



**CSN**  
COLLEGE OF  
SOUTHERN NEVADA

# Respiratory Protection Plan

*Department of Environmental Health & Safety*

**Author(s):** James H. Nelson, M.S.,REHS/RS  
Director, Environmental Health & Safety

**Revisions:**

<b>Rev. Date</b>	<b>Change Details</b>	<b>Reference Section(s)</b>
08/06	Drafted	Not applicable
11/07	Rev.; name changes	Throughout
03/08	General/annual review; add "voluntary" usage	Section I
03/08	Add OSHA "Appendix D"	Section 7
09/09	Review/update	all

# TABLE OF CONTENTS

<b>TITLE PAGE</b> .....	1
<b>AUTHORS / REVISIONS</b> .....	2
<b>TABLE OF CONTENTS</b> .....	3
<b><u>Section 1</u></b> <b>INTRODUCTION</b> .....	4
Program Scope / Purpose .....	4
Responsibilities .....	4
<b><u>Section 2</u></b> <b>POLICY DOCUMENTATION</b> .....	5
Compliance Plan .....	5
Documentation of Protection .....	5
<b><u>Section 3</u></b> <b>EXPOSURE AND EVALUATION</b> .....	6
Identification and Location of Exposures.....	6
Medical Evaluation .....	6
Medical History for Respirator Usage.....	7
HealthCare Professional’s Evaluation .....	9
<b><u>Section 4</u></b> <b>TRAINING AND FIT TESTING</b> .....	10
Respirator Selection .....	10
Employee Training and Fit Testing.....	11
Respirator Cleaning, Maintenance and Storage .....	12
<b><u>Section 5</u></b> <b>RECORDKEEPING</b> .....	13
<b><u>Section 6</u></b> <b>PROGRAM REVIEW</b> .....	14
<b><u>Section 7</u></b> <b>Appendix D, OSHA (29 CFR 1910.134</b> .....	15
(Voluntary / non-employer mandated use)	

## SECTION 1

### INTRODUCTION

#### PROGRAM PURPOSE

The purpose of this ***Respiratory Protection Program (RPP)***, and the primary goal of the Occupational Health and Safety Administration (OSHA) regulatory standard entitled *Respiratory Protection* it is intended to meet, is to prevent occupational diseases and illnesses associated with overexposure to airborne hazardous materials such as dusts, mists, fumes, gases and vapors. ***It is important to note, however, that control of such harmful agents should be accomplished, whenever feasible, through the use of engineering measures (e.g., mechanical ventilation), enclosures, and/or substitution of less hazardous materials.*** Respirator usage, though it should generally be regarded as a "last line of defense"/measure of last resort, may sometimes be necessary when sufficient engineering controls are not feasible, available, or are in the process of being installed. When used, respirators must be selected, used and maintained in a proper and careful manner. This manual will provide guidance in this respect.

**When respiratory protection is used to protect employees from inhalation hazards in the workplace, a number of important requirements must be met.**

OSHA requires that if an employer requires and provides respirators, the employer must provide respirators *suitable to the workplace contaminant(s)* and its airborne concentration(s), and that the employer develops and implements a **written program** (such as this document). The employee must then use such respiratory protection in a manner consistent with this plan, and in accordance with his or her employer-provided training.

In cases where the employee chooses to use a respirator, on a voluntary basis, because they wish to have it as a precaution only, and in the absence of any documented or suspected overexposure to hazardous agents, the employee shall not be prohibited from such usage. However, they shall be given "Appendix D" of the OSHA standard (*29CFR 1910.134*; see attached/ "Section 7") to read, and they should also contact CSN Environmental Health & Safety for additional information.

#### RESPONSIBILITIES

The CSN Department of Environmental Health & Safety (EH&S) is responsible for recommending to the appropriate Vice President(s) the provisions of the ***Respiratory Protection Program (RPP)*** that departments and programs shall follow.

EH&S shall also conduct site inspections to determine compliance with the RPP and other associated health and safety programs, policies, and procedures.

