



SAFETY MANUAL



Table of Contents

1. HSE Policy Statement
2. Scope & Responsibilities
3. Abrasive Blasting
4. Aerial Lifts
5. Asbestos Pipe Coating Removal
6. ATV Use
7. Behavior Based Safety
8. Benzine
9. Bloodborne Pathogens
10. Cold Weather
11. Compressed Gas Cylinders
12. Confined Space Entry
13. Disciplinary Program
14. Driving Safety
15. Drug and Alcohol Policy Non-DOT
16. Electrical Safety
17. Fall Protection
18. Fire Extinguishers
19. First Aid
20. Fit For Duty
21. Flame Resistant Clothing
22. Forklift and Industrial Trucks
23. Hand and Power Tools
24. Hazard Communication
25. Heat Illness Prevention
26. Hot Work
27. Hydrogen Sulfide
28. Incident Reporting



29. Ladder Safety
30. Lockout Tagout
31. Mobile Equipment
32. Noise Hearing Conservation
33. Personal Protective Equipment (PPE)
34. Respiratory Protection
35. Rigging and Material Handling
36. Risk Assessment and Identification of Hazards
37. Scaffolding
38. Short Service Employee (SSE)
39. Silica Exposure Control
40. Spill Prevention & Response
41. Stop Work
42. Trenching and Excavation
43. Appendix A: Heat Risks Hazards Assessment



The Veracity Field Services Commitment to Exceptional Team Safety Performance

At Veracity Field Services, we consider the health and safety of our employees, contractors, customers and the public to be as important as productivity, profitability, product or service quality, and customer satisfaction.

It is our philosophy that safety performance is a key indication of organizational excellence, therefore, safety is incorporated into our everyday business process.

The overall success of this business depends upon the individual's personal commitment to safety. The best way for the individual to achieve this commitment is by utilizing company resources in relation with their knowledge and skills to promote the well-being of themselves, their coworkers and the best business practices of Veracity Field Services.

We must strive to prevent all accidents and undesirable events through the active participation of each and every employee, partner and stake-holder.

Veracity Field Services subscribes to the following disciplines of business execution as our foundation for maintaining an injury free work environment:

Goal: No Accidents

- Always maintain that every job can be completed safely without injury or incident

Leading Indicators:

- Have a good plan
- Understand the hazards
- Stop Work when something is not right or doesn't feel right

Measure Performance:

- Measure the performance of every team player
- Communicate Key Performance Indicators back to the team
- Motivate team members through risk and reward

Accountability:

- Team members must hold each other accountable for producing results, regardless of the challenges. Without accountability the goal is unachievable.

At Veracity Field Services we will give our team clear direction, the right tools, ample training, and positive motivation as a means to foster predictable results with exceptional moral and low team attrition. It is of the highest importance we empower the team to achieve their very best.

President and Chief Executive Officer,
Nathan Tuckfield



Scope & Responsibilities

This Health Safety & Environmental (HSE) Manual is intended as a reference tool for Veracity Field Services employees and consultants. The health, safety and environmental information in this Manual is intended to provide an overview of the policies and work procedures that are required of employees and consultants of the company.

Veracity Field Services provides professional consultants to oil & gas and energy operators to provide oversight in well drilling, construction, completion, workover and safety related operations. By engaging consultants and consultants to provide professional services, Veracity Field Services thereby relies upon their specific expertise and their own HSE Policies to address their activities. The purpose of this Manual is to establish certain minimum standards these consultants and any Veracity Field Services employees overseeing or assisting such consultants must meet.

Each employee, in the interest of personal safety, must assume the responsibility for following the instructions and requirements covered in this Handbook, and each contractor must have HSE policies that at a minimum meet the requirements of the procedures located within this manual. However, the HSE procedures within this manual may be adopted for use by consultants and consultants who do not have formal HSE procedures in place.

Common sense and experience must be applied when considering safety on any specific work assignment. If you are not familiar with a particular work site, request an HSE orientation from the local supervisor prior to beginning work.

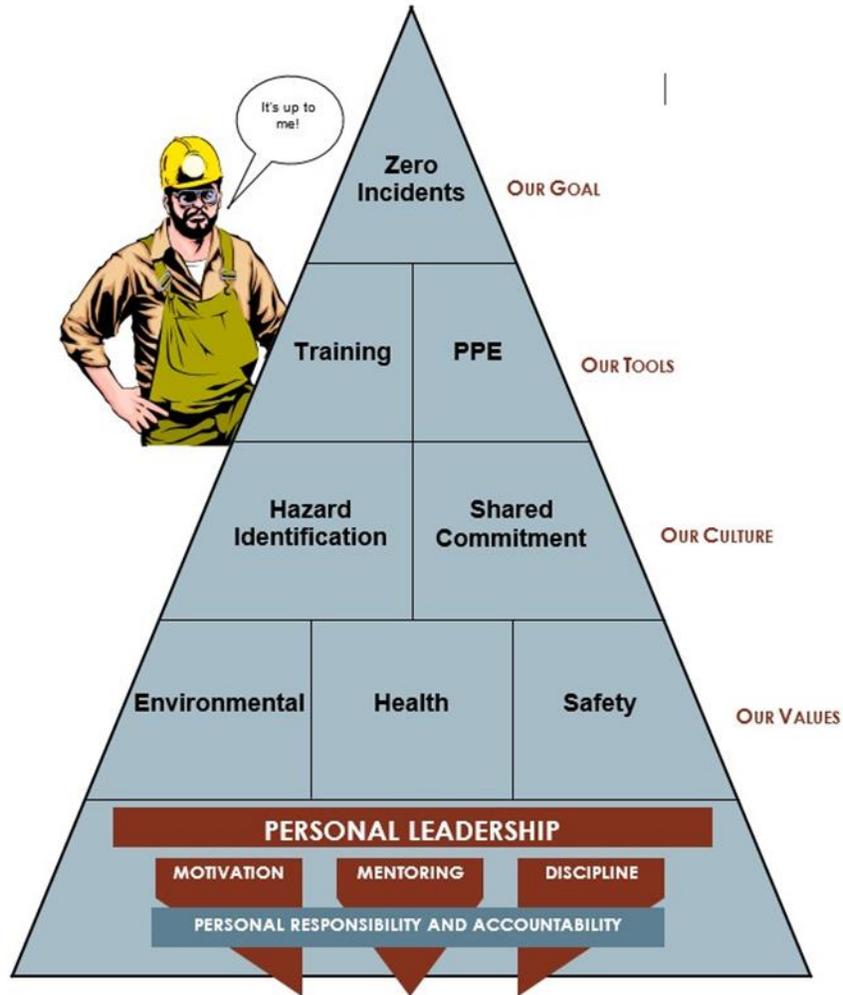
The content of this Manual may not provide all necessary information for a specific job. Always check to see if special work procedures are required for a specific job or location.

At Veracity Field Services, we believe it is very important that our employees and consultants adopt a culture, or way of thinking, that all incidents are preventable. To assist in helping build this culture, we have included a pyramid poster (Attachment 1) that helps us understand how incidents are caused and prevented. We believe it is important to share our commitment to HSE to all of our consultants and in return, we expect our consultants to share this same commitment when performing work for Veracity Field Services.



Attachment 1

MAINTAINING VALUE THROUGH ENVIRONMENTAL, HEALTH AND SAFETY LEADERSHIP





ABRASIVE BLASTING



Purpose

The purpose of this program is to provide safe guidelines for the operation and maintenance of abrasive blasting equipment and their related components for Veracity Field Services.

Scope

This program covers all employees involved in abrasive blasting jobs. Whenever hazardous substances such as dusts, fumes, mists, vapors, or gases exist or are produced in the course of construction work, their concentrations shall not exceed the limits specified in the "Threshold Limit Values of Airborne Contaminants – 1970" of the American Conference of Governmental Industrial Hygienists. When ventilation is used as an engineering control method, the system shall be installed and operated according to the requirements of 1926.57 (Ventilation).

Key Responsibilities

Supervisors

- Be aware of potentially hazardous conditions that may arise during the blasting process prior to starting any blasting job and must take measures to protect employees.
- Ensure that all employees are trained on related safety topics.
- Understand the importance of regularly scheduled maintenance for continued safe operation of blast equipment. Ensure that all employees comply with this policy and all other related policies.

Blast Employees

- Be familiar with the safe operating functions of blasting equipment to be used on a job.
- Comply with all company policies.
- Have knowledge of hazards associated with respirable silica.
- Understand they are prohibited from using compressed air for cleaning unless the pressure is reduced to less than 30 pounds per square inch and be equipped with effective chip guarding and proper PPE.

Procedure

General

Abrasives and the surface coatings on the materials blasted are shattered and pulverized during blasting operations and the dust formed will contain particles of respirable size. The composition and toxicity of the dust from these sources shall be considered in making an evaluation of the potential hazards.

Dust shall not be permitted to accumulate on the floor or on ledges outside of an abrasive blasting enclosure. Dust spills shall be cleaned up promptly. Aisles and walkways shall be kept clear of steel shot or similar abrasives which may create a slipping hazard.

Equipment Handling

Follow these guidelines when moving blasting equipment to prevent back strains and crushing injuries:



- Use a forklift, crane or other type of lifting device for transporting a blast machine; always use a lifting device when the machine contains abrasive.
- Never manually move a blast machine where abrasive has been spilled on hard surfaces or on a wet or slippery surface.
- Never attempt to manually move a blast machine containing abrasive.
- Always disconnect hoses from machines to avoid interference during moving.

Air Compressors

- Air compressors must be located in a well-ventilated area. It must be able to contain large volumes of clean, toxicant-free air. This means the compressor must be placed up wind from the blasting operation and out of the range of dust and flying abrasives.
- Due to the high pressure that air compressors create, precautions must be taken to prevent unleashing of strong forces that can cause serious bodily injury.
- Air for abrasive blasting respirators must be free of harmful quantities of dust, mists, or noxious gases and must be inspected daily, prior to use and comply with CFR 1910.134(I) (Respiratory Protection).
- Never adjust the pressure setting on a compressor above the blast equipment maximum working pressure rating. The maximum working pressure rating is indicated on the manufacturer's metal identification plate.

Blast Pot

- Position blast pots and/or compressors on level ground. Machines operate best when they sit on level surfaces.
- For communication purposes place blast pot between the compressor and the surface to be blasted. This will enable the pot tender and operator to make visual contact.
- All couplings and pipefitting on the blast pot, compressor and hoses must be airtight.
- Blast pots must be inspected daily prior to use.

Hoses and Connectors

- Couplings must have safety wires in place and be secure as required by federal safety regulations. The operator shall be responsible to ensure that each coupling has safety wires in place.
- Whip checks must be installed at bull hose connections.
- Operator should hold onto the blast hose until the air pressure from the nozzle drops off to zero.
- Do not use hoses with soft spots.
- Never use tape to repair a blown-out hose.
- Immediately replace a hose if a blowout or leak occurs.
- Hose ends must come into contact with coupling gaskets to prevent leaks and to maintain static electricity conductivity.

Nozzles and Remote Controls

- Blast nozzles shall be bonded and grounded to prevent the buildup of static charges. Where flammable or explosive dust mixtures may be present, the abrasive blasting enclosure, the ducts, and the dust collector shall be constructed with loose panels or explosion venting areas, located on sides away from any



occupied area, to provide pressure relief in case of explosion following the principles set forth in the National Fire Protection Association Explosion Venting Guide. NFPA 68-1954.

- Organic abrasives which are combustible shall be used only in automatic systems.
- Blast cleaning nozzles shall be equipped with an operating valve which must be held open manually. A support shall be provided on which the nozzle may be mounted when it is not in use.
- All blast machines must be equipped with remote control systems to start and stop the blasting process.
- Never tape, strap, or tie down an air actuated remote control lever or choke electric remote control switch.
- If there is the slightest delay in reaction time of the handle lever or lever lock to open, check for dust and dirt build-up around pivot pins before resuming blasting. Also, test the tension on the lever springs, and replace them immediately if they do not respond rapidly.
- Substituting component pieces with other manufacturer's parts is not allowed.
- Inspect blast nozzles for wear and cracks on the inner liner. When a nozzle orifice is worn 1/16" larger than its original size, it should be replaced.
- Check nozzles and nozzle holders for deterioration of thread form. Threads on nozzles and their companion holders must not be cross-threaded, worn or distorted.
- Hoses that are being tied and lifted to blasting operations being conducted above grade, i.e., scaffolds, shall be depressurized to prevent accidental start-up.

Operator Signals

- On the job site, voice communication is often impossible. Even shouts cannot be heard over the noise of compressors and blasting. In addition, the operator's head will be enclosed in the helmet, which blocks out sound and limits vision. For these reasons, an industry wide standard set of hand and sound signals has been developed.
- Signals may be visual hand movements, flashing light, pulls on a rope or sounds made by banging a hammer or using a horn or electric buzzer.
- Every operator must become familiar with the signals to be used on the jobsite.

