SAFETY MANUAL

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March 2019

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INJURY AND ILLNESS PREVENTION PROGRAM

Revised (9/22/2018)

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HPS MECHANICAL

INJURY AND ILLNESS PREVENTION PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 1509
- 8 CCR 3203

II. POLICY

HPS Mechanical has instituted a comprehensive Injury and Illness Prevention Program (IIPP) for all HPS employees and affected sub-contractor personnel. The safety of employees and the protection of environment and property are core values held by HPS Mechanical. Every employee is relied upon to actively support and implement this program.

The Company's Code of Safe Work Practices support the elements of this IIPP.

III. RESPONSIBILITIES

Scott DenHerder is the Injury and Illness Prevention Program Administrator and has the authority and responsibility for implementing the Program.

Frank Martinez is the IIPP Facilitator and is responsible for facilitating the implementation of the Program.

A. Management/Supervisor Responsibilities

Management is responsible for giving safety and loss prevention equal consideration with other factors that affect daily business decisions. Our position is that injuries and accidents are avoidable.

Management is also responsible for providing the tools necessary for maintaining a safe work environment. These tools include required safety training, proper personal protective equipment and safe tools and machinery.

Management and supervisors are responsible for actively supporting safe performance in the following ways:

- Holding employees accountable through the enforcement of safety policies, as well as for safe and at-risk behaviors.
- Communicating safety policies to their employees and subcontractors as necessary.
- Monitoring employee activities and behaviors to determine if employees should be removed from the work site.
- Reporting/recording injuries and incidents as required.
- Holding and documenting regularly held safety meetings (including tailgate safety meetings) and required safety training.

Management and supervisors will create a culture in which safety issues can be proactively and positively discussed and resolved.

B. Employee Responsibilities

Employees must recognize that their role in creating a safe work environment is critical. This includes having a responsible attitude for safety and the welfare of themselves and other employee personnel.

Employees shall:

- Demonstrate an ability to physically perform their assigned job function.
- Perform every job safely, using appropriate personal protective equipment, safety devices, Job Safety Analysis, as appropriate, and by practicing safe behaviors.
- Immediately report injuries, incidents, unsafe actions, and unsafe conditions to their supervisor.
- Immediately report any health conditions (temporary or permanent), which may impair their ability to perform their job function in a safe manner.
- Cooperate in the investigation of injuries and incidents.
- Attend safety meetings (including safety tailgate meetings) and training.
- Learn the contents of this program and other relevant safety programs.

HPS Mechanical encourages all employees to use Stop Work Authority when an unsafe condition exists, when unsure of safe work practices, when job scope changes, or when simultaneous operations create a hazardous environment.

IV. COMPLIANCE

By complying with safe and healthy work practices management, supervisors and employees will work together to create and maintain a safe workplace environment.

Compliance is achieved by:

A. Informing employees about the provisions of our IIPP.

B. Evaluating the safety performance of our employees.

C. Recognizing employees who follow safe and healthful work practices which could include gift certificates or other safety incentive awards.

D. Providing training to employees whose safety performance is deficient.

E. Disciplining employees for failure to comply with safe and healthy work practices.

Discipline Policy

Employees and contractors of HPS Mechanical are responsible for performing each job safely. Management and supervisors must hold employees accountable for behavior and actions. Employee actions that violate the intent of this IIPP will result in disciplinary action up to and including termination of employment.

V. COMMUNICATION

The management of HPS Mechanical will maintain an environment where safety and health issues may be discussed openly and without fear of reprisal. Communication from an employee to the supervisor may be verbal and/or by written statement. Safety and health matters are communicated to employees in verbal and written form through documents, pre-job meetings, formal and informal training, postings, distributed safety information, and safety meetings. The results of safety audits/inspections and incident investigations are reviewed during safety meetings as necessary with impacted individual personnel.

- Scheduled Safety Meetings

  Safety committee meetings are scheduled to be held monthly unless otherwise noted. Employees are responsible for attending safety meetings, either office-based or job-site tailgate meetings. If employees cannot attend a safety meeting, they will review the material discussed at that meeting with their supervisor. Safety meeting attendance is recorded and maintained by the IIPP Facilitator as appropriate.

- Tailgate Meetings

  Each work group or individual, depending on circumstances, will complete a Job Safety Analysis for high-risk tasks (JSA) and conduct a tailgate safety meeting with their work group prior to commencing high-risk jobs. Permitted activities (e.g., confined space entry, hot work) will utilize an applicable safe work permit. On construction-related tasks, a tailgate-related safety meeting will occur at least every ten days, depending on the length of the project.

- New Employee Orientation

  New employees are required to receive new hire orientation and training. This includes training on safe practices, employee responsibilities, emergency response and general safety rules.

- Posting and Distribution of Safety Information

  Information regarding safety is posted on a safety bulletin board and/or may be distributed in paper or electronic form periodically.

- Anonymous Communication

  Employees may inform management anonymously about workplace hazards by using a safety suggestion box, or by other anonymous means.

VI. HAZARD ASSESSMENTS

Supervisors/Safety Facilitator will conduct periodic inspections or audits to identify hazards and unsafe work practices, conditions or equipment. The inspection or audit may be conducted as part of an incident investigation. At a minimum, inspections will be conducted:

- When this IIPP is first implemented.
- Periodically as warranted by changes in workplace conditions.
- Whenever new substances, processes, procedures or equipment are introduced into the workplace that represents a serious safety or health hazard.
- Whenever the supervisor is made aware of a previously unrecognized hazard.
- During the job-site inspection process.

VII. INJURY AND INCIDENT REPORTING AND INVESTIGATION

Employees must report all injuries and incidents to their supervisor immediately. Supervisors will notify the IIPP Facilitator of the injury or incident as soon as it is practical to do so.

Appropriate medical treatment shall be provided, and corrective action taken. An investigation will be performed consistent with the circumstances. Investigations will, at a minimum, include the involved employee(s) and the appropriate supervisor. When appropriate, such as in cases where a formal investigation is performed, the investigation will include the following:

- Identification of causal factors and root causes.
- Identification of actions required to prevent reoccurrence.
- Identification of the persons responsible for corrective actions.
- Recording of completion dates for corrective actions.

The results of investigations will be reviewed by the Program Administrator and shared with employees during safety meetings or other venues. The effectiveness of corrective actions will be evaluated during subsequent inspections and audits. Serious injuries will be reported to Cal-OSHA per the Cal-OSHA serious injury reporting requirement.

VIII. HAZARD CORRECTION

Employees, supervisors, or management will correct unsafe conditions and practices when they are discovered.

When an imminent hazard exists that cannot be immediately abated without endangering employees and/or property, all workers will be removed from the area except those who are required to remain in the area to correct the hazard. Workers who are required to correct hazards will be provided with the equipment necessary to ensure their safety.

Documentation of hazard correction will be completed by the supervisor and maintained by the IIPP Facilitator. The Program Administrator will review all hazard correction records.

IX. TRAINING

All employees will receive training for the specific safety and health hazards of their job.

General Safety Training is provided:

- To all new employees
- To all employees given a new job assignment for which no previous training has been provided.
- Whenever new substances, processes, procedures, or equipment is introduced to the workplace that represents a new hazard.
- When a new or previously unrecognized hazard is brought to the attention of management.
- For supervisors so they are familiar with hazards faced by the employees under their control.

Training on General Safety Rules is provided to ensure compliance with safe work practices. General Safety Rules are reviewed during new employee orientation and periodically during safety meetings.

Supervisor Safety Training is provided in addition to the standard employee training.

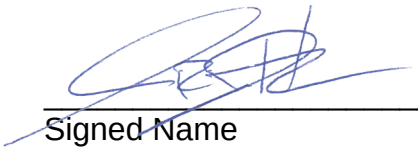
X. RECORDKEEPING

Hazard assessment and correction records, orientation and training records, and incident investigation records, JSAs, and Safe Work Permits, will be maintained by the IIPP Facilitator for a minimum of three years.

X. RESPONISIBLE MANAGER SIGN OFF

The person with the authority and responsibility for this IIPP's implementation is identified as:

Scott DenHerder, IIPP Administrator
Printed Name



Signed Name

CODE OF SAFE WORK PRACTICES

Revised 9/22/2018

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HPS MECHANICAL

CODE OF SAFE WORK PRACTICES

I. REGULATORY REFERENCES

- 8 CCR 1509
- 8 CCR 1510

II. PURPOSE

This section contains our "Code of Safe Practices." They are general safety rules that must be followed by all employees. Detailed safety plans may be contained elsewhere within the HPS Mechanical Safety Program. This Code of Safe Work Practices supports the elements of the Company's Injury and Illness Prevention Program (IIPP).

III. ALL EMPLOYEES

Housekeeping

- Use caution signs/cones to barricade slippery areas.
- Do not store or leave items on stairways.
- Return tools to their storage places after using them.
- Do not block or obstruct stairwells, exits, or accesses to safety and emergency equipment such as fire extinguisher, fire alarms or eye wash stations.
- Do not place materials such as boxes or trash in walkways and passageways.
- Mop up water around drinking fountains, drink dispensing machines, and ice machines.

Lifting Procedures

- Test the weight of the load before lifting by pushing the load along its resting surface.
- If the load is too heavy or bulky, use lifting and carrying aids such as hand trucks, dollies, pallet jacks and carts, or assistance from a co-worker.
- Never lift anything if your hands are greasy or wet.
- Wear protective gloves when lifting objects with sharp corners or jagged edges.

When Lifting

- Face the load.
- Position your feet 6-12 inches apart with one foot slightly in front of the other.
- Bend at the knees, not at the back.
- Keep your back straight.

- Get a firm grip on the object using your hands and fingers. Use handles when they are present.
- Hold the object as close to your body as possible.
- Perform lifting movements smoothly and gradually; do not jerk load.
- If you must change direction while lifting or carrying the load, pivot your feet and turn your entire body. Do not twist at the waist.
- Set down objects in the same manner as you picked them up, except in reverse.
- Do not lift and object from the floor to a level above your waist in one motion. Set the load down on a table or bench and then adjust your grip before lifting it higher.

Ladders and Step Ladders

- Read and follow the manufacturer's instruction label affixed to the ladder if you are unsure how to use the ladder.
- Do not use ladders that have loose rungs, cracked or split side rails, missing rubber footpads, or are otherwise visibly damaged.
- Keep ladder rungs clean and free of grease. Remove build-up of materials such as dirt.
- When performing work from a ladder, face the ladder and do not lean backwards or sideways from the ladder.
- Allow only one person on the ladder at a time.
- Do not stand on the top two rungs of any ladder.
- Do not stand on a ladder that wobbles, or that leans to the left or right of center.
- Do not try to walk/move the ladder any direction by rocking it while you are standing on the ladder. Climb down the ladder, and then move it.

Climbing a Ladder

- Face the ladder when climbing up or down it.
- Do not carry items in your hands while climbing up or down a ladder.
- Maintain a three-point contact by keeping both hands and one foot, or both feet and one hand on the ladder at all times when climbing up or down the ladder.

Knives/Sharp Instruments

- When handling knife blades and other cutting tools, direct sharp points and edges away from you.
- Cut in the direction away from your body when using knives.

- Use knives that has been sharpened; do not use knives that have dull blades.
- Use knives for the purposes for which they are made.
- Do not use knives that have broken or loose handles.
- Do not use knives as screwdrivers or pry bars.
- Do not pick up knives by their blades.
- Carry knives with their tips pointed towards the floor.
- Do not carry knives, scissors or other sharp tools in your pockets or an apron unless they are first placed in their sheath or holder.
- Do not attempt to catch a falling knife.
- Store knives in knife blocks or in sheaths after use.
- When opening cartons, use the safety box cutters. Do not cut with the blade extended beyond the guard.

Equipment Use

- Do not use fans that have excessive vibrations, frayed ors, or missing guards.
- Do not place floor-type fans in walkways, aisles, or doorways.
- Do not plug multiple electrical cords into a single outlet.
- Do not use extension cords that have the ground prong removed or broken off.
- Do not use frayed, cut or cracked electrical cords.
- Use a cord cover or tape the cord down when running electrical cords across aisles, between desks or across entrances or exits.
- Turn the power switch of the local exhaust fans to “on” when operating the blueprint machine.
- Do not use lighting fluid to clean drafting equipment; use soap and water.

IV. OFFICE PERSONNEL

General

- Do not place material such as boxes or trash in walkways or passageways
- Do not throw matches, cigarettes or other smoking materials into trash baskets.
- Do not kick objects out of your pathway; pick them up or push them out of the way.
- Keep floors clear of items such as paper clips, pencils, tacks or staples.
- Straighten or remove rugs and mats that do not lie flat on the floor.

- Mop up water around drinking fountains and drink dispensing machines.
- Do not block your view by carrying large or bulky items; use a dolly or hand truck or get assistance from a fellow employee.
- Store sharp objects, such as pens pencils, letter openers or scissors in drawers or with the points down in a container.
- Carry pencils, scissors and other sharp objects with the tips pointing down.
- Do not run on stairs or take more than one-step at a time.
- Keep doors in hallways fully open or fully closed.
- Use handrails when ascending or descending stairs or ramps.
- Obey all posted safety and danger signs.

Furniture Use

- Open only one file cabinet drawer at a time. Close the filing cabinet drawer you are working in before opening another filing drawer in the same cabinet.
- Use the handle when closing doors, drawers and files.
- Do not tilt the chair you are sitting in on its back two legs.
- Do not stand on furniture to reach high places.

V. FIELD EMPLOYEES

General Installation Rules and Guidelines

- Do not begin working until barricades, warning signs or other protective devices have been installed to isolate the work area from local traffic.
- Do not walk under partially demolished walls or floors.
- Stop working outdoors and seek shelter during lightning storms.
- When working outside, keep shirts on to avoid dehydration and sunburn.
- Drink plenty of clear liquids during your breaks.
- If you discover a wasp nest or bee hive while installing or servicing equipment, use the long-distance aerosol insecticide labeled “wasp and bee insecticide” to spray the nest. Test with the stick or pole once again to ensure that all bees/wasps are gone before continuing work.
- Seek first aid immediately if bitten or stung by wasps or bees.
- Do not block the walking surfaces of elevated working platforms, such as scaffolds, with tools or materials that are not being used.
- Do not stand on sinks, toilets or cabinets; use a stepladder.

- Do not work on open sided floors, elevated walkways or elevated platforms if there are only guardrails in place.
- Do not handle hot items such as hot water heaters or water/steam lines with your bare hands; use cloth gloves.
- Open the gate valve to release the pressure from the steam liners and turn off the boiler before servicing piping equipment.
- Supervisors shall conduct “toolbox” or “tailgate” safety meetings, or the equivalent, with affected personnel at least every ten working days to emphasize safety.

Work Clothing and Personal Protective Equipment

- Hardhats must be worn at all times on construction sites. Work boots must be worn on all construction sites. Safety glasses must be worn at all times. Gloves must be worn anytime hands need protection.
- Do not continue to work if your safety glasses become fogged. Stop work and clean the glasses until the lenses are clear and defogged.
- Wear the welding helmet or welding goggles during welding operations.
- Wear the dielectric gloves when working on electric current.
- Wear your earplugs or earmuffs in areas posted “Hearing Protection Required.”
- Safety goggles and face shield must be worn while welding or cutting metal.
- Do not wear long sleeve shirts that do not have tight cuffs.

VI. EXCAVATION AND TRENCHING OPERATIONS

General

- HPS Mechanical Inc. will provide safe work areas for employees, visitors, and others who are or may be exposed to hazards in or around trenches and other excavation areas.
- All trenching and excavation activities will be evaluated to eliminate or minimize the potential of cave-ins, review environmental contamination, and contact with underground utilities or other subsurface impediments.
- For detailed information on excavation and trenching requirements refer to the Excavation and Trenching Program in the HPS Mechanical Inc. Safety Manual.

Site Planning and Preparation

- Protective systems such as sloping, benching, shoring, or shielding will be utilized as appropriate.
- The estimated location of utility installations, such as sewer, telephone, fuel, electric, water lines, or any other underground installations that reasonably may be expected

to be encountered during excavation work, will be determined before opening an excavation.

- **USA DIG ALERT SHALL BE CONTACTED 48 HOURS PRIOR TO EXCAVATION.**
- The on-site excavation and trenching competent person will have the authority to take prompt corrective measures to eliminate existing and predictable hazards and stop work when required.

VII. FABRICATION OPERATIONS

General Machine Safety

- Replace the guards before starting machines or after making adjustments or repairs to the machine.
- Do not remove, alter or bypass any safety guards or devices when operating any piece of equipment or machinery.
- Do not wear loose clothing or jewelry around moving machinery.
- Long hair must be contained under a hat or hair net, regardless of gender.
- Read and obey safety warnings posted on or near any machinery.
- Do not try to stop a work piece as it goes through any machine. If the machine becomes jammed, unplug it before clearing the jam.
- Do not use equipment such as grinders, sanders or beveling machines if they do not have safety guards.
- Clamp work when using saws or cutting tools.

VIII. WELDING OPERATIONS

General

- Obey all signs posted in the welding areas.
- Wear clothing made of cotton, wool or non-synthetic fibers. Wear long sleeve shirts, long pants and boots.
- Before welding, place the floor fan behind you to keep welding fumes away from your face.
- Use the welding screen to shield other employees from flying slag and intense light.
- Wear the welding helmet or welding goggles during operations.
- Use the insulated work gloves when using welding sheet metal air-ducts.
- Do not perform welding tasks while wearing cotton gloves or wet leather gloves.

- Do not use the welding apparatus if the power cord is cut, frayed, split or otherwise visibly damaged or modified.
- Do not perform “hot work” such as welding, cutting or other spark producing operations within 50 feet of containers labeled “Flammable” or “Combustible.”
- Do not leave oily rags, paper or other combustible materials in the welding, cutting or brazing area.
- Use the red hose for gas fuel and the green hose for oxygen.
- Do not use worn or cracked hoses.
- Do not use oil, grease or other lubricants on the regulator.
- “Blow out” hoses before attaching the torch.
- “Blow out” the cylinder valve before attaching or reattaching a hose to the cylinder.
- Do not use a cigarette lighter to ignite torches; use friction lighters only.
- Do not wear contact lenses when welding.
- Do not change electrodes using your bare hands; use the dry rubber gloves.
- “Bleed” oxygen and fuel lines at the end of the work shift.
- Use the welding cart that has a safety chain or cable when transporting cylinders used for welding.
- Welding machines are to be placed outside of confined spaces.
- The power supply switch must be in the "off” position when welders or cutters stop work.
- In damp or humid conditions do not rest any parts of your body on the work piece. Use plywood, rubber mats or other dry insulation to stand of lie upon. Do not touch the electrode or any metal parts of the electrode holder with skin or wet clothing.

<u>Portable Welding/Soldering Operations</u>

- Do not perform welding or soldering tasks while wearing wet cotton gloves or wet leather gloves.
- Use the insulated work gloves when using welding or soldering equipment.
- Do not use the welding or soldering apparatus if the power cord is cut, frayed or otherwise visibly damaged or modified.
- Do not perform “Hot Work” such as welding, soldering or other spark producing operations within 50 feet of containers labeled “Flammable” or “Combustible.”

IX. COMPRESSED GAS CYLINDERS

Storage and Handling

- Do not handle cylinders if your gloves are greasy or oily.
- Sore all compressed gas cylinders in the upright position and secured to avoid tipping.
- Place valve protection caps on compressed gas cylinders that are in storage or are not being used.
- Do not lift compressed gas cylinders by the valve protection cap.
- Do not store compressed gas cylinders in areas where they can come in contact with chemicals labeled “corrosive.”
- Hoist compressed gas cylinders on the cradle, sling board, pallet or compressed gas cylinder basket.
- Do not place compressed gas cylinders against electrical panels or live electrical cords where the cylinder can become part of the circuit.

Use of Compressed Gas Cylinders

- Do not use dented, cracked or other visibly damaged cylinders.
- Use only an open ended or adjustable wrench when connecting or disconnecting regulators and fittings.
- Do not transport cylinders without first removing the regulators and replacing the valve protection caps.
- Close the cylinder valve when work is finished, when the cylinder is empty or at any time the cylinder is moved.
- Do not store oxygen cylinder near fuel gas cylinders such as propane or acetylene or near combustible materials such as oil or grease.
- Stand to the side of the regulator when opening the valve.
- If a cylinder is leaking around a valve or a fuse plug, move it to and outside area away from where work is performed, and tag it to indicate the defect.
- Do not use compressed gas to clean yourself, equipment or your work area.
- Do not remove the valve wrench from the acetylene cylinders while the cylinder is being used.
- Open cylinder valves slowly. Open the valves fully when the compressed gas cylinder is being used, in order to eliminate possible leakage around the cylinder valve stem.

X. HAZARDOUS MATERIALS

General

- Wear the chemical goggles when using, applying or handling chemical liquids from containers labeled “Caustic or “Corrosive.”
- Follow the instructions on the label and in the corresponding SDS (Safety Data Sheets) for each chemical product you will be using in your workplace.
- Use personal protective clothing or equipment such as neoprene gloves, rubber boots, shoe covers, rubber aprons and protective eyewear, when using chemicals labeled “Flammable,” “Corrosive” or “Caustic.”
- Do not use protective clothing or equipment that has split seams, pinholes, cuts, tears or other visible signs of damage.
- Each time you use your gloves wash them before removing the gloves using cold tap water and normal hand washing motion. Always wash your hands after removing the gloves.
- Only dispense a liquid labeled “Flammable” from its bulk container located in areas posted “Flammable Liquid Storage.”
- Do not use chemicals from unlabeled containers or unmarked cylinders.
- Do not drag containers labeled “Flammable.”
- Do not store chemical containers labeled “oxidizer” with containers labeled “Corrosive” or “Caustic.”

XI. TOOL BOXES/CHESTS/CABINETS

General

- Use the handle when opening and closing a drawer or door of a toolbox, chest or cabinet.
- Do not stand on toolboxes, chest or cabinets to gain extra height.
- Lock the wheels on large toolboxes, chests or cabinets to prevent them from rolling.
- Push large chest, cabinets and toolboxes; do not pull them.
- Do not open more than one drawer of a toolbox at a time.
- Close and lock all drawers and doors before moving the toolbox to a new location.
- Do not use a toolbox or chest as a workbench.
- Do not move a toolbox, chest or cabinet if it has loose tools or parts on the top.

XII. VEHICLE SAFETY

General

- Turn the vehicle off before fueling it.
- Do not smoke while fueling a vehicle.
- Wash hands with soap and water if you spill gasoline on your hands
- Shut your door and fasten your seatbelt before moving the vehicle.
- Obey all traffic laws and signals at all times.
- Maintain a three-point contact using both hands and one foot or both feet and one hand when climbing into and out of the vehicle.
- Only service vehicle personnel are permitted to operate a service vehicle.
- Do not ride in the bed of a pick-up truck.
- Turn headlights on when driving inside the shop area or on parking decks.
- Do no not drive over five MPH in the shop area.
- Walk behind the vehicle and remove any equipment, tools or other pathway obstructions before getting into the vehicle. Sound the horn to alert nearby coworkers before backing the vehicle.
- Tie down, latch or secure all materials and equipment hauled in the bed of vehicles.
- Do not mount or dismount a moving vehicle.

Vehicle/Trailer Safety

- Set the parking brake in the towing vehicle removing any equipment from the trailer.
- Secure equipment and fuel tanks to vehicle with chains or straps to eliminate or minimize shifting of the load.
- No one is permitted to ride in the trailer.
- Take slow, wide turns when towing trailers.
- Do not exceed the load capacity as posted on the trailer.
- Do not place all the heavy equipment on one side of the trailer.

Cone Procedure

- Before operating a HPS vehicle, you are required to perform a 360° inspection of the vehicle and its surroundings to locate any potential hazards.
- During the inspection, all toolbox bins and loads should be checked to ensure everything is properly secured.

- Once you have completed the 360° inspection, you may remove the safety cone from your vehicle and proceed with caution.
- Any time you exit a HPS vehicle, you are required to place the safety cone back on the hood of the vehicle, above the passenger headlight.
- Drive safely at all times.

XIII. WAREHOUSE PERSONNEL

General Storeroom/Stockroom Safety

- Wear gloves when handling materials such a copper or aluminum wire.
- Do not attempt to catch falling materials.
- Do not try to kick objects out of pathways. Push or carry them out of the way.
- Move slowly when approaching blind corners.
- Do not run on stairs or take more than one step at a time.
- Do not jump from elevated places such as truck beds, platforms or ladders.
- Do not lift slippery or wet objects; use a hand truck.
- Visually inspect for sharp objects or other hazards before reaching into containers such as garbage cans, boxes, bags or sinks.
- Remove or bend nails and staples from crates before unpacking them.
- When cutting shrink-wrap with a blade, always cut away from you and your coworkers.
- Straighten or remove rugs and mats that do not lie flat on the floor.
- Use caution signs or cones to barricade slippery areas such as freshly mopped floors.
- Remove one object at a time from shelves.
- Do not climb the racking to stock or retrieve merchandise; use a ladder.

Hand Truck Operations

- When loading hand trucks, keep your feet clear of the wheels.
- Do not exceed the manufacturer's load rated capacity. Read the capacity plate on the hand truck if you are unsure.
- Place the load so that it will not slip, shift or fall. Use straps, if they are provided, to secure the load.
- For extremely bulky items, such as air-conditioning units or heating units, strap or chain the items to the hand truck.

- Tip the load slightly forward so that the tongue of the hand truck goes under the load.
- Push the tongue of the hand truck all the way under the load that is to be moved.
- Keep the center of gravity of the load as low as possible by placing heavier objects below the lighter objects.
- Push the load so that the axle and not the handles will carry the weight.
- If your view is obstructed, ask a spotter to assist in guiding the load.
- Do not walk backward with the hand truck unless going up stairs or ramps.
- When going down an incline, keep the hand truck in front of you so that it can be controlled at all times.
- Move hand trucks at a walking pace.
- Store hand trucks with the tongue under a pallet, shelf or table.

Pallet Jacks

- Only pallet jack operators may operate pallet jacks.
- Do not exceed the manufacturer's load rated capacity. Read the lift capacity. Read the lift capacity plate on the pallet jack if you are unsure.
- Do not ride on pallet jacks.
- Start and stop the pallet jack gradually to prevent the load from slipping.
- Pull manual pallet jacks; push them when going down an incline or passing close to walls or obstacles.
- If your view is obstructed, ask a spotter to assist in guiding the load.
- Never place your feet under the pallet jack.

XIV. HAND TOOL SAFETY

General

- Tag worn, damaged or defective tools "Out of Service" and do not use them.
- Do not use a tool if its handle has splinters, burrs, cracks, splits or if the head of the tool is loose.
- Do not use impact tools such as hammers, chisels, punches or steel stakes that have mushroomed heads.
- When handing a tool to another person, direct sharp points and cutting edges away from yourself and the other person.

- Do not carry sharp or pointed hand tools such as screwdrivers, scribes, scrapers, chisels or files in your pocket unless the tool or your pocket is sheathed.
- Do not perform “make-shift” repairs on tools.
- Do not throw tools from one location to another or from one employee to another.
- Transport hand tools only in toolboxes or tool belts. Do not carry tools in your clothing.

XIV. COMPRESSED AIR

General

- Compressed air is prohibited for cleaning.
- Compressed air cylinders must be visually inspected prior to use.
- Every air receiver shall be equipped with an indicating pressure gauge.
- Safety valves must be tested before use.
- Receivers are to be drained frequently.

HAZARD COMMUNICATION PROGRAM

(Revised 9/28/2018)

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HPS MECHANICAL

HAZARD COMMUNICATION PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 5194
- 8 CCR 339

II. SCOPE

The HPS Mechanical Hazard Communication Program complies with Title 8 General Industry Safety Orders, Subsection 5194 Hazard Communication.

Except under certain circumstances, consumer products purchased and used by HPS Mechanical employees or the general public are not covered by this program. Nor does this program apply to pesticides, food, food additives, consumer products, RCRA- or EPA-regulated hazardous waste, tobacco, wood products, etc.

III. INTRODUCTION

The Hazard Communication (HazCom) Program provides information and procedures regarding chemical hazards and the control measures used to reduce the risk of injury.

This HazCom program includes the following elements:

- A Written Program
- Container Labeling
- Chemical Inventory
- Safety Data Sheets (SDS)
- Training
- Business Partner Responsibilities
- Proposition 65 Facility Signage

IV. GENERAL PROCEDURES

The Safety Coordinator acts as the Program Administrator for the Hazard Communication Program.

Containers of hazardous materials shall be labeled with the chemical name and hazard warning.

The one exception to this labeling requirement is chemical mixing/transferring of user quantities, where the only person handling the chemical(s) is the user. If the user does not leave the chemical(s) unattended and empty containers are disposed of properly or labeled for future use, then no labeling is required during that activity.

Any other exceptions to this requirement shall be approved by the Program Administrator.

Methods of communicating hazards and work practices include:

- Safety meetings and compliance training
- Job task training
- Safety Data Sheets

Occasionally, non-routine tasks involving hazardous materials are conducted. In these instances, procedures for complying with the Hazard Communication Program include using JSA/AHA and conducting a Pre-Job Safety Meeting with the affected personnel.

The appropriate SDS shall be used as a reference in determining safe work practices and personal protective equipment requirements. The jobsite competent person shall be responsible for obtaining SDS sheets from the Safety Supervisor when a new hazardous chemical is introduced.

Some of the hazardous materials at the HPS Mechanical Facility are regulated by Proposition 65. Accordingly, a Proposition 65 notice is posted at the main entrance of affected facilities to inform entrants that they could be exposed to substances that are found by the State of California to cause cancer or reproductive toxicity.

V. EMPLOYEE TRAINING

Hazard Communication training is covered in employee orientation at time of hire and conducted in a classroom general safety meeting. All current employees who may be exposed to hazardous substances in the workplace are required to attend. New and transferred employees shall, as soon as possible, receive a site-specific HazCom orientation and shall be scheduled for the next general HazCom training session.

Training covers the following topics:

- Hazard Communication Program requirements, including the Globally Harmonized System (GHS) labeling and Safety Data Sheet information (SDS) as noted in this program.
- Location of area operations in which hazardous substances are present.
- Location and availability of the written HazCom program, chemical inventory, and SDS.
    - Maintained and accessible 24 hours a day at the main office.
- Methods and observations that may be used to detect the presence or release of a hazardous substance in the work area.
- JSA/AHA process and/or tailgate safety meeting.

- The physical and health hazards of the substances in the work area and the measures personnel can take to protect themselves from these hazards, such as utilizing appropriate work practices, emergency procedures, and personal protective equipment.
- SDS information.
- Personal protective equipment, such as chemical protective goggles, face shields, gloves, etc.
- An explanation of the labeling system and the SDS, and how employees can obtain and use the appropriate hazard information.
- Classroom review of SDS and labeling system.
- The process to receive information regarding hazardous substances.
    - The Program Administrator is the contact for this information.
- The employee's right to know of chemical hazards and information.
    - This program ensures/communicates the employees' right-to-know.
- The employee's right to receive a new or revised Safety Data Sheet within 30 days after HPS Mechanical has received the new SDS.

Employee training on new hazards (new chemicals, procedures, or new information on SDS) shall be provided and documented as required.

New hire orientations are facilitated by the Program Administrator. This orientation consists of site-specific training for hazardous chemical management.

VI. SAFETY DATA SHEETS (SDS)

No chemical and/or hazardous substance shall be brought onto any HPS Mechanical facility without an SDS. All SDSs received at a work location shall be forwarded to the local Hazard Communication Program Administrator who shall:

- Read and review the SDS.
- Determine if any additional personnel training or procedures are required.
- Place the SDS into the central SDS binder in the main office.
- Inform employees of the new safety procedures.

VII. CHEMICAL INVENTORY

The chemical inventory for the work location shall be maintained on the Chemical Inventory Log Sheet in the central SDS binder.

The Program Administrator is responsible for maintaining the inventory and updating the log as necessary.

VIII. HAZARD DETERMINATION

HPS Mechanical relies on the information contained in SDSs and does not perform independent hazard determinations.

Whenever HPS Mechanical purchases a hazardous chemical product, it relies on the chemical manufacturers and importers of hazardous substances to evaluate their products as to their physical and health hazards. No hazardous substance shall be purchased or allowed to enter any HPS Mechanical facility without labels and visual warning signs identifying the substance. Safety Data Sheets should be submitted to the Hazard Communication Program Administrator.

Any employee who is asked to perform a non-routine task that may present special hazards to the individual or that the employee is not familiar with should consult with their supervisor on the proper procedures prior to performing the task (e.g., how to perform non-routine tasks associated with substances contained in unlabeled pipes in their work area).

IX. LABELING AND IDENTIFICATION OF HAZARDOUS SUBSTANCES

Chemical containers shall include the identity of the hazardous chemicals and the appropriate hazard warnings. HPS Mechanical may utilize the HMIS, NFPA, DOT, and/or chemical manufactures labeling systems, including GHS standardized labels. 2013 Globally Harmonized System of Classification and Labeling of Chemical requirements include the following:

- Product Identifier
- Signal Words (e.g., ”Danger “ or “Warning”)
- Hazard Statements (e.g., “Highly flammable liquid and vapor”)
- Precautionary Statements (e.g., “Keep away from heat, flames, sparks. No smoking.”)
- Pictograms
- Name, Address, and Telephone Number of the chemical manufacture

Stationary containers of hazardous substances shall be identified by either affixing labels to each container or completing the stationary container/system identification forms. Both methods shall convey the appropriate hazard warnings.

All portable containers into which hazardous substances are transferred shall be labeled unless the hazardous substance is being used immediately by the employee who performed the transfer.

X. ON-SITE CONTRACTORS/MULTI-EMPLOYER COMMUNICATIONS

The HPS Mechanical representative supervising the contractor work is responsible for informing the contractor of the hazardous substances to which they may be exposed while at the work location. The orientation process and tailgate safety meetings, coupled with site-specific training, facilitate the communication of required information including labeling systems used, precautionary safety measures for normal and emergency operations, and SDS information.

Contractors shall have access to all SDSs located in the central file and are encouraged to request SDS hazard information at any time during a project.

Contractors are required to provide information for any chemicals used at HPS Mechanical facilities, such as inventory, location, quantities and SDS. This information shall be retained with the program administrator.

The HPS Mechanical representative supervising the contractors' work shall obtain a SDS for any hazardous substance the contractor brings onto the work site. Contractors shall maintain chemical storage areas in a manner consistent with HPS Mechanical requirements, California Health and Safety Code and the Uniform Fire Code. When the contractor has completed the work, they shall remove all unused hazardous substances and containers from HPS Mechanical work locations.

Hazardous substances used by contractors on HPS Mechanical work locations should not be incorporated into the HPS Mechanical chemical inventory.

PERSONAL PROTECTIVE EQUIPMENT PROGRAM

Revised (9/28/2018)

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HPS MECHANICAL

PERSONAL PROTECTVE EQUIPMENT PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 1522
- 8 CCR 3380-3387
- 8 CCR 5096
- 8 CCR 5144

II. GENERAL

Personal Protective Equipment will not prevent an incident. It will however, offer a significant amount of protection to a worker and reduce the effect of an incident as long as it is used properly and consistently.

The supervisor's job is to recognize the need for and monitor the use of PPE. Supervisors must ensure that a sufficient supply of the following equipment is available at the start of all projects:

- Hard hats for employees and visitors
- Safety glasses with side shields (ANSI Z87.1 standards)
- Safety harnesses and lanyards for work in exposed and elevated locations
- Anchor points, lifelines and rope grabs for elevated work
- Respiratory equipment as dictated by hazard
- Hearing protection
- Welding hoods, lens, gloves, jackets, and sleeves for welding operations
- Full-face shields for cutting, grinding, chipping, etc.
- Traffic safety vests
- Gloves as dictated by hazard and operation

All PPE is provided by HPS Mechanical. Any employee-owned PPE shall be inspected prior to use to ensure the equipment is adequate.