**Division Deans** are ultimately responsible for maintaining their program area compliance with the RPP. To this end, they may wish to designate departmental Safety Officers within their divisions. EH&S is available to assist with compliance efforts, and to act as a campus-wide resource on such matters.

**Supervisors or Lead Instructors** are responsible for compliance with the RPP within their individual work areas. This responsibility may not be shifted to untrained, unqualified, or inexperienced personnel. This includes:

- Ensuring that workers and students within the program know and follow the RPP rules.
- Ensuring that appropriate training is provided to all affected parties within the program, and that appropriate training records are maintained.

**Individual Employees** are responsible for planning and conducting operations in accordance with this RPP and all other applicable college policies and procedures.

## **SECTION 2**

### **POLICY DOCUMENTATION**

The CSN *Respiratory Protection Plan (RPP)*; this document) is an important resource for faculty and staff, in the furtherance of the college's health and safety goals, and is also a **regulatory requirement of OSHA.**

### **COMPLIANCE PLAN**

This RPP is designed to reduce employee and student exposure to air contaminants and to enhance the safety aspects of the use of personal protective equipment, or "PPE" (namely, respirators). It includes information on the recognition and evaluation of inhalation hazards in the workplace environment, and the establishment of policies and procedures for the proper selection, usage, maintenance, and fitting of respirators.

### **DOCUMENTATION OF PROTECTION**

The key components of an employer-sponsored Respiratory Protection Program, where the College requires and provides respirators, include provisions for fit testing of respirators, employee training, medical surveillance/certification for

use, and maintenance/cleaning of equipment. **Sections 3 and 4** of this plan contain the following administrative forms to verify compliance with such components:

- Annual fit test roster
- Medical History for Respirator Usage
- Medical Qualification for Some Types of Respirator Usage
- Compliance Checklist (see **Section 6**)

### **SECTION 3**

#### **EXPOSURE AND EVALUATION**

##### **Identification and Locations of Exposures**

Any task or product may be reevaluated at any time, especially if there is a change in the nature of the process or product. Employee inquiry would also likely initiate such a review.

A properly credentialed Health Care Professional may be contracted to assess the ability of each employee required to wear a respirator, to do so, in the event that certain types of respirators are contemplated. A medical history questionnaire shall be completed by prospective respirator users, and may be evaluated by the Health Care Professional as warranted. A Health Care Professional may also perform a medical examination, if indicated/recommended. Such an assessment, if performed, shall be repeated every two years, or whenever a significant change in the individual's medical condition occurs. ***All such evaluations shall be performed at no expense to the employee, in accordance with OSHA regulations.***

##### **Medical Evaluation**

A College-contracted Health Care Professional (HCP) may assess the ability of each employee required to wear some types of respirators, to do so. The HCP will evaluate a medical history questionnaire submitted by prospective respirator users, and render a medical opinion. A medical exam may be performed, as recommended by the HCP. The frequency of such assessments shall be, at a minimum, every two years, or whenever a known change in the employee's medical condition/physical fitness occurs.

## **Medical History for Respiratory Protection Use**

In the event that a Health Care Professional (HCP) is contacted to assess the ability/fitness of an employee to wear a respirator, the employee's medical history must be known to the HCP. The following questionnaire will aid in that regard. In addition to this questionnaire, the HCP may require a physical exam and a pulmonary function test to be performed.

### **MEDICAL HISTORY/QUESTIONNAIRE FOR RESPIRATOR USE (sample):**

Employee \_\_\_\_\_ Job Title \_\_\_\_\_

Type of Exposure (e.g., pesticides) \_\_\_\_\_

Respirator Recommended \_\_\_\_\_  
Manufacturer Model Type Size

**Please provide answers to the following questions (Please Note: all answers will be held in strict confidentiality, and are only for purposes of medical evaluation for respirator usage):**