Respirator Use

- A specific work-site procedure shall be developed where respirators or CE blasting hoods/helmets are required to protect the health of the operator. A respiratory protection program shall be established wherever it is necessary to use respiratory protective equipment including worksite specific procedures and elements for required respirator use. Abrasive blasting respirators shall be worn by all abrasive blasting operators under certain conditions.
- Equipment for the protection of eyes, face and body shall be supplied to the operator when the respirator design does not provide such protection and to any other personnel working in the vicinity of abrasive blasting operations. This equipment shall conform to the requirements of 1926.102 (Eye and Face Protection).
- Equipment for protection of the eyes and face shall be supplied to any other personnel working in the vicinity of abrasive blasting operations.

Environmental Controls

- Organic abrasives which are combustible shall be used only in automatic systems. Where flammable or



explosive dust mixtures may be present, the construction of the equipment, including the exhaust system and all electrical wiring, shall conform to the requirements of American National Standard Installation of Blower and Exhaust Systems for Dust, Stock, and Vapor Removal or Conveying, Z33.1-1961 (NFPA 91-1961), and Subpart S of 1926.57 (Ventilation).

- The work area must be inspected for exterior electrical power lines that may endanger operators.
- Operators should use care to avoid directly blasting power lines and insulators.
- Do not blast in atmospheres that contain flammable fumes.
- Take precautions at the work site to eliminate hazardous surface obstacles that may cause tripping hazards or interfere with worker mobility.
- Adequate ventilation must be provided for employees working within enclosures.
- Never operate compressor if hoses are frozen. When winter temperatures drop below freezing, check for ice prior to pressurizing hoses.
- Provide adequate drinking water for operators, especially during summer.

Personal Protective Equipment

- Secure hoses by tying them to scaffolding or personnel platforms, when working from elevations, to prevent injury from hoses falling on other personnel working below or near blasting area.
- Before using any blasting abrasive, check the MSDS to find out the chemical composition of the abrasive material.
- Equipment for the protection of eyes, face and body shall be supplied to the operator when the respirator design does not provide such protection and to any other personnel working in the vicinity of abrasive blasting operations. This equipment shall conform to the requirements of 1926.102 (Eye and Face Protection).
- Ventilation systems and dust collectors may be necessary in enclosed conditions.
- Noise from abrasive blast nozzles can be loud enough to damage the hearing of blasters and others on the work site. Workers must not be exposed to noise levels exceeding 80 decibels as an eight-hour time weighted average (80 dBA TWA), therefore all blasters shall wear earplugs.
- Blaster must wear heavy-duty gloves and steel toe boots.
- Helmet lenses should be changed as soon as pitting or frosting takes place.

Checklist

Abrasive Blasting Checklist

An abrasive blasting checklist must be completed prior to commencement of any abrasive blasting work. The checklist can be found at: <https://veracityfieldservices.com/forms>



AERIAL LIFTS



Purpose

The purpose of this program is to define the requirements for safely operating an aerial lift device.

Scope

This policy shall cover all aerial lift devices used on Veracity Field Services (the company) property or used by a Veracity Field Services employee or consultant.

Key Responsibilities

Supervisors

- Shall ensure that all aerial devices are properly operated by trained personnel.
- Shall ensure that aerial lift devices are designed and constructed in conformance with applicable requirements of the American National Standards for “Vehicle Mounted Elevating and Rotating Work Platforms” ANSI A92.2-1969, including appendix.

Employees

- Shall follow all aspects of this program.

Procedure

- Aerial lifts may be “field modified” for uses other than those intended by the manufacturer provided the modification has been certified in writing by the manufacturer or by an equivalent entity.
- Lift controls shall be tested each day prior to use to determine that such controls are in safe working conditions. Tests shall be made at the beginning of each shift during which the equipment is to be used to determine that the brakes and operating systems are in proper working condition.
- Only authorized persons shall operate an aerial lift and boom and basket load limits specified by the manufacturer shall not be exceeded.
- Aerial lifts shall have a working back-up alarm audible above the surrounding noise level or the vehicle is backed up only when an observer (spotter) signals that it is safe to do so.
- The minimum clearance between electrical lines and any part of the equipment (i.e. crane or load) shall be 10 feet for lines rated 50 kV or below.
- Employees shall always stand firmly on the floor of the basket, and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.
- An approved fall restraint system shall be worn when working from an aerial lift. The fall restraint system must be attached to the boom or basket. An approved fall restraint system shall be attached to the boom or basket when working from an aerial lift and it is not permitted to be attached to adjacent poles or structures.
- All employees or consultants who operate an aerial lift device shall be trained in the safe operation of the



specific device they will operate. Training must conform to all OSHA requirements.



ASBESTOS PIPE COATING REMOVAL



Purpose

To provide basic precautions and protections for employees and consultants to avoid exposure to asbestos containing material when removing materials from pipe.

Scope

This program applies to all Veracity Field Services employees and Consultants. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document shall be used when an operator's program doesn't exist or is less stringent.

Key Responsibilities

Managers/Supervisors

- Prohibit Veracity Field Services employees or consultants from working until trained to this procedure.
- Ensure that all requirements of this procedure are understood and followed by those working under his/her direction.
- Perform duties of the competent person for asbestos work.

Competent Person

A competent person will make frequent and regular inspections of the project. The competent person must make frequent and regular inspections of the job site, materials, and equipment. The competent person must be capable of performing or supervising the regulated area and have authorization to take prompt corrective actions to eliminate a hazard.

All Employees

All employees and consultants are required to act in strict compliance with the requirements of this procedure and delay or discontinue work if there is ever an unresolved concern regarding exposure to asbestos.

Procedure

6 mil thick polyethylene sheeting must be placed under the pipeline at all times during coating removal to collect any debris generated.

Veracity Field Services will adequately wet the pipeline coating with an amended water solution using a low-pressure garden style sprayer or other similar device to prevent any visible dust emissions during the coating removal process.

A utility knife or similar tool may be used to cut the coating into uniform squares. The objective of this activity is to prevent tearing or crumbling of the coating and to remove it intact in a non-friable condition.

Veracity Field Services prohibits the use of high-speed abrasive disks and compressed air as a means by which to remove the coating. These work practices are prohibited by OSHA's Asbestos Construction standard and should



not be performed under any circumstances as doing so greatly increases the risk of airborne asbestos fiber exposure.

Veracity Field Services or the independent consultant shall ensure the use of vacuum cleaners equipped with HEPA filters to collect all debris generated by coating removal- Veracity Field Services is not obligated to provide vacuum equipment for consultants use, this is the responsibility of the consultant. Vacuum cleaners equipped with HEPA filters must be used to collect all debris generated by coating removal and to decontaminate disposable clothing of workers and supervisors in the designated area upon exiting the regulated area.

Regulated Area

Site preparation shall include proper signage. In addition to establishing a perimeter around the regulated area, warning signs must be posted around the regulated area in a sufficient number to identify the hazard.

Veracity Field Services shall prohibit eating, drinking, or smoking in a regulated area. Workers within the regulated or designated area must not eat, drink or smoke. These activities must be conducted outside of these areas to prevent accidental inhalation or ingestion of airborne asbestos fibers.

All employees and consultants who perform work in regulated areas shall be covered by this procedure. Employees who perform housekeeping activities during and after construction activities are also covered by this procedure.

Respiratory Protection and Personal Protective Equipment

Proper PPE for asbestos workers must include but not be limited to respirators, full body disposable suits, safety goggles and gloves.

PPE must be worn by all who enter the regulated area. The respirator may not be required following collection of air monitoring data by a competent person which demonstrates that exposures are below OSHA's Permissible Exposure Limit. Veracity Field Services must demonstrate a negative exposure assessment within the last 12 months or state asbestos containing pipe coating removal projects are and will be below the permissible exposure limit.

The respirator shall be provided at no cost to the employee and shall be chosen in accordance with the Veracity Field Services Respiratory Protection Program and shall be approved by NIOSH. Powered, air-purifying respirators shall be available when the workers choose to use this type, or the hazard assessment process requires this type, or when the respirator will provide more adequate protection. Consultants are responsible to provide their own respiratory protection PPE and equipment. Prerequisites for use of respiratory equipment, regarding asbestos, include:

- Successfully passing a respiratory physical.
- Successfully completing annual respiratory protection training.
- Successfully passing a respirator fit test.



Waste Disposal

Asbestos waste bags will be leak proof, air tight, puncture resistant and labeled in accordance with OSHA. The adequately wet intact coating pieces should be placed into labeled asbestos waste bags. These bags should be air tight, puncture resistant, and labeled accordingly. These bags should only be half filled and closed at the end by a "goose-neck" method and sealed with duct tape.

Asbestos waste, scrap, debris, bags, containers, equipment, and contaminated clothing shall be collected and disposed of in sealed, labeled impermeable bags of greater than 6 mils thickness or other closed, labeled, impermeable containers.

Bags or containers shall be imprinted and clearly labeled with the following OSHA asbestos hazard warning and address:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
Site Address
Contractor's Name
Contractor's Address

Bags/containers shall be clearly labeled, for DOT, as: RQ, Asbestos, 9, NA2212, PG III

Containers shall have a DOT number 9 diamond label on the container if the shipping container is greater than 66 pounds. For assistance with DOT labeling requirements, contact the Veracity Field Services Safety Manager.

Proper disposal of asbestos waste including but not limited to proper vehicle labeling and waste shipment records. Sealed, secured and labeled containers of ACM waste must be removed and transported to a pre-arranged disposal location as soon as technically feasible. Vehicles used for transport should be labeled properly during loading and unloading. A waste shipment record must be maintained.

Record Keeping

All records relating to any asbestos activity shall be maintained permanently by the company who performed the removal.

The following records shall be maintained:

- Exposure Assessments that are being relied upon to support a location's position that asbestos work (specific or generic) will not result in exposures above the PEL or excursion limit.
- Employee asbestos exposure records (personnel air monitoring).
- Medical Surveillance records.
- Training records.



- Shipping papers and disposal records.
- Copies of notification letters sent to Governmental agencies.
- Pre-project asbestos sampling results.
- Post-project clearance sampling results.
- Daily Work Summaries.
- Project Completion Closure Report, if provided.

Training

Employees removing the coating (asbestos workers) will have both classroom and hands-on training from an approved training provider.

Asbestos worker training must consist of both classroom and hands-on training from an approved training provider consisting of, but not limited to the following elements:

- methods of recognizing asbestos,
- health effects of asbestos,
- respirator training,
- requirements for posting signs and hands on training for acceptable removal methods.

A certificate of training shall be provided and maintained.



ATV USE



Purpose

This program is written to be in compliance with regulatory requirements and provide directives to managers, supervisors, and employees about their responsibilities in the operations and management of all-terrain vehicles (ATV).

Key Responsibilities

The Company Safety Manager

- The designated Safety Manager is responsible for developing and maintaining the program and related procedures. These procedures are available at the company solution center located at www.veracityfieldservices.com.

Site Manager

- Responsible for the implementation and maintenance of the program for their site and ensuring all assets are made available for compliance with the plan

Employees and Consultants

- All shall be familiar with this procedure and the client workplace vehicle safety program
- Follow all written and posted requirements and report unsafe conditions

Vehicle and Transportation Related

Driving Safety

- Operators of ATVS shall be trained to the requirements of this plan
- ATVs shall be operated in accordance with the manufacturer's specifications/recommendations.
- No passengers shall be on ATVs.

Employees driving vehicles are required to follow safe driving practices:

- Obey all client and local driving laws or regulations as well as client requirements
- Immediately report any collision, vehicle damage or near miss associated with company or client ATV operation while driving on company duties
- No use of cell phones, radios or other electronic devices while operating an ATV
- Slow down around construction, large vehicles, wildlife, fog, rain, snow or anything else that adds a hazard
- Workers shall not operate an ATV while under the influence of alcohol, illegal drugs, or prescription or over-the counter medications that might impair their driving skills

Drivers are to be prepared before using an ATV:

- Inspect for vehicle damage and immediately report any damage to the supervisor
- Make sure dirt or snow is removed from lights

Vehicle Requirements

- ATV speed shall not exceed 30 mph or that of the client requirements
- Each ATV shall be equipped with the following equipment that is checked prior to use:



- Lighting package
- Horn
- Follow all manufacturer guidelines when operating an ATV on sloped terrain.
- Veracity Field Services, LLC must ensure that each ATV operator has demonstrated their ability to operate the ATV and trained to the requirements of this program. The training program for an ATV operator must be documented and cover:
 - the operator's pre-trip inspection
 - use of personal protective apparel
 - operating skills according to the ATV manufacturer's instructions
 - basic mechanical requirements, and
 - safely loading and unloading the vehicle, if this is a job requirement
- Loading and unloading of an ATV onto or off a carrier vehicle must be done in a safe manner. If ramps are used when loading or unloading an ATV they must be securely anchored, placed at a suitable angle, be factory manufactured, have a positive means of securing the ramp to the transport vehicle, be sufficiently wide and have a surface finish which provides an adequate grip for the ATV's tires
- 3 wheeled ATVs are not permitted in Veracity Field Services, LLC operations

Protective Equipment Requirements

When operating the vehicle:

- An ATV operator must wear clothing suitable for the environmental conditions and when necessary to protect against the hazards presented at the worksite, suitable gloves and clothing which covers the body and appropriate footwear
- Veracity Field Services, LLC requires the use of DOT helmets by the ATV operator



BEHAVIOR BASED SAFETY



Purpose

The Veracity Field Services (the company) Behavior Based Safety (BBS) initiative is an education and observation process used to improve safety and reduce risk in the workplace. This process uses a proactive approach and is intended to communicate to employees the elements and the procedures of Behavior Based Safety that will assist in reducing at risk behaviors which in turn reduces injuries in our workplaces.

