

Medical and Dental Office Safety and Health Management Program



Occupational Safety and Health Division
N.C. Department of Labor
1101 Mail Service Center
Raleigh, NC 27699-1101

Cherie Berry
Commissioner of Labor

**N.C. Department of Labor
Occupational Safety and Health Program**

Cherie Berry
Commissioner of Labor
OSHA State Plan Designee

Allen McNeely
Deputy Commissioner for Safety and Health

Kevin Beauregard
Assistant Deputy Commissioner for Safety and Health

Wanda Lagoe
Author

This guide is in a series of industry guides focusing on safety and health management programs. It is intended to be consistent with all existing OSHA standards; therefore, if an area is considered by the reader to be inconsistent with a standard, then the OSHA standard should be followed.

To obtain additional copies of this guide, or if you have questions about North Carolina occupational safety and health standards or rules, please contact:

**N.C. Department of Labor
Education, Training and Technical Assistance Bureau
1101 Mail Service Center
Raleigh, NC 27699-1101**

Phone: 919-807-2875 or 1-800-625-2267

Additional sources of information are listed on the inside back cover of this guide.

The projected cost of the NCDOL OSH program for federal fiscal year 2012–2013 is \$18,073,694. Federal funding provides approximately 30.5 percent (\$5,501,500) of this total.



Table of Contents

Foreword and Overview	v
Section 1: Safety and Health Program Management	1
Management Commitment	1
Safety and Health Responsibilities	2
Employee Participation	3
Recordkeeping and Reporting	5
Accident/Incident Investigation Policy	7
• Employee’s Incident Report Form	8
• Supervisor’s Incident Investigation Form	9
• Incident Investigation Report	10
Safety and Health Inspection Procedures	14
Hazard Prevention and Control	15
Disciplinary Policy	16
Alcohol and Drug Use Policy	17
Section 2: Safety and Health Programs	18
Bloodborne Pathogens, Exposure Control Plan	19
Compressed Gas Policy	25
Emergency Action Plan	27
Ergonomics Policy	30
Ethylene Oxide	31
First Aid, CPR and AED Response Policy	33
Hazard Communication Program	34
Housekeeping Policy	36
Hygiene and Decontamination Procedures	38
Industrial Hygiene Policy	40
Ladder Safety Program	43
Medical Lasers	44
MRSA Policy	47
Respiratory Protection Program	48
Tuberculosis Program	65
Walking and Working Surfaces Policy	69
Waste Anesthetic Gas Control Policy	71
Workplace Violence Program	75
X-ray/Ionizing Radiation	80
Section 3: Training and Instruction	83
Employee Training	83
Employee Training Roster/Certificate of Training	85
Section 4: Reference Material	86
N.C. Department of Labor, Occupational Safety and Health Division	86
Federal Occupational Safety and Health Administration	86
Center for Disease Control	86
Section 5: Facility Inspection Forms	87
• Comprehensive Safety Inspection Form	88
• Monthly Inspection Form	101

Foreword

In North Carolina, the N.C. Department of Labor enforces the federal Occupational Safety and Health Act through a state plan approved by the U.S. Department of Labor. NCDOL offers many educational programs to the public and produces publications to help inform people about their rights and responsibilities regarding occupational safety and health.

When reading this guide, please remember the mission of the N.C. Department of Labor is greater than just regulatory enforcement. An equally important goal is to help citizens find ways to create safe workplaces. Everyone profits when managers and employees work together for safety. This booklet, like the other educational materials produced by the N.C. Department of Labor, can help.

Cherie Berry
Commissioner of Labor

Overview

This industry guide is designed to assist employers in developing a comprehensive safety and health program with best practices to be tailored to your own operation. We encourage you to customize the information in this industry guide as necessary to accomplish this goal. You may also copy any of the material in this guide to be used in your safety and health efforts.

This guide is provided as a best practice and compliance aid. It does not constitute a legal interpretation of OSHA standards, nor does it replace the need to be familiar with and follow the actual OSHA standards (including any North Carolina-specific changes.) ***Though the programs contained in this document are intended to be consistent with OSHA standards, if an area is considered by the reader to be inconsistent, the OSHA standard should be followed. Please note that this guide may not include all the programs and policies that may be required by OSHA standards or as a best practice for your specific operation or industry. It may also include more programs than are needed for your operation.***

The N.C. Department of Labor (NCDOL) Occupational Safety and Health (OSH) Division's Consultative Services Bureau can be contacted for assistance in helping you set up your individual safety and health management program and with on-site surveys. Feel free to contact them at 1-800-NC-LABOR (1-800-625-2267) or at 919-807-2899. You may also want to visit their website at <http://www.nclabor.com/osh/consult/consult.htm>

For training events, publications, PowerPoint presentations and standard interpretations, please contact the Education, Training and Technical Assistance (ETTA) Bureau at 919-807-2875 or access their website at <http://www.nclabor.com/osh/etta/etta.htm>.

Section 1

Safety and Health Program Management

*Note: The following section is a **best practice**. Please modify or delete content to these policies as deemed necessary.*

Management Commitment

Safety and Health Policy

We place a high value on the safety and health of our employees. We are committed to providing a safe workplace for all employees and have developed this program for injury prevention to involve management, supervisors and employees in identifying and eliminating hazards that may develop during our work process.

It is the basic safety and health policy of this company that no task is so important that an employee must violate a safety and health rule or take a risk of injury or illness to get the job done.

Employees are required to comply with all company safety and health rules and are encouraged to actively participate in identifying ways to make our company a safer place to work.

Supervisors are responsible for the safety and health of their employees and, as a part of their daily duties, must check the workplace for unsafe conditions, watch employees for unsafe actions and take prompt action to eliminate any hazards.

Management will do its part by devoting the resources necessary to form a safety and health committee composed of management and elected employees. We will develop a system for identifying and correcting hazards. We will plan for foreseeable emergencies. We will provide initial and ongoing training for employees and supervisors and we will establish a disciplinary policy to ensure that company safety and health policies are followed.

*Note: The following section is a **best practice**. Please modify or delete content to these policies as deemed necessary.*

Safety and Health Responsibilities

Manager Responsibilities

- Ensure that sufficient employee time, supervisor support and funds are budgeted for equipment, training and carrying out the safety and health program.
- Evaluate supervisors each year to make sure they carry out their responsibilities as described in this program.
- Ensure that incidents are fully investigated and corrective action is taken to prevent the hazardous conditions or behaviors from happening again.
- Ensure that a record of injuries and illnesses is maintained and posted as described in this program.
- Set a good example by following established safety and health rules and attending required training.
- Report unsafe practices or conditions to the supervisor of the area where the hazard was observed.

Supervisor Responsibilities

- Ensure that each employee has received initial orientation before beginning work.
- Ensure that each employee is competent or has received training on safe operation of equipment or tasks before starting work.
- Ensure that each employee receives required personal protective equipment (PPE) before starting work on a project requiring PPE.
- Perform a daily safety check of the work area. Promptly correct any hazards you find.
- Observe the employees you supervise while they are working. Promptly correct any unsafe behavior. Provide additional training and take corrective action as necessary.
- Document employee evaluations.
- Set a good example for employees by following the safety and health rules and attending required training.
- Investigate all incidents in your area and report findings to management.
- Talk to management about changes to work practices or equipment that will improve employee safety and health.

Employee Responsibilities

- Follow the safety and health rules established by your company. Report unsafe conditions or actions to your supervisor or safety and health committee representative promptly.
- Report all work-related injuries and illnesses to your supervisor promptly, regardless of how minor they may seem.
- Report all near miss incidents to your supervisor promptly.
- Always use personal protective equipment that is in good working condition when it is required.
- Do not remove or bypass any safety device or safeguard provided for your protection.
- Encourage your co-workers to use safe work practices on the job.
- Make suggestions to your supervisor, safety and health committee representative, or management about changes that will improve employee safety and health.

*Note: The following section is a **best practice**. Please modify or delete content to these policies as deemed necessary.*

Employee Participation

Note: While safety and health committees are not required by law (with the exception of employers covered by N.C. Gen. Stat. 95-251), the following can be used as a statement when the company has a voluntary safety and health committee and is an example of how the committee members may be selected and function within the company. Alternative methods may be used as well.

Safety and Health Committees and Meetings

Employers can form safety and health committees to help employees and management work together to identify safety and health problems, develop solutions, review incident reports, and evaluate the effectiveness of the safety and health program. The committee should be made up of management-designated representatives and employee-elected representatives from all areas within the company.

Employees from each operational unit, division or area may volunteer or be nominated from among themselves to be a representative on the committee. If there is only one volunteer or nomination, the employees may approve the person by voice vote at a short meeting called for that purpose. If there is more than one volunteer or nomination, a secret paper ballot may be used to elect the representative.

Elected representatives will serve for *(insert number of years)* year(s) before being re-elected or replaced. If there is a vacancy then an election will be held before the next scheduled meeting to fill the balance of the term. (It is recommended that members serve two years, with half of the members replaced after the first year when the initial committee is formed, so that there are carry-over members on the committee at all times).

In addition to the employee-elected representatives, management should designate no more than three representatives but a minimum of one who will serve until replaced by management. Management representation should not outnumber employee representation. If the company employs a medical professional on staff, it is recommended that this individual serve on the safety and health committee as well but at least an individual who manages the workers' compensation, injury and illness, and first aid logs, such as the company safety and health manager.

A chairperson should be selected by a majority vote by the committee members each year. If there is a vacancy, the same method should be used to select a replacement.

The duties of safety and health committee members include:

- Conducting a monthly self-inspection of the area they represent.
- Communicating with the employees they represent on safety and health issues.
- Encouraging safe work practices among co-workers.
- Reviewing the injury, illness and first aid logs for trends and conducting a separate investigation of any incident (if determined appropriate).
- Providing any recommendations to management for consideration.

The safety and health committee should meet at least *(insert frequency)*. Each area committee member should bring information from the monthly inspections of their areas and any concerns from the employees in the area they represent. Using this information, the committee can help identify safety and health problems, develop solutions, review incident reports, provide training, and evaluate the effectiveness of the safety and health program.

A committee member will be designated to keep minutes. A copy of the minutes will be posted in a place where all affected employees have access to them. The company should archive meeting minutes for a specified period of time such as one year for follow-up/review purposes. (The company may choose to post minutes on employee bulletin boards, on an intranet, etc. Additionally, the company may choose to archive such records electronically.)

General Employee Safety Meetings

All employees are required to attend a monthly safety and health meeting. This meeting will help identify safety and health problems, develop solutions, provide training, and evaluate the effectiveness of the safety and health program.

An employee will be designated each month to keep the minutes. A copy of the minutes will be posted in a place where all affected employees have access to them. The company should archive meeting minutes for a specified period of time such as one year for follow-up/review purposes. *(The company may choose to post minutes on employee bulletin boards, on an intranet, etc. Additionally, the company may choose to archive such records electronically).*

*Note: The following section contains workers' compensation procedures, and OSHA recordkeeping requirements. It also contains **best practices** that can be modified or deleted to the policy as deemed appropriate. Refer to the NCIC website <http://www.ic.nc.gov/> for information on workers' compensation. Medical and dental offices are not required to keep OSHA injury and illness records for unless they are asked in writing to do so by OSHA, the Bureau of Labor Statistics (BLS), or a state agency operating under the authority of OSHA or the BLS. All employers, including those partially exempted by reason of company size or industry classification, must report to OSHA any workplace incident that results in a fatality or the hospitalization of three or more employees (see § 1904.39).*

Recordkeeping and Reporting

(Ref. 29 CFR 1904, 29 CFR 1910.1020)

Injuries and Illnesses Reporting

Employees are required to report any injury or work-related illness to their immediate supervisor regardless of how serious. Minor injuries such as cuts and scrapes will be entered on the first aid log. The employee will use an “*Employee's Incident Report*” form (or Workers' Compensation Form 18) to report more serious/compensable injuries.

The supervisor will:

- Investigate all injuries and illnesses in their work area, including serious first-aid cases and near miss incidents. Complete an “*Incident Investigation Report*” form and “*Supervisor's Incident Investigation*” form immediately following the incident.
- Provide all *incident investigation report* forms to the safety and health manager/company medical professional or HR/personnel office within three days of the incident.

The safety and health manager/company medical professional/HR or personnel manager will:

- Determine from the Employee's Incident Report form, Incident Investigation Report form and any claim form associated with the incident whether it must be recorded on the OSHA 300 Injury and Illness Log and Summary according to the instructions for that form. (The N.C. Industrial Commission Form 19 may be used in lieu of OSHA Form 301.)
- Enter any recordable incident within seven calendar days after becoming aware of the injury/illness/fatality.
- If the injury is not recorded on the OSHA log, add it to the first aid log, which is used to record non-OSHA recordable injuries and near misses.
- The employer may need to fill out and file a Workers' Compensation Form 19, “*Employer's Report of Employee's Injury,*” with the Industrial Commission within five days of learning of an injury or allegation. If a Form 19 is filed with the Industrial Commission, the employer must provide a copy of the Form 19 to the employee, together with a blank Form 18, “*Notice of Accident to Employer and Claim of Employee,*” for use by the employee. (<http://www.ic.nc.gov/>)

A signed copy of the OSHA log summary (OSHA Form 300A) for the previous year must be posted on the safety bulletin board from Feb. 1 through April 30. The log must be kept on file for at least five years. Any employee can view an OSHA log upon request at any time during the year.

Employee Access to Medical and Exposure Records

Whenever an employee or designated representative requests access to a record, we must ensure that access is provided in a reasonable time, place, and manner. If we cannot reasonably provide access to the record within 15 working days, we will apprise the employee or designated representative requesting the record of the reason for the delay and the earliest date when the record can be made available.

The medical record for each employee will be preserved and maintained for at least the duration of employment plus 30 years.

First aid records (not including medical histories) of one-time treatment and subsequent observation of minor scratches, cuts, burns, splinters, and the like that do not involve medical treatment, loss of consciousness, restriction of work or motion, or transfer to another job, if made on-site by a nonphysician and if maintained separately from the employer's medical program and its records and the medical records of employees who have worked for less than one year for the employer need not be retained beyond the term of employment if they are provided to the employee upon the termination of employment.

Exposure Records

Background data to environmental (workplace) monitoring or measuring, such as laboratory reports and work-sheets, need only be retained for one year so long as the sampling results, the collection methodology (sampling plan), a description of the analytical and mathematical methods used, and a summary of other background data relevant to interpretation of the results obtained are retained for at least 30 years.

Safety data sheets and records concerning the identity of a substance or agent need not be retained for any specified period as long as some record of the identity (chemical name if known) of the substance or agent, where it was used, and when it was used is retained for at least 30 years.

Biological monitoring results designated as exposure records by specific occupational safety and health standards must be preserved and maintained as required by the specific standard.

Analyses using exposure or medical records must be preserved and maintained for at least 30 years.

Training Records

Some standards require training records to be maintained for three years and some do not require training records. Records of employees who have worked for less than one year need not be retained after employment, but we are required to provide these records to the employee upon termination of employment. Our policy is to maintain training records for *(insert time frame)*.

*Note: The following section is a **best practice**. Please modify or delete content to these policies as deemed necessary.*

Accident/Incident Investigation Policy

Accident/Incident Investigation Procedures

If an employee dies while working or within 30 days of the initial accident/incident causing an injury or illness, or when three or more employees are admitted to the hospital as a result of a work-related accident/incident, the company must contact the N.C. Department of Labor's OSH Division within eight hours of becoming aware of the accident/incident. The toll-free notification number is 1-800-NC-LABOR (1-800-625-2267).

Whenever there is an incident that results in death or serious injuries or illnesses, a preliminary investigation will be conducted by an accident investigation team made up of the immediate supervisor of the injured person(s), a person designated by management, an employee representative of the safety and health committee, and any others whose expertise would help in the investigation.

The accident investigation team will take written statements from witnesses and photograph the incident scene and equipment involved. The team will also document, as soon as possible after the incident, the condition of equipment and any anything else in the work area that may be relevant. The team will complete a written incident investigation report. The report will include a sequence of events leading up to the incident, conclusions about the incident and any recommendations to prevent a similar incident in the future. This report will be given to *(insert appropriate name/job title)* for corrective action. The report will be reviewed by the safety and health committee at its next regularly scheduled meeting.

When a supervisor becomes aware of an employee injury where the injury was not serious enough to warrant a team investigation as described above, the supervisor will write an incident investigation report to accompany the employee's report and forward them to *(insert appropriate name/job title)*.

In addition, whenever there is an incident that did not result in an injury to an employee *(a near miss)*, the supervisor will investigate the incident. The incident investigation report form will be filled out to investigate the near miss and to establish any corrective action as applicable. The form will be clearly marked to indicate that it was a near miss and that no actual injury occurred. The report will be forwarded to *(insert appropriate name/job title)* to record on the incident log and for further action.

Employee's Incident Report Form

Instructions: Employees will use this form to report **all** work-related injuries, illnesses or “near miss” events (which could have caused an injury or illness)—*no matter how minor*. This helps to identify and correct hazards before they cause serious injuries. This form will be completed by employees as soon as possible and given to a supervisor for further action. (NCIC Form 18 may be used in place of this one.)

I am reporting a work related: <input type="checkbox"/> Injury <input type="checkbox"/> Illness <input type="checkbox"/> Near miss	
Name:	
Job Title:	
Supervisor:	
Have you told your supervisor about this injury/near miss? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date of injury/illness/near miss:	Time of injury/illness/near miss:
Names of witnesses (if any):	
Where exactly did it happen?	
What were you doing at the time?	
Describe step by step what led up to the injury/illness/near miss (continue on the back if necessary):	
What could have been done to prevent this injury/illness/near miss?	
What parts of your body were injured? If a near miss, how could you have been hurt?	
Did you see a doctor about this injury/illness? <input type="checkbox"/> Yes <input type="checkbox"/> No	
If yes, whom did you see?	Doctor's phone number:
Date:	Time:
Has this part of your body been injured before? <input type="checkbox"/> Yes <input type="checkbox"/> No	
If yes, when?	Supervisor:
Employee's signature:	Date:

Supervisor's Incident Investigation Form

Name of Injured Person _____
Date of Birth _____ Telephone Number _____
Address _____
City _____ State _____ Zip _____
 Male Female

What part of the body was injured? Describe in detail.

What was the nature of the injury? Describe in detail.

Describe fully how the accident happened. What was employee doing prior to the event? What equipment and tools were being used?

Names of all witnesses:

Date of Event _____ Time of Event _____ a.m. p.m.

Exact location of event:

What caused the event?

Were safety regulations in place and used? If not, what was wrong?

Employee went to doctor/hospital? Doctor's Name:

Hospital's Name:

Recommended preventive action to take in the future to prevent reoccurrence:

Supervisor's Signature

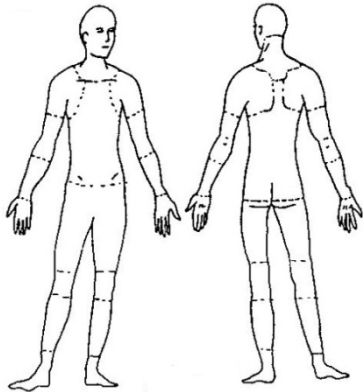
Date

Incident Investigation Report

Instructions: Complete this form as soon as possible after any incident that an employee reports or which results in serious injury or illness and to investigate a minor injury or near miss that could have resulted in a serious injury or illness.

This is a report of : <input type="checkbox"/> Death <input type="checkbox"/> Lost Time <input type="checkbox"/> Dr. Visit Only <input type="checkbox"/> First Aid Only <input type="checkbox"/> Near Miss	
Date of incident:	This report is made by: <input type="checkbox"/> Employee <input type="checkbox"/> Supervisor <input type="checkbox"/> Team <input type="checkbox"/> Other _____

Step 1: Injured employee (complete this part for each injured employee)

Name:	Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female	Age:	
Department:	Job title at time of incident:		
Part of body affected: (shade all that apply) 	Nature of injury: (most serious one): <input type="checkbox"/> Abrasion, scrapes <input type="checkbox"/> Amputation <input type="checkbox"/> Broken bone <input type="checkbox"/> Bruise <input type="checkbox"/> Burn (heat) <input type="checkbox"/> Burn (chemical) <input type="checkbox"/> Concussion (to the head) <input type="checkbox"/> Crushing Injury <input type="checkbox"/> Cut, laceration, puncture <input type="checkbox"/> Hernia <input type="checkbox"/> Illness <input type="checkbox"/> Sprain, strain <input type="checkbox"/> Damage to a body system: <input type="checkbox"/> Other _____	This employee works: <input type="checkbox"/> Regular full time <input type="checkbox"/> Regular part time <input type="checkbox"/> Seasonal <input type="checkbox"/> Temporary	
		Months with this company:	
		Months doing this job:	

Step 2: Describe the incident

Exact location of the incident:	Exact time:
What part of employee's workday? <input type="checkbox"/> Entering or leaving work <input type="checkbox"/> Doing normal work activities <input type="checkbox"/> During meal period <input type="checkbox"/> During break <input type="checkbox"/> Working overtime <input type="checkbox"/> Other _____	
Names of witnesses (if any):	

Attachments	Written witness statements:	Photographs:	Maps/drawings:
What personal protective equipment was being used (if any)?			
Describe, step-by-step the events that led up to the injury. Include names of any machines, parts, objects, tools, materials and other important details. Attach separate sheets if necessary.			

Step 3: Why did the incident happen?	
Unsafe workplace conditions: (Check all that apply) <input type="checkbox"/> Inadequate guard <input type="checkbox"/> Unguarded hazard <input type="checkbox"/> Defective safety device <input type="checkbox"/> Defective tool or equipment <input type="checkbox"/> Hazardous workstation layout <input type="checkbox"/> Unsafe lighting <input type="checkbox"/> Unsafe ventilation <input type="checkbox"/> Lack of needed personal protective equipment <input type="checkbox"/> Lack of appropriate equipment/tools <input type="checkbox"/> Unsafe clothing <input type="checkbox"/> No training or insufficient training <input type="checkbox"/> Other: _____	Unsafe acts by people: (Check all that apply) <input type="checkbox"/> Operating without permission <input type="checkbox"/> Operating at unsafe speed <input type="checkbox"/> Servicing equipment that has power to it <input type="checkbox"/> Making a safety device inoperative <input type="checkbox"/> Using defective equipment <input type="checkbox"/> Using equipment in an unapproved way <input type="checkbox"/> Unsafe lifting <input type="checkbox"/> Taking an unsafe position or posture <input type="checkbox"/> Distraction, teasing, horseplay <input type="checkbox"/> Failure to wear personal protective equipment <input type="checkbox"/> Failure to use the available equipment/tools <input type="checkbox"/> Other: _____
Why did the unsafe conditions exist?	
Why did the unsafe acts occur?	
Is there a reward (such as “the job can be done more quickly” or “the product is less likely to be damaged”) that may have encouraged the unsafe conditions or acts? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe:	
Were the unsafe acts or conditions reported prior to the incident? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Have there been similar incidents or near misses prior to this one? <input type="checkbox"/> Yes <input type="checkbox"/> No	

Step 4: How can future incidents be prevented?

What changes do you suggest to prevent this incident/near miss from happening again?
 Stop this activity Guard the hazard Train the employee(s) Train the supervisor(s)
 Redesign task steps Redesign workstation Write a new policy/rule Enforce existing policy
 Routinely inspect for the hazard Personal protective equipment Other: _____

What should be (or has been) done to carry out the suggestion(s) checked above? Attach separate sheets if necessary.

Step 5: Who completed and reviewed this form? (Please Print)

Written by: Department:	Title: Date:
----------------------------	-----------------

Names of investigation team members:

Does team agree with corrective action recommended in step 4? Yes No N/A
(Step 6 should be completed using investigation team's final recommendations)

Reviewed by:	Title: Date:
--------------	-----------------

Step 6: Corrective Action and Follow-up

Written by:
Department:

Title:
Date:

List corrective action to be implemented, date completed and responsible parties.

