8</sup>
Accelerator Facility	Cuts and abrasions	X	-	X	-	-
Electronics Fabrication Area	Chemical contact (low risk); cuts and abrasions; small projectiles	X		X		X
Electronics Test Bench Area	Cuts and abrasions	X	-	X	-	-
Machine Shop- Light [Light Technical Shop]	Cuts and abrasions; projectiles; dropped parts	X	-	X	-	X
Machine Shop- Heavy [Heavy Technical Shop]	Cuts and abrasions; projectiles; dropped parts	X	-	-	X	X
Magnet Assembly Area	Cuts and abrasions; projectiles; dropped parts	X	-	-	X	X
Microscope/Optics Area	Dropped parts	X	-	X	-	-
Laboratory- Biological	Biological agent contact	X	X	X	-	X
Laboratory- Chemical	Chemical contact	X	X	X	-	X
Laboratory- Unbound Nanomaterial (UNP)	UNP contact	X	X	X	-	X
Laboratory- Multi-Purpose	Chemical contact (low risk); cuts and abrasions	X	-	X	-	X
Tech Area	Cuts and abrasions; dropped parts	X	-	X	-	-
Warehouse	Cuts and abrasions; dropped parts	X	-	-	X	-

### Footnotes:

1. During exhibition/ informational tours of escorted visitors, the area-based PPE requirements can be temporarily suspended for the duration of the tour if operations are stopped and hazards are mitigated. This exemption does not apply to Audits/Surveillances and Tier1 Inspections where tour members may access or inspect hazards.

2. Areas with no hazards in the Hazard Validation Tool (such as offices, lunch rooms, and conference rooms) do not require area-based PPE postings. A HIP placard is optional at the discretion of the area owner.
3. Entry into an area to immediately retrieve and don PPE is acceptable. If there are multiple entrances into a room, when practical, PPE should be stored near the primary entrance.
4. Complete coverage of the feet, ankles, and legs by any combination of loose clothing and footwear is acceptable. (See the examples below.)
5. BNL laundered uniform with long sleeve shirt and long pants may be substituted for a lab coat. Lab coats which have been in contact with Unbound Nanomaterials (UNP) must be disposed of as hazardous waste. They are not to be laundered. Lab coats are not to be worn into offices, lunch rooms, conference rooms, etc. Lab coats should remain in the labs and corridors of science areas.
6. Shoes must meet the design in Section 3. Foot Protection of [PPE Descriptions and Design Requirements Standards](#). (See the examples below.)
7. A composite toe meeting the ASTM 2413 Impact Resistance Standard is an acceptable alternative to a steel toe.
8. Safety glasses may be removed during operations with eyepieces, such as looking into microscope optics.

**Examples of Acceptable and Unacceptable PPE**

Safety Glasses <sup>8</sup>	<b>Acceptable</b> Front and side coverage 	<b>Acceptable</b> Front and side coverage 	<b>Unacceptable</b> No side coverage 
Enclosed Shoe <sup>6</sup>	<b>Acceptable</b> Correct heel height, full coverage 	<b>Unacceptable</b> Heel too high, open toe 	<b>Unacceptable</b> Open toe and heel 
Lab Coat <sup>5</sup>	<b>Acceptable</b> Correct coat length, buttoned 	<b>Unacceptable</b> Coat too short, arms not covered 	<b>Unacceptable</b> Coat too short, not buttoned 
Long Pants and Alternatives <sup>4</sup>	<b>Acceptable</b> Full leg coverage 	<b>Acceptable</b> Full leg coverage 	<b>Unacceptable</b> Legs exposed 

Management System: [Worker Safety and Health](#)

Subject Area: [Personal Protective Equipment and Respirators](#)

# Operation-Based Personal Protective Equipment (PPE) Requirements

Effective Date: Mar 31, 2016

These requirements are the minimum acceptable Personal Protective Equipment (PPE) for each application. Additional PPE may be used by organizations without SBMS Subject Matter Expert approval. Lessening these requirements requires completing the SBMS Variance process (see the section [Requesting a Subject Area or Program Description Variance/Exemption from an External Requirements Document](#) in the [Requirements Management](#) Subject Area).

Use of PPE is limited to situations where Engineering Controls and Administrative Controls are not feasible or while they are being implemented.

Topic	Subject Area	PPE Requirements and Guidance
Animal Research & Handling Animals	<a href="#">Animal Research</a>	Handling Animals PPE (see section 3.3 <a href="#">Removing and Handling Animals</a> )
Asbestos	<a href="#">Asbestos</a>	Asbestos in thermal insulation, transite, ceiling tiles; Construction – Class I, II, III, & IV Brake and Clutch Removal (see the exhibit <a href="#">Construction Industry Requirements</a> and <a href="#">General Industry Requirements</a> )
Automobile Operation	<a href="#">Traffic Safety</a>	Section <a href="#">Following BNL Traffic Regulations</a>
Beryllium	<a href="#">Beryllium</a>	Exhibit <a href="#">PPE, Emergency and Spills Requirements and Recommendations</a>
Bicycle Use	<a href="#">Traffic Safety</a>	Section <a href="#">Following BNL Bicycling Regulations</a>
Biohazard	<a href="#">Biosafety in Research</a>	Exhibit <a href="#">Personal Protective Equipment for Biohazards</a>

