UNGER
CONSTRUCTION CO.

Proof of Training

Print name: _____Signature: _____ Date: _____

Portable Abrasive Wheel Tools

Purpose

To establish appropriate expectations and safe work practices when working with portable abrasive wheel tools. Abrasive wheel tools include grinding, cutting, polishing and wire buffing. Note: Unger Construction does not use stationary grinders such as bench or pedestal grinders.

Scope

This policy will apply to all work performed by employees and subcontractors including, but not limited to the following activities: construction, installation, demolition, remodeling, relocation, refurbishment, testing, and servicing or maintenance of equipment or machines and at other times when portable abrasive wheel tools are required.

Responsibilities

Management (Board of Directors and Project Managers)

Management is responsible for ensuring that the materials (e.g., tools, equipment, personal protective equipment) and other resources (i.e., worker training materials) required to fully implement and maintain this program are readily available where and when they are required. Additionally, management will monitor the effectiveness of the program, provide technical assistance as needed, and review the program bi-annually.

Program Manager

Dave Simpson is responsible for the development, documentation, training and administration of the program. This position carries the responsibility of insuring this program is adhered to and that proper reporting is executed.

Supervisors (Superintendents and Foreman)

Supervisors are responsible for ensuring that a task specific job hazard analysis (JHA), also known as a safe work plan, is developed. The JHA will select, implement and document the appropriate site-specific control measures as defined within this policy. Supervisors will direct the work in a manner that ensures the risk to workers is minimized, adequately controlled and that practices defined by this policy will be followed. Supervisors are responsible for ensuring Unger Construction employees and subcontractors are following expectations. Supervisors will be held accountable for enforcing the requirements of this program. Undesirable behavior will not resolve itself, therefore supervisors must be directly involved with modifying behaviors inconsistent with program expectations. Supervisors will be held accountable for enforcing Unger Construction's disciplinary program.

Workers (Employees and Subcontractors)

Unger Construction has high expectations and requires safety excellence for each employee, crew, project and for our entire company. Workers are required to follow the minimum procedures outlined in this program. Workers are responsible for knowing the hazards and the control measures established in the JHA. Workers are responsible for using the assigned PPE in an effective and safe manner. Workers are responsible for stopping unsafe acts and correcting unsafe conditions on the spot as soon as they are discovered. Any deviations from this program must be immediately brought to the attention of your supervisor. Workers that choose to conduct themselves in a manner that is inconsistent with these expectations will be held accountable for those decisions and may incur disciplinary actions.

Hazardous Material Survey

Unger Construction requires hazardous materials surveys before demolition or renovation work begins. The survey shall include all of the following: A visual inspection of a facility or a portion thereof for suspect materials, sampling and laboratory analysis of any suspect materials found for the presence of asbestos. The hazardous materials survey will also furnish a written report that includes: a description of the area(s) visually inspected, a detailed description of any suspect material sampled, the results of any laboratory analysis of suspect materials, the method of analysis, and the total amount of asbestos containing material. Typically a floor or roof plan is included with the report to reference the written information visually.

The person conducting the survey must be certified pursuant to OSHA and/or EPA regulations. The survey may be performed by a certified Site Surveillance Technician (SST) under the supervision of a licensed consultant. Note: The survey may be performed by a certified Site Surveillance Technician (SST) under the supervision of a licensed consultant. Note: The survey needs to be kept in a project file so that it can be accessed when working on future projects.

If lead or asbestos have been confirmed to be present employees and subcontractors must follow Unger Constructions Lead and/or Asbestos program. If hazards such as asbestos or lead will be disturbed during remediation, a properly licensed professional must perform the work and follow appropriate regulations.

Job Hazard Assessment (Safe Work Plan)

Unger Construction utilizes JHA's as our means of hazard assessment and establishing a safe work plan. JHA's are performed by supervisors and/or workers. Our library of hazard assessments is maintained on the "S" drive. Before beginning a new task refer to the JHA library, generally speaking all scopes of our work are covered. For situations that have not yet been covered select one that is substantially similar and use it as a baseline. JHA's on the "S" drive are organized by work area and job description. JHA's include strategies for elimination, substitution, engineering and administrative controls. After applying all appropriate reduction and elimination technique, the remaining hazards will be analyzed and the proper PPE to reduce the hazards will be selected. PPE will be identified for hazards that are in the process of being reduced or eliminated and/or when hazard-reduction efforts are not 100% effective in eliminating the hazards.

For complex or moderate to high hazard tasks, tasks where an additional level of safety planning is needed, the safety director will perform the JHA with the supervisor and workers.

Training

Before any employee is allowed to perform work in areas requiring portable abrasive wheel tools, they must first receive training. Each employee must demonstrate an understanding of the required training, and the ability to use portable abrasive wheel tools properly, before being allowed to perform work. Proof of training is available on the "S" drive. The training data base can be sorted by employee name or by subject. This ensures supervisors and employees are able to confirm they have the necessary training and if they don't which employees do. Employees that need training should contact their project manager or superintendent to make arrangements for them to be trained.

