

**PURPOSE:** Review each job task performed by employees to determine where job task hazards exist; providing recommendations for hazard elimination/protection, identifying appropriate personal protective equipment (PPE), and training to inform employees of appropriate safety standards and precautions.

**Department:** Facilities Operation and Development

**Job Title:** Facilities Mechanical Systems Tunnel Team

**Job Task:** Performs tasks that ensure the uninterrupted operations of mechanical systems and equipment tunnel specific

**Prepared By:** Shelli Shoemaker

**Date of Creation:** 10/30/2019



# **REQUIRED PERSONAL PROTECTIVE EQUIPMENT** *(choose all that apply for this task. If other, please type in specifics)*



## **Body Protection**

As Required by Job / Task - various



## **Eye Protection**

Safety Glasses

Face Shield



## **Fall Protection**

Fall Protection System Required



## **Foot Protection**

Safety Shoes



## **Hand Protection**

Other



## **Head Protection**

Bump Cap











## **Hearing Protection**

As required by Job / Task - various











## **Respiratory Protection**









As required by Job / Task - various









|  Task/Step  |  Hazard(s)       |  Control Methods  |  Additional Information  |
|---|--|---|--|
| <i>Break the job into a sequence of steps. Each of the steps should accompany some major task.</i>  | <i>Identify the hazard(s) associated with each step. Every possible source of energy must be identified. Look at the entire environment to determine every conceivable hazard.</i> | <i>Decide what actions are necessary to eliminate, control, or minimize hazards that could lead to accidents, injuries, damage to the environment, or illness.</i>                    | <i>Put any additional information here that should be known by the employee performing the task.</i>   |
| Working with steam heat, hot water pipes  | Steam<br>Other   | Whenever possible, shut off steam in work area several hours prior. Verify gauges are working properly. Be aware of steam leaks.  | Drain systems and/or pump before working on them. Release pressure slowly by nicking pipe. Put a barrier between you/pump.   |
| Working with pneumatic parts  | Steam<br>Other   | Slowly open valves to release pressure and wear safety glasses.   | Other includes; Getting sprayed with hot or cold water, steam, refrigerates. Injuries from shooting parts from air build-up.   |
| Working with power tools  | Hand/Power Tools<br>Slips, Trips, and Falls  | Wear goggles and dust mask if applicable. Keep cords away from work area. Keep tools in good condition. Inspect tools before use.   | Cuts, abrasive, electric shock, injury from flying debris, tripping over power cords. Verify that guards are working.  |
| Using hand tools  | Hand/Power Tools   | Keep tools in good condition. Inspect tools before use. Wear safety glasses. Work away from yourself. Use normal caution required.  |  |
| Equipment Maintenance   | Electricity<br>Other   | Shut off any power source before working, Utilize lock-out/tag-out Have appropriate PPE depending on job task.  | Other includes; electric shock, parts shooting and striking worker, getting caught in equipment, cuts from sharp edges   |
| Using scaffolding   | Elevated Work<br>Slips, Trips, and Falls   | Inspect all equipment before using and make sure it is assembled correctly; wheels are locked. Use safety rails. OSHA 1910.27   | Have a safe way to descend. Utilize proper PPE if required. Follow guidelines in OSHA 1910.28 regarding rails, toe-boards, etc.  |
| Using ladders or step-ladders   | Ladders<br>Elevated Work   | Inspect ladder before use. Use ladder at proper height. Make sure the ladder is assembled, locked and on level ground.  | Do not exceed weight limit for ladder. Do not stand on the top or top rung of ladder. Use a spotter if higher than step ladder.  |
| Working in mechanical rooms   | Noise<br>Other   | Be aware of odors and evacuate if you smell gas; be aware of your surroundings, walk carefully, hearing protection if needed.   | Other includes; Explosions from gas lines; burns from steam, hot water lines; slipping on water or oil; tripping, loud noise.  |
| Soldering and brazing using oxygen/acetylene outfit   | Hot Work<br>Other  | Check hose and connections for leaks prior to using, work in well-ventilated areas, Don't solder around flammable materials,  | Use correct solder and PPE, obtain Hot Work Permit.  |
| Preventive maintenance on all plumbing water and sewer lines  | Other  | Wear goggles and proper PPE to avoid cuts.  | Other includes; cuts and abrasions; eye and skin injuries from debris.   |

[Click to Add Page for more Tasks/Steps](#)