Scope

The Veracity Field Services BBS program applies to employees only. Employees and consultants are required to participate in BBS initiatives already in place at customer or client locations if required.

Requirements

Safety awareness principles are the foundation of the Veracity Field Services Behavior Based Safety process. The key concepts teach employees to recognize when they may be in one of the following states:

- Rushing
- Frustration
- Fatigue
- Complacency (which can cause or contribute to these critical errors)
- Eyes not on task
- Mind not on task
- Line of fire
- Loss of balance/traction/grip (which in turn increase the risk of injury.)

Pre-task Analysis is a process to evaluate the work environment by performing a Job Safety Analysis (JSA) of each job. The purpose of which is to eliminate or control all hazards that may be encountered to complete the job. This process is included in the Behavior Based Safety process to establish the correct habits and work procedures in order to reduce at-risk behaviors.

The observation process is designed to raise safety awareness and provide a feedback mechanism for management to make changes in design, process or procedure in order to reduce at-risk behaviors. The key to this process is raising awareness of behavior through observation and feedback. The process has three key elements:

Conducting Observations of Employees Work Behavior

Observations provide direct, measurable information on employee work practices identifying both safe and unsafe behaviors. The process starts with the observation of workers - fellow employees, other contractor employees and customer employees as they perform their tasks. Observers collect information about worker performance and provide feedback via the observation card. The emphasis is not on who was observed but rather what behavior was observed.



During the observation the observer records their findings on the BBS Observation Form. Items to be observed include but are not limited to:

- Personal Protective Equipment
- Procedures / Methods
- People
- Work Environment
- Equipment

Upon completion of an observation the observer is expected to have a discussion with the observed to get feedback. The observer will:

- Review the observation with observed employee.
- Start with a positive comment.
- Reinforce safe behaviors observed first.
- Describe and discuss unsafe behaviors observed.
- Solicit from observed employee explanation of his/her unsafe behavior with open-ended questions.
- Re-emphasize no consequence to observed employee.

Documenting feedback allows workers to assess what should be repeated and what should change to reduce risks in the workplace.

Collection of Data and Performing Trend Analysis

Individual departments, as well as Veracity Field Services as a whole, will compare these measurements and track these results by an acceptable method so that numerical and statistical comparisons can be made over time.

BBS Observation Forms are forwarded to the corporate safety manager for input into the BBS database. Reports are generated and forwarded to management. Veracity Field Services will collect data and performing trend analysis based on the information.

Elements of an Action Plan After the Trend Analysis is Completed

Once trend analysis is complete, appropriate action plans shall be developed to address unsafe behaviors. Action planning will include:

- Evaluate unsafe behaviors from trend analysis and prioritize
- Develop action plan for unsafe behaviors based on comments and feedback from data sheets
- Designate responsible parties and timeframes within the action plan
- Define who is responsible for action planning
- Ensure management support

Action Plan Follow Up

All action plans shall be arranged by a set time period. To ensure effectiveness of the BBS follow-up is necessary to ensure the closure of all actions listed. The follow-up process will include:

- Monthly frequency for review of action by the safety manager, senior management and employees.
- Assign accountability for closeout of action plans within Veracity Field Services.



- Document archiving of action plans with completed action items.

Responsibilities

Oversight

The manager/supervisor has these oversight responsibilities:

- Coach observers and develop action plans to ensure continuous improvement.
- Ensure that all employees are trained on the Behavior Based Safety elements.
- Maintain communication with workforce by channeling information in a timely manner (feedback).
- Collect and review process modification change requests from employees.
- After reviewing and giving feedback the BBS/JSA cards should be forwarded to the corporate safety director for data entry.

Each employee plays a specific role in the Behavioral Based Safety process. These roles include observe, observer, supervisor, manager and safety manager.

Person being observed

- Be willing to be observed.
- Be open and cooperative.
- Avoid being defensive.
- Participate in problem-solving meetings.
- Be familiar with the Behavior Based Safety process.

Person performing the observation

- Learn the Behavior Based Safety process and the benefits of reducing at-risk behaviors.
- Promote the Behavior Based Safety process.
- Make observing proactive.
- Be open to coaching.
- Be courteous and helpful.
- Assist workers by offering suggestions to safely perform a task or help them with a task if necessary.
- Communicate with the workers being observed.
- Give constructive feedback after observations.
- Stress the safe behaviors before the at-risk behaviors.
- Offer and work towards solutions of problems found.
- Record a comment for every recorded "at-risk" to include what and why. Make quality observations, concentrating on quality comments.

Manager

- Actively promote and participate in the behavior safety process by supporting the goals and objectives of the Behavior Based Safety process.
- Ensure that all employees are aware of what is expected of them regarding the BBS process.
- Encourage employees to participate in observations so that incidents/injuries are reduced in the workplace.



- Provide necessary resources to keep process productive.
- Attend safety meetings and offer feedback on areas of improvement.

Supervisor

- Actively promoting and participating in the Behavior Based Safety process by reviewing BBS Observation Forms turned in at least weekly and giving feedback, completing corrective actions needed, etc.
- Refraining from using data from the Behavior Based Safety process in a punitive manner.
- Assisting in problem solving and completing corrective actions in a timely manner.
- Understanding the behavior safety process and the benefits of reducing at-risk behaviors.

Safety Manager

- Support the goals and objectives of the Behavior Based Safety process.
- Encourage, promote, provide technical support and assist in acquiring the resources needed for the Behavior Based Safety process.
- Address the concerns and suggestions of field personnel.
- Collect all observation data cards.
- Enter data into BBS database.

Training

Training on the observation process will include how to conduct the observation, how to complete the observation form, what do the behaviors mean, feedback training and role play (mentoring and coaching) and employees should be aware they may be observed at any time.

Training will include:

- Program objectives and incident metrics reviewed.
- How to conduct the observation.
- How to complete the observation form.
- What do the behaviors mean.
- Feedback training and role play (mentoring and coaching).
- Employees should be aware they may be observed at any time.

BBS Safety Observation Form

The BBS Form can be found at www.veracityfieldservices.com



AERIAL LIFTS



Purpose

The purpose of this program is to define work practices, administrative procedures and engineering controls to protect employees exposed to benzene concentrations above the OSHA action level. This plan shall be implemented and kept current by the Safety Manager as required to reflect the most recent exposure monitoring data.

Scope

This program covers all employees who may be exposed to benzene in the course of completing job duties. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Veracity Field Services employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent. Employees will be aware of provisions of site specific contingency/emergency plans by either Veracity Field Services or of a facility owner.

The Veracity Field Services Safety Manager will develop and implement project/task specific benzene control procedures prior to the start of activities that may include exposure to benzene. Veracity Field Services will be aware of an owner's contingency plan provisions and all employees must be informed where benzene is used in the host facility.

Possible locations where employees may be exposed to benzene during their job functions may include, but not limited to: petroleum refining sites, tank gauging (tanks at producing, pipeline & refining operations) and field production and maintenance operations.

Definitions

- Action Level – means an airborne concentration of benzene of 0.5 ppm calculated as an 8-hour time-weighted average.
- Benzene – a toxic, colorless liquid or gaseous material. Benzene has an aromatic odor, is not soluble in water and is flammable.
- Employee exposure – exposure to airborne benzene that would occur if the employee were not using respiratory protective equipment.
- Health Effects – Short-term overexposure may cause irritation of eyes, nose and skin; breathlessness, irritability, euphoria, headache, dizziness or nausea. Long term effects may result in blood disorders such as leukemia and anemia.



Key Responsibilities

Manager or Designee

- Ensure personnel are aware of work that has the potential of exposure to benzene.
- Ensure individuals responsible for monitoring areas of exposure are properly trained.
- Ensure personnel receive documented medical surveillance exams.
- Ensure that emergency exams are performed if an overexposure or suspected overexposure occurs.

Supervisors

- Ensure employees have the appropriate personal protective equipment (PPE) and are properly trained in its use and care.
- Ensure employees comply with the benzene control program.

Safety Manager

- In coordination with the Manager, develop and implement project/task specific benzene control procedures prior to the start of activities that may include exposure to benzene.
- Coordinate monitoring activities, ensuring monitoring equipment is in proper working order and, as necessary, modifying the benzene control procedures to reflect exposure monitoring data.
- Maintain the benzene control program, notify management of any regulatory changes and ensure compliance with regulatory, client and corporate requirements.
- Coordinate training activities.
- Coordinate the medical surveillance program, including maintenance of medical records and administration of exams.
- Ensure fire extinguishers shall always be readily available where benzene is used/stored. Benzene liquid is highly flammable and vapors may form explosive mixtures in air. Fire extinguishers must be readily available in areas where benzene is used or stored.

Employees

- Comply with the benzene control program.
- Know where benzene is used at Veracity Field Services or client facilities and follow any of additional plant safety rules required by the client.
- Comply with the medical surveillance program and attend examinations as required.
- Maintain respiratory protection equipment in good working order and notify the supervisor or Safety Representative of any problems prior to starting work
- Review material safety data sheets or consult with the supervisor to identify any container with benzene containing material.
- Not smoke in prohibited areas where benzene is present.



- Report exposures resulting in any symptoms immediately. Procedure

Permissible Exposure Limits

The time-weighted average limit (TWA) for benzene is:

- 8-hour TWA 1 ppm
- 12-hour TWA 0.67 ppm

The short-term exposure limit (STEL) for benzene is 5 ppm.

Regulated Areas

- Veracity Field Services shall establish regulated areas wherever airborne concentration of benzene exceeds or can reasonably be expected to exceed the PEL or STEL.
- Veracity Field Services will control access to regulated areas and limit access to authorized personnel.
- Safety precautions such as prohibition of smoking in areas where benzene is used/stored shall be taken. Smoking is prohibited in areas where benzene is used or stored. The following signage shall be posted in all regulated areas when the potential exists for benzene vapors to be in excess of the PEL:

DANGER – BENZENE REGULATED AREA CANCER CAUSING AGENT FLAMMABLE – NO SMOKING AUTHORIZED
PERSONNEL ONLY RESPIRATOR REQUIRED

Methods of Compliance

- The benzene control program shall be written and implemented to comply with OSHA regulation 29 CFR 1910.1028 (Benzene).
- Veracity Field Services shall establish and implement a written program to reduce employee exposure to or below the PEL primarily by means of engineering and work practice controls to ensure compliance with the benzene control program and federal and state requirements.

Exposure Monitoring

Exposure monitoring shall be performed for the 8-hour and 12-hour TWAs or for the 15 minute STEL exposure when:

- Regulated areas are established
- An emergency occurs that could require a regulated area
- A change in the production, process, control equipment, personnel or work practices may result in new or additional exposure to benzene
- Cleanup of a spill, leak repair, or rupture occurs
- If the monitoring required reveals employee exposure at or above the action level but at or below the TWA, Veracity Field Services shall repeat the monitoring for each employee at least every year.
- If the initial monitoring reveals employee exposure to be below the action level Veracity Field Services may discontinue the monitoring.



- If the monitoring reveals that employee exposures, as indicated by at least two consecutive measurements taken at least 7 days apart, are below the action level Veracity Field Services may discontinue to monitor.
- Direct reading detection instruments (Dräger CMS is recommended) will be used where benzene vapors may be present in work areas not previously monitored.
- Personal monitoring will be performed by use of vapor monitoring badges following manufacturer requirements. All samples shall be analyzed at an AIHA (American Industrial Hygiene Association) certified laboratory.

Medical Surveillance

- Baseline and annual medical exams shall be provided to employees that may work or are anticipated to participate in operations more than 10 times per year or may work in areas where benzene exposures may exceed the PEL over 30 days per year.
- Veracity Field Services shall make available a medical surveillance program for employees who are or may be exposed to benzene at or above the action level 30 or more days per year; for employees who are or may be exposed to benzene at or above the PELs 10 or more days per year; for employees who have been exposed to more than 10 ppm of benzene for 30 or more days in a year prior to the effective date of the standard when employed by their current employer.
- Notification of monitoring results shall be provided to employees in writing within 15 working days of receipt of results.