Retraining

The need for retraining will be indicated when: An employee's work habits or knowledge indicate a lack of necessary understanding, motivation or skills required to properly use portable abrasive wheel, New equipment is installed/purchased, Changes in the workplace make previous training obsolete, or Upon a supervisor request.

Discussion

Due to the nature of the hazards and the potential for serious injury specialized work techniques are required when operating portable abrasive wheel tools. Portable abrasive wheel tools create special safety concerns because they throw off flying fragments. Workers must understand, and be able to control the hazards associated with portable abrasive wheel tools. All tasks involving portable abrasive wheel tools require an extra level of work preparation, awareness, and attention during use to prevent injury or incidental damage.

Operation, Alteration, Modification, Servicing, Repairing

All portable abrasive wheel tools shall be used in accordance to the manufacturers intended design and function and per their written instructions. Safety devices, covers, shields, interlocks and alarms shall be fully functional as the manufacturer intended for them. Portable abrasive wheel tools cannot be modified or altered in any way without written approval from the manufacturer or formal approval from a Professional Engineer registered in the State of California. Additionally, approval shall be received from Unger Constructions Director of Safety, Director of Risk Management and the Vice President of Operations.

Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, warnings and limitations. Portable abrasive wheel tools shall be only operated, serviced and repaired by qualified personnel. The operator is primarily responsible for the safe operation of equipment. They must have knowledge of the safety regulations applicable to the equipment and its operation.

Pre-task plan

Pre-task plans must be developed for each portable abrasive wheel tool. Operators and supporting cast members shall read and sign the Pre-task plan before beginning work. The pre-task plan shall list corresponding potential hazards for each task and the methods to eliminate or control hazards. Tasks should be listed sequentially, in the order in which they will be performed. Portable abrasive wheel tools can generate sparks and can ignite flammable vapors. In these situations the operator must complete a

Hotwork Permit. Personnel protective equipment (PPE) requirements for portable abrasive wheel tools are task specific however; typical PPE includes (gloves, glasses, face shield and hearing protection. Depending on the material being a respirator may also be required.)

The following is a list of examples where the work conditions can adversely affect the safety of working with portable abrasive wheel tools; they shall be addressed in the pre-task plan. Work done off the floor, Working in limited standing or movement areas, especially on ladders (use platforms or scaffolds), Work in cramped quarters, Line of sight problems (visual obstructions),Interfering pipes, racks, or conduits, Limited reach or maneuvering in cramped or isolated work spaces, Improper body positions requiring extended reach for lengthy periods of time, Poor leverage resulting the inability to position tools optimally, Poor lighting hazards - darkness, glare, Working on unstable surfaces, Work involving hazardous energies (chemicals, electrical, etc.)

Inspection

Portable abrasive wheel tools shall be inspected before each use. All portable abrasive wheel tools must be inspected prior to use to confirm they are in good, safe working condition. Safety guards, shields and protective devices must be properly positioned and functional. Before an abrasive wheel is mounted it must be inspected for damage and ring tested to ensure that it is free from cracks or defects. Ring testing is lightly tapping the wheel with a non-metallic object (wooden handle). An undamaged wheel will give a clear metallic tone or ring. Cracked or damaged wheels won't ring they will simply have a dull noise. Cracked or damaged wheel could come apart during operation. Worn, cracked or damaged wheels should be removed from service and discarded.

Performing tasks with Portable Abrasive Wheel Tools

Before using the portable abrasive wheel tool secure or remove loose clothing, confine long hair and dangling jewelry. Even though the abrasive wheel passed inspection it could disintegrate during use. Never stand in the plane of the wheel as it accelerates to full operating speed. Allow the tool to come up to full speed before grinding or cutting. Bring the wheel into contact slowly and smoothly, avoid impact or bumping motions, use the minimum pressure possible. Coordinate your activities with others working around you. Be aware of others working around you; don't let others work below you.
When not in use, portable abrasive wheel tools must be disconnected from their power source, and properly stowed. Torque due to binding of the wheel or blade can cause an imbalance or momentum transfer causing the tool or object to move unexpectedly. Anti-torque handles must be installed when the potential for torque related injury exists. After cutting, sections may be awkward, unstable and/or heavy. Provide support straps, slings, and lifting devices, or jacks to control gravitational forces.
When replacing the wheel unplug the tool, ensure that the maximum RPM rating for the wheel is below the maximum RPM rating for the grinder. The wheel should fit freely on the spindle. The spindle nut shall be tightened enough to hold the wheel in place without distorting the flange. Follow the manufacturer's recommendations. Before using the new wheel let it run for several minutes at operating speed. Watch for flutter or vibration that might be caused by poor installation or a poorly balanced wheel. Never stand in the plane of the wheel as it accelerates to full operating speed.
Portable abrasive wheel tools cannot be used to cut lines (pipes, duct, conduits or other services) while they are within a pipe rack or other supporting structure. The lines to be cut must be removed (released from their clamps and positioned outside of the rack or support structure) such that the probability of an accidental or unintentional cut to neighboring lines is zero.

Storage

Wheels are easily damaged if they are bumped or dropped. It is important to store them appropriately. Proper sorting and storage of wheels will ensure easy access and less chance for error.