All PPE is to be maintained in a sanitary or clean condition. Careful consideration must be given to comfort and fit. PPE must fit properly to be effective. Defective or damaged personal protective equipment shall not be used. Employees must certify that a hazard assessment is completed prior to work to evaluate the workplace.

The Safety Coordinator may designate an individual to ensure that a well-maintained stock of this equipment is available for use.

When selecting personal protective equipment, the following requirements must be met:

- Manufactured in accordance with accepted standards for performance and materials. American National Standards Institute (ANSI) and National Institute for Occupational Safety and Health (NIOSH) have established many of the standards.
- Durability and, if possible, the ability to maintain the equipment on the job site.

- Provide desired protection to worker against hazard exposure.
- Provide maximum comfort with minimal weight.
- Provide minimum restriction of essential body movement, i.e. vision, etc.
- Know when PPE is necessary.
- Know what PPE is necessary.
- Know how to properly put on, take off, adjust and wear the PPE.
- Know the limitations of the PPE
- Know the proper care, maintenance, useful life and disposal of PPE.

III. HEAD PROTECTION

- All hard hats shall meet ANSI standard Z89.2-1971. Since there is no way to determine exactly who or when employees may be exposed to electricity, metal hard hats will not be worn.
- Hard hats are to be worn at all times while engaged in daily work except while working in offices and working on a service call where there are no overhead dangers.
- Hard hats should never be worn on top of everyday hats and caps. For cold climates, winter liners may be ordered.
- Adjustment of the sweatband should be snug enough to stay on when the wearer leans over looks up or a strong wind gust blows. However, the hat should not be so tight that it leaves the band mark on the forehead.
- Never attempt to repair a damaged or cracked shell. Damaged hats are to be replaced immediately.
- Drilling holes into the hat for any reason destroys the rated strength and is prohibited. Painting of the hat is also prohibited.
- Hard hats must be worn with the bill (visor) to the front (over the nose). The bill keeps many chips, dust and dirt particles from going over the safety glasses and into the eyes. Exceptions will be allowed for survey crew personnel while looking through the instrument, and while heads are in tight spaces where the hard hat bill would interfere.

IV. FOOT PROTECTION

Employees are required to wear sturdy work boots that will provide adequate protection against injury to the feet. Tennis shoes, running shoes, sandals, light canvas shoes, etc. are not allowed for wear in construction areas.

Employees are expected to purchase and wear work boots or shoes with soles that are resistant to penetration and upper parts that offer ankle protection. Some job sites may require the wearing of steel toe safety boots and employees will be expected to comply.

V. SAFETY EYEWEAR

All commercial quality safety eyewear will meet the ANSI standard Z87.1 requirements.

Safety glass/goggle eyewear will be worn at all times on all construction sites. In the equipment shop areas, all workers that are servicing equipment and machines will be required to wear safety eyewear.

Employees can get non-prescription eyewear replaced by requesting it from a supervisor. Should the supervisor find intentional damage or abuse by the employee, the employee will be required to replace it at his or her own cost.

VI. SAFETY HARNESSES, LANYARDS AND LIFELINES

Fall protection shall be provided for employees. Each employee shall be made aware of the Company's policy to wear safety harnesses when the location and work dictates. This policy is to be strictly enforced. Any employee found not using fall protection as required will face disciplinary action up to and including suspension or termination of employment.

Any employee whose work places them outside a protected area without guardrails or performed on suspended scaffolds or any working surface where they may be subject to a fall of six (6) feet or more, shall be secured by a safety harness, lanyard, and lifelines as needed.

Lifelines shall be secured to a point above operations capable of withstanding a minimum of 5,000 pounds dead weight.

Safety harnesses, lanyards, lifelines and associated hardware shall be inspected after each use for wear and possible damage. If this equipment is subjected to in-service loading (an actual fall situation), it is to be removed immediately from service. Periodic inspections of all harnesses, lanyards, lifelines and associated equipment shall be completed to reveal any damage or deterioration that may have occurred. This inspection should be documented for all harnesses, lanyards, and lifelines. It shall include: date of inspection, condition of equipment, and the serial number for each item.

VII. HEARING PROTECTION

Employees exposed to noise levels in excess of the Occupational Exposure Limit of 85 dbA (higher levels for short periods of exposure) shall have hearing protection provided.

If employees are exposed to sound levels greater than 85dbA on an eight (8)-hour time-weighted average basis, the exposed employees will be included in a hearing conservation program. Records of employees exposure to noise will be maintained.

The two types of hearing protection available to reduce the exposure to excess noise levels are:

- Ear Plugs (in most instances are acceptable hearing protection).
- Earmuffs (may be added in very high noise areas).

When earmuffs are used for hearing protection, they must be cleaned and disinfected prior to issue to another employee, and each shift for anyone.

Employees are to be informed of the hazards associated with exposure to excess noise energy and the purpose and limitations of protective hearing devices. The use of protective hearing equipment is mandatory in high noise areas.

Training shall be provided annually on hearing protection and training records are kept maintained.

VIII. RESPIRATORY PROTECTION

Respiratory protective equipment will be provided for any employee who is or may be exposed to hazardous concentrations of gases, dust, fume, or vapors. Employees are required to wear respiratory protective equipment to protect them from potentially harmful concentrations of airborne contaminants. Employees should not be assigned tasks requiring the use of respiratory protective equipment unless it has been determined that they are physically able to perform the work and properly use it.

The supervisor shall maintain appropriate surveillance of the work area conditions for employee exposure and job effectiveness.

Where practical, respiratory protective equipment is to be assigned to individual workers for their exclusive use. Employees shall use the respiratory equipment provided in accordance with the manufacturer's instructions and the training received. Projects that require the use of such equipment shall include the use and maintenance of respiratory protective equipment within each new hire orientation. Refresher training shall be conducted annually.

Employees who have beards, goatees, sideburns or any other facial hair, which prevents a good seal on the respirator, will not be permitted to work in conditions requiring respirators.

Respiratory protective equipment shall be cleaned and inspected as per manufacturer's recommendations.

IX. SAFETY VESTS

A high visible shirt shall be used on all job sites at all times. A Class 2 safety vest shall be used when working near traffic or when working on job sites that require safety vests to be worn. A Class 3 safety vest shall be used during night time work.

X. HAND PROTECTION

Employees must wear suitable gloves or other hand protection when job or task poses danger to hands.

XI. TRAINING

Employees will be trained in the proper use of PPE. Any previously trained employee that is not demonstrating the proper understanding and skill level in the use of PPE will receive additional training. All PPE training shall be documented.

RESPIRATORY PROTECTION PROGRAM

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HPS MECHANICAL

RESPIRATORY PROTECTION PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 5144
- 8 CCR 1529
- 8 CCR 5158

II. PURPOSE

Occasionally work may necessitate the use of respirators to protect against air contaminants. Due to the limitations of respirators and their uncomfortable nature, the Company will make every effort to provide other means of protection, such as local exhaust ventilation, or substitution of less hazardous material, prior to requiring employees to wear them.

When it is clearly impractical to remove harmful dusts, fumes, mists, vapors, or gasses at their source, or where emergency protection against occasional and/or relatively brief exposure is needed, the Company will provide, and the employee exposed to such hazard shall use, approved respiratory equipment.

Whenever respirators are required to be used to control employee exposure to potentially harmful air contaminants, only respiratory equipment approved for that purpose shall be used and such equipment shall be approved by the National Institute for Occupational Safety and Health (NIOSH). Only parts approved for the specific respirator system shall be used for replacement.

III. GENERAL GUIDELINES

Atmospheric contamination will be prevented wherever feasible through engineering controls such as enclosure or confinement of the operation, general and local exhaust ventilation, or substitution of less toxic materials. Appropriate respirators shall be used if effective engineering controls are not feasible, or while the controls are being instituted.

The Company shall identify and evaluate the respiratory hazard(s) in the workplace. This evaluation shall include a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form. Where employee exposure cannot be identified or reasonably estimated, the atmosphere shall be considered to be immediately dangerous to life or health (IDLH).

Respirators and the training associated therewith shall be provided at no cost to the employee when such equipment is necessary to protect the health of the employee.

Only NIOSH-certified respirators shall be used and are to be used in compliance with the conditions of its certification.

The Company shall select and provide an appropriate respirator based on the respiratory hazard(s) to which the worker is exposed and workplace and user factors that affect respirator performance and reliability.

Respirators shall be selected from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

The Safety Director is qualified by appropriate training or experience that is commensurate with the complexity of the program to administer or oversee the respiratory protection program and conduct the required evaluations of program effectiveness.

The Company will ensure that employees using a tight-fitting facepiece respirator pass an appropriate qualitative fit test (QLFT) or quantitative fit test (QNFT).

The Company will establish and implement procedures for the proper use of respirators, including prohibiting conditions that may result in facepiece seal leakage, preventing employees from removing respirators in hazardous environments, taking actions to ensure continued effective respirator operation throughout the work shift, and establishing procedures for the use of respirators in IDLH atmospheres.

The Company shall provide each respirator user with a respirator that is clean, sanitary, and in good working order. The user shall ensure that respirators are cleaned and disinfected prior to and after use.

All filters, cartridges and canisters used in the workplace must be legibly labeled and color-coded with the NIOSH-approval label, which must not be removed.

Training and information will be provided to employees who are required to use respirators. This training will be comprehensive, understandable, and recur when necessary.

The Safety Director shall conduct evaluations of the workplace to ensure that the written respiratory protection program is being properly implemented, and to consult with employees to ensure that they are using the respirators properly.

Written information regarding medical evaluations, fit testing, and the respirator program shall be retained indefinitely. This information will facilitate employee involvement in the respirator program, assist the Company in auditing the adequacy of the program, and provide a record for compliance determinations by Cal/OSHA.

IV. RESPIRATOR SELECTION REQUIRMENTS

The proper respirator for the job and hazard shall be selected in accordance with ANSI Z88.2-1980 standards. The individual issuing the respirator(s) shall be adequately instructed so as to ensure the correct respirator specified for each job is used.

The manufacturers' recommendations and literature will also be reviewed to determine if the respirator provides protection against the expected contaminants. For instance, dust masks do not provide protection against gasses or vapors.

The Safety Director or other qualified individual shall review and approve all breathing air compressors and installations for compliance with appropriate Cal/OSHA regulations and safety procedures prior to use.

For protection against gasses and vapors:
An air-purifying respirator shall be used to protect against gasses and vapors, provided it is equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant. If there is no ESLI appropriate for conditions in the workplace, the Company will 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.

For protection against particulates:
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 part 84 shall be used to protect against particulates. For contaminants consisting primarily of particles with mass median aerodynamic diameters (MMAD) of at least two (2) micrometers, an air-purifying respirator equipped with any filter certified for particulates by NIOSH shall be used.

V. MEDICAL EVALUATION PROCEDURES

Employees shall not be assigned to tasks requiring the use of respirators unless it has been determined that they are physically able to perform the work while using the required respiratory equipment. This determination shall be made by a Company-selected physician or other licensed health care professional (PLHCP) who performs such medical evaluations.

This medical evaluation shall include any medical tests, consultations, or diagnostic procedures that the PLHCP deems necessary to make a final determination.

Medical questionnaires and examinations shall be administered confidentially during the employee's normal working hours or at a time and place convenient for the employee.

The employee shall have an opportunity to discuss the examination results with the PLHCP.

The following information must be provided to the PLHCP before a recommendation concerning an employee's ability to use a respirator can be made:

- The type and weight of the respirator to be used by the employee;
- The duration and frequency of respirator use (including use for rescue and escape);
- The expected physical work effort;
- Additional protective clothing and equipment to be worn; and
- Temperature and humidity extremes that may be encountered.

The Company shall also provide the PLHCP with a copy of this written respiratory protection program and a copy of the Cal/OSHA regulations if needed.

The written recommendation shall provide only the following information:

- Any limitations on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including if the employee is medically able to use the respirator;
- The need, if any, for follow-up medical evaluations; and
- A statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation.

If the respirator is a negative pressure respirator and the PLHCP finds a medical condition that may place the employee's health at increased risk if the respirator is used, the Company shall provide a powered air purifying respirator (PAPR) if the PLHCP's medical evaluation finds that the employee can use such a respirator. If a subsequent medical evaluation finds that the employee is medically able to use a negative pressure respirator, then a PAPR shall no longer be required.

The Company shall provide additional medical evaluations that comply with the requirements of this section if:

- An employee reports medical signs or symptoms that are related to ability to use a respirator;
- A PLHCP, supervisor, or the respirator program administrator informs the Company 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.

VI. FIT TESTING

The Company shall ensure that an employee using a tight-fitting face piece respirator is fit tested prior to initial use and whenever a different respirator facepiece (size, style, model or make) is used.

The Company shall conduct an additional fit test whenever the employee reports, or the employer, PLHCP, supervisor, or program administrator makes visual observations of, changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

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

The fit test shall be administered using a Cal/OSHA-accepted QLFT or QNFT protocol.

VII. USAGE RULES

The Company shall not permit respirators with tight-fitting face pieces to be worn by employees who have:

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

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

For all tight-fitting respirators, employees shall ensure that they perform a user seal check each time they put on the respirator.

Appropriate surveillance of work area conditions and the degree of employee exposure or stress shall be maintained. When there is a change in such conditions that may affect respirator effectiveness, the Company shall reevaluate the continued effectiveness of the respirator.

Respiratory equipment must be cleaned and sanitized prior to use by another individual. Respirators individually assigned should be marked to indicate to whom it was assigned

and the date of issuance. This mark shall not affect the respirator performance in any way.
When not in use, respirators shall be stored to protect against dust, sunlight, extreme temperatures, excessive moisture, or damaging chemicals. Plastic ziplock bags are suitable for storage.

The Company shall ensure that employees leave the respirator use area:

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

If the employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece, the respirator shall be replaced or repaired before the employee is allowed to return to the work area.

For all IDLH atmospheres, the Company shall ensure that:

- One or more employees are located outside the IDLH atmosphere;
- Visual, voice, or signal line communication is maintained between the employee(s) in the IDLH atmosphere and the employee(s) located outside the IDLH atmosphere;
- The employee(s) located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue;
- The supervisor or designee is notified before the employee(s) located outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue;
- The supervisor or designee authorized to do so by the Company provides necessary assistance appropriate to the situation when notified;
- Employee(s) located outside the IDLH atmospheres are equipped with:
    - pressure demand or other positive pressure SCBAs, or
    - a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA; and
    - appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry.

VIII. MAINTENANCE, INSPECTION AND CARE OF RESPIRATORS

The Company shall ensure that respirators are cleaned and disinfected using procedures recommended by the respirator manufacturer, provided that such

procedures are of equivalent effectiveness to Cal/OSHA regulations. The respirators shall be cleaned and disinfected at the following intervals:

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

All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and packed or stored to prevent deformation of the face piece and exhalation valve.

Emergency respirators shall be:

- Kept accessible to the work area;
- Stored in compartments or in covers that are clearly marked as containing emergency respirators; and
- Stored in accordance with any applicable manufacturer instructions.

All respirators used in routine situations shall be inspected before each use and during cleaning.

All respirators maintained for use in emergency situations shall be checked for proper function before and after each use and inspected at least monthly and in accordance with the manufacturer's recommendations.

Emergency escape-only respirators shall be inspected before being carried into the workplace for use.

The Company shall ensure that respirator inspections include the following:

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

In addition to the requirements above, self-contained breathing apparatus shall be inspected monthly.

Air and oxygen cylinders shall be maintained in a fully-charged state and shall be recharged when the pressure falls to 90% of the manufacturer's recommended pressure

level. The employer shall determine that the regulator and warning devices function properly.

For respirators maintained for emergency use, the Company shall:

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

The Company shall ensure that 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 shall use only the respirator manufacturer's NIOSH-approved parts designed for the respirator;
- Repairs shall be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed; and
- Reducing and admission valves, regulators, and alarms shall be adjusted or repaired only by the manufacturer or a technician trained by the manufacturer.

IX. TRAINING

The Company shall ensure that each employee required to use a respirator can demonstrate knowledge of at least the following:

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

The training shall be conducted in a manner that is understandable to the employee. Retraining shall be administered 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.

Respiratory protection is to be completed initially and annually thereafter.

X. PROGRAM EVALUATION

The Safety Coordinator shall conduct evaluations of the workplace as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.

The Safety Coordinator shall regularly consult employees required to use respirators to assess the employees' views on program effectiveness and to identify any problems. Any problems that are identified during this assessment shall be corrected. Factors to be assessed include, but are not limited to:

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

XI. RECORDKEEPING

Records of medical evaluations must be retained and made available to regulatory agencies.

The Company shall establish a record of the qualitative and quantitative fit tests administered to an employee including:

- The name or identification of the employee tested;
- Type of fit test performed;
- Specific make, model, style, and size of respirator tested;
- Date of test; and

- The pass/fail results for QLFTs or the fit factor and strip chart recording or other recording of the test results for QNFTs.

Fit test records shall be retained for respirator users until the next fit test is administered. Program records shall be made available upon request to affected employees and to governing or regulatory agencies for examination and duplication.

XII. PROCEDURES FOR CLEANING RESPIRATORS

Employees shall follow the following steps when cleaning a respirator:

- Remove filters, cartridges, or canisters.
- Disassemble facepieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard and replace any defective parts.
- Wash components in warm (43 deg. C [110 deg. F] maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
- Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running water, then drain.
- Components should be hand-dried with a clean lint-free cloth or air-dried.
- Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.
- Test the respirator to ensure that all components work properly.

XIII. MANDATORY INFORMATION FOR EMPLOYEES

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 regulatory exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not maintained in a clean condition, the respirator itself can become a hazard to the worker. If a respirator is provided for voluntary use, or if an employee provides their own respirator, certain precautions must be taken ensure the respirator itself does not present a hazard.

POWER AND HAND TOOLS PROGRAM

(Revised March 2019)

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POWER AND HAND TOOLS PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 3555-3557, 3559, 3562
- 8 CCR 1699
- 8 CCR 1510
- 8 CCR 3942
- 8 CCR 1505
- 8 CCR 4184

II. USE OF ELECTRICAL POWER TOOLS

- Do not use power equipment or tools on which you have not been trained.
- Keep power cords away from the path of drills, saws and grinders.
- Do not use cords that have splices, exposed wires or cracked or frayed ends.
- Do not carry plugged in equipment or tools with your finger on the switch.
- Ensure that all switches and controls for portable tools, such as circular saws, hand-held power drills, reciprocating saws, etc. are in proper working order.
- Do not carry equipment or tools by the cord.
- Disconnect the tool from the outlet by pulling on the plug, not the cord.
- Turn the tool off before plugging or unplugging it.
- Do not leave tools that are “on” unattended.
- Do not handle or operate electrical tools when your hands are wet or when you are standing on wet floors.
- Do not operate spark inducing tools such as drills, saws or grinders near containers labeled “Flammable” or in an explosive atmosphere.
- Do not use extension cords or other three-pronged power cords that have a missing prong.
- Do not remove the ground prong from electrical cords.
- Do not use an adapter such as a cheater plug that eliminates the ground.
- Do not plug multiple electrical cords into a single outlet.
- Do not stand in water or on wet surfaces when operating power hand tools or portable electrical appliances.
- Do not use a power hand tool while wearing wet cotton gloves or wet leather gloves.
- Never operate electrical equipment barefoot; wear rubber-soled or insulated work boots.
- Do not operate a power hand tool or portable appliance that has a frayed, worn, cut, improperly spliced, or damaged power cord.

- Do not operate a power hand tool or portable appliance if a prong from the three-pronged plug is missing or has been removed.
- Do not operate a power hand tool or portable appliance that has a two-pronged adapter or a two-conductor extension cord.
- Do not operate a power hand tool or portable appliance while holding part of the metal casing or while holding the extension cord in your hand; hold all portable power tools by the by the plastic handgrips or other nonconductive areas designed for such purposes.
- Provide and properly use the appropriate personal protective equipment for the job.
- Any tool that is not in compliance with any applicable requirement of this part is prohibited and shall be identified as unsafe by tagging or locking the controls to render them inoperable.
- All hand and power tools shall be maintained in a safe condition.
- Electric power operated tools shall either be of the approved double-insulated type or grounded. The ground shall be provided through use of a separate ground wire and polarized plug and receptacle.
- Machines designed for a fixed location shall be securely anchored to prevent walking or moving.

III. MACHINE GUARDING

- Machine guarding devices shall:
  - Prevent hands, arms, or any part of a worker's body or clothing from contacting dangerous moving parts.
  - Be constructed of durable material that will withstand the conditions of normal use and be firmly secured to the machine so as not to be easily removed.
  - Ensure that no objects can fall into moving parts.
  - Not create a new hazard.
  - Not create interference or impede a worker from performing the job quickly and comfortably.
  - Allow safe lubrication with removal of safeguard device.
- When power operated tools are designed to accommodate guards, they shall be equipped with such guards when in use.
- Machine guarding shall be provided to protect the operator and other employees in the area from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips and sparks.
- Machine guarding devices shall be designed and constructed to prevent the employee from having any part of his body in the danger zone while operating the tool.

- Special hand tools for placing and removing material may be used to permit easy handling of material without the employee placing a hand in the danger zone. Such tools shall be used to supplement, not in lieu of, other required guarding.
- Power and operating controls should be located within easy reach of the employee's regular work location, making it unnecessary to reach over the cutter to make adjustments.
- Belts, gears, abrasive grinder wheels, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other reciprocating, rotating or moving parts of equipment shall be guarded if such parts are exposed to contact by employees or otherwise create a hazard.
- The blades of a fan shall be guarded with openings no larger than ½ inch when they are located less than seven feet above the floor or working level.
- Compressed air shall not be used for cleaning purposes except where reduced to less than 30 psi and then only with effective chip guarding and personal protective equipment.

IV. HAND TOOL SAFETY

- Use tied off containers to keep tools from falling off scaffolds and other elevated work platforms.
- Carry all sharp tools in a sheath or holster.
- Tag worn, damaged or defective tools "Out of Service" and do not use them.
- Do not use a tool if its handle has splinters, burrs, cracks, splits or if the head of the tool is loose.
- Do not use impact tools such as hammers, chisels or steel stakes that have mushroomed heads.
- Do not perform "make-shift" repairs to tools.
- Do not carry tools in your hand when you are climbing; carry tools in tool belts or hoist the tools to the work area using a hand line.
- Do not throw tools from one location to another or from one employee to another.
- Transport hand tools only in toolboxes or tool belts; do not carry tools in your clothing.

POWER AND HAND TOOLS PROGRAM

HAMMERS

- Do not strike nails or other objects with the “cheek” of the hammer.
- Do not strike a hardened steel surface, such as a cold chisel, with a claw hammer.
- Do not strike a hammer against another hammer.
- Do not use a hammer if your hands are oily, greasy or wet.
- Do not use a hammer as a wedge or a pry bar.

SAWS

- Keep control of saws by releasing downward pressure at the end of the stroke.
- Do not use an adjustable blade saw if the blade is not taut.
- Do not use a saw blade that is dull.
- Oil saw blades after each use.
- Keep your hands and fingers away from the saw blade while you are using the saw.
- Do not carry a saw by the blade.
- When using the handsaw, hold the work piece firmly against the worktable.

SCREWDRIVERS

- Always match the size and type of screwdriver blade to fit the head of the screw.
- Do not hold the work piece against your body while using a screwdriver.
- Do not put your fingers near the blade of the screwdriver when tightening a screw.
- Use a drill, nail, or an awl to make a starting hole for screws.
- Do not force a screwdriver by using a hammer or pliers on it.
- Do not use a screwdriver as a punch, chisel, pry bar or nail puller.
- When you are performing electrical work, use the blue-handled screwdriver, as it is insulated.
- Do not use a screwdriver if your hands are wet, oily or greasy.

WRENCHES

- Do not use wrenches that are bent, cracked or badly chipped or that have loose or broken handles.
- Do not use a shim to make a wrench fit.
- Use a split box wrench on flare nuts.
- Do not use a wrench that has broken or battered points.

- Discard any wrench that has spread, nicked or battered jaws or if the handle is bent.
- Use box or socket wrenches on hexagon nuts and bolts as a first choice, and open-end wrenches as a second choice.

PLIERS

- Do not use pliers as a wrench or a hammer.
- Do not attempt to force pliers by using a hammer on them.
- When you are performing electrical work, use the pliers that have the blue rubber sleeves covering the handle; these are insulated.
- Do not use pliers that are cracked, broken or sprung.
- When using the diagonal cutting pliers, shield the loose pieces of cut material from flying into the air by using a cloth or your gloved hand.

FALL PROTECTION/LADDER AND SCAFFOLD SAFETY PROGRAM

Revised (October 2018)

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HPS MECHANICAL

FALL PROTECTION/LADDER AND SCAFFOLD SAFETY PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 1504
- 8 CCR 1629
- 8 CCR 1669
- 8 CCR 1670
- 8 CCR 1671
- 8 CCR 1675
- 8 CCR 1712
- 8 CCR 3276

II. LADDERS

Ladders present one of the major hazards in construction work and their improper use is the cause of many serious accidents. An analysis of accidents involving ladders revealed that the four principle causes of such accidents are:

- Ascending or descending improperly
- Failure to secure the ladder at the top or bottom
- Structural failure of the ladder itself
- Carrying objects while ascending or descending

Accordingly, all ladders shall be used in accordance with the manufacturers' recommendations. Metallic ladders shall not be permitted on the jobsite.

INSPECTION AND TESTING

All ladders shall be inspected frequently for damage and deterioration. All parts should be checked for wear, corrosion, and structural failure. Ladders found to be defective shall be tagged "Do Not Use." If a ladder is damaged beyond repair, it shall be removed from the job site and destroyed.

CARE AND MAINTENANCE

- Ladders shall be stored and transported in a manner that prevents damage and unauthorized use.
- Any damage to a ladder that is repairable shall be performed as soon as practical to prevent unsafe use.
- When not in use, all ladders should be stored under suitable cover protected from the weather. Ladders stored horizontally should be supported at both ends and at an intermediate point to prevent sagging of the midsection.

JOB-SITE USE

Ladder feet should be placed on a substantial, level base and the vicinity of the legs should be kept clear of debris and afford a non-skid surface. Both the top and bottom of the ladder should be secured to prevent displacement.

- Ladders leading to landings or walkways should extend at least 36" above the landing and be securely fastened. The front of the ladder should be placed approximately one-fourth of its supported length away from the vertical plane of its top support.
- No employee shall attempt to carry anything while ascending or descending a ladder; three-point contact shall be maintained while climbing.
- Side reach from a ladder should be kept to a minimum and shall not permit the belt buckle to pass the ladder uprights.
- Select an area out of normal traffic pattern to erect ladders to decrease the hazard of their being accidentally displaced.
- Do not use ladder for skids, braces, workbenches, scaffold plank supports or any purpose other than climbing.
- If it is necessary to place a ladder in or over a doorway, barricade the door and post warning signs.
- Keep both feet on the ladder rungs. Do not reach out too far, or place one foot on a line or piece of equipment. Change the position of the ladder as often as necessary.
- Always face a ladder when working from it. Only one person on is ever allowed on a ladder unless the ladder is designed for use by two persons.
- Ladders shall not be used on scaffolds.
- Except where either permanent or temporary stairways or suitable ramps or runways are provided, ladders shall be used to give safe access to all elevations.

STRAIGHT AND EXTENTION LADDERS

- The ladder shall be positioned so the distance at the bottom footing is one-fourth the vertical distance in height.
- Ladders must be equipped with tie-off rope and non-skid safety feet.
- Ladders must be adequately tied off at top and bottom except on single inspection climb.
- The top of the ladder must extend at least three feet beyond the supporting object when used as access to an elevated work area.
- After the extension section has been raised to the desired height, ensure that safety latches are engaged and the extension rope is secured to a rung on the base section of the ladder.
- Extension ladders must be overlapped a minimum of three rungs.
- Extension ladders shall not be taken apart to use either section separately.

- Ladder rungs, cleats, and steps shall be parallel, level, and uniformly spaced when the ladder is in position for use

STEPLADDERS

- Prior to use, open the stepladder, set it level on all four feet, and lock the spreaders in place. Do not use a stepladder like a straight ladder.
- Never stand on the uppermost platform or top rung of a stepladder.
- Do not place tools or material on the rungs or platform.

FIXED LADDERS

- Only employees who have received the proper training shall work on fixed ladders over 24 feet high. No employee shall perform rope descents.

III. STAIRWAYS

- Stairways or ladders shall be provided at all personnel access points where there is a break in elevation of 19 inches or more and no ramp, runway or sloped embankment is provided.
- Employees will not be allowed to use any stairway on which construction work is being performed.
- Stairs or ladders shall be kept clear for access at all times.
- All stairs or ladder access areas shall be provided with fall protection systems such as handrails or guardrails, as required.
- Stairways that are not a permanent part of the structure on which construction is being performed shall have landing not less than 30 inches in the direction of travel and extend at least 22 inches in width at every 12 feet or less of vertical rise.
- Riser height and tread depth shall be uniform within each flight of stairs; variations will not exceed one-fourth inch in any stairway system.
- Where doors or gates open directly on a stairway, a platform shall be provided; the swing of the door shall not reduce the effective width of the platform to less than 20 inches.
- Metal pan landings and pan treads shall be secured in place before filling with concrete or other materials.
- All parts of stairways shall be free of hazardous projections. Slippery conditions shall be eliminated before the stairways are used. The stair rail/handrail system shall be surfaced as to prevent injury or snagging of employee clothing.
- Except during construction on metal pan stairways, foot traffic will be prohibited until the treads and/or landings are filled completely with concrete, wood or other solid material at least to the top edge of each pan and shall be full width and depth of the stair.

- Stairs having four or more risers or rising more than 30 inches shall be equipped with one handrail and on stair rail system along each unprotected side or edge.
- Winding or spiral stairways shall be equipped with a stair railing not less than 36 inches in height from the tread nosing to the top of the stair rail.
- Mid-rails, screens, or mesh shall be provided between the top rail and the stair steps.
- Mid-rails, when used, shall be located at a height midway between the stair rail and the tread.
- Screens or mesh, when used, shall be installed from the top rail to the stair step.
- Handrails and the top rails of the stair rail system shall be capable of holding a force of 200 pounds applied in any downward or outward direction.
- The height of the handrail shall be not more than 37 inches or less than 36 inches from the top surface of the handrail to the nose on the tread.
- Handrails will be set at a minimum clearance of three inches between the handrail and the wall face.
- All unprotected sides and edges of stairway landings will be provided with a guardrail system.

IV. SCAFFOLDING

- Before starting work on a scaffold, they must be inspected by the competent person for the following:
  - Are guardrails, toe boards, and planking in place and secure?
  - Are locking pins at each joint in place?
  - Are all wheels on moveable scaffolds locked?
- Do not attempt to gain access to a scaffold by climbing on it (unless it is specifically designed for climbing) – always use a ladder.
- Scaffolds and their components must be capable of supporting four times the maximum intended load.
- Any scaffold, including accessories such as braces, brackets, trusses, screw legs, ladders, etc., damaged or weakened in any way, must be immediately repaired or replaced.
- Scaffold planks must extend over their end supports not less than six inches nor more than 12 inches, unless otherwise specifically required.
- Scaffold platforms must be at least 18 inches wide unless otherwise specifically required or exempted.
- Where persons are required to work or pass under the scaffold, scaffolds shall be provided with a screen between the toe board and guardrail, extending along the entire opening. The screen must be made of No. 18 gauge U.S. Standard wire, one-half inch mesh or equivalent protection.

- All scaffolds must be erected level and plumb, and on a solid footing.
- Scaffold members shall not be changed or removed unless authorized.
- Workers are not allowed to ride on a rolling scaffold when it is being moved.
- Remove or secure all materials and tools on deck before moving.
- Scaffold members shall not be altered by welding, burning, cutting, drilling, or bending.
- All employees will be trained on the safe use of scaffolds before use.
- Training will be provided to recognize the hazards associated with the type of scaffold being used and to understand the procedures which must be followed to control or minimize those hazards.
- Retraining is required when an employee lacks skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds so that the requisite proficiency is regained.
- Scaffolds will be tagged when defective or unsafe conditions are found.

V. AERIAL LIFT PLATFORMS

- There are two kinds of aerial lift platforms.
  - The most common type allows a worker to rise straight upward from the ground ("scissors lift").
  - The other type allows a worker to reach places off the ground that are not directly above-the equipment base (“articulating boom lifts").
- No worker shall be allowed to enter and operate any type of lift until training for that particular kind of equipment has been successfully completed.
- Records of training must be maintained.
- All lifts have weight capacity limits and number of occupant limits, which are not to be exceeded.

SCISSOR LIFTS

- Unless the manufacturer provides an "anchor point", the fall protection system needs to be approved by the supervisor.
- If an anchor point is provided inside the platform area, the operator's manual will describe the conditions that must be met to complete the fall protection requirements for normal operation.
- Before the platform is raised, the gate across the entry point must be closed and secured. This gate may be a hinged door frame or a chain.
- Platforms should be lowered to within five feet of the ground before driving the unit to another location.
- If the unit is to be driven over hole covers, a worker should be stationed on the ground to watch for deflection as the wheels pass over the cover.

ARTICULATING BOOM LIFTS

- All of the lifts are equipped with an anchor point inside the platform area and require the operator to be secured to the anchor point using a full body harness and lanyard before raising the platform or driving the unit.
- Lanyards should be short enough to keep operators from being thrown out of reach of the guardrail if a springing movement should throw them from the platform.
- Platforms are to be lowered to within five feet of the ground, not extended and facing over the front of the motor base when driving the unit to a work location.
- Driving over uneven ground requires extra caution; normally a ground man should walk alongside to spot any potholes.

INSPECTIONS

- Initial inspections are to be completed by qualified persons (this may be an agent of a rental company) prior placing the equipment into service on a project.
- Daily inspections are to be completed by the operator prior to each use.
- If deficiencies are found, the equipment must be tagged "out of service" until repairs are completed.

VI. FALL PROTECTION SYSTEMS AND PLANS

- Any worker that is exposed to a fall hazard of four feet or more will be provided with a means of fall protection.
- Wherever protection is required, the workers will be protected from falling by use of guardrails, safety nets or a personal fall arrest system.
- Each project supervisor will be required to determine if the walking and working surfaces have the strength and structural integrity to support their workers safely.
- All fall protection equipment used shall be ANSI certified.

VII. BUILDINGS AND OTHER SIMILAR STRUCTURES

UNPROTECTED SIDES AND LEADING EDGES

- Where a structure has unprotected sides, edges or leading edges and has a fall hazard of six feet or more above a lower level, employees shall be protected from falling by use of guardrail systems, safety net systems or personal fall arrest systems.
- All workers, whether engaged or not in the leading-edge work, shall be protected from falling by a guardrail system, safety net system or a personal fall arrest system.
- Controlled access zones are not an acceptable fall protection measure.

OPEN HOLES

- Open holes are defined to be openings that are two inches or greater in size in any dimension.
- Any open hole, including skylights, shall be protected by a guardrail system, safety net system, or personal fall arrest system erected around such holes where a six-foot or more fall exists above a lower level and a worker can walk or work near it.
- Workers shall be protected from open holes that can cause tripping in or stepping into or through by covers. These covers will be prominently color coded or labeled as to warn workers of such holes.
- Workers will be protected from falling objects through holes by covers.

WALL OPENINGS

- Workers shall be protected from falling by a guardrail system, safety net system, or personal fall arrest system when working on, at, above or near wall openings (including those with chutes attached) where the bottom of the wall opening is at least six feet above the adjacent exterior level, and less than 39 inches above the interior surface.