1. _____

2. _____

3. _____

Date of follow-up:

Conducted by:

*Note: The following section is a **best practice**. Please modify or delete content to these policies as deemed necessary.*

Safety and Health Inspection Procedures

We are committed to aggressively identifying hazardous conditions and practices that are likely to result in injury or illness to employees. We will take prompt action to eliminate any hazards we find. In addition to reviewing injury records and investigating incidents for their causes, management and the safety committee will regularly check the workplace for hazards as described below.

- **Annual Site Survey**—Once a year, an inspection team made up of members of the safety and health committee will conduct a wall-to-wall walk-through inspection of the entire worksite. They will write down any safety hazards or potential hazards they find. The results of this inspection will be used to eliminate or control obvious hazards, target specific work areas for more intensive investigation, assist in revising the checklists used during regular monthly safety inspections, and as part of the annual review of the effectiveness of the accident prevention program.
- **Periodic Change Survey**—A supervisor or a team will be assigned to look at any changes we make to identify safety issues. Changes include new equipment, changes to production processes or changes to the building structure. The team will be made up of maintenance, production and safety committee representatives. It will examine the changed conditions and makes recommendations to eliminate or control any hazards that were or may be created as a result of the change.
- **Monthly Safety Inspection**—Each month, the safety and health committee representatives will inspect their areas for hazards using the standard safety and health inspection checklist. They will talk to co-workers about their safety and health concerns. The committee representatives will report any hazards or concerns to the safety and health committee at the next scheduled meeting for consideration. The results of the area inspection and any action taken will be posted in the affected area. Safety and health committee representatives should inspect each other's area.

*Note: The following section is a **best practice**. Please modify or delete content to these policies as deemed necessary.*

Hazard Prevention and Control

Eliminating Workplace Hazards

We are committed to eliminating or controlling workplace hazards that could cause injury or illness to our employees. We will meet the requirements of OSHA standards where there are specific rules about a hazard or potential hazard in our workplace. Whenever possible, we will design our facilities and equipment to eliminate employee exposure to hazards. Where these engineering controls are not possible, we will write work practices (administrative controls) that effectively prevent employee exposure to the hazard. When the above methods of control are not possible or are not fully effective, we will require employees to use personal protective equipment (PPE) such as safety glasses, hearing protection and foot protection.

Basic Safety and Health Rules

Note: The company should establish a set of basic safety and health rules; however, the company should not address requirements for specific standards in this section. They should be addressed as part of/with the specific written program requirements of the standard.

The following basic safety and health rules have been established to help make the company a safe, healthy and efficient place to work. These rules are in addition to safety and health practices that must be followed when doing particular jobs or operating certain equipment. Those rules are listed in the safety hazard work practices and health hazard work practices sections of this manual. Failure to comply with any safety or health rules may result in disciplinary action.

The following are examples of basic safety and health rules. The company should base these rules on the hazards in its work environment.

- Never do anything that is unsafe in order to get the job done. If a job is unsafe, report it to your supervisor or safety committee representative. We will find a safer way to do that job.
- Do not remove or disable any safety device! Keep guards in place at all times on operating machinery.
- Never operate a piece of equipment unless you have been trained and are authorized.
- Use your personal protective equipment whenever it is required.
- Obey all safety warning signs.
- Loose clothing, jewelry and hair longer than shoulder length will not be worn around moving machinery.
- Working under the influence of alcohol or illegal drugs and using them at work are prohibited.
- Do not bring firearms or explosives onto company property (including personal vehicles in company-owned parking lots).
- Smoking is not permitted on company grounds (including in personal vehicles in company-owned parking lots OR if smoking is permitted, it is only permitted outside the building away from any entry or ventilation intake, except that smoking is not permitted in any areas where flammable liquid are dispensed, mixed, used or stored).
- Horseplay, running and fighting are prohibited.
- Report spills immediately so that they can be cleaned up promptly by appropriately trained employees.
- Replace all tools and supplies after use.
- Do not allow materials (especially combustible materials) to accumulate where they will become a tripping or fire hazard. Keep lids on trashcans at all times.
- Do not block any fire extinguisher, fire exit or exit pathway with materials or equipment.

*Note: The following section is a **best practice**. Please modify or delete content to these policies as deemed necessary.*

Disciplinary Policy

The company has established a progressive disciplinary program for those acts or practices not considered immediately dangerous to life or health. Unsafe acts will not be tolerated. Each employee has an individual responsibility to work safely. We have established a progressive disciplinary program for those acts or practices not considered immediately dangerous to life or health.

(Note: The following are examples of disciplinary actions. Employers may wish to establish these policies as part of their general personnel policies and should seek legal advice prior to implementing them in the workplace.)

First Instance Warning, notation in employee file and instruction on proper actions.

Second Instance Written reprimand and instruction on proper actions.

Third Instance One- to five-day suspension, written reprimand, and instruction on proper actions.

Fourth Instance Termination of employment.

An employee may be subject to immediate termination when a safety or health violation places the employee or co-workers at risk of permanent disability or death.

*Note: The following section is a **best practice**. It is an example of a drug testing and alcohol and drug use policy. Employers may wish to establish these policies as part of their general personnel policies and should seek legal advice prior to implementing them in the workplace.*

Alcohol and Drug Use Policy

We have a vital interest in maintaining safe, healthy and efficient working conditions for our employees. Therefore, the use of substances that impair an employee's ability to perform the job safely is not allowed. The use of these substances (except legally prescribed drugs reported to the supervisor/employer) during duty hours is prohibited, and their use may result in disciplinary action. Duty hours consist of all working hours, including break periods and on-call periods, whether on or off company premises.

The consumption of alcohol or illegal drugs while performing company business or while in a company facility or vehicle is prohibited and will result in disciplinary action up to and including termination of employment. Additionally, employees must report to their supervisor the use of legally prescribed drugs (such as narcotics) that may affect their ability to perform any part of their job safely so that alternate assignments/duties may be considered when necessary. Failure to report this type of drug use may also result in disciplinary action under certain circumstances.

Drug testing will be performed after **all** accidents that occur on company time or property or in or on a company owned vehicle or other equipment. Additionally, random drug testing may be performed if employees are suspected of being under the influence of alcohol or any illegal drug and when they appear to be impaired by **any** substance, including unreported use of legally prescribed medications, while at work. Refusal to submit to a drug test after an accident/incident may result in termination of employment.

(Reference N.C. Gen. Stat. Chapter 90, Article 5.)

Section 2

Safety and Health Programs

Note: The following pages contain example safety and health programs and policies that may be applicable to your company. It is the responsibility of the company to determine whether these programs are mandatory in your work environment based on the scope and application of the referenced standard. Every effort has been made to include the content required by the NCDOL OSH Division standards. Additionally, other good practices have been included that may or may not apply to your company. Please add or delete content to these programs as deemed necessary.

While most standards do not require a program administrator or coordinator, it is a good practice to have an employee who is knowledgeable and appropriately trained assigned to administer and review these programs on a continuing basis to ensure their effectiveness in the workplace. Individuals such as human resource professionals, risk managers, safety managers, industrial hygienists and medical professionals are the most appropriate to administer these programs. Additionally, safety and health committees and other suitably trained and experienced employees may also help administer and review these programs.

(Note: This program may be mandatory for your company. Please reference the scope and application of the referenced OSHA standard. This is an example program and may be modified to meet the company's needs. The standard should be referenced to ensure that all requirements are being met.)

Bloodborne Pathogens, Exposure Control Plan

(Ref. 29 CFR 1910.1030)

Purpose

The purpose of this exposure control plan is to:

- Eliminate or minimize employee occupational exposure to blood and/or certain other body fluids.
- Comply with the OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030.

Exposure Determination

OSHA requires a listing of job classifications in which employees have occupational exposure. Since not all the employees in these categories would be expected to incur exposure to blood or other potential infectious material (OPIM), tasks or procedures that would cause these employees to have occupational exposure must also be listed to understand clearly which employees in these categories are considered to have occupational exposure. The job classifications and associated tasks for these categories are as follows:

Job Classification	Task/Procedure
_____	_____
_____	_____
_____	_____
_____	_____

Implementation Schedule and Methodology

OSHA requires that this plan include a schedule and method of implementation for the various requirements of the standard. The following complies with this requirement.

Compliance Methods

Universal precautions will be observed to prevent contact with blood or OPIM. All blood or OPIM will be considered infectious, regardless of the perceived status of the source individual. Engineering and work practice controls will be utilized to eliminate or minimize exposure to employees at this facility. Where occupational exposure remains after institution of these controls, personal protective equipment will also be utilized.

Handwashing facilities will be made available to employees who incur exposure to blood or OPIM. *When handwashing facilities are not feasible, either an antiseptic cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes will be provided. When using these alternatives, the employees must wash their hands with soap and running water as soon as feasible.*

Personal Protective Equipment (PPE)

(Insert job title of person responsible) is responsible for ensuring that the following provisions are met.

All PPE used will be provided without cost to the employee. PPE will be chosen based on the anticipated exposure to blood or OPIM. The PPE will be considered appropriate only if it does not permit blood or OPIM to pass through or reach the employee's clothing, skin, eyes, mouth or other mucous membranes under normal conditions of use and for the duration of time while the protective equipment will be used.

PPE Cleaning, Laundering and Disposal

All PPE will be cleaned, laundered or disposed of by the company at no cost to employees. All repairs and replacements will be provided by the company at no cost to employees.

Gloves

Gloves will be worn where it is reasonably anticipated that employees will have hand contact with blood, OPIM, non-intact skin and mucous membranes; when performing vascular access procedures; and when handling or touching contaminated items or surfaces.

Disposable gloves are not to be washed or decontaminated for reuse and are to be replaced as soon as practical when they become contaminated or if they are torn, punctured or their ability to function as a barrier is compromised. Utility gloves may be decontaminated for reuse, provided that the integrity of the glove is not compromised. Utility gloves will be discarded if they are cracked, peeling, torn, punctured or show other signs of deterioration or when their ability to function as a barrier is compromised.

Eye and Face Protection

Masks, in combination with eye protection devices such as goggles or glasses with solid side shields, or chin length side face shields must be worn whenever splashes, spray, splatter or droplets of blood or OPIM may be generated and eye, nose or mouth contamination can be reasonably anticipated. The following situations require such protection:

Housekeeping

Note: A cleaning and decontamination schedule must be developed based on the type of contamination and the surfaces to be decontaminated. This schedule should include the frequency with which decontamination must be accomplished, such as immediately after a blood or body fluid release, once per shift, or after each procedure causing contamination of materials or surfaces.

Blood or OPIM release or spills must be reported to the supervisor or appropriately trained cleaning staff and surfaces must be decontaminated immediately or per the pre-established cleaning schedule. Decontamination may be accomplished by using sodium hypochlorite mixed with water in a 1:10 to 1:100 concentration. This must be mixed daily or immediately prior to use. Additionally other appropriate disinfectants may be used in accordance with the manufacturer's instructions as follows: *(insert list of predetermined appropriately selected EPA registered tuberculocidal disinfectants)*

Sharps and Other Regulated Waste

Regulated waste, including sharps, must be placed in containers that are closeable and constructed to contain all contents and prevent leakage. Sharps containers must be stored upright during use and may not be opened by employees.

All sharps and regulated waste containers must be labeled or color-coded and closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport or shipping.

Note: Disposal of all regulated waste must be in accordance with all applicable federal, state and local regulations.

Laundry Procedures

Laundry contaminated with blood or OPIM will be handled as little as possible. Such laundry will be placed in appropriately marked bags (biohazard labeled or color-coded red) at the location where it was used. The laundry will not be sorted or rinsed in the area of use.

Note: If the facility ships contaminated laundry offsite to a laundry that does not utilize universal precautions in the handling of all laundry, the contaminated laundry must be placed in bags or containers that are labeled or color-coded.

Hepatitis B Vaccine and Post-Exposure Evaluation and Follow-up

We make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure and post-exposure follow-up to employees who have had an exposure incident.

(Insert job title of person responsible) will ensure that all medical evaluations and procedures including the hepatitis B vaccine and vaccination series and post-exposure follow-up including prophylaxis are:

- Made available at no cost to the employee.
- Made available at a reasonable time and place.
- Performed by, or under the supervision of, a licensed physician or other licensed healthcare professional (PLHCP).
- Provided according to the recommendations of the U.S. Public Health Service.

Hepatitis B vaccination will be made available after the employee has received training in occupational exposure and within 10 working days of initial assignment to all employees who have occupational exposure unless: the employee has previously received the complete hepatitis B vaccination series; antibody testing has revealed that the employee is immune; or the vaccine is contraindicated for medical reasons.

For employees who complete the hepatitis B vaccination series, antibody testing will be made available at no cost to the employee one to two months after completion of the series, as recommended by the U.S. Public Health Service.

Employees who decline the hepatitis B vaccination will sign the OSHA required declination form indicating their refusal (Refer to hepatitis B declination at the end of program). Any employee who initially declines hepatitis B vaccination, but later decides to accept vaccination while still covered by the standard, will be provided the vaccination series as described above.

If at a future date the U.S. Public Health Service recommends a routine booster dose of hepatitis B vaccine, such booster doses will be made available at no cost to the employee.

Post-Exposure Evaluation and Follow-up

All exposure incidents will be reported, investigated, and documented. When an employee incurs an exposure incident, it will be reported to *(Insert job title of person responsible)*. Following a report of an exposure incident, the exposed employee will immediately receive a confidential medical evaluation and follow-up, including at least the following elements:

- Documentation of the route of exposure, and the circumstances under which the exposure incident occurred. If the incident involves percutaneous injury from a contaminated sharp, appropriate information should be entered in the sharps injury log.
- Identification and documentation of the source individual, unless it can be established that identification is infeasible or prohibited by state or local law. The source individual's blood will be tested as soon as feasible, and after consent is obtained, to determine HBV and HIV infectivity. If consent is not obtained, *(Insert job title of person responsible)* will establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the blood (if available) will be tested and the results documented.
- Results of the source individual's testing will be made available to the exposed employee, and the employee will be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

- When healthcare workers or others have been exposed to the blood or other body fluids of an individual as the result of a needlestick, contact with non intact skin or a splash or spatter to the mucous membranes of the eyes, nose or mouth, the individual source person, if known, shall be tested without their consent for infection with human immunodeficiency virus (HIV) and hepatitis B virus (HBV), unless the source person is already known to be infected. Please refer to 10A NCAC 41A.0202(4)(a)(i) and 41A.0203(b)(4)(A) for the communicable disease control requirements for exposure to HIV and HBV respectively.

Collection and testing of blood for hepatitis B virus (HBV) and human immunodeficiency virus (HIV) serological status will comply with the following:

- The exposed employee's blood will be collected as soon as feasible and tested after consent is obtained.
- The employee will be offered the option of having his or her blood collected for testing of the employee's HIV serological status. The blood sample will be preserved for up to 90 days to allow the employee to decide if the blood should be tested for HIV status.

Any employee who incurs an exposure incident will be offered post-exposure evaluation and follow-up in accordance with the OSHA standard. All post-exposure follow-up will be provided by *(Insert first aid clinic/doctor's office/urgent care/emergency room information)*.

Information Provided to the Health Care Professional

(Insert job title of person responsible) will ensure that the health care professional (HCP) responsible for the employee's hepatitis B vaccination is provided with a copy of the OSHA Bloodborne Pathogens Standard (29 CFR 1910.1030).

(Insert job title of person responsible) will ensure that the HCP who evaluates an employee following an exposure incident is provided with the following:

- A copy of the OSHA Bloodborne Pathogens Standard.
- A description of the exposed employee's duties as they relate to the exposure incident.
- Documentation of the route(s) of exposure and circumstances under which exposure occurred.
- Results of the source individual's blood testing.
- All medical records relevant to the appropriate treatment of the employee, including vaccination status.

Health Care Professional's Written Opinion

(Insert job title of person responsible) will obtain and provide the employee with a copy of the evaluating HCP's written opinion within 15 days of completion of the evaluation. For hepatitis B vaccination, the HCP's written opinion will be limited to whether the vaccination is indicated for an employee and whether the employee has received such vaccination.

For post-exposure follow-up, the HCP's written opinion will be limited to the following:

- A statement that the employee has been informed of the results of the evaluation.
- A statement that the employee has been told about any medical conditions resulting from exposure to blood or OPIM which may require further evaluation or treatment.

Note: The doctor must be informed that all other findings or diagnoses unrelated to the bloodborne pathogens exposure incident must remain confidential and must not be included in the written report from the doctor to the company.

Labels and Signs

(Insert job title of person responsible) will ensure that biohazard labels are affixed to containers of regulated waste, refrigerators and freezers containing blood or OPIM and other containers used to store, transport or ship blood or OPIM. The universal biohazard symbol will be used. Labels will be fluorescent orange or orange-red and will be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents loss or unintentional removal. Red bags or containers may be substituted for labels.

Information and Training

(Insert job title of person responsible) will ensure that training is provided at the time of initial assignment to tasks where occupational exposure may occur, and that training is repeated within 12 months of the previous training. Training will be tailored to the education and language level of the employee, and offered during the normal work shift.

Recordkeeping

Medical Records: *(Insert job title of person responsible)* is responsible for maintaining medical records as indicated below. These records are confidential and must be maintained for the duration of employment plus 30 years.

Training Records: *(Insert job title of person responsible)* is responsible for maintaining BBP training records. These records will be maintained for three years from the date of training.

(Note: The declination form must include this exact wording with no additions or deletions. However, the information may be put on employer's letterhead or other company form.)

Hepatitis B Vaccine Declination

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Employee's name (print)

Employee's signature

Date

*(Note: The following program is an example of a written program and based on the referenced standard. The standard does not require a written program, but as a **best practice**, it has been put into writing in this manual. Please modify or delete content to these policies as deemed necessary. The standard should be referenced to ensure that all requirements are being met.)*

Compressed Gas Cylinders Policy

(Ref. 29 CFR 1910.101)

Safe Work Practices

- Cylinders should be stored in upright positions and immobilized by chains or other means to prevent them from being knocked over.
- Cylinders should be stored away from highly flammable substances such as oil, gasoline or waste.
- Cylinders should be stored away from electrical connections, gas flames or other sources of ignition, and substances such as flammable solvents and combustible waste material.
- Flammable gases should be separated from oxidizing gases in storage areas.
- Oxygen and fuel gas cylinders should be separated by a minimum of 20 feet when in storage.
- Storage rooms for cylinders should be kept dry, cool and well ventilated.
- Cylinders should be stored away from incompatibles, excessive heat, continuous dampness, salt or other corrosive chemicals, and any areas that may subject them to damage.
- Storage areas should be permanently posted with the names of the gases stored in the cylinders.
- All compressed gas cylinders should have their contents and precautionary labeling clearly marked on their exteriors.
- Compressed gas cylinder valve covers should be in place when cylinders are not in use.
- All compressed gas cylinders should be stored so they do not interfere with exit paths.
- All compressed gas cylinders should be subjected to periodic hydrostatic testing and interior inspection.
- All compressed gas cylinders should have a safety pressure relief valve.
- Cylinders should always be maintained at temperatures below 125°F.
- The safety relief devices in the valve or on the cylinder should be kept free from any indication of tampering.
- Repair or alteration to the cylinder, valve or safety relief devices is prohibited. All alterations and repairs to the cylinder and valve must be made by the compressed gas vendor. Modification of safety relief devices beyond the tank or regulator should only be made by a competent person appointed by management.
- Painting cylinders without authorization is prohibited.
- Charged and full cylinders should be labeled and stored away from empty cylinders.
- The bottom of the cylinder should be protected from the ground to prevent rusting.
- All compressed gas cylinders should be regularly inspected for corrosion, pitting, cuts, gouges, digs, bulges, neck defects and general distortion.
- Cylinder valves should be kept closed at all times, except when the valve is in use.
- Compressed gas cylinders should be moved, even short distances, by a suitable hand truck.
- Using wrenches or other tools for opening and closing valves is prohibited.
- Suitable pressure-regulating devices should be kept in use whenever the gas is emitted to systems with pressure-rated limitations lower than the cylinder pressure.

- All compressed gas cylinder connections such as pressure regulators, manifolds, hoses, gauges, and relief valves should be checked for integrity and tightness.
- An approved leak-detection liquid should be used to detect flammable gas leaks.
- Procedures should be established for when a compressed gas cylinder leak cannot be remedied by simply tightening the valve. The procedures should include the following:
 - Attach tag to the cylinder stating it is unserviceable.
 - Remove cylinder to a well ventilated out-of-doors location.
 - If the gas is flammable or toxic, place an appropriate sign at the cylinder warning of these hazards.
 - Notify the gas supplier and follow its instructions as to the return of the cylinder.
- Employees should be prohibited from using compressed gases (air) to clean clothing or work surfaces.
- Compressed gases should only be handled by experienced and properly trained persons.

(Note: This program may be mandatory for your company. Please reference the scope and application of the referenced OSHA standard. This is an example program and may be modified to meet the company's needs. This program does not have to be in writing for employers with 10 or fewer employees. The standard should be referenced to ensure that all requirements are being met.)

Emergency Action Plan

(Ref. 29 CFR 1910.38 and 1910.157)

The intent of this plan is to ensure all employees a safe and healthful workplace. Those employees assigned specific duties under this plan will be provided the necessary training and equipment to ensure their safety. This plan applies to emergencies that could be reasonably expected in our workplace such as fire/smoke, tornadoes, bomb threats or chemical releases.

Emergency Plan Coordinators

Building/Department	Name/Title	Phone #

Coordinators are responsible for the proper inventory and maintenance of equipment. They may be contacted by employees for further information on this plan.

Plan Outline/Description

Means of Reporting Emergencies: All fires and emergencies will be reported by one or more of the following means as appropriate:

- Verbally to the coordinator during normal working hours.
- By telephone if after hours/weekends.
- By the building alarm system.

Note: The following numbers will be posted throughout the facility:

- Fire
- Police
- Ambulance
- Hazmat
- Poison Control

Alarm System Requirements: Alarm system requirements for notifying employees during an emergency are as follows:

- Provides warning for safe escape.
- Can be perceived by all employees.
- Alarm is distinctive and recognizable.
- Employees have been trained on the alarm system.
- Emergency phone numbers are posted.
- Emergency alarms have priority over all other communications.
- Alarm system is properly maintained.

Sounding the Alarm

The alarm signals for this facility are below:

- For fire: *(Insert signal)*
- For chemical release: *(Insert signal)*
- For hazardous weather: *(Insert signal)*
- Other: *(Insert signal)*

Evacuation Plans

Emergency evacuation escape route plans are posted in key areas of the facility. All employees will be trained on primary and secondary evacuation routes for each type of emergency, as well as storm/tornado shelter locations, and whether employees should exit the facilities or shelter-in-place or in some other internal area of the worksite.

For Building Evacuation

In the event of a fire/explosion evacuation, all occupants will promptly exit the building via the nearest exit. Go to your designated assembly point and report to your supervisor. Each supervisor (or designee) will account for each assigned employee via a head count. All supervisors will report their head count to *(insert job title of responsible person)* who will be located at *(insert evacuation location)* or accessible via cell phone or radio *(insert phone number or radio channel)*.

In the event of a chemical release, all affected employees will be given evacuation instruction by those in authority (supervisor, other) via: *(Insert alert)*. Each supervisor (or designee) will account for each assigned employee via head count. All supervisors will report their head count to *(insert job title of responsible person)*. Under no circumstances will employees leave the worksite unless instructed to so by management or other authority.

Building Re-Entry

Once evacuated, no one will re-enter the building. Once the fire department or other responsible agency has notified *(insert job title of responsible person)* that the building is safe to re-enter, personnel will return to their work areas. If building re-entry is not permissible, employees will be given further instruction as applicable by those in authority (supervisor, fire department).