Personal Protective Equipment

- PPE will be selected on the basis of its ability to prevent absorption, inhalation and ingestion.
- PPE will reflect the needs of the employee based on work conditions, amount and duration of exposure and other known environmental factors but shall contain as a minimum; boots, proper eye protection, gloves, sleeves, aprons and others as determined.
- PPE shall be provided and worn when appropriate to prevent eye contact and limit dermal exposure to liquid benzene. PPE must meet the requirements of 29 CFR 1910.133 and provided at no cost to the employees.

Respiratory Protection

- A respiratory protection program shall be established in accordance with 29 CFR 1910.134. Respiratory protection is required:
 - During the time period necessary to implement engineering controls or work practices.
 - When engineering and work practices are not feasible.
 - In emergencies.

Approved respirators shall be selected according to airborne concentrations of benzene or condition of use.

- 0 to 0.67 ppm – no respirator required
- 0.67 to 6.7 ppm – half-mask respirator with OV cartridges



- 6.7 to 33 ppm – full-face respirator with OV cartridges
- Greater than 33 ppm – Due to the Veracity Field Services policy of not permitting SCBA no employee shall enter a space containing more than 33 ppm.

Recordkeeping

- Medical surveillance records shall be maintained for 30 years after termination of employment
- Exposure monitoring records shall be maintained for 30 years after completion of the project
- Exposure and medical monitoring records shall be made available to affected employees or their representatives and to OSHA upon request

Communication of Benzene Hazards

- Signs and labels shall be posted at entrances of regulated areas
- The benzene control program shall be updated by the Veracity Field Services Safety Manager
- Project site specific contingency and emergency procedures shall be updated by the Safety Manager and made available to project staff prior to beginning work at the specific site.



BLOODBORNE PATHOGENS



Purpose

This Bloodborne Pathogen Exposure Control Plan has been established to ensure a safe and healthful working environment and act as a performance standard for all Veracity Field Services (the company) employees and consultants. This program applies to all occupational exposure to blood or other potentially infectious materials. The content of this plan complies with OSHA Standard 29 CFR 1910.1030 (Occupational Exposure to Bloodborne Pathogens).

Scope

This program addresses all occupational exposure to blood or other potentially infectious materials (examples of potentially infectious materials include bodily fluids containing hepatitis B, HIV). OSHA requires that all employers that can "reasonably anticipate exposure" of employees or consultants to infectious material to prepare and implement a written exposure control plan.

Key Responsibilities

Exposure Control Officer (COMPANY Safety Manager)

Has overall responsibility for developing and implementing the Exposure Control Procedure for all facilities.

Site Project Manager and Supervisors

Site project manager and supervisors are responsible for exposure control in their respective areas.

Employees

- Know what tasks they perform that have occupational exposure.
- Plan and conduct all operations in accordance with our work practice controls.
- Develop good personal hygiene habits.

Procedure

Training

Training shall be provided at the time of initial assignment to tasks where occupational exposure may take place, and at least annually thereafter. Annual training for all employees and consultants shall be provided within one year of their previous training. Training shall include:

- What bloodborne pathogens are; how to protect themselves from exposure
- Methods of warnings (signs, labels, etc.)
- The OSHA requirements of bloodborne pathogens
- The Hepatitis B vaccine shall be made available to all employees that have occupational exposure at no cost to the employee(s). Consultants are responsible for the administration and cost of their own vaccines.



Biohazard Label



Availability of Procedure to Employees

All employees and consultants will have access to a copy of the exposure control plan. Access to a copy of the exposure control plan shall be provided in a reasonable time, place, and manner.

Reviews and Update of the Procedure

The procedure is reviewed annually and updated whenever we establish new functional positions within our facility that may involve exposure to biohazards.

Exposure Determination

- There are no job classifications in which some or all employees and consultants have occupational exposure to bloodborne pathogens that may result from the performance of their routine duties.
- Designated employees and consultants may be trained to render first aid and basic life support. Rendering first aid or basic life support will expose employees or consultants to bloodborne pathogens and will require them to adhere to this program.
- In addition, no medical sharps or similar equipment is provided to, or used by, employees or consultants rendering first aid or basic life support.
- This exposure determination has been made without regards to the Personal Protective Equipment that may be used by employees or consultants.

Methods of Compliance

Universal Precautions

Under circumstances in which differential between body fluids is difficult or impossible, all body fluids will be considered potentially infectious.

Engineering Controls

Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Engineering controls should be examined and maintained or replaced on a regular schedule to ensure their effectiveness. Hand washing facilities shall be readily available at all work locations. If provision of hand washing facilities is not feasible, then an appropriate antiseptic hand cleanser in conjunction with cloth/paper towels or antiseptic towelettes shall be provided by COMPANY.

Containers for contaminated reusable sharps that our clients provide have the following characteristics: Puncture-resistant; Color-coded or labeled with a biohazard warning label; Leak-proof on the sides and bottom.

Secondary containers which are: Leak-proof; Color-coded or labeled with a biohazard warning label; Puncture-resistant, if necessary.

Work Practice Controls

- Employees shall wash their hands immediately, or as soon as feasible, after removal of potentially contaminated gloves or other personal protective equipment.
- Following any contact of body areas with blood or any other infectious materials, employees and consultants must wash their hands and any other exposed skin with soap and water as soon as possible.



- Hand washing facilities shall be available. If hand washing facilities are not feasible COMPANY will provide either an appropriate antiseptic hand cleanser in conjunction with cloth/paper towels or antiseptic towelettes.
- Contaminated needles and other contaminated sharps should not be handled if you are not AUTHORIZED or TRAINED to do so. Contaminated needles and other contaminated sharps are not bent or recapped.
- Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses is prohibited in work areas where there is potential for exposure to biohazardous materials.
- Food and drink is not kept in refrigerators, freezers, on countertops or in other storage areas where potentially infectious materials are present.
- All equipment or environmental surfaces shall be cleaned and decontaminated after contact with blood or other infectious materials.
- Specimens of blood or other potentially infectious materials must be put in leak proof bags for handling, storage and transport.
- If outside contamination of a primary specimen container occurs, that container is placed within a second leak proof container, appropriately labeled for handling and storage.
- Bloodborne pathogens kits are located on top of first aid kits and are to be used in emergency situations by the caregiver. Once the seal is broken on kit and any portion has been used it is not to be reused. Pathogen Kits shall be ordered and replaced promptly. Biohazard bags are identified by stickers and located in the first aid area. Contaminated supplies are to be disposed at once.

Personal Protective Equipment

When the possibility of occupational exposure is present, PPE is to be provided at no cost to the employee such as gloves, gowns, etc. PPE shall be used unless employees or consultants temporarily declined to use under rare circumstances. PPE shall be repaired and replaced as needed to maintain its effectiveness. All PPE shall be of the proper size and readily accessible.

Our employees and consultants adhere to the following practices when using their personal protective equipment:

- Any garments penetrated by blood or other infectious materials are removed immediately.
- All potentially contaminated personal protective equipment is removed prior to leaving a work area.
- Gloves are worn whenever employees and consultants anticipate hand contact with potentially infectious materials or when handling or touching contaminated items or surfaces.
- Disposable gloves are replaced as soon as practical after contamination or if they are torn, punctured or otherwise lose their ability to function as an "exposure barrier".
- Masks and eye protection (such as goggles, face shields, etc.) are used whenever splashes or sprays may generate droplets of infectious materials.
- Any PPE exposed to bloodborne pathogens shall be disposed of properly.
- PPE shall be used unless employees and consultants temporarily declined to use PPE under rare circumstances.
- PPE should be cleaned, laundered & properly disposed of if contaminated.
- COMPANY will repair and replace PPE as needed to maintain its effectiveness.



Housekeeping

Our staff employs the following practices:

- All equipment and surfaces are cleaned and decontaminated after contact with blood or other potentially infectious materials.
- Protective coverings (such as plastic trash bags or wrap, aluminum foil or absorbent paper) are removed and replaced.
- All trash containers, pails, bins, and other receptacles intended for use routinely are inspected, cleaned and decontaminated as soon as possible if visibly contaminated.
- Potentially contaminated broken glassware is picked up using mechanical means (such as dustpan and brush, tongs, forceps, etc.).

Post-Exposure and Follow Up

Post-Exposure Evaluation & Follow-Up

If there is an incident where exposure to bloodborne pathogens occurred, we immediately focus our efforts on investigating the circumstances surrounding the exposure incident and making sure that our employees receive medical consultation and immediate treatment. Consultants are required to arrange for their own medical consultation and treatment.

The COMPANY Safety Manager/ Supervisor investigates every reported exposure incident and a written summary of the incident and its causes is prepared and recommendations are made for avoiding similar incidents in the future. We provide an exposed employee with the following confidential information:

- Documentation regarding the routes of exposure and circumstances under which the exposure incident occurred.
- Identification of the source individual (unless not feasible or prohibited by law).

Once these procedures have been completed, an appointment is arranged for the exposed employee with a qualified healthcare professional to discuss the employee's medical status. This includes an evaluation of any reported illnesses, as well as any recommended treatment.

Information Provided to the Healthcare Professional. We forward the following:

- A copy of the Biohazards Standard.
- A description of the exposure incident.
- Other pertinent information.

Healthcare Professional's Written Opinion

After the consultation, the healthcare professional provides our facility with a written opinion evaluating the exposed employee's situation. We, in turn, furnish a copy of this opinion to the exposed employee. The written opinion will contain only the following information:

- Whether Hepatitis B Vaccination is indicated for the employee.
- Whether the employee has received the Hepatitis B Vaccination.



- Confirmation that the employee has been informed of the results of the evaluation.
- Confirmation that the employee has been told about any medical conditions resulting from the exposure incident which require further evaluation or treatment.
- All other findings or diagnoses will remain confidential and will not be included in the written report.

Record Keeping

All records of employees shall be made available to OSHA's Assistant Secretary and the Director of OSHA for examination and copying upon request. It must be understood that Veracity Field Services will only maintain records of employees and not consultants- it is expected that consultants maintain their own records. Medical records must have written consent of employee or consultant before being released. The company shall meet the requirements involving transfer of records set forth in 29 CFR 1910.1020(h).

The respective Human Resources representative shall maintain Bloodborne Pathogen exposure records.

Employee medical records shall be kept confidential and are not to be disclosed without the employee's written consent, except as required by 29 CFR 1910.1030 or other law.

Accurate medical records for each employee with occupational exposure must be maintained for at least the duration of employment plus 30 years and shall include at least the following:

- Employee's name, Social Security number and COMPANY employee number.
- Employee's Hepatitis B vaccination status, including vaccination dates.
- All results from examinations, medical testing and follow-up procedures, including all health care professional's written opinions.
- Information provided to the health care professional.
- Any Hepatitis B Vaccine Declinations.

Training records shall be maintained for 3 years from the date on which the training occurred and shall include at least the following:

- Outline of training program contents.
- Name of person conducting the training.
- Names and job titles of all persons attending the training.
- Date of training.

Labels and Signs

Biohazard warning labeling shall be used on containers of regulated waste; Sharps disposal containers; contaminated laundry bags and containers; contaminated equipment.

Information

Information provided to our employees and consultants includes:

- The Biohazards Standard itself.
- The epidemiology and symptoms of bloodborne diseases.



- The modes of transmission of bloodborne pathogens.
- Our facility's Exposure Control Procedure (and where employees or consultant can obtain a copy).
- Appropriate methods for recognizing tasks and other activities that may involve exposure.
- A review of the use and limitations of methods that will prevent or reduce exposure.
- Selection and use of personal protective equipment.
- Visual warnings of biohazards within our facility including labels, signs and "color-coded" containers.
- Information on the Hepatitis B Vaccine.
- Actions to take and persons to contact in an emergency involving potentially infectious material.
- The procedure to follow if an exposure incident occurs, including incident reporting.
- Information on the post-exposure evaluation and follow-up, including medical consultation.



VACCINATION DECLINATION FORM

Date: _____

Employee Name: _____

Employee ID#: _____

I understand that due to my occupational exposure to blood or other potential infectious materials I may be at risk of acquiring Hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with Hepatitis B vaccine, at no charge to myself. However, I decline the Hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring Hepatitis B, a serious disease. If, in the future, I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Employee Signature

Date

Facility Representative Signature

Date



POST-EXPOSURE EVALUATION AND FOLLOW-UP CHECKLIST

The following steps must be taken, and information transmitted, in the case of an employee's exposure to bloodborne pathogens:

<u>ACTIVITY</u>	<u>COMPLETION DATE</u>
Employee furnished with documentation regarding exposure incident.	_____
Source individual identified. (_____) Source individual	_____
Appointment arranged for employee with healthcare professional. (_____) Professional's name	_____
Documentation forwarded to healthcare professional	
_____ Bloodborne Pathogens Standard	
_____ Description of exposed employee's duties	
_____ Description of exposure incident, including routes of exposure	



COLD WEATHER



Purpose

The purpose of this program is to address control measures to protect Veracity Field Services (the company) employees and consultants from injuries when working in cold temperatures.