HOIST AREAS

- A guardrail system, gate, or chain is required where a hoisting operation is in place for landing materials. If the guardrail system, gate, or chain is removed to facilitate the landing of materials and the worker must lean through the access opening or out over the edge of the access opening, that worker shall be protected by a personal fall arrest system.
- In hoisting areas, the guardrail system, chain, gate or removable guardrail sections shall be placed across the access opening when hoisting-operations are not taking place.
- All personal restraint systems used in hoist areas will be rigged to allow the worker to approach, but not quite reach the unprotected edge.

RAMPS, RUNWAYS AND OTHER WALKWAYS

- A guardrail system will be installed along each unprotected side or edge on ramps, runways and other walkways where a fall hazard of six feet or more exists.
- The guardrail system will be built to the criteria mentioned in the guardrail system section of this manual.

VIII. EXCAVATIONS

- Workers will be protected from falling by guardrail systems, fences, or barricades at the edge of excavations where a six-foot or more fall exists.

- Workers shall be protected from falling into or onto dangerous equipment by guardrail systems, fences, barricades or covers at all wells, pits, shafts, and similar excavations that are six feet or more in depth.
- Refer to the Excavation and Trenching Program for additional provisions.

IX. PROTECTION FOR ROOFING ACTIVITIES

- Steep roofs: Personnel working on roofing activities on steep sloped roofs with unprotected sides and edges six feet or more above lower levels shall be protected from falling by a guardrail system with toe boards, safety net system, or personal fall arrest system.
- Low sloped roofs: Personnel working in roofing activities on low sloped roofs with unprotected sides and edges six feet or more above lower levels shall be protected from falling by a guardrail system, safety net system or personal fall arrest system, or personal fall arrest system.

X. PROTECTION FROM FALLING OBJECTS

Several methods can be used for protection from falling objects, including toe boards, screens, guardrail systems and canopies. When these methods are incorporated, they should be installed such that they will keep potential fall objects far enough from the edge of the higher level so that these objects would not go over any edge if displaced.

- Toe boards shall be erected along the edge of the overhead walking or working surface for the distance sufficient to protect workers below when used as falling object protection.
- These toe boards will be capable of withstanding a force of 50 pounds applied in any downward or outward direction at any point along the toe board.
- Toe boards will be a minimum of three and one-half inches tall. They shall not be placed more than one-quarter inch above the deck surface. They will be solid or not have any opening over one inch in height.
- Where tools and equipment are piled higher than the toe board, paneling or screening shall be erected from the deck surface or toe board, to the top of the guardrail system top rail or mid rail for a horizontal distance sufficient to protect the workers below.
- Where the guardrail system is used for falling object protection, openings will be small enough to prevent passage of potential falling objects.
- When overhand bricklaying or related work is performed, no materials or equipment except masonry materials or mortar shall be stored within four feet of the working edge. Excess mortar, broken or scattered masonry units and all other materials and debris shall be kept clear from the work area through removal at regular intervals.

- On roofing work, materials and equipment shall not be stored within six feet of the roof edge unless guardrails are erected at the edge. Materials that are piled, grouped or stacked near a roof edge will be stable and self-supporting.
- Canopies, when used as falling object protection, will be strong enough to prevent collapse and prevent penetration by any objects that may fall onto the canopy.

XI. GUARDRAIL SYSTEMS

Guardrail systems must have the following components and provisions:

- The top edge height of top rails or equivalent guardrail system members shall be between 42 and 45 inches, above the walking or working level.
- Mid rails, screens, mesh, intermediate vertical members or equivalent intermediate structural members shall be installed between the top edge of the guardrail system and the walking or opening surface when there is no wall or parapet wall of at least 21 inches high.
- Mid rails, when used, shall be installed at a height midway between the top edge of the top rail and the walking working level.
- Screens and mesh, when used, shall extend from the top rail to the walking or working level and along the entire opening between top rail vertical supports.
- Intermediate vertical members, when used between posts, shall be not more than 19 inches apart. If other structural members are used, they shall not have any openings larger than 19 inches.
- The guardrail system shall be capable of withstanding, without failure, a force of at least 200 pounds applied within two inches of the top edge in any outward or downward direction.
- The top guardrail edge shall not deflect below a height of 39 inches above the walking or working level.
- Mid rails, screens, mesh, intermediate vertical members, solid panels and equivalent structural members shall be capable of withstanding, without failure, a force of at least 200 pounds applied in any downward or outward direction at any point along the mid rail or other member.
- All surfaces of the guardrail system shall be smooth such that workers are protected from lacerations punctures or other injury, or snagging of clothing.
- The ends of top rails and mid rails shall not overhang the terminal posts unless the overhang does not constitute a projection hazard.
- If wire rope is used for top rails and mid rails, it will be at least one-quarter inch in diameter and not have any defects that could cause punctures or lacerations. The top wire rope rail will be flagged at least every six feet with high visibility material.
- Where openings in the guardrail system are used for passage of materials, the opening shall not have more than two sides provided with removable guardrail

sections. When the opening is not in use, it shall be closed with a cover, or a guardrail system shall be provided along all unprotected sides or edges.

- Where points of access are at openings, such as at ladder ways, they shall be provided with a gate or be so offset that a person cannot walk directly into the access opening.
- Guardrail systems used on ramps shall be erected along all unprotected sides or edges.
- Personal Fall Arrest Systems shall not be attached to any guardrail system or to any hoist.

XII. PERSONAL FALL ARREST SYSTEMS

Body Belts and Harnesses: Body belts will not be allowed except for positioning situations. Since January 1998, body belts have not been allowed for fall arrest.

FULL BODY HARNESSES

- Workers will attach their lanyards to the body harness, located in the center of the wearer's back near the head or the shoulder level. For positioning situations where a maximum of 24 inches of fall can occur, the workers can use the two Dee-rings on the belt portion of the harness. Use of a positioning chain or cable harness will be utilized for this type of operation provided they meet the OSHA standard.
- Lanyards will be such that they incorporate a braking device as outlined in the lanyard portion of this section.
- Body harnesses and any other components of the fall arrest system will not be used for hoisting materials.

CONNECTORS, DEE-RINGS AND SNAP HOOKS

- Connectors shall be drop-forged, pressed or formed steel, shall have corrosion-resistant finishes, and all surfaces and edges shall be smooth.
- Dee-rings and snap hooks shall be of a minimum tensile strength of 5,000 pounds and be proof-tested to a minimum tensile load of 3,600 pounds without cracking, breaking or deformation.
- Snap hooks shall be double locking type to prevent disengagement (roll out).

LIFELINES AND LANYARDS

- Lanyards and lifelines shall be of a minimum breaking strength of 5,000 pounds.
- Horizontal lifelines will be designed, installed and used under the supervision of a qualified person and the system will maintain a safety factor of at least two.
- Where vertical lifelines are provided, each person will have their own separate lifeline.

- In elevator shafts, two workers may be attached to the same lifeline provided both are working atop a false car that is equipped with guardrails, the strength of the lifeline is 10,000 pounds and all other required criteria on the lifelines have been met.
- Lifelines will be protected against being cut or abraded.
- Self-retracting lifelines and lanyards that automatically limit free fall distance to 24 inches or less shall be capable of sustaining a minimum tensile load of 3,000 pounds applied to the device with the device in a fully extended position. Mounting hardware will also meet these requirements.
- Lifelines that are not self-retracting will have the provision of rip-stitch or tearing and deforming and be capable of sustaining a minimum tensile load of 5,000 pounds in the fully extended position.
- Rope lanyards and web type straps, lifelines and components of body belts and harnesses shall be made from synthetic fibers.

ANCHORAGES

- Anchorages for attachment of personal fall arrest equipment will be independent of any anchorage being used to support or suspend platforms.
- They will be capable of supporting at least 5,000 pounds per worker attached or have a safety factor of two.
- The anchorage system shall always be under the supervision of a qualified person.

FALL FORCES AND DISTANCES

- The limit of maximum arresting force on an individual will be 900 pounds when using a body belt, and 1,800 pounds when using a body harness.
- The system shall be rigged such that the free-fall distance will not exceed six feet or contact any lower level, will bring the individual to a complete stop and limit the deceleration distance to a travel distance of 42 inches, and be of sufficient strength of twice the potential impact energy of free falling a distance of six feet or the distance permitted by the system, whichever is less.
- The system, in consultation with the Safety Department, shall be reevaluated for compliance and modified accordingly for any employee with 310 pounds or more combined body weight and tools.
- Systems that have been subjected to impact loading will be removed from service and not used until inspected and determined by a competent person that the system is undamaged and suitable for re-use.
- The Project Superintendent will make provisions for prompt rescue of a fallen worker unless the individual can complete a self-rescue procedure. A rescue plan shall be developed for all situations where rescue may be deemed necessary.

- Subcontractors will be responsible for their workers' rescue plan and shall submit a copy of their plan to the Safety Department, a copy of which will be kept on the project site and in the Safety Department.
- Failure to submit a rescue plan will cause the subcontractor to stop work until the submittal is completed.

INSPECTION AND PERSONAL ARREST SYSTEM

- Personal arrest systems shall be inspected before each use by the wearer and all defective or worn components shall be removed from service.
- Personal arrest systems shall not be attached to a guardrail system or hoist.

XIII. FALL RESTRAINT SYSTEMS

- Positioning devices shall be rigged such that the free-fall distance will be 24 inches maximum.
- The system shall be secured to an anchorage system capable of supporting at least twice the potential impact load of the worker's fall or 3,000 pounds whichever is greater.
- Connectors, Dee-rings, and snap hooks will meet the requirements as mentioned in the section on personal arrest systems.
- These systems shall not be used to hoist materials.

XIV. TRAINING AND RETRAINING PROGRAM

The training program is designed for all workers who might be exposed to fall hazards and shall inform each worker on how to recognize the hazards involving fall hazards and the procedures to be followed to minimize their hazards.

Training covers the following topics:

- The nature of fall hazards.
- The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used.
- The use and operation of guardrail systems, personal fall arrests systems, safety monitoring systems, Controlled Access Zones, and other protection to be used.
- The role of the worker in the safety monitoring system.
- The limitations on the use of mechanical equipment during the performance of roofing work on low-sloped roofs.
- The correct procedures for handling and storage of equipment and materials and erection of overhead protection.
- The role of workers in fall protection plans.
- The Cal/OSHA standard for fall protection.

CERTIFICATION OF TRAINING

- A written record that includes the workers' name, date of training, the signature of worker and signature of the instructor shall be maintained in the office.

RETRAINING

Retraining will be conducted when:

- Deemed necessary by the Safety Department or Project Superintendent.
- Changes occur in the workplace that renders the previous training obsolete.
- Changes are made in the type of fall protection system or equipment being used.
- Inadequacies in workers' knowledge are discovered.
- When non-compliant activities are observed.

EQUIPMENT OPERATION PROGRAM

Revised (October 2018)

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HPS MECHANICAL

EQUIPMENT OPERATION PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 3650
- 8 CCR 3660
- 8 CCR 3661
- 8 CCR 3664

II. PURPOSE

Improper procedures used by our employees can cause injury, disability, or death. By outlining and following safe operating procedures for use of heavy equipment, we learn to prevent injury and safeguard ourselves and our coworkers by:

- Ensuring all employees know and understand the safe operating procedures for the safe operation and maintenance of Heavy Equipment and Forklifts, and
- Reducing the risk of a work-related injury or death by maximizing personal safety during Heavy Equipment and Forklift operation.

III. GENERAL SAFETY FOR HEAVY EQUIPMENT AND FORKLIFTS

- Equipment shall only be operated by personnel who are trained and authorized to do so.

- Personal protective equipment is <u>mandatory</u> and may include the following:
  - Boots or safety shoes
  - Eye/face protection when working around engines or for maintenance
  - Long pants
  - Hard hat where there is overhead danger
  - Hearing protection
  - Gloves when there is potential danger to hands

<u>Pre-Start/Walk Around Inspection</u>

- Check for loose or worn parts and repair or replace immediately.
- Check all fluid/coolant levels. Caution: Open the radiator cap only when the engine is cooled.
- Inspect hydraulic line connectors and hoses for leaks before applying pressure to the system. Use paper or cardboard, not your hands, to search for leaks. Caution: Hydraulic fluid escaping under pressure can penetrate skin and cause serious bodily harm.

- Check tires for cuts, bulges, irregularities, abnormal wear and proper inflation.
- Ensure that a fire extinguisher and first aid kit are mounted in the cab.

Machine Maintenance

- When servicing equipment, fasten a “Do Not Operate” tag on the steering wheel.
- Review the LockOut/Tag Out Procedure in Section 15 prior to servicing any equipment.
- Ensure the cab area is clean and free of debris and tools.
- Clean the windshield, mirrors and lights.
- Remove all oil, grease or mud and snow from grab irons, hand rails, steps, pedals, and equipment floor to prevent slips and falls.
- Remove or secure any loose items such as tools, chains, or lunch boxes from the cab.

Work Site

- Inspect and mark the area for underground cables, gas lines, and water mains.
- Know work area clearances - watch for overhead or underground objects, holes, drop-offs, and partially hidden obstacles and wires.

Mount Properly

- DO NOT GET ON OR OFF A MACHINE THAT IS IN MOTION
- Maintain a three-point contact with the steps and hand rails while getting on/into the machine - do not use the controls or steering wheel as a handhold.
- Do not operate the machine with wet, greasy, or muddy hands or shoes.

Starting and Testing

- EXHAUST FUMES ARE DANGEROUS - ALWAYS ENSURE A RUNNING MACHINE IS LOCATED IN A WELL-VENTILATED AREA.
- Fasten the seat belt and adjust the seat prior to starting.
- Controls should be in neutral and the parking brake set before starting the engine.
- Start the engine only from the operator's seat.
- Warn personnel in the area that the engine is being started.
- Check all gauges, light, instruments and warning devices to assure that they are functioning properly and the readings are within normal range.
- Test steering right and left.
- Test brakes against ground speed to ensure there is no malfunction.
- Ensure all implement controls are operating properly.

Machine Operation

- SMOKING IS PROHIBITED AT ALL TIMES.
- Be familiar with the controls before operating the machine.
- Only the operator is permitted to ride on the machine.
- When backing up, use extra care and sound the horn to clear the area.
- If a malfunction is observed, DO NOT OPERATE the machine until the proper repairs have been made.
- Drive at speeds compatible with working conditions.
- Do not coast downhill, select a gear that will prevent excessive speed when going downhill.
- Do not park on a steep incline.
- Know the stopping distance at any given working speed.
- Do not permit anyone to stand or pass under the bucket or lift arms.
- Follow the manufacturer's load capacity limits. Identification plates are attached to all machines.
- If the machine is stuck, back it out or stop engine and get help.
- Do not make mechanical adjustments while the unit is in motion.
- Always follow the manufacturer's recommendations for pulling or towing.
- Lower all the hydraulic equipment before shutting down the equipment or getting off the machine.
- During snow removal, be alert for any obstructions covered by snow.

Ether - Cold Start Precautions

- Diesel cold start systems contain ether, which is explosive. Accordingly, this equipment must be kept away from heat, sparks, and open flames. Work in a well-ventilated area.
- If swallowed, breathed or contacted on skin or eyes, seek medical attention immediately and follow recommendations on the SDS sheets.
- Point the openings of the valve, tube or atomizer away from the body while testing the diesel cold start system.
- Store replacement ether cylinders in a cool dry place away from direct sunlight; do not keep them the in the operator’s compartment.

Refueling

- Shut off and cool the engine and any electrical equipment before fueling.
- Ensure the fueling area is well ventilated.
- Do not smoke while refueling; keep open flames and sparks away from the area.
- To avoid sparks when refueling, ground the funnel or fuel nozzle against the filler neck.
- Do not use gasoline or diesel fuel for cleaning parts.
- Check the battery and electrolyte levels according to manufacturers' instructions.
- Know where the fire extinguishers are located.

Road Rules

- When turning, use hand or turn signals.
- Obey all traffic regulations. Know local traffic laws regarding lights, warning signs, load limits, and requirements for slow-moving equipment on highways/roadways.
- When traveling slower than the flow of traffic, , pull over and allow the vehicles to pass.

Shut Down/Parking

- Park on level ground.
- When parking on a grade, block the wheels and set the parking brakes.
- When parking, lower all loader, buckets, and hydraulics to the ground.

IV. BACKHOES/EXCAVATORS

- KNOW THE WORKING RANGE OF THE MACHINE.
- Ensure the attachment or load doesn't catch on obstructions when lifting or swinging.
- When lifting a load, do not lift, swing or stop unnecessarily fast.
- Ensure everyone is the clear before swinging or moving in any direction. NEVER swing or position the attachment or load over personnel or vehicle cabs.
- Never allow personnel to walk or work under any part of the machine or load while the machine is operating.
- Never allow anyone to ride the attachment or the load; this is an extremely dangerous practice.
- Do not load a truck unless the driver is in a safe location. Then, load the truck from the rear or side.
- Use a signal person, who is in direct communication with the operator. The operator must pay close attention to the signals.

- Never exceed the lifting capacity of the machine. Stay within the lifting limits shown on the Load Rating Chart. Keep in mind that as the load radius and elevation change, the lifting capacity of the excavator may decrease.
- Keep the machine far away from the edge of an excavation. Avoid undercutting the machine. If necessary, provide adequate shoring to prevent the machine from falling into the excavation.
- Level off the work area if possible.
- Avoid swinging or extending the bucket farther than necessary in a downhill direction, as this will reduce the stability of the machine.
- When working with the bucket on the uphill side, the excavator may tip over if the slope is too steep.
- Avoid working with the tracks across the slope, as this reduces stability and increases the tendency for the machine to slide.
- Always be sure that slings or chains used to lift the load are of adequate strength and that they are in good condition.
- Maintain an over-head clearance at all times.
- Turn off the engine and allow the machine to cool before working on the machine. Most fluids on the excavator are hot enough to cause severe burns at normal operating temperatures.

V. DOZERS

- Operate the controls only with the engine running.
- Do not allow riders on the machine unless additional seat, seat belt, and rollover protection are provided.
- The operator must ensure that no one will be endangered before moving the machine.
- Report any needed repairs noted during operation.
- Carry implements close to the ground, approximately 40cm (15 in) above ground level.
- Maintain a safe distance away from the edge of cliffs, overhangs, and slide areas.
- If the machine begins to sideslip on a grade, immediately dispose of the load and turn the machine downhill.
- Be careful to avoid situations that could lead to tipping when working on hills, banks, or slopes, and when crossing ditches, ridges, or other obstructions.
- Work up and down slopes, rather than sideways, whenever possible.
- Keep the machine under control and do not work it over its rated capacity.
- Verify that hitch points and towing devices are adequate.

- Connect trailing equipment to a drawbar or hitch only.
- Never straddle a cable, wire rope, or similar device or allow others to do so.
- Personnel are prohibited to be between the machine and trailing equipment when maneuvering to connect them.
- Block the tongue or hitch of trailing equipment to align it with the drawbar or hitch.

VI. LOADERS

- Only one person is allowed on the machine; NO RIDERS ARE ALLOWED.
- Know the pinch points and wrap points on the loader.
- Operate at a speed consistent with working conditions, visibility, and terrain.
- Ensure the loader has an adequate rear counterweight
- Reduce speed and cross at an angle when crossing exposed railroad tracks, ditches, ridges, or curbs.
- Carry loaded buckets as close to the ground as possible; the higher a loaded bucket is from the ground the more unstable the loader becomes.
- Use extreme caution when operating a loader on a side slope. Slow down and carry the bucket, loaded or empty, as close to the ground as possible.
- Stay in gear when traveling downhill, which will help control speed.
- Never move a load above the heads of other workers.
- When back filling, use extreme caution. The weight of the material plus the weight of the machine could cause the new construction to collapse.
- Keep the work area level; avoid developing ruts by occasionally back dragging the bucket to smooth the surface.

VII. SKID-STEER LOADERS/MULIT-TERRAIN LOADERS

- Check to see that counterweights are in place, as recommended by the manufacturer. NOTE: This is very important, as improperly balanced skid-steer loaders are easily upset.
- Clean steps, pedals, and the floor of any slippery substances.
- Clear the driving compartment of loose items that might interfere with the controls.
- Check the work area for hazards such as holes, soft spots, and obstructions. Check overhead for utility lines, doorway clearances, or other obstructions.
- Mount the machine wearing clean, dry shoes and use the grab bars or handrails provided.

- Adjust the seat, fasten the seat belt, set the brake, and place the transmission in park or neutral before starting the engine.
- Visually check for the presence of others in the area and warn them away, being especially alert for children.
- If the machine is in a garage, allow for exhaust ventilation by opening a door or windows. CARBON MONOXIDE KILLS!
- Start the engine and check all controls to see that they are functioning properly.
- Check the horn and backup alarm for proper operation.
- Operate cautiously on uneven surfaces, avoiding steep slopes completely.
- Carry the load as low as possible and avoid sharp turns and slopes with a raised load.
- Travel an incline/decline in a straight line, with the heavy end of the machine pointed uphill.
- Operate near areas with sharp drop-offs with extreme caution.
- To avoid cave-ins or falling of material, do not undercut banks or materials that are piled high.
- NEVER leave the machine without first lowering the bucket, stopping the engine, setting the parking brake, and placing the shift in park or neutral. Dismount the machine carefully. Do not jump out of the loader.
- If stopping for any length of time, lock the ignition and remove the key.

VIII. TRUCKS

- Truck drivers shall be properly and thoroughly trained prior to working with or on any type of truck. The motor vehicle policy, as well as State and Federal regulations, prohibit the operation of commercial motor vehicles by individuals who do not have the proper training and license.
- Thoroughly inspect the truck for any defects that may inhibit safe operation of the vehicle. DOT regulations require that the operator complete an inspection form each day before placing the truck into service. This form is an excellent tool to help the operator remember to check all necessary items.
- When getting in and out of the truck, face the vehicle and always use the steps and grab irons.
- Place the gearshift into neutral and set the parking brake before starting the engine.
- Before placing the truck into motion, allow the engine to reach operating temperature and the air pressure to build to operating pressure.
- Carefully check the area around the truck before placing it into motion. Objects or people that are very close to the truck may not be visible from the driver's seat.

- Always property fasten the seatbelt before driving the truck.
- Allow adequate stopping distance between the truck and the vehicles in front of it.
- Check the area around the truck for obstructions (tree limbs, overhead wires, etc.) before raising the dump box. If dumping a pile, ensure that the spreader chains aren't set.
- When raising the dump box, position the truck on a level surface as much as possible. As the box raises, the truck's center of gravity goes up and the truck becomes less stable and more likely to tip over. If a dump must be made on a slope, position the truck so that it faces straight up or down the slope. Do not try to raise the box with the truck parked parallel with the slope. Remember that a dump truck is much more likely to tip over (or run into overhead obstructions) when spreading material then it is when dumping in a pile.
- NEVER work under a raised box (not even "for just a little bit") unless the box is adequately supported by a prop rod or cribbing. Do not rely on the truck's hydraulic system to hold the box.

IX. SAFE FORKLIFT OPERATION RULES

- Only authorized and certified trained personnel shall operate lift trucks.
- Training shall be provided by a qualified instructor and include formal instruction, practical training and a workplace-specific operator evaluation.
- Training shall be re-evaluated at least every three years and refresher training shall be conducted if an employee is observed operating in an unsafe manner or involved in an accident or near miss incident.
- Forklifts are to be inspected daily and before each shift.
- Before use, a visual inspection must be conducted to ensure that the horn, lights, brakes, tires, gas supply, hydraulic lines, etc. are in safe working condition. Employees shall not operate an unsafe forklift at any time.
- Fill fuel tanks outdoor and with the engine turned off.
- Do not exceed the safe load capacity of a forklift at any time, and do not counterweight a forklift to increase lifting capacity.
- Operators must verify trailer chocks, supports and dock plates prior to loading/unloading.
- Operators shall drive with both hands on the steering wheel. Horseplay is prohibited.
- No person shall ride as a passenger on a forklift or on the load being carried.
- A forklift shall not be used to elevate a platform or pallet with persons on it, except work platforms specifically designed for this purpose. Work platforms must have standard guard rails and be securely fastened to the forks.

- No person shall stand or walk under elevated forks.
- Jerky starts, quick turns, sudden stops, or using reverse as a brake shall be avoided.
- Forklifts should be driven on the right side of the road or aisle-way.
- Railroad tracks shall be crossed diagonally whenever possible.
- Forklifts shall be operated at a safe speed in accordance with traffic and conditions.
- Observe the following maximum speed limits:
    - inside buildings, 5 mph
    - outside buildings in work areas, 7 mph
    - on roads, 10 mph
- Slow down on wet and slippery surfaces and at cross aisles or locations where vision is obstructed.
- When entering a building or nearing a blind corner, approach at reduced speed, sounding the horn and proceeding carefully.
- Standard arm signals shall be used at all times.
- Operators shall give pedestrians the right-of-way at all times.
- Operators shall not drive toward any person who is in front of a fixed object or wall.
- Operators shall not overtake and pass another forklift traveling in the same direction, at intersections, blind spots, or hazardous locations.
- Operators should not put their fingers, arms, or legs between the uprights of the mast, or beyond the contour of the forklift.
- When the forklift is not carrying a load, the operator shall travel with the forks as low as possible. When carrying a load, it should be carried as low as possible (consistent with safe operation, two to six inches above the surface.)
- Forks should always be placed under the load as far as possible.
- No load should be moved unless it is absolutely safe and secure.
- The operator's view should not be obstructed by the load. In the event of a high load, the forklift is to be driven backward.
- Operators shall look in the direction of travel.
- The forks should not be operated while the forklift is traveling.
- On a downgrade, the load shall be last, and the forks raised only enough to clear the surface.
- On an upgrade, the load shall be first, and the forks raised only enough to clear the surface.
- Use extra care when handling long lengths of bar stock, pipe, or other materials.
- Avoid sharp or fast end-swing.

- Compressed gas cylinders shall be moved only in special pallets designed for this purpose.
- When unloading trucks or trailers, the brakes on the vehicle will be set (locked).
- Forklifts must be safely parked when not in use. The controls shall be neutralized, the power shut off, brakes set, and the forks left in a down position flat on a surface that does not obstruct walkways or aisles.
- A forklift shall not be left on an incline unless it is safely parked and the wheels blocked.

VEHICLE SAFETY PROGRAM

(January 2019)

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HPS MECHANICAL

VEHICLE SAFETY PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 1590 though 1599
- 8 CCR 3650
- 8 CCR 3664

II. PURPOSE

HPS Mechanical has established the following guidelines and procedures to ensure the safety of individuals operating any motor vehicle for company business. Protecting our employee drivers, their passengers, and the public is of the highest priority. However, the commitment of management and employees is critical to the success of this program, and clear communication of, and strict adherence to, the program's guidelines and procedures are essential.

Our primary goal is to maintain a high level of safety awareness and to foster responsible safe driving behavior. Driver safety awareness and responsible driving behavior will significantly decrease the frequency of motor vehicle accidents and reduce the severity of personal injuries and property damage.

Drivers must follow the requirements of each element outlined in this program, which are:

- Driver selection
- Driver training
- Vehicle use policy
- Vehicle inspection & preventive maintenance
- Accident investigation

Violations of any element of this program may result in disciplinary action up to, and including, suspension of driving privileges or dismissal.

III. DRIVER SELECTION

Only company authorized and assigned employees are allowed to drive company vehicles at any time. Prior to being authorized and assigned, the company will verify that the driver meets the company's acceptable driver criteria and possesses the following:

- A valid un-restricted driver's license
- A current California driving record with no more than three points within a three-year period
- No serious or major motor vehicle violations

The company will also review driving records of all employees who are authorized to drive on company business on an annual basis. Employees who do not meet the established requirements are not authorized or allowed to drive company vehicles or drive their own vehicle on company business.

IV. COMPANY VEHICLE USE POLICY

The company has established the following policies pertaining to company-owned vehicles:

- Personal and off duty use of company vehicles is prohibited.
- Only authorized employees may drive company vehicles. No other family members may drive company vehicles.
- Non-employee passengers are not permitted in company vehicles at any time, unless it is business-related.
- Seat belts must be worn in company vehicles at all times.
- No employee is permitted to drive company vehicles while impaired by alcohol, illegal or prescription drugs, or over the counter medications.
- All accidents involving company vehicles must be reported to the office immediately.
- Employees with two or more preventable accidents in a three-year period, or who obtain three points on their driving record, will be subject to a restriction or loss of their driving privileges.
- Cell phone use is prohibited during vehicle operation.

V. VEHICLE INSPECTION AND PREVENTIVE MAINTENCE

All company vehicles must be inspected by the driver prior to each use, and mechanical defects are to be repaired immediately. The Safety Coordinator will periodically inspect company vehicles to evaluate the condition of the following items:

- Lights
- Turn signals
- Emergency flashers
- Tires
- Horn
- Brakes
- Fluids
- Windshield condition and wiper condition
- Mirrors

All vehicles will also be maintained in accordance with the manufacturers' recommendations. It is the responsibility of the individual assigned the vehicle to

ensure proper maintenance and repairs are performed. If the vehicle is not safe, it shall not be driven.

VI. FLAGGERS

Flaggers shall be used at construction site locations where barricades and warning signs cannot effectively control moving traffic. When required, the Company shall ensure:

- Flaggers are placed in locations so as to give effective warning.
- Worksite traffic controls and placement of warning signs shall conform to State requirements.
- Flaggers wear orange or strong yellow-green warning garments, such as vests, jackets, shirts, or rainwear, as appropriate.
- During the hours of darkness, flaggers shall be clearly visible to approaching traffic by wearing reflectorized garments that are visible at a distance of at least 1,000 feet.
    - Only colored vests, jackets and/or shirts with retroreflective material shall be worn in snowy or foggy conditions.
- Flaggers are trained in the proper fundamentals of flagging moving traffic and signaling directors prior performing flagging duties. This training shall be documented as required.

EXCAVATION AND TRENCHING PROGRAM

(Revised November 2018)

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HPS MECHANICAL
EXCAVATION AND TRENCHING PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 341
- 8 CCR 1540
- 8 CCR 1541

II. SCOPE

This Excavation and Trenching Plan addresses the requirements and safe practices to ensure the safety of employees and contractors who work in or around trenching and excavation activities performed for the company. These requirements apply to all work involving excavation, digging, and trenching, grading, or ditching operations.

HPS Mechanical Inc. will provide safe work areas for employees, visitors, and others who are or may be exposed to hazards in or around trenches and other excavation areas. All trenching and excavation activities will be evaluated to eliminate or minimize the potential of cave-ins, review environmental contamination, and contact with underground utilities or other subsurface impediments.

III. HAZARD ASSESSMENT

Excavation and trenching work presents serious hazards to all workers involved. Cave-ins pose the greatest risk and are much more likely than other excavation-related accidents to result in worker fatalities. Other potential hazards include falls, falling loads, hazardous atmospheres, and incidents involving mobile equipment.

Before work begins on an excavation or trench, the competent person(s) will evaluate the specific hazardous conditions at the worksite through jobsite studies, observations, test borings for soil type or conditions, and consultations with local officials and utility companies. The following factors will be considered to determine the hazards associated with specific site conditions:

- Traffic
- Proximity and physical conditions of nearby structures
- Soil
- Surface water and groundwater
- Location of the water table
- Overhead and underground utilities
- Weather
- Visible PPE (see inspection log)

IV. RESPONSIBILITIES

Competent Person

The competent person will be able to:

- Evaluate soil conditions and select appropriate protective measures.
- Construct protective systems in accordance with the excavation regulatory requirements.
- Preplan, such as contacting utilities (gas, electric) to locate underground lines; planning for traffic control, if necessary; and determining the proximity to structures that could affect choice of protective systems.
- Test for low oxygen, hazardous fumes, and toxic gasses, especially when gasoline engine–driven equipment is running, or if the dirt has been contaminated by leaking lines or storage tanks.
- Ensure adequate ventilation or respiratory equipment, if necessary.
- Provide safe access into and out of the excavation.
- Provide appropriate protection if water accumulation is an issue.
- Inspect the site daily at the start of each shift, following a rainstorm, or after any other hazard-increasing event.
- Keep excavations open the minimum amount of time needed to complete operations.
- Ensure spoil piles or other materials are stored two feet or more from the edge of the excavation.

The competent person must be able to detect:

- Conditions that could result in cave-ins
- Failures in protective systems
- Hazardous atmospheres
- Other hazards, including those associated with confined spaces or fall protection requirements.
- When rescue equipment is required.
- When and where walkways are provided.
- Potential for water accumulated in a trench or excavation.

The competent person will have the authority to take prompt corrective measures to eliminate existing and predictable hazards and stop work when required.

Supervisor

A supervisor must be classified as a competent person and will be in charge of each excavation. The supervisor will:

- Successfully complete training for classification as a competent person for trenching operations.
- Ensure there is a safe means of access and egress (i.e. ladders, ramps, stairs, etc.) at a lateral distance less than 25 feet away from employees in an excavation.
- Implement the Excavation and Trenching Plan for work areas under their control.

- Act as the competent person for excavation sites under his or her control.
- Ensure that the equipment necessary to complete an excavation safely is available and in good condition.
- Conduct soil tests to determine soil type and a means to stabilize soil as appropriate.
- Ensure that all underground utility installations are located and marked before excavation begins.
- Receive written approval from the relevant utilities and landowners for digging, trenching, or excavating operations.
- Ensure that underground installations are protected, supported, or removed while the excavation is open. Notify the appropriate agencies when utility systems are exposed during the excavation process to allow the location and condition of the utility to be evaluated.
- Ensure worker protection and compliance with other applicable safety plans or programs.
- Ensure protection of the public with appropriate barricades.
- Determine what protective systems will be used to prevent cave-ins.
- Conduct daily inspections of excavations, the adjacent areas, and protective systems for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions.
- Immediately notify Project Manager if a utility system is damaged during the trenching or excavation process.

Employees

Each employee engaged in trenching or other excavation-related activities must:

- Complete training, and request assistance when uncertain about any activity he or she must perform.
- Use appropriate personal protective equipment (PPE).
- Adhere to the requirements of the Plan.
- Report all workplace injuries and unsafe conditions to the supervisor.

V. UNDERGROUND INSTALLATIONS

****CONTACT USA DIG ALERT 48 Hours Prior to Excavation****

The estimated location of utility installations, such as sewer, telephone, fuel, electric, water lines, or any other underground installations that reasonably may be expected to be encountered during excavation work, will be determined before opening an excavation.

Utility companies or owners will be contacted within established or customary local response times, advised of the proposed work, and asked to establish the location of the utility underground installations before the start of actual excavation. When utility companies or owners cannot respond to a request to locate underground utility installations within 48 hours (unless a longer period is required by state or local law) or cannot establish the exact location of these installations, the excavation work may

proceed provided that such work is performed with caution, and detection equipment or other acceptable means to locate utility installations are used.

When operations approach the location of underground utilities, excavation will progress with caution until the exact location of the utility is determined. While the excavation is open, underground installations will be protected, supported, or removed as necessary to safeguard employees.

VI. SITE INSPECTIONS

When personnel will be in or around an excavation, a competent person will inspect the excavation, the adjacent areas, and protective systems:

- Daily
  - Before each work shift
  - Throughout the work shifts as dictated by the work being done
- After every rainstorm
- After other events that could increase hazards (e.g., snowstorm, windstorm, thaw, earthquake)
- When fissures, tension cracks, sloughing, undercutting, water seepage, bulging at the bottom, or other similar conditions occur
- When there is a change in size, location, or placement of the spoil pile
- Where there is any indication of change in adjacent structures

The competent person will use the attached *Excavation Site Inspection Checklist* or equivalent form when conducting inspections. All completed inspection forms will be maintained at the worksite during construction and stored at the main office after excavation work is completed.

