

**2010 GENERAL SHOP
&
WORK AREA
SAFETY PLAN**

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1. GENERAL SHOP & WORK AREA SAFETY PLAN

1. Accepted safety and health precautions will be practiced by Granville County Schools in the use of general shop machines, fixed and portable power tools, and other hand held equipment so that all employees using such equipment will be protected against personal injury.
2. It is also Granville County Schools' policy to institute practices that will minimize the danger of injury to non-operators or user personnel who will be in the area and to minimize the risk to visitors.

2. EMPLOYEE RESPONSIBILITIES

1. Granville County Schools' supervisors will recognize those factors in the workplace with accident potential.
2. The supervisor will provide frequent inspections of job sites, work methods, and materials/equipment used.
3. Any unsafe equipment/material will be tagged and rendered inoperative or physically removed from its place of operation.
4. The supervisor will permit only qualified personnel to operate equipment and machinery according to safe work practices.

A. Supervisors:

1. Ensuring safe working conditions
2. Providing necessary protective equipment
3. Ensuring that required guards and protective equipment are provided, used, and properly maintained.
4. Ensuring that tools and equipment are properly maintained and used.

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- 5.** Planning the workload and assigning employees to jobs that they are qualified to perform. Granville County Schools ensures that the employees understand the work to be done, the hazards that will be encountered, and the proper procedure for doing the work safely.
- 6.** Taking immediate action to correct any violation of safety rules observed or reported to them.
- 7.** Ensuring workers exposed or potentially exposed to hazardous chemicals/materials have access to appropriate Material Safety Data Sheets (MSDS).
- 8.** Of a shop or any area where fixed or portable powered or non-powered machines and tools are located, is responsible for being familiar with all procedures for safe use and guarding of machines, personal protective equipment required, shielding against possible injury to other employees or visitors. Granville County Schools enforces safe practices.
- 9.** Trains new employees by providing and requiring manuals to be studied, personally instructing and requesting the assistance of veteran employees already familiar with required safety precautions.
- 10.** Posts signs indicating the use of powered machines by "Authorized Personnel Only" and requires the employees under his/her supervision to assist in the enforcement of this policy.
- 11.** No one is allowed to use fixed or portable powered shop machines or welding equipment without sufficient training to the supervisor's satisfaction.
- 12.** Designates a person to be responsible for general management of a specific shop area and notifies the Safety and Health Manager of the person selected.
- 13.** Designates a qualified person to be responsible for each major fixed, powered machine or tool, posts the name on or near the apparatus, and notifies the Safety and Health Manager accordingly.

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14. Coordinates with the Safety and Health Manager to plan and conduct safety meetings with employees as often as needed and warranted.

15. Topics to be discussed at each session will be selected to fit current operations and any unsafe trends. The Safety and Health Manager leads the discussion and encourages each employee to participate.

16. Granville County Schools will assign one employee to make a short presentation of the topic to get discussion started.

a. Provides appropriate marking of shop floor areas to identify restricted work areas or "approved operator only" yellow floor lines.

b. Makes periodic inspections of shop areas and other industrial areas. Notes all deficiencies and initiates corrective actions.

c. Ensures that all painting operations or other operations are conducted in ventilated areas. Employees will ask for assistance from the Safety and Health Manager in making a determination to what protective equipment and respirators are appropriate.

B. Employees:

1. Granville County Schools employees will be thoroughly trained in the use of protective equipment, guards, and safeguards for chemicals and safe operation of equipment, machines, and tools they use or operate.

2. Only employees who have been trained and those undergoing supervised on-the-job training (OJT) will be allowed to use shop equipment, machines, and tools.

C. All Employee responsibilities:

1. Complies with OSHA standards, Granville County Schools policies and good safe practices when using fixed and portable power tools, equipment and hand held equipment.

2. Cleans up when finished using equipment.

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3. Maintains the tools, equipment and work area in an orderly and safe manner.
4. Properly trains new users of equipment for that he/she is responsible.
5. Shares responsibility with the supervisor for identifying and marking shop floor areas.
6. Will not use or permit use of defective equipment or tools in disrepair. Malfunctioning equipment and damaged hand tools will be reported and repair made before using the equipment or tools. If repairs are not possible the equipment or tools will be discarded.

D Safety and Health Manager:

1. Ensures OSHA standards, Granville County Schools policies and good safe practices are carried out.
2. Assists supervisor and employee in defining hazards and designating safe practices.
3. Conducts routine and periodic inspection of shop areas for compliance to OSHA standards and NIEHS policies.
4. Conducts periodic inspections of employee's hand tools and portable power tools.
5. Assists the supervisor in planning and conducting safety meetings.