Bloodborne Pathogens	<a href="#">Bloodborne Pathogens</a>	Exhibit <a href="#">Methods for Hazard Control</a>
Boating	<a href="#">Marine Safety</a>	Exhibit <a href="#">Vessel Operations Safety Requirements</a>
Chemicals	<a href="#">Chemical Safety</a>	Exhibit <a href="#">Personal Protective Equipment Requirements for Working with Chemicals</a>
Compressed Gases	<a href="#">Compressed Gas Cylinders and Related Systems</a>	Section <a href="#">Installing Compressed Gas Systems</a> and exhibit <a href="#">Working Safely with Compressed Gas Systems</a> .
Controlled Substances	<a href="#">Using Controlled Substances in Research</a>	Controlled Substances PPE Requirements [TBD]
Cryogenics	<a href="#">Cryogenics Safety</a>	Cryogen PPE Requirements (see the section <a href="#">Storage and Use of Cryogenics/Cryogenic Systems</a> )
Diving	<a href="#">Diving Safety</a>	Diving PPE Requirements [TBD]
Electrical	<a href="#">Electrical Safety</a>	Exhibit <a href="#">Certification of Personal Protective Equipment (PPE) for Working On Or Near Energized Equipment</a>
Explosives	<a href="#">Explosives Safety</a>	Exhibit <a href="#">Safety Shields for Explosive Laboratory Operations</a> and exhibit <a href="#">Handling and Use of Explosives</a>
Elevated work	<a href="#">Fall Protection</a>	Section <a href="#">Wearing Personal Protective Equipment</a>
Hazardous Material Response	<a href="#">Spill Response</a>	See Emergency Services Division (ESD)-level documents
Hoisting, Rigging, Mechanical Material Handling	<a href="#">Lifting Safety</a>	Exhibit <a href="#">Safe Lifting and Operating Practices</a>

Laser	<a href="#">Laser Safety</a>	Exhibit <a href="#">General Guidance for Laser Protective Eyewear</a>
Lead	<a href="#">Lead</a>	Exhibit <a href="#">Personal Protective Equipment (PPE) Requirements for Work with Lead</a>
Nanomaterials	<a href="#">Approach to Nanomaterial ESH</a> (Interim Procedure)	Section 2.5.2 Clothing & Personal Protective Equipment (PPE)
Natural Hazards in the Environment (heat stress, cold, sunlight)	<a href="#">Natural Hazards in the Environment</a>	Exhibit <a href="#">Natural Environmental Hazards Work Control Recommendations</a>
Noise	<a href="#">Noise and Hearing Conservation</a>	Section <a href="#">Controlling Noise Exposure</a> and exhibit <a href="#">Noise PPE &amp; Hearing Protection Controls – Requirements &amp; Recommendations</a>
PCBs (Polychlorinated Biphenyls)	<a href="#">PCB Management</a>	Exhibit <a href="#">Personal Protective Equipment Requirements for Working with Chemicals</a>
Pressure Safety	<a href="#">Pressure Safety</a>	Section <a href="#">Operating, Maintaining, or Changing Service of a Pressure Vessel or System</a>
Radiological hazards	<a href="#">Radiological Control Manual</a>	Chapter 4, PART 6, Support Activities, section 461 Control and Monitoring of Personal Protective Equipment and Clothing
Slips, Trips, and Falls	<a href="#">Walking and Working Surfaces</a>	Exhibit <a href="#">Self-Inspection Checklist of Walking and Working Surface Requirements</a> ( <b>Note:</b> Non-Mandatory. This exhibit contains a recommendation, not a requirement.)
Soldering	<a href="#">Fire Safety</a>	Section <a href="#">2.3 Personal Protective Equipment</a>
Welding,	<a href="#">Fire Safety</a>	Section <a href="#">2.3 Personal Protective Equipment</a>

Cutting		
---------	--	--

---

The only official copy of this file is the one on-line in SBMS.

Before using a printed copy, verify that it is the most current version by checking the *effective date*.

Management System: [Worker Safety and Health](#)

Subject Area: [Personal Protective Equipment and Respirators](#)

# OSHA Requirements on Respirator Cleaning

Effective Date: Mar 31, 2016

---

## Based on OSHA 20CFR1910.134 Appendix B-2 Respirator Cleaning Procedures (Mandatory)

These procedures are provided for use when cleaning respirators. They are general in nature, and alternative procedures for cleaning provided by the manufacturer of the respirators may be used, provided such procedures are as effective as those listed here. Equivalent effectiveness simply means that the procedures used must accomplish the objectives set forth in these procedures, i.e., must ensure that the respirator is properly cleaned and disinfected in a manner that prevents damage to the respirator and does not cause harm to the user.

