



Safety and Training Procedures Manual

Wilkes Community College

January 2024

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Introduction

The safety of all Wilkes Community College employees, students, and visitors is of the utmost importance. The administration strongly supports and encourages the use of safe practices and the exercise of all possible precautions for the prevention of accidents and deterrence of crimes. It requires assessment and reports documenting compliance with all college policies, procedures, and external regulations. You may also refer to WCC's [Policies and Procedures](#) for more information located on www.wilkescc.edu.

This manual serves as a reference and includes valuable information furnished by North Carolina Occupational Safety and Health Administration (OSHA) and other external agencies that have an interest in campus safety and security. It has been prepared and will be reviewed yearly by the college's Human Resources/Safety office.

Each supervisor and employee are expected to be familiar with those activities within his/her scope of work or work areas that present a safety hazard or concern and, as appropriate, to identify, secure and use personal protective equipment (PPE), and training. It is everyone's responsibility to use safe practices and always use safety equipment if required. Most accidents resulting in injury are the result of the failure to use safe practices. When training is required, the Human Resource/Safety Office of the college stands ready to assist.

The Human Resources/Safety Office will monitor compliance with regulations, conduct assessments and maintain accurate records as deemed appropriate or as required. Contact the Human Resources/Safety Office at (336)838-6172 or (336)838-6422 if you have any questions or need assistance with safety matters.

Required Safety Trainings

Bloodborne Pathogens

Orientation of new employees, then annually thereafter (November)

Who: all college employees who may

Electrical Safety and Arc Flash Awareness

Orientation of new employees, then every three years thereafter

Who: maintenance, construction, motor pool, shop/lab instructors

Evacuation/Emergency Response Plan

Orientation of new employees and students, then each fall semester

Who: all college employees and students

Hand and Power Equipment/Machine Guarding

Orientation of new employees, then whenever a new physical or health hazard is introduced

Who: construction, grounds, maintenance, motor pool, shop/lab instructors

Hazard Communication

Orientation of new employees, then whenever a new physical or health hazard is introduced

Who: all college employees

Hearing Protection

Orientation of new employees, then annually thereafter (November)

Who: construction, custodian, grounds, maintenance, motor pool, shop/lab instructors

Ladder Safety

Orientation of new employees

Who: construction, custodian, grounds, IT, maintenance, shipping/receiving, shop/lab instructors

Lock Out/Tag Out

Orientation of new employees, then annually thereafter (November)

Who: construction, maintenance, shop/lab instructors

Powered Industrial Trucks

Orientation of new employees, then every three years thereafter

Who: shipping/receiving, grounds, construction, maintenance, motor pool, shop/lab instructors

Personal Protective Equipment

Orientation of new employees

Who: construction, custodian, food service, grounds, maintenance, motor-pool, shipping/receiving, shop/lab instructors

Respiratory Protection

Orientation of new employees, then annually thereafter (November)

Who: construction, custodian, grounds, maintenance, motor pool, shop/lab instructors

Welding

Orientation of new employees

Who: construction, motor pool, shop/lab welding instructors

Top 10 Most Frequently Cited Standards for Fiscal Year 2022 (Oct.1, 2021, to Sept. 30, 2022)

The following is a list of the top 10 most frequently cited standards following inspections of worksites by federal OSHA for all industries. OSHA publishes the list to alert employers about these commonly cited standards so they can take steps to find and fix recognized hazards addressed in these and other standards before OSHA shows up. Workers suffer preventable injuries, illnesses, and deaths related to the hazards addressed in these standards.

1. **Fall Protection, construction** ([29 CFR 1926.501](#)) [[related safety resources](#)]
2. **Hazard Communication, general industry** ([29 CFR 1910.1200](#)) [[related safety resources](#)]
3. **Ladders, construction** ([29 CFR 1926.1053](#)) [[related safety resources](#)]
4. **Respiratory Protection, general industry** ([29 CFR 1910.134](#)) [[related safety resources](#)]
5. **Scaffolding, construction** ([29 CFR 1926.451](#)) [[related safety resources](#)]
6. **Control of Hazardous Energy (lockout/tagout), general industry** ([29 CFR 1910.147](#)) [[related safety resources](#)]
7. **Powered Industrial Trucks, general industry** ([29 CFR 1910.178](#)) [[related safety resources](#)]
8. **Fall Protection Training, construction** ([29 CFR 1926.503](#)) [[related safety resources](#)]
9. **Eye and Face Protection, construction** ([29 CFR 1926.102](#)) [[related safety resources](#)]
10. **Machinery and Machine Guarding, general industry** ([29 CFR 1910.212](#)) [[related safety resources](#)]

To search an OSHA standard, see this webpage: [OSHA Law and Regulations](#)



Procedures to Follow for Student Incident

Faculty/Staff should notify the cashier of the Business Office (ext. 6519) within one business day of any student incident that occurs on college property, clinical site, or off-site course location.

The student must complete the WCC Student Incident Report form and submit it to the Business Office as soon as possible. To be reimbursed for payments made, the student should also complete and mail the Student Insurance Claim Form, along with their medical bills, to the insurance company's address, located on the back of the form. Students are encouraged to report any acute medical condition to the Registrar's Office and to their instructors.

All student incident reporting forms are available in the Business Office or on the iNsider under Forms and Resources >Student Incident Procedures and Forms.

If a student suffers a life-threatening injury, proceed to call 911.

Students with illness or injury should be referred to their family physician. If they do not have a family physician, below is a list of available providers according to the campus or class location.

Wilkes Campus

FastMed Urgent Care

1903 Addison Avenue
Wilkesboro, NC 28697
Phone: (336) 667-2710

Alleghany Center:

Alleghany Family Medicine

233 Doctors Street
Sparta, NC 28675
Phone: (336) 372-5606

Ashe Campus:

Mountain Family Care Center

200 Hospital Ave
Jefferson, NC 28640
Phone: (336) 846-6322

Procedures to Follow for Employee Incident

Contact your supervisor and Sherry Cox (ext. 6422), Amanda Blevins (ext. 6172), or Devin Royal (ext. 6421) in Human Resources as soon as possible if an accident happens.

If an employee is injured at work and is not life threatening, but requires medical attention, the employee must complete a North Carolina Employee Incident Report form. The employee must deliver the completed form to Human Resources immediately. Human Resources will schedule an appointment with our worker's compensation provider. Employees will also be required to do a drug screen.

If an employee suffers life threatening injury and it is an **Emergency**, the employee needs to be taken to the emergency room or proceed to call 911 if an ambulance is needed.

The following providers are the approved worker's compensation provider for Wilkes Community College according to the campus location:

Wilkes Campus Employees:

FastMed Urgent Care

1903 Addison Avenue
Wilkesboro, NC 28697
Phone: (336) 667-2710

Alleghany Center Employees:

Alleghany Family Practice

214 Doctors Street
Sparta, NC 28675
Phone: (336) 372-5606

Ashe Campus Employees:

Mountain Family Care Center

200 Hospital Ave
Jefferson, NC 28640
Phone: (336) 846-6322

In the event that no one is available in the Human Resources department to make an appointment for you, please contact the provider above based on your campus location to set up the appointment. It is a requirement to have a drug screen post an accident.

Disposal of Contaminated Needles and Blood Tube Holders

Sharps

1. Only disposable needles will be used at WCC and whenever applicable, safety needle devices will be purchased.
2. Contaminated sharps will be discarded immediately or as soon as possible in containers which are closable, puncture-resistant, leak-proof on the sides and bottom, and:
 - labeled with the international biological hazard symbol and the wording "BIOHAZARD", or
 - red containers.
3. The sharps containers will be easily accessible to personnel and located as close as possible to the areas where sharps are used.
4. The sharps containers will be maintained upright throughout use, replaced routinely and not be filled past the max fill line on the container.
5. During replacement or removal from the work area, the sharps containers will be closed to prevent the spillage or protrusion of contents during handling, storage, transport, or shipping. The sharps containers will be placed in a secondary container if leakage is possible.

Hazard Communication Safety Data Sheets (SDS)

All Wilkes Community College employees are required to be trained in the use of the Safety Data Sheet (SDS) program. The Vector Solutions SDS and Chemical Management program contains hazard information and protective measures to take while using any chemical. Any chemical used at Wilkes Community College will have a Safety Data Sheet and QR code poster in all locations that chemicals are stored or used.