Scope

This policy shall cover all Veracity Field Services employees and consultants when working in temperatures cold enough to cause injury. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Veracity Field Services employees and consultants and shall be used when an operator or client's program doesn't exist or is less stringent.

Responsibilities

Safety Manager

- implement and/or provide controls (engineering, administrative or personal protective equipment) to minimize cold stress
- provide training and education regarding cold stress, including early signs and symptoms of cold-related exposure

Worker Responsibilities

- identify and conduct a visual assessment of tasks where there is the potential for cold stress
- adhere to all control measures or work procedures that have been designed and implemented to reduce exposure to conditions that could cause cold stress
- leave cold environments if signs or symptoms of cold-related stress appear
- wear all required cold temperature clothing and PPE
- immediately report any signs or symptoms of cold-related stress

Cold Temperature Procedures

Health Effects of Cold Stress

Warning signs of hypothermia can include complaints of nausea, fatigue, dizziness, irritability or euphoria. Workers can also experience pain in their extremities (hands, feet, ears, etc.), and severe shivering. Workers should be moved to a heated shelter and seek medical advice when appropriate.

Facilities

- Regularly used walkways and travel ways shall be sanded, salted or cleared of snow and ice as soon as practicable.
- Employees and consultants must be knowledgeable of the dangers associated with working around unstable snow and ice build-ups both at and above walking and working surface, unstable snow build-up, sharp icicles and ice dams, and plan into their work how to prevent incidents caused by them.
- When dangerous overhead build-ups of snow or ice are present, barricades will be used to prevent workers from walking or driving into potential danger zones.



Clothing, PPE and Supplies

Proper cold weather protection must be worn by employees and consultants when working in cold, wet and windy conditions. Protective clothing is the most important way to avoid cold stress. The type of fabric also makes a difference.

Cotton loses its insulation value when it becomes wet. Wool, silk and most synthetics, on the other hand, retain their insulation even when wet. The following are recommendations for working in cold environments:

- Wear at least three layers of clothing. An inner layer of wool, silk or synthetic to wick moisture away from the body – a middle layer of wool or synthetic to provide insulation even when wet - an outer wind and rain protection layer that allows some ventilation to prevent overheating.
- Wear a hat or hood. Up to 40% of body heat can be lost when the head is left exposed.
- Keep a change of dry clothing available in case work clothes become wet.
- With the exception of the wicking layer do not wear tight clothing. Loose clothing allows better ventilation of heat away from the body.
- Do not underestimate the wetting effects of perspiration. Often times wicking and venting of the body's sweat and heat are more important than protecting from rain or snow.
- Wear proper footwear. Felt-lined, rubber bottomed, leather-topped boots with removable felt insoles are best suited for heavy work in cold since leather is porous and will allow the boots to "breathe" and let perspiration evaporate.
- Liner socks made from polypropylene will help keep feet dry and warmer by wicking sweat away from the skin. Always wear the right thickness of socks for your boots.
- Work clothing must be kept dry. Workers shall maintain a change of dry clothes in the event clothing becomes damp or wet in cold environments.

Preventative Controls That Are Implemented to Avoid Cold Induced Injuries

- Some preventive measures include drinking plenty of liquids, avoiding caffeine and alcohol.
- It is easy to become dehydrated in cold weather. If possible, heavy work should be scheduled during the warmer parts of the day.
- Take breaks out of the cold.
- Try to work in pairs to keep an eye on each other and watch for signs of cold stress.
- Avoid fatigue since energy is needed to keep muscles warm.
- Take frequent breaks and consume warm, high calorie food such as pasta to maintain energy reserves.
- If a worker exposed to cold shows signs or reports symptoms of cold stress or injury the worker must be removed from further exposure and treated by an appropriate first aid attendant, if available, or a medical care provider.
- For continuous work in temperatures below the freezing point, heated warming shelters such as vehicles, tents or cabins should be available. The work should be paced to avoid excessive sweating. If such work is necessary, proper rest periods in a warm area should be allowed and workers should change into dry clothes when work clothes dampen.
- New employees and consultants should be given enough time to get acclimatized to cold and protective clothing before assuming a full work load.
- For work below the freezing point, machines and tools should be designed so that they can be operated without having to remove mittens or gloves.



Training

Veracity Field Services employees and consultants who are required to work in cold weather conditions will receive initial and annual awareness training regarding the health effects of cold exposure and proper rewarming procedures. The following will constitute adequate training:

- Hypothermia occurs when body heat is lost faster than it can be replaced. When the core body temperature drops below the normal 98.6°F to around 95°F the onset of symptoms normally begins. The person may begin to shiver and stomp their feet in order to generate heat. Workers may lose coordination, have slurred speech and fumble with items in the hand. The skin will likely be pale and cold.
- Frostbite occurs when the skin actually freezes and loses water. In severe cases, amputation of the frostbitten area may be required. While frostbite usually occurs when the temperatures are 30°F or lower, wind chill factors can allow frostbite to occur in above freezing temperatures. Frostbite typically affects the extremities, particularly the feet and hands. The affected body part will be cold, tingling, stinging or aching followed by numbness. Skin color turns red, then purple, then white and is cold to the touch. There may be blisters in severe cases.
- Trench Foot or immersion foot is caused by having feet immersed in cold water at temperatures above freezing for long periods of time. It is similar to frostbite, but considered less severe. Symptoms usually consist of tingling, itching or a burning sensation. Blisters may be present.
- While working in cold, a buddy system should be used. Look out for one another and be alert for the symptoms of hypothermia.

Training and training documentation required by this program is available at the company solution center located at www.veracityfieldservices.com.



COMPRESSED GAS CYLINDERS



Purpose:

The purpose of this program is to prevent injury from failing or failure of compressed gas cylinders and to establish requirements for handling, lifting and storing compressed gas cylinders safely.

Scope

This program covers all Veracity Field Services (the company) employees and consultants who handle, transport and/or use compressed gas cylinders. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document shall be used when an operator or client's program doesn't exist or is less stringent.

Key Responsibilities

Managers/Supervisors

- Shall ensure that all employees are aware of the proper handling, storage and use requirements for compressed gas cylinders. Consultants are required to be independently knowledgeable of the same.
- Shall ensure that initial training is conducted for all new employees and that retraining is conducted when employee behaviors suggest that retraining is warranted. Awareness training is available at www.veracityfieldservices.com.

Employees

- Shall follow all requirements regarding the safe handling, storage and use of compressed gas cylinders.

Procedure

General

Cylinders shall not be accepted, stored or used if evidence of denting, bulging, pitting, cuts, neck or valve damage is observed. If damage is observed:

- The cylinder must be taken out of service.
- The cylinder's owner shall be notified to remove the cylinder from the premises.

Cylinder Identification

Gas identification shall be stenciled or stamped on the cylinder or a label used. No compressed gas cylinder shall be accepted for use that does not legibly identify its content by name.

Handling

Valve caps must be secured onto each cylinder before moving or storage.

Secure the cylinder in a blanket when being lifted by mechanical means. Slings, ropes or electromagnets are prohibited to be used for lifting compressed gas cylinders.



The preferred means to move compressed gas cylinders is with a cart, carrier or with a helper.

Compressed gas cylinders must not be allowed to strike each other.

When a cylinder cap cannot be removed by hand the cylinder shall be tagged "Do Not Use" and returned to the designated storage area for return to vendor.

Storing

All cylinders must be secured upright in a safe, dry, well-ventilated area that limits corrosion and deterioration.

- Cylinders must be secured by means that will prevent the cylinder from falling.
- When securing the cylinder, the restraints shall not be attached to electrical conduit or process piping.

Empty and non-empty cylinders shall be stored separately. All stored cylinders shall be capped.

Oxygen cylinders must be stored a minimum of 20 feet from combustible gas cylinders or areas where there may be open flame or arcing. Cylinders may also be stored where the oxygen is separated from combustible gas cylinders by a 5 foot or higher wall with a fire resistance rating of 30 minutes.

Storage areas for full and empty cylinders must be designated and labeled. Cylinders should be stored in definitely assigned places away from elevators, stairs or gangways.

Use

Cylinders must be equipped with the correct regulators. Regulators and cylinder valves should be inspected for grease, oil, dirt and solvents. Only tools provided by the supplier should be used to open and close cylinder valves.

- Never force or modify connections.
- Only regulators and gauges shall be used within their designated ratings.
- The use of a pressure-reducing regulator is required at the cylinder, unless the total system is designed for the maximum cylinder pressure.
- Valves must be closed when cylinders are not in use.
- Cylinders shall not be used as rollers or supports.
- Cylinders shall not be placed where they can come in contact with electrical circuits.
- Cylinders must be protected from sparks, slag or flame from welding, burning or cutting operations.
- Empty cylinders must be returned to designated storage areas as soon as possible after use.

Inspection of Compressed Gas Cylinders

Veracity Field Services shall determine that compressed gas cylinders under its control are in a safe condition to the extent that this can be determined by visual inspection. Visual and other inspections shall be conducted as prescribed in the Hazardous Materials Regulations of the Department of Transportation (49 CFR parts 171-179 and 14 CFR part 103). Where those regulations are not applicable, visual and other inspections shall be conducted in accordance with Compressed Gas Association Pamphlets C-6-1968 and C-8-1962. Some elements include, but are not limited to:



- Hoses and connections should be inspected regularly for damage. Hoses should be stored in cool areas and protected from damage.
- These owned cylinders shall be visually inspected prior to charging, before each use and at least annually.
- All inspections and testing must be documented.

High Pressure Cylinders are those cylinders marked for service pressures of 900 psi and greater.

- High pressure cylinders shall be taken out of service and submitted for re-qualification testing when any of the following conditions are identified by visual inspection.
- Cuts, dings, gouges, dents bulges, pitting, neck damage or evidence of exposure to fire.
- The cylinders shall be inspected and retested according to the requirements stated in 49 CFR 180.205 and .209.
- Re-qualification of non-damaged cylinders shall be conducted per the schedule in 49 CFR 180.209.

Low Pressure Cylinders are those cylinders marked for service pressures of less than 900 psi.

- Low pressure cylinders fall into two categories, those requiring requalification and those that do not require re-qualification.
- Low pressure cylinders that do not require re-qualification shall be taken out of service and condemned when any of the following conditions are identified during inspection:
- The tare weight of the cylinder is less than 90% of the stamped on weight of the cylinder.
- Observed pitting, dents, cuts, bulging, gouges or evidence of exposure to fire.
- Low pressure cylinders subject to re-qualification shall be taken out of service, inspected and retested when visual inspection identifies any of the following conditions; dents, bulges, pitting or neck damage.
- Re-qualification of non-damaged cylinders shall be conducted per the schedule in 49 CFR 180.209.

Leaking Cylinders

Leaking cylinders should be moved promptly to an isolated, well-ventilated area, away from ignition sources. Soapy water should be used to detect leaks. If the leak is at the junction of the cylinder valve and cylinder, do not try to repair it. Contact the supplier and ask for response instructions.

Transportation

Cylinders must be transported in a vertical secured position using a cylinder basket or cart and must not be rolled. Regulators should be removed and cylinders capped before movement. Cylinders should not be dropped or permitted to strike violently and protective caps are not used to lift cylinders.

Empty Cylinder Marking

Empty cylinders must be handled as carefully as when filled.

Engineering Controls

Engineering controls such as emergency shutoff switches, gas cabinets and flow restrictors should be used wherever possible to control hazards. Emergency eyewash facilities should be present where corrosive gases or materials are used.



CONFINED SPACE



Purpose

The purpose of this program is to ensure the safety of all employees and contractors working for Veracity Field Services and to comply with all regulations and host clients that pertain to confined spaces.

Scope

This program covers all employees and other workers that may be involved in confined space entry. When work is performed on a non-owned or operated site, the operator's program shall take precedence unless an operator's program doesn't exist or is less stringent.

Definitions

Acceptable entry conditions - the conditions that must exist in a confined space to allow entry and to ensure that employees involved with a confined space entry can safely enter into and work within the space.

Attendant - an individual stationed outside one or more Confined spaces who monitors the authorized Entrants and who performs all Attendant's duties assigned in the Veracity Field Services Confined Spaces Program. Attendants must have sufficiently completed and fully understands the Confined Space training and is approved by the HSE Manager to work in a confined space as an Attendant.

Authorized Entrant - an individual who is authorized by Veracity Field Services to enter a confined space. Entrants must have sufficiently completed and fully understands the Confined Space training and is approved by the HSE Manager to work in a confined space as an Authorized Entrant.