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| Using high-pressure water machine to clean drain.   | Other<br>Slips, Trips, and Falls   | Inspect hose before use and replace it if it looks worn. PPE to include eye safety if required.   | Other includes; Hose could break, causing severe injury to worker from high-pressure water.  |
| Working with sewer machine and cable.   | Electricity<br>Other   | Wear rubber gloves under work gloves; always wear special sewer machine gloves with the large sewer machine.  | Stay clear of machine as much as possible to avoid getting caught, get it off the floor to avoid having machine in standing water.   |
| Using air gun to unclog drains.   | Other  | Make sure hose is securely inserted in drain. Wear safety glasses.  | Other includes; Hose popping out of drain and striking worker and/or shooting air at worker.   |
| Working in extreme (hot/cold) temperatures  | Cold/Heat Stress   | Wear proper clothing, take frequent breaks, stay hydrated.  |  |
| Working in confined spaces  | Confined Space Entry   | Before working in confined area, verify that it is safe by monitoring air. Always ventilate area using fan.   | Confined Space Permit must be obtained. Competent Person on the outside to monitor safety of occupants. OSHA 1910.149  |
| Starting up and operating chillers: turning on pumps, opening valves, and checking gauges.  | Other  | Take time to open to the valves, wear proper PPE especially gloves.   | Other includes; back strain, overexertion, burns.  |
| Heavy lifting   | Heavy Lifting  | Use proper lifting techniques, limit duration of repetitive motion. Always know your weight limit, lift with your legs.   | Get help if needed; heavy or awkward.  |
| Operates University vehicles  | Driving University Vehicles  | Inspect vehicle before use. Use seat belts and safety prescription glasses. Stay alert for pedestrians, other vehicles and objects.   |  |
| May work with materials containing asbestos.  | Asbestos Exposure  | Never disturb materials containing asbestos unless properly trained. Use appropriate exposure control methods and PPE.  | Call EHS regarding asbestos concerns.  |
| Working around electricity  | Electricity  | De-energize equipment and work area. Always utilize lock-out/tag-out device. Verify equipment is de-energized. Utilize all PPE.   | If equipment must remain on; wear safety glasses and leather gloves and have a spotter with you. Remove standing water.  |

[Click to Add Page for more Tasks/Steps](#)

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| Storing or transporting compressed gas cylinders  | Compressed Gases<br>Other  | Always install a protective valve cover and secure cylinders to a stand or wall, wear proper PPE. No lubricants on valves.  | Other includes; Explosion of compressed gas, rupture of valve.   |
| Battery work  | Other  | Wear eye protection, utilize safety junction box starting vehicle with jumper cables, and wear gloves and protective coveralls.   | Other includes; Eye injuries, acid spills, explosion.  |
| Steam cleaning  | Steam<br>Other   | Wear protective gloves and safety glasses. Direct steam flow always away from body.   | Other includes; Eye injuries, scalding burns.  |
| Using grinders  | Hand/Power Tools<br>Other  | Wear eye protection--always. Wear gloves--always. Keep guards properly adjusted. Tool rest adjusted to within 1/8 in.   | Other includes; Eye, hand and bodily injuries.   |
| Working with/around rotating equipment.   | Other  | Secure or remove loose clothing, jewelry or anything else that could be entangled in the rotating wheel.  | Watch for pinch points.  |
| Lifting, moving, loading material, tools, and parts; material handling hoist  | Falling Objects<br>Other   | Never go under the load. Do not exceed load capacity. PPE includes hard hat, eye protection, gloves, and safety footwear.   | Other includes; Hand Contusions<br>All overhead hoists must be inspected and certified annually.   |
| Work in low lighting/no lighting areas  | Other  | Always use portable lighting. Survey the area for possible slip, trip, fall hazards.  |  |
| Standing water  | Electricity<br>Other   | Use extreme caution, Avoid using electrical components, LOTO if warranted until water is removed.   |  |
| Animals and Insects   | Animal/Insect Bite or Sting  | Use appropriate covering to prevent skin interaction. Remove affected material upon exit from job.  |  |
|   |  |   |  |

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**REQUIRED TRAINING COURSES** *(choose all that apply for this task. If other, please type in specifics)*

 Building Emergency Action Plan \_\_\_\_\_

 Confined Space Entry \_\_\_\_\_

 Crane, Sling, and Hoist Safety \_\_\_\_\_

 Electrical Safety/Arc Flash Awareness \_\_\_\_\_

 Elevated Work \_\_\_\_\_

 Fall Protection \_\_\_\_\_

 Filtering Facepiece Respirator Training \_\_\_\_\_


 Fire Extinguisher \_\_\_\_\_

 Flammable Liquids \_\_\_\_\_

 Hand and Power Tool Safety \_\_\_\_\_

 Hazard Communication \_\_\_\_\_

 Hearing Conservation \_\_\_\_\_

 Heat and Cold Stress \_\_\_\_\_

 Hot Work \_\_\_\_\_

 Lead Safety Awareness \_\_\_\_\_

 Legionella Awareness \_\_\_\_\_

 Lockout/Tagout \_\_\_\_\_

 Personal Protective Equipment (PPE) \_\_\_\_\_

 Respiratory Protection \_\_\_\_\_

 Shop Safety \_\_\_\_\_


 Silica Dust Safety \_\_\_\_\_


 OSHA Class III Asbestos Course \_\_\_\_\_

 Asbestos Awareness \_\_\_\_\_

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I have read and understand the contents of the JHA and the controls required to mitigate the risks from the identified hazards.

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

Supervisor: \_\_\_\_\_

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

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