A Safety Data Sheet (SDS) contains the following information:

- Section 1. Identification
- Section 2. Hazard(s) identification
- Section 3. Composition/information on ingredients
- Section 4. First-aid measures
- Section 5. Fire-fighting measures
- Section 6. Accidental release measures
- Section 7. Handling and storage
- Section 8. Exposure controls/personal protection
- Section 9. Physical and chemical properties
- Section 10. Stability and reactivity
- Section 11. Toxicological information
- Section 12. Ecological information
- Section 13. Disposal considerations
- Section 14. Transport information
- Section 15. Regulatory information
- Section 16. Other information

Pictograms and Hazards:

<p>Health Hazard</p>  <ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity 	<p>Flame</p>  <ul style="list-style-type: none"> • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides 	<p>Exclamation Mark</p>  <ul style="list-style-type: none"> • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)
<p>Gas Cylinder</p>  <ul style="list-style-type: none"> • Gases Under Pressure 	<p>Corrosion</p>  <ul style="list-style-type: none"> • Skin Corrosion/ Burns • Eye Damage • Corrosive to Metals 	<p>Exploding Bomb</p>  <ul style="list-style-type: none"> • Explosives • Self-Reactives • Organic Peroxides
<p>Flame Over Circle</p>  <ul style="list-style-type: none"> • Oxidizers 	<p>Environment (Non-Mandatory)</p>  <ul style="list-style-type: none"> • Aquatic Toxicity 	<p>Skull and Crossbones</p>  <ul style="list-style-type: none"> • Acute Toxicity (fatal or toxic)

Wilkes Community College

For the safety of our students and staff, Safety Data Sheets (SDS) for all chemicals at this location can be accessed online using the QR Code or [link below](#).



Construction Safety Procedures Overview

With any construction program taking place at Wilkes Community College, procedures will be followed by a general contractor, prime contractor, or any other entity to ensure that all employers provide adequate protection for their employee's safety. There will be a designated competent person responsible for implementation and monitoring of the project safety and health plan that can identify existing and predictable hazards and has the authority to take prompt corrective measures. There will be a project safety and health program/plan that complies with OSHA STANDARD 1926 Subpart C and addresses the following:

1. Project Safety Analysis at the start of construction and at critical stages that describes the sequence, procedure, and responsible individuals for safe construction.
2. Identification of work/activities requiring planning, design, inspection or supervision by an engineer, competent person or other professional.
3. Evaluation/monitoring of subcontractors to determine conformance with the Project Plan. (The Project Plan may be utilized by subcontractors).
4. Supervisor and employee training according to the Project Plan including recognition, reporting and evidence of hazards, and applicable standards.
5. Procedures for controlling hazardous operations such as: cranes, scaffolding, -trenches, confined spaces, hot work, hazardous materials, leading edges, etc.
6. Documentation of training, permits, hazard reports, inspections, uncorrected hazards, incidents and near misses.
7. Employee involvement in hazard analysis, prevention, avoidance, correction, and reporting.
8. Project emergency response plan.

Supervisors should confirm that the plan has been implemented to address the four leading hazards: falls, struck by objects, caught in/between objects and electrical hazards are identified and corrected with preventive measures instituted in a timely manner and that employees are knowledgeable of the project safety and health plan, avoidance of hazards, applicable standards and their rights and responsibilities.

Ladder Safety

- When ascending or descending, the climber must face the ladder.
- Portable ladders are designed as a one-man working ladder based on a 200-pound load and will be used accordingly.
- Portable rung and cleat ladders will be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder (the length along the ladder between the foot and the top support).
- Ladders must extend three (3) feet above the point of support of eaves, gutters, or roof line and should be tied off.
- The ladder will be placed as to prevent slipping, or it will be lashed, or held in position. The ladder base section must be placed with a secure footing.
- Employees will equip all portable rung ladders with nonslip bases when there is a hazard of slipping. However, nonslip bases are not intended as a substitute for care in safely placing, lashing, or holding a ladder that is being used on oily, metal, concrete, or slippery surfaces.
- The top of the ladder must be placed with the two rails supported, unless equipped with a single support attachment.
- On two-section extension ladders, the minimum overlap for the two sections in use will be according to OSHA specifications.
- Portable rung ladders with reinforced rails will be used only with the metal reinforcement on the underside.
- The bracing on the back legs of step ladders is designed solely for increasing stability and not for climbing.
- Ladders for which dimensions are specified should not be used by more than one man at a time nor with ladder jacks and scaffold planks where use by more than one man is anticipated.
- Ladders with broken or missing steps, rungs, or cleats, broken side rails, or other faulty equipment must not be used.
- Ladders made by fastening cleats across a single rail will not be used.
- Tops of the ordinary types of stepladders will not be used as steps.
- Middle and top sections of sectional or window cleaner's ladders will not be used for bottom section unless the user equips them with safety shoes.
- Ladders will be always maintained in good usable condition.
- The joint between the steps and side rails is kept tight, all hardware and fittings are securely attached, and the movable parts operate freely without binding or undue play.
- Metal bearings of locks, wheels, pulleys, etc., will be frequently lubricated.
- Safety feet and other auxiliary equipment will be kept in good condition to insure proper performance.
- Ladders which have developed defects will be withdrawn from service for repair or destruction and tagged or marked as *Dangerous, Do Not Use*.
- If ladders are exposed to oil and grease, equipment will be cleaned and kept free of oil, grease, or slippery materials.

Ladders will NOT be:

- Be used in a horizontal position as platforms, runways, or scaffolds.
- Placed in front of doors opening toward the ladder unless the door is blocked open, locked, or guarded.
- Placed on boxes, barrels, or other unstable bases to obtain additional height.
- Tied or fastened together to provide longer sections. They must be equipped with the hardware fittings necessary if the manufacturer endorses extended uses.
- Used to gain access to a roof unless the top of the ladder extends at least 3 feet above the point of support, at eave, gutter, or roofline.
- Used as a brace, skid, guy or gin pole, gangway, or for other uses than that for which they were intended, unless specifically recommended for use by the manufacturer.

Tool & Machinery Safety Procedures

Chainsaw Safety

The Occupational Health & Safety Administration (OSHA) requires that any employee who uses a chain saw while cutting trees or cleaning debris, should wear the following personal protective equipment (PPE).

- Head protection, such as a hard hat
- Hearing protection sufficient to reduce noise exposure to 90 decibels or less
- Eye/Face Protection such as safety glasses
- Appropriate protective footwear per OSHA standards
- Leg protection such as work pants or chaps
- Work gloves
- Fall protection as necessary

Work Area Safety

- Ensure the area is marked and that there are no people in the immediate area. Other workers should be twice as far as the height of the trees being felled.
- Identify and clear any obstacles that may interfere with stable footing, cutting, or impede retreat/movement paths.
- Identify electrical lines in and near the work area.
- Identify “hangers” and “widow-makers”— branches that may dislodge and fall into the work area from above.

Before Starting the Chainsaw

- Check controls, chain tension and all bolts and handles to ensure they are functioning properly and adjusted according to the manufacturer’s instructions.
- Ensure the chainsaw engine is the appropriate size for the project.
- Fuel the saw at least 10 feet away from ignition sources.
- Check the fuel container to ensure it:
 - Is metal or plastic
 - Does not exceed 5 gallons in capacity
 - Is approved by the Underwriters Laboratory, FM Approvals (FM), or the Department of Transportation (DOT)
- Ensure electric chainsaws are tested and certified by a Nationally Recognized Testing Laboratory (NRTL). Extension cords shall be sized according to the chainsaw manufacturer’s instructions.
- Check that all safety devices are working properly.
- Do not operate a chainsaw that is damaged or has disengaged safety devices.
- Look for nails, spikes, or other metal objects prior to cutting.
- Clear away dirt, debris, small tree limbs, and rocks from the chainsaw’s path.
- Never work alone.
- Use proper personal proactive equipment (PPE).