Blanking or Blinding - the absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.

Confined Space

- A space that is large enough and so configured that an employee can bodily enter and perform assigned work;
- Has limited or restricted means for entry or exit (for example, tanks, vessels, coolers, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and
- Is not designed for continuous occupancy.

Double block and bleed - the closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.

Emergency - any occurrence (including any failure of hazard control or monitoring equipment) or an event internal or external to the confined space that could endanger Entrants.



Engulfment - the surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

Entry - the action by which a person passes through an opening into a confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the Entrant's body breaks the plane of an opening into the space.

Entry permit – means the written or printed document that is provided by Veracity Field Services to allow and control entry into a confined space that contains the information specified in this program.

Entry Supervisor - the person responsible for determining if acceptable entry conditions are present at a confined space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.

- Entry Supervisors must have sufficiently completed and fully understands the Confined Space training and is approved by the HSE Manager to work in a confined space.
- An Entry Supervisor also may serve as an Attendant or as an authorized Entrant, as long as that person is trained and equipped as required by this section for each role he or she fills. Also, the duties of Entry Supervisor may be passed from one individual to another during the course of an entry operation.
- The Entry Supervisor is responsible to test and monitor the atmosphere conditions.

Hazardous atmosphere - an atmosphere that may expose employees to the risk of death, incapacitation, and impairment of ability to self-rescue (that is, escape unaided from a confined space), injury, or acute illness from one or more of the following causes:

- Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL), (0% is normal).
- Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent, (20.9 % is normal).
- Any other atmospheric condition that is immediately dangerous to life or health. (Ex.-H2S 10%, 0% is normal).
- Note: For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Safety Data Sheets that comply with the Hazard Communication Standard, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

Hot work permit - the written authorization to perform operations (for example, riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.

Immediately dangerous to life or health (IDLH) - any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a confined space.

- Note: Some materials -- hydrogen fluoride gas and cadmium vapor, for example -- may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse 12-72 hours after exposure. The victim "feels normal" from recovery from



transient effects until collapse. Such materials in hazardous quantities are considered to be “immediately dangerous to life or health”.

Inerting - the displacement of the atmosphere in a permit space by a non-combustible gas (such as nitrogen) to such an extent that the resulting atmosphere is non-combustible. This procedure produces an IDLH oxygen deficient atmosphere.

Isolation - the process by which a confined space is removed from service and completely protected against the release of energy and material into the space by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages.

Line Breaking - the intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.

Non-Permit Confined Space - A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Oxygen deficient atmosphere - an atmosphere containing less than 19.5 percent oxygen by volume.

Oxygen enriched atmosphere - an atmosphere containing more than 23.5 percent oxygen by volume.

Permit-Required Confined Space - a confined space that has one or more of the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere.
- Contains a material that has the potential for engulfing an Entrant.
- Has an internal configuration such that an Entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section.
- Contains any other recognized serious safety or health hazard.

Permit system - the employer's written procedure for preparing and issuing permits for entry and for returning the confined space to service following termination of entry.

Prohibited condition - any condition in a confined space that is not allowed by the permit during the period when entry is authorized.

Rescue service - the personnel designated to rescue employees from Permit-Required Confined Spaces.

Retrieval system - the equipment (including a retrieval line, chest or full-body harness, wristlets, if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from confined spaces.

Testing - the process by which the hazards that may confront Entrants of a confined space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.



Responsibilities

Managers/Supervisor

- Shall ensure that all employees have been trained and fully understand the requirements of this program.
- Shall provide the necessary equipment to comply with these requirements and ensure that all employees are trained on its use.
- Shall ensure that all confined space assessments have been conducted and documented.
- Shall ensure that provisions and procedures are in place for the protection of employees from external hazards including but not limited to pedestrians, vehicles and other barriers and by use of the pre-entry checklist verifying that conditions in the permit space are acceptable for entry during its duration.
- Shall ensure that all Permit-Required Confined Spaces permits are posted.
- Shall ensure an annual review of the program including all entry permits issued that during that annual period.
- Shall ensure that confined spaces are identified properly as either a Non-Permit Confined Space or a Permit-Required Confined Space.
- Shall ensure that all confined spaces that have been identified as “no entry” have signs that state, “DANGER- DO NOT ENTER”.
- Shall ensure signs have been posted at all Permit-Required Confined Space areas that state, “DANGER – PERMIT ENTRY CONFINED SPACE” along with the proper warning word such as “ASPHYXIANT, FLAMMABILITY or TOXIC HAZARD”
- Shall file all permits at the area offices for review. Permits shall be kept on file for one year.

Affected Employee

- Shall attend Confined Space Entry training commensurate with their duties and when duties change as required.
- Shall comply with all aspects of this program.
- Authorized Entrants, Attendants and Entry Supervisors may be any Veracity Field Services employee that is authorized by management to work in a confined space setting and that has been trained and is proficient in the understanding of program requirements.

Authorized Entry Supervisor Duties

- Shall have a tailgate safety meeting, with all workers to be involved in the confined space entry and review the job to be performed and what safety concerns may be present.
- Shall confirm that all isolation, Lock/out and Tag/outs have been completed prior to entry into a confined space.
- Shall ensure that the requirements of this program are followed and maintained.
- Shall test all atmosphere conditions prior to entry and shall complete and maintain the confined space permit form, and have it accessible for review on the job site at all times.
- Shall notify Veracity Field Services supervisor of entry into a confined space, and notify the supervisor of any changes that may occur, during an entry.



- If the confined space poses a hazard that cannot be eliminated, the Entry Supervisor must arrange for a rescue services.
- If the confined space poses no hazards to the Entrants, the Entry Supervisor can reclassify the confined space to a Non-Permit Confined Space.
- A stand-by rescue team is not required to be on site for Non-Permit Confined Space entries.

Authorized Attendant Duties

- Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
- Is aware of possible behavioral effects of hazard exposure in authorized Entrants.
- Continuously maintains communication and an accurate count of authorized Entrants in the confined space and ensures that the means used to identify authorized Entrants, and accurately identifies who is in the confined space.
- Remains outside the confined space during entry operations until relieved by another Attendant.
- Veracity Field Services has procedures to be used by a single attendant monitoring several confined spaces during an emergency. If more than one confined space is to be monitored by a single attendant, the program must include the means and procedures that will be used in order to enable the attendant to respond to emergencies in one or more permit spaces that he/she is monitoring without distraction from all responsibilities. This will include radio communications with emergency responders or other methods of summoning aid, directing entrants to leave the confined spaces, etc. The procedures shall be on the confined space permit.
- Monitors activities inside and outside the confined space to determine if it is safe for Entrants to remain in the space and orders the authorized Entrants to evacuate the confined space immediately under any of the following conditions:
 - If the Attendant detects a prohibited condition;
 - If the Attendant detects the behavioral effects of hazard exposure in an authorized Entrant;
 - If the Attendant detects a situation outside the space that could endanger the authorized Entrants;
 - If the Attendant cannot effectively and safely perform all the duties required.
- Summon rescue and other emergency services as soon as the Attendant determines that authorized Entrants may need assistance to escape from confined space hazards.
- Takes the following actions when unauthorized persons approach or enter a confined space while entry is underway:
 - Warn the unauthorized persons that they must stay away from the confined space;
 - Advise the unauthorized persons to exit the confined space immediately, if they have entered the space;
 - Inform the authorized Entrants and the Entry Supervisor if unauthorized persons have entered the confined space.
- Performs no duties that might interfere with the Attendant's primary duty to monitor and protect the authorized Entrants.
- Authorized Attendants shall not monitor more than one confined space at a time.



Authorized Entrant Duties

- Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
- Uses appropriate personal protective equipment properly, e.g., face and eye protection, and other forms of barrier protection such as gloves aprons, coveralls, and breathing equipment;
- Is aware of possible behavioral effects of hazard exposure in authorized Entrants;
- Shall witness and verify calibrated air monitoring data and if approved, sign off, before entry is made.
- Is entitled to request additional monitoring at any time.
- Maintain communication with the Attendants to enable the Attendant to monitor the Entrants status as well as to alert the Entrant to evacuate if needed; and
- Exit from confined spaces as soon as possible when ordered by an Attendant or Entry Supervisor, when the Entrant recognizes the warning signs or symptoms of an exposure exists, or when a prohibited condition exists, or when an alarm is activated.

Procedure

Non-Permit Confined Space Entry

If testing of the confined space atmosphere is within acceptable limits without the use of forced air ventilation and the space is properly isolated, the space can be entered by following the requirements for Level I confined space entry.

- Entrants and/or their representative shall be given the opportunity to observe and participate in the air monitoring process.
- Entrants shall review and sign the confined space permit.

Employees may enter and work in the confined space as long as LEL, O₂, and toxicity hazards remain at safe levels.

- Complete the Veracity Field Services Confined Space Entry Permit to document that there are no confined space hazards. Make this certification available to all personnel entering the space.
- A trained Attendant must always be outside the confined space. The Attendant must monitor the authorized Entrants for the duration of the entry operation.

Exception: The Attendant requirements for Level I confined space entry may be exempted, if the job assessment is performed and has determined that there are no inherent dangers to allow single person entry.

- This provision is intended to permit field operations to enter crankses, shallow valve boxes, cellars, excavations, etc. without an Attendant being present and all other aspects of the entry permit complied with.
- When there are changes in the use and configuration of a confined space that might increase the hazards to the Entrants (e.g., using epoxy coating on a tank floor, welding, painting, etc.), re-evaluate the space. If necessary, reclassify the space as a Permit-Required Confined Space.
- Continuously monitor the confined space atmosphere to ensure that it is still safe.
- The space must not contain a hazardous atmosphere while personnel are inside.
- If a hazardous atmosphere is detected during an entry, personnel must immediately evacuate the space.



- Re-evaluate the space to determine how the hazardous atmosphere developed.
- The Entry Supervisor shall cancel the entry permit.
- Take action to protect personnel before any subsequent activity to re-enter the space takes place.
- Reissue the Veracity Field Services Confined Space Entry Permit before allowing Entrants to re-enter the space.
- If necessary, reclassify the space as a Permit-Required Confined Space.
- Ensure that vehicle or other equipment exhaust does not enter the space.

Permit-Required Confined Space Entry

If the space is properly isolated and results of air monitoring are above acceptable parameters without local exhaust ventilation in operation, classify the entry as a Permit-Required Confined Space.

- Complete the Veracity Field Services Confined Space Entry Permit before proceeding with work in a Permit-Required Confined Space.
- Entrants and/or their representative shall be given the opportunity to observe and participate in the air monitoring process.
- Entrants shall review and sign the confined space permit.
- At least one trained Attendant must always be outside the Permit-Required Confined Space.
- The Attendant must monitor the authorized Entrants for the duration of the entry operation.
- Only authorized Entrants may enter a Permit-Required Confined Space.
- All Entrants must sign in and out on the entry permit when entering and leaving a Permit-Required Confined Space.
- The back of the permit or a sign-in sheet must be used for this purpose.
- Post signs and barricades outside all Permit-Required Confined Spaces to notify personnel that a confined space entry is in progress and unauthorized entry is prohibited.
- Conditions must be continuously monitored where Entrants are working to determine that acceptable conditions are maintained during entry.
- If a hazardous atmosphere is detected during an entry, personnel must immediately evacuate the space.
 - The Entry Supervisor shall cancel the entry permit.
 - Re-evaluate the space to determine how the hazardous atmosphere developed.
 - Take action to protect personnel before any subsequent activity to re-enter the space takes place.
 - Re-issue the Veracity Field Services Confined Space Entry Permit before allowing Entrants to re-enter the space.
 - Employees or their representatives are entitled to request additional monitoring at any time.
- The permit must be terminated when the entry operations are complete or when permit conditions change (i.e., hazardous air monitoring results are noted, unsafe behaviors are observed, etc.).
- The minimum rescue equipment required for Permit-Required Confined Space entry is covered in the Rescue & Emergency section of this program.
- Permit-Required Confined Space entry operations will be reviewed when Veracity Field Services believes that the requirements of this confined space program may not adequately protect personnel.



- If deficiencies are found in the program, the program will be revised and personnel will be trained in the new revisions before subsequent entries are authorized.

Pre-Job Planning and Space Preparation

The Entry Supervisor must determine that the confined space is properly isolated by blinding, disconnecting, and/or by following local Lockout/Tagout procedures.

The Entry Supervisor must discuss with all Entrants the hazards of the space, communication methods and emergency procedures during the confined space entry.

Eliminate any condition making it unsafe to open the equipment to atmosphere.

Promptly guard the opening to prevent an accidental fall through the opening and to protect each employee working in the space from foreign objects entering the space.

If applicable, wash, steam, ventilate or degas the confined space to properly free it of possible contaminants. Vent vapors to a safe location.