3. SHOP PROCEDURES WORK AREA SAFETY

1. All portable and fixed powered shop machines and tools will be equipped with approved guarding devices. Guards are to be in place while using the machine. Equipment will also be properly electrically grounded before use.

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- 2.** Proper personal protective equipment will be provided by Granville County Schools (safety glasses, goggles, and shields) and used during grinding or other work that will produce flying particles (e.g. drill press, power saws, etc.).
- 3.** Granville County Schools approved dust respirators will be used for work that produces airborne dust particles. Eye protection is required during electrical or electronic hardware repair, installation and/or open front operation.
- 4.** Approved face, eye and body protection will be used during any burning or welding operation. Also, sufficient shielding that provides protection to others in the immediate area will be used.
- 5.** Flammable materials (paints, solvents, chemicals, etc.) will not be stored by Granville County Schools within the immediate area of any burning or welding operation. Flammable materials will be stored in OSHA and Granville County Schools approved cabinets.
- 6.** Any employee using portable fixed tools (drill press, jig or band saw, etc.) will not wear loose clothing.
- 7.** Anyone with long hair will tie back the hair or wear acceptable hair protection while operating equipment.
- 8.** All stock will be clamped down (attempting to hold stock with hands will not be permitted).
- 9.** Before any Granville County Schools' employee performs service or maintenance on a machine or equipment where the unexpected energizing, start up or release of stored energy could occur and cause injury, the machine or equipment will be made safe. This is accomplished by locking out and tagging out energy isolating devices, and otherwise disabling the machines or equipment.
- 10.** Clean up after using powered equipment or hand tools will be done immediately following use of the power tool.

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11. Before any work is started in an area posted with a "Radioactive Materials" label, the supervisor or the Safety and Health Manager will be contacted for instructions so that the work will be safely performed.

12. Before any work is started in an area designated as "Restricted" (e.g. high hazard, carcinogens, etc.) the area will be inspected by the Safety and Health Manager and permission to proceed, given to the supervisor.

13. Before any work is started in any laboratory area, a request will be made to the Laboratory Supervisor, principal investigator and/or Safety and Health Manager to ensure that there will be no danger from hazardous materials in the immediate area of work.

14. All burning or welding operations outside the shops area requires a Hot Work permit from Granville County Schools' Safety and Health Manager.

15. Good housekeeping will be maintained in the shop area. Material will be stored in such a manner that there is no danger from sliding, falling or presenting a hazard by striking against or cutting.

16. Scrap stock will be cleaned from floor and the workbenches following each job or at the end of each day.

4. PERSONAL PROTECTIVE EQUIPMENT

1. (PPE) Personal protective equipment is not a substitute for engineering controls or feasible work or administrative procedures.

2. While these controls are being implemented, or if it has been determined that control methods are not feasible, personal protective equipment is required whenever there are hazards that can do bodily harm through absorption, inhalation, or physical contact.

3. This equipment includes respiratory and hearing protective devices, special clothing, and protective devices for the eyes, face, head, and extremities.

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4. All PPE will be of a safe design and constructed for the work to be performed and will be maintained in a sanitary and reliable condition.
5. Eye protection is required when there is a possibility of injury from chemicals or flying particles. Examples of operation requiring the use of eye protection include, but are not limited to:
 - a. Chipping, grinding, and impact drilling.
 - b. Breaking concrete, brick, and plaster.
 - c. Welding or helping in welding of any type.
 - d. Cleaning with compressed air.
 - e. Tinning or soldering lugs or large joints.
 - f. Riveting, grinding, or burning metals.
 - g. Handling chemicals, acids, or caustics.
6. Face shields will be thoroughly washed with soap and water before being worn by another person.
7. Appropriate hearing protection will be used where employees are in designated hazardous noise areas with operating noise sources, or using tools or equipment that are labeled as hazardous noise producers.
8. The Office of Health and Safety will be contacted for noise level surveys and guidance on the type of hearing protection required.
9. Appropriate hand protection will be used where employees are in designated hazardous areas.
 - a. Rubber protective gloves are worn by personnel working in battery shops or where acids, alkalis, organic solvents, and other harmful chemicals are handled.