Operate Within Your Skill Level

Accidents can happen when chainsaw operators perform tasks that are beyond their capabilities or training level. Higher risk operations may include:

- Trees on unstable ground or steep slopes.
- Trees with a heavy lean. Trees with stem or root rot.
- Trees known to split.
- Operating a chainsaw above shoulder height or above ground level, such as from a ladder or tree.

Machine Equipment Safety & Guarding

It is the policy of this company to permit only trained and authorized employees to operate machinery, tools, or equipment at any time. This policy is applicable to:

- Daily operators of machinery, tools, and equipment; and
- those who only occasionally have cause to use machinery, tools, or equipment.

Hand tools must be inspected prior to use to ensure that:

- For tools with jaws, jaws are not sprung to the point of slippage.
- For impact tools, they are free of mushroom heads.
- For tools with wooden handles, the handles are free of splinters or cracks and are tight in the tool.
- The tool is otherwise safe for use.

Any machine or power-operated tool, function, or process which may cause injury will be guarded. All permanent guards are securely attached in good working order and all removable guards are in place on the machine or equipment before starting use. Guards meet these minimum general requirements:

- Prevent contact - The guards prevent hands, arms, or any part of an employee's body or clothing from making contact with dangerous moving parts.
- Secure - Guards are not easy to remove or alter. Guards and safety devices are made of durable material that will withstand the conditions of normal use. They are firmly secured to the machine.
- Protect from falling objects - The guards ensure that no objects can fall into moving parts.
- Create no new hazards - If a guard creates a hazard of its own such as shear point, a jagged edge, or an unfinished surface which can cause a laceration, then employees must not use the piece of machinery or equipment.

If a guard is defective, damaged, or in any way does not meet the requirements of these procedures, employees may not use the machine, and must immediately notify the department and the Human Resources/Safety Coordinator.

Where the operation of a machine or accidental contact with it can injure employees in the vicinity, the hazard is either controlled or eliminated.

Employees must locate and put on necessary and appropriate personal protective equipment (PPE) for use with the machinery or equipment before beginning use. PPE is provided by the department.

Employees must make sure that work areas are well-lit, dry, and clean before beginning work. Sawdust, paper, and oily rags are a fire hazard and can damage machinery and equipment.

Employees must change clothing or take off jewelry that could become entangled in the machinery or equipment they are to use.

Only qualified personnel may install or repair equipment. Employees must notify the department and the Human Resources/Safety Coordinator if machinery or equipment is in need of any type of repair.

If a lock or tag is in place on a piece of machinery or equipment, it may not be removed, and the machinery or equipment may not be used.

Operating Procedures

Employees may not remove a guard for any reason while operating any piece of machinery or equipment. All necessary personal protective equipment (PPE) is worn while the machinery or equipment is running.

If an employee is distracted or unable to focus on the work with the machinery or equipment, they must stop work with that machinery or equipment.

Upon finishing with a piece of equipment, tool, or machine, basic maintenance must be performed. It should be kept sharp, oiled, and stored properly, as appropriate.

Problem equipment must be immediately reported the department and Human Resources/Safety Coordinator so it can be repaired or replaced.

Employees must always use the proper piece of machinery or equipment for the job.

Electric cables and cords are kept clean and free from kinks. Equipment may never be carried by its cord.

Powered Industrial Truck (Forklift Safety)

Operating Procedures

Powered industrial trucks can create certain hazards that only safe operation can prevent. That's why we have created sets of operating procedures. Our operating procedures follow.

Driving

Driving a powered industrial truck is fundamentally different than driving a car or other trucks. In fact, powered industrial trucks:

- Are usually steered by the rear wheels,
- Steer more easily loaded than empty,
- Are driven in reverse as often as forward,
- Are often steered with one hand, and
- Have a center of gravity toward the rear, shifting to the front as forks are raised.

Unlike cars, some powered industrial trucks have a greater chance of tipping over when suddenly turned. Because of the design of powered industrial trucks, they have a very short rear wheel swing. This means that, at high speeds, sudden turns can tip them and could result in serious injury and damage. Speed can cause the center of gravity to shift dramatically. Similarly, speeding over rough surfaces can cause tipping.

Although structurally different than cars, powered industrial trucks, like cars, can collide with property and people. Therefore, it is our policy for all operators to follow these driving procedures:

- Always operate the vehicle according to the manufacturer's instructions.
- Always wear a seatbelt when the forklift has one.
- Never exceed the rated load and ensure it is stable and balanced.
- Do not raise or lower the load while traveling.
- Keep a safe distance from platform and ramp edges.
- Be aware of other vehicles in the work area.
- Have clear visibility of the work area and ensure you have enough clearance when raising, loading, and operating a forklift.
- Use proper footing and the handhold, if available, when entering the lift.
- Use horns at cross aisles and obstructed areas.
- Watch for pedestrians and observe the speed limit.
- Do not give rides or use the forks to lift people.

Load Lifting and Carrying

Powered industrial trucks can lift only so much. Each truck has its own load capacity, which is indicated on the rating plate. Powered industrial trucks also have three-point suspension that forms an imaginary triangle from the left front wheel to the right front wheel to the point between the two back wheels. The center of gravity for a powered industrial truck must lie somewhere within this triangle or else the truck will tip over. The load and its position on the forks, as well as traveling speed and slopes, all affect the center of gravity. Loads, themselves, have gravity with which to contend. Loads need special care so that they do not fall.

Fuel Handling and Storage

Some of our powered industrial trucks operate with highly flammable fuels.

The storage and handling of liquid fuels, including gasoline and diesel fuel are done in accordance with NFPA Flammable and Combustible Liquids Code (NFPA 30-1969).

The storage and handling of liquefied petroleum gas fuel is done in accordance with NFPA Storage and Handling of Liquefied Petroleum Gases (NFPA 58-1969).

Safety Training

- Only trained and certified workers may operate a forklift.
- Ensure operators are trained on types of trucks in use.

Carbon Monoxide Awareness

Powered industrial trucks with internal combustion engines produce carbon monoxide (CO), an odorless, colorless, and deadly gas produced by the incomplete burning of any material that contains carbon. These materials include gasoline, natural gas, propane, coal, and wood. The most common source of CO is the internal combustion engine. Trucks, cars, forklifts, floor polishers, pressure washers, or any other machine powered by fossil fuels generates CO.

If inhaled, CO restricts the ability of your blood system to carry oxygen to the body tissues that need it. Overexposure combined with less oxygen results in carbon monoxide poisoning. Mild poisoning can result in headaches, tightness in the chest, dizziness, drowsiness, inattention, fatigue, flushed face, or nausea. If you continue exposure lack of coordination, confusion, weakness, or loss of consciousness may result. A heart condition, smoking, taking drugs or alcohol, and pregnancy can aggravate CO poisoning. Physical activity, too, can make a situation worse. That's because your body needs more oxygen to exert itself. Severe poisoning can kill you within minutes, sometimes without warning symptoms. The more CO there is in the air and the longer the exposure, the greater the danger.

Pedestrians

Because powered industrial trucks are typically used near pedestrians, we require both pedestrians and powered industrial truck operators to watch out for each other.

Wheel Safety

Multi Piece Rim Wheels:

Safe operating procedure - multi-piece rim wheels. The employer shall establish a safe operating procedure for servicing multi-piece rim wheels and shall assure that employees are instructed in and follow that procedure. The procedure shall include at least the following elements:

- Tires shall be completely deflated before denouncing by removal of the valve core.
- Tires shall be completely deflated by removing the valve core before the rim wheel is removed from the axle in either of the following situations:
 - When the tire has been driven under-inflated at 80% or less of its recommended pressure, or
 - When there is obvious or suspected damage to the tire or wheel components.
- Rubber lubricant shall be applied to bead the rim mating surfaces during assembly of the wheel and inflation of the tire, unless the tire or wheel manufacturer recommends against it.
- If a tire on a vehicle is under-inflated but has more than 80% of the recommended pressure, the tire may be inflated while the rim wheel is on the vehicle provided remote control information equipment is used, and no employee remain in the trajectory during inflation.
- Tires shall be inflated outside a restraining device only to a pressure sufficient to force a tire bead onto the rim ledge and create an airtight seal with the tire bead.
- Whenever a rim is in a restraining device, the employee shall not rest or lean any part of his body or equipment on or against the restraining device.
- After tire inflation, the tire and wheel components shall be inspected, while still within the restraining device to make sure they are properly seated and locked. If further adjustment to the tire or wheel components is necessary, the tire shall be deflated by the removal of the valve core.
- No attempt shall be made to correct the seating of side and lock rings by hammering, striking, or forcing the components while the tire is pressurized.
- Cracked, broken, bent, or otherwise damaged rim components shall not be reworked, welded, brazed, or otherwise heated.
- Whenever multi-piece rim wheels are being handled, employees shall stay out of the trajectory unless the employer can demonstrate that performance of the servicing makes the employee's presence in the trajectory necessary.
- No heat shall be applied to a multi-piece wheel or wheel component.