Do not allow unauthorized personnel to enter a confined space. Barricade and/or guard all confined spaces to prevent entry of unauthorized Entrants.

If performing hot work in the confined space, precautions must be taken consistent with the Veracity Field Services Hot Work Permit procedure.

Ensure that vehicle or other equipment exhaust does not enter the space.

Pre-Entry Safety Meeting

The Entry Supervisor must declare when the confined space is ready for entry.

The Entry Supervisor shall hold a pre-entry safety meeting to discuss all requirements and procedures with all authorized Entrant(s) and Attendant(s) involved with the entry. He/she will discuss other concerns such as previous contents, vessel coating, PPE required etc., during this meeting.

The Entry Supervisor must coordinate entry operations when employees of more than one company are working simultaneously in the confined space. This coordination is necessary so that one company's work does not endanger the employees of another company.

Equipment

Check all work equipment to ensure that it has the proper safety features and is approved for the locations where it will be used. The Entry Supervisor shall ensure that all equipment is properly maintained in a safe condition and that Entrants use the equipment properly.

The following equipment must be considered and may be required when entering a confined space:



- Atmospheric Testing and Monitoring Equipment.
- Barriers, Shields, and Signs – Post signs and barricades outside all Permit-Required Confined Spaces to notify personnel that a confined space entry is in progress and unauthorized entry is prohibited. Any signs used must state “Danger – Permit Entry Confined Space” along with the proper warning word such as “Asphyxiant, Flammability or Toxic Hazard”. All barricades must be capable of preventing a person from inadvertently walking into or kicking an object into the space.
- Communications Equipment – Only use intrinsically safe equipment in areas where a hazardous atmosphere may exist. Use a communication system that will keep the Attendant in constant, direct communication with the Entrant(s) working in the confined space. Also, use a communication system that allows the Attendant to summon help from rescue or emergency service.
- Entry and Exit Equipment – (For example: ladders may be needed for safe entry and exit).
- Lighting Equipment – Needed for safe entry, work within the space and exit. Lighting equipment used in the confined space must be certified safe for the location.
- Portable electric lighting used in wet and/or other conductive locations (drums, tanks, vessels) must be operated at 12 volts or less. 120 volt lights may be used if protected by a ground-fault circuit interrupter.
- Personal Protective Equipment – Ensure that personnel wear the required personal protective equipment. For respiratory protection requirements, refer to the Respiratory Protection Program.
- Rescue and Emergency Equipment – Except if provided by outside rescue services.
- The Attendants must also have an approved first aid kit.
- Vacuum Trucks – When used, trucks must be properly grounded or bonded to prevent static sparks.
- Ventilating Equipment – Local exhaust air movers used to obtain acceptable atmospheric entry conditions (e.g., Copus air movers).
- Other – Any other equipment necessary for safe entry into and rescue from permit required confined spaces.

Air Monitoring

- Before an employee enters the space, the internal atmosphere shall be tested, with a calibrated direct-reading instrument, for oxygen content, for flammable gases and vapors, and for potential toxic air contaminants, in that order. Monitoring of the space must inform the entrants of the potential hazards and results and they must participate in the permit review and signing.
- Air shall be periodically test while continuous ventilation is applied.
- Any employee, who enters the space, or that employee's authorized representative, shall be provided an opportunity to observe the pre-entry testing required by this paragraph.
- Employees or their representatives are entitled to request additional air monitoring at any time.

Ventilation

Continuous forced air ventilation must be used and tested as follows:

- An employee may not enter the space until the forced air ventilation has eliminated any hazardous atmosphere;
- The forced air ventilation shall be so directed as to ventilate the immediate areas where an employee is or will be present within the space and shall continue until all employees have left the space;



- The air supply for the forced air ventilation shall be from a clean source and may not increase the hazards in the space.
- The atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere. Any employee, who enters the space, or that employee's authorized representative, shall be provided with an opportunity to observe the periodic testing and may request additional monitoring at any time.
- If a hazardous atmosphere is detected during entry each employee shall leave the space immediately and the space shall be evaluated to determine how the hazardous atmosphere developed; and measures shall be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place.

Multiple Employer Procedure

In order not to endanger the employees of any other employer, the Entry Supervisor shall:

- Verify that all contractor employees have been trained in confined space and that all contractor employees fully understand the Veracity Field Services procedures pertaining to Confined Space.
- Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of this section.
- Apprise the contractor of the elements, including the hazards identified and the employees experience with the space, that make the space in question a permit space.
- Inform the contractor of any precautions or procedures that Veracity Field Services has implemented for the protection of employees in or near permit spaces where contractor personnel will be working.
- Coordinate entry operations with the contractor, when both Veracity Field Services personnel and contractor personnel will be working in or near confined spaces.
- Debrief the contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazards confronted or created in confined spaces during entry operations.
- In addition to complying with the confined space requirements that apply to all employees; each contractor, who is retained to perform permit space entry operations, shall:
 - Obtain any available information regarding confined space hazards and entry operations from the Veracity Field Services Entry Supervisor.
 - Coordinate entry operations with the Veracity Field Services Entry Supervisor, when both Veracity Field Services personnel and contractor personnel will be working in or near permit spaces.
 - Inform Veracity Field Services of the confined space program that the contractor will follow and of any hazards confronted or created in the confined space, either through a debriefing or during the entry operation.

Rescue and Emergency Services

General

Rescue service must be on-site for immediately dangerous to life and health (IDLH) conditions while work is being performed. Rescue services must be either:



- Provided by the host facility,
- Provided by an outside service which is given an opportunity to examine the entry site, practice rescue and decline as appropriate, or
- Provided by Veracity Field Services by selecting a rescue team that is equipped and trained to perform the needed rescue services.
- The Attendant shall order the other Entrants not to move the injured nor allow untrained or unauthorized workers into the space that are not trained to handle a confined space rescue.
- Safety Data Sheet's for substances that an injured Entrant was exposed to must be provided to the medical facility treating the injured worker.

Permit-Required Confined Space Rescue:

- When the Attendant becomes aware of the need for rescue, the Attendant shall immediately summon the onsite rescue team by the agreed upon communication method, verbally, radio or cell phone, without leaving the vicinity of the confined space.
- The Attendant shall prevent unauthorized personnel from attempting a rescue.
- After the rescue team has been notified, the Attendant shall alert the Entry Supervisor of the emergency via the same communication methods.
- The preferred means of providing rescue service is through the use of a qualified outside rescue service vendor (client host). The outside rescue service vendor must be:
 - Informed of the hazards that they may confront during a rescue;
 - Provided access to the Permit-Required Confined Space to examine the entry site, practice rescue, and decline as appropriate.
 - Access to the space allows the rescue service and local supervision to jointly develop appropriate rescue plans.
 - If the host operator is designated to provide rescue services for Veracity Field Services, the agreement of services must be included in contract for the job.
- If Veracity Field Services employees are to perform Permit-Required Confined Space rescues, they must be:
 - Provided and trained in the use of the proper personal protective equipment necessary to make the rescue;
 - Provided PPE at no cost
 - Trained to perform the assigned duties;
 - Required to practice making rescues at least once every 12 months;
 - Trained in basic first aid and CPR.
 - A minimum of one member of the rescue team must hold a current certification in first aid and CPR.

Non-entry Rescue

- To facilitate non-entry rescue, an Entrant must be attached to a retrieval system whenever he/she enters a Permit-Required Confined Space with a vertical depth of more than 5 feet.



- The retrieval equipment is not required if it will increase the overall risk of the entry, e.g., creating an entanglement hazard, or will not contribute to the rescue of the Entrant.
- Each Entrant shall use a full body harness equipped with a “D” ring located between the shoulders or above the head.
- Wristlets may be used instead of the full body harness, if the use of the full body harness is not feasible or creates a greater hazard *and* that using wristlets is the safest and most effective alternative.
- The retrieval line must be attached to the “D” ring and the other end of the retrieval line attached to a retrieval device or fixed point located outside the space so that rescue can begin as soon as the rescuer becomes aware that rescue is necessary.

Issuance/Reviewing of Permit

Only when all pre-entry requirements are satisfied, the Entry Supervisor shall issue a completed and signed confined space permit. The confined space permit is valid for one shift.

In the event of any unauthorized entry, employee complaints, a hazard not covered by the permit, the occurrence of an injury or near miss the entry permit shall be cancelled and a review shall be conducted to provide employee protection and for revising the program prior to authorizing subsequent entries.

An annual review of this program, using the cancelled permits retained within 1 year after each entry shall be conducted by the HSE Manager to revise the program as necessary, to ensure that employees are protected. If no confined space entries were performed during a 12-month period, no review is necessary.

Termination and Closing or Cancelling of Permits

The Entry Supervisor shall terminate the confined space permit, at the end of the job operation, at the end of the shift or when the Entry Supervisor or Attendant determine that conditions in or near the confined space have changed and is hazardous to the Entrants.

The Entry Supervisor shall, at the conclusion of entry operation, close out the permit and provide the safety department the original copy of the Confined Space Permit.

Training

Training shall be provided so that all employees whose work is regulated by this program acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned to them.

Training shall be provided to each affected employee, before the employee is first assigned duties under this program, if a new hazard has been created or special deviations have occurred and before there is a change in assigned duties.

The employee shall be retrained:

- Whenever there is a change in confined space operations that presents a hazard about which an employee has not previously been trained.



- Whenever the supervisor has reason to believe either that there are deviations from the permit space entry procedures required by this section or that there are inadequacies in the employee's knowledge or use of these procedures.

The training shall establish employee proficiency in the duties required by this program and shall introduce new or revised procedures, as necessary.

The supervisor shall certify that the training required by this program has been accomplished.

- The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training.
- The certification shall be available for inspection by employees, their authorized representatives, management, clients and the safety department.

Confined Space Entry Permits

A confined space entry permit must be completed anytime a permit required or non-permit required confined space is entered by any person. Both the Confined Space Entry Permit, and the Non-Permit Required Confined Space Entry Permit can be found at the following location:

<https://veracityfieldservices.com/permits>



DISCIPLINARY PROGRAM



Purpose

The purpose of this program is to establish a firm but fair disciplinary action policy to enforce the safety program.

Scope

This document is applicable to all employees and consultants of Veracity Field Services (the company).

Responsibilities

It is the responsibility of employees and consultants of Veracity Field Services to work in a safe and efficient manner. The company safety program provides guidelines and procedures to help insure that safe work practices are observed. In the event that any employee or consultant violates provisions of the Veracity Field Services safety program, the client program, or works in a manner that threatens his own health and safety or the health and safety of the workers around him/her will be subject to disciplinary action, up to and including termination of employment or contract.

Veracity Field Services management holds each employee and consultant personally responsible for following and enforcing the company safety program as well as the safety program of the client of which that person is assigned.

Requirements

Safety is a core value and a condition of employment or contract at Veracity Field Services. The following actions constitute a safety violation:

- Not following verbal or written safety procedures, guideline or rules of Veracity Field Services or our clients
- Horse play, failure to wear required PPE, and or abuse of PPE
- Being under the influence of drugs or alcohol during work
- Bringing weapons on the job site of clients who forbid such
- Failure to report incidents or injuries
- Attempted or actual physical force to cause injury, threatening statements or other actions to cause an employee to feel they are at risk of injury or physical violence

Procedure

The following procedures will be following after issuing a safety violation notice:

- The first offense will result in a verbal warning. The employee will be met with and informed that he or she is being issued a verbal warning and informed of the infraction, rule or procedure that was violated and the corrective action to be taken. Proper procedure will be discussed to clarify the situation and allow the employee to correct his behavior
- The second offense will result in a written reprimand and additional training. The reprimand will be written on the standard Safety Reprimand form (see below) and will describe the unsafe activity or behavior that needs correction. Refer to the section of the safety program that was violated (when



applicable). The employee or consultant receiving the reprimand has the right to submit a written rebuttal to the reprimand. The employee or consultant must sign the reprimand. The reprimand and any rebuttal will become a part of the employee's or consultant's employment records.

- The third offense will result in another written reprimand (using the standard form) and/or punitive layoff or termination of employment or contract, the duration of which will be decided at the time of the disciplinary action and is to be weighed by the severity of the offense. Again, the employee or consultant may submit a written rebuttal to the reprimand. The employee must sign the reprimand. The reprimand and any rebuttal will become a part of the employee's employment records. Refusal to sign a reprimand is grounds for termination or cancelation of contract.

The above actions are to be placed against a sliding twelve month scale. If an employee receives a reprimand on January 1 and commits his third offense on or before December 31st of the same year, he/she may be terminated. The employee does not have to commit the same violation each time to receive further reprimands. He/she could receive a verbal reprimand for smoking in a no smoking area on his first offense and get a written reprimand for his/her second offense which might be a forklift violation and yet another for failing to use proper personal protective equipment.