### Procedures for Cleaning Respirators

- A. Remove filters, cartridges, or canisters. Disassemble facepieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
- B. Wash components in warm (43°C [110°F] maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
- C. Rinse components thoroughly in clean, warm (43°C [110°F] maximum), preferably running water. Drain.
- D. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:
  1. Hypochlorite solution (50 ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at 43°C (110°F); or,
  2. Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6 to 8 grams ammonium and/or potassium iodide/100 cc of 45% alcohol) to one liter of water at 43°C (110°F); or,
  3. Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.
- E. Rinse components thoroughly in clean, warm (43°C [110°F] maximum), preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.



Management System: [Worker Safety and Health](#)

Subject Area: [Personal Protective Equipment and Respirators](#)

# Requirements for Filtering Facepiece Respirator Use

Effective Date: Mar 31, 2016

---

## BNL Requirements on Filtering Face Piece Masks (Disposable Dust Masks)

The following criteria apply at BNL to disposable filtering facepiece respirators (i.e., masks characterized as single use, paper/fabric construction, where the filter forms the facepiece seal):

- a. Filtering face piece respirators are NOT acceptable for any use in atmospheres above the OSHA Permissible Exposure Limits (PELs) or ACGIH Threshold Limit Values (TLVs).
- b. Filtering face piece respirators are NOT acceptable for any use in unknown atmospheres, atmospheres Immediately Dangerous to Life or Health, or for emergency response.
- c. Filtering face piece respirators may be required (i.e., mandatory) as determined by BNL health and safety professionals in some cases when the atmosphere is below the OSHA Permissible Exposure Limits (PELs) or ACGIH Threshold Limit Values (TLVs) or no occupational exposure limits have been established.
- d. Training, medical approval, and fit testing is required for disposable filtering face piece masks when the use of the filtering face piece respirator is required (mandatory) by BNL.
- e. When respiratory protection is not necessary, the filtering face piece mask may be used at the request of the individual. Use of the mask is NOT mandatory (i.e., voluntary) in these situations. When use of the filtering face piece is voluntary, provide the information contained in OSHA 29 CFR 1910.134 Appendix D by having the employee review and sign the [Voluntary Use of Respirators When Not Required By Regulations](#) form (TQ-RESP-VOLUNTARY) and send it to the Training Coordinator. Medical approval and fit testing is not required when the use is voluntary.
- f. Store unused masks properly. Keep them in a clean location in a plastic bag in the manufacturer's box. After use, discard the filtering face piece masks and do not reuse them.

Examples of acceptable uses of the filtering face piece masks are:

- Operations where nuisance dust levels are below PEL or TLVs, such as floor sweeping, parts machining, and bulk material handling.
- Comfort for workers in operations such as mowing grass.
- Operations when exposure monitoring has verified that respiratory protection is not required, but an employee desires to wear a filtering face piece mask.

- Hazards, such as animal dander, that do not have an occupational exposure limit but may be allergenic.

### **BNL Requirements on Filtering Face Piece Masks (Disposable Dust Masks) Used for Human Patient Exposure Control**

The following criteria apply at BNL to filtering face piece respirators used in exposure control applications such as the OMC physicals, EMT response, and medical research with human patients:

- a. These respiratory protective devices are acceptable to use to prevent spread of infectious organisms (such as H1N1, tuberculosis and SARs) from exposure such as coughing and sneezing.
- b. Training, medical approval, and QLFT or QNFT fit testing are required for disposable dust masks when the use of the respirator is required by BNL (i.e., mandatory). When use of the filtering face piece is voluntary, provide the information contained in OSHA 29 CFR 1910.134 Appendix D by having the employee review and sign the [Voluntary Use of Respirators When Not Required By Regulations](#) form (TQ-RESP-VOLUNTARY) and send it to the Training Coordinator. Medical approval and fit testing is not required when the use is voluntary.
- c. BNL line organizations may order and issue disposable filtering face piece masks. Authorization to requisition disposable filtering face piece masks is NOT limited to BNL Authorized Respirator Issuers.
- d. Unused filtering face piece masks must be stored properly. Keep the masks in a clean location. After use, the masks must be discarded and not reused.

---

The only official copy of this file is the one on-line in SBMS.

Before using a printed copy, verify that it is the most current version by checking the *effective date*.

# Requirements for Respirators Used for Emergency Situations

Effective Date: **Mar 31, 2016**

---

1. For atmospheres that are Immediately Dangerous to Life or Health (IDLH), use only a NIOSH certified respirator. Use either a
  - Full face-piece pressure-demand SCBA with a minimum service life of thirty minutes; or
  - Combination full face-piece pressure-demand supplied-air respirator (SAR) with auxiliary self-contained air supply.
2. Inspect equipment used for escape from IDLH atmospheres before it is carried into the workplace for use for tightness of connections and condition (including pliability and signs of deterioration) of the face piece, head straps, valves, connecting tube, and cartridges, canisters or filters.
3. Maintain all respirators for use in emergency situations as follows:
  - Maintain air and oxygen cylinders in a fully charged state and recharge when the pressure falls to 90% of the manufacturer's recommended pressure level.
  - Check for proper function of respirators before and after each use.
  - Inspect equipment at least monthly in accordance with the manufacturer's recommendations. Inspect for function, tightness of connections, and condition (including pliability and signs of deterioration) of the face piece, head straps, valves, connecting tube, cartridges, canisters or filters, regulator and warning devices.
  - Document the date the inspection was performed, the name (or signature) of the person who made the inspection, findings, required remedial action, and a serial number or other means of identifying the inspected respirator. Provide inspection information on a tag or label that is attached to the storage compartment for the respirator, kept with the respirator, or included in inspection reports in paper or electronic files. Maintain until replaced following a subsequent certification.
4. Prior to entry into an IDLH atmosphere, those planning the entry confirm with BNL Fire Rescue group (F/R) that responders are aware of the entry and the responders are available to be on stand-by throughout entry period.
5. When employees enter the IDLH atmosphere, station one or more employee outside the IDLH atmosphere with visual, voice, or signal line communication maintained between the employee(s) in the IDLH atmosphere and those located outside the IDLH atmosphere.