Single Piece Rim Wheels

Safe operating procedure-single piece rim wheels. The employer shall establish a safe operating procedure for servicing single piece rim wheels and shall assure that employees are instructed in and follow that procedure. The procedure shall include at least the following elements:

- Tires shall be completely deflated by removal of the valve core before demounting.
- Mounting and demounting of the tire shall be done only from the narrow ledge side of the wheel. Care shall be taken to avoid damaging the tire beads while mounting tires on wheels. Tires shall be mounted only on compatible wheels of matching bead diameter and width.
- Nonflammable rubber lubricant shall be applied to bead and wheel mating surfaces before assembly of the rim wheel, unless the tire or wheel manufacturer recommends against the use of any rubber lubricant.

- If a tire changing machine is used, the tire shall be inflated only to the minimum pressure necessary to force the tire bead onto the rim ledge while on the tire changing machine.
- If a bead expander is used, it shall be removed before the valve core is installed and as soon as the rim wheel becomes airtight (the tire bead slips onto the bead seat).
- Tires may be inflated only when contained within a restraining device, positioned behind a barrier or bolted on the vehicle with the lug nuts fully tightened.
- Tires shall not be inflated when any flat, solid surface is in the trajectory and within one foot of the sidewall.
- Employees shall stay out of the trajectory when inflating a tire.
- Tires shall not be inflated to more than the inflation pressure stamped in the sidewall unless a higher pressure is recommended by the manufacturer.
- Tires shall not be inflated above the maximum pressure recommended by the manufacturer to seat the tire bead firmly against the rim flange.
- No heat shall be applied to a single piece wheel.
- Cracked, broken, bent, or otherwise damaged wheels shall not be reworked, welded, brazed, or otherwise heated.

Scaffold Safety

Rolling Towers and Rolling Scaffolds

- Competent person(s) supervises all erection, dismantling, altering of the scaffold.
- Scaffold components are inspected and in safe condition before being put to use. Regular inspection thereafter.
- Scaffolds and their components are capable of supporting without failure at least 4 times intended maximum load.
- Scaffold height does not exceed 4 times the minimum base — or the unit is secured tied off to prevent tipping.
- Scaffold is level/plumb at all times and used only on level, smooth surface, free of major defects.
- Use of ladders or makeshift devices to increase the height of the scaffold on the working platform is prohibited.
- Casters with effective locking devices are provided and all casters are locked when unit is in use.
- The platform decking covers the full width of the unit and is secured against displacement.
- Scaffold bracing is not used to ascend or descend the units unless the bracing is specifically designed for climbing. An access ladder is provided and installed so as not to cause the unit to tip.
- Guard rails, midrails and toe boards are installed on all open sides and ends of the scaffold.
- Where persons are required to work or pass under a scaffold, the unit is provided with a screen or equivalent protective device to prevent materials from falling.
- Overhead protection is provided for workers exposed to overhead hazards.
- Workers are not allowed on scaffolds during storms/high winds, or when the work platform is covered with ice, snow, or other slippery conditions.
- Workers are prohibited from riding rolling scaffolds unless special precautions are taken:
 - Floor is within 3° of level;
 - Floor is free of defects, holes, or obstructions;
 - Maximum dimension of height to base is 2:1 or less;
 - Employee on scaffold must be made aware of any move; and
 - Tools and materials are removed/secured wire mesh or equivalent provided.
- All workers are instructed in proper and safe use of scaffolding on a periodic basis.

Welding Safety

Welding Hazards

- Specific hazards are created while performing hot work. These hazards present health risks to the individuals who are welding, cutting or brazing, as well as to other workers in the area. The following hazards are created while performing hot work:
 - Sparks/Spatter – Employees will need to take into consideration that sparks and spatter will be generated during welding, cutting or brazing. Spatter can travel as far as 35 feet from the welding operation; therefore, employees must remove or shield all combustible/flammable material within a 35-foot radius. The job should also be protected by a welding curtain or partition to protect other people who are working in or may walk past the hot work area.
Note: All open loose clothing pockets must be taped so that spatter is unable to fall inside the pocket. Employees must remove butane lighters from their pockets prior to performing hot work.
- Light – Light is generated from the electric current arcing from the electrode to metal. Eye damage can occur from the flash and ultraviolet (UV) rays that are generated. Eye protection must be worn at all times. Exposed skin can also be affected by UV rays. All skin must be covered for protection, as exposure to UV rays may result in a sunburn-like effect. Employees not directly involved in the hot work project are still susceptible to adverse effects of UV rays. Therefore, it is mandatory that the hot work is shielded by a welding curtain or other barrier. Fixed stations will be enclosed by a welding curtain as well.
- Fumes-Fumes will be given off while welding, cutting or brazing. The composition and concentration of these fumes are difficult to classify. In general, the specific hazards of any welding, cutting or brazing operation depend upon:
 - The type of welding, cutting or brazing being performed.
 - The type of filler metal, fluxes coatings and base metals being used.
 - The length of time the employee is exposed.
 - The amount of ventilation (general or local) available during the welding, cutting or brazing activities.
- The following is a list of materials used commonly:
 - Carbon-steel: Iron oxide is the primary element found in the fumes when carbon-steel is welded or cut. There are no serious health hazards associated with iron oxide.
 - Galvanized stock: Zinc oxide fumes are given off when welding/cutting on galvanized steel. High concentrations of freshly generated zinc oxide fumes can cause a temporary condition referred to as metal fume fever or zinc chill. Symptoms of metal fume fever include fever, chills, nausea, fatigue and general aching of the head and body. These symptoms are reversible and rarely last longer than 24 hours.
 - Brazing flux and solders: Solders are composed of different types of metals. Depending on the operation, these metals may include the following:
 - Lead: These solders will come with varying percentages of lead ranging from 10% to 70%. Lead oxide is present in the fumes when welding, cutting or brazing materials that contain lead. Lead can accumulate in the body from repeated exposure to lead oxide fumes as the lead builds up in the body over a period of time. Lead poisoning could result with such symptoms as a metallic taste in the mouth, loss of appetite, nausea and abdominal cramping.
 - Cadmium: Cadmium will usually be present in solder in the range of 75% to 85%. Short-term exposure to high concentrations of cadmium fumes can produce severe lung irritation. Long-term exposure to low levels of cadmium in air can result in damage to the kidneys.

Equipment Needed

- Hot Work Equipment – All hot work equipment must be approved and marked by a nationally recognized testing laboratory. The manufacturer of equipment, (torches, torch tips, hoses, personnel protective equipment etc.) will provide instructions on its safe use.
- Personal Protective Equipment – All personal protective equipment will be purchased and supplied at no cost to the employees by the Organization, including:
 - Eye protection – When performing hot work, the eye is exposed to sparks, slag, fumes and the flash, all of which can cause severe damage. All employees performing hot work are required to wear eye protection. The shade of the eye protection will depend on the type of hot work performed.
- Clothing – The type of hot work employees perform varies from light to heavy. All employees are responsible for wearing necessary protective clothing. No rings, necklaces, watches, or other jewelry can be worn during hot work operations. Following is a list of clothing for the various types of hot work.
- Ventilation – Fixed stations for the performance of hot work will be equipped with a ventilation hood. The location of the ventilation draw will be installed such that the fumes will not be drawn from the work through the employee's breathing zone whenever possible. When performing hot work away from a fixed station (remote work), employees must keep their head away from the fume plume. When welding for an extended period of time, ventilation (ordinary fan for example) may be used to blow the fumes away from the individual. Another option is to provide a "mobile" ventilation system.