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- b.** Electrical worker's gloves are designed and will be used to insulate electrical workers from shock, burns, and other electrical hazards. These gloves will NOT be the only protection provided and will never be used with voltages higher than the insulation rating of the gloves.
 - c.** Multi-use gloves will be worn to protect the hands from injuries caused by handling sharp or jagged objects, wood, or similar hazard-producing materials.
 - d.** These gloves are usually made of cloth material with chrome leather palms and fingers or synthetic coating. All-leather gloves are also acceptable.
- 10.** Foot protection non-skid shoes will be worn where floors will be wet or greasy. Where there is reasonable probability of foot or toe injury from impact and compression forces, safety footwear will be worn.
- 11.** Respiratory Protection is need with various airborne hazards, e.g., organic vapors, particulates, fumes, etc., that personnel will encounter and respiratory protection will be required. The Safety and Health Manager will be consulted for guidance on the type of protection required.
- 12.** All personnel working below other workers and in areas where sharp projections or other head hazards exist will wear head protection and/or hard hats.
- 13.** Body Protection made of natural or synthetic rubber or personnel handling irritating or corrosive substances will wear acid-resisting rubberized cloth aprons. Aprons will normally be worn with acid sleeves and gloves for greater body protection against skin injuries.
- 14.** Insulated Matting will be used by workers for additional resistance to shock where potential shock hazards exist, such as:
- a.** Areas where floor resistance is lowered due to dampness.
 - b.** Areas where high voltage (above 600 volts) will be encountered.

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c. Areas with electrical repair or test benches.

15. Shop supervisors will ensure that shop personnel use the protective clothing and equipment that will protect them from hazards of the work they perform.

16. It is the responsibility of workers to keep their PPE in a clean, sanitary state of repair and use the equipment when required.

17. Workers will keep their hands and face clean, change clothes when they are contaminated with solvents, lubricants, or fuels, and keep their hands and soiled objects out of their mouth.

18. No food or drink will be brought into or consumed in areas exposed to toxic materials, chemicals, or shop contaminants.

19. Workers will wash their hands before eating or smoking after exposure to any contaminant.

20. Workers will not wear rings, earrings, bracelets, wristwatches, or necklaces in the vicinity of operating machinery and power tools.

21. Additionally, long full beards, unrestrained long hair, and loose clothing can become caught in tools or machinery and cause serious personal injury.

22. Highly combustible garments or coveralls made of material such as nylon will not be worn in or around high temperature equipment or operations such as boiler operations, welding, and any other work with open flame devices.

5. SHOP LAYOUT SAFETY PLAN

1. Granville County Schools will provide proper layout, spacing, and arrangement of equipment, machinery, passageways, and aisles are essential to orderly operations and to avoid congestion.

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- 2.** Equipment and machinery will be arranged by Granville County Schools to permit an even flow of materials. Sufficient space will be provided to handle the material with the least possible interference from or to workers or other work being performed.
- 3.** Machines will be placed so it is not necessary for an operator to stand in a passageway or aisle.
- 4.** Additionally, machine positioning will allow for easy maintenance, cleaning, and removal of scrap.
- 5.** Clear zones will be established and will be of sufficient dimensions to accommodate typical work.
- 6.** Marking of machine clear zones will be yellow or yellow and black hash-marked lines, 2 to 3 inches wide.
- 7.** Machines designed for fixed locations will be securely anchored. If pieces of stock exceed the workplace/clear zone floor markings, rope/stanchions will be used to temporarily extend the workplace.
- 8.** Machines with shock mounting pads will be securely anchored and installed according to manufacturer's instructions.
- 9.** Passageways/aisles will be provided and marked to permit the free movement of employees bringing and removing material from the shop. These passageways are independent of clear zones and storage spaces. They will be clearly recognizable.
- 10.** Where powered materials handling equipment (forklift) is used, facility layout will provide enough clearance in aisles, on loading docks, and through doorways to permit safe turns.
- 11.** Aisles will be at least 3 feet wider than the widest vehicle used or most common material being transported.

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6. ILLUMINATION SAFETY PLAN

Adequate illumination will be provided to ensure safe working conditions:

1. Portable lamps will have UL approved plugs, handles, sockets, guards, and cords for normal working conditions.
2. For work in boilers, condensers, tanks, turbines, or other grounded locations that are wet or will cause excessive perspiration, a low voltage lighting system will be used, either from a battery system or low-voltage lighting unit. In situations where these lighting systems are not available, a vapor-proof 110-volt lighting system will be used.
3. Flashlights for use near energized electrical equipment and circuitry will have insulated cases.

fine work will require 100 foot-candles or more. This can be obtained with a combination of general lighting plus supplemental lighting.