## AREA-BASED PPE CERTIFICATION FORM

Directorate/Department/Division:		Date:
Building:	Area/Room(s) Designation:	
Area Description:		
Area-Based PPE Area Title:		

AREA-BASED PPE REQUIREMENTS						
<b>PPE Required For Entry:</b>	<b>SAFETY GLASSES</b> <input type="checkbox"/>	<b>LAB COAT</b> <input type="checkbox"/>	<b>LONG PANTS</b> <input type="checkbox"/>	<b>ENCLOSED SHOE</b> <input type="checkbox"/>	<b>SAFETY SHOE</b> <input type="checkbox"/>	
	<b>SAFETY GLASSES IN DESIGNATED AREA</b> <input type="checkbox"/>		<b>SAFETY SHOE IN DESIGNATED AREA</b> <input type="checkbox"/>		<b>OTHER:</b>	
	<b>NO FOOD OR DRINK IN AREA</b> <input type="checkbox"/>		<b>FOOD/ DRINK ALLOWED OUTSIDE DESIGNATED AREA</b> <input type="checkbox"/>		<b>FOOD &amp; DRINK ALLOWED</b> <input type="checkbox"/>	
Workplace Hazard Assessment Basis for Case Specific Area-Based PPE Requirements						
<b>Radiological</b>	<input type="checkbox"/> Isotope:		<input type="checkbox"/> Particulate	<input type="checkbox"/> Gas		
<b>Chemical</b>	<input type="checkbox"/> Toxic Chemical(s):		<input type="checkbox"/> Nanomaterial:			
<b>Biological</b>	<input type="checkbox"/> Etiologic Agent (CDC/USDA)	<input type="checkbox"/> Biohazard (BSL2)	<input type="checkbox"/> Biohazard (BSL1)	<input type="checkbox"/> Bloodborne Pathogens	<input type="checkbox"/> Animal/Bird Husbandry	<input type="checkbox"/> Other:
<b>Physical</b>	<input type="checkbox"/> Burn (Heat)	<input type="checkbox"/> Cryogen	<input type="checkbox"/> Laser	<input type="checkbox"/> Fall/Slip	<input type="checkbox"/> Projectiles	
	<input type="checkbox"/> Drop/Crush	<input type="checkbox"/> Cut/Abrasion	<input type="checkbox"/> Electrical	<input type="checkbox"/> Impact	<input type="checkbox"/> Mechanical Irritant	
	Other:					
<b>Potential for Highest Concentration or Most Severe Exposure:</b>						
Frequency of Exposure:						
Control Measures In-place:						
Certification of the Hazard Assessment for Case-Specific Area-Based PPE Requirements						
<b>Line Organization ESH Professional:</b>				<b>Area Representative:</b>		
<b>ESH Directorate SME*:</b>				<b>Other:</b>		

*\*Electronic Signature indicated by posting this record by the SME as a PDF on the SHSD Program Area for Personal Protective Equipment*



Brookhaven National Laboratory Respiratory Protection Program Record  
**BNL Employee Respirator Medical Approval Form**

This form is to be completed and available to the examining physician at the Occupational Medicine Clinic (OMC) at the time of your medical evaluation for respirator use.

Employee Last Name:		First Name:	
Life No:	Dept./Div.	Building No:	Extension:

Types, approximate weights of respirator, and respiratory working conditions for this employee			
<input type="checkbox"/> Self-Contained Breathing Apparatus (20 Lbs.)		<input type="checkbox"/> Full-Face Air Purifying Respirator (2 – 3 Lbs.)	
<input type="checkbox"/> Air-Line Respirator ( mask/ hood and hoses ) (9 Lbs.)		<input type="checkbox"/> Half-Mask Air Purifying Respirator (0.75 Lb.)	
<input type="checkbox"/> Escape Pack (5 - 15 Lbs.)		<input type="checkbox"/> Powered Air Purifying Respirator (5 Lbs.)	
		<input type="checkbox"/> Filtering Facepiece (Dust Mask)	
Duration and frequency of respirator use:	Hours per Day	Days per Week	Weeks per Year
Expected physical work effort:	<input type="checkbox"/> Light	<input type="checkbox"/> Moderate	<input type="checkbox"/> Strenuous
Potential for Heat Stress: (Maximum)	Temperature <input type="checkbox"/> F <input type="checkbox"/> C:		Humidity (%):
Emergency use:	<input type="checkbox"/> None	<input type="checkbox"/> Escape	<input type="checkbox"/> Entry Rescue
	Describe Role:		
Additional protective clothing / equipment to be worn or carried:	<input type="checkbox"/> None <input type="checkbox"/> Describe:		
Respirator Use Requires:	<input type="checkbox"/> Close Visual Activities	<input type="checkbox"/> Distant Visual Activities	<input type="checkbox"/> Spectacle Kit