When using a lead or cadmium base solder, or welding/cutting for an extended period of time, a respirator may be required even if ventilation is used.

Gas Welding and Cutting – Acetylene/Oxygen

- Only authorized personnel will be allowed to gas weld. The Maintenance Manager will maintain a list of trained and authorized employees.
- Cylinder Labeling – Certain labeling must be displayed by the manufacturer on any compressed gas cylinders brought into the facility. Employees will check to assure that all labels are present. If not, the cylinder should be taken out of use and returned to the vendor.
- Before placing the regulator on the cylinder, stand to one side of the valve and crack it open for a second; this will remove debris from the valve.
- Never fix a leak on the welding apparatus while the regulator is on the cylinder
- Welding apparatus and cylinders must be secured to the vehicle when being transported. The use of bungee cords is sufficient for small cylinders.
- Regulators must be removed and safety caps placed on the cylinders while in transit.
- Never lift or move a cylinder by its safety cap.
- Cylinder valves must be closed when not in use.
- Hoses and fittings must be free of grease and oil.
- When taping supply hoses together, tape must not exceed four inches in length. Taping must not be closer than twelve inches apart.
- Pressure regulators and gauges must remain in good operating condition at all times.
- Any leaking equipment must be immediately taken out of service and repaired.
- Cylinder Storage – When storing compressed gas cylinders, they must be secured, have their safety caps on, and be stored away from heat sources. Bottles not actively in use at the job site will be considered "stored" and will remain chained to the cart until actively being used.

Oxygen cylinders must never be stored near highly combustible material (especially oil and grease) or near acetylene or other fuel gas cylinders. There will be a minimum distance of 20 feet separating the storage areas for oxygen and fuel gas cylinders, or a wall to separate the 2 storage areas, that it is at least 5 feet in height, does not contain any holes or other openings, and has a fire rating of at least 1 hour.

Welding Around Combustible/Flammable Materials

- Never weld or cut around combustible/flammable materials. If it is not possible to move the combustible/flammable materials away from the welding site, the following steps will be taken:
 - Shield the combustible materials with either a welding curtain or partition.
 - Have a fire extinguisher at the welding site ready to be used.
 - A second person as fire watch will be present at the work area, trained and ready to use the fire extinguisher. (A fire watch is also necessary when work is being performed above ground and sparks may land on combustible material. The fire watch will be stationed on the ground, not the work platform.)

Training

Employees who perform hot work will be informed of the proper steps and procedures for performing hot work. Training records will be maintained for the length of employment. Training records will be maintained by the Organization.

Electrical Safety Overview

Purpose

As part of Organization's overall safety and health program, an Electrical Safety program has been established. The program is designed to assist in compliance with Occupational Safety and Health Administration's (OSHA) Electrical Training, Selection and Use of Work Practices, Use of equipment, and Safeguards for personnel protection standards, 29 CFR 1910.332 – 1910.335. To establish minimum requirements to prevent injury to personnel working on or near exposed energized parts of electrical equipment and to achieve compliance with OSHA final rule 1910 Subpart S. Our intention is to comply with the final rule and raise the awareness level of electrical hazards in the workplace or home, for all Organization employees.

Definitions

- Qualified Person – One who has skills and knowledge related to the construction and operation of the electrical equipment and installations and has received safety training on the hazards involved. Examples of safety training include, but are not limited to, training in the use of special precautionary techniques, personal protective equipment, including arc flash, insulating, and shielding materials, and insulated tools and test equipment. A person can be considered qualified with respect to certain equipment and methods but still be unqualified for others.
- Unqualified Person – those with little or no training working on, near, or with electrical wiring or optical fiber cable (where such installations are made along with electrical conductors).

General Requirements

- This procedure, including the training requirements, applies to both qualified and unqualified persons who work on, near or with exposed energized parts. This procedure applies only when energized parts are exposed (i.e. not reduced to a safe level by the electrical installation requirements of 1910.303 through 1910.308) and only to exposed energized parts operating at 50 Volts or more.
- Work excluded from the provisions of this procedure for qualified persons includes: generation, transmission and distribution installations; communications installations; installations in vehicles; and railway installations.
- Only persons who have the skills, knowledge, and required training (including task specific training) are considered "qualified" and may work on or near any circuit parts or equipment that have not been deenergized. These qualified persons must:
 - Be capable of working safely on energized circuits
 - Be familiar with the proper use of special precautionary techniques
 - Know how to select, use, and inspect appropriate personal protective equipment
 - Know how to use insulating and shielding materials
 - 5. Understand the proper selection and use of insulated tools

Training

- Training is required for both qualified and unqualified persons who face a risk of electric shock that is not reduced to a safe level by the electrical installation requirements of 1910.303 through 1910.308.
- Training shall be classroom/webinar and/or on-the-job type. The degree of training provided shall be determined by the risk to the employee. All training must be documented.

- Training of qualified persons must include at the minimum the following:
 - The safety-related work practices required by 1910.331 through 1910.335 that pertain to their respective job assignments.
 - The ability to distinguish live parts from other parts of electrical equipment.
 - The ability to determine the nominal voltage of live parts.
 - The knowledge of clearance and/or approach distances when working on or near exposed energized parts, as described in 1910.333 (c).
- Training of unqualified persons must include at the minimum the following:
 - The safety-related work practices required by 1910.331 through 1910.335 that pertain to their respective job assignments.
 - The inherent hazards of electricity, such as high voltage, electric current, arcing, grounding and lack of guarding.
 - Any electrically related safety practices not specifically addressed by 1910.331 through 1910.335 that pertain to their respective job assignments.
 - It is recommended that all employees receive unqualified person training during the new hire orientation process.

Selection & Use of Work Practices

Live electrical parts are to be put into an electrically safe work condition before a potentially exposed employee works on them unless:

- The employer can demonstrate that de-energizing introduces additional or increased hazards. Examples include:
 - Interruption of life-support equipment.
 - Deactivation of emergency alarms systems.
 - Shutdown of hazardous-location ventilation equipment.
 - Removal of illumination for an area.
- The employer can demonstrate that de-energizing is infeasible due to equipment design or operational limitations. Examples of work that may be performed because of infeasibility include:
 - a. Testing of electric circuits that can only be performed with the circuit energized (troubleshooting).
 - b. Work on circuits that form an integral part of a continual industrial process.
- De-energized parts require lockout/tagout accordance with 1910.333 and 1910.147 as well as the lockout/tagout program, unless otherwise exempted.

An electrically safe work condition will be achieved when utilizing the energy control procedure and verified by the following process:

- Determine all possible sources of electrical supply to the specific equipment. Check applicable up-to-date drawings, diagrams and identification tags.
- After properly interrupting the load current, open the disconnecting device(s) for each source.
- Wherever possible, visually verify that all blades of the disconnecting devices are fully open or that drawout type circuit breakers are withdrawn to the fully disconnected position.
- Apply lockout/tagout devices in accordance with local lockout procedure.
- Use an adequately rated voltage detector to test each phase conductor or circuit part to verify they are deenergized. Test each phase conductor or circuit part both phase-to-phase and phase-to-ground. Before the test, determine that the voltage detector is operating properly. When used on 600v and above the voltage detector must be tested before and immediately after each test.
- Where the possibility of induced voltages or stored electrical energy exists, ground the phase conductors or circuit parts before touching them. Where it could be reasonably anticipated that the conductors or circuit parts being de-energized could contact other exposed energized conductors or circuit parts, apply ground connecting devices rated for the available fault duty.

If live electrical parts are not placed in an electrically safe work condition (i.e., for the reasons of increased or additional hazards or infeasibility), then work being performed shall be considered energized electrical work and shall be performed by written permit only (Energized Work Permit).

Work performed on or near live parts by qualified persons related to tasks such as testing, troubleshooting, and voltage measuring shall be permitted to be performed without an energized work permit, provided appropriate safety work practices and proper personal protective equipment is utilized.

Only qualified persons shall be allowed to work on energized parts or equipment.