7. EXITS AND EXIT MARKINGS SAFETY PLAN

1. Every exit will have "**EXIT**" in plain legible letters not less than 6 inches high with the strokes of the letters not less than three-quarters of an inch wide.
2. Doors, passageways, or stairways that are neither exits nor ways to an exit (but will be mistaken for an exit) will be clearly marked "**NOT AN EXIT**" or by a sign indicating their actual use, for example: "**STORAGE ROOM**" or "**BASEMENT.**"
3. When the direction to the nearest exit will not be apparent to an occupant, an exit sign with an arrow indicating direction will be used.
4. Exit access will be arranged so it is unnecessary to travel toward any area of high hazard potential in order to reach the nearest exit (unless the path of travel is effectively shielded by suitable partitions or other physical barriers

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5. Granville County Schools' exit signs will be clearly visible from all directions of egress and will not be obstructed at any time. If occupancy is permitted at night, or if normal lighting levels are reduced at times during working hours, exit signs will be suitably illuminated by a reliable light source.
6. A door from a room to an exit or to a way of exit access will be the side-hinged swinging type. It will swing out in the direction of travel if 50 or more persons occupy the room or the exit is from an area of high hazard potential.
7. Areas around exit doors and passageways will be free of obstructions. The exit route will lead to a public way.
8. No lock or fastening device will be used to prevent escape from inside the building.
9. There will be at least two means of exit remote from each other where occupants will be endangered by the blocking of any single exit due to fire or smoke.
10. Exits, exterior steps, and ramps will be adequately lighted to prevent mishaps. Separate lighting will not be required if street or other permanent lighting gives at least one foot-candle of illumination on the exit, steps, or ramp.

8. AISLES AND PASSAGEWAYS PLAN

1. Granville County Schools in all shops, yards, buildings, and mobile equipment will maintain good housekeeping. Supervisors are responsible for good housekeeping in or around the work they are supervising.
2. Material will not be placed where anyone might stumble over it, where it might fall on someone, or on or against any support unless the support can withstand the additional weight.
3. Aisles and passageways will be kept clear of tripping hazards.

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4. Nails will be removed from loose lumber or the points turned down.
5. In areas where it is cold enough for ice to form, ice will be removed from all walkways and work areas where it will create a hazard or interfere with work to be done. If ice cannot be removed readily, sand or other approved materials will be applied.
6. Trash and other waste materials will be kept in approved receptacles. Trash will not be allowed to accumulate and will be removed and disposed of as soon as practicable, at least once per shift (or more often if needed).
7. Disconnect switches, distribution panels, or alarm supply boxes will not be blocked by any obstruction that will prevent ready access.
8. Machinery and equipment will be kept clean of excess grease and oil and (operating conditions permitting) free of excessive dust.
9. Pressure gauges and visual displays will be kept clean, visible, and serviceable at all times.
10. Drip pans and wheeled or stationary containers will be cleaned and emptied at the end of each shift.

9. FIRE PREVENTION SAFETY PLAN

1. All Granville County Schools' shop services personnel will receive fire prevention training as part of their general training.
2. Supervisors in charge of operations where fuels, solvents, or other flammable liquids are used will be constantly alert for hazards and unsafe acts.
3. Fuels such as gasoline will never be used to clean floors or clothing, and open solvent or gasoline containers will not be kept near electrical equipment.
4. The use of low flashpoint petroleum solvents will be avoided whenever possible.

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5. Open flames, open element heaters, equipment not properly grounded, and no explosion-proof electrical equipment used in the presence of flammable or combustible liquids will be avoided.

6. Fire extinguishers with proper rating will be installed in shop areas. The number of extinguishers depends upon the size and layout of the facility. Fire extinguishers will meet the following OSHA requirements:

- a.** Be kept fully charged and in their designated area.
- b.** Be located along normal paths of travel.
- c.** Not be obstructed or obscured from view.
- d.** Be visually inspected at least monthly to ensure that they:
 - 1.** Are in their designated places.
 - 2.** Have not been tampered with or actuated.
 - 3.** Do not have corrosion or other impairments.
 - 4.** Are accessible and not obstructed.
 - 5.** Be visually inspected at least monthly to ensure that they meet OSHA requirements.
 - 6.** Be examined at least yearly and/or recharged or repaired to ensure operability and safety.
 - 7.** Be hydrostatically tested.
 - 8.** Be placed so the maximum travel distance, unless there are extremely hazardous conditions, does not exceed 75 feet for Class A or 50 feet for Class B locations.

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7. Granville County Schools' supervisors will ensure that employees remove construction debris and rubbish from the job site upon completion of the job, or daily if extended beyond one day.

8. Hazardous materials will not be left at job sites unless properly stored. Work being performed on job sites will not endanger building occupants (e.g., exits blocked, fire alarm devices disconnected, etc.).

10. MATERIAL STORAGE SAFETY PLAN

1. Granville County Schools will avoid all unnecessary accumulation of materials and supplies in the shop area.

2. The presence of unnecessary material in the shop could cause such incidents as tripping, falling, or slipping. This could be especially hazardous around equipment that is in operation.