VII. PROTECTIVE SYSTEMS

General Requirements

- **Excavations less than five feet deep.** For excavations less than 5 five feet (1.5 meters) deep, the competent person will examine the excavation for potential cave-in hazards and determine if a protective system is needed.

- **Excavations five feet deep or deeper.** All workers in an excavation or trench five feet deep or deeper will be protected from cave-ins by an adequate protective system. Protective systems shall have the capacity to resist without failure all loads that are intended or could reasonably be expected to be applied or transmitted to the system.

- **Excavations more than 20 feet deep.** Protective systems for all excavations more than 20 feet (6.0 meters) deep will be designed and approved by a registered professional engineer.

- **Protective System Selection.** The competent person will select the method of

protection that is most suitable for the particular excavation site, taking into consideration soil type and surrounding structures. See the ***Soil Classification*** subsection of this Plan for more information.

- **Types of protective systems.** Excavations in which employees could potentially be exposed to cave-ins will be protected by:
  - Sloping or benching the sides of the excavation; *or*
  - Supporting or shoring the sides of the excavation; *or*
  - Placing a shield between the side of the excavation and the work area.

- **Exempt Excavations.** The following excavations do not require protective systems:
  - Excavations made entirely in stable rock; or
  - Excavations are less than five feet (1.52 meters) deep and examination of the ground by a competent person provides no indication of a potential cave-in.

A fixed means to safely exit exempt excavations will be provided for workers.

VIII. SLOPING AND BENCHING SYSTEMS

The competent person or supervisor will select and construct slopes and configurations of sloping and benching systems from one of four options.

Sloping

- Option 1
  Slope the walls of the excavation at an angle so that soil does not roll into the excavation. The degree of the sloping angle needed depends on the stability of the soil at the site. The maximum allowable slopes for excavations less than 20 feet deep based on soil type and angle to the horizontal are as follows:

Soil Type	Height/Depth Ratio	Slope Angle
B	1:1 or less	45
C	11/2:1	34

Examples:
In Type B soil, a ten-foot deep trench must be sloped to a 45-degree angle. The total distance across such a trench would be 20 feet plus the width of the trench. In Type C soil, the ten-foot deep trench would be sloped at a 34-degree angle. The total width of the trench would be 15 feet in both directions, for a total of 30 feet across plus the width of the trench. Sloping will be greater if the areas near the excavation are subject to heavy loads (e.g., soil piles and vehicles).

Excavation in an Unclassified Soil:
If the soil is not classified, the excavation must be sloped according to the requirements for Type C soil.

- Option 2
  Determine the maximum slope based on site-specific variables. Consult the attached App A Soil Classification and App B Sloping and Benching of the regulations about procedures for Option 2.

- Option 3
  Use tabulated data, such as tables and charts approved by a registered professional engineer to determine the slope. Use tabulated data, and to design the excavation. This data must be in writing and include sufficient explanatory information to enable the user to make a selection, including the criteria for determining the selection and limits of the data. A copy of the information will be kept at the worksite during construction of the protective system.

- Option 4
  Use a registered professional engineer to design the sloping or benching system based on professional judgment.

Benching Systems

- Benching is not permitted in Type C soil.
- Benching may be one of two types:
  - Single level or step not exceeding 4 ft high; or
  - Multiple levels or steps, each not exceeding 4 ft high.
- Benching may be used in conjunction with simple sloping, but must be below the maximum allowable slope for that soil type. For example, a ten-foot-deep trench in Type B soil must be benched back ten feet in each direction with the maximum 45 degree angle.

Worker Safeguards

- Workers must not work on the faces of sloped or benched excavations at levels above other employees except when employees at the lower levels are adequately protected from the hazard of falling, rolling, or sliding material or equipment.

IX. SHORING AND SHIELDING SYSTEMS

- Option 1
  Design the shoring system using the soil classification (see attached App A), timber shoring (see App C), and aluminum shoring (see App D) of the OSHA excavation rule or applicable state regulations. Designs for timber shoring in trenches will be determined according to the conditions and requirements of Appendices A and C of the excavation rule. Designs for aluminum hydraulic shoring must be according to the manufacturer's tabulated data, but if such data cannot be used, designs must follow the requirements of Appendix D of the rule. The system must be approved by a registered professional engineer.

- Option 2
  Design using the system manufacturer's tabulated data. Design of support systems, shield systems, or other protective systems that are drawn from manufacturer's tabulated data shall be in accordance with all specifications, recommendations, and limitations issued or made by the manufacturer, and the data will be in written form and kept at the jobsite during construction of the protective system. The system must be approved by a registered professional engineer.

- Option 3
  Design using other tabulated data. Designs of protective systems will be selected from, and be in accordance with, tabulated data, such as tables and charts approved by a registered professional engineer. This data must be in writing and must include sufficient explanatory information to enable the user to make a selection, including the criteria for determining the selection and limits of the data. A copy of the information will be kept at the worksite during construction of the protective system. Upon completion of the system, the data may be stored away from the jobsite but must be made available to regulatory personnel on request.

- Option 4
  Use a registered professional engineer to design the shoring and shield protective systems. Designs must be in the form of a written plan kept at the jobsite during construction of the protective system.

Shoring

Shoring is used when the location or depth of the trench makes sloping back to the maximum allowable slope impractical. Shoring will be used for unstable soil or depths greater than five feet (1.5 meters) unless benching, sloping, or other acceptable plan is accepted by the competent person.

Installation and Removal of Shoring or Support Systems

Installation of a shoring or support system shall be closely coordinated with the excavation of trenches. All shoring will be installed from the top down and removed from the bottom up.

- Installation procedures. Members of shoring or support systems will be securely connected together to prevent sliding, falling, kick-outs, or other predictable failure.

- Support systems will be installed and removed in a manner that protects employees from cave-ins, structural collapses, or from being struck by members of the support system. Individual members of support systems will not be subjected to loads exceeding those that those members were designed to withstand.

- Removal procedures. Before temporary removal of individual members begins, additional precautions will be taken to ensure the safety of employees, such as

installing other structural members to carry the loads imposed on the support system. Removal will begin at, and progress from, the bottom of the excavation. Members will be released slowly so as to note any indication of possible failure of the remaining members of the structure or possible cave-in of the sides of the excavation.

- Backfilling procedures. Backfilling will progress together with the removal of support systems from excavations. Excavation of material to a level no greater than two feet (0.6 meters) below the bottom of the members of a support system will be permitted, but only if the system is designed to resist the forces calculated for the full depth of the trench and there are no indications while the trench is open of a possible loss of soil from behind or below the bottom of the support system.

Shields

A trench shield may be used as long as the protection it provides is equal to or greater than the protection that would be provided by the appropriate shoring system. The competent person or supervisor must follow manufacturer's instructions for premade boxes and shields once a design has been chosen. Shields may be used in conjunction with sloping or benching.

- Load requirements: Shield systems will not be subjected to loads exceeding those that the system was designed to withstand.

- Installation requirements: Shields will be installed in a manner to restrict lateral or other hazardous movement of the shield in the event of the application of sudden lateral loads.

- Worker protections: Workers will be protected from the hazard of cave-ins when entering or exiting the areas protected by shields. Workers will not be allowed in shields when shields are being installed, removed, or moved vertically.

- Excavations below the depth of the shield: Excavations of earth material to a level not greater than two feet (0.6 meters) below the bottom of a shield will be permitted, but only if the shield is designed to resist the forces calculated for the full depth of the trench and there are no indications while the trench is open of a possible loss of soil from behind or below the bottom of the shield.

X. PROTECTIVE SYSTEM MATERIALS AND EQUIPMENT

- Maintenance of Materials and Equipment
  Materials and equipment used for protective systems will be free from damage or defects that might impair their proper function. Manufactured materials and equipment used for protective systems will be used and maintained in a manner that is consistent with the recommendations of the manufacturer and in a manner that will prevent employee exposure to hazards.

- Damaged Materials and Equipment
  When material or equipment that is used for protective systems is damaged, a competent person will examine the material or equipment and evaluate its suitability for continued use. If the competent person cannot ensure that the material or equipment is able to support the intended loads or is otherwise suitable for safe use, such material or equipment will be removed from service and will be evaluated and approved by a registered professional engineer before being returned to service.

- Emergency Rescue Operations
  In the event of any emergency situation requiring rescue from an excavation, workers will not attempt to enter an unprotected excavation or trench to perform rescue. Local emergency services will be notified using the standard reporting system. Call 911, your Supervisor and the Safety Director. Rescue operations that can be performed safely from outside the excavation, such as hoisting a harnessed victim, will be carried out. Other personnel in the excavation will exit immediately and may provide assistance only when their own safety is ensured.

XI. RECORDKEEPING

The competent person or supervisor will ensure that the following records and documents are kept for each excavation or trench project in a place accessible for inspection by authorized personnel and regulatory agency personnel:

- The credentials of the competent person(s)
- Soil classification methodology and results of tests
- Methodology and background information used to determine which protective systems are required and the type of systems used
- Records of the employee training program, including dates of training and attendee lists
- Safety program enforcement activities
- Worksite inspection reports or logs
- The aspects of the protective systems that have been designed or approved by a registered professional engineer, including the name of such individual or, if a firm, the firm's name, the name of the engineer of record that approved the work for the firm, and the registration number
- Where applicable, evidence that the registered professional engineer of record is in fact working within a discipline applicable to the excavation work

HPS MECHANICAL
EXCAVATION AND TRENCHING PROGRAM
EXCAVATION/TRENCHING DAILY INSPECTION LOG

HPS MECHANICAL INC.

Project: _____ Date of Inspection: _____

Weather: _____

Soil Type: _____

Depth: _____ Length: _____ Width: _____

Protective System(s): _____

Yes	No	n/a	**Excavation/Trench Safety Procedures**	Deficiencies/Corrections
			Safe access provided and for workers to enter.	
			Competent person has authority to remove workers from the excavation/trench immediately.	
			Surface encumbrances supported or removed.	
			A means of exit is provided within 25 ft of each person in the excavation/trench.	
			Workers protected from loose rock or soil.	
			Classified as permit-required confined space.	
			If a permit-required confined space, reviewed the *Confined Space Entry Permit*.	
			Surrounding area has been properly protected and barricaded.	
			Hard hats worn by all workers.	
			Spoils, materials, and equipment set back a minimum of 2 ft from edge of excavation.	
			Barriers provided at all remote excavations, wells, pits, shafts, etc.	
			Guardrails on walkways and bridges over excavations 6 ft deep or more.	
			Warning vests or other highly visible PPE provided and worn by all workers exposed to vehicular traffic.	
			Workers prohibited from working or walking under suspended loads.	
			Corrective measures taken to eliminate existing or anticipated hazards identified in previous inspections, accident investigations, hazard analysis, or enforcement actions.	
			Warning system established and used when mobile equipment is operating near edge of excavation.	
			Workers received daily briefing on special	

			requirements and hazards.	
Yes	No	n/a	**Protective System(s)**	Deficiencies/Corrections
			Inspected by competent person daily, before start of work.	
			Excavation/trench properly sloped and/or shored.	
			Shielding properly placed and in good condition.	
			Workers prohibited from working on faces of sloped or benched excavations above other workers.	
			Foundations, structures, and appurtenances supported or underpinned.	
			Shoring and/or shielding complies with the manufacturer's instructions or engineering designs.	
			Checked for evidence of failure (e.g., soil distress, structural member damage, soil fissures).	
Yes	No	n/a	**Utilities**	Deficiencies/Corrections
			Utility companies contacted and/or utilities located.	
			Exact location of utilities marked when near excavation.	
			Underground installations protected, supported, or removed when excavation is open.	
Yes	No	n/a	**Wet Conditions**	Deficiencies/Corrections
			Precautions taken to protect workers from accumulation of water.	
			Water removal equipment monitored by competent person.	
			Surface water controlled or diverted.	

HPS MECHANICAL
EXCAVATION AND TRENCHING PROGRAM
ANNUAL PERMIT

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH

No: **2015-906118**

ANNUAL PERMIT

Permit Issued To
(Insert Contractor/Project Administrator's Name, Address and Telephone No.)

HPS Mechanical Inc
Attn: Safety Mgr or Doug De Groot
3100 E Belle Terrace
Bakersfield CA 93307-6830

(661) 397-2121

No.
Date 9/7/2015
Region 4
District 7
Tel. (661) 588-6400

Type of Permit T1-ANNUAL TRENCH/EXCAVATION

Pursuant to Labor Code Sections 6500 and 6502, this Permit is issued to the above-named employer for the projects described below.

State Contractor's License Number	**793014**	Permit Valid through	September 06, 2016	
Description of Project	Location Address	City and County	Anticipated Dates	
			Starting	Completion
Various Conditions of Issuance:	Statewide		Sep 7, 2015	Sep 06, 2016

This Permit is issued upon the following conditions:

1. That the work is performed by the same employer. If this is an annual permit the appropriate District Office shall be notified, in writing, of dates and location of job site prior to commencement.

2. The employer will comply with all occupational safety and health standards or orders applicable to the above projects, and any other lawful orders of the Division.

3. That if any unforeseen condition causes deviation from the plans or statements contained in the Permit Application Form the employer will notify the Division immediately.

4. Any variation from the specification and assertions of the Permit Application Form or violation of safety orders may be cause to revoke the permit.

5. This permit shall be posted at or near each place of employment as provided in 8 CCR 341.4

Received From	Received By	
Doug De Groot	Permit Unit	
☐ Cash ☒ Check 152095	Amount $100.00	Date 9/7/15

Investigated by _____ Safety Engineer Date

Approved by Robert L Lowe 9/7/2015
District Manager/Permit Unit Date

Attachment B

ISOLATION OF HAZARDOUS ENERGY PROGRAM (LOCKOUT/TAGOUT)

Revised (October 2018)

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ATTACHMENT A: ISOLATION CHECKLIST
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ATTACHMENT C: PROCEDURE INSPECTION FORM

HPS MECHANICAL

ISOLATION OF HAZARDOUS ENERGY PROGRAM (LOCKOUT/TAGOUT)

I. REGULATORY REFERENCES

- 29 CFR 1910.147
- 8 CCR Section 3314

II. SCOPE

Performing maintenance on or servicing machines and/or equipment generates unique hazards that result from the continued presence of energy. This energy, either kinetic (the force caused by the motion of an object) or potential (the force stored in an object that isn't moving) is always present in any powered equipment, whether the power switch is on or off. Hazardous energy includes electrical, mechanical, hydraulic pressure, pneumatic pressure, chemical sources, thermal sources, gravity, friction, and vibration. Hazards associated with these forms of energy include unexpected movement, direct contact with an unshielded energy source, and being caught in a mechanism driven by a form of energy.

This program applies to the control of hazardous energy and is intended to protect employees against injury or near miss incidents that may occur while performing maintenance, servicing or new construction activities.

This Hazardous Energy Control Program does not apply to:

- Cord and plug equipment, when the plug and cord are under the exclusive control of the person performing the work and when the hazards of unexpected energization or start-up of the equipment is controlled by unplugging the equipment.
- Operational information locks and tags.
- Hot tapping operations. Specific established hot tap procedures that comply with American Petroleum Institutes' Recommended Practice 2201, "Procedures for Welding or Hot Tapping on Equipment Containing Flammables," must be followed.
- Routine servicing and equipment checks as described below:
    - Simple equipment checks, adjustments, and other minor servicing activities, which are conducted as part of normal operations. The work being performed shall have effective hazard protection for the employee, including the use of the Job Hazard Analysis (JHA), isolation checklist, standard operating procedure, or other administrative means. The use of a caution tag by itself on an isolation valve, breaker, or switch is also an effective hazard protection for the activities outlined in this and the following section.
    - Routine servicing and equipment adjustments that are repetitive and integral to the use of the equipment for production. Such activities include lubricating, making minor adjustments, tool changes, greasing bearings,

tightening packing glands, changing filters, cleaning probes and calibrating monitors.

The Company's Isolation of Hazardous Energy Program shall be followed by all affected employees, including contract personnel. Employees working on the same equipment or system as contract personnel will ensure the isolation procedures protect all affected personnel.

III. APPLICATION/PURPOSE

This program shall be used to control various forms of hazardous energy prior to and during isolation and maintenance/servicing or new construction job tasks, as all electrical systems and equipment are to be treated as energized until tested or otherwise proven to be de-energized. The nine-step lockout/tagout sequence is the guiding process for all hazardous energy control; either lockout, tagout or both are allowed, depending on the degree of hazardous energy control or operational control required.

Site-specific isolation procedures will be developed on a case-by-case basis using the JHA, isolation checklist, or other process. Requirements for working on energized electrical systems (standard operating procedures) shall be developed, if said systems cannot be de-energized.

Note that only a qualified electrician is permitted to perform an electrical disconnection or isolation.

Tasks, Machinery and Equipment that Require Lockout/Tagout to Control Hazardous Energy

- Energized Machinery or Equipment: Any and all systems or equipment (e.g. boiler electrical panel, electrical substation, mobile equipment, generator, cooling system conduit, hydraulic or pneumatic system, fluids and gases, stored chemical solutions or solids, or mechanical equipment) located on a jobsite

Tasks that Require Lockout/Tagout

- Installation, repair, maintenance or other service tasks (e.g., installing pumps and gauges, clearing a jam or restriction, repairing defective parts, cleaning, etc.).

IV. DEFINITIONS

Affected Employees
Personnel who operate equipment that is to be locked/tagged, or who may have to work in an area where maintenance is being performed (operators, construction, electrical, etc).

Authorized Person
A qualified person who locks-out or tags-out specific machines or equipment in order to perform new construction, maintenance, or non-routine servicing tasks. A qualified person is trained in the recognition of energy hazards and the mitigation of said hazards for new construction, maintenance, or the specific equipment to be isolated.

Authorized personnel may be Company or contractor employees.

Energy-Isolating Device
A mechanical device that physically prevents the transmission or release of energy, including, but not limited to, the following: a manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors, and, in addition, no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches and other control circuit-type devices are not energy-isolating devices.

Isolation
The process that segregates the hazardous energy or toxic substance from the recipient (i.e., employees or contract personnel). Complete isolation achieves a ZERO ENERGY STATE, which is the maximum protection against unexpected movement or activation of equipment or machinery, release of stored pressure, or flow of liquid or gas when maintenance or repair is performed.

Lock
A padlock that is used to lock hazardous energy-isolating devices. These locks may be used for simple (individual) lockout/tagout or for group lockout/tagout. The locks may be keyed alike or keyed individually.

Lockout
The placement of a lockout device such as a hasp and lock to ensure that the energy-isolating device and the equipment being controlled cannot be operated until the lockout device is removed. All lockout devices must be applied and removed in accordance with the nine-step lockout/tagout sequence.

Lockout Hasp
A device that allows multiple locks to be attached to the same energy-isolating device.

Other Employees
Personnel (engineers, draftsmen, management, etc.) who occasionally need to enter any area where lockout/tagout procedures are used.

Qualified Electrical Workers.
A worker who performs work on energized conductors or equipment connected to energized high-voltage systems.

Tagout
The placement of a tag on an energy-isolating device to indicate that the energy-isolating device and the equipment being controlled may not be operated until the

tagout device is removed. Tags must be non-reusable, self-locking, non-releasable and have a minimum removable strength of no less than 50 pounds.

V. RESPONSIBILITIES

Supervisor

The supervisor has the responsibility and authority to implement the Isolation of Hazardous Energy Program, which includes the use of the JHA and isolation checklist to both identify energy hazards and ensure all mitigations are put in place.

Qualified contractors may perform hazardous energy control without direct oversight. In some instances (generally routine or repetitive work processes), the supervisor or designee may grant permission to those selected contractors after the contractor's hazardous energy control program is reviewed.

Employee

Company personnel will direct the shutdown and the isolation of equipment except as discussed below.

HPS Mechanical employees shall act as the issuer of the isolation checklist with the overall job-associated lockout/tagout control responsibility and are responsible for coordinating affected work groups and ensuring continuity of protection for all lockout/tagout.

Prior to working on equipment, authorized persons must notify the responsible supervisor with the job-associated lockout/tagout responsibility. This may be coordinated using the isolation checklist, JHA, work order system, or other administrative means.

Contractors

Contractors qualified to perform hazardous energy control as authorized employees may initiate and participate in lockout/tagout, and must use isolation devices provided by their employer. Company personnel will assist in identifying energy sources and/or isolating new construction.

Contractors may perform lockout/tagout/blockout without direct oversight from Company personnel. Examples include qualified contract electricians and qualified contract maintenance supervisors.

Qualified Electrical Worker

Qualified electrical workers shall perform work on energized conductors or equipment connected to energized high-voltage systems. No such employee shall be assigned to work alone except for replacing fuses, operating switches or other operations that do not require the employee to contact energized high-voltage conductors or energized parts of equipment, clearing "trouble" message or in emergencies involving hazard to life or property. Employees in training, who are qualified by experience and training, shall be permitted to work on energized conductors or equipment connected to high-voltage systems while under the supervision or instruction of a qualified electrical worker.

VI. ISOLATION REQUIREMENTS

Nine-step lockout/tagout sequence:

1. Identify all energy sources;
2. Communicate lockout/tagout plans to all affected employees;
3. Trace all energy sources to shutoff location;
4. Shutoff, disengage and lockout/tagout system;
5. Release or neutralize residual energy;
6. **VERIFY** no energy remains - **ZERO ENERGY STATE**;
7. Perform maintenance operations;
8. Communicate plans to start-up/energize equipment to all affected employees; and
9. Remove lock and restore equipment to service as needed.

All affected employees working in the area where the Isolation of Hazardous Energy Program procedures are being utilized must be notified prior to shutting down the equipment, performing energy isolation, and applying lockout/tagout devices. It is the responsibility of the authorized person performing isolation and applying lockout/tagout devices to make this notification.

After the work has been completed, all affected personnel working in the area where the Isolation of Hazardous Energy Program procedures are being utilized will be informed to stay clear of the equipment prior to re-energization of the equipment. An inspection of the work area will be performed to ensure that all tools and equipment have been removed/secured prior to startup. This inspection and notification is the responsibility of the authorized person that performed the energy isolation.

Whenever lockout or tagout devices must be temporarily removed from the energy-isolating device and the machine or equipment is energized to test or jog/position the system, equipment or component thereof, the following sequence of actions will be followed:

1. Notify the HPS Mechanical employee(s) of impending tests or start-up of equipment;
2. Clear the machine or equipment of tools and materials;
3. Remove employees from the machine or equipment area;
4. Remove the lockout or tagout devices;
5. Energize and proceed with testing or positioning; and
6. De-energize all systems and reapply energy control measures to continue the servicing and/or maintenance.

The isolation checklist (Attachment A) or an equivalent form will be used to develop equipment- or process-specific isolation procedures where specific written procedures are not in place.

VII. LOCKOUT/TAGOUT PROCEDURES

Tags

Tags shall be attached to hazardous energy-isolating devices, including equipment controls, electric start/stop switches, misaligned or blinded pipe, unblinded valves, and other devices used for control of hazardous energy. Tags are red, black and white, and contain required information, such as a “Danger: Do Not Operate” message.

Red, black and white lockout/tagout tags and/or locks and tags shall be attached to all energy-isolating devices and to equipment controls such as electric start-up switches, unblinded valves, or other devices that, if left uncontrolled, could introduce hazardous energy to the work environment.

The hazardous energy control lockout/tagout tags serve as a visual warning that the equipment is out of service and any change or attempt to operate the equipment could endanger life or property.

Each hazardous energy control colored lockout/tagout tag shall be filled out in its entirety. This includes the date, equipment identification, reason for tagout, and the name of the person installing the tag.

Simple (Individual) Lockout

When only one authorized employee in a given craft will be performing hazardous energy control for work on a piece of equipment, he/she will place his/her tag or lock and tag on each energy isolation point.

Type of Lock/Tag

- Locks with individual names and individual corresponding keys for each authorized employee.

Lock/Tag Identifier

- Each set of locks will be provided to each authorized employee using a single-keyed system for each set of locks with the employee's name on each lock.

Acquisition Procedure

- Upon hire or reassignment, each authorized employee will be assigned specific lockout/tagout devices and a set of keys. A separate set of employee-specific keys will be maintained by the employee's department supervisor.

Group Lockout

Group Lockout – Option 1: When more than one person is working on the same process or equipment, the following process will be utilized:

1. A principal authorized person shall place a hazardous energy control lock and tag on each energy-isolating point for the other authorized employees.
2. The principal authorized person shall then place his/her keys into a lock box and accept personal responsibility for persons working on that equipment during that shift.
3. Each authorized person will document, by using the isolation checklist, when he/she is under protection of the group lockout, and will place his/her personal hazardous energy control lock and tag into the lock box.
4. Only the principal authorized person may remove the locks and tags after conferring with the supervisor, who has the overall job-associated lockout/tagout control responsibility, or his/her designee.

Group Lockout – Option 2: When more than one person is working on the same process or equipment, each individual must apply his/her own set of hazardous energy control locks and tags on each energy-isolating device.

Replacement, Removal and Transfer of Lockout/Tagout Devices

The transfer of lockout/tagout devices involving hazardous energy control for a given process or equipment will be facilitated using the JHA and the isolation checklist procedure, provided that a tailgate safety meeting on the isolation methods in place is conducted and documented.

In the event the formal transfer of hazardous energy control lockout/tagout devices cannot be completed:

1. Contact the area/facility supervisor or designee;
2. Obtain verbal verification that the person who applied the lockout/tagout device is not present at the facility;
3. Make a reasonable effort during business hours to contact the person who applied the lock and/or tag to inform him/her that his/her hazardous energy control locks and/or tags must be removed and determine if there is any additional information needed;
4. Obtain final approval from the supervisor; and
5. Inform all affected personnel of the hazardous energy control lock/tag removal using verbal or written communication.

In an emergency, locks/tags placed by an electrician may only be removed by a designated qualified person (one who has electrical experience and has been trained in the skills and techniques of an electrician) under the direction of the appropriate supervisor.

Materials Selection

Hazardous energy control tagout device attachments shall be attachable by hand, self-locking, non-releasable, and non-reusable, with a minimum breaking strength of 50 pounds. One-piece nylon cable ties are commonly used for this purpose. It is acceptable to attach the tag by threading the lock through the eye of the tag.

Other hardware devices may be used as necessary to secure energy and maintain energy controls in the off, open, or safe position. Examples include chains, blinds, valve covers, ball valve lockout devices, clamps, wedges, blocks, power cord locks, signs, and any specially designed appurtenances used to achieve lockout/blockout.

VIII. PERIODIC INSPECTIONS

Inspections of this program and associated procedures are to be performed at least annually, the purpose of which is to evaluate the continued effectiveness of the program/procedures and to determine if revisions are necessary.

- The periodic inspections are to be performed by an authorized employee or person other than the one(s) utilizing the hazardous energy control procedures being inspected.
- The inspector and authorized person(s) shall review their responsibilities under the hazardous energy control procedure being inspected.

- The documented inspection process shall consist of a review of the Isolation of Hazardous Energy Program and associated procedures to be updated/modified based on operational conditions. Also, machines or equipment on which hazardous energy control procedures are utilized shall be evaluated to ensure existing lockout/tagout procedures are adequate.

IX. TRAINING/RECORDS

Authorized employees shall be trained on the hazardous energy control information contained in this Isolation of Hazardous Energy Program.

Training records and annual inspection records are maintained in the onsite safety files.

ATTACHMENT A

Isolation of Hazardous Energy Checklist

Number: _____ PAGE _____ OF_____

Note: Ensure list is correct and all sources of energy into and out of equipment are isolated
P & ID or Drawing may accompany this list if available

PURPOSE: **OPERATOR:**
DATE:

EQUIPMENT IDENTIFICATION:	**LOCATION:**

NO.		**SATISFIED Y/N**

VALVE POSITION CHANGE		**CURRENT POSITION**	**VALVE SIZE**	**VALVE NORMAL OPEN**	**VALVE NORMAL CLOSED**	**VALVE LOCKED / TAGGED**	**VALVE BACK TO NORM PS**	**VALVE LOCK / TAG REMOVED**
NO.	**VALVE LOCATION**							

BLINDING / MISALIGNMENT		**SAFE TO INSTALL BLINDS. INITIAL**	**BLINDS / TAG / LOCKS INSTALLED. INITIAL / DATE**		**SAFE TO REMOVE BLINDS. INITIAL**	**BLINDS / TAG / LOCKS REMOVED. INITIAL / DATE**
NO.	**LOCATION OF BLIND / MISALIGNMENT**					

MOTOR / ELECTRICAL CONTROLS		**LOCK / TAG INSTALLED INITIAL**	**ENERGY DISSIPATED**	
NO.	**LOCATION OF ISOLATION DEVICES**		**YES**	**NO**

HPS MECHANICAL

ISOLATION OF HAZARDOUS ENERGY PROGRAM (LOCKOUT/TAGOUT)

	LOCKS REMOVED	
NO.	**PRECONDITION TO ACTIVATE EQUIPMENT**	**SATISFIED**

ATTACHMENT B

Periodic Inspection Record

Date of Review	Certified by	Sections Updated

ATTACHMENT C

ISOLATION OF HAZARDOUS ENERGY PROGRAM
LOCKOUT/TAGOUT
Procedure Inspection Form

Facility: _____ Date: _____

Lockout/tagout procedure inspected (identify machine/equipment/process): _____

_____

_____

Authorized employee(s) audited: _____

_____

_____

Ensure the following steps are taken to lockout/tagout the machine/equipment (explain any deficiencies):

- ☐ Shutdown preparation (employee familiar w/ procedure, equipment, energy sources, etc.): _____
- ☐ Inform all affected employees: _____
- ☐ Turn off machine/equipment: _____
- ☐ Locate/isolate energy-control device(s): _____
- ☐ Apply lockout and/or tagout device(s): _____
- ☐ Potential stored/residual energy relieved/disconnected/restrained/rendered safe: _____

  _____
- ☐ Test/verify control(s) disabled: _____
- ☐ Return control(s) to off/safe position: _____
- ☐ Begin service/maintenance: _____

HPS MECHANICAL

ISOLATION OF HAZARDOUS ENERGY PROGRAM (LOCKOUT/TAGOUT)

Ensure the following steps are taken to restore energy to the machine/equipment (explain any deficiencies):

- ☐ Area/equipment cleared of workers: _____
- ☐ Area cleared of tools/materials: _____
- ☐ Machine guards reinstalled: _____
- ☐ Lockout/tagout devices removed: _____
- ☐ Restore power: _____
- ☐ Conduct "trial run": _____
- ☐ Notify affected employees lockout/tagout completed: _____
- ☐ Ensure each authorized employee affixes/removes personal lock(s): _____

_____

- ☐ Ensure each lock and/or tag used properly identifies the worker using it: _____

_____

- ☐ Ensure all locks and/or tags in use are standardized in either size/shape/color: _____

_____

Corrective action(s) taken (if applicable): _____

_____

_____

_____

Name of inspector: _____

_____

_____

FIRE PROTECTION PROGRAM

(February 2019)

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HPS MECHANICAL

FIRE PROTECTION PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 1920 - 1922
- 8 CCR 6151

II. POLICY

HPS Mechanical employees shall be trained to fight only incipient stage fires. This training will be provided to employees required to use fire extinguishing equipment, with annual retraining as needed.

III. FIRE FIGHTING EQUIPMENT

- Work locations shall be responsible for the development of a fire protection program, as applicable
- Access to all firefighting equipment and egress shall be mandatory at all times.
- Operational capability of firefighting equipment and control of egress shall be managed at all times.
- All firefighting equipment shall be inspected and maintained at least monthly. Defective or discharged equipment shall be immediately replaced and tagged "out of service."
- Fire extinguishers are subject to annual maintenance.
- During welding, cutting or grinding operations, a fire extinguisher with at least a 10B rating shall be in close proximity.
- Fire extinguishers used to protect areas involving welding, cutting, or grinding shall be inspected daily prior to the start of operation.
- Fire extinguishers will be used unless a temporary or permanent water supply of sufficient volume, duration and pressure to properly operate the firefighting equipment is available.
- A portable fire extinguisher, rated at not less than 2-A, shall be provided for each 3,000 square feet of the protected area. Travel distance from any point of the protected area to the nearest fire extinguisher shall not exceed 75 feet.
- One or more fire extinguishers rated at not less than 2-A shall be provided on each floor. As a minimum, fire extinguishers shall be located next to stairways in multi-story buildings.
- Where more than five (5) gallons of flammable or combustible liquids or five (5) pounds of flammable gas are being used on the job site, a fire extinguisher rated at not less than 20-B shall be provided at a distance of between 25 feet and 75 feet.
- Portable fire extinguishers shall be inspected and maintained in accordance with NFPA codes or the local authority having jurisdiction.

- Proper equipment must be put into place as soon as a fire hazard becomes apparent or when an operation is planned with a known risk associated.

IV. FIRE PREVENTION

- All employees shall be familiar with the use of fire extinguishers.
- Smoking shall be prohibited in the vicinity of operations that constitute a fire hazard and shall be conspicuously posted: "NO SMOKING OR OPEN FLAME."
- All signs that warn against smoking and open flames (where fire or explosion hazards exist) shall be observed.
- Areas where cutting and welding are performed shall be kept clean, and any accumulation of trash, rags, etc. shall be removed. Consideration should be given to the distance that sparks or slag can travel.
- When practical, objects to be welded, cut or heated should be moved to a safe location. If this is not feasible, and if all the fire hazards cannot be removed, appropriate steps shall be taken to confine the heat, sparks, slag, etc.
- When welding, cutting or grinding operations are to be performed above gratings, decks, or near floor or wall openings, a non-combustible covering shall be placed over the deck or openings. Care shall be taken to direct the stream of slag or cutting away from any opening in the floor or wall. Large pieces of hot slag shall not remain on surfaces long enough to cause combustion or damage.
- Sparks and slag must be contained in congested work areas. When this is impractical, the danger area shall be surrounded with barrier warning tape.
- Equipment that has an open flame must always be attended by a knowledgeable person.
- Flammable liquids are to be stored in approved safety containers (not plastic) and kept in properly managed storage areas.
- Electrical wiring or repairs are to be in accordance with Code.
- Fuel, oil, grease, and any flammable material spill shall be cleaned up immediately.
- Accumulations of trash, scrap lumber, packing and other debris are to be cleaned up regularly. Provisions shall be made for the removal and disposal of garbage and debris from the job site.
- Open fires are prohibited.

V. FLAMMABLE LIQUID STORAGE

The following shall be observed for storage vessels such as aboveground flammable liquid (gasoline, diesel) storage in skid tanks, overhead tanks, or trailer-mounted tanks

- The local authorities shall be contacted for existing ordinances covering the aboveground storage of flammable liquids.
- All fuel tanks shall be located at least twenty (20) feet from any type of building.

- Two or more fuel tanks, grouped together, having a combined capacity in excess of 2,200 gallons shall be separated by a five (5) foot clear area.
- All fuel tanks shall be vented.
- Vent pipes shall be at least as large as the filling or withdrawal connection, whichever is larger, but in no case less 1 1/4" nominal inside diameter.
- There shall be a minimum of 12 feet above the building or adjacent ground level when a vent pipe outlet is installed on top of a vent pipe that it is adjacent to buildings or highly traveled areas.
    - The vent pipe outlet shall be constructed to include a flame arrestor and be able to discharge the flammable vapors upward and horizontally away from the adjacent area.
- Vent outlets shall be located so that the flammable vapors will not be trapped by eaves or other obstructions and shall be at least five feet from building openings.
- All tanks equipped with small pump engines shall be:
    - Provided with a flame/spark shield between the tank and the engine that is constructed of a non-combustible material.
    - Inspected regularly to ensure the muffler and spark plug wire are not defective and that there are no fuel leaks. If there are any defects, they shall be repaired or replaced as soon as possible.
- All fuel dispensing hoses shall be provided with a bonding wire that is permanently attached to the fuel tank and hose (some hoses have the wire bonded internally within the hose and to its end connections).