BNL Supervisor:	Mail:	FS Representative:	Mail:
<b>Approval:</b>			
<b>ES&amp;H Coordinator</b>			
_____	_____	_____	_____
Printed Name	Signature	Date	Mail

<b>This portion to be completed by Occupational Medicine Clinic (OMC). Do not include personal medical information.</b>	
<input type="checkbox"/> Respirator use <i>approved without limitation</i> . Qualified until next scheduled examination or eighteen months, whichever occurs first.	
<input type="checkbox"/> Respirator use <i>approved with limitations</i> (check any that apply).	
<input type="checkbox"/> Respirator approval only through (specify date):	
<input type="checkbox"/> Employee approved for specific respirator and/or conditions, as follows:	
<input type="checkbox"/> Medically qualified with the following exceptions:	
<input type="checkbox"/> Respirator use <i>not approved</i>	
<input type="checkbox"/> Until further notice	<input type="checkbox"/> Until (specify date):
<input type="checkbox"/> Employee should return to OMC on _____ for re-evaluation of respirator approval status.	
<b>Approval:</b>	
<b>OMC Physician</b>	
_____	_____
Name	Signature
	_____
	Date

Distribution/Retention:

- Original on file in OMC medical record
- Copy to supervisor
- Copy to employee
- Copy to ES&H Coordinator
- Copy to Fit Test Office

Brookhaven National Laboratory - Occupational Medicine Clinic (OMC), Building B-490-OMC Upton, New York 11973 (631) 344-3670



**Brookhaven National Laboratory Respiratory Protection Program**  
**Non-BNL Employee Respirator Medical Approval Form**

Non-BNL Worker:  
 You will need a medical evaluation by an off-site medical provider to receive respirator training and fit testing.  
 You, your supervisor, and the appropriate ES&H Coordinator should complete the top sections of this form before going for medical approval, training and fit testing. Bring this form to the BNL Respirator Fit Tester.

<b>To be completed by BNL organization authorizing respirator use in their organization:</b>			
Worker's Last Name:	First Name:	Date of Birth:	
Guest No:	Dept./ Division	Building No:	Extension:
Company:		Company Address:	
Types & approximate weights of respirator and respiratory working conditions for this worker at BNL:			
<input type="checkbox"/> Self-Contained Breathing Apparatus (20 Lbs.)		<input type="checkbox"/> Full-Face Air Purifying Respirator (2 – 3 Lbs.)	
<input type="checkbox"/> Air-Line Respirator (mask / hood and hoses) (9 Lbs.)		<input type="checkbox"/> Half-Mask Air Purifying Respirator (0.75 Lb.)	
<input type="checkbox"/> Powered Air Purifying Respirator (5 Lbs.)		<input type="checkbox"/> Filtering Facepiece (Dust Mask) - mandatory	
<input type="checkbox"/> Escape Pack (3 Bottle Unit) (3-5 Lbs.)			
Duration and frequency of respirator use:	Hours per Day:	Days per Week:	Weeks per Year:
Expected physical work effort	<input type="checkbox"/> Light	<input type="checkbox"/> Moderate	<input type="checkbox"/> Strenuous <input type="checkbox"/> Very Strenuous
Potential for Heat Stress:	Maximum Expected Temp.	Maximum Expected Humidity (%)	
Additional protective clothing / equipment to be worn or carried:			
Respirator Use Requires:	<input type="checkbox"/> Close Visual Activities	<input type="checkbox"/> Distant Visual Activities	<input type="checkbox"/> Spectacle Kit
Supervisor:	FS Rep or S&H Rep.:		
ES&H Coordinator:	Signature	Date	