Hazardous Weather

A hazardous weather alert consists of *(insert alert)*. When a hazardous weather alert is made, all employees will immediately report to the closest refuge area. Stay in this area until notified by *(insert job title of responsible person)*.

Portable Fire Extinguishers

Option 1

Employees are to evacuate from the workplace upon sounding the fire alarm. They are not use fire extinguishers to try to extinguish fires.

Option 2

Upon sounding the fire alarm, employees not designated and trained to use fire extinguishers are to evacuate the workplace and assemble in the designated area. Only employees that have been trained in fire extinguisher use are authorized to use the fire extinguishers in the workplace.

Training

The personnel listed below have been trained to assist in the safe and orderly emergency evacuation of employees:

Task	Building/Department	Name/Title/Phone #
Fire Extinguisher/Hoses		
Evacuation Assistant		
Emergency Shutdown		

Employee training is provided when this plan is initiated, when employees' responsibilities change, when the plan changes, initially for new hires and annually for all employees. Subjects to be covered include:

- Emergency escape procedures/routes
- Fire extinguisher locations and proper use (when the use is required by the company)
- Procedures for accounting for employees and visitors

- Major facility fire hazards
- Fire prevention practices
- Means of reporting fires/emergencies (use and types of alarm systems)
- Names/titles of emergency coordinators
- Availability of the plan to employees
- Hazardous weather procedures
- Special duties as assigned to coordinators and those listed above.

Written records will be maintained for all training and provided to (*insert job title of responsible person*).

Inspection and Maintenance

All fire extinguishers will be inspected, maintained, and tested based on the following requirements:

- Visually inspected monthly.
- Annual maintenance check. The annual maintenance date will be recorded and retained for one year after the last entry or the life of the shell, whichever is less.
- Alternate equivalent protection will be provided when portable fire extinguishers are removed from service for maintenance and recharging.
- Hydrostatic testing will only be performed by trained persons with suitable testing equipment and facilities.
- Portable extinguishers will be hydrostatically tested at required intervals.

(Note: The following topic is a best practice. Please modify or delete content to these policies as deemed necessary.)

Ergonomics Policy

Ergonomics is the science of fitting workplace conditions and job demands to the capabilities of the working population. Effective and successful “fits” ensure high productivity, avoidance of illness and injury risks, and increased satisfaction among the workforce. Although the scope of ergonomics is much broader, the term here refers to assessing those work-related factors that may pose a risk of musculoskeletal disorders and recommendations to alleviate them. Common examples of ergonomic risk factors are found in jobs requiring repetitive, forceful or prolonged exertions of the hands; frequent or heavy lifting, pushing, pulling or carrying of heavy objects; and prolonged awkward postures. Vibration and cold may add risk to these work conditions. Jobs or working conditions presenting multiple risk factors will have a higher probability of causing a musculoskeletal problem. The level of risk depends on the intensity, frequency and duration of the exposure to these conditions and the individual’s capacity to meet the force of other job demands that might be involved.

Stressor Factors

Not all musculoskeletal disorders (MSDs) are related to work activities. Other factors, such as personal characteristics and societal factors have also been associated with ergonomic related injuries and illnesses. When analyzing jobs or work tasks that may be associated with MSDs, conditions to consider may include, but are not limited to:

- Awkward postures, which might include prolonged work with hands above the head or with the elbows above the shoulders; prolonged work with the neck bent; squatting, kneeling or lifting; handling objects with back bent or twisted; repeated or sustained bending or twisting of wrists, knees, hips or shoulders; forceful and repeated gripping or pinching.
- Forceful lifting, pushing or pulling, which might include handling heavy objects; moving bulky or slippery objects; assuming awkward postures while moving objects.
- Prolonged repetitive motion, which might include keying; using tools or knives; packaging, handling or manipulating objects.
- Contact stress, which might include repeated contact with hard or sharp objects, like desk or table edges.
- Vibration, which might include overuse of power hand tools.

Safe Work Practices

- Do not exert additional force than is required to perform daily tasks.
- Practice proper postures when standing, sitting and lifting.
- Keep a constant awareness of preferred neutral body postures at all times—not only at work, but also in all areas of your life.
- Avoid long periods of continuous computer use by performing other jobs or taking quick breaks intermittently.
- Try to not work more than 30 minutes at a time without some type of break.
- Take exercise breaks or stretch breaks throughout your workday.
- Make sure you have plenty of light to safely and comfortably perform your work duties, but stay away from overly bright or direct lighting.

(Note: This written program may be mandatory for your company. Please reference the scope and application of the referenced OSHA standard. This is an example program and may be modified to meet the company's needs. This program does not have to be in writing for employers with 10 or fewer employees. The standard should be referenced to ensure that all requirements are being met.)

Ethylene Oxide Program

(Ref. 29 CFR 1910.1047)

Ethylene oxide (EtO) is used to sterilize medical equipment and supplies.

EtO possesses several physical and health hazards that merit special attention. EtO is both flammable and highly reactive. Acute exposures to EtO gas may result in respiratory irritation and lung injury, headache, nausea, vomiting, diarrhea, shortness of breath, and cyanosis. Chronic exposure has been associated with the occurrence of cancer, reproductive effects, mutagenic changes, neurotoxicity, and sensitization.

This program will be reviewed annually and updated to reflect changes to the company's procedures.

Exposure Monitoring

Determinations of employee exposure are made from breathing zone air samples that are representative of the 8-hour TWA and 15-minute short-term exposures of each employee and compared to the 8-hour TWA and 15-minute excursion limit. This is conducted initially and then periodically if equipment or process changes which may result in new or additional exposures, thereby making past monitoring obsolete.

Employees will be provided the monitoring results within 15 working days after receipt of results. If requested, employees will be allowed to observe exposure monitoring.

Regulated Areas, Signs and Labels

Regulated areas will be limited to authorized employees only and will be marked with signage. The signs will bear the following legend:

**DANGER
ETHYLENE OXIDE
MAY CAUSE CANCER
MAY DAMAGE FERTILITY OR THE UNBORN CHILD
RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING MAY BE REQUIRED IN
THIS AREA
AUTHORIZED PERSONNEL ONLY**

All EtO containers will have labels.

Engineering Controls and Work Practices

The following engineering controls and work practices have been implemented:

Personal Protective Equipment

Employees will be provided with appropriate personal protective equipment (PPE), which may include lab coats, respirators, gloves, goggles and other PPE as applicable. Reference the respiratory protection program and PPE policy for specific requirements and procedures.

Emergency Action Procedures

The emergency action plan should be referenced for specific emergency response information to EtO.

Medical Surveillance

If an employee is exposed to EtO at or above the action level for 30 or more days per year, he or she will be provided with medical examinations and consultations at no expense to the employee. The examinations will be provided prior to an assignment where exposure will occur at least 30 days per year and annually thereafter. If required by a physician, the examinations may occur more frequently.

The physician will provide a written opinion containing the results of the medical examination and any recommended limitations on the employee or on the use of PPE. No specific findings or diagnoses unrelated to EtO exposure will be given in the written opinion. The employee will be provided with a copy of the written opinion within 15 days of its receipt.

Training and Information

Employees will be trained at the time of their initial assignment and annually thereafter. Training will include:

- Requirements of the standard
- Operations where EtO is present
- Safe work practices
- Medical surveillance
- PPE
- Physical and health hazards
- Methods and observations
- Emergency procedures
- Hazard communication

Recordkeeping

Medical and exposure records will be maintained per 29 CFR 1910.1020. Exposure records will be maintained for 30 years. Medical surveillance records will be maintained for the duration of employment plus 30 years. Employees will be provided these records upon request.

(Note: This program may be mandatory for your company. Please reference the scope and application of the referenced OSHA standard. This is an example program and may be modified to meet the company's needs. This policy is not required to be in writing. The standard should be referenced to ensure that all requirements are being met.)

First Aid, CPR and AED Response Policy

(Ref. 29 CFR 1910.151)

The OSHA First Aid standard (29 CFR 1910.151) requires trained first aid providers at all workplaces of any size if there is no “infirmary, clinic, or hospital in near proximity to the workplace which is used for the treatment of all injured employees.”

For this reason, we have identified employees that are expected to render first aid as part of their job duties. They are also covered by the requirements of the Bloodborne Pathogens Standard (29 CFR 1910.1030). Our designated employees are trained by *(insert job title of person responsible)*.

Employee Name	Department	Phone Number
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

(Note: Training should be conducted in accordance with the American Red Cross or American Heart Association guidelines or other nationally recognized programs. Instructors should also be certified to train per the requirements of these programs.)

(Note: This program may be mandatory for your company. Please reference the scope and application of the referenced OSHA standard. This is an example program and may be modified to meet the company's needs. The standard should be referenced to ensure that all requirements are being met. The 2012 changes to the standard will be included in the next edition of this guide.)

Hazard Communication Program

(Ref. 29 CFR 1910.1200)

This program will describe how to protect the safety and health of employees who are exposed to hazardous chemicals in the workplace, and to comply with the provisions of 29 CFR 1910.1200.

(Insert job title of responsible person) has been assigned the title of hazard communication program coordinator and is responsible for monitoring all related activities to ensure compliance with both the intent and specifics of this program.

Each supervisor will be held responsible for strict adherence to these policies and will closely monitor all activities involving hazardous chemicals.

Each employee will carefully follow established work practices and promptly report observed or potential problems to supervision.

No job is so vital or urgent as to justify the risk of employee overexposure to a hazardous chemical. Ask when in doubt. Proceed with a job only after being satisfied that it is safe to do so.

A list of all hazardous chemicals for each workplace has been made and is readily available upon request to any employee working on any shift. It is located at *(insert location of hazardous chemical list)*.

A Safety Data Sheet (SDS) for each hazardous chemical on the list referenced above is on file at *(insert location of SDSs)*.

The SDSs are accessible during each work shift for any employee to review. If you have further questions about the SDS procedure, contact your supervisor.

(Insert job title of responsible person) is responsible to ensure that the list of hazardous chemicals is kept current and that a current SDS is on hand for each hazardous chemical used. A chemical that is not shown on the current list will not be ordered without prior coordination with *(insert job title of responsible person)*.

All containers of hazardous chemicals in each workplace will be conspicuously labeled with the identity of the chemical (same as on the applicable SDS) and the appropriate hazard warnings. If the chemical is a known or suspected cancer causing agent (carcinogen) or if it is known to affect a specific organ of the body, this information will also be placed on the container label. The person having supervisory responsibility for the storage or use of each hazardous chemical will ensure that such labels are not defaced and that they remain legible at all times.

(Insert job title of responsible person) will ensure that an adequate supply of labels is kept on hand and made available to the responsible supervisors.

(Insert job title of responsible person) is responsible for anticipating, as much as possible, the hazards that would be present for nonroutine tasks, such as a chemical spill or container rupture. Cleanup procedures and proper personal protective equipment will be considered and adequate training for such tasks will be addressed.

When an outside contractor will be used, it will be the responsibility of *(insert job title of responsible person)* to advise the contractor of any hazardous chemicals to which its employees may be exposed and the appropriate protective measures to be taken. Conversely, it will be the same person's responsibility to determine if the contractor will be using any hazardous chemicals during this work that would expose employees. Appropriate training and protective measures must be taken in order to protect employees. Prior to any work being performed by an outside contractor involving hazardous chemicals, *(insert job title of responsible person)* is to be advised.

All employees exposed to any hazardous chemicals will complete an information and training program that includes at least the subjects listed below. New employees must complete similar instruction before initial exposure to any hazardous chemical in the workplace.

Adequate training of all employees exposed to hazardous chemicals will be given by (*insert job title of responsible person*), assisted as needed by the hazard communication program coordinator.

Employee information for this program will include:

- The purpose and need for such a program, including the basic concept that gives every employee the right to know about hazardous chemicals with which they work.
- The location and availability of the written hazard communication program, plus the list of hazardous chemicals and their corresponding SDSs.
- The identity, upon request, of any chemical to which the employee is exposed. In the case of a trade secret chemical, the name shown on the SDS will be provided.

Employee training will include at least the following:

- Methods and observations used to detect the presence or release of a hazardous chemical in the work area, such as monitoring devices, appearance or odor.
- The physical and health hazards associated with each chemical, as specified in the SDS.
- Action that employees can take to protect their own safety and health, including specific procedures that have been established for normal work practices, emergency procedures and policies on the use of personal protective equipment.
- Details of the hazard communication program, including an explanation of the labeling system used on in-house containers of hazardous chemicals. Also details of how employees can obtain and use information contained in the SDS.

It is the intent of management to protect the safety and health of each employee. By following correct procedures, no employee should experience any harmful effects from working with chemicals in the workplace.

*(Note: The following program is an example of a written program and based on the referenced standard. The standard does not require a written program, but as a **best practice**, it has been put into writing in this manual. Please modify or delete content to these policies as deemed necessary. Please reference the standard for all requirements that may be applicable to your company.)*

Housekeeping Program

(Ref. 29 CFR 1910.22)

Housekeeping is an important element of every safety and health program. When materials, tools and equipment all have a place for orderly storage and are returned to the proper place after use, they are easier to find and easier to inspect for damage and wear.

The following housekeeping safety procedures apply:

- Keep work areas and storage facilities clean, neat and orderly.
- Keep all aisles, stairways, passageways, exits and access ways to buildings free from obstructions at all times. Remove all grease and water spills from traffic areas immediately.
- It is everyone's responsibility to pick up and clean up.
- Do not place supplies on top of lockers, hampers, boxes or other moveable containers at a height where they are not visible from the floor.
- When piling materials for storage, make sure the base is firm and level. Cross tie each layer. Keep piles level and do not stack piles too high. Keep aisles clear and maintain adequate space to work in them.
- When storing materials suspended from racks or hooks, secure them from falling and route walkways a safe distance from the surface beneath.
- When storing materials overhead on balconies or mezzanines, provide adequate toeboards to keep objects from rolling over the edge.
- Do not let materials and supplies that are no longer needed accumulate. If it is not needed, get rid of it!
- Tools, equipment, machinery and work areas are to be maintained in a clean and safe manner. Defects and unsafe conditions must be reported to your supervisor.
- Return tools and equipment to their proper place when not in use.
- Lay out extension cords, air hoses, water hoses, ladders, pipes, tools, etc., in such a way as to minimize tripping hazards or obstructions to traffic.
- Clean up spills immediately to avoid hazards. In the event the removal cannot be done immediately, the area must be appropriately guarded, signed or roped off.
- Nail points, ends of loop or tie wires, etc., must not be left exposed when packing and unpacking boxes, crates, barrels, etc. Nails are to be removed as soon as lumber is disassembled.
- Store sharp or pointed articles to keep co-workers from coming in contact with the sharp edges or points.
- Dispose of all packing materials properly to reduce the chance of fires.
- Empty wastebaskets daily into approved containers.
- Put oily and greasy rags in a metal container for that purpose and dispose of properly and frequently.
- Maintain adequate lighting in obscure areas for the protection of both employees and the public. Keep landscaping well manicured to minimize hiding places.
- Consumption of food and beverages is prohibited in areas where hazardous substances are stored or used.
- All switches or drives on machinery must be shut down and locked out before cleaning, greasing, oiling, or making adjustments or repairs.

- Circuit breaker boxes and fuse boxes should be kept closed at all times. It is a requirement to maintain a minimum clearance of 36 inches in front of them.
- Flammables and combustible materials (coats, rags, cleaning supplies) should not be stored in mechanical rooms or around electrical boxes.
- Extension cords should not be run across aisles or through oil or water. Inspect cords for kinks, worn insulation and exposed strands of wire before use.
- When fuses blow continually, it is an indication of an overload or short. Report this condition to your safety coordinator immediately.
- Keep electrical equipment properly maintained and free of grease and dirt.
- To prevent static sparks, keep drive belts dressed. Also check belts for proper tension to prevent overloading motors.
- Maintain fire inspections and other fire prevention measures.

*(Note: The following program is an example of a written program and based on the referenced standard. The standard does not require a written program, but as a **best practice**, it has been put into writing in this manual. Please modify or delete content to these policies as deemed necessary. Please reference the standard for all requirements that may be applicable to your company.)*

Hygiene and Decontamination Procedures

(Ref. 29 CFR 1910.1030 and 1910.120)

Safe Work Practices

General Hygiene Practices

- Regularly wash hands, face, neck and other exposed skin surfaces with soap and water after using the toilet; prior to preparing food and eating or drinking, applying cosmetics, using medications, or smoking; after chemical use and dirty work; and at the end of the workday.
- Use shower facilities after exposure to chemicals or as needed.
- Dispose of clothes in proper laundry containers.
- Floodwaters may be contaminated with sewage and decaying animal and human remains. Wear appropriate PPE when contact cannot be avoided.
- Disinfection of skin, clothing, tools and equipment, and work surfaces after contamination is critical in disease prevention.
- Seek immediate medical attention if a wound becomes red, swells or oozes pus.

Hand Decontamination

- Use soap and clean water whenever it is available. A waterless alcohol-based hand cleaner may be used when soap and water are not immediately available; however, employees must wash their hands with soap and water as soon as possible.
- Rinse completely; dry with a clean disposable towel or air dry.

Clothing, Tool and Equipment Decontamination

- Use soap and clean water when available.
- If only contaminated water is available, mix ¼ cup bleach per gallon of water. Immerse objects in solution for 10 minutes; for clothing, gently agitate periodically.
- Transfer objects to hand wash solution for 10 minutes; for clothing, gently agitate periodically.
- Allow clothes and tools/equipment to thoroughly air dry before reuse.

Clothing, tools and equipment that cannot be decontaminated in the field or on which bleach, chemicals or water cannot be used (such as electrical or battery operated equipment) must be containerized/bagged on site and labeled as contaminated. The manufacturer of the clothing, tools or equipment may need to be contacted to discuss appropriate cleaning procedures.

Severe Surface Decontamination

- For decontaminating the most seriously affected surfaces.
 - Mix 1½ cups of bleach per gallon of water.
 - Douse surfaces with heavy contamination and allow to sit for three minutes.
 - Wipe the contamination from the surface with a paper towel and douse the surface again, but use the hand wash solution.
 - Wipe off residual contamination with a paper towel.

Clothing, tools and equipment that have internal cavities or components that cannot be completely decontaminated in the field or on which bleach, chemicals or water cannot be used (such as electrical or battery operated equipment) must be containerized/bagged on site and labeled as contaminated. The manufacturer of the clothing, tools or equipment may need to be contacted to discuss appropriate cleaning procedures.

Important Considerations

- Use gloves and eye protection.
- Prepare bleach solutions daily and allow to stand for at least 30 minutes before use.
- Label containers “Bleach-disinfected water, DO NOT DRINK.”
- CAUTION: Do not mix bleach with ammonia products.

*(Note: The following program is an example of a written program and based on standard. The standard does not require a written program, but as a **best practice**, it has been put into writing in this manual. Please modify or delete content to these policies as deemed necessary. Please reference the standard for all requirements that may be applicable to your company.)*

Industrial Hygiene Policy

(Ref. 29 CFR 1910.1000, 1910.1096)

Industrial hygiene is the science of anticipating, recognizing, evaluating and controlling workplace conditions that may cause workers injury or illness. Industrial hygienists use environmental monitoring and analytical methods to detect the extent of worker exposure and employ engineering, work practice controls and other methods to control potential health hazards.

Air Contaminants

These are commonly classified as either particulate or gas and vapor contaminants. The most common particulate contaminants include dusts, fumes, mists, aerosols and fibers. Dusts are solid particles that are formed or generated from solid organic or inorganic materials by reducing their size through mechanical processes such as crushing, grinding, drilling, abrading or blasting.

Fumes are formed when material from a volatilized solid condenses in cool air. In most cases, the solid particles resulting from the condensation react with air to form an oxide.

The term mist is applied to a finely divided liquid suspended in the atmosphere. Mists are generated by liquids condensing from a vapor back to a liquid or by breaking up a liquid into a dispersed state such as by splashing, foaming or atomizing. Aerosols are also a form of a mist characterized by highly respirable, minute liquid particles.

Fibers are solid particles whose length is several times greater than their diameter.

Gases are formless fluids that expand to occupy the space or enclosure in which they are confined. Examples are welding gases such as acetylene, nitrogen, helium and argon as well as carbon monoxide generated from the operation of internal combustion engines or by its use as a reducing gas in a heat treating operation. Another example is hydrogen sulfide, which is formed wherever there is decomposition of materials containing sulfur under reducing conditions.

Liquids change into vapors and mix with the surrounding atmosphere through evaporation. Vapors are the volatile form of substances that are normally in a solid or liquid state at room temperature and pressure. Vapors are the gaseous form of substances that are normally in the solid or liquid state at room temperature and pressure. They are formed by evaporation from a liquid or solid and can be found where parts cleaning and painting takes place and where solvents are used.

Chemical Hazards

Harmful chemical compounds in the form of solids, liquids, gases, mists, dusts, fumes and vapors exert toxic effects by inhalation (breathing), absorption (through direct contact with the skin), or ingestion (eating or drinking). Airborne chemical hazards exist as concentrations of mists, vapors, gases, fumes or solids. Some are toxic through inhalation and some of them irritate the skin on contact, some can be toxic by absorption through the skin or through ingestion, and some are corrosive to living tissue.

The degree of worker risk from exposure to any given substance depends on the nature and potency of the toxic effects and the magnitude and duration of exposure.

Information on the risk to workers from chemical hazards can be obtained from the Safety Data Sheet (SDS). The SDS is a summary of the important health, safety and toxicological information on the chemical or the mixture's ingredients.

Biological Hazards

These include bacteria, viruses, fungi and other living organisms that can cause acute and chronic infections by entering the body either directly or through breaks in the skin. Effective personal hygiene, particularly proper attention to minor cuts and scratches, especially those on the hands and forearms, should be followed to keep worker risks to a minimum.

Workers should also use local ventilation along with proper personal protective equipment such as gloves and respirators, adequate infectious waste disposal systems, and appropriate controls including isolation as applicable.

Physical Hazards

These include excessive levels of ionizing and nonionizing electromagnetic radiation, noise, vibration, illumination, and temperature.

Only authorized employees may enter areas where ionizing and nonionizing radiation are being used. Signs will be posted to identify the restricted work areas and pieces of equipment. Personal radiation monitors must be used in these areas and around the equipment.

Where employees are exposed to ionizing radiation, time, distance and shielding are important tools in ensuring worker safety. Danger from radiation increases with the amount of time one is exposed to it; hence, the shorter the time of exposure the smaller the radiation danger.

Distance also is a valuable tool in controlling exposure to both ionizing and nonionizing radiation. Radiation levels from some sources can be estimated by comparing the squares of the distances between the worker and the source. For example, at a reference point of 10 feet from a source, the radiation is 1/100 of the intensity at 1 foot from the source.

Shielding also is a way to protect against radiation. The greater the protective mass between a radioactive source and the worker, the lower the radiation exposure.

Nonionizing radiation also is dealt with by shielding workers from the source. Sometimes limiting exposure times to nonionizing radiation or increasing the distance is not effective. Laser radiation, for example, cannot be controlled effectively by imposing time limits. An exposure can be hazardous that is faster than the blinking of an eye. Increasing the distance from a laser source may require miles before the energy level reaches a point where the exposure would not be harmful.

As much as applicable, noise will be reduced by installing equipment and systems that have been engineered, designed, and built to operate quietly; by enclosing or shielding noisy equipment; by making certain that equipment is in good repair and properly maintained with all worn or unbalanced parts replaced; by mounting noisy equipment on special mounts to reduce vibration; and by installing silencers, mufflers, or baffles.

Substituting quiet work methods for noisy ones is another way we will strive to reduce noise. Where possible, treating floors, ceilings and walls with acoustical material or erecting sound barriers at adjacent workstations around noisy operations will be considered.