VI. HOT WORK

The following shall be observed when performing hot work:

- Employees with fire watch duties shall be provided proper training.
- Welders/cutters shall be provided with hot work training.
- Combustible material must be moved out of the area where hot work is being performed.
- Guards and shields are to be used if hot work activities cannot be separated from combustible material.
- Hot work activities must not be performed if it is unsafe to do so.
- A fire watch is required during hot work activities and shall be maintained for at least 30 minutes after hot work activities are completed.
- Fire extinguishers must be readily available while hot work is being performed.
- A hot work permit must be completed before performing hot work.
- Proper ventilation and/or respiratory equipment shall be used when hazardous fumes/gases or dust may be present.

- All defective hot work equipment must be removed from service immediately.

BLOODBORNE PATHOGENS

(Revised November 2018)

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HPS MECHANICAL

BLOODBORNE PATHOGEN PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 3203
- 8 CCR 3204
- 8 CCR 5193
- 8 CCR 5158
- California Health and Safety Code Section 118275

II. POLICY

The Company policy is no employee is to handle bloodborne pathogens outside of the scope of a trained and current first aid responder as defined in this procedure under sub-section V Exposure Category Group III. Spills or clean-up operations of Bloodborne Pathogens and/or Other Potentially Infectious Materials (OPIM) are to be conducted by a contracted qualified third party. All personnel shall isolate and barrier the area and deny entry of Bloodborne Pathogens and/or OPIM exposure zones until a qualified third party can conduct clean-up operations.

III. PURPOSE

The purpose of HPS Mechanical's Blood Borne Program is to clarify HPS Mechanical employee's role and expectations if they witness, observe or come in contact with Bloodborne Pathogens or OPIM during their assigned work activity.

IV. DEFINITIONS

Blood
Human blood, human blood components, and products made from human blood.

Bloodborne Pathogens
Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), hepatitis C virus (HCV) and human immunodeficiency virus (HIV).

Chief
The Chief of the Division of Occupational Safety and Health (DOSH) of the California Department of Industrial Relations or designated representative.

Contaminated
The presence or the reasonably anticipated presence of blood or other potentially infectious materials on a surface or in or on an item.

Contaminated Laundry
Laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

Decontamination
The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal. Decontamination includes procedures regulated by California Health and Safety Code Section 118275.

Engineering Controls
Controls (e.g., sharps disposal containers, needleless systems, and sharps with engineered sharps injury protection) that isolate or remove the bloodborne pathogens hazard from the workplace.

"Engineered Sharps Injury Protection"

- A physical attribute built into a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, which effectively reduces the risk of an exposure incident by a mechanism such as barrier creation, blunting, encapsulation, withdrawal or other effective mechanisms; or
- A physical attribute built into any other type of needle device, or into a non-needle sharp, which effectively reduces the risk of an exposure incident.

Exposure Incident
A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Handwashing Facilities
A facility providing an adequate supply of water, soap, and single use towels or hot air drying machines.

HBV
Hepatitis B virus.

HCV
Hepatitis C virus.

HIV
Human immunodeficiency virus.

Licensed Healthcare Professional
A person whose licensed scope of practice includes an activity which this section requires to be performed by a licensed healthcare professional.

Needle or Needle Device
A needle of any type, including, but not limited to, solid and hollow-bore needles.

NIOSH
The Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designated representative.

Occupational Exposure
Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

OPIM
Other Potentially Infectious Materials, which include:

- The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any other body fluid that is visibly contaminated with blood such as saliva or vomitus, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids such as emergency response;
- Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and
- Any of the following, if known or reasonably likely to contain or be infected with HIV, HBV, or HCV:
    - Cell, tissue, or organ cultures from humans or experimental animals;
    - Blood, organs, or other tissues from experimental animals; or
    - Culture medium or other solutions.

Parenteral Contact
Piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.

Personal Protective Equipment
Specialized clothing or equipment worn or used by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Regulated Waste
Waste that is any of the following:

- Liquid or semi-liquid blood or OPIM;
- Contaminated items that:
    - Contain liquid or semi-liquid blood, or are caked with dried blood or OPIM; and
    - Are capable of releasing these materials when handled or compressed.
- Contaminated sharps.
- Pathological and microbiological wastes containing blood or OPIM.
- Regulated Waste includes "medical waste" regulated by Health and Safety Code Sections 117600 through 118360.

Sharp
Any object used or encountered in the industries covered by subsection (a) that can be reasonably anticipated to penetrate the skin or any other part of the body, and to result in an exposure incident, including, but not limited to, needle devices, scalpels, lancets, broken glass, broken capillary tubes, exposed ends of dental wires and dental knives, drills and burs.

Sharps Injury
Any injury caused by a sharp, including, but not limited to, cuts, abrasions, or needlesticks.

Source Individual
Any individual, living or dead, whose blood or OPIM may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinical patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

Universal Precautions
An approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, HCV, and other bloodborne pathogens.

Work Practice Controls
Controls that reduce the likelihood of exposure by defining the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique and use of patient-handling techniques).

V. EXPOSURE DETERMINATION

The Department of Occupational Safety and Health (DOSH – Cal-Osha) requires employers to determine which employees may incur occupational exposure to blood or OPIM. The exposure determination is made without regard to the use of personal protective equipment (i.e. employees are considered to have potential exposure even if they normally would wear personal protective equipment (PPE) such as gloves which would prevent exposure). This exposure determination is required to list all job classifications in which employees may be expected to incur an occupational exposure, regardless of frequency.

Exposure Categories

- Group I: A list of all job classifications in which all employees in those job classifications have occupational exposure.
    - The Company does not have any employees under Exposure Category Group I.
- Group II: A list of job classifications in which some employees have occupational exposure.
    - The Company does not have any employees under Exposure Category Group II.
- Group III: Designated first aid providers who provide first aid only as a collateral assignment, not as a primary assignment, generally responding as “First Aid Treatment” to workplace incidents.
    - Bloodborne Pathogen Training requirements and exposure control requirements apply to this group, but not employer-paid Hepatitis B vaccination, unless the employee has sustained an exposure incident.
    - Designated first aid providers who render assistance on a regular basis, for example, at a first aid station, clinic, dispensary, or other location where injured employees routinely go for such assistance, and emergency or public safety personnel who are expected to render first aid in the course of their work are assigned to Group I.
    - Positions that fall under Group III are listed the table on the following page.

Group III Employees	
Position/Employees	**Activity with Potential Exposure**
Field construction sites where employees are trained to render first aid to meet compliance with the Construction Safety Orders - §1512. Emergency Medical Services	First aid responder — collateral duty
Designated employees who are trained to render first aid to meet compliance with the General Industry Safety Orders §3400. Medical Services and First Aid.	First aid responder — collateral duty

VI. COMPLIANCE METHODS

Universal Precautions

All employees shall observe universal precautions in order to minimize exposure to infected blood or OPIM.

- All blood and OPIM will be considered infectious, regardless of the perceived status of the source individual.
- All personnel shall isolate and barrier the area and deny entry to Bloodborne Pathogens and/or OPIM exposure zones until a qualified third party can conduct clean-up operations.
- Employees shall follow required procedures regardless of their opinion of the likelihood of exposure.
- When differentiation between body fluid types is difficult or impossible, all bodily fluids shall be considered potentially infectious materials.

Engineering and Work Practice Controls

- Company policy is no employee is to handle bloodborne pathogens outside of the scope of a trained and current first aid responder as defined in this procedure under Exposure Category Group III. All actions shall be within the training and scope as taught in the first aid/CPR program.
- Spills or clean-up operations of Bloodborne Pathogens and/or OPIM are to be conducted by a contracted qualified third party.
- All personnel shall isolate and barrier the area and deny entry of Bloodborne Pathogens and/or OPIM exposure zones until a qualified third party can conduct clean-up operations.

- Qualified and trained third party contractors.
- Sharp Containers in facilities as needed.
- Training of employees in the Bloodborne Pathogens Program.

VII. REGULATED WASTE

Disposable Sharps

- Contaminated disposal sharps are not to be discarded into regular trash containers. Personal use contaminated disposable sharps shall be discarded immediately to the containers that are closable, puncture resistant, leak proof and properly labeled. Containers for contaminated sharps shall be placed in Company restroom facilities.
- The containers shall be maintained upright throughout use, replaced routinely, and not allowed to be overfilled. Before moving containers of contaminated sharps from the area of use, the containers shall be closed to prevent spillage or protrusion of contents during handling, storage, and transport. Contact your hazmat contractor for disposal.
- All sharps containers must be labeled with the words “sharps waste” and/or with the international biohazard symbol and the word “BIOHAZARD.” If you have questions regarding the disposable sharps containers contact your supervisor immediately.

Other Regulated Waste

- Other bloodborne pathogen or OPIM regulated waste shall be managed by a qualified third-party contractor as part of the clean-up operations.
- Bloodborne pathogen or OPIM regulated waste shall be placed in containers that are closable, of the appropriate size to contain all contents, and constructed to prevent leakage during handling, storage, and transport.
- All bloodborne pathogen or OPIM regulated waste containers shall be closed and properly labeled prior to removal from the contaminated area. If outside contamination of the Bloodborne pathogen or OPIM regulated waste container occurs, it shall be placed in a labeled second clean container before disposal.
- Biohazard labels will be affixed to containers of regulated waste, refrigerators and freezers containing blood or OPIM, and any other containers used to store blood or OPIM.
- Disposal of all bloodborne pathogen or OPIM regulated waste shall be in accordance with applicable state and local regulations.

Labels and Signs

- Biohazard labels shall be properly affixed and are required on the following:
    - Regulated waste (when regulated waste is red-bagged, the bag must be labeled)
    - Sharps containers
    - Laundry bags of contaminated laundry,
    - Refrigerators and freezers that are used to store blood or OPIM,
    - Bags and other containers used to store, dispose of, transport, or ship blood or OPIM, contaminated equipment which is to be serviced, shipped or disposed
- The label shall include the universal biohazard symbol and the word "BIOHAZARD." In case of regulated waste, the words "BIOHAZARDOUS WASTE" may be substituted for "BIOHAZARD". The label shall be fluorescent orange or orange-red.
- Regulated waste red bags or containers must also be labeled.

VIII. NON-REGULATED WASTE

Not all items contaminated with blood or OPIM are defined as "regulated waste." Some contaminated items may become contaminated with blood or OPIM during the course of their use but are not within the scope of regulated waste and the disposal provision of 8 CCR 5193. These include minimally contaminated absorbent items, such as gauze, and Band-Aids, that will dry out and be free of dried blood in quantities that could be considered "caked." These items can be placed in plastic bags and disposed of in normal trash. Discarded sanitary napkins and other feminine hygiene products are also not considered "regulated waste." The absorbent material of which they are composed will, under most circumstances, prevent the release of liquid or semi-liquid blood or the flaking off of dried blood. These items must be discarded into waste containers that are properly lined with plastic bags.

IX. HEPATITIS B VACCINE

- The Company will make available the HBV vaccine and vaccination series to all employees who have occupational exposure and post-exposure follow-up to employees who have had an exposure incident.

- Designated first aid responders (listed as Group III on the exposure determination) who respond only as a collateral duty will be offered free

vaccination only after responding where blood and other potentially infectious materials were present. At that time, they will also receive the same post-exposure evaluation and follow-up as all other employees listed on the exposure determination.

- Employees who are designated as first aid responders as a collateral duty are listed in the exposure determination as Group III. Employees that render first aid as a "Good Samaritan" but not as a job duty are not listed in any exposure group in this plan but will be treated as if they were a part of Group III after an exposure incident.

- The Company shall ensure that all medical evaluations and procedures including the HBV vaccination series and any suspected post-exposure follow-up, including prophylaxis are:
  - Available at no cost to the employee
  - Available to the employee at a reasonable time and place
  - Performed by or under the supervision of a licensed health care professional
  - Provided according to the recommendations of the U.S. Public Health Service
  - An accredited laboratory shall conduct all laboratory tests at no cost to the employee

- If any employees are exposed to blood or OPIM while providing first aid at work, follow these directions:
  - An employee shall report the incident to his or her supervisor and to Human Resources (HR) immediately.
  - Employees will record the following information, and maintain it in a file for DOSH review:
    - Names of all first aid providers involved
    - A description of the incident
    - Date and time of incident
    - A determination if an actual exposure has occurred
  - HR will instruct an employee on how to get appropriate evaluation and post-exposure follow-up, including the HBV vaccination series, at no cost to the employee. The vaccine will be offered to the first aid providers at this time, whether an actual exposure occurred.
- Any first aid training offered to employees shall include:

- Discussion of the hazards and exposure prevention of bloodborne pathogens and OPIM
- The Company's Bloodborne Pathogens Program
- A training curriculum equal to that of the American Red Cross, American Heart Association or the Mine Safety and Health Administration

X. POST-EXPOSURE EVALUATION AND FOLLOW-UP

Following a report of an exposure incident, the employer shall make immediately available to the exposed employee a confidential medical evaluation and follow-up, including at least the following elements:

- The employer shall document the route(s) of exposure, and the circumstances under which the exposure incident occurred.

- The employer shall identify and document the source individual, unless the employer can establish that identification is infeasible or prohibited by state or local law:
  - The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV, HCV and HIV infectivity. If consent is not obtained, the employer shall establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.
  - When the source individual is already known to be infected with HBV, HCV or HIV, testing for the source individual's known HBV, HCV or HIV status need not be repeated.
  - Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

- The Company shall provide the employee for collection and testing of the employee's blood for HBV, HCV and HIV serological status:
  - The exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained.
  - If the employee consents to baseline blood collection but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident,

the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.

- Additional collection and testing shall be made available as recommended by the U.S. Public Health Service.

- The Company shall provide for post-exposure prophylaxis, when medically indicated, as recommended by the U.S. Public Health Service.

- The Company shall provide for counseling and evaluation of reported illnesses.

- Information provided to the healthcare professional:
  - The Company shall ensure that the healthcare professional responsible for the employee's HBV vaccination is provided a copy of Title 8, California Code of Regulations, §5193
  - The Company shall ensure that the healthcare professional evaluating an employee after an exposure incident is provided the following information:
    - Title 8, California Code of Regulations, §5193;
    - A description of the exposed employee's duties as they relate to the exposure incident;
    - Documentation of the route(s) of exposure and circumstances under which exposure occurred;
    - Results of the source individual's blood testing, if available; and
    - All medical records relevant to the appropriate treatment of the employee including vaccination status which are the employer's responsibility to maintain, as required by subsection Title 8, California Code of Regulations, §5193 (h)(1)(B)2.

- The Company shall obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation.
  - The healthcare professional's written opinion for HBV vaccination shall be limited to whether HBV vaccination is indicated for an employee, and if the employee has received such vaccination.
  - The healthcare professional's written opinion for post-exposure evaluation and follow-up shall be limited to the following information:
    - That the employee has been informed of the results of the evaluation; and

        - That the employee has been told about any medical conditions resulting from exposure to blood or OPIM which require further evaluation or treatment.
    - All other findings or diagnoses shall remain confidential and shall not be included in the written report.

XI. INFORMATION AND TRAINING

- Employers shall ensure that all employees with occupational exposure participate in a training program that must be provided at no cost to the employee and during working hours.

- Training shall be provided as follows:
    - At the time of initial assignment to tasks where occupational exposure may take place
    - At least annually thereafter

- For employees who have received training on bloodborne pathogens in the year preceding the effective date of the standard, only training with respect to the provisions of the standard which were not included need be provided.

- Annual training for all employees shall be provided within one year of their previous training.

- Employers shall provide additional training when changes, such as introduction of new engineering, administrative or work practice controls, modification of tasks or procedures or institution of new tasks or procedures, affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

- Material appropriate in content and vocabulary to educational level, literacy, and language of employees shall be used.

- The training program shall be commensurate with the duties and responsibilities of the employee and contain at a minimum the following elements:
    - Copy and Explanation of Standard - An accessible copy of the regulatory text of Title 8, California Code of Regulations, §5193 and an explanation of its contents.

- Epidemiology and Symptoms - A general explanation of the epidemiology and symptoms of bloodborne diseases.
- Modes of Transmission - An explanation of the modes of transmission of bloodborne pathogens.
- Employer's Exposure Control Plan - An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan.
- Risk Identification - An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and OPIM.
- Methods of Compliance - An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, administrative or work practice controls and personal protective equipment.
- Decontamination and Disposal - Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment.
- PPE - An explanation of the basis for selection of PPE.
- HBV Vaccination - Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge.
- Emergency - Information on the appropriate actions to take and persons to contact in an emergency involving blood or OPIM.
- Exposure Incident - An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident, the medical follow-up that will be made available and the procedure for recording the incident on the Sharps Injury Log.
- Post-Exposure Evaluation and Follow-Up - Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident.
- Signs and Labels - An explanation of the signs and labels and/or color coding.
- Interactive Questions and Answers - An opportunity for interactive questions and answers with the person conducting the training session.

- The person conducting the training shall be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the workplace that the training will address.

XII. RECORDKEEPING

Medical Records

- The Company shall establish and maintain an accurate record for each employee with occupational exposure, in accordance with Title 8, California Code of Regulations, §3204.

- This record shall include:
  - The name and social security number (or employee ID) of the employee
  - A copy of the employee's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination
  - A copy of all results of examinations, medical testing, and follow-up procedures
  - The employer's copy of the healthcare professional's written opinion
  - A copy of the information provided to the healthcare professional
- Employee medical records required by subsection are:
  - Kept confidential; and
  - Not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by law.

- The employer shall maintain the records for at least the duration of employment plus 30 years.

Training Records

- The dates of the training sessions.

- The contents or a summary of the training sessions.

- The names and qualifications of persons conducting the training.

- The names and job titles of all persons attending the training sessions.

- Training records shall be maintained for three years from the date on which the training occurred.

Sharps Injury Log

- The Sharps Injury Log shall be maintained five years from the date the exposure incident occurred.

- Availability
  - The employer shall ensure that all records required to be maintained by this section shall be made available upon request to the DOSH Chief and NIOSH for examination and copying.
  - Employee training records required by this subsection shall be provided upon request for examination and copying to employees, to employee representatives, to the DOSH Chief, and to NIOSH.
  - Employee medical records shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, to the DOSH Chief, and to NIOSH in accordance with Title 8, California Code of Regulations, §3204.
  - The Sharps Injury Log shall be provided upon request for examination and copying to employees, to employee representatives, to the DOSH Chief, to the Department of Health Services, and to NIOSH.

- Transfer of Records.
  - The employer shall comply with the requirements involving transfer of records set forth in Section 3204.
  - If the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify NIOSH, at least three months prior to their disposal and transmit them to the NIOSH, if required by the NIOSH to do so, within that three-month period.

CONFINED SPACE ENTRY PROGRAM

(Revised December 2018)

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HPS MECHANICAL

CONFINED SPACE ENTRY PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 5156
- 8 CCR 5157
- 8 CCR 5158

II. PURPOSE

The purpose of HPS Mechanical's Confined Space Program is to establish procedures that will ensure workers' safe entry into confined spaces and permit-required confined spaces to perform routine tasks associated with their employment.

III. BACKGROUND

A confined space is defined as any location that has limited openings for entry and egress, is not intended for continuous employee occupancy, and is so enclosed that natural ventilation may not reduce air contaminants to levels below the threshold limit value (TLV). Examples of confined spaces include: manholes, stacks, pipes, storage tanks, trailers, tank cars, pits, sumps, hoppers, and bins. Entry into confined spaces without proper precautions could result in injury, impairment, or death due to:

- an atmosphere that is flammable or explosive;
- lack of sufficient oxygen to support life;
- contact with or inhalation of toxic materials; or
- general safety or work area hazards such as steam or high-pressure materials.

IV. RESPONSIBILITIES

Employer

In administering this Confined Space Program, HPS Mechanical, Inc**.** will:

- Monitor the effectiveness of the program.
- Provide atmospheric testing and equipment as needed.
- Provide personal protective equipment as needed.
- Provide training to affected employees and supervisors.
- Provide technical assistance as needed.
- Preview and update the program on at least an annual basis or as needed.

Program Manager

The onsite safety person in charge is responsible for managing the Confined Space Program, and shall ensure that:

- A list of confined spaces at all HPS Mechanical, Inc. worksites are maintained.
- Canceled permits are reviewed for lessons learned.
- Training of personnel is conducted and documented.
- Coordination is made with outside responders.
- Equipment is in compliance with standards.

Onsite Safety Person in Charge

The onsite safety person in charge in charge of confined space work shall:

- Ensure requirements for entry have been completed before entry is authorized.
- Ensure confined space monitoring is performed by personnel qualified and trained in confined space entry procedures.
- Ensure a list of monitoring equipment and personnel qualified to operate the equipment is maintained by the Safety and Occupational Health Office.
- Ensure that the rescue team has simulated a rescue in a confined space within the past twelve (12) months.
- Know the hazards that may be faced during entry, including the mode (how the contaminant gets into the body), signs or symptoms, and consequences of exposure.
- Complete an entry permit.
- Determine the entry requirements.
- Require a permit review and signature from the authorized Entry Supervisor.
- Notify all involved employees of the permit requirements.
- Post the permit in a conspicuous location near the job.
- Renew the permit or have it reissued as needed (a new permit is required every shift).
- Determine the number of Attendants required to perform the work.
- Ensure all Attendant(s) know how to communicate with the entrants and how to obtain assistance.
- Post any required barriers and signs.
- Remain alert to changing conditions that might affect the conditions of the permits (i.e., require additional atmospheric monitoring or changes in personal protective equipment).
- Ensure periodic atmospheric monitoring is conducted according to permit requirements.

- Ensure that personnel doing the work and all support personnel adhere to permit requirements.
- Ensure the permit is canceled when the work is completed.
- Ensure the confined space is safely closed and all workers are cleared from the area.

Entry Supervisors

The onsite safety person(s) in charge shall serve as the Entry Supervisor(s), and shall be qualified and authorized to approve confined space entry permits. The Entry Supervisor(s) shall be responsible for:

- Determining if conditions are acceptable for entry.
- Authorizing entry and overseeing entry operations.
- Terminating entry procedures as required.
- Serving as an Attendant, as long as the person is trained and equipped appropriately for that role.
- Ensuring measures are in place to keep unauthorized personnel clear of the area.
- Checking the work at least twice a shift to verify and document permit requirements are being observed (more frequent checks shall be made if operations or conditions are anticipated that could affect permit requirements).
- Ensuring that necessary information on chemical hazards is kept at the worksite for the employees or rescue team.
- Ensuring a rescue team is available and instructed in their rescue duties (i.e., an onsite team or a prearranged outside rescue service).
- Ensuring the rescue team members have current certification in first aid and cardiopulmonary resuscitation (CPR).

Attendants

Trained Attendant(s) shall:

- Be knowledgeable of and be able to recognize potential confined space hazards.
- Be stationed outside of the confined workspace. A single Attendant is prohibited from monitoring multiple confined spaces.
- Maintain a sign-in/sign-out log with a count of all persons in the confined space, and ensure all entrants sign in and out.
- Monitor surrounding activities to ensure the safety of personnel.
- Maintain effective and continuous communication with personnel during confined space entry, work, and exit.

- Order personnel to evacuate the confined space if he/she:
    - Observes a condition that is not allowed on the entry permit;
    - Notices the entrants acting strangely, possibly as a result of exposure to hazardous substances;
    - Notices a situation outside the confined space that could endanger personnel;
    - Notices a hazard within the confined space that has not been previously recognized or taken into consideration;
    - Must leave his/her work station; or
- Immediately summon the Rescue Team if crew rescue becomes necessary.
- Keep unauthorized persons out of the confined space, order them out, or notify authorized personnel of an unauthorized entry.

Rescue Team

The Rescue Team members shall:

- Complete a training drill using mannequins or personnel in a simulation of the confined space prior to the issuance of an entry permit for any confined space and at least annually thereafter.
- Respond immediately to rescue calls from the Attendant or any other person recognizing a need for rescue from the confined space.
- In addition to emergency response training, receive the same training as that required of the authorized entrants.
- Have current certification in first aid and CPR.

Entrants/Affected Employees

Employees who are granted permission to enter a confined space shall:

- Read and observe the entry permit requirements.
- Remain alert to the hazards that could be encountered while in the confined space.
- Properly use the personal protective equipment that is required by the permit.
- Immediately exit the confined space when:
    - They are ordered to do so by an authorized person;
    - They notice or recognize signs or symptoms of exposure;
    - A prohibited condition exists; or
    - The automatic alarm system sounds.
- Alert Attendant(s) when a prohibited condition exists and/or when warning signs or symptoms of exposure exist.

V. TRAINING

HPS Mechanical, Inc. shall provide training so that all employees whose work is regulated by this Confined Space Program acquire the understanding, knowledge, and skills necessary for the safe performance of their duties in confined spaces. This training shall establish employee proficiency in the duties required in this program, and shall introduce new or revised procedures, as necessary, for compliance with this program.

TRAINING FREQUENCY

The onsite safety person in charge shall provide training to each affected employee:

- Before the employee is first assigned duties within a confined space;
- Before there is a change in assigned duties;
- When there is a change in permit space operations that presents a hazard for which an employee has not been trained; and
- When HPS Mechanical, Inc. has reason to believe that there are deviations from the confined space entry procedures required in this program, or that there are inadequacies in the employee's knowledge or use of these procedures.

Refresher training shall be conducted as needed to maintain employee competence in entry procedures and precautions

GENERAL TRAINING

All employees who will enter confined spaces shall be trained in entry procedures. Personnel responsible for supervising, planning, entering, or participating in confined space entry and rescue shall be adequately trained in their functional duties prior to any confined space entry. Training shall include:

- Explanation of the general hazards associated with confined spaces.
- Discussion of specific confined space hazards associated with the facility, location, or operation.
- Reason for, proper use, and limitations of personal protective equipment and other safety equipment required for entry into confined spaces.
- Explanation of permits and other procedural requirements for conducting a confined space entry.
- A clear understanding of what conditions would prohibit entry.
- Procedures for responding to emergencies.
- Duties and responsibilities of the confined space entry team.
- Description of how to recognize symptoms of overexposure to probable air contaminants in themselves and co-workers, and method(s) for alerting the Attendant(s).

SPECIFIC TRAINING

Training for atmospheric monitoring personnel shall include proper use of monitoring instruments, including instruction on the following:

- Proper use of the equipment;
- Calibration of equipment;
- Sampling strategies and techniques; and
- Exposure limits (PELs, TLVs, LELs, UELs, etc.).

Training for Attendants shall include the following:

- Procedures for summoning rescue or other emergency services; and
- Proper utilization of equipment used for communicating with entry and emergency/rescue personnel.

Training for Emergency Response Personnel shall include:

- Rescue plan and procedures developed for each type of confined space that is anticipated to be encountered;
- Use of emergency rescue equipment;
- First aid and CPR techniques; and
- Work location and confined space configuration to minimize response time.

VERIFICATION OF TRAINING

Periodic assessment of the effectiveness of employee training shall be conducted by the onsite safety person in charge. Training sessions shall be repeated as often as necessary to maintain an acceptable level of personnel competence. All confined space training shall be documented and kept on file.

VI. IDENTIFICATION OF HAZARDS AND EVALUATION OF CONFINED SPACES

WORKSITE SURVEY

The onsite safety person in charge shall ensure a survey of the worksite is conducted to identify confined spaces. This survey can be partially completed using initial and continuing site characterizations, as well as other available data (i.e., blueprints and job safety analyses). The purpose of the survey is to develop an inventory of those locations and/or equipment at HPS Mechanical, Inc. that meet the definition of a confined space. This information shall be communicated to personnel, and appropriate confined space procedures shall be followed prior to entry. The initial surveys shall include air monitoring to determine the air quality in the confined spaces.

The potential for the following situations shall be evaluated by the onsite safety person in charge:

- Flammable or explosive potential;
- Oxygen deficiency; and
- Presence of toxic and corrosive material.

HAZARD EVALUATION

A master inventory of confined spaces shall be maintained. The onsite safety person in charge shall identify and reevaluate hazards based on possible changes in activities or other physical or environmental conditions that could adversely affect work. Any change in designation of a confined space will be routed to all affected personnel by the onsite safety person in charge.

PRE-ENTRY HAZARD ASSESSMENT

A hazard assessment shall be completed by the onsite safety person(s) in charge prior to any entry into a confined space. This hazard assessment should identify:

- the sequence of work to be performed in the confined space;
- the specific hazards known or anticipated; an
- the control measures to be implemented to eliminate or reduce each of the hazards to an acceptable level.

No entry shall be permitted until the hazard assessment has been reviewed and discussed by all persons engaged in the activity. Personnel who are to enter confined spaces shall be informed of known or potential hazards associated with said confined spaces.

HAZARD CONTROLS

Hazard controls shall be instituted to address changes in the work processes and/or working environment. Hazard controls must be able to either control the health hazards by eliminating the responsible agents, reduce health hazards below harmful levels, or prevent the contaminants from coming into contact with the workers.

The following order of precedence shall be followed in reducing confined space risks:

- Engineering Controls
    - Engineering controls are those controls that eliminate or reduce the hazard through implementation of sound engineering practices.
    - Ventilation is one of the most common engineering controls used in confined spaces. When ventilation is used to remove atmospheric contaminants from a confined space, the space shall be ventilated until the atmosphere is within the acceptable ranges. Ventilation shall be maintained during the occupancy if there is a potential for the atmospheric conditions to move out of the acceptable range. When ventilation is not possible or feasible, alternate

protective measures or methods to remove air contaminants and protect occupants shall be determined by the onsite safety person in charge prior to authorizing entry.

- When conditions necessitate and can accommodate continuous forced air ventilation, the following precautions shall be followed:
  - Employees shall not enter the space until the forced air ventilation has eliminated any hazardous atmosphere.
  - Forced air ventilation shall be directed so as to ventilate the immediate areas where an employee is or will be present within the space.
  - Continuous ventilation shall be maintained until all employees have left the space.
  - Air supply or forced air ventilation shall originate from a clean source.

- Work Practice (Administrative) Controls
  - Work practice (administrative) controls are those controls which eliminate or reduce the hazard through changes in the work practices (i.e., rotating workers, reducing the amount of worker exposure, and housekeeping).

- Personal Protective Equipment (PPE)
  - If the hazard cannot be eliminated or reduced to a safe level through engineering and/or work practice controls, PPE should be used.
  - The onsite safety person(s) in charge shall determine the appropriate PPE required by all personnel entering the confined space, including rescue teams.
  - PPE that meets the specifications of applicable standards shall be selected in accordance with the requirements of the job to be performed.

VII. ENTRY PERMITS

The Confined Space Entry Permit is the most essential tool for assuring safety during entry in confined spaces with known hazards, or with unknown or potentially hazardous atmospheres. The entry permit process guides the supervisor and workers through a systematic evaluation of the space to be entered, and should be used to establish appropriate conditions. Before each entry into a confined space, an entry permit will be completed by the onsite safety person in charge, who will then communicate the contents of the permit to all employees involved in the operation and post the permit conspicuously near the work location. A standard entry permit shall be used for all entries.

KEY ELEMENTS OF ENTRY PERMITS

A standard entry permit shall contain the following items:

- Space to be entered.
- Purpose of entry.
- Date and authorized duration of the entry permit.
- Name of authorized entrants within the permit space.
- Means of identifying authorized entrants inside the permit space (i.e., rosters or tracking systems).
- Name(s) of personnel serving as Attendant(s) for the permit duration.
- Name of individual serving as Entry Supervisor, with a space for the signature or initials of the Entry Supervisor who originally authorized the entry.
- Hazards of the permit space to be entered.
- Measures used to isolate the permit space and to eliminate or control permit space hazards before entry (i.e., lockout/tagout of equipment and procedures for purging, ventilating, and flushing permit spaces).
- Acceptable entry conditions.
- Results of initial and periodic tests performed, accompanied by the names or initials of the testers and the date(s) when the tests were performed.
- Rescue and emergency services that can be summoned, and the means of contacting those services (i.e., equipment to use, phone numbers to call).
- Communication procedures used by authorized entrants and Attendant(s) to maintain contact during the entry.
- Equipment to be provided for compliance with this Confined Space Program (i.e., PPE, testing, communications, alarm systems, and rescue).
- Other information necessary for the circumstances of the particular confined space that will help ensure employee safety.
- Additional permits, such as for hot work, that have been issued to authorize work on the permit space.

PERMIT SCOPE AND DURATION

A permit is only valid for one shift. For a permit to be renewed, the following conditions shall be met before each reentry into the confined space:

- Atmospheric testing shall be conducted and the results shall be within acceptable limits. If atmospheric test results are not within acceptable limits, precautions to protect entrants against the hazards should be addressed on the permit and should be in place.
- The onsite safety person in charge shall verify that all precautions and other measures called for on the permit are still in effect.
- Only operations or work originally approved on the permit shall be conducted in the confined space.

Note: Personnel may request additional atmospheric testing at any time.

A new permit shall be issued, or the original permit will be reissued if possible, whenever changing work conditions or work activities introduce new hazards into the confined space. The onsite safety person in charge shall retain each canceled entry permit for at least one (1) year to facilitate the review of the Confined Space Entry Program. Any issues encountered during an entry operation shall be noted on the respective permit(s) so that appropriate revisions to the confined space permit program can be made.

VIII. ENTRY PROCEDURES

When entry into a confined space is necessary, either the Entry Supervisor or onsite safety person in charge may initiate entry procedures, including the completion of a Confined Space Entry Permit. Entry into a confined space shall follow the standard entry procedure below.

PRIOR TO ENTRY

entire Confined Space Entry Permit shall be completed in its entirety before a standard entry. Entry shall be allowed only when all requirements of the permit are met and it is reviewed and signed by an Entry Supervisor.

The following conditions must be met prior to standard entry:

- Affected personnel shall be trained to establish proficiency in the duties that will be performed within the confined space.
- The internal atmosphere within the confined space shall be tested by the onsite safety person in charge with a calibrated, direct-reading instrument.
- Personnel shall be provided with necessary PPE as determined by the Entry Supervisor.
- Atmospheric monitoring shall be conducted during the entry. If a hazardous atmosphere is detected during entry:
    - Personnel within the confined space shall be evacuated by the Attendant(s) or Entry Supervisor until the space can be evaluated by the onsite safety person in charge to determine how the hazardous atmosphere developed; and
    - Controls shall be put in place to protect employees before reentry.

OPENING A CONFINED SPACE

Any condition(s) making it unsafe to remove an entrance cover shall be eliminated before the cover is removed. When entrance covers are removed, the opening shall be promptly guarded by a railing, temporary cover, or other temporary barrier that will prevent persons

from falling through the opening. This barrier or cover shall protect each employee working in the space from foreign objects entering the space. If it is in a traffic area, adequate barriers shall also be erected.

ATMOSHERIC TESTING

Atmospheric test data is required prior to entry into a confined space. Atmospheric testing is required for two distinct purposes: (1) evaluation of the hazards of the permit space, and (2) verification that acceptable conditions exist for entry into that space. If a person must enter the space to obtain the needed data, then Standard Confined Space Entry Procedures shall be followed. Before entering the space, the onsite safety person in charge shall conduct testing for hazardous atmospheres. The internal atmosphere shall be tested with a calibrated, direct-reading instrument for oxygen, flammable gases and vapors, and potential toxic air contaminants, in that order.

Testing equipment used in specialty areas shall be listed or approved for use in such areas by the onsite safety person in charge. All testing equipment shall be approved by a nationally recognized laboratory, such as Underwriters Laboratories or Factory Mutual Systems.

EVALUATION TESTING

The atmosphere of a confined space should be analyzed using equipment of sufficient sensitivity and specificity. This analysis shall identify and evaluate any hazardous atmospheres that may exist or arise, so that appropriate permit entry procedures can be developed, and acceptable entry conditions stipulated for that space. Evaluation and interpretation of this data and development of the entry procedure should involve a technically qualified professional (i.e., consultant, certified industrial hygienist, registered safety engineer, or certified safety professional).