If work is to be performed near overhead lines (inside or outside of a building), the lines and ground must be deenergized or other protective measures must be taken such as guarding, isolation, or insulation. Minimum distances for qualified and unqualified persons and vehicles are described in 1910.333 (c) (3). Under no circumstances may an unqualified person come within 10 feet of overhead lines (and greater in some instances).

Appropriate illumination must be provided for employees who work on exposed energized parts. At a minimum 300 lux/30 foot-candles should be maintained in the task work area. However, additional lighting may be required for more detailed tasks. This can be obtained by a combination of general lighting plus specialized supplementary lighting.

Conductive materials and equipment that are in contact with any part of an employee's body shall be handled in a manner that will prevent them from contacting exposed energized parts (conduit, piping, jewelry, cloth with conductive thread, metal headgear, etc.).

Portable ladders (metal) may not have conductive side rails where the employee or the ladder could contact exposed energized parts. Cleaning and the use of electrically conductive cleaning materials (steel wool, metalized cloth, conductive liquids, etc.), may not be used in proximity to energized parts unless procedures are followed which will prevent electrical contact.

Only a qualified person may defeat an electrical interlock, and then only temporarily and when following the requirements under 1910.333 (c).

Note: Defeating interlocks is only allowed by a qualified person and only for calibrating or troubleshooting equipment

Use of Equipment

- Cord and plug-connected equipment, including extension cords:
 - Shall be handled in a manner which will not cause damage, such as raising and lowering by the flexible cord, or fastening extension cords with staples.
 - Shall be visually inspected before each use, and if damaged, removed from service.
 - Shall be approved for high-conductive (wet, etc.) work locations where required. Employees' hands may not be wet when plugging and unplugging equipment.
 - A ground fault circuit interrupter must be used when (1) using an electric powered hand tool with an extension cord; (2) in a wet location.
- Load rated switches, circuit breakers, or the equivalent (load-break type) shall be designed for opening, closing, and reversing circuits under load conditions.
- When a circuit is de-energized by a circuit protection device, the circuit may not be manually re-energized until it has been determined it can be done so safely (unless the design allows it to be determined an overload condition rather than a fault condition).

- Overcurrent protection of circuits and conductors may not be modified, even on a temporary basis.
- Only qualified persons may perform testing work on electrical circuits or equipment. Test instruments shall be visually inspected before use (over 600v the equipment must be checked before and immediately after the test) and shall be rated and designed for their use.

Safeguards for Personal Protection

- Electrical protective equipment shall be provided and used when necessary, such as non-conductive headgear, eye or face protection where electric arcs or flashes or flying objects may be present, insulated tools and handling equipment, protective barriers, and insulating materials, etc.
 - Employees shall wear Flame-Resistant (FR) clothing wherever there is possible exposure to an electric arc flash above the threshold incident-energy level for a second-degree burn 5 J/cm² (1.2 cal/cm²).
 - To determine which level of personal protection is necessary, employees should refer to the electrical equipment on which they will be working.
 - It is critical when selecting the appropriate PPE that at a minimum all required elements of the level are worn. In addition, it is necessary to add the arc thermal protective value (ATPV) rating for each layer of clothing to ensure that it exceeds the arc flash rating on the equipment.
 - Voltage rated gloves shall be worn whenever the prohibited approach boundary will be crossed. They shall be rated adequately for the task and be provided with leather over protection.
- Protective equipment shall be maintained in a safe, reliable condition and shall be periodically inspected or tested as required by 1910.137
- Safety signs, tags, barricades and attendants shall be used as necessary to warn and protect employees from electrical hazards.

It is recommended that signs reading "WARNING: Arc Flash and Shock Hazard Appropriate PPE Required" be posted on all individual machine panels, power distribution panels, and unit substations, distribution panels, and plant switch gears that are likely to require examination, adjustment, servicing, or maintenance while energized to warn qualified persons of the potential electric arc flash hazards.

Training

Every employee at Wilkes Community College who faces the risk of electric shock from working on or near energized or deenergized electrical sources receives training in electrical related safety work practices pertaining to the individual's job assignment.

The goal of our electrical safety training program is to ensure that all employees understand the hazards associated with electric energy and that they are capable of performing the necessary steps to protect themselves and their coworkers.

Our electrical training program covers these basic elements:

- Lockout and tagging of conductors and parts of electrical equipment.
- Safe procedures for deenergizing circuits and equipment.
- Application of locks and tags.
- Verification that the equipment has been deenergized.
- Procedures for reenergizing the circuits or equipment.
- Other electrically related information which is necessary for employee safety.

In our facility, all the persons working on or near energized or deenergized electric sources are considered "qualified" to work safely with electrical energy and have received the appropriate training and certification to do so. In addition to the basic training elements, our "qualified" employees are trained in the skills and techniques necessary to identify exposed live parts, determine nominal voltages, and clearance distances and corresponding voltages.

Lockout And Tagging Program

- It is mandatory that circuits and equipment must be disconnected from all electric energy sources before work on them begins. We use lockout and tagging devices to prevent the accidental reenergization of this equipment. The lockout and tagging procedures are the main component of our electrical safety program.
- Deenergizing circuits and equipment. We disconnect the circuits and equipment to be worked on from all electric energy sources and we release stored energy that could accidentally reenergize equipment.
- **Application of locks and tags.** Only authorized employees are allowed to place a lock and tag on each disconnecting means used to deenergize our circuits or equipment before work begins. Our locks prevent unauthorized persons from reenergizing the equipment or circuits and the tags prohibit unauthorized operation of the disconnecting device.
- **Verification of deenergized condition of circuits and equipment.** Prior to work on the equipment, we require that a "qualified" employee verify that the equipment is deenergized and cannot be restarted.
- **Reenergizing circuits and equipment.** Before circuits or equipment are reenergized, we follow these steps in this order:
 - A "qualified" employee conducts tests and verifies that all tools and devices have been removed.
 - All exposed employees are warned to stay clear of circuits and equipment.
 - Authorized employees remove their own locks and tags.
 - We do a visual inspection of the area to be sure all employees are clear of the circuits and equipment.

Enforcement

Constant awareness of and respect for electrical hazards, and compliance with all safety rules are considered conditions of employment.

Respiratory Protection Overview

This Respiratory Protection Program specifies standard operating procedures to protect each construction site employee from respiratory hazards, according to the requirements of 29 CFR 1926.103, which simply refers to 29 CFR 1910.134. Respirators are to be used only where engineering control of respirator hazards is not feasible, while engineering controls are being installed, or in emergencies.

Respirator Selection

Respirators are selected on the basis of respiratory hazards to which the worker is exposed and workplace and user factors that affect respirator performance and reliability.

When selecting any respirator in general:

- Select and provide respirators based on respiratory hazard(s) to which a worker is exposed and workplace and user factors that affect respirator performance and reliability.
- Select a NIOSH-certified respirator. (NIOSH stands for the National Institute for Occupational Safety and Health)
- Identify and evaluate the respiratory hazard(s) in the workplace, including a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form. Consider the atmosphere to be immediately dangerous to life or health (IDLH) if you cannot identify or reasonably estimate employee exposure.
- Select respirators from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

When selecting respirators for atmospheres that are not IDLH:

- Provide a respirator that is 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.
- Select a respirator that meets or exceeds the required level of employee protection by using the assigned protection factors (APFs) listed in §1910.134 Table 1. [Effective Nov. 22, 2006]
- For combination respirators (e.g., airline respirators with an air-purifying filter, ensure that the APF is appropriate to the mode of operation in which the respirator is being used. [Effective Nov. 22, 2006]
- Select a respirator for employee use that maintains the employee's exposure to the hazardous substance at or below the maximum use concentration (MUC), when measured outside the respirator. [Effective Nov. 22, 2006]
- Do not apply MUCs to conditions that are immediately dangerous to life or health (IDLH); instead use respirators listed for IDLH conditions in §1910.134(d)(2). [Effective Nov. 22, 2006]
- Set the MUC at the lower limit when the calculated MUC exceeds the IDLH level for a hazardous substance or the performance limits of the cartridge or canister. [Effective Nov. 22, 2006]
- Select respirators appropriate for the chemical state and physical form of the contaminant.