3. The only material in the shop area will be that actually in work.

4. The only place materials will accumulate in quantity is in storerooms and material holding areas.

5. The storage of materials will not, of itself, create a hazard.

6. Materials stored in tiers will be stacked, strapped, blocked or interlocked, and limited in height so they are stable and secure against sliding or collapse.

7. Storage racks will have sufficient capacity to bear the loads imposed on them.

8. Stored materials will not obstruct fire extinguishers, alarm boxes, sprinkler system controls, electrical switch boxes, machine operations, emergency lighting, first aid or emergency equipment, or exits.

9. Heavy materials and equipment will be stored low and close to the ground or floor to reduce the possibility of injury during handling.

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10. All passageways and storerooms will be maintained clean, unobstructed, dry, and in sanitary condition. Spills will be promptly removed.

11. Where mechanical handling equipment, such as lift trucks is used, safety clearance will be provided for aisles at loading docks, through doorways, and wherever turns or passages will be made. No obstructions that could create a hazard are permitted in aisles.

11. USE OF TOOLS SAFETY PLAN

1. Incidents at the job site involving hand tools are usually the result of misuse. Hand tools are precision tools capable of performing many jobs when used properly. Granville County Schools' prevention of incidents involving hand tools on the job site becomes a matter of good instruction, adequate training, and proper use.

2. Hand tool safety requires that the tools be of good quality and adequate for the job. All tools will be kept in good repair and maintained by qualified personnel.

3. Racks, shelves, or toolboxes will be provided for storing tools that are not in use.

4. When personnel use hand tools while they are working on ladders, scaffolds, platforms, or work stands, they will use carrying bags for tools that are not in use. Workers will not drop tools.

5. Granville County Schools' supervisors will frequently inspect all hand tools used in the operation under their supervision. Defective tools will be immediately removed from service.

6. When handles of hammers, axes, picks, or sledges become cracked, split, broken, or splintered, will be immediately replaced.

7. Tool handles will be well fitted and securely fastened by wedges or other acceptable means.

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8. Wedges, always used in pairs, will be driven into the handle when repairing a sledgehammer or maul, to prevent the head from accidentally flying off if the handle shrinks.
9. Files, wood chisels, and other tools with tangs will be fitted and used with suitable handles covering the end of the tang. Ends of the handles will not be used for pounding or tapping.
10. Cold chisels, punches, hammers, drift pins, and other similar tools have a tendency to mushroom heads from repeated poundings. They will be dressed down as soon as they begin to crack and curl.
11. When dressing tools, a slight bevel of about three-sixteenths of an inch will be grounded around the head. This will help prevent the heads from mushrooming.
12. When tool heads mushroom, the material is highly crystallized and, with each blow of the hammer, fragments are likely to break off.
13. Portable power tools increase mobility and convenience but are frequently more hazardous to use than their stationary counterparts.
14. Granville County Schools' personnel who are required to use portable power tools in their work will be thoroughly trained in safe operating practices.
15. Safe operating procedure will be set up for each type of tool consistent with the manufacturer's instructions.

12. USE OF COMPRESSED AIR SOURCES SAFETY PLAN

1. Compressed air has the appearance of a relatively harmless gas. However, to avoid accidents, compressed air will be used correctly.
2. The improper or inadvertent connection of items not designed for shop air pressure, i.e., equipment, storage vessels, or containers, to a shop air supply will cause serious personal injury and more than likely will damage the item being connected.

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3. The maximum air pressure approved for general use in the shops and laboratories is 30 psi (pounds per square inch).
4. This pressure is sufficient for most shop and laboratory operations and is not significantly hazardous.
5. Use discretion and good judgment when using compressed air, even at this low pressure.
6. The following rules and practices are suggested to avoid personal injury, equipment damage, and potential environmental impact:
 - a. All personnel assigned to shops with air compressors will be familiar with compressor operating and maintenance instructions.
 - b. Compressed air is not to be used to blow dirt, chips, or dust from clothing.
 - c. Air compressors will be maintained strictly in accordance with the manufacturer's instructions.
 - d. Do not use compressed air to transfer materials from containers when there is a possibility of exceeding the safe maximum allowable working pressure of the container.
 - e. The maximum working pressure of compressed air lines will be identified in psi.
 - f. Pipeline outlets will be tagged or marked showing maximum working pressure immediately adjacent to the outlet.
 - g. Do not use compressed air to transfer materials from standard 55-gallon drums. Use a siphon with a bulk aspirator on a pump.