VERIFICATION TESTING

A confined space that may contain a hazardous atmosphere shall be tested for residues of all identified or suspected contaminants. The evaluation testing should be conducted with specified equipment to determine that residual concentrations at the time of testing and entry are within acceptable limits. Results of this testing shall be recorded on the Confined Space Entry Permit by the person conducting the testing. The atmosphere shall be periodically retested (frequency to be determined by the onsite safety person in charge) to verify that atmospheric conditions remain within acceptable entry parameters.

ACCEPTABLE LIMITS

The atmosphere of the confined spaces shall be considered to be within acceptable limits when the following conditions are maintained:

- Oxygen: 19.5 percent to 23.5 percent;
- Flammability: less than ten (10) percent of the Lower Flammable Limit (LFL); and

- Toxicity: less than recognized American Conference of Governmental Industrial Hygienists (ACGIH) exposure limits or other published exposure levels (i.e., OSHA Permissible Exposure Limits (PELs) or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (RELs)).

ISOLATION AND LOCKOUT/TAGOUT

All energy sources that are potentially hazardous to confined space entrants shall be secured, relieved, disconnected, and/or restrained before personnel are permitted to enter the confined space. Equipment systems or processes shall be locked out and/or tagged out as required by the HPS Mechanical Inc. Lockout/Tag Out Program (which complies with OSHA's 29 CFR 1910-147 and American National Standards Institute (ANSI) Z244.1-1982, Lockout/Tagout of Energy Sources) prior to permitting entry into the confined space.

In confined spaces where complete isolation is not possible, the onsite safety person in charge shall evaluate the situation and make provisions for as rigorous an isolation as practical. Special precautions shall be taken when entering double-walled, jacketed, or internally insulated confined spaces that may discharge hazardous material through the vessel's internal wall.

Where there is a need to test, position, or activate equipment by temporarily removing the lock or tag or both, a procedure shall be developed and implemented to control hazards to the occupants. Any removal of locks, tags, or other protective measures shall be done in accordance with the HPS Mechanical, Inc. Lockout/Tag Out Program.

INGRESS/EGRESS SAFEGUARDS

Means for safe entry and exit shall be provided for confined spaces. Each entry and exit points shall be evaluated by the onsite safety person in charge to determine the most effective methods and equipment that will enable employees to safely enter and exit the confined space.

Appropriate retrieval equipment or methods shall be used whenever a person enters a confined space. Use of retrieval equipment may be waived by the onsite safety person(s) in charge if use of the equipment increases the overall risks of entry or does not contribute to the rescue. A mechanical device shall be available to retrieve personnel from vertical confined spaces greater than five (5) feet in depth.

WARNING SIGNS AND SYMBOLS

All confined spaces that could be inadvertently entered shall have signs identifying them as confined spaces and shall be maintained in a legible condition. The signs shall contain a warning that a permit is required before entry. Access points to all confined spaces shall be prominently marked.

IX. EMERGENCY RESPONSE

EMERGENCY RESPONSE PLAN

The onsite safety person in charge shall maintain a written Emergency Response Plan of action that has provisions for conducting a timely rescue of individuals within a confined space should an emergency arise. This written Plan shall be kept onsite where the confined space work is being conducted. All affected personnel shall be trained on the Emergency Response Plan.

IMMEDIATELY DANGEROUS TO LIFE AND HEALTH (IDLH)

HPS Mechanical does not perform confined space entry job tasks that have an IDHL potential. If, during CSE job planning, any potential IDLH situation could arise, rescue services will be provided as necessary.

RETRIEVAL SYSTEMS AND METHODS OF NON-ENTRY RESCUE

Retrieval systems shall be available and ready when an authorized person enters a permit space, unless such equipment increases the overall risk of entry, or the equipment would not contribute to the rescue of the entrant. Retrieval systems shall have a chest or full-body harness and a retrieval line attached at the center of the back near shoulder level or above the head. If harnesses are not feasible, or would create a greater hazard, wristlets may be used in lieu of the harness. The retrieval line shall be firmly fastened outside the space so that rescue can begin as soon as anyone is aware that retrieval is necessary. A mechanical device shall be available to retrieve personnel from vertical confined spaces more than five (5) feet deep.

HPS MECHANICAL

CONFINED SPACE ENTRY PERMIT

Date and Time Issued:_____ Date and Time Expires:_____

Job site/Space I.D.:_____ Entry Supervisor:_____

Equipment to be worked on:_____ Worked to be performed:_____

Stand-by personnel:_____

1. Atmospheric Checks: Time_____
   Oxygen_____%
   Explosive_____% L.F.L.
   Toxic_____PPM

2. Tester's signature:_____

3. Source isolation (No Entry):

	N/A	Yes	No
Pumps or lines blinded, disconnected, or blocked	( )	( )	( )

4. Ventilation Modification:

	N/A	Yes	No
Mechanical	( )	( )	( )
Natural Ventilation only	( )	( )	( )

5. Atmospheric check after isolation and Ventilation:

   Oxygen _____% > 19.5 %

   Explosive _____% L.F.L < 10 %

   Toxic _____PPM < 10 PPM H_2S

   Time _____

   Tester's signature:_____

6. Communication procedures:_____
   _____

7. Rescue procedures:_____
   _____

8. Entry, standby, and back up persons:

	Yes	No
Successfully completed required training?	( )	( )
Is it current?	( )	( )

9. Equipment:	N/A	Yes	No
Direct reading gas monitor tested	( )	( )	( )
Safety harnesses and lifelines for entry and standby persons	( )	( )	( )
Hoisting equipment	( )	( )	( )
Powered communications	( )	( )	( )
SCBA's for entry and standby persons	( )	( )	( )
Protective Clothing	( )	( )	( )
All electric equipment listed Class I, Division I, Group D and Non-sparking tools	( )	( )	( )

10. Periodic atmospheric tests:

Oxygen	____%	Time ____	Oxygen	____%	Time ____
Oxygen	____%	Time ____	Oxygen	____%	Time ____
Explosive	____%	Time ____	Explosive	____%	Time ____
Explosive	____%	Time ____	Explosive	____%	Time ____
Toxic	____%	Time ____	Toxic	____%	Time ____
Toxic	____%	Time ____	Toxic	____%	Time ____

We have reviewed the work authorized by this permit and the information contained here-in written instructions and safety procedures have been received and are understood. Entry cannot be approved if any squares are marked in the "No" column. This permit is not valid unless all appropriate items are completed.

Permit Prepared By: (Supervisor)_____

Approved By: (Unit Supervisor)_____

Reviewed By (Operations Personnel):_____

_____

(Printed name)

_____

(Signature)

This permit is to be kept at job site location. Return job site copy to Safety Office following job completion.

ELECTRICAL SAFETY PROGRAM

Revised (October 2018)

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HPS MECHANICAL
ELECTRICAL SAFETY PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 1510
- 8 CCR 1611.5
- 8 CCR 1699
- 8 CCR 2395.45
- 8 CCR 3314

II. GENERAL

Only qualified personnel are authorized to work on or alter electrical circuits, extension cords, tools or any other type of electrical equipment. All electrical work and PPE requirements shall conform to the NEC and any state, local regulation.

A. Qualified Person – Low Voltage (0-600 volts): A person designated by the employer, who by reason of experience or instruction has demonstrated familiarity with the operation to be performed, and the hazards involved.

B. Qualified Electrical Worker – High Voltage (> 600 volts): A qualified person who has a minimum of two years of training and experience with high-voltage circuits and equipment, and who has demonstrated by performance, familiarity with the work to be performed and the hazards involved.

When working around electrical equipment, personnel shall move deliberately to avoid accidental contact with the energized equipment.

Care must be exercised to have feet firmly in place for good balance when standing and working on electrical equipment. Personnel should be careful not to contact electrical circuitry if reaching for falling tools. This could result in accidental contact with electrical power and/or damage to delicate equipment.

Power shall be turned off, locked out, and tagged before working on electrical equipment, in a manner which ensures that power cannot be accidentally restored. When working on a motor or circuit, the circuit switch or circuit breaker must be opened, locked (if possible), and the switch properly tagged (i.e., “Danger - Do Not Operate”). After tag-out has been completed, verify the isolation of the motor or circuit is in a zero-energy state by pushing the start button and verifying that it cannot be re-energized by someone else. Follow the Hazardous Energy LO/TO Control Program.

High-voltage points shall be grounded before maintenance begins.

Extreme care shall be exercised not to touch electrical equipment while standing in water, on metal floors, damp concrete, or other well-grounded surfaces. Likewise, electrical equipment shall not be operated while wearing wet shoes, damp clothing, or while skin surfaces are damp.

Non-explosion proof electrical equipment or any other source or ignition should not be allowed in an area that is classified (Division 1 or Division 2).

When opening and closing a breaker, the person should stand on the non-hinged side of the enclosure in the event of an explosion.

Do not wear rings, watches, bracelets, necklaces, etc. while working on electrical equipment.

When working around overhead power lines, employees must assume that at all power lines are energized unless the utility owner/operator confirms that the power line has been and continues to be deenergized and visibly grounded at the worksite. Maintain at least a ten-foot clearance when working around overhead power lines. Only a qualified person or qualified electrical worker are allowed to work around energized power lines.

III. ELECTRICAL POWER TOOLS

Power tools must be grounded or double insulated. Personnel shall make sure that all portable power tools, not double insulated are equipped with a three-wire grounded conductor cord and that the three-pronged plug makes effective contact with the service outlet and that a GFCI is utilized. The grounded conductor shall be mechanically secured to the frame of the electric tool and to the grounding pin of the plug and contained in the same jacket as the two power conductors. Be certain every service outlet is grounded. Ground Fault Circuit Interrupters shall be used on all temporary electrical lines, cables and cords.

A hot work permit is required where electric tools are used in classified areas of in-service facilities. New construction on facilities not currently in service should not need to follow this requirement, but must follow the direction of the area/facility supervisor.

IV. EXTENSION CORDS

Extension cords are designed for and will be used for temporary use (less than 60 days). All other electrical connections will be made permanent by proper construction methods.

If a cord is damaged, it shall be replaced or shortened by an electrician. Cords shall never be patched with electrical tape.

Cords shall be protected against contact with oil, hot surfaces and chemicals.

Cords should not be hung over nails or other sharp edges or placed where vehicles may run over them. Cords shall not be run through door or window openings that can be closed.

Adapter cords, often referred to as cheater cords, should be provided to incorporate an explosion-proof plug on one end and a three-wire grounding type receptacle on the other. The non-explosion-proof receptacle must be of the locking type or means must be provided so that it cannot be accidentally disconnected. These cords should

be yellow, and it is preferred that the plug be metal. They should be no longer than two feet in length.

V. ELECTRICAL FUSES

Only qualified personnel shall replace fuses. Blown fuses shall not be replaced with fuses having a higher amperage or lower voltage rating. Fuses shall be replaced in kind to maintain proper circuit protection. A fuse puller shall be used to remove fuses.

VI. STATIC ELECTRICITY-BONDING AND GROUNDING

To avoid static discharge, tanks and vessels storing hydrocarbon products should not be splash filled. Overhead fill lines should have down spouts extending to the bottom of the tank. Any filter screen should be placed well forward of the outlet to permit the charge to dissipate before reaching the tank.

Trucks and tanks shall be electrically bonded to the loading or unloading lines before hoses are hooked up and hatch covers are opened. Reinforcing wire in hoses must be bonded to nozzles. Damaged hoses must be taken out of service and tagged “Do not use, hose damaged,” or equivalent message.

Vacuum trucks shall be bonded to tanks or vessel with a static line before any loading or emptying starts.

If steam is used to clean oil storage tanks and separators, nozzles shall be bonded to the tank.

Sandblasting nozzles should be bonded electrically to vessels being blasted.

Plastic buckets shall not be used to collect hydrocarbons. A metal bucket with a metal handle can be used provided the handle of the bucket does not have a plastic or wood grip. The plastic or wood grip prevents the bucket from being bonded to the valve or other metal parts and static charges generated cannot dissipate.

Ventilation fans and ducting shall be bonded to equipment prior to starting ventilation.

FIRST AID/CPR

(Revised December 2018)

HPS MECHANICAL

First Aid/CPR

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HPS MECHANICAL

First Aid/CPR

I. REGULATORY REFERENCES

- 29 CFR 1910.151(b)
- 29 CFR 1910.1030(d)
- 29 CFR 1926.23
- 8 CCR 1512
- 8 CCR 1504
- 8 CCR 3400

II. POLICY

The Company does not provide emergency medical services for hire. Employees who respond do so under their personal choice and will respond as a "Good Samaritan." The Company does not have designated First Aid/CPR responders but does provide First Aid/CPR training as an option for its employees. Employees are not required to respond to first aid or CPR events, but if they feel they have adequate knowledge, training and capability, they may respond as "Good Samaritans."

III. FIRST AID/CPR

- The Company will provide employees the option to attend, at no cost, Medic First Aid or American Red Cross First Aid/CPR training.
- Any employee who feels they are not capable of administering First Aid/CPR should at least seek immediate help by implementing the facilities emergency action plan for the victim of an accident and stay with the victim until help arrives or seek out another employee that can administer First Aid/CPR. Someone should also be designated to stand watch for emergency personnel arrival and direct them to the victim.
- First aid kits should at a minimum contain supplies recommended by ANSI Z308.1 *Minimum Requirements for Industrial Unit-Type First Aid Kits*.
- For bloodborne pathogens, universal precaution supplies must be available (isolation gloves, splash goggles, pocket mouth-to-mouth resuscitation masks, and other barrier devices). Compliance with the Bloodborne Pathogens Program as trained in the first aid course is required.
- First aid kits should be inspected weekly at a minimum.
- Each first aid kit shall have a legible label posted inside showing an inventory of the kit's contents. The kit inspector must verify that the listed items are available and that the sterile packaging is intact and document the date of the last inspection.

IV. FIRST AID EQUIPMENT

First Aid Kits

- First aid kits are provided in all company vehicles, office locations, shop area and job sites.
- Refer to ANSI Z308.1 *Minimum Requirements for Industrial Unit-Type First Aid Kits* for itemization of the first aid kits.
- Stretchers and blankets, or other adequate warm covering, may be required unless ambulance service is available within 30 minutes under normal conditions.

Wash Stations

- Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.
- When work is to be performed in remote locations, a portable wash station (eye wash and as needed safety shower) shall be provided.
- Reference ANSI [Z]358.1-2004 for guidance for eye wash and safety showers.

V. REMOTE LOCATIONS

- At isolated locations, provisions are made in advance for prompt medical attention in case of serious injuries. The Company's Emergency Response Plan shall be followed.
- Remote project sites shall have the first aid equipment listed above as well as a designated vehicle as transport if an injured person must be immediately transported.
- Communications for contacting EMS shall be in place with emergency numbers immediately available.

IV. FIRST AID LOG

- A First Aid Log is to be used when personnel administer first aid treatment to employees.
- The following information for each treated person shall be recorded on the log:
  - Name of treated person– first name, middle initial, last name
  - Date of treatment
  - Brief description of treatment given (i.e., washed out left eye)
  - Name of person administering first aid
- Complete First Aid Logs shall be retained in the job files. All first aid activity is to be immediately reported to supervision. A copy of completed First Aid Logs shall be forwarded to supervisory personnel within 24 hours.

ACCIDENT REPORTING AND INVESTIGATION PROGRAM

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HPS MECHANICAL
ACCIDENT REPORTING AND INVESTIGATION PROGRAM

I. REGULATORY REFERENCE

- 8 CCR 1509
- 8 CCR 1510
- 8 CCR 1511
- 8 CCR 3203

II. POLICY

The Supervisor, Manager, or other designated individual will investigate all work-related accidents within 24 hours. This includes minor incidents and "near accidents," as well as serious injuries. An accident is defined as any unexpected occurrence that results in injury to personnel, damage to equipment, facilities, or material, or interruption of normal operations.

III. RESPONSIBILITIES

Immediately upon being notified of an accident, the Supervisor, Manager, or other designated individual shall conduct an investigation, the purpose of which is to determine the cause of the accident and develop corrective action to prevent future reoccurrence, not to place blame or find fault. An unbiased approach is necessary in order to obtain objective findings.

IV. ACCIDENT INVESTIGATION

Purpose

- To prevent or decrease the likelihood of similar accidents/incidents.
- To identify and correct unsafe work practices and physical hazards. Accidents are often caused by a combination of these two factors.
- To identify training needs. This makes training more effective by focusing on factors that are most likely to cause accidents.

Types of Incidents to Investigate

- Fatalities
- Serious injuries
- Minor injuries
- Property damage
- Near misses

Procedures for Investigating Accidents

Immediately upon being notified of an accident the Supervisor, Manager, or other designated individual will:

- Visit the accident scene as soon as possible, while facts and evidence are still fresh, before witnesses forget important details, and to ensure hazardous conditions to which other employees or customers could be exposed are corrected or have been removed.
- Provide for needed first aid or call 911 emergency for the injured employee(s).
- If possible, interview the injured worker at the scene of the accident and verbally "walk" him or her through a re-enactment. All interviews should be conducted as privately as possible.
    - Interview all witnesses individually and talk with anyone who has knowledge of the accident, even if they did not actually witness it.
- Report the accident to the main office. Accidents are to be reported by the office to the insurance carrier within 24 hours. All serious accidents must be reported to the carrier as soon as possible.
- Consider taking signed statements in cases where facts are unclear or there is an element of controversy.
- Thoroughly investigate the accident to identify all causes and contributing factors.
    - Document details graphically using sketches, diagrams and photos as needed.
    - Take measurements when appropriate.
- All accidents involving death, disfigurement, amputation or hospitalization (other than for observation purposes) in excess of 24 hours must be immediately reported to Federal and/or Cal/OSHA, as, appropriate.
- Focus on causes and hazards. Develop an analysis of what happened, how it happened, and how it could have been prevented. Determine what caused the accident itself, not just the injury.
- Every investigation must also include an action plan. How can such accidents be prevented in the future?
- In the event a third-party or defective product contributed to the accident, save any evidence as it could be critical to the recovery of claim costs.

It is important that investigations are conducted promptly and accurately. Doing so:

- Ensures information is available
- Allows the causes to be quickly corrected
- Helps identify all contributing factors
- Reflects management concern
- Reduces chance of recurrence

Investigation Tips

- Avoid placing blame
- Document with photos and diagrams, if needed
- Be objective, get the facts
- Reconstruct the event
- Use open-ended questions

Questions to Ask

When investigating accidents, open-ended questions such as who? what? when? where? why? and how? will provide more information than closed-ended questions such as "Were you wearing gloves?"

Examples include:

- How did it happen?
- Why did it happen?
- How could it have been prevented?
- Who was involved?
- Who witnessed the incident?
- Where were the witnesses at the time of the incident?
- What was the injured worker doing?
- What was the employee working on?
- When did it happen?
- When was the accident reported?
- Where did it happen?
- Why was the employee assigned to do the job?

However, the single most important question that must be answered as the result of any investigation is:

"What do you recommend be done (or have you done) to prevent this type of incident from recurring?"

Once the Accident Investigation is Completed

- Take or recommend corrective action
- Document the corrective action
- Consider safety program modifications

Management and the Safety Program Administrator will review the results of all investigations. Information obtained through accident investigations can be used to update and improve our current program.

Attachment A – Investigations and Report of Incident

NAME OF INJURED (Last Name, First Name)		**D.O.B.:**	**SEX: M ☐ F ☐**
DEPT.:	**JOB TITLE:**	**WORK LOCATION:**	
WHEN	**Date and Time of Incident: / / ☐ AM ☐ PM** **Date reported to supervisor: / / If delayed, Why?**		
DESCRIPTION OF INCIDENT	**Detail what employee was doing (i.e. - at risk behavior) and/or what physical objects (machines, equipment), materia (chemical vapor, inhalant) (i.e. - unsafe conditions) were involved:** **Was employee doing something other than required duties: ☐ NO ☐ YES If yes, explain:**		
WHAT	**State body parts injured:** **Was treatment beyond first aid required? ☐ YES ☐ NO If yes, explain:** **Fatality: ☐ YES ☐ NO When: _____ Lost Time ☐ YES ☐ NO**		
WHERE	**Exact location where incident occurred:** **Was ambulance transport necessary? ☐ YES ☐ NO** **To what facility?**		
WITNESSES	**(Last Name, First Name / Title/TEL. #:)**		
WHY	**Comment on the causes of this incident:**		
PREVENTION	**What should be done and by whom to prevent recurrence of this type of incident?** **What action are you taking to see that this is done?** **SUPERVISOR/MANAGER'S Signature/Dept.** **Phone #_____ Date of this report:_____** **Employee Signature _____Date ____/___/_____** **Comments:**		

DRUG-FREE WORKPLACE PROGRAM

HPS MECHANICAL

DRUG-FREE WORKPLACE PROGRAM

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HPS MECHANICAL

DRUG-FREE WORKPLACE PROGRAM

I. REGULATORY REFERENCES

- 49 CFR Parts 40, 199, 382, 391 & 394

II. POLICY

HPS Mechanical, Inc. has a vital interest in maintaining a safe, healthful and efficient work environment for all employee(s). Possession, use, or distribution of drugs or controlled substances or being under the influence of drugs, controlled substances or alcohol poses a serious and unacceptable threat to the safety of our employees and to our company's operations.

HPS Mechanical, Inc. recognizes that the company's own health and future are dependent upon the physical and psychological health of all employee(s). Accordingly, it has the right, obligation and intent to maintain a safe, healthful and drug-free working environment for all employee(s) and to protect company property, equipment and operations.

With these objectives in mind the Company has established the following zero tolerance policy for the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance that will be vigorously enforced and is a condition of employment.

III. ILLEGAL DRUGS, ALCOHOL, FIREARMS AND WEAPONS

No employee, regardless of work site location, will possess any firearm, live ammunition, explosives, weapons or any quantity of a controlled substance, unauthorized drugs, illegal drugs, drug paraphernalia and/or alcoholic beverage. Work site means any motor vehicle, office, building, yard or other property operated by HPS Mechanical, Inc., or any location at which the employee conducts work. Possess means to have in or on the employee's person, personal effects, vehicle or areas substantially entrusted to the control of the employee.

No employee will report for work or drive when impaired by alcohol, drug or controlled substance. Impaired means under the influence of a substance such that the employee is affected in any detectable manner or that the employee's motor senses, i.e., (sight, balance, reaction, reflex), or judgment are or may be presumed affected. Consumption of alcohol at our facility or any job site is prohibited.

IV. LEGAL DRUGS AND REPORTING REQUIRMENTS

Legal drugs include prescribed and over-the-counter drugs that have been legally obtained and are being used for the purpose for which they were prescribed or manufactured. Under penalty of discharge, an employee taking any over-the-counter or

prescribed medication that could impair the employee's job performance or safety **must** notify the company's Human Resources Department **prior** to reporting for work.

Using or being under the influence of "legal drugs" while performing company business, at our facility, company work site or in company equipment/vehicles is prohibited to the extent such use or being under the influence may affect the safety of co-workers or members of the public, the employee's job performance, or the safe or efficient operation of our facility, job site or equipment. An employee may continue to work only if the Human Resources Department, in agreement with the company's industrial doctors, has determined that the employee does not pose a threat to his or her safety or the safety of co-workers and that the employee's job performance is not significantly affected by the legal drug. Otherwise, the employee may be assigned to other appropriate work or, in the absence of such other work, be placed on a medical leave until the employee no longer requires the legal drug pursuant to a doctor's release.

V. SEARCH POLICY

Entry onto HPS Mechanical, Inc. premises or job sites constitutes consent to and recognition of the right of HPS Mechanical, Inc., its authorized representative, customers or clients to search the person, vehicle and other property of individuals while on its premises or job sites. Refusal to consent will result in the employee's removal from the job site and discharge.

Such searches may be initiated without prior announcement and will be conducted at such times and locations as deemed appropriate. The term premises is used in the broadest sense and includes all land, property, buildings, structures, cars, trucks, equipment and all other means of conveyance owned by, leased to, or otherwise being utilized in business conducted by HPS Mechanical, Inc. Employees are responsible for securing their personal effects and will be held accountable for the contents therein.

VI. SUBCONTRACTORS

The provisions outlined in this policy are applicable to HPS Mechanical Inc.'s subcontractors and their employees. Violation of these provisions or refusal to cooperate with implementation and enforcement of this policy will result in HPS Mechanical, Inc. barring such personnel from their facilities and job sites or termination of the subcontractor's employment agreement.

VII. PREVIOUS EMPLOYER INQUIRY

When HPS Mechanical, Inc. hires a new driver, the Human Resources Department will contact all of the driver's previous employers within the past three years. The purpose of the contact is to inquire if the previous employer is aware of any violations outlined in CFR 49 that might have been committed by the driver. The driver must sign a written authorization to release this information from the previous employers to HPS Mechanical, Inc. If the driver does not sign the authorization, HPS Mechanical, Inc. will not use the

driver. The Human Resources Department must have information from this inquiry on file within 30 days of hiring the driver, or the company will not continue the driver's employment.

VIII. SUBSTANCE SCREENING

For purposes of assuring compliance with this policy and federal and state laws, employees and applicants will be subject to controlled substances screening and/or alcohol testing under the circumstances described below. Substance screens include testing of urine or breath to determine use or impairment.

Applicant Testing

Applicants will be subject to substance screening as a pre-qualification condition prior to employment. Refusal to submit to such screening makes it impossible to medically qualify the applicant for employment.

Reasonable Cause Testing

The employee may be subject to substance screening and/or alcohol testing when there is reasonable cause to suspect an employee has reported to work or is working impaired. Refusal to submit to such screening will be considered to be a positive test and will result in the termination of the employee based solely on HPS Mechanical Inc.'s independent authority. A driver must submit to a Controlled Substance and Alcohol Test (CSAT) any time the employer has a reasonable suspicion or believes the driver has violated the CSAT prohibitions. Only a supervisor who has been properly trained may make the determination to test. Each supervisor is required to receive a minimum of one hour of training on alcohol abuse and controlled substances abuse.

Industrial Injury and/or Accident Testing

A drug test will be performed on any employee involved in an industrial injury and/or property damage accident when it is apparent the injury/accident could have been avoided, the employee contributed to the accident or cannot be completely discounted as a contributing factor to the accident. A drug test will also be performed at the request/demand of customers where an employee is injured, caused an injury to another or is involved in a property damage accident at the customer's job site. All injuries or accidents, no matter how minor, must be reported without delay to the company's Safety Director or the designee.

IX. DEPARTMENT OF TRANSPORATION

Department of Transportation (DOT) Random Drug Testing

Unannounced random drug testing for DOT-regulated drivers shall be conducted throughout the year. The computer-generated random selection process ensures each driver has an equal chance of being tested each time selections are made. Minimum testing rates are as follows:

- 10% of total number of drivers will be randomly tested for alcohol during the year

- 50% of total number of drivers will be randomly tested for drugs during the year

Safety Sensitive On-Site Random Drug Testing

Unannounced random drug testing shall be done throughout the year at a 50% annualized rate for non-DOT regulated safety sensitive employees assigned to the field or the Shop.

Driver's Post Traffic Accident Testing

An accident is defined as an occurrence involving a commercial motor vehicle on a public road, highway or street, open to public travel, while in interstate or intrastate commerce that results in:

- A fatality;
- Injury to a person requiring immediate medical treatment away from the scene of the accident, or
- Disabling damage to a vehicle requiring it to be towed from the scene.

A driver regulated by DOT who is involved in an accident that results in loss of life will be tested for both alcohol and drugs, regardless of who is at fault.

In addition, if the accident resulted in bodily injury to a person who, as a result of the injury, requires immediate medical treatment away from the scene of the accident, or one or more motor vehicles incurring disabling damage as a result of the accident must be transported away from the scene by a tow truck or other motor vehicle **and** the driver received a citation for a moving violation in connection with the accident, then:

- An alcohol test is required if the citation was received within eight hours of the accident; and
- A drug test is required if the citation was received within 32 hours of the accident.

Post-accident alcohol testing must be conducted within two hours of the accident. If a test cannot be conducted within eight hours, it should be not performed, and reports filed stating the reason the test was not administered.

Drivers subject to post-accident testing must refrain from consuming alcohol for eight hours following the accident or until he or she submits to the alcohol test, whichever occurs first.

A driver who refuses or fails to give a specimen as required will be legally disqualified to drive commercially for one year and is subject to immediate termination from our company based solely on HPS Mechanical, Inc.'s independent authority.

HPS Mechanical, Inc.'s policy demands that employees report all accidents to their supervisor **and** to the Company's Safety Director as soon as possible. Upon notification, company officials will assist in determining the proper medical facility or lab for the driver to contact for testing. The specimen must be sent to a National Institute on Drug Abuse (NIDA) certified laboratory for analysis if the testing is subject to DOT regulations.

Note: HPS Mechanical, Inc. has a post-accident or post-industrial injury drug and alcohol testing policy totally independent from DOT regulations whereby our employee will be tested when it is apparent the injury/accident could have been avoided, the employee contributed to the injury/accident, or could not be discounted as a contributing factor to the injury/accident. These tests can be Non-NIDA certified.

X. TESTING

The DOT Testing Program requires testing for the following: marijuana, cocaine, opiates, amphetamines, phencyclidine and alcohol. The use of these substances by commercial drivers is prohibited at all times. These five substances are the only substances for which testing may be conducted under the DOT regulations. When a driver has a positive test result, the employee will not be permitted to drive a regulated vehicle until the driver has successfully completed the return-to-duty process identified in regulation.

Consumption of alcohol is generally legal, except while driving a regulated vehicle or within four hours prior to driving a regulated vehicle. When a driver has an alcohol test result with a blood alcohol content of 0.02 or greater, but less than 0.04, the employee will not be permitted to drive a regulated vehicle until at least 24 hours has passed following the test. When a driver has an alcohol test result with a blood alcohol content of 0.04 or more, the employee **will not** be permitted to drive a regulated vehicle until the driver has successfully completed the return-to-duty process identified in regulation.

The Safety Sensitive Random, Post-Accident or Post-Injury Safety Sensitive testing Program requires testing for the following:

- Alcohol
- Amphetamines (Amphetamine/Methamphetamine)
- Barbiturates (Amobarbital, Butalbarbital, Butalbital, Pentobarbital, Phenobarbital, Seconbarbital)
- Benzodiazepines
- Cannabinoids
- Cocaine (Benzoylecgonine)
- Opiates (Codeine/Morphine, Hydrocodone/Hydromorphone)
- Methadone
- Methaqualone
- Phencyclidine
- Propoxyphene (Norpropoxyphene)
- Ethanol

Medical Review Office (MRO):

The MRO (Medical Review Office) for HPS Mechanical, Inc. in the Bakersfield area is Industrial Medical Group, 2501 “G” Street Bakersfield, CA 93301, telephone (661) 327-2225.

The MRO in the San Diego area is Sharp Rees-Stealy Genesee, 2020 Genesee Ave. San Diego, CA 92123, telephone (858) 616-8400.

Disciplinary Action

Any company employee will be subject to termination if any of the following occurs:

- An employee refuses to submit or fails to submit a urine specimen within two hours after a request is made by a company officer.
- It is discovered the urine, blood or any other submitted sample has been switched, altered or masked by any substance, additives or any other product to thwart a drug or alcohol test.
- The driver, as required by laws governing post-accident drug testing, fails to give a urine specimen for testing as soon as possible after the accident or as prescribed by law.
- An employee refuses to submit to a search or inspection for controlled substances and/or illegal or unauthorized items.
- An employee's test results confirm the presence of alcohol, drugs or controlled substances.
- An investigation reveals the employee has an on-going substance abuse problem that could affect job performance and the safety of the employee and his or her co-workers.
- An employee's utilization of another employee's prescription medications.
- Any employee failing to notify the company's Human Resources Department or Safety Director, prior to reporting for work, that they are taking an over-the-counter or prescribed medication that could impair the employee's job performance or the safety of that employee and his or her co-workers.

Second Chance in Lieu of Termination

HPS Mechanical, Inc. has a policy of zero tolerance for drug/alcohol abuse and any employee in violation of the company's Drug/Alcohol/Search Policy will be terminated. However, those employees who voluntarily contact the company's General Superintendent or immediate supervisor and admit they have a drug or alcohol problem, and demonstrate a willingness to seek professional help, may, at the discretion of HPS Mechanical, Inc., be afforded the opportunity for a second chance in-lieu of termination, if the employee has:

- At least six-months of full-time employment
- No pending disciplinary actions
- No drug/alcohol testing results pending
- Not been considered for discharge for below-standard work performance
- Has not had an injury or property damage accident within past ten days

This second chance opportunity will be based upon the employee's acceptance of terms and conditions set forth in a Written Agreement, also known as a "last chance agreement," that spells out employee and employer requirements. Thereafter, the employee will be placed on an unpaid leave of absence during which time the employee

must have an evaluation performed by a qualified Substance Abuse Professional (SAP), the cost of which will be borne by the employee.

The SAP will:

- Determine treatment needs.
- Assist the employee with locating service providers.
- Issue "proof-of-wellness" for release to work.
- Assist the employer with post-treatment testing frequency and length of testing program issues.
- Be able to assist both employee and employer on other related treatment matters.

The employee will not be returned to work without proof of wellness, in a form satisfactory to the company, that demonstrates the employee is fit and ready to return to work.

The employee must agree to participate in a rigorous post-treatment random and unscheduled drug testing program monitored by the company that reveals no detectable amounts of a substance prohibited by this policy. This post-treatment testing program will be conducted for a minimum of 60 months.

The employee will be terminated if they fail to successfully complete any phase of the treatment and follow-up program, including producing ongoing documentation verifying continued attendance and participation in follow-up care/counseling/therapy as recommended by the treatment specialist.

Regulatory Compliance

HPS Mechanical, Inc. will fully comply with the following:

- All DOT-regulated and safety sensitive employee(s) are subject to drug/alcohol testing.
- All supervisors and management shall receive training to identify symptoms, manifestations and behavioral patterns that indicate drug or alcohol abuse.
- HPS Mechanical, Inc.'s Human Resources Department is responsible for managing the company Drug/Alcohol and Search Program, for receiving and maintaining medical/drug results, and maintaining and assuring confidentiality of such records.
- HPS Mechanical, Inc. will maintain appropriate records, such as chain of custody forms, drug/alcohol testing forms, signed acknowledgment/consent forms, and test results for a minimum of:
    - Three years after the termination of a client contract.
    - Ten years after the date of termination of an employee for violating this policy.

If a driver refuses to submit to a required test, the refusal will be treated the same as a positive test result. Additionally, if a driver has violated the prohibitions, return-to-duty testing shall be conducted before the driver can once again operate a commercial motor vehicle, and follow-up testing shall be conducted for at least 12 months after the return-

to-duty test. All testing shall be conducted in accordance with the United States Department of Transportation rules (49 CFR Part 40).

EMERGENCY RESPONSE AND EVACUATION PLAN

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EVACUATION MAP - BAKERSFIELD OFFICE A-1
EVACUAATION MAP - SAN DIEGO OFFICE A-2

HPS MECHANICAL
EMERGENCY RESPONSE AND EVACUATION PLAN

I. REGULATORY REFERENCES

- 8 CCR 3220

II. POLICY

HPS Mechanical has a written an Emergency Response/Evacuation Plan that addresses potential emergency scenarios at the office and shop facility. This Plan addresses the following topics:

- Emergency Escape Procedure, Evacuation Routes, and Assembly Points
- Training and Education

III. FIRST AID/MEDICAL ATTENTION

HPS Mechanical has employees trained in First Aid/CPR. Employees at the facility will be informed as to the identity of the first aid attendants and how to contact them. All potential injuries/illness must be reported immediately to management for further assessment, including the possibility of activating 911 emergency medical response.