**Yes No**

- \_\_\_ \_\_\_ Do you have insulin dependent diabetes?
- \_\_\_ \_\_\_ Do you have epilepsy, grand mal or petit mal (uncontrolled, i.e., within the past six months) seizures?
- \_\_\_ \_\_\_ Has your general health noticeably worsened during the past year?
- \_\_\_ \_\_\_ Do you use medications? If Yes, please specify \_\_\_\_\_
- \_\_\_ \_\_\_ Have you ever had a punctured ear drum?
- \_\_\_ \_\_\_ Do you have any known skin sensitivities (allergies)?
- \_\_\_ \_\_\_ Do you have an impaired or non-existent sense of smell?
- \_\_\_ \_\_\_ Do you have emphysema?
- \_\_\_ \_\_\_ Do you have chronic pulmonary obstructive disease (CPOD)?
- \_\_\_ \_\_\_ Do you have asthma (wheezing)?

**Yes No**

- \_\_\_ \_\_\_ Do you have or have you ever had pneumoconiosis (dust related lung disease)?
- \_\_\_ \_\_\_ Do you have any evidence or suspicion of reduced pulmonary (lung) function?
- \_\_\_ \_\_\_ Do you have a history of heart attack, stroke, or other heart/circulatory problems?
- \_\_\_ \_\_\_ Do you have untreated or uncontrolled hypertension?
- \_\_\_ \_\_\_ Do you have any breathing problems? If Yes, specify \_\_\_\_\_
- \_\_\_ \_\_\_ Have you ever experienced breathing difficulty when wearing a respirator?
- \_\_\_ \_\_\_ Have you ever experienced claustrophobia (fear of being "closed in") when wearing a respirator?
- \_\_\_ \_\_\_ Do you have difficulty walking up two flights of stairs at a rapid pace?
- \_\_\_ \_\_\_ Do you smoke? If Yes, specify packs/day \_\_\_\_\_  
and how long (years you have smoked) \_\_\_\_\_
- \_\_\_ \_\_\_ Are there any other conditions that you feel might affect your safe use of a respirator? If Yes, specify \_\_\_\_\_

**Employee Signature** \_\_\_\_\_ **Date** \_\_\_\_\_



**HEALTH CARE PROFESSIONAL'S EVALUATION (sample)**

Employee Name \_\_\_\_\_

**CLASS:**        1. No Restrictions on Respirator Use  
**(Circle One)**

                  2. Some Specific Respirator Use Restrictions (Specify:)

**Restrictions:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

                  3. No Respirator Use Permitted

\_\_\_\_\_  
**Health Care Professional  
(Name/Title)**

\_\_\_\_\_  
**Health Care Professional  
(Signature)**

\_\_\_\_\_  
**Date**

## **SECTION 4**

### **SELECTION, TRAINING AND FIT-TESTING DOCUMENTATION**

#### **Respirator Selection**

Selection of the proper type of respirator shall be in accordance with ***ANSI Standard V88.2-1980***, and shall take into account the following factors:

- The nature of the airborne contaminant (e.g., its health effects, concentration, permissible exposure levels/TLV), warning properties, if any, potential for skin absorption)
- The nature of the (hazardous) process/work
- The physical location, conditions (e.g., heat, ventilation)
- Worker activity
- Respirator limitations
- Respirator protection factors
- Respirator (product) approvals

Contact CSN Env. Health & Safety (EH&S) regarding respirator selection and approvals (ext. **7445**).

#### **Employee Training and Fit-Testing**

Training of respirator users under this program shall be conducted prior to initial respirator usage, and annually thereafter. Additional training may be required should significant process changes or equipment substitution, occur.

***Training programs shall include, but not necessarily be limited to, the following:***

- Respiratory hazards, and health effects of overexposure to anticipated airborne contaminants
- Respirator selection criteria
- Function, capabilities, and *limitations* of selected respirators
- Proper wear and fit (including fit testing methods)
- Respirator maintenance
- Factors which preclude use of certain types of respirators

In conjunction with employee safety training and EH&S, a fit test shall be performed on respirator users. EH&S shall maintain records pertaining to such employee training and fit testing.