WARNING

**IT IS DANGEROUS TO PRESSURIZE ANY CONTAINER
NOT DESIGNED FOR THAT PURPOSE.**

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- h.** Never use compressed air where particles can be accelerated by the air stream.
- i.** Do not use compressed air to clean machinery or parts unless absolutely necessary.
- j.** Where possible, use a brush. If necessary, use a minimum pressure and provide barriers or clean the area of personnel. Wear goggles to protect your eyes.
- k.** Never apply compressed air to any part of a person's body.
- l.** Do not use a compressed air line that does not have a pressure regulator for reducing the line pressure.
- m.** Keep the hose length between tool housing and the air source as short as possible.
- n.** Where possible, attach a short length of light chain between the hose and the housing on air-operated tools. This keeps the hose from whipping will the hose-tool coupling separate.
- o.** Inspect air supply and tool hoses before using. Discard and label unfit hoses. Repair hoses where applicable.
- p.** Turn valve off and vent pressure from a line before connecting or disconnecting it. Never work on a pressurized line.
- q.** Do not connect air supply respirators or supplied-air suits to the compressed air supply system of any building. Such compressed air is unsafe to breathe.
- r.** Do not attach pneumatic tools, process, or control instruments to breathing airlines. The potential contamination to personnel and systems is hazardous.

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13. ROOFTOP WORK AREA SAFETY PLAN

1. If the rooftop is to be worked on and there is no adequate guardrail, none of Granville County Schools' employees will come within 10 feet of the roof's edge without wearing a lifebelt or harness securely attached to a securely anchored rope or line, with the entire system being capable of supporting a minimum dead weight of 5,400 pounds.
2. No employee will work on the rooftop if the wind speed exceeds 20 miles per hour.

14. SHORING AND TRENCHING SAFETY PLAN

1. The walls and faces of excavations and trenches over 5 feet, where workers will be exposed to danger, will be guarded by a shoring system, sloping of the ground, or some other equivalent means.
2. Trenches less than 5 feet deep with hazardous soil conditions also will be effectively protected.
3. Appropriate trench boxes and/or shields will be used in lieu of shoring or sloping.
4. Tools, equipment, an excavated material will be kept 2 feet or more from the lip of the trench.
5. Where Granville County Schools' employees are required to be in or work in trenches 4 feet deep or more, an adequate means of exit such as ladders or steps will be provided within 25 feet of travel and used.
6. Daily inspections will be made of trenches and excavations by the supervisor in charge to ensure adequate slopes, shoring and bracing, and that there is no evidence of possible slides or cave-ins.

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7. More frequent inspections will be necessary as work progresses or after inclement weather conditions, such as rain, or where loose compacted or unstable materials are present.

8. Workers will take extra care when hand excavating in close proximity to utilities to preclude interruption of services an personnel injury and/or equipment damage that can result from breaking electrical, gas, and steam lines.

15. BARRICADES SAFETY PLAN

1. Whenever a common area is disturbed by maintenance, repair, or construction operations and presents a hazard to personnel working in or near, or traveling through the area, Granville County Schools will warn these personnel and other engineering services personnel of the potential hazard.

2. Appropriate barriers will be erected around excavations, open manholes, open electrical panels, etc., whenever they are to be left unattended.

**Granville County Schools
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SAFETY PLAN**

General Work Environment Self Audit Safety Questions

- YES - NO Are all work sites clean and orderly?
- YES - NO Are work surfaces kept dry or appropriate means taken to assure the surfaces are slip-resistant?
- YES - NO Are all spilled materials or liquids cleaned up immediately?
- YES - NO Is combustible scrap, debris and waste stored safely and removed from the work site promptly?
- YES - NO Is accumulated combustible dust routinely removed from elevated surfaces, including the overhead structure of buildings?
- YES - NO Is combustible dust cleaned up with a vacuum system to prevent the dust going into suspension?
- YES - NO Is metallic or conductive dust prevented from entering or accumulating on or around electrical enclosures or equipment?
- YES - NO Are all work areas adequately illuminated?
- YES - NO Are pits and floor openings covered or otherwise guarded?
- YES - NO Are covered metal waste cans used for oily and paint-soaked waste?
- YES - NO Are all oil and gas fired devices equipped with flame failure controls that will prevent flow of fuel if pilots or main burners are not working?
- YES - NO Are paint spray booths, dip tanks and the like, cleaned regularly?
- YES - NO Are the minimum number of toilets and washing facilities provided?
- YES - NO Are all toilets and washing facilities clean and sanitary?

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Environmental Controls Self Audit Safety Questions

- YES - NO Are all work areas properly illuminated?