IV. LIFE SAFETY (EGRESS)

HPS Mechanical shall ensure that adequate access and egress is provided for all buildings and structures. Items to consider in a life safety program include:

- Exits and exit access doors that are not obvious should be clearly marked as exits.
- Those doors that are not intended to provide an exit will be marked “Not an Exit.”
- Areas that contain more than 20 people shall have a minimum of two separate means of egress.
- Exits must remain clear of obstructions at all times (i.e., no storing of material in an exit way).

V. EVACUATION PLAN AND PROCEDURES

In the event of an emergency, employees shall be alerted by:

- Inter office phone
- Verbal announcement
- Cell phones
- Fire and/or alarm systems

In the event of an emergency, employees shall evacuate by means of the nearest available marked exit. Evacuation maps are posted on the walls in the office and shop areas.

Portable fire extinguishers are provided in the workplace for employee use. In the event of fire, any properly-trained employee may use an extinguisher to attempt to extinguish an incipient stage fire.

In the event of an emergency evacuation, employees shall evacuate through the nearest emergency door and muster at the assembly points designated on the Emergency Evacuation Map. The Safety Coordinator or the highest ranking employee present will then take an attendance roll check of all employees. Each employee is responsible for reporting to his/her supervisor so that an accurate head count can be made.

VI. TRAINING

Emergency Response training is provided to all personnel employed by HPS Mechanical. Contractor personnel working on HPS Mechanical property are given an initial orientation session, which includes the basic emergency response procedures and expectations.

Training shall be provided:

- Initially for all new employees
- When responsibilities change
- When site conditions change
- Annually

VII. EARTHQUAKE EMERGENCY PROCEDURES

<u>During an Earthquake</u>

- If you are indoors:
  - Do not leave the building because objects can fall on you.
  - Take cover under a piece of heavy furniture or against an inside wall and hold on.
- If you are outdoors:
  - Move into the open, away from buildings, trees, masts, bridges, rigs, streetlights, and utility wires.
  - Remain in the open area until the shaking stops.
- If you are in a moving vehicle:
  - Stop, stay in the vehicle and assess your location for hazards.
  - If necessary, move to an area that is clear from trees, electrical poles, buildings, etc.
  - Once the shaking has stopped, proceed with caution, avoiding bridges and other elevated structures that might have been damaged by the quake.

After the Earthquake:

- Be prepared for aftershocks.
  - Although smaller than the main shock, aftershocks cause additional damage and may bring weakened structures down.
  - Aftershocks can occur in the first hours, days, weeks, or even months after the quake.
- Remember to help.
  - Your colleagues may require special assistance due to their injuries. However, do not move seriously injured persons unless they are in immediate danger of further harm.
- Return to buildings only when authorities say it is safe to do so.
- Use the telephone only for emergency calls.
- Leave the area if you smell gas or fumes from other chemicals.
- Open closets and cupboards cautiously.

VIII. BOMB THREAT EMERGENCY PROCEDURES

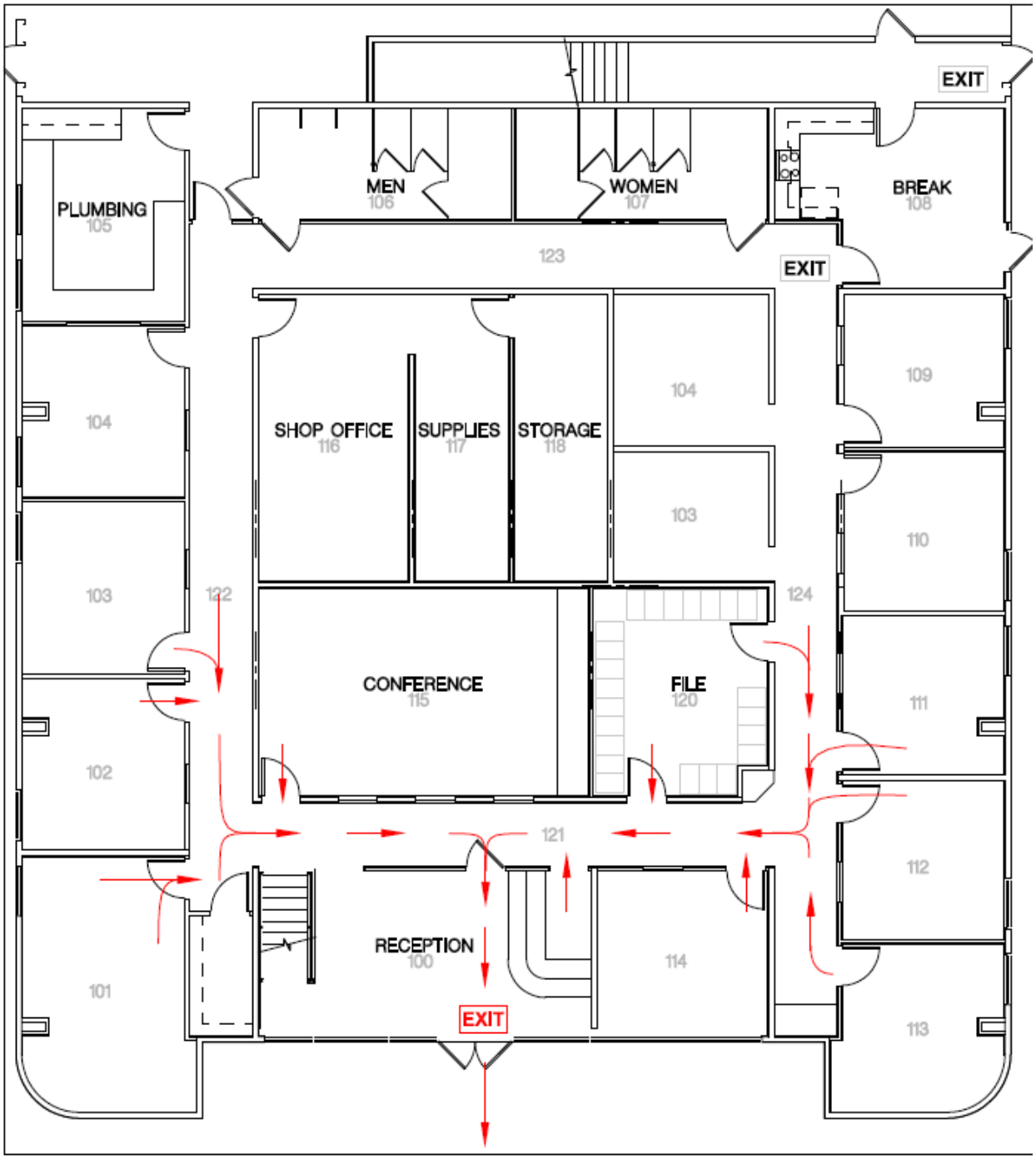
Bomb Threat by Phone

- Check caller ID; if there is a number, write it down.
- Keep the caller on the line as long as possible (do not hang up on the caller).
- Try to keep the caller talking so that you can gather more information.
- Ask the following questions:
  - When is the bomb going to explode?
  - Where is the bomb right now?
  - What does the bomb look like?
  - What kind of bomb is it?
  - Where are you calling from?
  - Why did you place the bomb?
- Listen carefully.
- Be polite and show interest.
- Notify management immediately.

FOR ALL BOMB THREATS, CALL 911

- When contacting 911, provide the following information:
  - Your name and telephone number
  - Address of the facility
  - Description of the thread
  - Location of bomb inside the building (if known)
- Follow instructions as provided by 911 operators.

HPS MECHANICAL
EMERGENCY RESPONSE AND EVACUATION PLAN
BAKERSFIELD OFFICE



1st FLOOR - SOUTH

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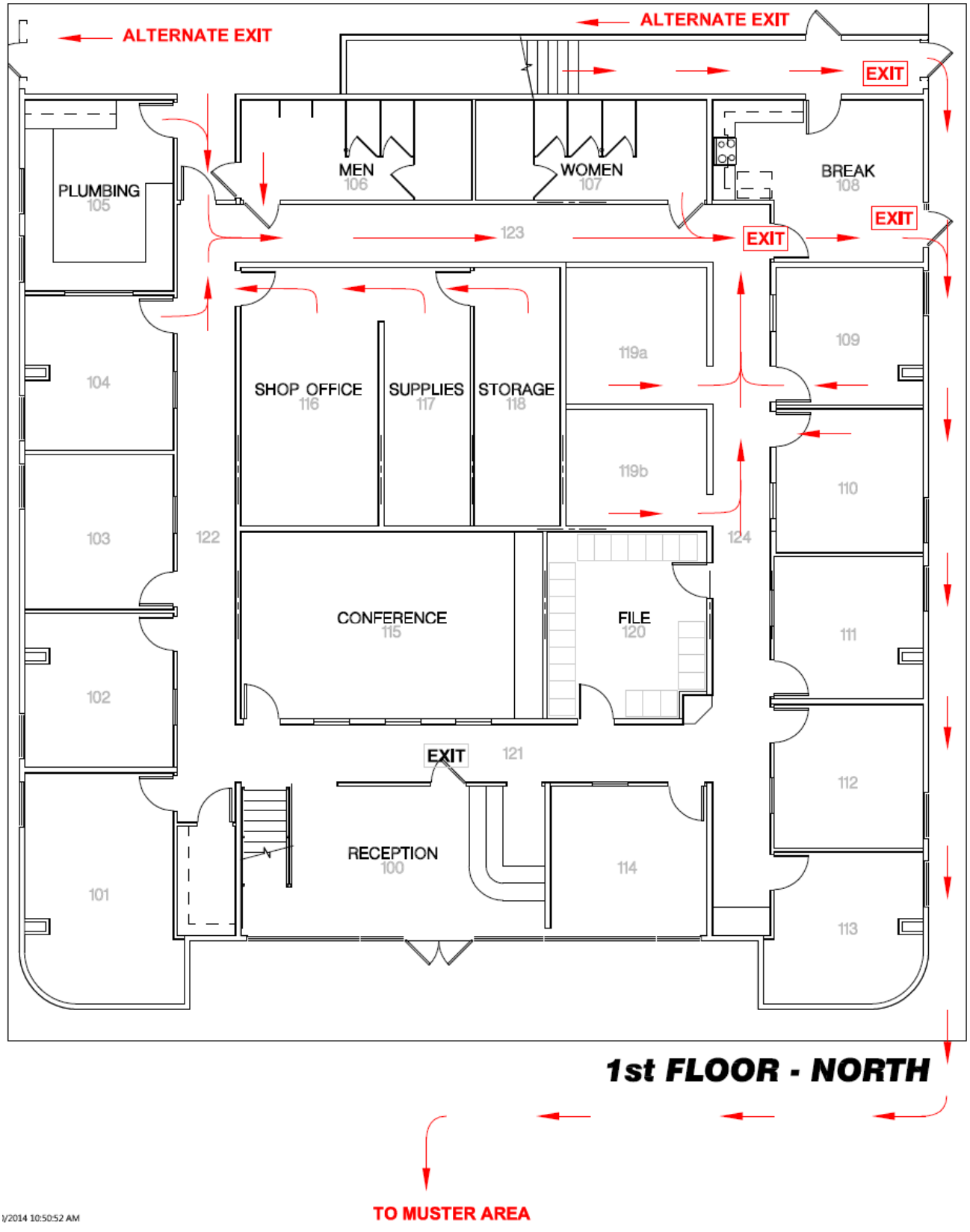
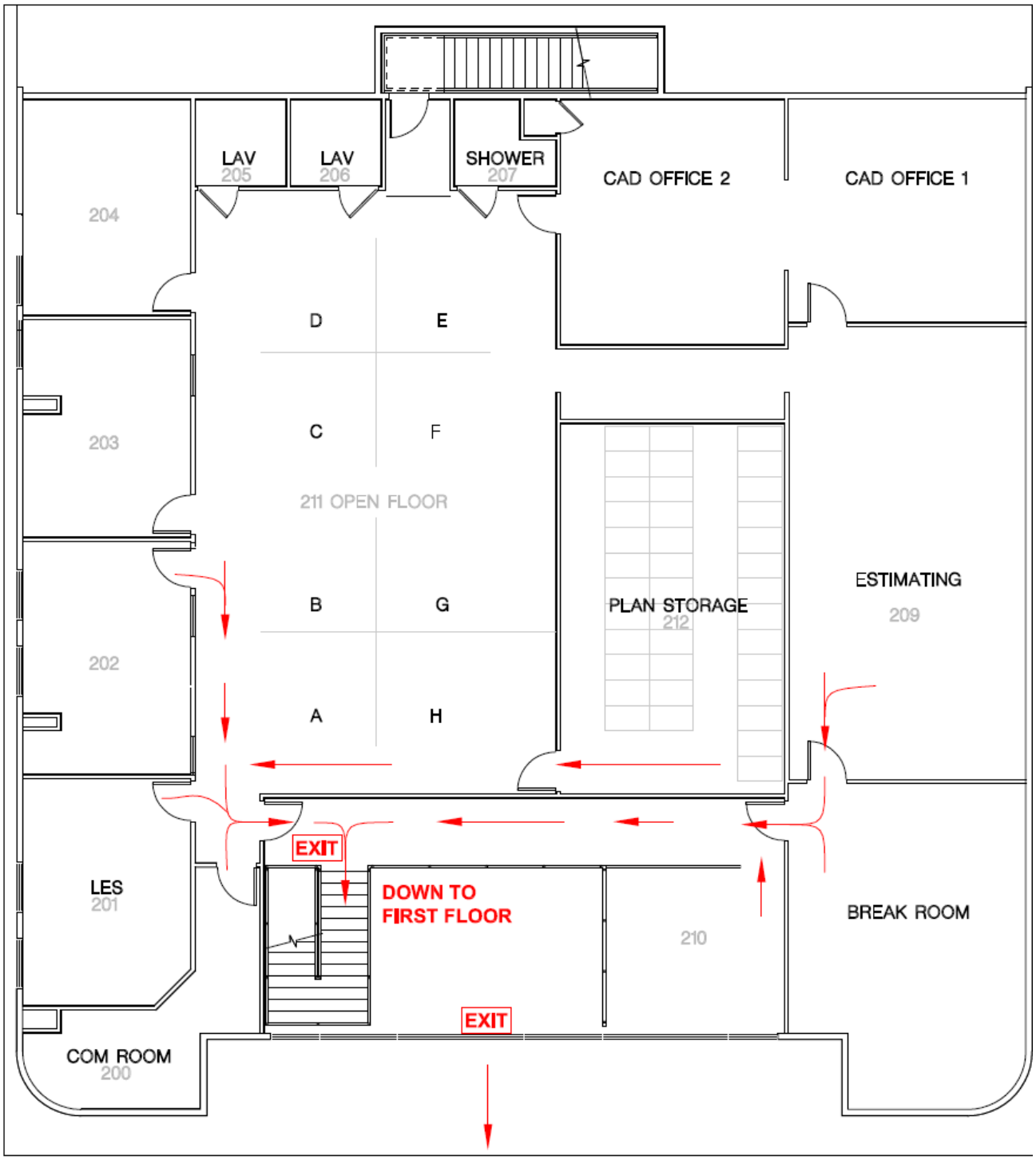
TO MUSTER AREA

HPS MECHANICAL
EMERGENCY RESPONSE AND EVACUATION PLAN
BAKERSFIELD OFFICE

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SHOWER
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PLAN STORAGE
212
ESTIMATING
209
202
A
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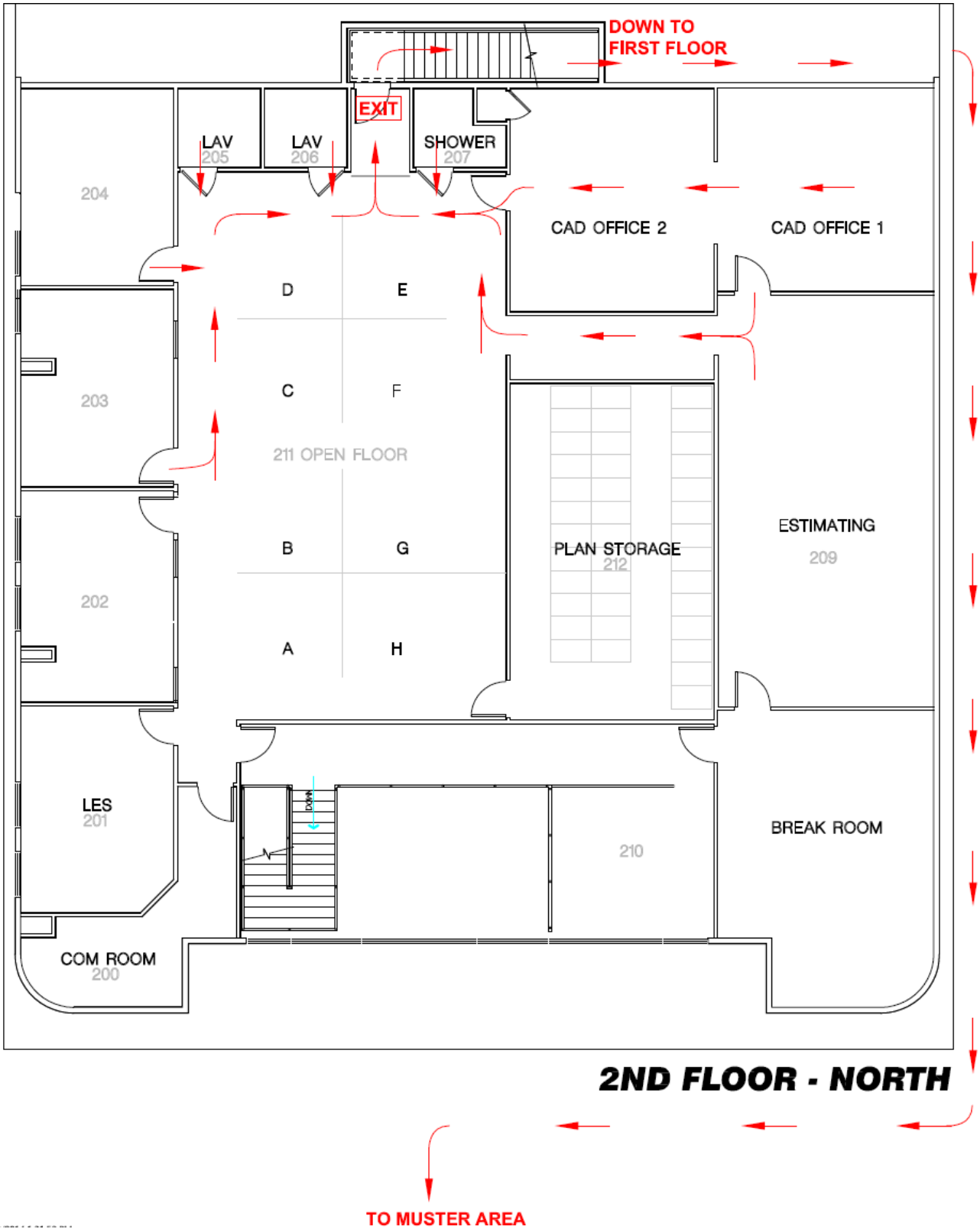
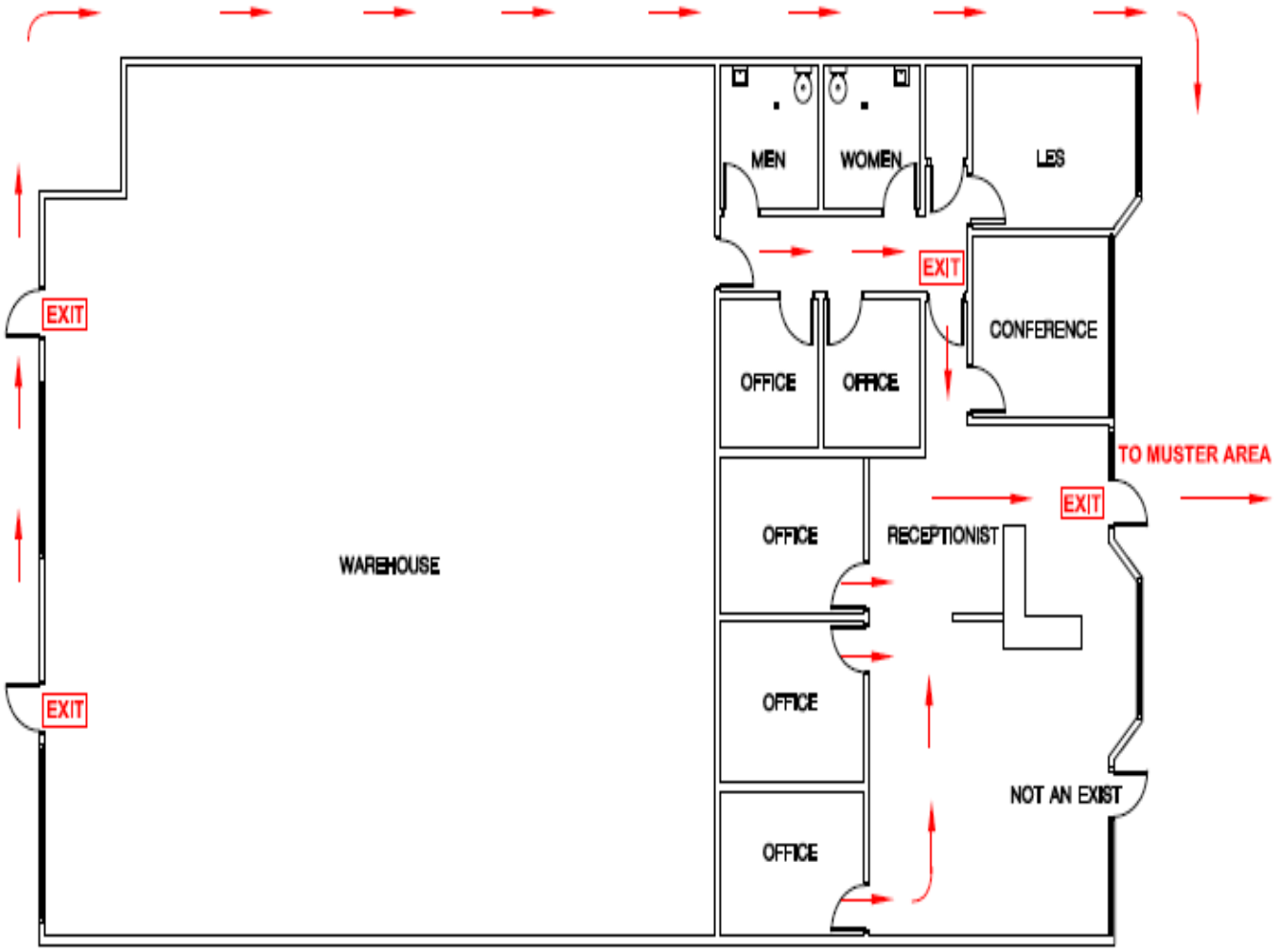
EXIT
LES
201
DOWN TO
FIRST FLOOR
210
BREAK ROOM
EXIT
COM ROOM
200
2ND FLOOR - SOUTH
TO MUSTER AREA

HPS MECHANICAL
EMERGENCY RESPONSE AND EVACUATION PLAN
BAKERSFIELD OFFICE



HPS MECHANICAL
EMERGENCY RESPONSE AND EVACUATION PLAN
SAN DIEGO OFFICE



HEAT ILLNESS PREVENTION PROGRAM

Revised (9/23/2018)

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JOBSITE-SPECIFIC EMERGENCY RESPONSE INFORMATION A-1

HPS MECHANICAL
HEAT ILLNESS PREVENTION PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 3395

II. SCOPE

HPS Mechanical has developed this Heat Illness Prevention Program to prevent the occurrence of heat illnesses, to plan for heat illness should it occur, and to comply with the Cal/OSHA Heat Illness Prevention standard.

This program applies to employees in all outdoor places of work where a risk of heat illness exists.

III. DEFINITIONS

Shade: Blockage of direct sunlight and may be provided by any natural or artificial means that does not expose employees to unsafe or unhealthy conditions and that does not prevent access or use.

Acclimatization: Temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within for to fourteen days of regular work for at least two hours per day in the heat. Proper and constant hydration is a key component of acclimatization.

Heat Illness: A serous medical condition resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke.

Environmental Risk Factors for Heat Illness: Working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personal equipment worn by employees.

Personal Risk Factors for Heat Illness: Factors such as an individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affect the body's water retention or other physiological responses to heat.

Preventative Recovery Period: A period of time to recover from the heat in order to prevent heat illness.

IV. RESPONSIBILITIES

HPS Mechanical management is responsible for ensuring compliance with this Heat Illness Prevention Program.

HPS Mechanical shall:

- Train all employees, including supervision, on the provisions of this program.
- Comply with all provisions of this program.

V. TRAINING

Training shall be provided to employees and supervisors prior to their commencement of outdoor work in which the potential for heat exposure and subsequent heat illness symptoms may occur. Training information will include:

- The environmental and personal risk factors for heat illness.
- The employer's procedures for complying with the requirements of this standard (e.g., implementing action level requirements during 80-degree temperatures and above).
- The importance of frequent consumption of small quantities of water, up to four (4) cups per hour, when the work environment is hot, as employees are likely sweat more than usual in the performance of their duties.
- The importance of acclimatization.
- The different types of heat illness and the common signs and symptoms of heat illness, and how heat illness can progress from mild symptoms and signs to serious and life-threatening illness.
- Prevention of heat stress.
- The availability of shade and period of time for the preventive recovery of an employee who needs and/ or expresses the need for such a recovery time.
- The importance to employees of immediately reporting to the employer, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in co-workers.
- The employer's procedure for responding to symptoms of possible heat illness, including how first aid or emergency medical services will be provided should they become necessary (Attachment A).
- The presence of sufficient drinking water for all employees.
- The presence of adequate shade for all employees.
- How to monitor the weather.

- Adjusting work hours and/or work conditions when necessary (such as during a heat wave or when temperatures reach 95 degrees or higher). A supervisor will have authority to adjust the crew's working hours in the event of hot working conditions, such as air temperature exceeding 95 degrees or the occurrence of a heat wave.
- Ensuring any employee is provided with a recovery period if the employee is suffering from heat illness, appears to be suffering from heat illness, or an employee believes a preventive recovery period is necessary.
- Communication to employees that the HIPP is available to them at the worksite upon request.

VI. ACCLIMATIZATION

- Employees new to working during "heat wave" environments are at the highest risk of heat illness. This may potentially include all new employees, as well as employees returning to work after an absence from working in a hot outdoor environment. A heat wave is when the predicted temperature will be at least 80 degrees Fahrenheit and at least ten (10)_degrees higher than the preceding five-day average high daily temperature.
- As noted above, employees shall initially work no more than six (6) hours when beginning work, or until acclimatized.
- Employees may be assigned a longer work period in a hot outdoor environment after the employee and the supervisor agree that the employee has become acclimatized. The supervisor will make such a decision based on frequent observation of the employee, discussions with the employee and the workplace and environmental conditions. In no case will any employee work a shift of eight (8) hours or more until it is certain the employee is able to do so safely. Newly assigned employees shall be closely monitored for a period of 14 days by the supervisor.

VII. PROVISION OF WATER

- The employer shall provide drinking water in sufficient quantities so that each employee has access to one quart of water per hour throughout the entire work shift.
- Water shall be fresh, pure, suitably cool, and provided by HPS Mechanical management. All sources of drinking water shall be maintained in a clean and sanitary condition. Water shall be located as close as practicable to employee work areas.
- The dipping or pouring of drinking water from containers is prohibited regardless of whether or not the containers are fitted with covers. The use of a common cup, glass or other vessel for drinking purposes is prohibited.

- Any necessary replenishment of water will be accomplished by the supervisor with sufficient lead-time to ensure compliance with a one quart/per hour/per employee requirement.
- During tailgate safety meetings, supervisors shall discuss and encourage employees to drink water constantly throughout the day.

VIII. ACCESS TO SHADE

The employer shall make available shade to employees when the temperature exceeds 80 degrees Fahrenheit. Employees shall be allowed and encouraged to take a preventative cool-down rest in the shade provided when they feel the need to do so to protect themselves from overheating. Such access to shade shall be permitted at all times.

The shaded area shall:

- Be sufficient enough to block direct sunlight (so that the employee does not cast a shadow in the area of blocked sunlight) and may include areas under canopies (pop-ups).
- Be located as close as practical to work areas.
- Be either open to air or provided with ventilation or cooling.
- Have sufficient space to reasonably accommodate each member of the crew at any time, including meal periods, and enough space so that they can sit in a normal posture fully in the shade without having to be in physical contact with each other.
- Shade is not adequate when heat in the area of shade defeats the purpose of the shade, which is to allow the body to cool. Using vehicles and machinery which may cast a shadow during part of the day is not a sufficient source of shade.
- Supervisors shall inform employees what shade is available and how to access shade as part of employee training and at tailgate meetings.
- Shade may be provided in the form of canopies or pop-ups; the supervisor will determine the location of such pop-ups at each area of operation and will ensure the erection of needed pop-ups prior to the commencement of work at each area of operation.
- As work of the crew progresses in the area of operation, pop-ups may be moved or additional pop-ups may be erected.
- The location of the pop-ups much be maintained within the work location of the crew to ensure such shade will be accessible and not require travel of more than one quarter (1/4) of a mile walk or five (5) minutes of walk travel, whichever is less, from the work location of the crew.

- Supervisors will encourage the use of shade for any employee who exhibits signs or symptoms of heat illness or who requests access to shade. A properly air-conditioned vehicle constitutes an acceptable means of shade provision.

Upon an employee's request, the Company shall also provide timely access to shade as described above when the outdoor temperature in the work area does not exceed 80 degrees Fahrenheit.

IX. HIGH-HEAT PROCEDURES

High-heat procedures shall be implemented when the temperature equals or exceeds 95 degrees Fahrenheit. These procedures include, to the extent practicable:

- Ensuring that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor when necessary. Cell phones may be used for this purpose only if there is reliable reception.
- Frequent observation of employees for any heat illness sign or symptom.
- Reminding employees throughout the entire work shift to hydrate frequently.
- Close supervision of new employees by a supervisor or designee for the first 14 days of the employee's employment, unless the employee indicates at the time of hire that he or she has encountered similar outdoor conditions for at least ten (10) of the past 30 days and for four (4) or more hours per day.
- Ensuring that the employee takes a minimum ten-minute net preventative cool-down rest period every two hours.
    - These cool-down rest periods may be combined any other meal or rest period if the timing of the preventative cool-down rest period coincides with a required meal or rest period, thus resulting in no additional preventative cool-down rest period required in an eight-hour workday.
- Pre-shift meetings will be held prior to starting work to review the high-heat protocol including reminders for employees to take a cool-down rest period when necessary.

X. PREVENTATIVE RECOVERY PERIOD

Any employee suffering from heat illness, appearing to be suffering from heat illness, or believing a preventive recovery period is needed, shall be immediately provided with access to an area with shade for that period of time necessary for a recovery, not less than five (5) minutes in duration. The employee shall be promptly evaluated by the supervisor to determine whether emergency medical services are necessary and, if so, the supervisor shall comply with the emergency response provision of the

program. The employee must not return to work until any signs or symptoms of heat illness have abated.

XI. RESPONDING TO SYMPTOMS OF HEAT ILLNESS

Upon learning that an employee may be suffering from heat illness, appearing to be suffering from heat illness, or being informed by an employee or believing a preventive recovery period is need for an employee, the supervisor will instruct the employee to stop working and go to the shaded area provided by the employer.

In the shaded area, the supervisor will assess the affected employee's condition. If in, the supervisor's judgment, the affected employee is suffering from heat illness or upon the affected employee's belief that he/she is suffering from heat illness, the supervisor will notify the next level of management and will follow the procedures for providing emergency medical services. The employee will be encouraged to drink water, and the supervisor will designate a second employee knowledgeable in recognizing the symptoms of heat illness to remain with the affected person during the preventative recovery period.

In the event any employee or supervisor forms an opinion that an employee has in fact suffered or may suffer from heat illness, the supervisor will ensure appropriate first aid care is provided pending the arrival of emergency response services.

If in the supervisor's judgment, the affected employee is not suffering from heat illness, the affected employee will be instructed to wait in the shaded area until it is determined the employee may return to work.

Supervisors shall be trained on heat illness recognition (i.e. decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior, or convulsing) and emergency response procedures.

XII. PROCEDURES FOR PROVIDING EMERGENCY MEDICAL SERVICES

Prior to beginning work in each area of operation, the supervisor will inform employees on the jobsite of the work location and the type of work. An employee will be designated to meet emergency responders at an identified location and direct the emergency responders to the location of the employee suffering from heat illness. If necessary, employee(s) will be transported to meet emergency responders depending on the situation.

In the event a supervisor is not present or is unavailable to contact emergency medical services, one or more employees will be directed at the beginning of work to implement the procedures if needed.

The supervisor will be equipped with means of communication such as a cell phone or radio.

XIII. RECORDS

Records of employee training will be maintained in accordance with the Company's Injury and Illness Prevention Program.

JOBSITE-SPECIFIC EMERGENCY RESPONSE INFORMATION

Information for Employees and Supervisors:

Method employees will use to report heat illness (i.e., cell phone, radio, etc.):

Method the Company will use to contact emergency medical services (i.e., cell phone, radio, etc.)

Method to transport employee to meeting point:

Information for Emergency Medical Services:

Jobsite Location (address):

Nearest main road or intersection:

Directions to be given to Emergency Medical Services:

Meeting point with Emergency Medical Services:

Special instructions or precautions to be given to Emergency Medical Services:

CRANE AND RIGGING PROGRAM

(February 2019)

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IV. RIGGING A LOAD 2
V. CRANE SAFETY 3
VI. HAND SIGNALS 4
VII. CRITICAL LIFTS 4

HPS MECHANICAL

CRANE AND RIGGING PROGRAM

I. REGULATORY REFERENCES

- 8 CCR, Subchapter 4. Construction Safety Orders, Article 15. Cranes and Derricks in Construction
- 8 CCR, Subchapter 7. General Industry Safety Orders, Group 13. Cranes and Other Hoisting Equipment

II. GENERAL

HPS Mechanical is dedicated to the protection of our employees from occupational injuries and illnesses and recognizes the potential for serious injury or death while rigging and lifting materials with the aid of cranes. Accordingly, this program has been developed to communicate mobile crane safety requirements the proper techniques of rigging in order to reduce the potential of injury.

III. RIGGING SAFETY REQUIREMENTS

The following requirements apply when rigging a load:

- Only rigging equipment that is in good condition may be used.
- All rigging equipment shall be inspected prior to use to ensure it is safe.
    - Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during its use to ensure that it is safe. Defective equipment shall not be used and shall be removed from service immediately.
- Rigging equipment shall not be loaded beyond its recommended safe working load. Identification markings that indicate the rated capacity for the type(s) of hitch(es) used, the angle upon which it is based, and the number of legs if more than one, shall be permanently affixed to the rigging.
- All rigging equipment shall be stored and maintained in accordance with the manufacturer's recommendations.
- Rigging equipment not in use shall be removed from the immediate work area so as not to present a hazard to employees.
- Slings (e.g., wire rope, synthetic web or rope, and chain) and rigging hooks shall be inspected at least annually by a qualified person and be permanently labelled with a durable tag (synthetic or metal) affixed to the device for identification purposes. Equipment that is not properly labelled shall not be used (manufacturer-supplied serial numbers or other individualized markings meet the labelling requirements).

The Responsible Individual for the equipment shall ensure that a designated person determines whether conditions found during the inspection(s) constitutes a hazard and whether a more detailed inspection is required.