We may also reduce noise exposure by increasing the distance between the source and the receiver, by isolating workers in acoustical booths, limiting workers' exposure time to noise, and by providing hearing protection. OSHA requires that workers in noisy surroundings be periodically tested as a precaution against hearing loss.

Another physical hazard, radiant heat exposure can be controlled by installing reflective shields and by providing protective clothing.

Ergonomic Hazards

The science of ergonomics studies and evaluates a full range of tasks including, but not limited to, lifting, holding, pushing, walking and reaching. Many ergonomic problems result from technological changes such as increased assembly line speeds, adding specialized tasks and increased repetition. Some problems arise from poorly designed job tasks. Any of those conditions can cause ergonomic hazards such as excessive vibration and noise, eyestrain, repetitive motion, and heavy lifting problems. Improperly designed tools or work areas also can be ergonomic hazards. Repetitive motions or repeated shocks over prolonged periods of time as in jobs involving sorting, assembling and data entry can often cause irritation and inflammation of the tendon sheath of the hands and arms, a condition known as carpal tunnel syndrome.

Ergonomic hazards are avoided primarily by the effective design of a job or jobsite and better designed tools or equipment that meet workers' needs in terms of physical environment and job tasks. Through thorough worksite analyses, employers can set up procedures to correct or control ergonomic hazards by using the appropriate engineering controls (e.g., designing or redesigning workstations, lighting, tools and equipment); teaching correct work practices (e.g., proper lifting methods); employing proper administrative controls (e.g., shifting workers among several different tasks,

reducing production demand and increasing rest breaks); and, if necessary, providing and mandating personal protective equipment. Evaluating working conditions from an ergonomics standpoint involves looking at the total physiological and psychological demands of the job on the worker.

Hazard Controls

Engineering controls include eliminating toxic chemicals and replacing harmful toxic materials with less hazardous ones, enclosing work processes or confining work operations, and installing general and local ventilation systems.

Work practice controls alter the manner in which a task is performed. Some fundamental and easily implemented work practice controls that we may utilize include (1) following proper procedures that minimize exposures while operating production and control equipment; (2) inspecting and maintaining process and control equipment on a regular basis; (3) implementing good housekeeping procedures; (4) providing good supervision and (5) mandating that eating, drinking, smoking, chewing tobacco or gum, and applying cosmetics in regulated areas be prohibited.

Administrative controls that we may utilize include controlling employees' exposure by scheduling production and workers' tasks, or both, in ways that minimize exposure levels.

When effective work practices and engineering controls are not feasible to achieve the permissible exposure limit, or while such controls are being instituted, and in emergencies, appropriate respiratory equipment will be used. In addition, personal protective equipment such as gloves, safety goggles, helmets, safety shoes, and protective clothing may also be required. To be effective, personal protective equipment must be individually selected, properly fitted and periodically refitted; conscientiously and properly worn; regularly maintained; and replaced as necessary.

Permissible Exposure Limits (PELs)

OSHA sets enforceable permissible exposure limits (PELs) to protect workers against the health effects of exposure to hazardous substances. PELs are regulatory limits on the amount or concentration of a substance in the air. They may also contain a skin designation. OSHA PELs are based on an 8-hour time weighted average (TWA) exposure.

Permissible exposure limits (PELs) are addressed in specific standards for the general industry, shipyard employment, and the construction industry.

Sampling and Analysis

Chemical sampling and analysis will be used to assess workplace contaminants and associated worker exposures.

Sampling and analysis hazards are addressed in specific standards for the general industry. The specific standard will be used to assess each chemical.

*(Note: The following program is an example of a written program and based on the referenced standard. The standard does not require a written program, but as a **best practice**, it has been put into writing in this manual. Please modify or delete content to these policies as deemed necessary. Please reference the standard for all requirements that may be applicable to your company.)*

Ladder Safety Program

(Ref. 29 CFR 1910.25-27)

Ladders must be maintained in good condition at all times. Ladders that are not in good condition will be placed out of service immediately with a tag stating “out of service.” The employee will submit a maintenance request/work order for ladder repair.

Inspections

Portable ladders will be visually inspected each day prior to use.

Other ladders will be inspected at least annually or more often if the conditions of use or location necessitate more frequent inspection.

Loads

Self-supporting (foldout) and non-self-supporting (leaning) portable ladders must be able to support at least four times the maximum intended load, except extra-heavy-duty metal or plastic ladders, which must be able to sustain 3.3 times the maximum intended load.

Angle

Non-self-supporting ladders, which must lean against a wall or other support, are to be positioned at such an angle that the horizontal distance from the top support to the foot of the ladder is about one-fourth the working length of the ladder.

In the case of job-made wooden ladders, that angle should equal about one-eighth the working length. This minimizes the strain of the load on ladder joints that may not be as strong as on commercially manufactured ladders.

Rungs

Ladder rungs, cleats or steps must be parallel, level and uniformly spaced when the ladder is in position for use. Rungs must be spaced between 10 and 14 inches apart. For extension trestle ladders, the spacing must be 8–18 inches for the base, and 6–12 inches on the extension section. Rungs must be so shaped that an employee’s foot cannot slide off, and they must be skid resistant.

Slipping

Ladders are to be kept free of oil, grease, wet paint and other slipping hazards. Wood ladders must not be coated with any opaque covering, except identification or warning labels on one face only of a side rail.

Other Requirements

Foldout or stepladders must have a metal spreader or locking device to hold the front and back sections in an open position when in use. When two or more ladders are used to reach a work area, they must be offset with a landing or platform between the ladders.

The area around the top and bottom of a ladder must be kept clear. Ladders must not be tied or fastened together to provide longer sections, unless they are specifically designed for such use. Never use a ladder for any purpose other than the one for which it was designed.

*(Note: The following example program is a **best practice** and does not need to be in writing. Please modify or delete content to these policies as deemed necessary.)*

Medical Laser Policy

(Ref. ANSI Z 136.1)

Employees are exposed to lasers used in healthcare facilities during diagnostic, cosmetic, preventive and therapeutic applications. Lasers used in these applications are incorporated into an apparatus, which includes:

- A delivery system to direct the output of the laser,
- A power supply with laser control and calibration functions,
- Mechanical housing with interlocks, and
- Associated liquids and gases if required for the operation of the laser.

Laser Safety Officer (LSO)

The LSO has the authority to monitor and enforce the control of laser hazards and effect the knowledgeable evaluation and control of laser hazards. The LSO administers the overall laser safety program where the duties include, but are not limited to, items such as confirming the classification of lasers, doing the nominal hazard zone (NHZ) evaluation, ensuring that the proper control measures are in place and approving substitute controls, approving standard operating procedures (SOPs), recommending and/or approving eye wear and other protective equipment, specifying appropriate signs and labels, approving overall facility controls, providing the proper laser safety training as needed, conducting medical surveillance, and designating the laser and incidental personnel categories.

The NHZ describes the space within which the level of direct, reflected, or scattered radiation during normal operation exceeds the maximum permissible exposure (MPE). The NHZ associated with open-beam Class 3B and Class 4 laser installations is useful in assessing area hazards and implementing controls.

Laser Classes

Although there are hundreds of different types of lasers, only about a dozen laser systems are found in everyday clinical use. Nearly all treatment laser products used in surgery are Class 4 as they are designed to deliver laser radiation for the purpose of altering biological tissue. The types and hazards are described below.

- A Class 1 laser system is considered to be incapable of producing damaging radiation levels during normal operation, and is exempt from any control measures or other forms of surveillance. Although some Class 1 lasers emit very weak, nonhazardous beams, most Class 1 laser systems incorporate “embedded” higher-power lasers, which can be accessed only if important safety features such as interlocks are defeated or deliberately bypassed as is sometimes done during servicing. In this case, the system temporarily reverts back to the original laser classification (requiring special safety procedures).
- A Class 1M laser system is considered to be incapable of producing hazardous exposure conditions during normal operation unless the beam is viewed with an optical instrument, such as an eye-loupe or a telescope, and is exempt from any control measures other than to prevent potentially hazardous optically aided viewing and is exempt from other forms of surveillance.
- A Class 2 laser system emits in the visible portion of the spectrum (400–700 nm), and eye protection is normally afforded by the aversion response. The aversion response is the closure of the eyelid, eye movement, pupillary constriction or movement of the head to avoid an exposure to a bright light stimulant. The aversion response to a bright visible laser source is assumed to limit the exposure of the retina to 0.25 seconds or less.
- A Class 2M laser system emits in the visible portion of the spectrum (400–700 nm), and eye protection is normally afforded by the human aversion response for unaided viewing. However, Class 2M is potentially hazardous if viewed with certain optical aids.

- A Class 3R laser system is potentially hazardous under some direct and specular reflection (shiny or mirror-like) viewing conditions if the eye is appropriately focused and stable, but the probability of an actual injury is small. This laser will not pose either a fire hazard or diffuse reflection hazard. Note: Products that have been previously classified as Class 3A should be treated the same as Class 3R.
- A Class 3B laser system may be hazardous under direct and specular viewing conditions but is normally not a diffuse reflection or fire hazard.
- A Class 4 laser system is a hazard to the eye and skin from the direct beam and may pose a diffuse reflection or fire hazard and may also produce laser-generated airborne contaminants and hazardous plasma radiation.

The following laser class(es) are used at this facility:

Note: Federal regulations require manufacturers to classify medical laser systems based primarily on their ability to cause damage to the eye and skin. This classification must be indicated on the laser system's label.

Work Practice Controls and Personal Protective Equipment

Different laser wavelengths affect various parts of the human eye and may cause serious injury at high power levels. Lasers operating in the ultraviolet spectrum (315–390 nm) are absorbed by the lens. An excimer laser is a typical ultraviolet medical laser.

Laser radiation in the visible region of the spectrum (400–700 nm) is absorbed primarily within the retina. An ideal eye can focus a collimated visible beam by as much as 100,000 times. Argon and KTP lasers are typical visible medical lasers.

Laser radiation in the near-infrared region of the spectrum (700–1,400 nm) is absorbed by the retina. The eye can concentrate a laser beam on the retina as much as 100,000 times. For example, a 1 mW/cm² irradiance (power density) at the cornea will be 100 W/cm² at the retina. Since the eye does not have an aversion response in the near- or far-infrared portion of the spectrum, we will not know that we have been overexposed until the injury occurs. This is why this portion of the spectrum is very dangerous.

Laser radiation in the far-infrared region of the spectrum (1,400 nm to 1 mm) and the mid-ultraviolet (180–315 nm) primarily affects the cornea. CO² laser is a typical far-infrared medical laser.

In operations using lasers that vaporize tissue through disruption of cells, laser-generated airborne contaminants (LGAC) result as an airborne hazard requiring appropriate management. Analysis of these contaminants produced during laser surgical procedures has shown the presence of:

- Gaseous toxic compounds.
- Bio-aerosols.
- Dead and live cellular material.
- Viruses.

In orthopedics, dentistry, plastic surgery and other fields, it is also possible to generate particulates and metal fumes. At certain concentrations some of the LGAC may cause ocular and upper respiratory tract irritation, have unpleasant odors, create visual problems for the user, and have been shown to have mutagenic and carcinogenic potential. It has been shown that laser smoke production is a function of increased irradiance levels. Therefore, laser surgical procedures requiring high irradiance levels are more likely to produce LGAC.

The following work practice controls and personal protective equipment will be used when using Class _____ laser system:

The following work practice controls and personal protective equipment will be used when using Class _____ laser system:

Note: The Food and Drug Administration regulates all medical lasers under regulations issued under the Medical Device Amendments to the Food and Drug Act.

Training

Detailed training in laser safety will be provided for healthcare personnel using, or working in the presence of, Class 3B and Class 4 health care laser systems. All training activities will be documented and retained on file. Laser safety training will be presented to the following healthcare personnel:

- Laser Safety Officer (LSO)
- Users
- Laser technical support staff
- Nurses

*(Note: The following example program is a **best practice** and does not need to be in writing. Please modify or delete content to these policies as deemed necessary.)*

MRSA Policy

Multidrug-resistant organisms (MDROs) are defined as microorganisms – predominantly bacteria – that are resistant to one or more classes of anti-microbial agents. Methicillin-resistant *Staphylococcus aureus*, commonly referred to as MRSA, is one example of a drug-resistant micro-organism that is of concern in healthcare settings. The Occupational Safety and Health Administration (OSHA) provides guidelines and regulation in regards to MRSA, pronounced “mersa,” to prevent the spread among workers in healthcare settings. Due to the drug-resistant nature of the bacteria, a MRSA infection can pose a particularly serious health threat. Additional guidelines regarding control of infection by MRSA and other MDROs can be found in CDC guidelines, including the *Guidelines for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings, 2007*.

MRSA is primarily transmitted by skin-to-skin contact or contact with shared items or surfaces that have come into contact with a person’s infection (towels or bandages, for example). Common community settings where MRSA infections have occurred include dormitories, military barracks, correctional facilities, schools and other facilities with locker rooms, and daycare centers.

As with all regular staph infections, recognizing the signs and receiving treatment for MRSA skin infections in the early stages reduce the chances of the infection becoming severe.

Severe Infections

MRSA usually causes more severe and potentially life-threatening infections, such as bloodstream infections, surgical site infections or pneumonia. The signs and symptoms will vary by the type and stage of the infection.

Skin Infections

In the community, most MRSA infections are skin infections that may appear as pustules or boils that often are red, swollen and painful or have pus or other drainage. They often first look like spider bites or bumps that are red, swollen and painful. These skin infections commonly occur at sites of visible skin trauma, such as cuts and abrasions, and areas of the body covered by hair (e.g., back of neck, groin, buttock, armpit, beard area of men).

To prevent transmission of MRSA in medical and dental office settings, the following precautions are advised in addition to the requirements to follow Universal Precautions and use appropriate PPE (e.g., gloves) when contact with blood or OPIM is anticipated:

- Workers with active infections should be excluded from activities where skin-to-skin contact is likely to occur until their infections have healed.
- Keep wounds that are open and draining or have pus covered with a clean, dry bandage. If wounds cannot be kept covered or good hygiene cannot be maintained, consider excluding the employee from work until the infection has healed.
- Ensure that infected workers and those who are in contact with them practice frequent hand washing with soap and warm water. If soap and water are not readily available, use alcohol-based hand sanitizer.
- Personal items such as uniforms, personal protective equipment, clothing, towels, washcloths or razors that may have come in contact with an infected wound or bandage should not be shared.
- Items such as uniforms, clothing, sheets or towels should be washed in water and laundry detergent after use and dried in a hot dryer. Drying items in a hot dryer rather than air drying helps to kill bacteria.
- Ensure that routine housekeeping is done in the workplace, including cleaning potentially contaminated equipment and surfaces with detergent-based cleaners or disinfectants. (A list of U.S. EPA registered products effective against MRSA is available online.)

(Note: This program may be mandatory for your company. Please reference the scope and application of the referenced OSHA standard. This is an example program and may be modified to meet the company's needs. The standard should be referenced to ensure that all requirements are being met.)

Respiratory Protection Program

(Ref. 29 CFR 1910.134)

General

In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays or vapors, the primary objective will be to prevent atmospheric contamination. This will be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators will be used.

Responsibilities

All employees must follow the requirements of the respiratory protection program.

Management

- Implement the requirements of this program.
- Provide a selection of respirators as required.
- Enforce all provisions of this program.
- Appoint an individual to administer the respiratory protection program.

Program Administrator

- Review sanitation/storage procedures.
- Ensure respirators are properly stored, inspected and maintained.
- Monitor compliance for this program.
- Provide training for affected employees.
- Review compliance and ensure monthly inspection of all respirators.
- Provide respirator fit testing.

Designated Occupational Health Care Provider (HCP)

- Conduct medical aspects of program.

Program Administrator

(Insert job title) will be designated as the program administrator who is qualified by appropriate training or experience that is commensurate with the complexity of the program to administer or oversee the respiratory protection program and conduct the required evaluations of program effectiveness.

Voluntary Use of Respirators

OSHA requires that the voluntary use of respirators (i.e., when respirators are not required by the company) be controlled as strictly as if their use were required. So any employee wearing a respirator voluntarily will fall under this respiratory protection program, be issued a copy of Appendix D of 29 CFR 1910.134, and fill out a medical

questionnaire (Appendix C of 29 CFR 1910.134) and have it evaluated by the designated HCP. Training will be conducted on the proper storage, cleaning and maintenance of the respirator. All steps will be taken to ensure that the respirator does not pose a health risk to the person donning it.

Exception: Employees whose only use of respirators involves the voluntary use of filtering (nonsealing) facepieces (dust masks, with one or two straps) do not fall under this program.

Program Evaluation

Evaluations of the workplace are necessary to ensure that the written respiratory protection program is being properly implemented. This includes consulting with employees to ensure that they are using the respirators properly. Evaluations will be conducted as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.

Program evaluation will include discussions with employees required to use respirators to assess the employees' views on program effectiveness and to identify any problems. Any problems that are identified during this assessment will be corrected. Factors to be assessed include, but are not limited to:

- Respirator fit (including the ability to use the respirator without interfering with effective workplace performance);
- Appropriate respirator selection for the hazards to which the employee is exposed;
- Proper respirator use under the workplace conditions the employee encounters; and
- Proper respirator maintenance.

Recordkeeping

The company will retain written information regarding medical evaluations, fit testing, and the respirator program. This information will facilitate employee involvement in the respirator program, assist the company in auditing the adequacy of the program, and provide a record for compliance determinations by OSHA.

Training and Information

Effective training for employees who are required to use respirators is essential. The training must be comprehensive, understandable, and recur annually, and more often if necessary. Training will be provided prior to requiring the employee to use a respirator in the workplace. The training will ensure that each employee can demonstrate knowledge of at least the following:

- Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator.
- Limitations and capabilities of the respirator.
- How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions.
- How to inspect, put on and remove, use, and check the seals of the respirator.
- What the procedures are for maintenance and storage of the respirator.
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
- The general requirements of this program.

Retraining will be conducted annually and when:

- Changes in the workplace or the type of respirator render previous training obsolete.
- Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill.
- Other situation arises in which retraining appears necessary to ensure safe respirator use.

Training will be conducted by instructors who have adequate knowledge of OSHA training requirements. Training is divided into the following sections:

Classroom Instruction

1. Overview of the company respiratory protection program and OSHA Standard.
2. Respiratory protection safety procedures.
3. Respirator selection.
4. Respirator operation and use.
5. Why the respirator is necessary.
6. How improper fit, usage or maintenance can compromise the protective effect.
7. Limitations and capabilities of the respirator.
8. How to use the respirator effectively in emergency situations, including respirator malfunctions.
9. How to inspect, put on and remove, use, and check the seals of the respirator.
10. What the procedures are for maintenance and storage of the respirator.
11. How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
12. Change out schedule and procedure for air-purifying respirators (APR).

Fit Testing

- For each type and model of respirator used.

Hands-on Respirator Training

1. Respirator inspection.
2. Respirator cleaning and sanitizing.
3. Recordkeeping.
4. Respirator storage.
5. Respirator fit check.
6. Emergencies.

Basic Respiratory Protection Safety Procedures

- Only authorized and trained employees may use respirators. Those employees may use only the respirator that they have been trained on and properly fitted to use.
- Only physically qualified employees may be trained and authorized to use respirators. A preauthorization and annual certification by a qualified physician will be required and maintained. Any changes in an employee's health or physical characteristics will be reported to the program administrator and will be evaluated by a qualified physician.
- Only the proper prescribed respirator or SCBA may be used for the job or work environment. Air-purifying respirators may be worn in work environments when oxygen levels are 19.5 percent to 23.5 percent and when the appropriate cartridge (as determined by the manufacturer and approved by NIOSH) for the known hazardous substance is used. SCBAs will be worn in oxygen deficient and oxygen rich environments (below 19.5 percent or above 23.5 percent oxygen).
- Employees working in environments where a sudden release of a hazardous substance is likely will wear an appropriate respirator for that hazardous substance. (Example: Employees working in an ammonia compressor room will have an ammonia APR respirator on their person.)
- Only SCBAs will be used in oxygen deficient environments, environments with an unknown hazardous substance or unknown quantity of a known hazardous substance, or any environment that is determined "immediately dangerous to life or health" (IDLH).

- Employees with respirators loaned on permanent checkout will be responsible for the sanitation, proper storage and security. Respirators damaged by normal wear will be repaired or replaced by the company when returned.
- The last employee using a respirator or SCBA that is available for general use will be responsible for proper storage and sanitation. Monthly and after each use, all respirators will be inspected with documentation to ensure its availability for use.
- All respirators will be located in a clean, convenient and sanitary location.
- In the event that employees must enter a confined space; work in environments with hazardous substances that would be dangerous to life or health should an RPE (respiratory protection equipment) fail (a SCBA is required in this environment); and/or conduct a HazMat entry, a “buddy system” detail will be used with a “safety watchman” with constant voice, visual or signal line communication. Employees will follow the established emergency response program and/or confined space entry program when applicable.
- Management will establish and maintain surveillance of jobs and work place conditions and degree of employee exposure or stress to maintain the proper procedures and to provide the necessary RPE.
- Management will establish and maintain safe operation procedures for the safe use of RPE with strict enforcement and disciplinary action for failure to follow all general and specific safety rules. Standard operation procedures for general RPE use will be maintained as an attachment to the respiratory protection program and standard operation procedures for RPE use under emergency response situations will be maintained as an attachment to the emergency response program.

Selection of Respirators

The company has evaluated the respiratory hazards in each workplace, has identified relevant workplace and user factors, and has based respirator selection on these factors. Also included are estimates of employee exposures to respiratory hazards and an identification of the contaminant’s chemical state and physical form. This selection has included appropriate protective respirators for use in IDLH atmospheres and has limited the selection and use of air-purifying respirators. All selected respirators are NIOSH certified.

(List company air contaminants, estimates of exposure and respirators to be used with those contaminants in this section.)

Filter Classifications—These classifications are marked on the filter or filter package

N-Series: Not Oil Resistant

- Approved for non-oil particulate contaminants.
- Examples: dust, fumes, mists not containing oil.

R-Series: Oil Resistant

- Approved for all particulate contaminants, including those containing oil.
- Examples: dusts, mists, fumes.
- Time restriction of 8 hours when oils are present.

P-Series: Oil Proof

- Approved for all particulate contaminants including those containing oil.
- Examples: dust, fumes, mists.
- See manufacturer’s time use restrictions on packaging.

Respirators for IDLH Atmospheres.

The following respirators will be used in IDLH atmospheres:

- A full facepiece pressure demand SCBA certified by NIOSH for a minimum service life of 30 minutes, or
- A combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.

- Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.

Respirators for Atmospheres That Are Not IDLH

- The respirators selected must be adequate to protect the health of the employee and ensure compliance with all other OSHA statutory and regulatory requirements under routine and reasonably foreseeable emergency situations. The respirator selected must be appropriate for the chemical state and physical form of the contaminant.

Identification of Filters and Cartridges

All filters and cartridges will be labeled and color-coded with the NIOSH approval label. The user will ensure that the label is not removed and remains legible. A change out schedule for filters and cartridge has been developed to ensure these elements of the respirators remain effective.

Respirator Filter and Canister Replacement

An important part of the respiratory protection program includes identifying the useful life of cartridges and filters used on air-purifying respirators. Each filter and cartridge must be equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant.

If there is no ESLI appropriate for the conditions, a change schedule for canisters and cartridges based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life will be implemented.

Filter and Cartridge Change Schedule

Stock of spare filters and cartridges will be maintained to allow immediate change when required or desired by the employee.

Cartridges will be changed based on the most limiting factor below:

- Prior to expiration date.
- Manufacturer's recommendations for the specific use and environment.
- After each use.
- When requested by employee.
- When contaminant odor is detected.
- When restriction to air flow has occurred as evidenced by increase effort by user to breathe normally.