<b>To the examining Licensed Health Care Provider:</b>	
Respirator use may impose a significant burden on the cardiopulmonary system. It is the policy of Brookhaven National Laboratory to issue respirators only to medically qualified individuals. Since we have no medical information on the above individual, please perform an examination and complete this form. Provide the form to the employee to be delivered to BNL.	
<b>Cover the following items in an interview of the medical history and past/current medications:</b>	
<ul style="list-style-type: none"> <li>• Cardiovascular disease</li> <li>• Severe or progressive hypertension</li> <li>• Chest pain</li> <li>• Cardiac arrhythmia</li> <li>• Dyspnea</li> <li>• Wheezing</li> <li>• Asthma</li> <li>• Pulmonary disease</li> <li>• Any conditions that could result in sudden loss of control or loss of consciousness</li> </ul>	<ul style="list-style-type: none"> <li>• Abnormal chest-x-ray</li> <li>• Cerebrovascular disease</li> <li>• Loss of consciousness</li> <li>• Transient ischemic attacks</li> <li>• Syncope</li> <li>• Epilepsy / seizure</li> <li>• Heat exhaustion / heat stroke</li> <li>• Hemorrhagic diathesis</li> <li>• Any conditions that could contribute to the development of hypoxia</li> </ul>
<ul style="list-style-type: none"> <li>• Diabetes</li> <li>• Hypoglycemia</li> <li>• Thyroid disease</li> <li>• Hernia</li> <li>• Hearing loss</li> <li>• Perforated tympanic membrane</li> <li>• Vision loss</li> <li>• Any difficulty with prior respirator use</li> </ul>	
<b>Conduct a medical examination of:</b> Height; Weight; Blood Pressure; Pulse; General Appearance; HEENT; Neck/Thyroid; Lungs and Spirometry; Heart; Abdomen; Musculoskeletal, Spine & Extremities; and Neurology as they pertain to respirator use.	
<b>Please check one:</b> <input type="checkbox"/> <b>Respirator use can be tolerated without medical difficulty</b> <input type="checkbox"/> <b>Respirator use not recommended.</b> <input type="checkbox"/> <b>Respirator use recommended with limitations of:</b>	
Health Care Provider's Name:	Signature:
License Number: <input type="checkbox"/> MD <input type="checkbox"/> OD <input type="checkbox"/> PA <input type="checkbox"/> NP <input type="checkbox"/> RN	
Address of Medical Practice:	Date:



## NOTIFICATION OF RESPIRATOR USE BY A CONTRACTOR

Contractor:	Date:
Building/Project:	

### Hazards Present

<input type="checkbox"/> Radiological:
<input type="checkbox"/> Chemicals:
<input type="checkbox"/> Other:

### Respirator Usage

<b>Respirator type</b>	<input type="checkbox"/> Filtering facepiece (Dust Mask) <input type="checkbox"/> APR Half-face <input type="checkbox"/> APR Full-face <input type="checkbox"/> PAPR <input type="checkbox"/> Supplied Air <input type="checkbox"/> Other		
<b>Dates of Project</b>	Start date:	End date:	
<b>Respirator Usage Period</b>	Start date:	End date:	
<b>Location of Respirator Usage:</b>			
<b>Location of Cleaning Facility:</b>			

### Submitted By

<b>Competent Person:</b>	Print	Signature	Date
--------------------------	-------	-----------	------

Submit to:

- Project Engineer: \_\_\_\_\_ Building: \_\_\_\_\_

CC:

- SHSD Construction Safety Engineer, Building 120
- Respiratory Protection Program Administrator, Bldg 120



Issuance # -

Project Information					
Work Order#:		Job#:		Activity#:	
Work Permit#:	ESR#:	RWP#:		Date of Project:	
Department:		Building:		Room/Area:	
Scope of Work Contact Name:		Phone:		Pager:	
Description of Area:					
Description of Work to be done:					
Hazard Information					
Description of Hazard: (Including mechanism of generation of hazard)					
Description of Potential Exposure:					
<input type="checkbox"/> Required Use <input type="checkbox"/> Voluntary Use <input type="checkbox"/> Precautionary <input type="checkbox"/> Accidental <input type="checkbox"/> Emergency <input type="checkbox"/> Routine <input type="checkbox"/> Splash <input type="checkbox"/> Immersion <input type="checkbox"/> Nuisance Level <input type="checkbox"/> Toxic <input type="checkbox"/> Irritation					
<b>Radiological:</b>	Isotope:		<input type="checkbox"/> Particulate		<input type="checkbox"/> Gas
<b>Chemical</b>	<input type="checkbox"/> Lead	<input type="checkbox"/> Mercury	<input type="checkbox"/> Asbestos	<input type="checkbox"/> CHEMICAL:	
<b>Biological</b>	<input type="checkbox"/> Biohazard Material	<input type="checkbox"/> Animal/Bird Droppings	<input type="checkbox"/> Bloodborne Pathogen	<input type="checkbox"/> Other:	
<b>Physical</b>	<input type="checkbox"/> Burn (Heat)	<input type="checkbox"/> Cryogen	<input type="checkbox"/> Laser	<input type="checkbox"/> Fall/Slip	
	<input type="checkbox"/> Drop/Crush	<input type="checkbox"/> Cut/Abrasion	<input type="checkbox"/> Electrical	<input type="checkbox"/> Impact	
<b>Hazard Analysis:</b>	<input type="checkbox"/> Calculation	<input type="checkbox"/> Analogy to Similar Work	<input type="checkbox"/> MSDS Review	<input type="checkbox"/> Tour of Area	Other:
	<input type="checkbox"/> Measurement	<input type="checkbox"/> Manufacturer Data	<input type="checkbox"/> Professional Judgment	<input type="checkbox"/> Published Info	
Protective Equipment Selection					
<b>Eye:</b>	<input type="checkbox"/> Safety Glasses	<input type="checkbox"/> Splash Goggles	<input type="checkbox"/> Gas-proof Goggles	<input type="checkbox"/> Face Shield	
	<input type="checkbox"/> Welding Shade#:		<input type="checkbox"/> Laser Shade#/ Type:		
<b>Hand:</b>	<input type="checkbox"/> Glove	Elastomer (material of construction):	Thickness: _____ mil		
	<input type="checkbox"/> Finger Cot	BNL Stock#:	<input type="checkbox"/> Disposable	<input type="checkbox"/> Reusable	
<b>Foot:</b>	<input type="checkbox"/> Safety Toe	<input type="checkbox"/> Shoe Covers	<input type="checkbox"/> Boots	<input type="checkbox"/> Insulating	<input type="checkbox"/> Conductive
<b>Body:</b>	<input type="checkbox"/> Apron	<input type="checkbox"/> Lab Coat	<input type="checkbox"/> Suit (1 piece)	<input type="checkbox"/> Suit (2 piece)	<input type="checkbox"/> Hood/Cap
	<input type="checkbox"/> Rain Wear	<input type="checkbox"/> Long Sleeves	<input type="checkbox"/> Long Pants	<input type="checkbox"/> Casual Dress	
<b>Other:</b>	<input type="checkbox"/> Fall Harness	<input type="checkbox"/> Hard Hat	Other:		
Authorization					
I acknowledge that I have discussed the capabilities and limitations of the recommended PPE with the worker or work planner.					
<b>Selection Made By (ESH Professional):</b>	Print		Signature		Date