Defective equipment shall be removed from service and destroyed to prevent inadvertent reuse. Examples of conditions that may require rigging hardware to be removed from service include:

Synthetic slings with:

- Abnormal wear
- Torn stitching
- Visible red threads from the interior of the sling fabric
- Broken or cut fibers
- Discoloration or deterioration
- Evidence of heat damage

Wire-rope slings with:

- Kinking, crushing, bird-caging, or other distortions
- Evidence of heat damage
- Cracks, deformation, or worn end attachments
- Broken wires in excess of regulatory requirements
- Hooks opened more than 15% at the throat
- Hooks twisted sideways more than ten inches from the plane of the unbent hook
- Shackles, eye bolts, turnbuckles, or other components that are damaged or deformed.

Hooks and shackles shall be used in accordance with manufacturer's recommendations or the most conservative requirement. Hooks on overhaul ball assemblies, lower load blocks, or other attachment assemblies shall be of a type that can be closed and locked, thus eliminating the hook throat opening. Alternatively, an alloy anchor type shackle with a bolt, nut and retaining pin may be used.

IV. RIGGING A LOAD

When rigging a load, the following shall be observed:

- Determine the weight of the load - do not guess.
- Determine the proper size for slings and components.
- Ensure shackle pins and shouldered eye bolts are installed in accordance with the manufacturer's recommendations.
- Ensure ordinary (i.e., shoulderless) eye bolts are threaded in at least 1.5 times the bolt diameter.
- Use safety hoist rings (i.e., swivel eyes) as a preferred substitute for eye bolts whenever possible.

- Pad sharp edges to protect slings with suitable material such as wood, tire rubber or other pliable material.
    - Machinery foundations or angle-iron edges may not feel sharp to the touch but could cut into rigging when under several tons of load.
- Do not use slings, eye bolts, shackles, or hooks that have been cut, welded, or brazed.
- Determine the center of gravity and balance the load before moving it, keeping the attachment points of rigging accessories as far above and as far away from the center of gravity as possible.
- Initially lift the load only a few inches to test the rigging and balance.
- Tag lines shall be used unless their use creates an unsafe condition.
- Protect rigging hardware as required. Items left in the sun may have surface temperatures that exceed the safe limits of synthetic lifting devices.

V. CRANE SAFETY

Cranes must not be assembled or used unless ground conditions are firm, drained, and graded to a sufficient extent so that, in conjunction with the use of supporting materials (if necessary), the equipment manufacturer's specifications for adequate support and degree of level of the equipment are met.

The crane manufacturer's procedures and prohibitions must be followed when assembling and disassembling equipment.

The assembly/disassembly of equipment must be directed by a competent and qualified person. Cranes shall be operated only by employee(s) who have been properly trained by an Accredited Certifying Entity for the type of crane to be used.

The work zone shall be identified by demarcating boundaries such as with flag and range limiting devices, or by defining the work zone as 360 degrees around the equipment, up to the maximum working radius.

A hazard assessment must be conducted to determine if any part of the equipment could get closer than 20 feet to a power line. If it is determined that any part of the equipment, load line or load could get closer than 20 feet to a power line, at least one of the following measures must be taken:

- Ensure the power lines have been de-energized and visibly grounded.
- Ensure no part of the equipment, load line or load gets closer than 20 feet to the power line.
- Determine the line's voltage and minimum approach distance.

A competent, trained person must conduct a visual inspection of equipment prior to each shift. This inspection must consist of observation for apparent deficiencies of items such as control mechanisms, pressurized lines, hooks and

latches, wire rope, electrical apparatus, tires (when used), and ground conditions.

All employees shall be kept clear of suspended loads and loads that will soon be lifted.

VI. HAND SIGNALS

Hand signals shall be used to communicate with operators unless voice communications equipment (i.e., radio, or equivalent) is used. Signals shall be discernible or audible at all times. Some special operations may require additional or modified signals. In all such cases, special signals shall be agreed upon and thoroughly understood by both the person giving the signals and the operator.

VII. CRITICAL LIFTS

Some lifts may be determined to be a critical lift in which collision, upsetting, or dropping could result in one or more of the following:

- Unacceptable risk of personnel injury or significant adverse health impact (either onsite or offsite).
- Significant release of radioactive or other hazardous material or other undesirable conditions.
- Undetectable damage that would jeopardize future operations or the safety of a facility.
- Damage that would result in unacceptable delay to the schedule or other significant program impact such as loss of vital data.

A lift shall also be designated as critical if the load requires exceptional care in handling because of size, weight, close tolerance installation, high susceptibility to damage, or other unusual factors. The authorizing organization shall identify and designate personnel responsible for determining the lift category and assign a person in charge of the entire lifting operation.

SILICA EXPOSURE CONTROL PLAN

(February 2019)

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HPS MECHANICAL

SILICA EXPOSURE CONTROL PLAN

I. REGULATORY REFERENCES

- 8 CCR 1528
- 8 CCR 1530
- 8 CCR 1503.1

II. GENERAL

HPS Mechanical will use *Alternative Exposure Control Methods* to protect its workers from overexposure to respirable crystalline silica resulting from the silica dust producing task(s) described in Section V below. These *Alternative Exposure Control Methods* are necessary because effective engineering controls required by "Table 1" of OSHA's *Respirable Crystalline Silica Standard* are not achievable for the respirable crystalline silica dust producing tasks within the scope of work for all projects in which HPS Mechanical is involved.

III. PURPOSE

The purpose of this written silica exposure control plan is to protect HPS Mechanical workers from overexposure to respirable crystalline silica. Such overexposure can lead to serious health problems including silicosis, lung cancer, chronic bronchitis, kidney disease, and autoimmune diseases. Therefore, HPS Mechanical will ensure that:

- No worker is exposed to respirable crystalline silica above the Permissible Exposure Limit (PEL) of 50 ug/m^3;
- An exposure assessment is performed for each worker who could be exposed to respirable crystalline silica at or above the Action Level (AL) of 25 ug/m^3.
- Worker exposure is reassessed whenever a change in production, process, control equipment, personnel, work practices, or any other reason that becomes apparent could change exposures to measure at or above the AL.

Whenever feasible, engineering and work practice controls will be established and implemented to reduce and maintain exposures at or below the PEL.

IV. RESPONSIBILITIES

The Competent Person on each jobsite is responsible for implementing the silica exposure control plan and will perform frequent and regular inspections of applicable areas of the jobsite, materials, and equipment to ensure that it is being properly implemented.

The Competent Person's responsibilities include, but are not necessarily limited to, ensuring that:

- An acceptable exposure assessment has been completed and documented for each applicable silica-related task affecting HPS Mechanical workers;
- The results of the exposure assessments are made available to affected workers and their designated representatives;
- Affected workers have received appropriate safety and health training on respirable crystalline silica generating tasks, accompanying hazards, and effective protective measures;
- Appropriate engineering controls are established whenever they are feasible;
- Appropriate safe work practices are established and implemented as needed;
- Respiratory protection is used when needed, and respirator use is in compliance with applicable respiratory protection standards;
- Housekeeping practices limit exposure to respirable crystalline silica as much as possible; and
- The effectiveness of this exposure control plan is evaluated at least annually, where applicable, and updated as necessary to keep affected workers from overexposure to respirable crystalline silica.

V. SILICA DUST PRODUCING TASKS

HPS Mechanical may perform work in close proximity to the following silica dust producing task(s):

Working on concrete with a:

- handheld drill
- handheld impact drill
- handheld rotary hammer drill
- handheld power saw
- jackhammer
- handheld powered chipping tool

Working in close proximity to:

- stationary masonry saw work on concrete
- handheld power saw work on fiber cement board with a blade diameter of eight (8) inches or less
- heavy equipment/utility vehicle work on silica-containing materials
- heavy equipment/utility vehicle work on excavations

VI. ENGINEERING CONTROLS

Acceptably effective engineering controls may not be not feasible for the respirable crystalline silica generating task(s) within HPS Mechanical's scope of work on all projects. However, when acceptable engineering controls *are* feasible, HPS Mechanical will always defer to, and comply with, "Table 1" of OSHA's *Respirable Crystalline Silica Standard.*

VII. SAFE WORK PRACTICES

All affected HPS Mechanical workers and supervisors shall observe the following safe work practices, or others not delineated below as determined by the Competent Person, for tasks and exposures within the scope of work to help prevent overexposure to respirable crystalline silica on each project.

- Affected workers will wear appropriate respirators until the results of the exposure assessment(s) indicate that overexposure to respirable crystalline silica will not occur without respiratory protection.
- Engineering controls (such as the wet method, HEPA filtered dust collection systems, and local exhaust ventilation) will be implemented in conjunction with respirator use to help control respirable crystalline silica concentrations if such controls are feasible but inadequate for worker protection from overexposure.
- To minimize the amount of dust generated, only sharp masonry drill bits and saw blades will be used when drilling or cutting into concrete.
- Affected workers are not permitted to eat, drink, smoke, or apply cosmetics in affected work areas.
- Affected workers are required to wash their hands and faces before eating, drinking, smoking, or applying cosmetics.
- Affected workers are not permitted to dry sweep, dry brush, or use compressed air to clean their clothes or surfaces in affected work areas. Cleanup will be performed only with HEPA filtered vacuums.

VIII. RESPIRATORY PROTECTION

Affected workers are required to use respiratory protection until the results of the exposure assessment(s) indicate that overexposure to respirable crystalline silica will not occur without respiratory protection.

Prior to respirator use, HPS Mechanical will ensure that each affected worker has:

- Received appropriate training on respiratory protection (including the contents of OSHA's *Respiratory Protection Standard),* and proper respirator selection, use, maintenance and storage requirements;

- Completed a medical evaluation and has been approved to work while wearing a respirator; and
- Completed fit testing procedures that have established an appropriate size, brand, and style of respirator for adequate protection from overexposure to respirable crystalline silica on this project.

When an employee must use a respirator for 30 or more days per year, an initial medical exam shall be made available within 30 days after the initial assignment (unless an exam meeting the requirements has already been conducted within the last three years). The exam shall include medical and work history, a physical exam, chest X-ray, pulmonary function test, testing for TB infection, and any other tests determined by the physician or other licensed health care professional.

IX. HOUSEKEEPING

Employees shall observe the following housekeeping measures when the project presents a hazard from silica dust exposure:

- Dry sweeping, and dry brushing are not permitted; a wet sweeping method or an approved sweeping compound (if available) shall be utilized to reduce dust exposure.
- Use of compressed air to clean clothing or surfaces in affected work areas is not permitted.
- A HEPA vacuum will be used for all silica-containing dust cleanup.

X. ACCESS RESTRICTIONS

HPS Mechanical shall restrict access in areas where HPS Mechanical workers are performing silica dust producing tasks, and shall restrict access to its own affected workers who must perform work in areas where other trades are pulverizing silica containing building materials.

Prior to starting work on any project where respirable crystalline silica exposure is a concern, HPS Mechanical will meet with all other affected employers to determine whether HPS Mechanical workers could be exposed to respirable crystalline silica from the work of other trades on the project. Where potential exposures are identified, the Competent Person will document the operations, their locations on the project, and when they will be performed.

Prior to starting work on any project where respirable crystalline silica exposure is a concern, the Competent Person will meet with all HPS Mechanical workers to inform them of the silica exposures on the project and the necessary affected area restrictions.

When HPS Mechanical workers are performing tasks that generate respirable crystalline silica:

- The affected work area will be barricaded with stanchions and yellow and black caution tape.
- The barricaded area will be large enough to prevent other trades in the area from overexposure to respirable crystalline silica, provided that they do not breach the barricade.
- Signs stating “Caution - Silica” will be posted around the perimeter of the barricaded areas to inform other trades why they should not to breach the barricade.
- The Competent Person will inform all other affected employers on the project about the silica generating tasks that will be performed by HPS Mechanical, their locations on each project, and when they will be performed.

When HPS Mechanical workers must work in close proximity to other trades that are pulverizing silica-containing building materials:

- Affected HPS Mechanical workers will not enter the work area, but will report the issue to the Competent Person.
- The Competent Person will reschedule the mechanical construction work in the affected area to another time when exposure to respirable crystalline silica is not a concern.
- When work in the affected area cannot be rescheduled, access to affected HPS Mechanical workers will not be restricted, but the Competent Person will ensure that they are implementing the necessary safe work practices and protective measures to prevent overexposure to respirable crystalline silica in those work areas.

XI. RECORDKEEPING

The Safety Supervisor will evaluate the effectiveness of this written silica exposure control plan at least annually and update it as necessary to prevent affected workers from overexposure to respirable crystalline silica on each project. This plan will always be available for review and copies shall be provided at no cost to employees or their designated representative.

HPS Mechanical shall maintain an accurate record of all exposure measurements taken to assess employee exposure to respirable crystalline silica.

XII. TRAINING

HPS shall ensure that each employee covered by this program is able to demonstrate knowledge and understanding the health hazards associated with the exposure to respirable silica, specific tasks in the workplace that could result in exposure to respirable crystalline silica and the contents in this program.

ASBESTOS AWARENESS PROGRAM

(January 2019)

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HPS MECHANICAL

ASBESTOS AWARENESS PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 341.11
- 8 CCR 1529
- 8 CCR 5203
- 8 CCR 5208
- 40 CFR 61, Subpart M
- APCD Demolition and Abatement Requirements

II. PURPOSE

Asbestos is a known human carcinogen that was used in a multitude of building applications prior to 1980; accordingly, many buildings constructed prior to 1980 have ACM in publicly accessible areas in materials such as floor tiles and mastic, sheet vinyl, acoustical ceilings, roofing felt, lab benches, and hoods. These materials are considered "non-friable" (not easily reduced to dust or powder) and, as long as they are not crushed or abraded, do not pose a public health risk.

The purpose of HPS Mechanical's Asbestos Awareness Program is to provide general information regarding the identification of asbestos and the steps to take if it is suspected that asbestos is present in the work area.

III. POLICY

All work activity conducted on HPS Mechanical projects that have the potential to contain Asbestos-Containing Material (ACM) shall meet the following guidelines and regulatory requirements relative to this awareness-level program. If ACM is suspected, work shall cease until the Project Manager/Site Supervisor discusses exposure control measures with the Prime/General Contractor. HPS Mechanical, Inc. does not perform ACM abatement.

IV. GENERAL PROPERTIES OF ASBESTOS

Asbestos is a group of minerals occurring naturally as masses of strong, flexible fibers that can be separated into thin threads and woven. These fibers are not affected by heat or chemicals and do not conduct electricity. For these reasons, asbestos has been widely used in many industries. Three most common types of asbestos that have been used commercially are:

- Chrysotile, or white asbestos, which accounts for about 99 percent of the asbestos currently used in the United States
- Crocidolite, or blue asbestos
- Amosite, which has brown fibers

As mentioned previously, asbestos that is bonded into finished products poses no risk to health as long as it is not damaged or disturbed (for example, by sawing or drilling) in such a way as to release fibers into the air. Asbestos fiber masses tend to break easily into a dust composed of tiny particles that can float in the air and stick to clothes. When asbestos particles are set free and inhaled, exposed individuals are at risk of developing an asbestos-related disease. Once these fibers work their way into body tissues, they may stay there indefinitely.

More than 5,000 products contain or have contained asbestos. It is used in the building and construction industry for strengthening cement and plastics, as well as for insulation, fireproofing, and sound absorption. Other industries have used asbestos to insulate boilers, steam pipes, and hot water pipes, to wrap pipelines, and as binder in paint. Some of the known products containing asbestos are:

- Asbestos cement sheet and pipe products used for water supply and sewage piping, roofing and siding, casings for electrical wires, fire protection material, electrical switchboards and components, gaskets, and residential and industrial building materials
- Products containing asbestos paper, such as table pads and heat-protective mats, heat and electrical wire insulation, industrial filters for beverages, and underlying material for sheet flooring;
- Asbestos textile products, such as packing components, roofing materials, and heat- and fire-resistant fabrics (including blankets and curtains); and
- Other products, including ceiling and floor tile; gaskets and packings; paints, coatings, and adhesives; caulking and patching tape; artificial ashes and embers for use in gas-fired fireplaces; and plastics.

Asbestos use started being phased out in the late 1970s beginning with wallboard patching compounds, gas fireplaces, and hairdryers. In 1989, the U.S. Environmental Protection Agency (EPA) banned all new uses of asbestos; however, uses established prior to 1989, are still allowed. Asbestos is currently used most frequently in gaskets and in roofing and friction products.

V. EXPOSURE LIMITS

Time-Weighted Average Limit (TWA)

The Prime/General Contractor shall ensure that no HPS Mechanical employee is exposed to an airborne concentration of asbestos in excess of 0.1 fiber per cubic centimeter (0.1 f/cc) of air for an eight (8)-hour timeweighted average (TWA).

Excursion Limit
The Prime/General Contractor shall ensure that no HPS Mechanical employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air (1 f/cc) as averaged over a sampling period of thirty (30) minutes.

VI. EXPOSURE HAZARDS

Exposure to asbestos may increase the risk of several serious diseases, such as:

- Asbestosis: a chronic lung ailment that can produce shortness of breath, coughing, and cause a buildup of scar-like tissue in the lungs, and result in loss of lung function that often progresses to disability and death
- Lung cancer
- Mesothelioma: a relatively rare cancer of the thin membranes that line the chest and abdomen
- Other cancers, such as those of the larynx, oropharynx, gastrointestinal tract, and kidney

Asbestos fibers associated with these health risks are too small to be seen with the naked eye, and smokers are at higher risk of developing some asbestos-related diseases. Although it is known that the risk to workers increases with heavier exposure and longer exposure time, asbestos-related diseases have been found in individuals with only brief exposures.

The symptoms of asbestos-related diseases may not become apparent for many decades after exposure. If any of the following symptoms develop, a physical examination should be scheduled without delay:

- Shortness of breath;
- A cough or a change in cough pattern;
- Blood in the sputum (fluid) coughed up from the lungs;
- Pain in the chest or abdomen;
- Difficulty in swallowing or prolonged hoarseness; and/or
- Significant weight loss

VII. NOTIFICATION OF THE PRESENCE OF ACM

The Prime/General Contractor will inform employees and contractors regarding the presence of ACM in the work utilizing one or more of the following methods:

- Signs posted at the entrance of mechanical rooms or areas with asbestos containing material (ACM) and where asbestos work/removal is being performed.

- Labels attached to ACM products, containers of asbestos, including waste containers.
- Training on health hazards, locations of asbestos, signs of damage to ACM and PACM (Presumed Asbestos-Containing Material) and what to do if asbestos fibers are released.
- Notification of asbestos work to those who will work in or near an area where asbestos will be disturbed and the methods to contain asbestos fibers before the job begins.
- Markings that delineate cleared work areas that are free of asbestos containing material prior to the commencement of work activities.

VIII. RESPONSIBILITIES

Project Managers/Site Supervisors

Project Managers/Site Supervisors have the ultimate responsibility for confirming with the Prime/General Contractor that HPS employees do not perform any asbestos abatement procedures.

Their general duties include, but are not limited to:

- Being the point of contact for projects under their management or operational control for all issues concerning disturbances of ACM (both potential and accidental).
- Treating suspected ACM as known asbestos until proven otherwise by having the Prime/General Contractor ensure a sample is collected by a qualified professional and samples analyzed by a California certified accredited lab.
- Ensuring the Prime/General Contractor retains current California state asbestos registered contractors and certified asbestos consultants.

Employees

Employees are responsible for immediately ceasing work and notifying the Project Manager/Site Supervisor if they suspect ACM is present in their work area. Employees may also secure the work area by shutting down heating and air conditioning/ventilating systems, if appropriate.

IX. ANNUAL AWARENESS TRAINING

All Project Managers/Site Supervisors who are responsible for projects that may involve ACM, and employees working with or around asbestos, must receive training in asbestos awareness at least annually.

ASBESTOS AWARENESS PROGRAM

This awareness training must include the following topics:

- The physical characteristics of asbestos, including types, fiber size aerodynamic characteristics, and physical appearance.
- Examples of different types of asbestos-containing products and materials that employees may encounter in specific work assignments.
- The health hazards of asbestos including the nature of asbestos-related diseases, routes of exposure, dose-response relationships, latency period of asbestos-related diseases, hazards of contamination of personal contacts outside of work, and health basis for asbestos standards.
- The increased risk of lung cancer associated with smoking cigarettes and asbestos exposure.
- The quantity, location, manner of use, release, and storage of asbestos, the specific nature of the operations that could result in exposure to asbestos, and specific information to aid employees in recognizing when and where asbestos exposure may result.

LEAD AWARENESS PROGRAM

(January 2019)

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IV. IDENTIFICATION OF LEAD HAZARDS 1
V. EXPOSURE CONTROL 2
VI. RESPIRATORY PROTECTION 2
VII. AIR SAMPLING 2

HPS MECHANICAL

LEAD AWARENESS PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 1532.1

II. PURPOSE

The Company has established this policy to protect employees from lead exposure by providing training on lead hazards in the workplace and how to evaluate work activities for potential lead exposure.

III. POLICY

All work activity conducted on HPS Mechanical projects that have the potential to expose employees to lead shall meet the following guidelines and regulatory requirements relative to this awareness-level program. If lead is encountered, work shall cease until the Project Manager/Site Supervisor discusses exposure control measures with the Prime/General Contractor. HPS Mechanical, Inc. does not perform lead removal activities.

IV. IDENTIFICATION OF LEAD HAZARDS

If work as the potential to expose employees to lead-containing material, work will not proceed until third-party testing and analysis is conducted. Employees will be informed of the results, and all appropriate protections will be taken as necessary.

Safety Data Sheets (SDS) and labels for all raw materials or products used will be reviewed to determine if they contain lead, and employees shall be informed of the hazards.

All employees potentially exposed to lead dust, mist or fumes will be trained in the hazards of lead, how to protect themselves, and other worker protections. Employees who are exposed to 50 micrograms per cubic meter of air (μg/meter^3) while working on public access buildings, and their supervisors, shall receive additional training and must be State certified by the California Department of Health.

HPS will utilize third-party certified lead abatement services to remove lead on projects prior to HPS employee exposure to lead levels above the Permissible Exposure Limit (PEL).

V. EXPOSURE CONTROL

HPS shall take the following precautions to prevent or minimize lead exposure:

- Lead-free materials shall be substituted, and high-exposure tasks shall be eliminated whenever possible.
- Airborne lead levels over 50 µg/meter^3 shall be reduced by using safer tools, mechanical ventilation such as HEPA vacuums, and/or modifying work tasks. Dry sweeping is not allowed.
- Vertical and horizonal containment shall be used to contain paint chips inside the work area, all lead waste shall be disposed of properly, and the job site shall be free of lead contamination upon completion of the job.

VI. RESPIRATORY PROTECTION

The Company shall observe the following regarding respiratory protection:

- Respirators shall be used to protect against airborne lead exposure during all disturbance of lead and related cleanup activities.
- The appropriate respirator shall be initially selected based on the task being performed, its assumed exposure level, and the assigned protection factor (APF) of the respirator. Air monitoring results shall then be reviewed to ensure adequate protection is being provided.
- When respirator use is required, a complete respiratory protection program shall be in place, which includes:
    - Annual face seal fit testing
    - Regular fit testing
    - Regular face seal checking
    - Training
    - Medical determination of fitness for respirator use
    - Provisions for cleaning and storage

VII. AIR SAMPLING

Personal air sampling shall be conducted as appropriate by a qualified third-party service provider to determine the eight-hour average airborne lead exposure level for all employees who could potentially be exposed to lead dust or fumes. Employees shall be notified of their results, in writing, within five days of receiving the results from the laboratory.

Air sampling shall be repeated whenever there is any significant change in material, process, control, personnel, or tasks that could result in increased exposure.

When exposures are above the Action Level but below the PEL, air monitoring shall be repeated at least once every six months. When exposures are above the PEL, air monitoring shall be conducted quarterly.

COMPRESSED GAS CYLINDER SAFETY PROGRAM

(February 2019)

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HPS MECHANICAL

COMPRESSED GAS CYLINDER SAFETY PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 3301-3305
- 8 CCR 4649-4650
- 8 CCR 4657

II. GENERAL

Compressed gas cylinders can be extremely hazardous when misused and can present a variety of hazards due to their pressure and/or content. Hazards associated with compressed gases include oxygen displacement, fires, explosions, and toxic gas exposures, as well as the physical hazards associated with high-pressure systems. Therefore, special storage, use, and handling precautions are necessary in order to control these hazards.

III. COMPRESSED GAS CYLINDER SAFETY

Handling

Employees shall observe the following when handling compressed gas cylinders:

- Cylinder valves shall be kept closed with the valve protection cap in place during handling.
- Valve protection caps shall never be used to lift the cylinder.
- Cylinders must **never** be dropped or allowed to strike each other violently and shall never be used for any purpose other than to contain the gas for which the cylinder was designed.
- When necessary to move compressed gas cylinders, a cart or other mechanical device specially designed for that purpose shall be used. Cylinders may also be rolled on the bottom edge, but never dragged.
- Cylinders handled by hoisting equipment shall be carried in a cradle or similar device and care taken to prevent their being dropped. Slings, ropes, or an electromagnet shall never be used to move cylinders.
- Cylinders to be transported shall be loaded and secured in an upright position, unless specifically designed for horizontal service.
- Empty cylinders are to be marked or labeled "EMPTY," their valves tightly closed and the valve protection caps replaced.

Use

The following shall be observed while using compressed gas cylinders:

- Acetylene cylinders shall be used in a secured and upright position.
- Valve protector caps shall be kept on cylinders except when the regulator is attached or the cylinder is connected to a manifold system.
- Threads on a regulator or union shall correspond to those on the cylinder valve outlet; connections shall not be forced.
- A cylinder of compressed gas shall never be used without a pressure-reducing regulator attached to the cylinder valve.
- Regulators and pressure gauges shall only be used with the gases for which they are designed and intended.
- The cylinder valve shall always be closed before attempting to stop leaks.
- Sparks, molten metal, electrical currents, excessive heat, or flames shall not be permitted to come in contact with the cylinder or attachments. This includes propane or acetylene torches and space heaters.
- Cylinders shall not be subjected to temperatures above 125^{o}F.
- Cylinders shall not be used or stored near flammable substances such as oil, gasoline or chemicals.
- Oil or grease shall never be used as a lubricant on valves or attachments to oxygen cylinders, since oil and oxygen under pressure can be a fire hazard. Nor shall oxygen regulators be handled with oily or greasy hands or gloves.
- Cylinder contents shall never be used for purposes other than those for which they were intended.

Compressed Gas Cylinder Inspection

Cylinders inspections shall include the following:

- Employees shall verify that compressed gas cylinders bear all markings and be hydrostatically tested as required by U.S. Department of Transportation (DOT) regulations.

- Compressed gas cylinders shall not be accepted from the supplier unless they are properly labeled and have protective valve caps in place.

- Cylinders shall be examined for signs of corrosion or other damage.

- Leaky or damaged cylinders shall be reported and taken out of service immediately, marked or labeled "DAMAGED," then removed to a safe location and observed until safely depressurized.

Cylinder Storage

Storage of compressed gas cylinders shall meet the following:

- Cylinders, both empty and full, shall be stored and secured in an upright position, unless designed for horizontal use.

- Cylinders shall be secured with a chain or by some other acceptable means, and kept in a safe, dry, well-ventilated place that is not exposed to heat or the direct rays of the sun.

- Cylinders shall be mounted and stored in a fashion that will prevent the bottoms from becoming corroded or otherwise damaged.

- Cylinder valves shall be kept closed during storage, with the protective valve caps in place.

- Oxygen cylinders shall not be stored within 20 feet of fuel gas cylinders or combustible/flammable materials (especially oil or grease), unless protected by a noncombustible barrier that is at least five feet high and has a fire resistance rating of at least one-half hour.

- Acetylene cylinders shall not be placed in a horizontal position.

WILDFIRE SMOKE AWARENESS PROGRAM

(October 2020)

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HPS MECHANICAL

WILDFIRE SMOKE AWARENESS PROGRAM

I. REGULATORY REFERENCES

- 8 CCR 5141.1

II. PURPOSE

The Company has established this policy to protect employees from wildfire smoke by providing training on wildfire smoke hazards in the workplace and how to identify when AQI is a level of concern. Although there are many hazardous chemicals in wildfire smoke, the main harmful pollutant for people who are not very close to the fire is “particulate matter,” the tiny particles suspended in the air. Particulate matter can irritate the lungs and cause persistent coughing, phlegm, wheezing, or difficulty breathing. Particulate matter can also cause more serious problems, such as reduced lung function, bronchitis, worsening of asthma, heart failure, and early death. People over 65 and people who already have heart and lung problems are the most likely to suffer from serious health effects. The smallest -and usually the most harmful- particulate matter is called PM 2.5 because it has a diameter of 2.5 micrometers or smaller.

The current AQI is divided into six categories as shown in the table below, adapted from Table 2 of Title 40 of Federal Regulations, Part 58, and appendix G.

Air Quality Index (AQI)	
Categories for PM 2.5	Levels of Health Concern
0 to 50	Good
51 to 100	Moderate
101 to 150	Unhealthy for Sensitive Groups
151 to 200	Unhealthy
201 to 300	Very Unhealthy
301 to 500	Hazardous

III. POLICY

All work activity conducted on HPS Mechanical projects that have the potential to expose employees to wildfire smoke shall meet the following guidelines and regulatory requirements relative to this awareness-level program. If wildfire smoke is present, work shall cease until the Project Manager/Site Supervisor discusses exposure control measures with the Prime/General Contractor. All employees have the right to obtain medical treatment without fear of reprisal. The Company allows employees who show signs of injury or illness due to wildfire smoke exposure to seek medical treatment, and will not punish affected employees for seeking such treatment of employees in the event of serious injury or illness caused by wildfire smoke exposure.

IV. IDENTIFICATION OF WILDFIRE SMOKE

Various government agencies monitor the air at locations throughout California and report the current AQI for those places. The AQI is a measurement of how polluted the air is. An AQI over 100 is unhealthy for sensitive people and an AQI over 150 is unhealthy for everyone. Although there are AQIs for several pollutants, Title 8, section 5141.1 about wildfire smoke only uses the AQI for PM2.5.

The easiest way to find the current and forecasted AQI for PM2.5 is to go to www.AirNow.gov and enter the zip code of the location where you will be working. The current AQI is also available from the U.S. Forest Service at https://tools.airfire.org/ or a local air district, which can be located at www.arb.ca.gov/capcoa/dismap.htm. Employees who do not have access to the internet can contact the safety department for the current AQI. The EPA website www.enviroflash.info can transmit daily and forecasted AQIs by text or email for particular cities or zip codes.

V. EXPOSURE CONTROL

If employees may be exposed to wildfire smoke and the current AQI for PM2.5 is 151 or more, The Company shall:

(1) Check the current AQI before and periodically during each shift.
(2) Provide training to employees.
(3) Lower employee exposures.
(4) Provide respirators and encourage their use.

The Company shall alert employees when the air quality is harmful and what protective measures are available to employee and shall encourage employees to inform their employers if they notice the air quality is getting worse, or if they are suffering from any symptoms due to the air quality.

You can contact the Safety Department at (661)397-2121 for any questions or concerns regarding wildfire smoke.

VI. RESPIRATORY PROTECTION

Exposure Respirators can be an effective way to protect employee health by reducing exposure to wildfire smoke, when they are properly selected and worn. Respirator use can be beneficial even when the AQI for PM2.5 is less than 151, to provide additional protection.

When the current AQI for PM2.5 is 151 or greater, HPS provides employee's with proper respirators for voluntary use. If the current AQI is greater than 500, respirator use is required.

If you plan on using a respirator please contact the Safety Department at (661)397-2121.

The following precautions shall be taken:

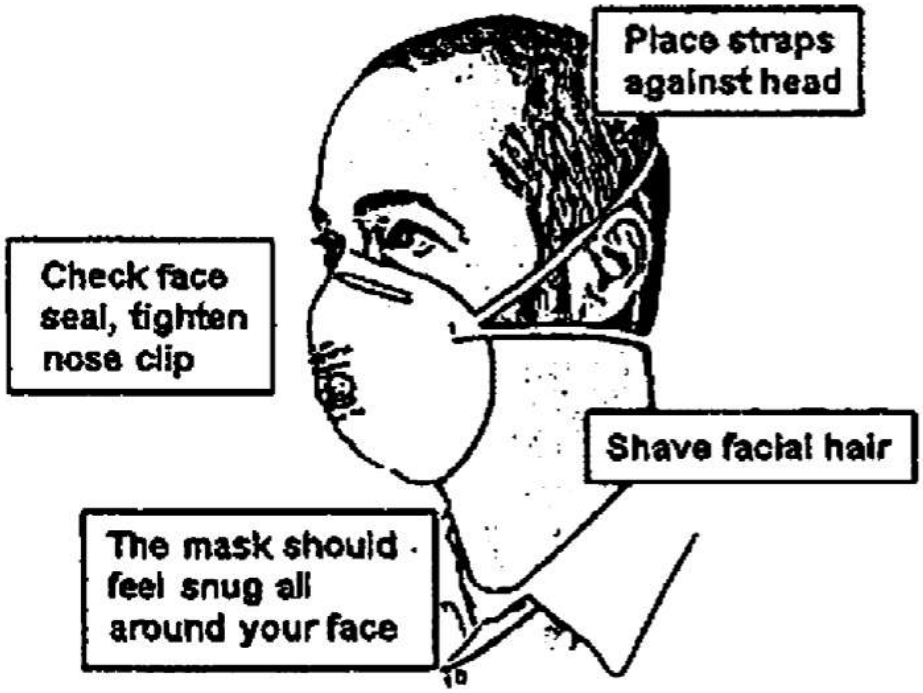
(1) Employers shall select respirators certified for protection against the specific air contaminants at the workplace. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Center for Disease Control and Prevention certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will list what the respirator is designed for (particulates, for example). Surgical masks or items worn over the nose and mouth such as scarves, T-shirts, and bandannas will not provide protection against wildfire smoke. An N95 filtering face piece respirator, shown in the image below, is the minimum level of protection for wildfire smoke.
(2) Read and follow the manufacturer's instructions on the respirator's use, maintenance, cleaning and care, along with any warnings regarding the respirator's limitations. The manufacturer's instructions for medical evaluations, fit testing, and shaving should also be followed, although doing so is not required by Title 8, section 5141.1 for voluntary use of filtering face piece respirators.
(3) Do not wear respirators in areas where the air contains contaminants for which the respirator is not designed. A respirator designed to filter particles will not protect employees against gases or vapors, and it will not supply oxygen.
(4) Employees must keep track of their respirator so that they do not mistakenly use someone else's respirator.
(5) Employees who have a heart or lung problem should ask their doctor before using a respirator.

HOW TO PROPERLY PUT ON, USE, AND MAINTAIN THE RESPIRATORS PROVIDED.

To get the most protection from a respirator, there must be a tight seal around the face. A respirator will provide much less protection if facial hair interferes with the seal. Loose-fitting powered air purifying respirators may be worn by people with facial hair since they do not have seals that are affected by facial hair.
The proper way to put on a respirator depends on the type and model of the respirator.

For those who use an N95 or other filtering face piece respirator mask that is made of filter material:

(1) Place the mask over the nose and under the chin, with one strap placed below the ears and one strap above.
(2) Pinch the metal part (if there is one) of the respirator over the top of the nose so it fits securely.



Drawing Showing Proper Fitting of a Filtering Facepiece Respirator (shaving is not required for voluntary respirator use)

A respirator should be used properly and kept clean. For a respirator that relies on a tight seal to the face, check how well it seals to the face by following the manufacturer's instructions for user seal checks. Adjust the respirator if air leaks between the seal and the face. The more air leaks under the seal, the less protection the user receives. Respirator filters should be replaced if they get damaged, deformed, dirty, or difficult to breathe through. Filtering face piece respirators are disposable respirators that cannot be cleaned or disinfected. A best practice is to replace filtering face piece respirators at the beginning of each shift. If you have symptoms such as difficulty breathing, dizziness, or nausea, go to an area with cleaner air, take off the respirator, and get medical help. Note: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code.