To ensure safe use of any respiratory protective device, it is essential that the user be properly trained on the procedures and limitations pertaining to the device. ***Supervisors or any other person(s) issuing or requiring respirators must also receive such training.***

OSHA requires that all employees be trained in the safe use of any respiratory devices assigned/required. Written documentation of such training must be maintained.

**Training must include:**

- The importance of proper respirator use, and possible health effects of improper use or non-use in a given (department or process-specific) situation
- Differences between various types of respirators and components (e.g., filter cartridges) and their efficacy for different contaminants
- Limitations of respirators in relation to types and concentrations of contaminants
- Factors which influence a respirator's integrity
- How to wear, clean, maintain (e.g., change cartridges) and store respirators
- Fit testing measures to use each time a respirator is worn

**Respirator Fit Testing**

Even after careful consideration of all the details pertaining to respirator selection, proper protection will not be provided if the respirator face piece does not fit the wearer properly. Do not expect one make and model of a respirator to fit an entire work force. Due to the great variety in face sizes and shapes among employees, most respirator manufacturers make their devices available in more than one size. Also, the exact size and shape of each face piece will vary among manufacturers. Therefore, it is necessary to purchase or make available several makes and models to conduct a proper respirator fit testing program.

The OSHA Respiratory Protection Standard (29CFR 1910.134) requires that all negative pressure (e.g., air purifying, cartridge types) be fit tested to the individual by use of a "test atmosphere".

### Qualitative Fit Testing

A "qualitative" fit test relies on the wearer's subjective response (i.e., "yes/no" as to whether test substance is detected). The test atmosphere/substance is something that can typically and easily be detected by wearers, such as isoamyl acetate (banana oil), irritant smoke, or saccharin. The respirator is equipped to remove portions of the test atmosphere. For example, if using banana oil, which is an organic chemical that gives off a vapor, an organic vapor chemical cartridge must be utilized in the respirator. In such a test situation, assuming the respirator is in good condition, the wearer should not be able to detect the banana oil smell. If at any time the odor is detected, the fit is not proper.

### Respirator Cleaning, Maintenance and Storage

Cleaning and routine inspection and maintenance is the responsibility of the respirator user.

Maintenance shall include:

- Thorough cleaning, drying, and storage of respirators
- Routine respirator inspection
- Replacement of worn or damaged components, as needed

All maintenance records shall be kept with the respirator and available for inspection.

**SECTION 5**

**RECORDKEEPING**

**Respirator Fit Test and Training**

The following employees of CSN were fit tested for negative pressure respirators, and have received training in the proper selection, use, maintenance, and limitations of respiratory protection devices.

Trainer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

<b>Employee Name</b>	<b>Employee Signature</b>	<b>Medical Approvals: Date/Physician</b>	<b>Fit Test (Date)</b>	<b>Respirator: Make/Model</b>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

All records pertaining to employee fit tests and respirator training shall be kept in the Department of Environmental Health & Safety and/or other College files, as appropriate.

Records pertaining to routine respirator cleaning and maintenance shall reside with the respirator.

Records pertaining to medical evaluation shall be kept with other confidential employee records in Personnel.

## **SECTION 6**

### **PROGRAM REVIEW**

The effectiveness of this Respiratory Protection Program shall be reviewed (at a minimum) annually, by the College Department of Environmental Health & Safety.

All such reviews will include inspection of training methods and records, maintenance records, observation of user proficiency, and random inspections of devices for cleanliness, proper maintenance, and storage.

Records of all such evaluations shall be kept in the Department of Environmental Health or other College office(s) as appropriate for a period of length of employment of any employee, plus a minimum of 30 years thereafter.

## **SECTION 7**

### **CFR 29.1910 “Appendix D”**

#### Appendix D to Sec. 1910.134 (Mandatory) Information for Employees Using Respirators When not Required Under the Standard

*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 your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.*

*You should do the following:*

- 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. NIOSH, the National Institute for Occupational Safety and Health 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.*

*[63 FR 1152, Jan. 8, 1998; 63 FR 20098, April 23, 1998]*