Cartridges will remain in their original sealed packages until needed for immediate use.

Filters will be changed on the most limiting factor below:

- Prior to expiration date.
- Manufacturer's recommendations for the specific use and environment.
- When requested by employee.
- When contaminant odor is detected.
- When restriction to air flow has occurred as evidenced by increase effort by user to breathe normally.
- When discoloring of the filter media is evident.

Filters will remain in their original sealed package until needed for immediate use.

Respiratory Protection Schedule by Job and Working Condition

The company maintains a respiratory protection schedule by job and working condition. This schedule is provided to each authorized and trained employee. The schedule provides the following information:

- Job/working conditions
- Work location
- Hazards present
- Type of respirator or SCBA required
- Type of filter/canister required
- Location of respirator or SCBA
- Filter/cartridge change out schedule

The schedule will be reviewed and updated at least annually and whenever any changes are made in the work environments, machinery, equipment or processes or if respirator different respirator models are introduced or existing models are removed.

Permanent respirator schedule assignments are:

(List as appropriate)

Physical and Medical Qualifications

Records of medical evaluations must be retained and made available in accordance with 29 CFR 1910.1020.

Medical Evaluation Required

Using a respirator may place a physiological burden on employees that varies with the type of respirator worn, the job and workplace conditions in which the respirator is used, and the medical status of the employee. The company provides a medical evaluation through an HCP to determine the employee's ability to use a respirator, before the employee is fit tested or required to use the respirator in the workplace.

Medical Evaluation Procedures

The employee will be provided a medical questionnaire (29 CFR 1910.134, Appendix C), which is sent confidentially to the designated HCP for review, and when determined by the HCP, will receive a medical examination.

Follow-Up Medical Examination

The company will ensure that a follow-up medical examination is provided for an employee who gives a positive response to any question among questions in Part B of the questionnaire or whose initial medical examination demonstrates the need for a follow-up medical examination. The follow-up medical examination will include any medical tests, consultations or diagnostic procedures that the physician deems necessary to make a final determination.

Administration of the Medical Questionnaire And Examinations

The medical questionnaire and examinations will be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee. The medical questionnaire will be administered in a manner that ensures that the employee understands its content. The company will provide the employee with an opportunity to discuss the questionnaire and examination results with the physician.

Supplemental Information for the Physician

The following information must be provided to the physician before the physician makes a recommendation concerning an employee's ability to use a respirator.

- The type and weight of the respirator to be used by the employee.
- The duration and frequency of respirator use (including use for rescue and escape).

- The expected physical work effort.
- Additional protective clothing and equipment to be worn.
- Temperature and humidity extremes that may be encountered.
- Any supplemental information provided previously to the physician regarding an employee need not be provided for a subsequent medical evaluation if the information and the physician remain the same.

The company has provided the physician with a copy of the written respiratory protection program and a copy of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

Medical Determination

In determining the employee's ability to use a respirator, the company will obtain a written recommendation regarding the employee's ability to use the respirator from the physician. The recommendation will provide only the following information:

- Any limitations on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator.
- The need, if any, for follow-up medical evaluations.
- A statement that the physician has provided the employee with a copy of the physician's written recommendation.
- If the respirator is a negative pressure respirator and the physician finds a medical condition that may place the employee's health at increased risk if the respirator is used, the company will provide an APR if the physician's medical evaluation finds that the employee can use such a respirator. If a subsequent medical evaluation finds that the employee is medically able to use a negative pressure respirator, then the company is no longer required to provide an APR.

Additional Medical Evaluations

At a minimum, the company will provide additional medical evaluations that comply with the requirements of this section if:

- An employee reports medical signs or symptoms that are related to ability to use a respirator.
- A physician, supervisor or the respirator program administrator informs the company that an employee needs to be re-evaluated.
- Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation.
- A change occurs in workplace conditions (physical work effort, protective clothing, temperature, etc.) that may result in a substantial increase in the physiological burden placed on an employee.

Respirator Fit Testing

Before an employee is required to use any respirator with a negative or positive pressure tight-fitting facepiece, the employee must be fit tested with the same make, model, style and size of respirator that will be used. The company will ensure that an employee using a tight-fitting facepiece respirator is fit tested prior to initial use of the respirator, whenever a different respirator facepiece (size, style, model or make) is used, and at least annually thereafter.

The company has established a record of the qualitative and quantitative fit tests administered to employees including:

- The name or identification of the employee tested.
- Type of fit test performed.
- Specific make, model, style and size of respirator tested.
- Date of test.
- The pass/fail results for QLFTs or the fit factor and strip chart recording or other recording of the test results for QNFTs.

Additional fit tests will be conducted whenever the employee reports or the company, physician, supervisor or program administrator makes visual observations of changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery or an obvious change in body weight.

If after passing a QLFT or QNFT, the employee notifies the company, program administrator, supervisor or physician that the fit of the respirator is unacceptable, the employee will be given a reasonable opportunity to select a different respirator facepiece and to be retested.

Types of Fit Tests

The fit test shall be administered using an OSHA-accepted QLFT or QNFT protocol. The OSHA-accepted QLFT and QNFT protocols and procedures are contained in Appendix A of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

- **QLFT** may only be used to fit test negative pressure air-purifying respirators that must achieve a fit factor of 100 or less.
- If the fit factor, as determined through an OSHA-accepted QNFT protocol, is equal to or greater than 100 for tight-fitting half facepieces, or equal to or greater than 500 for tight-fitting full facepieces, the QNFT has been passed with that respirator.
- **Fit testing of tight-fitting** atmosphere-supplying respirators and tight-fitting powered air-purifying respirators will be accomplished by performing quantitative or qualitative fit testing in the negative pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.
- **Qualitative fit testing** of these respirators will be accomplished by temporarily converting the respirator user's actual facepiece into a negative pressure respirator with appropriate filters or by using an identical negative pressure air-purifying respirator facepiece with the same sealing surfaces as a surrogate for the atmosphere-supplying or powered air-purifying respirator facepiece.
- **Quantitative fit testing** of these respirators will be accomplished by modifying the facepiece to allow sampling inside the facepiece in the breathing zone of the user, midway between the nose and mouth. This requirement will be accomplished by installing a permanent sampling probe onto a surrogate facepiece or by using a sampling adapter designed to temporarily provide a means of sampling air from inside the facepiece.
- Any modifications to the respirator facepiece for fit testing will be completely removed and the facepiece restored to NIOSH approved configuration before that facepiece can be used in the workplace.

Fit test records will be retained for respirator users until the next fit test is administered. Written materials required to be retained will be made available upon request to affected employees.

Respirator Operation and Use

Respirators will only be used following the respiratory protection safety procedures established in this program. The operations and use manuals for each type of respirator will be maintained by the program administrator and be available to all qualified users.

Surveillance by the direct supervisor will be maintained of work area conditions and degree of employee exposure or stress. When there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, the company will re-evaluate the continued effectiveness of the respirator.

For continued protection of respirator users, the following general use rules apply:

- Users will not remove respirators while in a hazardous environment.
- Respirators are to be stored in sealed containers out of harmful atmospheres.
- Store respirators away from heat and moisture.
- Store respirators such that the sealing area does not become distorted or warped.
- Store respirator such that the facepiece is protected.

Facepiece Seal Protection

The company does not permit respirators with tight-fitting facepieces to be worn by employees who have:

- Facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function.
- Any condition that interferes with the face-to-facepiece seal or valve function.

If an employee wears corrective glasses or goggles or other personal protective equipment, the company will ensure that such equipment is worn in a manner that does not interfere with the seal of the facepiece to the face of the user.

Continuing Effectiveness of Respirators

The company will ensure that employees leave the respirator use area:

- To wash their faces and respirator facepieces as necessary to prevent eye or skin irritation associated with respirator use.
- If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece.
- To replace the respirator or the filter, cartridge or canister elements.

If the employee detects vapor or gas breakthrough, changes in breathing resistance or leakage of the facepiece, the company will replace or repair the respirator before allowing the employee to return to the work area.

Cleaning and Disinfecting

The company will provide each respirator user with a respirator that is clean, sanitary and in good working order. The company will ensure that respirators are cleaned and disinfected using the standard operating procedure for cleaning and disinfecting.

The respirators will be cleaned and disinfected when:

- Respirators issued for the exclusive use of an employee will be cleaned and disinfected as often as necessary to be maintained in a sanitary condition.
- Respirators issued to more than one employee will be cleaned and disinfected before being worn by different individuals.
- Respirators maintained for emergency use will be cleaned and disinfected after each use.
- Respirators used in fit testing and training will be cleaned and disinfected after each use.

Cleaning and storage of respirators assigned to specific employees is the responsibility of that employee.

Respirator Inspection

All respirators/SCBAs will be inspected. Should any defects be noted, the respirator/SCBA will be taken to the program administrator. Damaged respirators will be repaired or replaced. The inspection of respirators will be the responsibility of the employee.

Respirators will be inspected as follows:

- All respirators used in routine situations will be inspected before each use and during cleaning.
- All respirators maintained for use in emergency situations will be inspected at least monthly and in accordance with the manufacturer's recommendations, and will be checked for proper function before and after each use.
- Emergency escape-only respirators will be inspected before being carried into the workplace for use.

Respirator inspections include the following:

- A check of respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the facepiece, head straps, valves, connecting tube, and cartridges, canisters or filters.
- Check of elastomeric parts for pliability and signs of deterioration.

- Self-contained breathing apparatus will be inspected monthly. Air and oxygen cylinders will be maintained in a fully charged state and will be recharged when the pressure falls to 90 percent of the manufacturer's recommended pressure level. The company will determine that the regulator and warning devices function properly

For emergency use respirators, the additional requirements apply:

- Certify the respirator by documenting the date the inspection was performed, the name (or signature) of the person who made the inspection, the findings, required remedial action, and a serial number or other means of identifying the inspected respirator.
- Provide this information on a tag or label that is attached to the storage compartment for the respirator, is kept with the respirator, or is included in inspection reports stored as paper or electronic files. This information will be maintained until replaced following a subsequent certification.

Respirator Storage

Respirators are to be stored as follows:

- All respirators will be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture and damaging chemicals, and they will be packed or stored to prevent deformation of the face-piece and exhalation valve.
- Emergency respirators will be:
 - Kept accessible to the work area.
 - Stored in compartments or in covers that are clearly marked as containing emergency respirators.
 - Stored in accordance with any applicable manufacturer's instructions.

Repair of Respirators

Respirators that fail an inspection or are otherwise found to be defective will be removed from service to be discarded, repaired or adjusted in accordance with the following procedures:

- Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations and will use only the respirator manufacturer's NIOSH-approved parts designed for the respirator.
- Repairs shall be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed.
- Reducing and admission valves, regulators, and alarms will be adjusted or repaired only by the manufacturer or a technician trained by the manufacturer.

Breathing Air Quality and Use

The company will ensure that compressed air, compressed oxygen, liquid air and liquid oxygen used for respiration accords with the following specifications:

- Compressed and liquid oxygen must meet the United States Pharmacopoeia requirements for medical or breathing oxygen.
- Compressed breathing air must meet at least the requirements for Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989, to include:
 - Oxygen content (v/v) of 19.5–23.5 percent.
 - Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less.
 - Carbon monoxide (CO) content of 10 ppm or less.
 - Carbon dioxide content of 1,000 ppm or less.
 - Lack of noticeable odor.
- Compressed oxygen will not be used in atmosphere-supplying respirators that have previously used compressed air.
- Oxygen concentrations greater than 23.5 percent are used only in equipment designed for oxygen service or distribution.

- Cylinders used to supply breathing air to respirators meet the following requirements:
 - Cylinders are tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR part 173 and part 178).
 - Cylinders of purchased breathing air have a certificate of analysis from the supplier that the breathing air meets the requirements for Grade D breathing air.
 - Moisture content in breathing air cylinders does not exceed a dew point of -50 degrees F (-45.6 degrees C) at 1 atmosphere pressure.
 - Breathing air couplings are incompatible with outlets for nonrespirable worksite air or other gas systems. No asphyxiating substance will be introduced into breathing air lines.
 - Breathing gas containers will be marked in accordance with the NIOSH respirator certification standard, 42 CFR Part 84.

Appendix C to Sec. 1910.134:

OSHA Respirator Medical Evaluation Questionnaire (Mandatory)

To the employer: Answers to questions in Section 1, and to question 9 in Section 2 of Part A, do not require a medical examination.

To the employee:

Can you read (circle one): Yes/No

Your employer must allow you to answer this questionnaire during normal working hours, or at a time and place that is convenient to you. To maintain your confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver or send this questionnaire to the health care professional who will review it.

Part A. Section 1. (Mandatory) The following information must be provided by every employee who has been selected to use any type of respirator (please print).

1. Today's date: _____
2. Your name: _____
3. Your age (to nearest year): _____
4. Sex (circle one): Male/Female
5. Your height: _____ ft. _____ in.
6. Your weight: _____ lbs.
7. Your job title: _____
8. A phone number where you can be reached by the health care professional who reviews this questionnaire (include the Area Code): _____
9. The best time to phone you at this number: _____
10. Has your employer told you how to contact the health care professional who will review this questionnaire (circle one): Yes/No
11. Check the type of respirator you will use (you can check more than one category):
 - a. _____ N, R, or P disposable respirator (filter-mask, non-cartridge type only).
 - b. _____ Other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus).

12. Have you worn a respirator (circle one): Yes/No

If "yes," what type(s): _____

Part A. Section 2. (Mandatory) Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (please circle "yes" or "no").

1. Do you *currently* smoke tobacco, or have you smoked tobacco in the last month: Yes/No
2. Have you *ever had* any of the following conditions?
 - a. Seizures: Yes/No
 - b. Diabetes (sugar disease): Yes/No
 - c. Allergic reactions that interfere with your breathing: Yes/No
 - d. Claustrophobia (fear of closed-in places): Yes/No
 - e. Trouble smelling odors: Yes/No
3. Have you *ever had* any of the following pulmonary or lung problems?
 - a. Asbestosis: Yes/No
 - b. Asthma: Yes/No

- c. Chronic bronchitis: Yes/No
 - d. Emphysema: Yes/No
 - e. Pneumonia: Yes/No
 - f. Tuberculosis: Yes/No
 - g. Silicosis: Yes/No
 - h. Pneumothorax (collapsed lung): Yes/No
 - i. Lung cancer: Yes/No
 - j. Broken ribs: Yes/No
 - k. Any chest injuries or surgeries: Yes/No
 - l. Any other lung problem that you've been told about: Yes/No
4. Do you *currently* have any of the following symptoms of pulmonary or lung illness?
- a. Shortness of breath: Yes/No
 - b. Shortness of breath when walking fast on level ground or walking up a slight hill or incline: Yes/No
 - c. Shortness of breath when walking with other people at an ordinary pace on level ground: Yes/No
 - d. Have to stop for breath when walking at your own pace on level ground: Yes/No
 - e. Shortness of breath when washing or dressing yourself: Yes/No
 - f. Shortness of breath that interferes with your job: Yes/No
 - g. Coughing that produces phlegm (thick sputum): Yes/No
 - h. Coughing that wakes you early in the morning: Yes/No
 - i. Coughing that occurs mostly when you are lying down: Yes/No
 - j. Coughing up blood in the last month: Yes/No
 - k. Wheezing: Yes/No
 - l. Wheezing that interferes with your job: Yes/No
 - m. Chest pain when you breathe deeply: Yes/No
 - n. Any other symptoms that you think may be related to lung problems: Yes/No
5. Have you *ever had* any of the following cardiovascular or heart problems?
- a. Heart attack: Yes/No
 - b. Stroke: Yes/No
 - c. Angina: Yes/No
 - d. Heart failure: Yes/No
 - e. Swelling in your legs or feet (not caused by walking): Yes/No
 - f. Heart arrhythmia (heart beating irregularly): Yes/No
 - g. High blood pressure: Yes/No
 - h. Any other heart problem that you've been told about: Yes/No
6. Have you *ever had* any of the following cardiovascular or heart symptoms?
- a. Frequent pain or tightness in your chest: Yes/No
 - b. Pain or tightness in your chest during physical activity: Yes/No
 - c. Pain or tightness in your chest that interferes with your job: Yes/No
 - d. In the past two years, have you noticed your heart skipping or missing a beat: Yes/No
 - e. Heartburn or indigestion that is not related to eating: Yes/No
 - f. Any other symptoms that you think may be related to heart or circulation problems: Yes/No
7. Do you *currently* take medication for any of the following problems?
- a. Breathing or lung problems: Yes/No
 - b. Heart trouble: Yes/No
 - c. Blood pressure: Yes/No
 - d. Seizures: Yes/No
8. If you've used a respirator, have you *ever had* any of the following problems? (If you've never used a respirator, check the following space and go to question 9:)
- a. Eye irritation: Yes/No
 - b. Skin allergies or rashes: Yes/No
 - c. Anxiety: Yes/No
 - d. General weakness or fatigue: Yes/No
 - e. Any other problem that interferes with your use of a respirator: Yes/No

9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire: Yes/No

Questions 10 to 15 below must be answered by every employee who has been selected to use either a full-facepiece respirator or a self-contained breathing apparatus (SCBA). For employees who have been selected to use other types of respirators, answering these questions is voluntary.

10. Have you ever lost vision in either eye (temporarily or permanently): Yes/No

11. Do you *currently* have any of the following vision problems?

- a. Wear contact lenses: Yes/No
- b. Wear glasses: Yes/No
- c. Color blind: Yes/No
- d. Any other eye or vision problem: Yes/No

12. Have you *ever had* an injury to your ears, including a broken eardrum: Yes/No

13. Do you *currently* have any of the following hearing problems?

- a. Difficulty hearing: Yes/No
- b. Wear a hearing aid: Yes/No
- c. Any other hearing or ear problem: Yes/No

14. Have you *ever had* a back injury: Yes/No

15. Do you *currently* have any of the following musculoskeletal problems?

- a. Weakness in any of your arms, hands, legs, or feet: Yes/No
- b. Back pain: Yes/No
- c. Difficulty fully moving your arms and legs: Yes/No
- d. Pain or stiffness when you lean forward or backward at the waist: Yes/No
- e. Difficulty fully moving your head up or down: Yes/No
- f. Difficulty fully moving your head side to side: Yes/No
- g. Difficulty bending at your knees: Yes/No
- h. Difficulty squatting to the ground: Yes/No
- i. Climbing a flight of stairs or a ladder carrying more than 25 lbs: Yes/No
- j. Any other muscle or skeletal problem that interferes with using a respirator: Yes/No

Part B Any of the following questions, and other questions not listed, may be added to the questionnaire at the discretion of the health care professional who will review the questionnaire.

1. In your present job, are you working at high altitudes (over 5,000 feet) or in a place that has lower than normal amounts of oxygen: Yes/No

If “yes,” do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you’re working under these conditions: Yes/No

2. At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (e.g., gases, fumes, or dust), or have you come into skin contact with hazardous chemicals: Yes/No

If “yes,” name the chemicals if you know them _____

3. Have you ever worked with any of the materials, or under any of the conditions, listed below:

- a. Asbestos: Yes/No
- b. Silica (e.g., in sandblasting): Yes/No
- c. Tungsten/cobalt (e.g., grinding or welding this material): Yes/No
- d. Beryllium: Yes/No
- e. Aluminum: Yes/No
- f. Coal (for example, mining): Yes/No
- g. Iron: Yes/No
- h. Tin: Yes/No

- i. Dusty environments: Yes/No
- j. Any other hazardous exposures: Yes/No

If “yes,” describe these exposures: _____

4. List any second jobs or side businesses you have: _____

5. List your previous occupations: _____

6. List your current and previous hobbies: _____

7. Have you been in the military services? Yes/No

If “yes,” were you exposed to biological or chemical agents (either in training or combat): Yes/No

8. Have you ever worked on a HAZMAT team? Yes/No

9. Other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire, are you taking any other medications for any reason (including over-the-counter medications): Yes/No

If “yes,” name the medications if you know them: _____

10. Will you be using any of the following items with your respirator(s)?

- a. HEPA Filters: Yes/No
- b. Canisters (for example, gas masks): Yes/No
- c. Cartridges: Yes/No

11. How often are you expected to use the respirator(s) (circle “yes” or “no” for all answers that apply to you)?:

- a. Escape only (no rescue): Yes/No
- b. Emergency rescue only: Yes/No
- c. Less than 5 hours per week: Yes/No
- d. Less than 2 hours per day: Yes/No
- e. 2 to 4 hours per day: Yes/No
- f. Over 4 hours per day: Yes/No

12. During the period you are using the respirator(s), is your work effort:

a. Light (less than 200 kcal per hour): Yes/No

If “yes,” how long does this period last during the average shift: _____ hrs. _____ mins.

Examples of a light work effort are **sitting** while writing, typing, drafting, or performing light assembly work; or **standing** while operating a drill press (1-3 lbs.) or controlling machines.

b. Moderate (200 to 350 kcal per hour): Yes/No

If “yes,” how long does this period last during the average shift: _____ hrs. _____ mins.

Examples of moderate work effort are **sitting** while nailing or filing; **driving** a truck or bus in urban traffic; **standing** while drilling, nailing, performing assembly work, or transferring a moderate load (about 35 lbs.) at trunk level; **walking** on a level surface about 2 mph or down a 5-degree grade about 3 mph; or **pushing** a wheelbarrow with a heavy load (about 100 lbs.) on a level surface.

c. Heavy (above 350 kcal per hour): Yes/No

If “yes,” how long does this period last during the average shift: _____ hrs. _____ mins.

Examples of heavy work are **lifting** a heavy load (about 50 lbs.) from the floor to your waist or shoulder; working on a loading dock; **shoveling**; **standing** while bricklaying or chipping castings; **walking** up an 8-degree grade about 2 mph; climbing stairs with a heavy load (about 50 lbs.).

13. Will you be wearing protective clothing and/or equipment (other than the respirator) when you're using your respirator: Yes/No

If "yes," describe this protective clothing and/or equipment: _____

14. Will you be working under hot conditions (temperature exceeding 77 deg. F): Yes/No

15. Will you be working under humid conditions: Yes/No

16. Describe the work you'll be doing while you're using your respirator(s):

17. Describe any special or hazardous conditions you might encounter when you're using your respirator(s) (for example, confined spaces, life-threatening gases):

18. Provide the following information, if you know it, for each toxic substance that you'll be exposed to when you're using your respirator(s):

Name of the first toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of the second toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of the third toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

The name of any other toxic substances that you'll be exposed to while using your respirator:

19. Describe any special responsibilities you'll have while using your respirator(s) that may affect the safety and well-being of others (for example, rescue, security):

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.

*(Note: The following example policy is a **best practice** as there is no standard for tuberculosis. Please modify or delete content to these policies as deemed necessary. Respiratory protection from tuberculosis is covered under OSHA's Respiratory Protection Standard (1910.134).)*

Tuberculosis Infection Control Plan

Mycobacterium tuberculosis: TB is caused by the bacteria *Mycobacterium tuberculosis* and is spread by airborne droplets generated when a person with TB disease coughs, speaks, sings, sneezes, etc. Infection occurs when a susceptible person inhales droplet nuclei containing the bacteria, which then become established in the body.

An additional hazard is now present because of multidrug-resistant (MDR) TB. MDR organisms are resistant to the drugs that are normally used to treat TB, such as isoniazid and rifampin. The course of treatment when treating MDR TB increases from six months to 18–24 months, and the cure rate decreases from nearly 100 percent to less than 60 percent. Mortality among patients with MDR TB can be high.

Policies and Program Administration

We maintain, review and update the infection control plan (ICP) at least annually, and whenever necessary to reflect new or modified tasks, procedures and engineering controls* that affect occupational exposure. The ICP is also updated to reflect new or revised employee positions with occupational exposure.

This facility has had _____ cases of confirmed TB in the last 12 months.