- YES - NO Are employees instructed in proper first aid and other emergency procedures?

- YES - NO Are hazardous substances identified which may cause harm by inhalation, ingestion, skin absorption or contact?
- YES - NO 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?
- YES - NO Is employee exposure to chemicals in the work place kept within acceptable levels?

- YES - NO Can a less harmful method or product be used?

- YES - NO Is the work area's ventilation system appropriate for work being performed?

- YES - NO Are spray painting operations done in spray rooms or booths equipped with an appropriate exhaust system?
- YES - NO Is employee exposure to welding fumes controlled by ventilation, use of respirators, exposure time, or other means?
- YES - NO Are welders and other workers nearby provided with flash shields during welding operations?
- YES - NO If forklifts and other vehicles are used in buildings or other enclosed areas, are carbon monoxide levels kept below maximum acceptable concentration?
- YES - NO Has there been a determination that noise levels in the facilities are within acceptable levels?
- YES - NO Are steps being taken to use engineering controls to reduce excessive noise levels?

- YES - NO Are proper precautions being taken when handling asbestos and other fibrous materials?
- YES - NO Are caution labels and signs used to warn of asbestos?

- YES - NO Are wet methods used, when practicable, to prevent emission of airborne asbestos fibers, silica dust and similar hazardous materials?
- YES - NO Is vacuuming with appropriate equipment used whenever possible, rather than blowing or sweeping dust?
- YES - NO Are grinders, saws and other machines that produce dusts that are vented to an industrial collector or central exhaust system?

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Environmental Controls Self Audit Safety Questions

YES - NO Are the local exhaust ventilation systems designed and operating properly at the airflow and volume necessary for the application? Are the ducts free of obstructions or the belts slipping?

YES - NO Is personal protective equipment provided, used and maintained wherever required?

YES - NO Are there written standard operating procedures for the selection and use of respirators where needed?

YES - NO Are rest rooms and washrooms kept clean and sanitary?

YES - NO Is all water provided for drinking, washing and cooking potable?

YES - NO Are all outlets for water not suitable for drinking clearly identified?

YES - NO Are employees physical capacities assessed before being assigned to jobs requiring heavy work?

YES - NO Are employees instructed in the proper manner of lifting heavy objects?

YES - NO If heat is a problem, have all fixed work areas been provided with spot cooling or air conditioning?

YES - NO Are employees screened before assignment to areas of high heat to determine if their health condition might make them more susceptible to having an adverse reaction?

YES - NO Are employees working on streets and roadways, where they are exposed to the hazards of traffic, required to wear a bright colored (traffic orange) warning vest?

YES - NO Are exhaust stacks and air intakes located so that contaminated air will not be re-circulated within a building or other enclosed area?

YES - NO Is equipment producing ultra-violet radiation properly shielded?

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Walkways-Environmental Controls Self Audit Safety Questions

- YES - NO Are aisles and passageways kept clear?
- YES - NO Are aisles and walkways marked as appropriate?
- YES - NO Are wet surfaces covered with non-slip materials?
- YES - NO Are holes in the floor, sidewalk or other walking surface repaired properly, covered or otherwise made safe?
- YES - NO Is there safe clearance for walking in aisles where motorized mechanical handling equipment in operating?
- YES - NO Are spilled materials cleaned up immediately?
- YES - NO Are materials or equipment stored in such a way that sharp projectiles will not interfere with the walkway?
- YES - NO Are changes of direction or elevation readily identifiable?
- YES - NO 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?
- YES - NO Is adequate headroom provided for the entire length of any aisle or walkway?
- YES - NO Are standard guard rails provided wherever aisle or walkway surfaces are elevated more than 30 inches above any adjacent floor or the ground?
- YES - NO Are bridges provided over conveyors and similar hazards?

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Exiting or Egress Self Audit Safety Questions**

- YES - NO** Are all exits marked with an exit sign and illuminated by a reliable light source?
- YES - NO** Are the directions to exits, when not immediately apparent, marked with visible signs?
- YES - NO** 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**", and the like?
- YES - NO** Are exit signs provided with the word "**EXIT**" in lettering at least 5 inches high and the stroke of the lettering at least 1/2 inch wide?
- YES - NO** Are exit doors side-hinged?
- YES - NO** Are at least two means of egress provided from elevated platforms, pits or rooms elevated where the absence of a second exit would increase the risk of injury from hot, poisonous, corrosive, suffocating, flammable, or explosive substances?
- YES - NO** Are all exits kept free of obstructions?
- YES - NO** Are there sufficient exits to permit prompt escape in case of emergency?
- YES - NO** Are special precautions taken to protect employees during construction and repair operations?
- YES - NO** Is the number of exits from each floor of building, and the number of exits from the building itself, appropriate for the building occupancy load?
- YES - NO** Are exit stairways which 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?
- YES - NO** When ramps are used as part of required exiting from a building, is the ramp slope limited to 1 foot vertical and 12 feet horizontal?
- YES - NO** Where exiting will be through frameless glass doors, glass exit doors, storm doors and such, are the doors fully tempered and meeting safety requirements for human impact?