- For protection against gases and vapors, provide:
 - An atmosphere-supplying respirator,
 - An air-purifying respirator, provided that: (1) The respirator is equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant; or (2) If there is no ESLI appropriate for conditions in our workplace, implement a change schedule for canisters and cartridges that is based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life. Describe in the respirator program the information and data relied upon and the basis for the canister and cartridge change schedule and the basis for reliance on the data.

- For protection against particulates, provide:
 - An atmosphere-supplying respirator; or
 - An air-purifying respirator equipped with a filter certified by NIOSH under 30 CFR part 11 as a high efficiency particulate air (HEPA) filter, or an air-purifying respirator equipped with a filter certified for particulates by NIOSH under 42 CFR 84; or
 - For contaminants consisting primarily of particles with mass median aerodynamic diameters (MMAD) of at least 2 micrometers, an air-purifying respirator equipped with any filter certified for particulates by NIOSH.

Medical Evaluation

A medical evaluation to determine whether an employee is able to use a given respirator is an important element of an effective Respiratory Protection Program and is necessary to prevent injuries, illnesses, and even, in rare cases, death from the physiological burden imposed by respirator use.

At Wilkes Community College, persons will not be assigned to tasks requiring use of respirators nor fit tested unless it has been determined that they are physically able to perform the work and use the respirator.

Wilkes Community College provides additional medical evaluations if:

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

Maintenance and Care Procedures

In order to ensure continuing protection from respiratory protective devices, it is necessary to establish and implement proper maintenance and care procedures and schedules. A lax attitude toward maintenance and care will negate successful selection and fit because the devices will not deliver the assumed protection unless they are kept in good working order.

Storage

Storage of respirators must be done properly to ensure that the equipment is protected and not subject to environmental conditions that may cause deterioration. We ensure that respirators are stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and they are packed or stored in proper cabinet to prevent deformation of the facepiece and exhalation valve.

Inspection

In order to assure the continued reliability of respirator equipment, it must be inspected on a regular basis. The frequency of inspection is related to the frequency of use. Here are our frequencies for inspection:

Respirator type:	Inspected at the following frequencies:
All types used in routine situations	Before each use and during cleaning
Maintained for use in emergency situations	At least monthly and in accordance with the manufacturer's recommendations, and checked for proper function before and after each use
Emergency escape-only respirators	Before being carried into the workplace for use

Repairs

Respirators that fail an inspection or are otherwise found to be defective are removed from service, and are discarded or 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 only with the respirator manufacturer's NIOSH-approved parts designed for the respirator.
- Repairs must be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed; and
- Reducing and admission valves, regulators, and alarms must be adjusted or repaired only by the manufacturer, or a technician trained by the manufacturer.

Training

The most thorough respiratory protection program will not be effective if employees do not wear respirators, or if wearing them, do not do so properly. The only way to ensure that our employees are aware of the purpose of wearing respirators, and how they are to be worn is to train them. Simply put, employee training is an important part of the respiratory protection program and is essential for correct respirator use.

We require all our employees to be retrained annually and when the following situations occur:

- 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; or
- Any other situation arises in which retraining appears necessary to ensure safe respirator use.

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:

- Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
- 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.
- 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.
- Keep track of your respirator so that you do not mistakenly use someone else's respirator.

Personal Protective Equipment

Safety Eye Protection

Safety glasses, goggles, side shields, face shields, welding shields.

Eye protection is needed where there is airborne dust; the danger of flying metal, wood or other materials, welding, and splashing chemicals. Employees should choose and use the protective safety eyewear best suited for their jobs.

Safety Footwear

Safety shoes offer soles with puncture protection instep protection, ankle protection to ward off sparks, metatarsal guard, non-slip sole and steel caps that protect the toes from falling object. Today safety shoes are very comfortable, fashionable, and effective.

Hand Protection

Approved cloth work gloves, leather hand pads, metal mesh gloves, insulated gloves, neoprene, plastic gloves, and rubber gloves provide protection when handling sharp, rough, greasy and hot materials, and during operations where the hands are directly involved with lifting or moving objects. Other special-purpose hand protection includes leather wrist and arm sleeves, hand mitts and finger pads.

Hearing Protection

When noise is above acceptable levels and it is impossible to reduce noise output, personal hearing protectors, such as ear plugs, earmuffs, sound bands and molded ear plugs, must be used. This equipment must be worn properly and kept in good condition to be effective.

Safety Headgear

For protection from falling or flying objects, moving machinery, sharp corners, heat and fire, electric shock, dripping chemicals and unseen dangers, hard hats should be worn. Hard hats must have sturdy brims, and rigid inner suspension to cushion shocks and blows; they may have chin straps and removable face shields. Hard hats can be made of plastic, fiberglass or metal. Other head protection includes bump caps, hair nets and chemical-resistant hoods.

Respirators

Respirators should be worn if inhalation hazards are present in the workplace. They should be provided by the employer. Respirators are used where there is dust, paint spray, fumes, smoke, and mists. In hazardous working conditions, self-contained breathing apparatuses are required. You should know the proper methods of fitting, maintaining, and cleaning respirators.

Other Personal Protective Equipment

- High visibility clothing for traffic work
- Safety harness for aerial lifts
- Rubber, plastic, and leather aprons to protect from acid and chemical splashes
- Insulation suits for protection from fire and heat
- Leaded clothing for protection against X-rays
- Leggings and sleeves for added protection against splashes and flying particles
- Disposable paper, cloth, or plastic clothing for protection against germs or harmful chemicals

PPE Checklist

The following list of Personal Protective Equipment must be used when operating equipment or performing certain tasks in the Applied Engineering, Construction, Grounds, and Maintenance.

Task: Buffing and Stripping Floors

PPE Required: Ear Protection (when buffer is used), Eye Protection, Gloves, Respiratory Protection, Slip Resistant Footwear; (refer to SDS for chemical PPE)

Task: Chainsaw

PPE Required: Ear Protection, Eye/Face Protection such as safety glasses, Fall Protection as necessary, Head protection - such as a Hard Hat, Steel Toe/Safety Shoes, Leg protection such as work pants or chaps, Work gloves

Task: Edgers and Aerators

PPE Required: Ear Protection, Eye Protection, High Visibility Clothing, Work Gloves (leather)

Task: Electrical Work

PPE Required: Depending on the task to be performed- Eye Protection, Flame-Resistant Face Shields, Hard Hats, Steel Toe/Safety Shoes, Insulated (rubber) Gloves with Leather Protectors, and Protective Clothing.

Task: Heavy Equipment

PPE Required: Ear Protection, Eye Protection, Hard Hat, High Visibility Clothing, Steel Toe/Safety Shoes

Task: Laundry

PPE Required: Gloves, If laundry is contaminated: Gloves, Gown, Face Shields, Masks as mentioned in the Bloodborne Pathogens Standard [29 CFR 1910.1030\(d\)\(4\)\(iv\)\(B\)](#)

Task: Leaf Blower

PPE Required: Ear Protection, Eye Protection, Dust Mask is optional

Task: Masonry

PPE Required: Eye Protection, Head Protection - such as a Hard Hat (if others are working overhead), Work Gloves

Task: Mowers and Tillers

PPE Required: Riding Mower – Ear Protection, Eye Protection
Push Mowers – Ear Protection, Eye Protections, and Steel Toe/Safety Shoes
Tillers – Ear Protection, Eye Protection, and Steel Toe/Safety Shoes

Task: Powered Industrial Truck (Forklift)

PPE Required: Eye Protection (depending on the task), Safety Gloves (depending on the task), Steel Toe/Safety Shoes

Task: Pressure Washing

PPE Required: Ear Protection, Eye Protection, Enclosed shoes

Task: Overhead Work

PPE Required: Dust mask (possible respirator-depending on conditions) Hard Hat, Safety Glasses

Task: Hand and Power Tools

PPE Required: Eye Protection, Hand Protection (only if there is no hazard of the glove material getting caught), Respiratory Protection (if dust, fumes, or mists are produced)

Task: Spraying Chemicals

PPE Required: Refer to Safety Data Sheet

Task: Trash Pick Up

PPE Required: Eye Protection, Protection, Puncture Resistant Gloves

Task: Vacuum Cleaning

PPE Required: Slip Resistant Shoes

Task: Weed Eater

PPE Required: Anti-Vibration Gloves, Ear Protection, Eye Protection, Face Protection, Long Sleeve Shirt and Pants, Long Socks, Steel Toe/Safety Shoes

Task: Welding

PPE Required: Eye Protection (Welder Goggles/Glasses), Hand/Arm Protection, Head (Welding Helmet) and Body Protection

OSHA Standards

www.osha.gov

The following standards are applicable to Wilkes Community College's Safety and Training Procedures:

- 1910 Subpart D - Walking-Working Surfaces
 - 1910.21 - Scope and definitions.
 - 1910.22 - General requirements.
 - 1910.23 - Ladders.
 - 1910.24 - Step bolts and manhole steps.
 - 1910.25 - Stairways.
 - 1910.26 - Dockboards.
 - 1910.27 - Scaffolds and rope descent systems.
 - 1910.28 - Duty to have fall protection and falling object protection.
 - 1910.29 - Fall protection systems and falling object protection-criteria and practices.
 - 1910.30 - Training requirements.