(b) This facility is located in _____ County, which has reported cases of TB in the last 12-month reporting period.

Employee Exposure Determination

ALL employees in the following job classifications have or may have occupational exposure to TB:

Job Title

Employees in the following job classifications have or may have exposure to TB when they are performing the listed tasks and procedures:

Job Title

Tasks/Procedures

Employee Notification of TB Hazard:

We use the following procedures to ensure that all employees with job tasks that offer potential for occupational exposure are informed of the hazard and take proper precautions against exposure to TB.

Procedures

(* *(responsible person(s)/department)* maintains contact with all outside contractors who provide temporary or contract employees who may incur occupational exposure. This allows the contractor to institute precautions to protect his or her employees. These contractors are informed of the TB hazard and the facility's procedures for protecting themselves from exposure.

Procedures

(* Employee exposure in AFB isolation rooms is minimized by combining tasks the amount of time an employee spends in an AFB isolation room is minimized by

Procedures

(* *(organization's name)* uses the following procedures, minimizing the number of workers entering AFB isolation rooms:

(* *(organization's name)* utilizes the following procedures to delay transport or relocation within the facility until the individual is considered noninfectious:

(* Services are provided in the patient's room whenever feasible such as portable X-ray and *(list other services provided in the patient's room to minimize exposure)*

(* This facility uses _____ *(list the type of engineering controls in use—properly fitted masks or valveless respirators for the patient to be masked or portable containment devices)*

on individuals with suspected or confirmed infectious TB when it is necessary to transport or relocate the individual.

(* The following procedures ensure that the individual is returned to the AFB isolation room as soon as practical after completion of the procedure _____

Procedures

(* Services that cannot be rendered in the patient's room are provided in an area that meets the requirements for an AFB isolation room.

(* Elective high-hazard procedures and surgery are delayed until the patient is noninfectious.

(* HIGH-HAZARD PROCEDURES

(* High-hazard procedures (where TB may be aerosolized) require precautions to prevent/minimize occupational exposure to infectious TB. The following high-hazard procedures are performed at this facility:

Procedures

(* Engineering Controls Maintenance Schedules and Records

(* The maintenance schedule for engineering controls is as follows:

(* Daily—Negative pressure areas are qualitatively demonstrated by using smoke trails.

(*) Whenever HEPA filters are changed, the system is inspected and its performance monitored in accordance with current USPHS guidelines. HEPA filters are changed every _____ in this facility or whenever:

(*) Every six months—HEPA filters in contained air exhaust systems are inspected, maintained and performance monitored in accordance with current USPHS guidelines.

Clinical and/or Research Laboratories

The (*type of laboratory—clinical or research*) operates at biosafety level _____ as determined by (*name of laboratory director*) for (*organization's name*). This is in accordance with CDC/NIOSH Biosafety in Microbiological and Biomedical Laboratories.

The following controls are in operation in the laboratory at this facility _____ (*list controlled access, anterooms, sealed windows and other controls required in the standard and determined necessary by the laboratory director*):

The procedures in this exposure control plan minimize the occupational exposure to TB. The procedures for isolating and managing care are used until the individual with suspected or confirmed infectious TB is determined to be non-infectious or until the diagnosis for TB is ruled out.

Recordkeeping

Any employee who has been occupationally exposed to anyone with a known case of active tuberculosis, and subsequently develops a tuberculosis infection, the case must be recorded on the 300 log.

*(Note: The following program is an example of a written program and based on the referenced standard. The standard does not require a written program, but as a **best practice**, it has been put into writing in this manual. Please modify or delete content to these policies as deemed necessary. Please reference the standard for all requirements that may be applicable to your company.)*

Walking and Working Surfaces Program

(Ref. 29 CFR 1910.21–30)

There are many situations that may cause slips, trips, and falls, such as ice, wet spots, grease, polished floors, loose flooring or carpeting, uneven walking surfaces, clutter, electrical cords, open desk drawers and filing cabinets, and damaged ladder steps. The controls needed to prevent these hazards are usually obvious, but too often ignored, such as keeping walkways and stairs clear of scrap and debris; coiling up extension cords, lines, and hoses when not in use; keeping electrical and other wires out of the way; wearing lug soles in icy weather; clearing parking lots, stairs, and walkways in snowy weather; and using salt/sand as needed.

Aisles and Passageways

- Aisles and passageways will be kept clear and in good repair with no obstruction across or in aisles that could create a hazard.
- Permanent aisles and passageways will be appropriately marked.
- Where mechanical handling equipment is used, aisles will be sufficiently wide. Improper aisle widths coupled with poor housekeeping and vehicle traffic can cause injury to employees, damage the equipment and material, and can limit egress in emergencies.

Floor Loading Protection

Load rating limits will be marked on plates and conspicuously posted. It will be prohibited to place, or cause or permit to be placed, a load greater than that for which such floor or roof is approved on any floor or roof of a building or other structure.

Guarding Floor and Wall Openings

Floor openings and holes, wall openings and holes, and the open sides of platforms may create hazards. People may fall through the openings or over the sides to the level below. Objects such as tools or parts may fall through the holes and strike people or damage machinery on lower levels.

Protection for Floor Openings

Standard railings will be provided on all exposed sides of a stairway opening, except at the stairway entrance. For infrequently used stairways, where traffic across the opening prevents the use of a fixed standard railing, the guard will consist of a hinged floor opening cover of standard strength and construction along with removable standard railings on all exposed sides, except at the stairway entrance.

A “standard railing” consists of toprail, midrail and posts, and will have a vertical height of 42 inches nominal from the upper surface of toprail to floor, platform, runway, or ramp level. Nominal height of midrail is 21 inches. A “standard toeboard” is 4 inches nominal in vertical height, with not more than ¼-inch clearance above floor level.

Floor openings may be covered rather than guarded with rails. When the floor opening cover is removed, a temporary guardrail will be in place or an attendant will be stationed at the opening to warn personnel.

Every floor hole into which people can accidentally walk will be guarded by either:

- A standard railing with toeboard, or
- A floor hole cover of standard strength and construction. While the cover is not in place, the floor hole will be constantly attended by someone or will be protected by a removable standard railing.

Stairway Railings and Guards

Every flight of stairs with four or more risers will have standard stair railings or standard handrails as specified below. Stair width is measured clear of all obstructions except handrails.

- On stairways less than 44 inches wide having both sides enclosed, at least one handrail will be affixed, preferably on the right side descending.
- On stairways less than 44 inches wide with one open side, at least one stair rail will be affixed on the open side.
- On stairways less than 44 inches wide having both sides open, two stair rails will be provided, one for each side.
- On stairways more than 44 inches wide, but less than 88 inches, one handrail will be provided on each enclosed side and one stair rail on each open side.
- On stairways 88 inches or more in width, one handrail will be provided on each enclosed side, one stair rail on each open side, and one intermediate stair rail placed approximately in the middle of the stairs.

A “standard stair railing” (stair rail) will be of construction similar to a standard railing, but the vertical height will be not more than 34 inches nor less than 30 inches from the upper surface of the top rail to the surface of the tread in line with the face of the riser at the forward edge of the tread.

*(Note: The following policy is an example of a written policy and has been put into writing as a **best practice**. Please modify or delete content to these policies as deemed necessary. The standard should be referenced to ensure that all requirements are being met.)*

Waste Anesthetic Gas Control Policy

(Ref. 29 CFR 1910.1000)

Occupational exposures can be controlled by the application of a number of well-known principles including engineering and work practice controls, administrative controls, personal protective equipment, and monitoring. These principles may be applied at or near the hazard source, to the general workplace environment, or at the point of occupational exposure to individuals. Controls applied at the source of the hazard, including engineering and work practice controls, are generally the preferred and most effective means of control.

In anesthetizing locations and post-anesthesia care units (PACU), where employees are at risk of exposure to waste anesthetic gases, exposure will be controlled by some or all of the following: (1) effective anesthetic gas scavenging systems that remove excess anesthetic gas at the point of origin; (2) effective general or dilution ventilation; (3) good work practices and administrative controls on the part of the health care workers, including the proper use of controls; (4) personal protective equipment, (5) proper maintenance of equipment to prevent leaks; and (6) periodic personnel exposure and environmental monitoring to determine the effectiveness of the overall waste anesthetic gas control program.

Engineering Controls

The following engineering controls are used (identify each area/equipment):

Ventilation

The following ventilation controls are used (identify each area/equipment):

Work Practice and Administrative Controls

The following work practices will be used (identify each area/equipment):

Personal Protective Equipment

The following personal protective equipment will be used at detailed below:

Equipment/Area	Personal Protective Equipment

Maintenance Schedule

The following maintenance schedule will be followed:

Equipment/Area	Maintenance Schedule (Weekly/Monthly/Annually)

Exposure Monitoring

Air monitoring is one of the fundamental tools used to evaluate workplace exposures. Accordingly, this section presents some of the appropriate methods that can be used to detect and measure the concentration of anesthetic gases that may be present in the health care environment. The data provided by monitoring are necessary to establish proper engineering, work practice, and administrative controls to ensure the lowest reasonably achievable gas levels in the operator and PACU room air.

OSHA recommends that air sampling for anesthetic gases be conducted every six months to measure worker exposures and to check the effectiveness of control measures. It also recommends that only the agent(s) most frequently used needs to be monitored, since proper engineering controls, work practices and control procedures should reduce all agents proportionately. However, our decision to monitor only selected agents could depend not only on the frequency of their use, but on the availability of an appropriate analytical method and the cost of instrumentation.

The American Society of Anesthesiologists (ASA) emphasizes regular maintenance of equipment and scavenging systems, daily check-out procedures for anesthesia equipment, and education to ensure use of appropriate work practices. It does not believe that a routine monitoring program is necessary when these actions are being carried out. ASA prefers to use monitoring when indicated such as in the event of known or suspected equipment malfunction. The Academy of General Dentistry also recommends the use of properly installed and maintained analgesia delivery systems.

Three fundamental types of air samples may be taken in order to evaluate the workplace: personal, area and source samples. Personal samples give the best estimate of a worker's exposure level since they represent the actual airborne contaminant concentration in the worker's breathing zone during the sampling period. This is the preferred method for determining a worker's time-weighted average (TWA) exposure and should be used to assess personal exposures during anesthetic administration and in the PACU. Where several health care workers perform the same job, on the same shift, and in the same work area, and the length, duration and level of waste gas exposures are similar, an employer may sample a representative fraction of the employees instead of all employees.

Area sampling is useful for evaluating overall air contaminant levels in a work area and for investigating cross-contamination with other areas in the health care facility. Source sampling can be used to detect leaks in the anesthesia delivery and scavenging systems as well as ineffective capture by the scavenging system. Thus the types of air samples and how they are taken is a critical point in any safety program.

Exposure monitoring has been done initially and will be conducted periodically. The following schedule will be followed:

Medical Surveillance

In all locations where anesthesia is administered, engineering controls such as a scavenging system to remove waste anesthetic gases and adequate room ventilation should be utilized. Medical surveillance of personnel working in scavenged operating rooms is intended primarily to establish a baseline. Routine annual follow-up is primarily educational and at minimum, might consist of a health questionnaire.

Examinations and laboratory testing will be available for conditions suspected of being related to occupational exposure. We have created a system for employees to report health problems which they believe may be associated with anesthetic exposure. Employees will be informed of this reporting system and of the method by which reports can be submitted.

This system is as follows: _____

An acute exposure (i.e., a sudden, high-level exposure) will be documented. Any subsequent health effects will trigger a medical history and a physical examination (where appropriate).

A final medical review upon job transfer or termination will be conducted. This will be in the form of a questionnaire that includes any acute or significant exposures as well as a review of symptoms and signs detected during employment, along with a medical evaluation when appropriate.

Medical and exposure records developed for employees who may be exposed to hazardous chemicals such as N₂O and halogenated anesthetic agents will be retained, made available and transferred in accordance with OSHA Standard for Access to Employee Exposure and Medical Records, 29 CFR 1910.1020. The occurrence of injury or illness related to occupational exposure must be recorded in accordance with OSHA recordkeeping regulations in 29 CFR 1904.

Cleanup and Disposal

Small volumes of liquid anesthetic agents such as halothane, enflurane, isoflurane, desflurane and sevoflurane evaporate readily at normal room temperatures and may dissipate before any attempts to clean up or collect the liquid are initiated. However, when large spills occur, such as when one or more bottles of a liquid agent break, specific cleaning and containment procedures are necessary and appropriate disposal is recommended by the American Association of Nurse Anesthetists (AANA). The recommendations of the chemical manufacturer's safety data sheet (SDS) that identify exposure reduction techniques for spills and emergencies will be followed.

Only adequately trained and equipped workers may respond to spills. When the situation is unclear or data are lacking on the exposure level, the response will be the same as for high levels of exposure and as follows:

- Because of the volatility of liquid anesthetics, rapid removal by suctioning in the OR is the preferred method for cleaning up spills.
- Spills of large volumes in poorly ventilated areas or in storage areas should be absorbed using an absorbent material, sometimes called a sorbent, that is designed for cleanup of organic chemicals.
- "Spill pillows" commonly used in hospital laboratories, vermiculite and carbon-based sorbents are some of the materials commercially available and regularly used for this purpose.
- Caution should be exercised if broken glass bottles pose a hazard.

Both enflurane and desflurane are considered hazardous wastes under the EPA regulations because these chemicals contain trace amounts of chloroform (a hazardous substance), a by-product of the manufacturing process. Consequently, sorbents that have been saturated with enflurane or desflurane should be managed as an EPA hazardous waste material due to the trace concentrations of chloroform present. Isoflurane and halothane do not contain trace amounts of chloroform or any other regulated substance and are therefore not considered hazardous wastes by EPA.

To minimize exposure to all liquid anesthetic agents during cleanup and to limit exposure during disposal procedures, the following general guidelines should be followed:

- The waste material should be placed in a container, tightly sealed, properly labeled and disposed of with other chemical wastes sent to a facility's incinerator or removed by a chemical waste contractor.
- After a large spill has occurred and the appropriate response action taken, airborne monitoring should be conducted to determine if the spill was effectively contained and cleaned up.

Empty anesthetic bottles are not considered regulated waste and may be discarded with ordinary trash or recycled. Furthermore, the facility as well as the waste handling contractor must comply with all applicable federal, state and local regulations.

To minimize exposure to waste liquid anesthetic agents during cleanup and disposal, the following general guidelines are recommended by the manufacturers of liquid anesthetic agents and will be followed:

- Wear appropriate personal protective equipment.
- Where possible, ventilate area of spill or leak. Appropriate respirators should be worn.
- Restrict persons not wearing protective equipment from areas of spills or leaks until cleanup is complete.
- Collect the liquid spilled and the absorbent materials used to contain a spill in a glass or plastic container. Tightly cap and seal the container and remove it from the anesthetizing location. Label the container clearly to indicate its contents.
- Transfer the sealed containers to the waste disposal company that handles and hauls waste materials.
- Health care facilities that own or operate medical waste incinerators may dispose of waste anesthetics by using an appropriate incineration method after verifying that individual incineration operating permits allow burning of anesthetic agents at each site.

Training

Employees will be trained on this policy initially and annually thereafter. Records of training will be maintained until the next training session.

*(Note: The following example policy is a **best practice** as there is no standard for workplace violence. Please modify or delete content to these policies as deemed necessary.)*

Workplace Violence Program

Background

Violence or the threat of violence in all forms is unacceptable workplace behavior. It will not be tolerated and it will be dealt with appropriately.

Policy, Purpose and Scope

Violence against employees occurs in a variety of circumstances and situations including robberies and other crimes, actions by frustrated or dissatisfied clients and customers, acts perpetrated by disgruntled co-workers or former co-workers, and domestic incidents that spill over into the workplace.

Our policy and position on workplace violence are clear. It is our policy to promote a safe environment for our employees and the visiting public and to work with our employees to maintain a work environment that is free from violence, harassment, intimidation and other disruptive behavior. Our position in this area is that violence and threats of violence—in all forms—are unacceptable behavior. It will not be tolerated and will be dealt with appropriately.

The primary purpose of this document is to provide employees with a concise reference regarding the company's program on managing actual or potentially violent situations. It is intended to make employees, including supervisors and managers, aware of the potential for violence in the workplace, to increase their abilities to recognize early warning signs of potentially violent situations, and to understand how to respond to actual or potential incidents. It identifies functional area experts whom employees, supervisors and managers can call on to help them assess, defuse or resolve the situation. This document also provides some prevention tips. Finally, some additional resources are included in the appendixes for those who want to learn more.

All employees and all facilities are covered by the policies and program guidance contained in this document. It also applies to contractors and visitors to company facilities.

Roles and Responsibilities

The goal of the company workplace violence program is to support a work environment in which violent or potentially violent situations are effectively addressed with a focus on prevention by increasing employee understanding of the nature of workplace violence, how to respond to it, and how to prevent it. Success in the protection of our employees requires your personal attention and, as necessary, appropriate action.

IT IS UP TO EACH EMPLOYEE TO HELP MAKE THE DEPARTMENT A SAFE WORKPLACE FOR ALL OF US. The expectation is that each employee will treat all other employees, as well as customers or clients, with dignity and respect.

Depending on the parameters of the incident and the resources available, one or more of the experts in the functional areas listed below may be called upon to provide technical assistance in their particular field to help assess, investigate or respond to a violent or potentially violent situation.

Employees (including managers and supervisors) are responsible for:

Safety and health manager is responsibility for:

Preventing Workplace Violence

All managers and supervisors are expected to discuss the policy and program with their staff so that they understand how to handle intimidating, threatening or violent incidents as well as understand the consequences of such behavior (such as disciplinary and adverse action up to and including removal and criminal charges).

Work Environment

The best prevention strategy is to maintain an environment that minimizes negative feelings, such as isolation, resentment and hostility among employees. Although no workplace can be perceived as perfect by every employee, there are several steps that management can take to help create a professional, healthy and caring work environment. These include, but are not necessarily limited to:

- Promoting sincere, open and timely communication among managers, employees and union representatives.
- Offering opportunities for professional development.
- Fostering a family-friendly work environment.
- Maintaining mechanisms for complaints and concerns and allowing them to be expressed in a non-judgmental forum that includes timely feedback to the initiator.
- Promoting “quality of life” issues such as facilities and job satisfaction.
- Maintaining impartial and consistent discipline for employees who exhibit improper conduct and poor performance.

Security

Maintaining a secure and physically safe workplace is part of any good strategy for preventing workplace violence. The company uses a variety of security measures to help ensure safety. The measures used depend on the resources available in the area. These may include:

Additional law enforcement assistance is available through local police departments for emergency situations. Employees should notify the appropriate security office or designated police of suspicious or unauthorized individuals on company property. The phone numbers for the security office and local police department are:

Education

Education and communication are also critical components of any prevention strategy. The following types of education and communication are effective in preventing violence and other threatening behavior:

- Communicating an awareness among employees, supervisors, and managers regarding all aspects of the company’s workplace violence program: what it is, what to do when faced with possible problems, employee and management responsibilities, early intervention techniques, who to call for assistance, etc.
- Educating employees and communicating to them techniques designed to effectively deal with conflict resolution, stress reduction, etc.

Performance/Conduct Indicators

Being aware of performance and conduct problems that may be warning signs of potential trouble is good prevention strategy. These signs may show up in perpetrators of violence, those who are victims and those involved in domestic violence. Although it is possible that only one of these indicators will occur, it is more likely that a pattern will occur or that they will represent a change from normal behavior. **Remember that the presence of any of these characteristics does not necessarily mean a violent act will occur. They may be indicators of another type of problem such as being ill, depressed or bereaved.** Some examples of performance and conduct indicators are listed below (listing is not intended to be all-inclusive):

- **Attendance problems**—excessive sick leave, excessive tardiness, leaving work early, improbable excuses for absences.
- **Adverse impact on supervisor’s time**—supervisor spends an inordinate amount of time coaching or counseling employee about personal problems, redoing the employee’s work or dealing with co-worker concerns.
- **Decreased productivity**—making excessive mistakes, poor judgment, missed deadlines, or wasting work time and materials.
- **Inconsistent work patterns**—alternating periods of high and low productivity and quality of work, inappropriate reactions, overreaction to criticism, and mood swings.
- **Concentration problems**—easily distracted and often has trouble recalling instructions, project details and deadline requirements.
- **Safety issues**—more accident prone, disregard for personal safety as well as equipment and machinery safety, and needless risks.
- **Poor health and hygiene**—marked changes in personal grooming habits.
- **Unusual/changed behavior**—inappropriate comments, threats and throwing objects.
- **Evidence of possible drug or alcohol use/abuse.**
- **Evidence of serious stress in the employee’s personal life**—crying, excessive phone calls or recent separation.
- **Continual excuses/blame**—inability to accept responsibility for even the most inconsequential errors.
- **Unshakable depression**—low energy, little enthusiasm or despair.

Early Intervention

Intervening early in a threatening or potentially violent situation is vital to preventing its escalation. There are many intervention options, and they vary greatly depending upon the situation. Early intervention may defuse the initial situation and give the supervisor an opportunity to thoroughly review options for resolution. Intervention sets the tone for how the situation will be resolved, so it must be handled deftly.

Recognizing the Levels of Violence and Response

Potential or actual violent situations among employees usually escalate if not defused. Violence and the warning signs that typically occur can usually be identified at three levels. It should be noted that any one or combination of warning signs at the three levels may be indicative of a potentially violent situation. The following is an attempt to delineate warning signs and the appropriate response. There is no fail-safe way of presenting this information to employees. Employees will have to make a judgment call as to the appropriate action to take by discerning and evaluating the given situation.

Level One (Early Warning Signs)

The person is:

- Intimidating/bullying.
- Discourteous/disrespectful.
- Uncooperative.
- Verbally abusive.

Response when early warning signs occur at level one:

- Observe the behavior in question.
- **Report** concerns to your supervisor to seek help in assessing/responding to the situation. If the offending employee is the reporting employee's immediate supervisor, the employee should notify the next level of supervision. If the offending person is not an employee, the supervisor of the employee reporting the incident is still the appropriate individual to receive and provide initial response.
- **Document** the observed behavior in question.
- Supervisor should **meet** with the offending employee to discuss concerns. Follow these procedures:
 - Schedule private time and place.
 - Coordinate any necessary union participation.
 - Get straight to the point.
 - Ask the employee for his or her input.
 - Ask the employee what should be done about the behavior.
 - Ask how you can help.
 - Identify the performance or conduct problems that are of concern.
 - Identify the steps you would like to see to correct problems.
 - Set limits on what is acceptable behavior and performance.
 - Establish time frames to make changes and subsequent consequences for failing to correct behavior and performance.

Level Two (Escalation of the Situation)

The person:

- Argues with customers, vendors, co-workers or management.
- Refuses to obey agency policies and procedures.
- Sabotages equipment and steals property for revenge.
- Verbalizes wishes to hurt co-workers or management.
- Sends threatening notes to co-workers or management.
- Sees self as victimized by management (me against them).

Response when the situation has escalated to level two:

- If warranted, **call** 911 and other appropriate emergency contacts (such as federal protective service) for that particular facility, particularly if the situation requires immediate medical or law enforcement personnel.
- Immediately **contact** the supervisor and, if needed, the supervisor will contact other appropriate officials such as functional area experts to seek help in assessing and responding to the situation.
- If necessary, **secure** your own safety and the safety of others, including contacting people who are in danger (make sure emergency numbers for employees are kept up-to-date and accessible).
- **Document** the observed behavior in question.
- Supervisor should **meet** with the employee to discuss concerns and, if appropriate, begin or continue progressive discipline. The supervisor should follow these procedures:
 - Call for assistance in assessing/responding, if needed.
 - Avoid an audience when dealing with the employee.
 - Remain calm, speaking slowly, softly and clearly.
 - Ask the employee to sit down; see if he or she is able to follow directions.
 - Ask questions relevant to the employee's complaint such as:
 - ◆ What can you do to try to regain control of yourself?
 - ◆ What can I do to help you regain control?
 - ◆ What do you hope to gain by committing violence?
 - ◆ Why do you believe you need to be violent to achieve that?
 - Try to direct the aggressive tendencies into another kind of behavior so that the employee sees he or she has choices about how to react.