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Exit Doors Self Audit Safety Questions

- YES - NO** Are doors which are required to serve as exits designed and constructed so that the way of exit travel is obvious and direct?
- YES - NO** Are windows which could be mistaken for exit doors, made inaccessible by means of barriers or railings?
- YES - NO** Are exit doors operable from the direction of exit travel, without the use of a key or any special knowledge or effort, when the building is occupied?
- YES - NO** Is a revolving, sliding or overhead door prohibited from serving as a required exit door?
- YES - NO** If 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?
- YES - NO** 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?
- YES - NO** If 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** Are doors that swing in both directions and are located between rooms where there is frequent traffic, provided with viewing panels in each door?

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Compressors & Compressed Air Self Audit Safety Questions Page 1

- YES - NO** Are compressors equipped with pressure relief valves and pressure gauges?
- YES - NO** Are compressor air intakes installed and equipped to ensure that only clean, uncontaminated air enters the compressor?
- YES - NO** Are air filters installed on the compressor intake?
- YES - NO** Are compressors operated and lubricated in accordance with the manufacturer's recommendations?
- YES - NO** Are safety devices on compressed air systems checked frequently?
- YES - NO** Before any repair work is done on the pressure system of a compressor, is the pressure bled off and the system locked out?
- YES - NO** Are signs posted to warn of the automatic starting feature of the compressors?
- YES - NO** Is the belt drive system totally enclosed to provide protection for the front, back, top and sides?
- YES - NO** Is it strictly prohibited to direct compressed air towards a person?
- YES - NO** Are employees prohibited from using highly compressed air for cleaning purposes?

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Compressors & Compressed Air Self Audit Safety Questions Page 2

YES - NO If compressed air is used for cleaning off clothing, is the pressure reduced to less than 10 psi?

YES - NO When using compressed air for cleaning, do employees use personal protective equipment?

YES - NO Are safety chains or other suitable locking devices used at couplings of high-pressure hose lines where a connection failure would create a hazard?

YES - NO Before compressed air is used to empty containers of liquid, is the safe working pressure of the container checked?

YES - NO When compressed air is used with abrasive blast cleaning equipment, is the operating valve a type that must be held open manually?

YES - NO When compressed air is used to inflate auto tires, is a clip-on chuck and an in line regulator preset to 40 psi required?

YES - NO Is it prohibited to use compressed air to clean up or move combustible dust if such action could cause the dust to be suspended in the air and cause a fire or explosion hazard?

YES - NO Are employees made aware of the hazards caused by faulty or improperly used hand tools?

YES - NO Are appropriate safety glasses, face shields and similar equipment used while using hand tools or equipment which might produce flying materials or be subject to breakage?

YES - NO Are jacks checked periodically to assure they are in good operating condition?

YES - NO Are tool handles wedged tightly in the head of all tools?

YES - NO Are tool cutting edges kept sharp so the tool will move smoothly without binding or skipping?

YES - NO Are tools stored in a dry, secure location where they won't be tampered with?

YES - NO Is eye and face protection used when driving hardened or tempered spuds or nails?

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Hand Tools & Equipment Self Audit Safety Questions

YES - NO Are all tools and equipment (both company and employee-owned) used by employees at their work place in good condition?

YES - NO Are hand tools such as chisels or punches, which develop mushroomed heads during use, reconditioned or replaced as necessary?

YES - NO Are broken or fractured handles on hammers, axes and similar equipment replaced promptly?

YES - NO Are worn or bent wrenches replaced regularly?

YES - NO Are appropriate handles used on files and similar tools?

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Control of Harmful Substances by Ventilation Self Audit Safety Questions

YES - NO 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?

YES - NO Are exhaust inlets, ducts and plenums designed, constructed, and supported to prevent collapse or failure of any part of the system?

YES - NO Are clean-out ports or doors provided at intervals not to exceed 12 feet in all horizontal runs of exhaust ducts?

YES - NO If two or more different types of operations are being controlled through the same exhaust system, will the combination of substances being controlled constitute a fire, explosion or chemical reaction hazard in the duct?

YES - NO Is adequate makeup air provided to areas where exhaust systems are operating?

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