Department/ Division/Organization:	Date:
Building:	Room:

Hazards Present for Decontamination / Cleaning	
Radiological:	<input type="checkbox"/> Isotope: <input type="checkbox"/> Particulate:
Chemical:	<input type="checkbox"/> Chemical(s):
Other:	

Inspection Checklist			
	Criteria	Compliance	Non-compliance
a.	Facepieces disassembled for cleaning (speaking diaphragms, demand and pressure- demand valve assemblies, hoses, or any components recommended by the manufacturer)	<input type="checkbox"/>	<input type="checkbox"/>
b.	Decontamination: Components washed in warm water (maximum 43°C [110°F]) with a mild detergent or with a cleaner recommended by the manufacturer.	<input type="checkbox"/>	<input type="checkbox"/>
c.	Components rinsed thoroughly in clean, warm water (maximum 43°C [110°F]). Drained.	<input type="checkbox"/>	<input type="checkbox"/>
d.	Disinfection: Components immersed for two minutes in one of the following: <input type="checkbox"/> Cleaner containing a disinfecting agent, or <input type="checkbox"/> Hypochlorite solution (50 ppm of chlorine) at 43°C [110°F], or <input type="checkbox"/> Aqueous solution of iodine (50 ppm iodine) at 43°C [110°F], or <input type="checkbox"/> Other commercially available cleansers if their use is recommended or approved by the respirator manufacturer.	<input type="checkbox"/>	<input type="checkbox"/>
e.	Components rinsed thoroughly in clean, warm water (maximum 43°C [110°F]) to remove all disinfectants. Drained.	<input type="checkbox"/>	<input type="checkbox"/>
f.	Components hand-dried with a clean lint-free cloth or air-dried.	<input type="checkbox"/>	<input type="checkbox"/>
g.	Respirators stored in clean bag after cleaning in preparation for use.	<input type="checkbox"/>	<input type="checkbox"/>
h.	Waste water disposal from the decontamination process is approved by the BNL Environmental Protection Division.	<input type="checkbox"/>	<input type="checkbox"/>
i.	Respirator tested to ensure that all components work properly before wearing in hazardous atmosphere.	<input type="checkbox"/>	<input type="checkbox"/>
Comments/Findings:			
Person performing Inspection:	Print	Signature	Date



# RESPIRATOR SELECTION FORM

Issuance #

Project Information		
Work Order #:	Job #:	Activity #:
Work Permit #:	RWP #:	Date(s) of Project:
Department:	Building:	Room/Area:
Scope of Work Contact Name:	Phone:	Pager:
Description of Area:		
Description of Work to be done:		
Line Management Approval by:		
Print	Signature	Date

Hazard Information	
Description of Hazard: (Including mechanism of generation of hazard)	
<b>Hazard</b>	<b>Anticipated/Measured Air Concentration</b>
<b>Radiological:</b> Isotope: _____ Particulate _____ Gas _____	
<b>Chemical</b> _____ Asbestos    _____ Lead _____ Mercury    _____ Other:	
<b>Biological</b> _____ Animal/Bird Droppings    _____ Etiologic Agent _____ Other:	
<b>Regulatory:</b> _____ Voluntary Use    _____ Precautionary    _____ Nuisance Level _____ Required Use    Other:	_____ <Action Level    _____ <PEL/TLV _____ >PEL/TLV    _____ >IDLH
<b>Hazard analysis:</b> Concentration determined by: _____ Measurement    _____ Calculation    _____ Analogy to Similar Work	_____ MSDS Reviewed    _____ Tour of Area
Hazard Analysis By:	
Print	Signature
Date	