Level three (further escalation—usually resulting in an emergency response)

The person displays intense anger resulting in:

- Suicidal threats.
- Physical fights.
- Destruction of property.
- Display of extreme rage.
- Utilization of weapons to harm others.

Response when situation is a level three emergency:

Any individual observing violent or threatening behavior that poses an immediate danger to people or property is expected to:

- Call 911 and other appropriate emergency contacts (such as federal protective service) for that particular facility, particularly if the situation requires immediate medical or law enforcement personnel.
- **Remain calm** and **contact** supervisor.
- **Secure** your personal safety first.
- **Leave** the area if your safety is at risk.
- **Cooperate** with law enforcement personnel when they have responded to the situation.

Once law enforcement personnel are on the scene, they will assume control of the situation. Witnesses should be prepared to provide a description of the violent or threatening individual, details of what was observed, and the exact location of the incident.

- Document the observed behavior in question.
- Supervisor, where needed, will contact functional area experts and will follow the procedures described in the *level two* section.

Domestic

Except when those involved in domestic violence are co-workers, most incidents are perpetrated by individuals outside the work setting. It is, therefore, unlikely that the levels of violence described above will be evident. There will, however, be early warning signs that this type of violence is escalating outside the workplace. The victim may show symptoms such as increased fear, emotional episodes or signs of physical injury. Victims, as well as perpetrators, also show signs of work performance deterioration. By intervening when the early warning signs occur, even though violence may not yet have been committed at work, a serious incident may be prevented.

Response involving domestic violence

In the event the perpetrator shows up at work with the intent of harming the employee and any others who happen to be in the way or involved, follow the procedures described in *level three* in responding to the immediate crisis.

If it is known that an employee is being affected by domestic violence, whether or not the perpetrator has shown up at work, it is important to provide support and assistance. Not only is the person at risk for more and usually escalated violence, but it has an impact on the safety and productivity of the entire workforce. Below are some tips for supervisors when helping an employee affected by domestic violence.

- Talk with the employee about your concern of the possibility of the violence extending into the workplace and **recommend** that the employee contact the employee assistance program or the company's resource and referral service for assistance in dealing with the problem.
- **Recommend** that the employee call the National Domestic Violence Hotline (1-800-799-SAFE) for more information about domestic violence or to help find local resources.
- **Contact** the employee assistance program for more information and/or assistance, if needed.
- **Recommend** that a workplace safety plan be developed in case an incident occurs at the workplace. Think about the safety of the individual as well as everyone around. Don't be a hero if the perpetrator shows up at work. Follow the safety plan and go for help.

(Note: The following program is an example of a written program and based on the referenced standard. The OSHA standard does not require a written program, but the North Carolina Administrative Code does require it. Please modify or delete content to these policies as deemed necessary. Please reference the standard for all requirements that may be applicable to your company.)

X-ray/Ionizing Radiation Program

(Ref. 29 CFR 1910.1096, 15A NCAC 11 Section .0800)

Radiation Surveys

Surveys will be conducted periodically and will include a physical survey of the location of materials and equipment, and measurements of levels of radiation or concentrations of radioactive material present.

Surveys as may be necessary for him to comply with the provisions in this section. For purposes of this program, a survey will mean an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions. Surveys will be conducted:

- Upon installation of equipment
- Following any change in the initial arrangement, number or type of local components in the system
- Following maintenance requiring disassembly or removal of a local component in they system
- Radiation monitoring performed during maintenance

Precautionary Procedures

Personnel monitoring equipment, such as film badges, pocket chambers, pocket dosimeters or film rings, will be used by the following job titles:

The following dose limits will be followed:

- An annual limit, which is the more limiting of:
 - The total effective dose equivalent being equal to 5 rems (0.05 Sv); or
 - The sum of the deep-dose equivalent and the committed dose equivalent to any individual organ or tissue other than the lens of the eye being equal to 50 rems (0.5 Sv); and
- The annual limits to the lens of the eye, to the skin and to the extremities, which are:
 - An eye dose equivalent of 15 rems (0.15 Sv), and
 - A shallow-dose equivalent of 50 rems (0.50 Sv) to the skin or to each of the extremities.

Doses received in excess of the annual limits, including doses received during accidents, emergencies and planned special exposures, will be subtracted from the limits for planned special exposures that the individual may receive during the current year and during the individual's lifetime.

Operating Procedures

Normal operating procedures will be available to all analytical X ray equipment workers. No person will be permitted to operate analytical X ray equipment in any manner other than that specified in the procedures unless the person has obtained written approval of the person responsible for radiation safety.

No person will bypass a safety device unless the person has obtained the approval of the person responsible for radiation safety. Such approval will be for a specified period of time. When a safety device has been bypassed, a readily discernible sign bearing the words "SAFETY DEVICE NOT WORKING" or words having a similar intent, will be placed on the radiation source housing and the control panel during the period such bypassing is in effect.

Normal operating procedures are listed below:

Signs and Labels

Each radiation area will be conspicuously posted with a sign or signs bearing the radiation caution symbol and words “Caution—X-Ray Equipment” or words having a similar intent. Rooms or other areas in onsite medical facilities are not required to be posted with caution signs because of the presence of patients containing radioactive material, provided that there are personnel in attendance who will take the precautions necessary to prevent the exposure of any individual to radiation or radioactive material in excess of the limits established in the referenced standard.

Training and Instruction

Personnel instruction will include the following:

- No person will be permitted to operate or maintain analytical X-ray equipment unless the person has received instruction in:
 - Identification of possible radiation hazards and biological effects associated with the use of the equipment;
 - significance of the various radiation warning and safety devices incorporated into the equipment, or the reasons they have not been installed on certain pieces of equipment and the extra precautions required in these cases;
 - Proper operating procedures for the equipment;
 - Appropriate use and limitation of dosimetric devices;
 - Proper procedures for reporting an actual or suspected exposure.
- Each licensee or registrant will maintain, for inspection by the agency, records of training which demonstrate that the requirements of the standard have been met.
- Personnel monitoring or wrist dosimetric devices will be provided to, and will be used by:
 - Analytical X ray equipment workers using systems having an open beam configuration and not equipped with a safety device; and
 - Personnel maintaining analytical X-ray equipment if the maintenance procedures require the presence of a primary X-ray beam when any local component in the analytical X-ray system is disassembled or removed.

Equipment Requirements

A safety device that prevents the entry of any portion of an individual’s body into the primary X-ray beam path of which causes the beam to be shut off upon entry into its path will be provided on all open beam configurations. A registrant or licensee may apply to the agency for an exemption from the requirement of a safety device. This application will include:

- A description of the various safety devices that have been evaluated;
- The reason safety devices cannot be used; and
- A description of the alternative methods that will be employed to minimize the possibility of an accidental exposure, including procedures to ensure that operators and others in the area will be informed of the absence of safety devices.

Open beam configurations will be provided with a readily discernible indication of:

- Shutter status (OPEN CLOSED) located near each port on the radiation source housing, if the primary beam is controlled in this manner; and
- X ray tube status (ON OFF) located near the radiation source housing, if the primary beam is controlled in this manner.

Warning devices will be labeled so that their purpose is easily identified. On equipment installed after the effective date of the standard, warning devices will have fail safe characteristics.

- Unused ports on radiation source housings will be secured in the closed position in a manner that will prevent casual opening.
- All analytical X-ray equipment will be labeled with a readily discernible sign or signs bearing the radiation symbol and the words:
 - “CAUTION—HIGH INTENSITY X RAY BEAM,” or words having a similar intent, on the X-ray source housing; and
 - “CAUTION—RADIATION—THIS EQUIPMENT PRODUCES RADIATION WHEN ENERGIZED,” or words having a similar intent, near any switch that energizes an X-ray tube, if the radiation source is an X-ray tube; or
 - “CAUTION—RADIOACTIVE MATERIAL” on the source housing if the radiation source is a radionuclide.
- On open beam configurations installed after the effective date of the standard, each port on the radiation source housing will be equipped with a shutter that cannot be opened unless a collimator or a coupling has been connected to the port.
- An easily visible warning light labeled with the words “X RAY ON” or words having a similar intent, will be located outside each entrance into the room containing an analytical X-ray tube and will be illuminated only when the tube is energized; or in the case of a radioactive source, will be illuminated only when the shutter is open. On equipment installed after the effective date of the standard, warning lights will have fail safe characteristics.
- Each X-ray tube housing will be so constructed that when all shutters are closed the leakage radiation measured at a distance of 5 centimeters from its surface is not capable of producing a dose in excess of 2.5 millirems in one hour.
- Each X-ray generator will be supplied with a protection cabinet that limits leakage radiation measured at a distance of 5 centimeters from its surface such that it is not capable of producing a dose in excess of 0.04 millirems in one hour.

Recordkeeping

The program will be reviewed and updated annually. All records pertaining to this program including audits, surveys and program reviews will be maintained for three years after the record was made.

*(Note: The following section contains example training matrixes. Please add, modify or delete content to each matrix as deemed necessary to meet your company’s needs. The matrixes and course descriptions are a **best practice**.)*

Section 3

Training and Instruction

Employee Training

Orientation/Initial Training

All employees will go through an orientation training program that covers safe work practices, OSHA requirements, and safety policies and procedures. Depending on the employee’s job or career track, the employee will then be released to the safety coordinator for on-the-job training (OJT), combination OJT/classroom, or other job progression training schedule. All employees will also be on a probation period dictated by human resources and management.

Orientation Training Matrix—Initial (Example)

Day 1	Day 2	Day 3	Day 4
Welcome and Introductions	Respiratory Protection*	Hazard Communication*	Workplace Violence
Company Safety Policy and Procedures	PPE*	MRSA	Workplace Violence
Company Safety Policy and Procedures	Hazard Communication*	X-ray/Ionizing Radiation	Air Contaminants
Accident Reporting and Investigation*	Ethylene Oxide*	Tuberculosis	Slips, Trips and Falls
Workers’ Compensation, Return to Work	Hygiene and Decontamination	Compressed Gas Cylinders	Bloodborne Pathogens*
Substance Abuse Policy/Disciplinary Policy	Emergency Eyewash and Shower	Ergonomics	Bloodborne Pathogens*
Walking and Working Surfaces	Emergency Action*	Ladder Safety	Safe Work Practices
Housekeeping	First Aid/CPR/AED	Fire Extinguishers*	Summary

Note: Orientation topics will be modified as needed to best meet the needs of the employees and the Company. Each topic will be covered for a minimum of 30 minutes. Some topics may require several hours depending on the employee’s assigned job duties and responsibilities.

*Required by OSHA—initial training (dependent on assigned job duties and responsibilities)

On-the-Job Training (OJT)

Each department has an OJT matrix that each new employee goes through before being released. The matrix for each department will be reviewed and updated as necessary by management.

OJT Matrix (Example)

Job: All

Department:

Conducted by: Safety Coordinator

Company:

Week 1	Monday	Tuesday	Wednesday	Thursday	Friday
	OJT—safe work practices	OJT—safe work practices	OJT—safe work practices	OJT—safe work practices	OJT—safe work practices

Note: Dependent on assigned job duties and responsibilities. Training may be a few days to several weeks.

Annual Refresher Training

Annual refresher training will be conducted by each department on required OSHA and other safety and health topics along with job safe practices. The following matrix will be updated and modified based on company needs. This will be the responsibility of management.

Annual Refresher Training Matrix (Example)

Location:

Trainer:

Day 1	Day 2	Day 3
Ethylene Oxide*	PPE	Workplace Violence
Slips, Trips and Falls	Industrial Hygiene	Workplace Violence
Respiratory Protection*	Walking and Working Surfaces	Compressed Gas Cylinders
Fire Extinguishers*	Emergency Action	Air Contaminants
Housekeeping	Fire Prevention	Bloodborne Pathogens*
MRSA	Ergonomics	Ladder Safety
Tuberculosis	Safe Work Practices	X-Ray/Ionizing Radiation
Accident Reporting	First Aid/CPR/AED	Summary

Each topic will be covered for a minimum of 30 minutes or based on need. All employees will receive annual refresher training. **Note:** Dependent on assigned job duties and responsibilities.

*Required by OSHA annually

**Refresher Required by OSHA

Section 4

Reference Material

N.C. Department of Labor

A–Z Topics

http://www.nclabor.com/osha/etta/A_to_Z_Topics/a_to_z_toc.htm

OSH Division Compliance Material

<http://www.nclabor.com/osha/compliance/manuals.htm>

PowerPoint Presentations

<http://www.nclabor.com/osha/etta/presentations/presentations.htm>

Publications

<http://www.nclabor.com/pubs.htm>

Safety and Health Programs

http://www.nclabor.com/osha/consult/sample_programs.htm

Training Requirements

<http://www.nclabor.com/osha/etta/indguide/ig8.pdf>

Federal Occupational Safety and Health Administration

Publications

<http://www.osha.gov/pls/publications/publication.html>

Training Resources

<http://www.osha.gov/dte/index.html>

Centers for Disease Control and Prevention

Publications

<http://www.cdc.gov/mmwr/>

Section 5

Facility Inspection Forms

- Comprehensive Safety Inspection Checklist
- Monthly Building Inspection Form

Comprehensive Safety Inspection Checklist

Yes No NA

Employer Posting

- Is the required NCDOL workplace poster displayed in a prominent location where all employees are likely to see it?
- Are emergency telephone numbers posted where they can be readily found in case of emergency?
- Where employees may be exposed to any toxic substances or harmful physical agents, has appropriate information concerning employee access to medical and exposure records and safety data sheets (SDS) been posted or otherwise made readily available to affected employees?
- Are signs concerning "exiting from buildings," room capacities, floor loading, biohazards, exposures to X-ray, microwave, or other harmful radiation or substances posted where appropriate?
- Is the summary of occupational injuries and illnesses posted February through April?

Recordkeeping

- Are all occupational injuries and illnesses, except minor injuries requiring only first aid, being recorded as required on the OSHA 300 log?
- Are employee medical records and records of employee exposure to hazardous substances or harmful physical agents up-to-date and in compliance with current OSHA standards?
- Are employee training records kept and accessible for review by employees, when required by OSHA standards?
- Have arrangements been made to maintain required records for the legal period of time for each specific type of record? (Some records must be maintained for at least 40 years.)
- Are operating permits and records up to date for such items as elevators, air pressure tanks and liquefied petroleum gas tanks?

Safety and Health Program

- Do you have an active safety and health program in operation that deals with general safety and health program elements as well as the management of hazards specific to your worksite?
- Is one person clearly responsible for the overall activities of the safety and health program?
- Do you have a working procedure for handling in-house employee complaints regarding safety and health?

Medical Services and First Aid

- Is there a hospital, clinic or infirmary for medical care in proximity of your workplace?
- If medical and first aid facilities are not in proximity of your workplace, is at least one employee on each shift currently qualified to render first aid?
- Have all employees who are expected to respond to medical emergencies as part of their work: (1) received first aid training; (2) had hepatitis B vaccination made available to them; (3) had appropriate training on procedures to protect them from bloodborne pathogens, including universal precautions; and (4) have available and understand how to use appropriate personal protective equipment to protect against exposure to bloodborne diseases?
- Where employees have had an exposure incident involving bloodborne pathogens, did you provide an immediate post-exposure medical evaluation and follow-up?
- Are medical personnel readily available for advice and consultation on matters of employees' health?
- Are emergency phone numbers posted?

Yes No NA

- Are first aid kits easily accessible to each work area, with necessary supplies available, periodically inspected and replenished as needed?
- Have first aid kit supplies been approved by a physician, indicating that they are adequate for a particular area or operation?
- Are means provided for quick drenching or flushing of the eyes and body in areas where corrosive liquids or materials are handled?

Fire Protection

- Is your local fire department well acquainted with your facilities, its location and specific hazards?
- If you have a fire alarm system, is it certified as required?
- If you have a fire alarm system, is it tested at least annually?
- If you have interior standpipes and valves, are they inspected regularly?
- If you have outside private fire hydrants, are they flushed at least once a year and on a routine preventive maintenance schedule?
- Are fire doors and shutters in good operating condition?
- Are fire doors and shutters unobstructed and protected against obstructions, including their counterweights?
- Are fire door and shutter fusible links in place?
- Are automatic sprinkler system water control valves, air and water pressure checked weekly/periodically as required?
- Is the maintenance of automatic sprinkler systems assigned to responsible people or to a sprinkler contractor?
- Are sprinkler heads protected by metal guards, when exposed to physical damage?
- Is proper clearance maintained below sprinkler heads?
- Are portable fire extinguishers provided in adequate number and type?
- Are fire extinguishers mounted in readily accessible locations?
- Are fire extinguishers recharged regularly and noted on the inspection tag?
- Are employees periodically instructed in the use of extinguishers and fire protection procedures?

Personal Protective Equipment and Clothing

- Are protective goggles or face shields provided and worn where there is any danger of flying particles or corrosive materials?
- Are approved safety glasses required to be worn at all times in areas where there is a risk of eye injuries such as punctures, abrasions, contusions or burns?
- Are employees who need corrective lenses (glasses or contacts) in working environments having harmful exposures required to wear only approved safety glasses or protective goggles or use other medically approved precautionary procedures?
- Are protective gloves, aprons, shields or other means provided and required where employees could be cut or where there is reasonably anticipated exposure to corrosive liquids, chemicals, blood or other potentially infectious materials? (See 29 CFR 1910.1030(b) for the definition of "other potentially infectious materials.")
- Are hard hats provided and worn where danger of falling objects exists?
- Are hard hats inspected periodically for damage to the shell and suspension system?

Yes No NA

- Is appropriate foot protection required where there is the risk of foot injuries from hot, corrosive or poisonous substances, falling objects, and crushing or penetrating actions?
- Are approved respirators provided for regular or emergency use where needed?
- Is all protective equipment maintained in a sanitary condition and ready for use?
- Do you have eyewash facilities and a quick drench shower within the work area where employees are exposed to injurious corrosive materials?
- Where special equipment is needed for electrical workers, is it available?
- Where food or beverages are consumed on the premises, are they consumed in areas where there is no exposure to toxic material, blood or other potentially infectious materials?
- Is protection against the effects of occupational noise exposure provided when sound levels exceed those of the OSHA noise standard?
- Are adequate work procedures, protective clothing and equipment provided and used when cleaning up spilled toxic or otherwise hazardous materials and liquids?
- Are there appropriate procedures in place for disposing of or decontaminating personal protective equipment contaminated with, or reasonably anticipated to be contaminated with, blood or other potentially infectious materials?

General Work Environment

- Are all worksites clean, sanitary and orderly?
- Are work surfaces kept dry or appropriate means taken to ensure the surfaces are slip-resistant?
- Are all spilled hazardous materials or liquids, including blood and other potentially infectious materials, cleaned up immediately and according to proper procedures?
- Are combustible scrap, debris and waste stored safely and removed from the worksite promptly?
- Is all regulated waste, as defined in the OSHA bloodborne pathogens standard (29 CFR 1910.1030), discarded according to federal, state and local regulations?
- Are accumulations of combustible dust routinely removed from elevated surfaces including the overhead structure of buildings?
- Are covered metal waste cans used for oily and paint-soaked waste?
- Are the minimum number of toilets and washing facilities provided?
- Are all toilets and washing facilities clean and sanitary?
- Are all work areas adequately illuminated?
- Are pits and floor openings covered or otherwise guarded?

Walkways

- Are aisles and passageways kept clear?
- Are aisles and walkways marked as appropriate?
- Are wet surfaces covered with nonslip materials?
- Are holes in the floor, sidewalk or other walking surfaces repaired properly, covered or otherwise made safe?
- Are spilled materials cleaned up immediately?
- Are changes of direction or elevation readily identifiable?

Yes No NA

- Are aisles or walkways that pass near moving or operating machinery, welding operations, or similar operations arranged so employees will not be subjected to potential hazards?
- Is adequate headroom provided for the entire length of any aisle or walkway?
- Are standard guardrails provided wherever aisle or walkway surfaces are elevated more than 30 inches above any adjacent floor or the ground?
- Are bridges provided over conveyors and similar hazards?

Floor and Wall Openings

- Are floor openings guarded by a cover, guardrail or equivalent on all sides (except at entrance to stairways or ladders)?
- Are toeboards installed around the edges of permanent floor openings (where people may pass below the opening)?
- Are skylight screens of such construction and mounting that they will withstand a load of at least 200 pounds?
- Is the glass in the windows, doors, glass walls, etc., which are subject to human impact, of sufficient thickness and type for the condition of use?
- Are grates or similar type covers over floor openings such as floor drains of such design that foot traffic or rolling equipment will not be affected by the grate spacing?

Stairs and Stairways

- Are standard stair rails or handrails on all stairways having four or more risers?
- Are all stairways at least 22 inches wide?
- Do stairs have landing platforms not less than 30 inches in the direction of travel and extend 22 inches in width at every 12 feet or less of vertical rise?
- Do stairs angle no more than 50 and no less than 30 degrees?
- Are stairs of hollow-pan type treads and landings filled to the top edge of the pan with solid material?
- Are step risers on stairs uniform from top to bottom?
- Are steps on stairs and stairways designed or provided with a surface that renders them slip resistant?
- Are stairway handrails located between 30 and 34 inches above the leading edge of stair treads?
- Do stairway handrails have at least 3 inches of clearance between the handrails and the wall or surface they are mounted on?
- Where doors or gates open directly on a stairway, is there a platform provided so the swing of the door does not reduce the width of the platform to less than 21 inches?
- Are stairway handrails capable of withstanding a load of 200 pounds, applied within 2 inches of the top edge, in any downward or outward direction?
- Where stairs or stairways exit directly into any area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees stepping into the path of traffic?
- Do stairway landings have a dimension measured in the direction of travel at least equal to the width of the stairway?
- Is the vertical distance between stairway landings limited to 12 feet or less?

Elevated Surfaces

- Are signs posted, when appropriate, showing the elevated surface load capacity?

Yes No NA

- Are surfaces elevated more than 30 inches above the floor or ground provided with standard guardrails?
- Are all elevated surfaces (beneath which people or machinery could be exposed to falling objects) provided with standard 4-inch toeboards?
- Is a permanent means of access and egress provided to elevated storage and work surfaces?
- Is required headroom provided where necessary?

Exiting or Egress

- Are all exits marked with an exit sign and illuminated by a reliable light source?
- Are the directions to exits, when not immediately apparent, marked with visible signs?
- Are doors, passageways or stairways that are neither exits nor access to exits and which could be mistaken for exits appropriately marked "NOT AN EXIT," "TO BASEMENT," "STOREROOM," etc.?
- Are exit signs provided with the word "EXIT" in lettering at least 5 inches high and the stroke of the lettering at least ½-inch wide?
- Are exit doors side-hinged?
- Are all exits kept free of obstructions?
- Are at least two means of egress provided from elevated platforms, pits or rooms where the absence of a second exit would increase the risk of injury from hot, poisonous, corrosive, suffocating, flammable or explosive substances?
- Are there sufficient exits to permit prompt escape in case of emergency?
- Are special precautions taken to protect employees during construction and repair operations?
- Is the number of exits from each floor of a building, and the number of exits from the building itself, appropriate for the building occupancy load?
- Are exit stairways that are required to be separated from other parts of a building enclosed by at least two-hour fire-resistive construction in buildings more than four stories in height, and not less than one-hour fire-resistive construction elsewhere?
- Where ramps are used as part of required exiting from a building, is the ramp slope limited to 1 foot vertical and 12 feet horizontal?
- Where exiting will be through frameless glass doors, glass exit doors, storm doors, etc., are the doors fully tempered and do they meet the safety requirements for human impact?