- 1910 Subpart E - Exit Routes and Emergency Planning
 - 1910.33 - Table of contents.
 - 1910.34 - Coverage and definitions.
 - 1910.35 - Compliance with alternate exit-route codes.
 - 1910.36 - Design and construction requirements for exit routes.
 - 1910.37 - Maintenance, safeguards, and operational features for exit routes.
 - 1910.38 - Emergency action plans.
 - 1910.39 - Fire prevention plans.
 - 1910 Subpart E App - Exit Routes, Emergency Action Plans, and Fire Prevention Plans.

- 1910 Subpart G - Occupational Health and Environmental Control
 - 1910.94 - Ventilation.
 - 1910.95 - Occupational noise exposure.
 - 1910.95 App A - Noise exposure computation
 - 1910.95 App B - Methods for estimating the adequacy of hearing protector attenuation
 - 1910.95 App C - Audiometric measuring instruments
 - 1910.95 App D - Audiometric test rooms
 - 1910.95 App E - Acoustic calibration of audiometers
 - 1910.95 App F - Calculations and application of age corrections to audiograms
 - 1910.95 App G - Monitoring noise levels non-mandatory informational appendix
 - 1910.95 App H - Availability of referenced documents
 - 1910.95 App I - Definitions
 - 1910.97 - Nonionizing radiation.

- 1910 Subpart H - Hazardous Materials
 - 1910.101 - Compressed gases (general requirements).
 - 1910.102 - Acetylene.
 - 1910.103 - Hydrogen.
 - 1910.104 - Oxygen.
 - 1910.105 - Nitrous oxide.

- [1910.106 - Flammable liquids.](#)
- [1910.107 - Spray finishing using flammable and combustible materials.](#)
- [1910 Subpart I - Personal Protective Equipment](#)
 - [1910.132 - General requirements.](#)
 - [1910.133 - Eye and face protection.](#)
 - [1910.134 - Respiratory Protection.](#)
 - [1910.134 App A - Fit Testing Procedures \(Mandatory\).](#)
 - [1910.134 App B-1 - User Seal Check Procedures \(Mandatory\).](#)
 - [1910.134 App B-2 - Respirator Cleaning Procedures \(Mandatory\).](#)
 - [1910.134 App C - OSHA Respirator Medical Evaluation Questionnaire \(Mandatory\).](#)
 - [1910.134 App D - \(Mandatory\) Information for Employees Using Respirators When not Required Under Standard.](#)
 - [1910.135 - Head protection.](#)
 - [1910.136 - Foot protection.](#)
 - [1910.137 - Electrical Protective Equipment.](#)
 - [1910.138 - Hand Protection.](#)
 - [1910.139 - Reserved](#)
 - [1910.140 - Personal fall protection systems.](#)
- [1910 Subpart J - General Environmental Controls](#)
 - [1910.141 - Sanitation.](#)
 - [1910.144 - Safety color code for marking physical hazards.](#)
 - [1910.145 - Specifications for accident prevention signs and tags.](#)
 - [1910.145 App A - Recommended color coding](#)
 - [1910.147 - The control of hazardous energy \(lockout/tagout\).](#)
 - [1910.147 App A - Typical minimal lockout procedures](#)
- [1910 Subpart L - Fire Protection](#)
 - [1910.155 - Scope, application and definitions applicable to this subpart.](#)
 - [1910.157 - Portable fire extinguishers.](#)
 - [1910.159 - Automatic sprinkler systems.](#)
 - [1910.164 - Fire detection systems.](#)
 - [1910.165 - Employee alarm systems.](#)
- [1910 Subpart M - Compressed Gas and Compressed Air Equipment](#)
- [1910 Subpart N - Materials Handling and Storage](#)
 - [1910.176 - Handling materials - general.](#)
 - [1910.177 - Servicing multi-piece and single piece rim wheels.](#)
 - [1910.177 App A - Trajectory](#)
 - [1910.177 App B - Ordering Information for the OSHA Charts](#)
 - [1910.178 - Powered industrial trucks.](#)
 - [1910.178 App A - Powered industrial trucks.](#)
- [1910 Subpart O - Machinery and Machine Guarding](#)
 - [1910.211 - Definitions.](#)
 - [1910.212 - General requirements for all machines.](#)
 - [1910.213 - Woodworking machinery requirements.](#)

- [1910.214 - Cooperage machinery. Reserved](#)
- [1910.215 - Abrasive wheel machinery.](#)
- [1910 Subpart P - Hand and Portable Powered Tools and Other Hand-Held Equipment](#)
 - [1910.241 - Definitions.](#)
 - [1910.242 - Hand and portable powered tools and equipment, general.](#)
 - [1910.243 - Guarding of portable powered tools.](#)
 - [1910.244 - Other portable tools and equipment.](#)
- [1910 Subpart Q - Welding, Cutting and Brazing](#)
 - [1910.251 - Definitions.](#)
 - [1910.252 - General requirements.](#)
 - [1910.253 - Oxygen-fuel gas welding and cutting.](#)
 - [1910.254 - Arc welding and cutting.](#)
 - [1910.255 - Resistance welding.](#)
- [1910 Subpart S - Electrical](#)
 - [1910.301 - Introduction.](#)
 - [1910.302 - Electric utilization systems.](#)
 - [1910.303 - General.](#)
 - [1910.304 - Wiring design and protection.](#)
 - [1910.305 - Wiring methods, components, and equipment for general use.](#)
 - [1910.306 - Specific purpose equipment and installations.](#)
 - [1910.307 - Hazardous \(classified\) locations.](#)
 - [1910.332 - Training.](#)
 - [1910.333 - Selection and use of work practices.](#)
 - [1910.334 - Use of equipment.](#)
 - [1910.335 - Safeguards for personnel protection.](#)
- [1910 Subpart Z - Toxic and Hazardous Substances](#)

References:

United States Department of Labor. (Oct. 1, 2021, to Sept. 30, 2022) The 10 Most Frequently Cited Standards. Retrieved October 3, 2023, from <https://www.osha.gov/top10citedstandards>

United States Department of Labor. (September 2018) Working Safely with Chainsaws. Retrieved July 13, 2021, from <https://www.osha.gov/sites/default/files/publications/chainsaws.pdf>

United States Department of Labor (2019) Safe Forklift Operation. Retrieved July 14, 2021, from <https://www.osha.gov/sites/default/files/publications/OSHA3949.pdf>

United States Department of Labor. (n.d.) Hazard Communication Standard: Labels and Pictograms. Retrieved 7/27/2021 from <https://www.osha.gov/sites/default/files/publications/OSHA3636.pdf>

Cincinnati Insurance: JJ Keller OSHA Programs and Training

United Heartland: Loss Control Forms Library

Wilkes Community College provides equal employment opportunities (EEO) to all employees and applicants for employment without regard to race, color, religion, sex, national origin, age, disability, or genetics. In addition to federal law requirements, Wilkes Community College complies with applicable state and local laws governing nondiscrimination in employment in every location in which the company has facilities.

Wilkes Community College prohibits any form of workplace harassment based on race, color, religion, gender, sexual orientation, gender identity or expression, national origin, age, genetic information, disability, or veteran status. Improper interference with the ability of Wilkes Community College's employees to perform their job duties may result in discipline up to and including discharge.