Equipment Selection				
<b>Facepiece</b>	_____ Full face	_____ Half Face	_____ Hood	Other:
<b>Respirator Type</b>	_____ APR	_____ PAPR	_____ Air Line	_____ SCBA
<b>Cartridge(s)</b> _____ SINGLE _____ COMBO (Mark all needed elements)	_____ HEPA (Purple)    _____ P-100    _____ N100 _____ Particulate    _____ N95    _____ P95    _____ R95    _____ N99 _____ Organic Vapor (Black) _____ Organic Vapor/Acid Gas (Yellow) _____ Acid Gas (White)		_____ Multi-purpose (Olive) _____ Ammonia/Amine (Green) _____ Mercury/Chlorine (Orange) _____ Other:	
<b>End of Service on Cartridges</b>	_____ Replace at End of 8 hour Shift	_____ Change via ESL Indicator	Replace after _____ (minutes) (hours) (days) <span style="font-size: small; text-align: center;">circle one</span>	
<b>Cartridge Reuse:</b>	_____ Leave on face piece, tape inlet    _____ Dispose after 1 use _____ Remove from face piece, store in separate bag		<b>Cartridge Disposal:</b>	
<b>Return of Face piece</b>	_____ Permanent Issue	_____ Destroy/Dispose after use	Return on:	
Respirator Equipment Specification Made By:				
Print		Signature		Date

Management System: [Worker Safety and Health](#)

Subject Area: [Personal Protective Equipment and Respirators](#)

# Respiratory Protection Program Periodic Oversight Record

Effective Date: **Mar 31, 2016**

---

[Respiratory Protection Program Periodic Oversight Record](#) is provided as a Word file.

---

The only official copy of this file is the one on-line in SBMS.

Before using a printed copy, verify that it is the most current version by checking the *effective date*.

# RESPIRATORY PROTECTION PROGRAM PERIODIC OVERSIGHT RECORD

Department/ Division//Organization/Contractor:	Date:
Building:	Room:

## Hazards Present

<input type="checkbox"/> Radiological:
<input type="checkbox"/> Chemical:
<input type="checkbox"/> Other:

## Inspection Checklist

	Criteria	N/A	Compliance	Non-Compliance
<b>a.</b>	Medical approval from a Licensed Health Care Provider has been obtained & documented for each respirator user.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>b.</b>	Respiratory protection training has been completed & documented for each user for each user for each type of respirator worn.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>c.</b>	Fit testing has been completed & documented for each user for each type & size of respirator worn.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>d.</b>	Selection of the appropriate respirator style, cartridges, end-of service is based on the hazards present and is made by an ESH professional & documented.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>e.</b>	Masks are properly decontaminated/disposed of after exposure to hazards per environmental requirements.			
<b>f.</b>	Respirators that will be used in emergency situations have a documented formal plan for use, inspection, and maintenance of the equipment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>g.</b>	Mask that are permanently assigned to workers are properly sanitized between users according to manufacturer's instructions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>h.</b>	Masks are properly stored between sessions after use according to manufacturer's instructions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>i.</b>	Supplied Air is documented to meet CGA Grade D quality.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>j.</b>	Contractor has submitted a written Respiratory Protection Program to BNL.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>k.</b>	Contractor's Respiratory Protection Program has been approved by BNL.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Observations & Corrective Actions:**

## Inspection Performed By

<b>Person Performing Oversight:</b>	Print	Signature	Date
-------------------------------------	-------	-----------	------

Management System: [Worker Safety and Health](#)

Subject Area: [Personal Protective Equipment and Respirators](#)

# Voluntary Use of Respirators When Not Required By Regulations Record

Effective Date: Mar 31, 2016

---

[Voluntary Use of Respirators When Not Required By Regulations \(TQ-RESP-VOLUNTARY\)](#) is provided as a Word file.

---

The only official copy of this file is the one on-line in SBMS.

Before using a printed copy, verify that it is the most current version by checking the *effective date*.



# Voluntary Use of Respirators When Not Required By Regulations

(Form: TQ-RESP-VOLUNTARY)

**Application:** An employee, guest, or user may request respiratory protection even if an exposure assessment determines that the atmosphere does not require respiratory protection. Use of respiratory equipment is allowed as long as wearing the respirator does not result in an increased risk of harm to the person. When an increased risk exists, as is the case for some work in Radiological Areas (as outlined in [Radiological Control Division \(RCD\) Standard Operating Procedures](#), Radiological Work Permit [FS-SOP-4031]), respirators will be denied to the employee, guest, or user.

**Restrictions:** All respiratory equipment used by BNL employees, guests, or users must be provided by the BNL from sources approved by the Respiratory Protection SME. Individuals are not permitted to purchase and wear their own respirators while at BNL.

## Instructions for Using Respirators When Not Required Under the OSHA Standard (29CFR1910.134 Appendix D):

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards.

If BNL has provided a respirator for your voluntary use, you should take the following precautions to ensure the respirator itself does not present a hazard:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. The National Institute for Occupational Safety and Health (NIOSH) of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

I have read the above information and agree to comply with this Voluntary Respirator Use program.

Print Name	Signature	BNL#	Date