Exit Doors

- Are doors that are required to serve as exits designed and constructed so that the way of exit travel is obvious and direct?
- Are windows that could be mistaken for exit doors made inaccessible by means of barriers or railings?
- Are exit doors openable from the direction of exit travel without the use of a key or any special knowledge or effort when the building is occupied?
- Is a revolving, sliding or overhead door prohibited from serving as a required exit door?
- Where panic hardware is installed on a required exit door, will it allow the door to open by applying a force of 15 pounds or less in the direction of the exit traffic?
- Are doors on cold storage rooms provided with an inside release mechanism that will release the latch and open the door even if it's padlocked or otherwise locked on the outside?
- Where exit doors open directly onto any street, alley or other area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees stepping into the path of traffic?

Yes No NA

- Are doors that swing in both directions and are located between rooms where there is frequent traffic provided with viewing panels in each door?

Portable Ladders

- Are all ladders maintained in good condition, joints between steps and side rails tight, all hardware and fittings securely attached, and moveable parts operating freely without binding or undue play?
- Are nonslip safety feet provided on each ladder?
- Are nonslip safety feet provided on each metal or rung ladder?
- Are ladder rungs and steps free of grease and oil?
- Is it prohibited to place a ladder in front of doors opening toward the ladder except when the door is blocked open, locked or guarded?
- Is it prohibited to place ladders on boxes, barrels or other unstable bases to obtain additional height?
- Are employees instructed to face the ladder when ascending or descending?
- Are employees prohibited from using ladders that are broken, missing steps, rungs, or cleats, broken side rails, or other faulty equipment?
- Are employees instructed not to use the top step of ordinary stepladders as a step?
- When portable rung ladders are used to gain access to elevated platforms, roofs, etc., does the ladder always extend at least 3 feet above the elevated surface?
- Is it required that when portable rung or cleat type ladders are used, the base is so placed that slipping will not occur, or it is latched or otherwise held in place?
- Are portable metal ladders marked with signs reading “CAUTION—Do Not Use Around Electrical Equipment” or equivalent wording?
- Are metal ladders inspected for damage?
- Are the rungs of ladders uniformly spaced at 12 inches, center to center?

Hand Tools and Equipment

- Are all tools and equipment (both company- and employee-owned) used by employees at their work-place in good condition?

Compressed Gas Cylinders

- Are cylinders with a water weight capacity over 30 pounds equipped with means for connecting a valve protector device or with a collar or recess to protect the valve?
- Are cylinders legibly marked to clearly identify the gas contained?
- Are compressed gas cylinders stored in areas that are protected from external heat sources such as flame impingement, intense radiant heat, electric arcs or high temperature lines?
- Are cylinders located or stored in areas where they will not be damaged by passing or falling objects or subjected to tampering by unauthorized people?
- Are cylinders stored or transported in a manner to prevent them from creating a hazard by tipping, falling or rolling?
- Are cylinders containing liquefied fuel gas stored or transported in a position so that the safety relief device is always in direct contact with the vapor space in the cylinder?
- Are valve protectors always placed on cylinders when the cylinders are not in use or connected for use?
- Are all valves closed off before a cylinder is moved, when the cylinder is empty, and at the completion of each job?

Yes No NA

- Are low pressure fuel gas cylinders checked periodically for corrosion, general distortion, cracks or any other defect that might indicate a weakness or render it unfit for service?
- Does the periodic check of low pressure fuel gas cylinders include a close inspection of the cylinders' bottoms?

Environmental Controls

- Are all work areas properly illuminated?
- Are employees instructed in proper first aid and other emergency procedures?
- Are hazardous substances, blood and other potentially infectious materials that may cause harm by inhalation, ingestion, or skin absorption or contact identified?
- Are employees aware of the hazards involved with the various chemicals they may be exposed to in their work environment, such as ammonia, chlorine, epoxies and caustics?
- Is employee exposure to chemicals in the workplace kept within acceptable levels?
- Are the safest methods and products being used?
- Has there been a determination that noise levels in the facilities are within acceptable levels?
- Are steps being taken to use engineering controls to reduce excessive noise levels?
- Are caution labels and signs used to warn of hazardous substances (e.g., asbestos) and biohazards (e.g., bloodborne pathogens)?
- Are engineering controls examined and maintained or replaced on a scheduled basis?
- Is vacuuming with appropriate equipment used whenever possible rather than blowing or sweeping dust?
- Is personal protective equipment provided, used and maintained wherever required?
- Are there written standard operating procedures for the selection and use of respirators where needed?
- Are restrooms and washrooms kept clean and sanitary?
- Is all water provided for drinking, washing and cooking potable?
- Are all outlets for water not suitable for drinking clearly identified?
- Are employees' physical capacities assessed before being assigned to jobs requiring heavy work?
- Are employees instructed in the proper manner of lifting heavy objects?
- Where heat is a problem, have all fixed work areas been provided with spot cooling or air conditioning?
- Are exhaust stacks and air intakes so located that contaminated air will not be recirculated within a building or other enclosed area?
- Is equipment producing ultraviolet radiation properly shielded?
- Are universal precautions observed where occupational exposure to blood or other potentially infectious materials can occur and in all instances where differentiation of types of body fluids or potentially infectious materials is difficult or impossible?

Flammable and Combustible Materials

- Are combustible scrap, debris and waste materials (oily rags, etc.) stored in covered metal receptacles and removed from the worksite promptly?
- Is proper storage practiced to minimize the risk of fire, including spontaneous combustion?
- Are all connections on drums and piping vapor and liquid tight?

Yes No NA

- Are all flammable liquids kept in closed containers when not in use (e.g., parts cleaning tanks and pans)?
- Are bulk drums of flammable liquids grounded and bonded to containers during dispensing?
- Do storage rooms for flammable liquids have explosion-proof lights?
- Do storage rooms for flammable liquids have mechanical or gravity ventilation?
- Is liquefied petroleum gas stored, handled and used in accordance with safe practices and standards?
- Are "NO SMOKING" signs posted on liquefied petroleum gas tanks?
- Are liquefied petroleum storage tanks guarded to prevent damage from vehicles?

Yes No NA

- Are all solvent wastes and flammable liquids kept in fire-resistant covered containers until they are removed from the worksite?
- Is vacuuming used wherever possible rather than blowing or sweeping combustible dust?
- Are firm separators placed between containers of combustibles or flammables, when stacked one upon another, to ensure their support and stability?
- Are fuel gas cylinders and oxygen cylinders separated by distance, fire-resistant barriers, etc., while in storage?
- Are fire extinguishers selected and provided for the types of materials in areas where they are to be used?

Class A: Ordinary combustible material fires.

Class B: Flammable liquid, gas or grease fires.

Class C: Energized electrical equipment fires.

- Are appropriate fire extinguishers mounted within 75 feet of outside areas containing flammable liquids and within 10 feet of any inside storage area for such materials?
- Are extinguishers free from obstructions or blockage?
- Are all extinguishers serviced, maintained and tagged at intervals not to exceed one year?
- Are all extinguishers fully charged and in their designated places?
- Where sprinkler systems are permanently installed, are the nozzle heads so directed and arranged that water will not be sprayed into operating electrical switchboards and equipment?
- Are "NO SMOKING" signs posted where appropriate in areas where flammable or combustible materials are used or stored?
- Are safety cans used for dispensing flammable liquids at a point of use?
- Are all spills of flammable liquids cleaned up promptly?
- Are storage tanks adequately vented to prevent the development of excessive vacuum or pressure as a result of filling, emptying or atmosphere temperature changes?
- Are storage tanks equipped with emergency venting that will relieve excessive internal pressure caused by fire exposure?
- Are "NO SMOKING" rules enforced in areas involving storage and use of hazardous materials?

Hazardous Chemical Exposure

- Are employees trained in the safe handling practices of hazardous chemicals, such as acids and caustics?
- Are employees aware of the potential hazards involving various chemicals stored or used in the workplace, such as acids, bases, caustics, epoxies and phenols?

Yes No NA

- Is employee exposure to chemicals kept within acceptable levels?
- Are eyewash fountains and safety showers provided in areas where corrosive chemicals are handled?
- Are all containers such as vats and storage tanks labeled with their identity and hazards?
- Are all employees required to use personal protective clothing and equipment when handling chemicals (gloves, eye protection, respirators, etc.)?
- Are flammable or toxic chemicals kept in closed containers when not in use?
- Are chemical piping systems clearly marked as to their content?
- Where corrosive liquids are frequently handled in open containers or drawn from storage vessels or pipelines, are adequate means readily available for neutralizing or disposing of spills or overflows properly and safely?
- Have standard operating procedures been established and are they being followed when cleaning up chemical spills?
- Where needed for emergency use, are respirators stored in a convenient, clean and sanitary location?
- Are respirators intended for emergency use adequate for the various uses for which they may be needed?
- Are employees prohibited from eating in areas where hazardous chemicals are present?
- Is personal protective equipment provided, used and maintained whenever necessary?
- Are there written standard operating procedures for the selection and use of respirators where needed?
- If you have a respirator protection program, are your employees instructed on the correct usage and limitations of the respirators? Are the respirators NIOSH approved for this particular application? Are they regularly inspected and cleaned, sanitized and maintained?
- If hazardous substances are used in your processes, do you have a medical or biological monitoring system in operation?
- Are you familiar with the threshold limit values or permissible exposure limits of airborne contaminants and physical agents used in your workplace?
- Have control procedures been instituted for hazardous materials, where appropriate, such as respirators, ventilation systems and handling practices?
- Whenever possible, are hazardous substances handled in properly designed and exhausted booths or similar locations?
- Do you use general dilution or local exhaust ventilation systems to control dusts, vapors, gases, fumes, smoke, aerosols or mists that may be generated in your workplace?
- Do you monitor employees to make sure there are no complaints about dizziness, headaches, nausea, irritation or other discomfort when they use solvents or other chemicals?
- Do you watch for employee health problems such as dryness, irritation or sensitization of the skin?
- Have you considered the use of an industrial hygienist or environmental health specialist to evaluate your operation?
- Are materials that give off toxic, asphyxiant, suffocating or anesthetic fumes stored in remote or isolated locations when not in use?

Respiratory Protection Program

- In any workplace where respirators are necessary to protect the health of the employee or whenever respirators are required by the employer, has a written respiratory protection program with worksite-specific procedures been established and implemented? If NA, go to next section.

Yes No NA

The program must be updated as necessary to reflect those changes in workplace conditions that affect respirator use. You must include in the program the following provisions as applicable:

- Procedures for selecting respirators for use in the workplace.
- Medical evaluations of employees required to use respirators.
- Fit testing procedures for tight-fitting respirators.
- Procedures for proper use of respirators in routine and reasonably foreseeable emergency situations.
- Procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding and otherwise maintaining respirators.
- Procedures to ensure adequate air quality, quantity and flow of breathing air for atmosphere-supplying respirators.
- Training of employees in the respiratory hazards to which they are potentially exposed during routine and emergency situations.
- Training of employees in the proper use of respirators, including putting on and removing them, any limitations on their use, and their maintenance.
- Procedures for regularly evaluating the effectiveness of the program.

Hazardous Substances Communication

- Is there a list of hazardous substances used in your workplace?
- Is there a written hazard communication program dealing with safety data sheets (SDS), labeling and employee training?
- Is each container for a hazardous substance (including vats, bottles and storage tanks) labeled with product identity and a hazard warning (communication of the specific health hazards and physical hazards)?
- Is there a safety data sheet readily available for each hazardous substance used?
- Is there an employee training program for hazardous substances?

This program needs to include:

- An explanation of what an SDS is and how to use and obtain one.
- SDS contents for each hazardous substance or class of substances.
- Explanation of “right to know.”
- Identification of where employees can see the employer’s written hazard communication program and where hazardous substances are present in their work areas.
- Physical and health hazards of substances in the work area and specific protective measures to be used.
- Details of the hazard communication program, including how to use the labeling system and SDSs.

Bloodborne Pathogens

- If employees are exposed to blood or other potentially infectious material, is there a written exposure control plan? If NA, skip to the next section.

The employee training program on the bloodborne pathogens standard needs to contain the following elements:

- An accessible copy of the standard and an explanation of its contents.
- A general explanation of the epidemiology and symptoms of bloodborne diseases.
- An explanation of the modes of transmission of bloodborne pathogens.

Yes No NA

- An explanation of the employer's exposure control plan and the means by which employees can obtain a copy of the written plan.
- An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.
- An explanation of the use and limitations of methods that will prevent or reduce exposure, including appropriate engineering controls, work practices and personal protective equipment.
- Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment.
- An explanation of the basis for selection of personal protective equipment.
- Information on the hepatitis B vaccine.
- Information on the appropriate actions to take and people to contact in an emergency involving blood or other potentially infectious materials.
- An explanation of the procedure to follow if an exposure incident occurs, including the methods of reporting the incident and the medical follow-up that will be made available.
- Information on post-exposure evaluations and follow-up.
- An explanation of signs, labels and color-coding.

Are employees trained in the following:

- How to recognize tasks that might result in occupational exposure?
- How to use work practice and engineering controls and personal protective equipment and to know their limitations?
- How to obtain information on the types, selection, proper use, location, removal, handling, decontamination and disposal of personal protective equipment?
- Who to contact and what to do in an emergency?

Electrical

- Do you specify compliance with OSHA standards for all contract electrical work?
- Are employees instructed to make preliminary inspections and/or appropriate tests to determine what conditions exist before starting work on electrical equipment or lines?
- Are electrical appliances such as vacuum cleaners, polishers and vending machines grounded?
- Do extension cords being used have a grounding conductor?
- Are multiple-plug adapters prohibited?
- Are ground-fault circuit interrupters installed on each temporary 15 or 20 ampere, 120 volt AC circuit at locations where construction, demolition, modifications, alterations or excavations are being performed?
- Are all temporary circuits protected by suitable disconnecting switches or plug connectors at the junction with permanent wiring?
- Do you have electrical installations in hazardous dust or vapor areas? If so, do they meet the National Electrical Code (NEC) for hazardous locations?
- Are exposed wiring and cords with frayed or deteriorated insulation repaired or replaced promptly?
- Are flexible cords and cables free of splices or taps?
- Are clamps or other securing means provided on flexible cords or cables at plugs, receptacles, tools and equipment, and is the cord jacket securely held in place?

Yes No NA

- Are all cord, cable and raceway connections intact and secure?
- In wet or damp locations, are electrical tools and equipment appropriate for the use or location or otherwise protected?
- Are metal measuring tapes, ropes, handlines or similar devices with metallic thread woven into the fabric prohibited where they could come in contact with energized parts of equipment or circuit conductors?
- Is the use of metal ladders prohibited in areas where the ladder or the person using the ladder could come in contact with energized parts of equipment, fixtures or circuit conductors?
- Are all disconnecting switches and circuit breakers labeled to indicate their use or equipment served?
- Are disconnecting means always opened before fuses are replaced?
- Do all interior wiring systems include provisions for grounding metal parts of electrical raceways, equipment and enclosures?
- Are all electrical raceways and enclosures securely fastened in place?
- Are all energized parts of electrical circuits and equipment guarded against accidental contact by approved cabinets or enclosures?
- Is sufficient access and working space provided and maintained about all electrical equipment to permit ready and safe operations and maintenance?
- Are all unused openings (including conduit knockouts) in electrical enclosures and fittings closed with appropriate covers, plugs or plates?
- Are electrical enclosures such as switches, receptacles and junction boxes provided with tight-fitting covers or plates?
- Are disconnecting switches for electrical motors in excess of 2 horsepower capable of opening the circuit when the motor is in a stalled condition without exploding? (The horsepower rating of switches must be equal to or in excess of the motor's horsepower rating.)

Noise

- Does every area in the workplace have a continuous noise level that does not exceed 85 dBA? If yes, skip to the next set of questions.
- Is there an ongoing preventive health program to educate employees in safe levels of noise, exposures, effects of noise on their health and the use of personal protection?
- Have work areas where noise levels make voice communication between employees difficult been identified and posted?
- Are noise levels being measured using a sound level meter or octave band analyzer and are records being kept?
- Have engineering controls been used to reduce excessive noise levels? Where engineering controls are determined to not be feasible, are administrative controls (such as worker rotation) being used to minimize individual employee exposure to noise?
- Is approved hearing protective equipment (noise attenuating devices) available to every employee working in noisy areas?
- If you use ear protectors, are employees properly fitted and instructed in their use?
- Are employees in high noise areas given periodic audiometric testing to ensure that you have an effective hearing protection system?

Yes No NA

Control of Harmful Substances by Ventilation

- Is the volume and velocity of air in each exhaust system sufficient to gather the dusts, fumes, mists, vapors or gases to be controlled and to convey them to a suitable point of disposal?
- Are exhaust inlets, ducts and plenums designed, constructed and supported to prevent collapse or failure of any part of the system?
- Are clean-out ports or doors provided at intervals not to exceed 12 feet in all horizontal runs of exhaust ducts?
- Are proper safeguards taken to ensure that where two or more different types of operations are being controlled through the same exhaust system, the combination of substances being controlled do not constitute a fire, explosion or chemical reaction hazard in the duct?
- Is adequate makeup air provided to areas where exhaust systems are operating?
- Is the source point for makeup air located so that only clean, fresh air, which is free of contaminants, will enter the work environment?
- Where two or more ventilation systems are serving a work area, is their operation such that one will not offset the function of the other?

Sanitizing Equipment and Clothing

- Is personal protective clothing or equipment that employees are required to wear or use of a type capable of being cleaned easily and disinfected?
- Are employees prohibited from interchanging personal protective clothing or equipment unless it has been properly cleaned?
- Are machines and equipment that process, handle or apply materials that could be injurious to employees cleaned and/or decontaminated before being overhauled or placed in storage?
- Are employees prohibited from smoking or eating in any area where contaminants that could be injurious if ingested are present?
- When employees are required to change from street clothing into protective clothing, is a clean change room with separate storage facility for street and protective clothing provided?
- Are employees required to shower and wash their hair as soon as possible after a known contact has occurred with a carcinogen?
- When equipment, materials or other items are taken into or removed from a carcinogen-regulated area, is it done in a manner that will not contaminate nonregulated areas or the external environment?

Monthly Inspection Checklist

Floors and floor openings	Yes	No	N/A
Are floors in good condition, free of broken and pitted surfaces?			
Are floor coverings, such as carpets and mats, in good condition?			
Are floor openings properly protected?			
Are stairways equipped with appropriate handrails, guardrails?			
Check floors for slippery conditions—a major cause of falls?			

Aisles and passageways	Yes	No	N/A
Are aisles and passageways kept clear?			
Are they free of tripping hazards?			

Electrical	Yes	No	N/A
Are extension cords used appropriately, i.e., <i>not</i> in place of permanent wiring?			
Are electrical cords stretched across the floor without appropriate floor covers?			
Are electrical cords free from damage (exposed wires, missing grounding pins)?			
Are portable electrical tools grounded?			

Housekeeping	Yes	No	N/A
Is the department clean and orderly?			
Are materials properly stored out of walkways or paths to exits?			

Storage of materials	Yes	No	N/A
Are materials and supplies properly stacked—within recommended heights?			
Are flammable materials properly handled and stored?			
Are all chemical containers appropriately labeled?			

Lighting	Yes	No	N/A
Is lighting in work and storage areas, passageways and stairways satisfactory?			
Check for burned out bulbs.			
Check light guarding and reflectors.			

Ventilation	Yes	No	N/A
Is there good general ventilation?			
Is there adequate local ventilation to control possible health hazards?			

Ladders	Yes	No	N/A
Are portable ladders of standard construction and in good condition?			
Are fixed ladders of standard construction and securely fastened?			

Fire extinguishers	Yes	No	N/A
Are enough fire extinguishers of the right type available and easily accessible?			
Is all fire suppressant equipment in proper working order?			
Are fire extinguishers properly mounted?			
Are fire extinguishers inspected on a monthly and annual?			

Exits	Yes	No	N/A
Are emergency exits adequate in number and location and properly identified?			
Are any exits blocked or locked, preventing escape to the outside?			

OSH Publications

We provide a variety of OSH publications. These include general industry and construction regulations, industry guides that cover different OSH topics, quick cards, fact sheets and brochures that cover a wide variety of serious safety and health workplace hazards. Workplace labor law posters are available free of charge. To obtain publications, call toll free at 1-800-NC-LABOR (1-800-625-2267) or direct at 919-807-2875. You may view the list of publications and also download many of them at **www.nclabor.com/pubs.htm**.

Occupational Safety and Health (OSH) Sources of Information

You may call 1-800-NC-LABOR (1-800-625-2267) to reach any division of the N.C. Department of Labor; or visit the NCDOL home page on the World Wide Web: <http://www.nclabor.com>.

Occupational Safety and Health Division

Mailing Address:
1101 Mail Service Center
Raleigh, NC 27699-1101
Local Telephone: 919-807-2900 Fax: 919-807-2856

Physical Location:
111 Hillsborough St.
(Old Revenue Building, 3rd Floor)

For information concerning education, training, interpretations of occupational safety and health standards, and OSH recognition programs contact:

Education, Training and Technical Assistance Bureau

Mailing Address:
1101 Mail Service Center
Raleigh, NC 27699-1101
Telephone: 919-807-2875 Fax: 919-807-2876

Physical Location:
111 Hillsborough St.
(Old Revenue Building, 4th Floor)

For information concerning occupational safety and health consultative services contact:

Consultative Services Bureau

Mailing Address:
1101 Mail Service Center
Raleigh, NC 27699-1101
Telephone: 919-807-2899 Fax: 919-807-2902

Physical Location:
111 Hillsborough St.
(Old Revenue Building, 3rd Floor)

For information concerning migrant housing inspections and other related activities contact:

Agricultural Safety and Health Bureau

Mailing Address:
1101 Mail Service Center
Raleigh, NC 27699-1101
Telephone: 919-807-2923 Fax: 919-807-2924

Physical Location:
111 Hillsborough St.
(Old Revenue Building, 2nd Floor)

For information concerning occupational safety and health compliance contact:

Safety and Health Compliance District Offices

Raleigh District Office (3801 Lake Boone Trail, Suite 300, Raleigh, NC 27607)
Telephone: 919-779-8570 Fax: 919-420-7966

Asheville District Office (204 Charlotte Highway, Suite B, Asheville, NC 28803-8681)
Telephone: 828-299-8232 Fax: 828-299-8266

Charlotte District Office (901 Blairhill Road, Suite 200, Charlotte, NC 28217-1578)
Telephone: 704-665-4341 Fax: 704-665-4342

Winston-Salem District Office (4964 University Parkway, Suite 202, Winston-Salem, NC 27106-2800)
Telephone: 336-776-4420 Fax: 336-767-3989

Wilmington District Office (1200 N. 23rd St., Suite 205, Wilmington, NC 28405-1824)
Telephone: 910-251-2678 Fax: 910-251-2654

To make an OSH Complaint, **OSH Complaint Desk:** 919-807-2796

For statistical information concerning program activities contact:

Planning, Statistics and Information Management Bureau

Mailing Address:
1101 Mail Service Center
Raleigh, NC 27699-1101
Telephone: 919-807-2950 Fax: 919-807-2951

Physical Location:
111 Hillsborough St.
(Old Revenue Building, 2nd Floor)

For information about books, periodicals, vertical files, videos, films, audio/slide sets and computer databases contact:

N.C. Department of Labor Library

Mailing Address:
1101 Mail Service Center
Raleigh, NC 27699-1101
Telephone: 919-807-2850 Fax: 919-807-2849

Physical Location:
111 Hillsborough St.
(Old Revenue Building, 5th Floor)

N.C. Department of Labor (Other than OSH)

1101 Mail Service Center
Raleigh, NC 27699-1101
Telephone: 919-733-7166 Fax: 919-733-6197