In the case of serious safety violations such as by-passing guarding or other unsafe activities that put the violator or other employees at serious risk of injury, the manager may move the violator directly to the second or third warning level without prior notification. If the violator's actions put him/her or others at risk of death or dismemberment the manager has the option to terminate him/her with no further warning.

Safety Reprimand Form

This form can be found at www.veracitywfieldservices.com under the 'Forms' tab



DRIVING



Purpose

This program is written to be in compliance with regulatory requirements and provide directives to managers, supervisors, and employees about their responsibilities in the operations and management of vehicle safety.

Key Responsibilities

COMPANY Safety Manager

- The designated Safety Manager is responsible for developing and maintaining the program and related procedures. These procedures are available at the company solution center located at www.veracityfieldservices.com.

Site Manager

- Responsible for the implementation and maintenance of the program for their site and ensuring all assets are made available for compliance with the plan.

Employees & Consultants

- All shall be familiar with this procedure and the local workplace vehicle safety program.
- Follow all requirements, report unsafe conditions, and follow all posted requirements.
- Only authorized employees will drive a motor vehicle in the course and scope of work or operate a company owned vehicle.
- The driver of a Veracity Field Services vehicle will have a valid and current license to operate the vehicle. Drivers will be appropriately licensed and trained to operate the vehicle they have been authorized to operate.
- Authorized drivers are not allowed to operate a motor vehicle while under the influence of alcohol, illegal drugs, certain medications, prescription or over-the counter medications that might impair their driving skills.

Vehicle and Transportation Related

Driving Safety

- Backing is prohibited whenever practicable. Where backing is required, drivers, when parking, should make every effort to park the vehicle in a manner that allows the first move when leaving the parking space to be forward.
- Passenger compartments are to be free from loose objects that might endanger passengers in the event of an accident. Any vehicle with non-segregated storage shall be equipped with a cargo net or equivalent to separate the storage area.
- Signs, stickers or labels are to be fitted in such a manner that they do not obstruct the driver's vision or impede the driver's use of any controls.

Reporting of Traffic Violations and Vehicle Accidents – Employees and consultants will report any accident to the safety manager while driving to perform company duties.



Safe Driver Behaviors/Practices:

- Drivers will observe safe driving Behaviors/Practices
- Obey all federal and local driving laws or regulations as well as client requirements
- Immediately report any restriction to their driving privileges to the safety manager
- Driver and all passengers must wear seatbelts. Seatbelts shall be worn by all occupants at all times whenever a vehicle is in motion
- When speaking with a passenger, always keep your eyes on the road
- Drivers must follow all local cell phone while driving laws as well as the requirements of the client when using a cell phone, 2-way radio or other handheld communication device
- Drivers shall not exceed the posted speed limit
- Drivers shall maintain a safe distance between other vehicles
- Slow down around construction, large vehicles, wildlife, fog, rain, snow, or any other hazard
- Alcohol or illegal drugs are not allowed to be in a personal, company, client or leased vehicle at any time the vehicle is operating in the interest of duties

Drivers are to be prepared before leaving:

- Inspect for vehicle damage and immediately report any damage to the supervisor if not previously observed
- Make sure dirt or snow is removed from lights on all sides of the vehicle
- Brush or clean off snow or ice on all windows to ensure complete vision
- Check fuel level to be certain the destination can be reached
- Check to ensure the license plates and inspection tag on vehicle are current
- Ensure that there is a first aid kit and inspected fire extinguisher in the company vehicle if required by client
- Be rested and alert for driving
- Employees are not to perform repairs or maintenance other than routine fluid additions.

Vehicle Requirements

- Vehicles shall be maintained in safe working order
- Vehicles are to be fitted with a spare wheel and changing equipment to safely change a wheel, or a suitable alternative
- All vehicles are to be equipped with an adjustable left, right and central rear view mirrors
- Loads shall be secured and within the manufacturer and legal limits and shall not exceed the manufacturer's specifications and legal limits for the vehicle

Transportation

If workers are required to travel in a worker transportation vehicle, Veracity Field Services must ensure that reasonable measures are taken to evaluate road, weather and traffic conditions to ensure the safe transit of the workers.



The operator of a worker transportation vehicle must ensure that the vehicle has been inspected prior to use or before the journey.

Seated workers must wear seat belts while being transported in a vehicle equipped with seat belts.

A worker must not ride in a vehicle in a standing position, unless protected from being thrown off balance.

A worker must not ride in a vehicle with any part of the body outside the vehicle unless essential to the work process and then only if the worker is adequately restrained.

Any enclosed portion or compartment of a vehicle in which workers are transported must have:

- effective ventilation, independent of doors, providing clean air
- adequate lighting and means for heating and cooling
- an effective means of communication between the operator and passengers, and
- more than one means of exit

ATV Vehicles

If a Veracity Field Services employee or consultant is required to utilize an ATV vehicle, the following shall apply:

- Follow all manufacturer guidelines when operating an ATV.
- Veracity Field Services must ensure that each ATV operator is properly trained in the safe operation of the vehicle. The training program for an ATV operator must cover:
 - the operator's pre-trip inspection,
 - use of personal protective apparel,
 - operating skills according to the ATV manufacturer's instructions,
 - basic mechanical requirements, and
 - loading and unloading the vehicle, if this is a job requirement.
- An ATV operator and any passenger on an ATV must wear clothing suitable for the environmental conditions and when necessary to protect against the hazards presented at the worksite
- Approved head protection shall be worn by the operator and passenger
- Loading and unloading of an ATV onto or off a carrier vehicle must be done in a safe manner. If ramps are used when loading or unloading an ATV they must be securely anchored, placed at a suitable angle, be sufficiently wide and have a surface finish which provides an adequate grip for the ATV's tires



DRUG AND ALCOHOL POLICY NON-DOT



Scope

This policy is applicable to all Veracity Field Services employees. If subcontractors are used they are required to comply with their company policy that must equal or exceed this program.

Testing Requirements

Pre-Employment/Post-Offer Testing of Individuals

Drug and alcohol testing will be given to all individuals prior to employment. Testing must be given before initial assignment.

Random Drug and Alcohol Testing

Drug and alcohol testing will be administered at random times. Employees will be chosen through an unbiased selection process.

Drug and Alcohol Testing for Reasonable Cause as Determined by a Company Official (or Other Person Considered Competent)

If a company official or competent person has determined that there is reasonable cause or suspicion that an individual is performing work under the influence, then that individual will be required to submit to a drug and alcohol test.

Post Incident Testing

Veracity Field Services shall administer drug and alcohol tests to any employees involved in a work-related incident. All employees involved in a work-related incident will be required to submit to a drug and alcohol test.

Drugs Being Tested For

The names of the drugs being tested for include:

- Marijuana
- Cocaine
- Opiates
- Amphetamines
- Phencyclidine

Records

Veracity Field Services must ensure that it will maintain appropriate records for as long as we have a contract with a client and then for 3 years after the termination of the contract. Examples include:

- Chain of custody forms
- Alcohol testing forms
- Signed acknowledgment/consent forms



Policy

Any employee or subcontractor on duty or on Veracity Field Services property who possesses, sells, receives, is impaired or is determined to have measurable levels of any alcohol or illegal drug in their blood or urine (no matter the amount), post drug/alcohol screen, will be subject to immediate disciplinary action or contract dismissal.

We have a Zero Tolerance policy. ANY violation to the policy will result in the permanent removal of the employee from Veracity Field Services or our client's premises. Veracity Field Services does not have a return to duty process and any employee or subcontractor violating this policy will be permanently banned from Veracity Field Services or client property.

Drug and alcohol testing will be performed when there is reasonable suspicion or reasonable cause to suspect the employee of being under the influence of a prohibited substance. The employee(s) or subcontractor(s) removed for reasonable cause testing will not be allowed to return to work until receipt of a negative drug and alcohol test is received.

Alcohol testing must be performed by a breath, blood or saliva (with breath confirmation) test.

Drug and alcohol testing will be performed after an accident or incident.

Employees receiving unacceptable test results will not be allowed to work on Client/Host sites or facilities. Any employee that receives unacceptable drug and alcohol test results will not be allowed to work on a Client/Host site or facility.

If an employee or subcontractor returns to work following an absence of more than 90 days a return to work screening shall occur. Follow up drug screening shall be applied when appropriate as determined by management.

Veracity Field Services must ensure that all employees who will be working on our client's jobsite must have received a negative result on a drug within the past 12 months.

Veracity Field Services prohibits the misuse of prescription or over the counter medications. Some types of medications could have undesirable effects, and these can create a safety risk and endanger the employee and others. Employees must notify his/her supervisor if taking a medication that might impair their ability.

Periodically, unannounced inspections will be made of persons entering or leaving Veracity Field Services work sites by authorized Veracity Field Services representatives. Entry onto Veracity Field Services or client property is deemed to have provided consent to an inspection of a person, locker, vehicle or any other personal effects. Our clients have the right to conduct unannounced searches of your personnel and property and any employee who refuses to cooperate with the searches shall be removed from our clients' property.

Any refusals to submit to a drug/alcohol screen will be treated as a positive test, resulting in immediate contract dismissal or disciplinary action, up to and employment termination. The subcontractor or employee refusing to



submit to the test will be asked to sign a refusal document. If they refuse to sign the document, it will be noted and kept on file.

All results are treated with confidentiality. The switching or adulterating any urine, blood or any other samples is a violation of this policy.

If another subcontractor or employee comes to management with concern regarding another subcontractor or employee in reference to alcohol or substance abuse, we will treat that with discretion and confidentiality. We will pursue investigation and decide accordingly whether a drug and or alcohol screen is the appropriate step to take.

All subcontractors and employees are subject to the policies explained above. This policy is to be posted at the Veracity Field Services Solution Center located at: www.veracityfieldservices.com.



ELECTRICAL SAFETY



Purpose

The purpose of this Electrical Safety program is to set forth procedures for the safe use of electrical equipment, tools, and appliances at Veracity Field Services.

Scope

This program applies to all Veracity Field Services employees, temporary employees, consultants and contractors. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Veracity Field Services employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

Affected Personnel - Personnel who normally use and work with electrical equipment, tools, and appliances, but who do not make repairs or perform lock out/tag out procedures.

Appliances - Electrical devices not normally associated with commercial or industrial equipment such as air conditioners, computers, printers, copiers, coffee pots, microwave ovens, toasters, etc.

Circuit Breaker - A device designed to open and close a circuit by non-automatic means and to open the circuit automatically on a predetermined over current without injury to itself when properly applied within its rating.

Disconnecting Means - A device, or group of devices, or other means by which the conductors of a circuit can be disconnected from their source of supply.

Disconnecting Switch - A mechanical switching device used for isolating a circuit or equipment from a source of power.

Double Insulated Tool - Tools designed of non-conductive materials that do not require a grounded, three wire plug.

Ground - Connected to earth or some conducting body that serves in place of the earth.

Grounded Conductor - A conductor used to connect equipment or the grounded circuit of a wiring system to a grounding electrode or electrodes.

Ground Fault Circuit Interrupter (GFCI) - A device whose function is to interrupt the electric circuit to the load when a fault current to ground exceeds some predetermined value that is less than that required to operate the over current protective device of the supply circuit.

Insulated - A conductor encased within material of composition and thickness that is recognized as electrical insulation.



Premises Wiring - That interior and exterior wiring, including power, lighting, control, and signal circuit wiring together with all its associated hardware, fittings, and wiring devices, both permanently and temporarily installed, which extends from the load end of the service drop, or load end of the service lateral conductors to the outlet (s). Such wiring does not include wiring internal to appliances, fixtures, motors, controllers, motor control centers, and similar equipment.

Qualified Person - One that has been trained in the repair, construction and operation of electrical equipment and the hazards involved.

Strain Relief - A mechanical device that prevents force from being transmitted to the connections or terminals of a cable or extension cord.

Class I Locations - Are those in which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.

Class 1 Division 1 - Is a location (a) in which hazardous concentrations of flammable gases or vapors may exist under normal operating conditions; or (b) in which hazardous concentrations of such gases or vapors may exist frequently because of repairs or maintenance operations or because of leakage; or (c) in which a breakdown or faulty operation of equipment or processes might release hazardous concentrations of flammable gases or vapors, and might also cause simultaneous failure of electrical equipment.

Class 1 Division 2 - Is a location (a) in which volatile flammable liquids or flammable gases are handled, processed, or used, but in which the hazardous liquid, vapors, or gases will normally be confined within closed containers or closed systems from which they can escape only in case of accidental rupture or breakdown of such containers or systems, or in of abnormal operation of equipment or (b) in which hazardous concentrations of gases or vapors are normally prevented by positive mechanical ventilation, and which might become hazardous through failure or abnormal operations of the ventilating equipment; or (c) that is adjacent to a Class 1, Division 1 location, and to which hazardous concentrations of gases or vapors might occasionally be communicated unless such communication is prevented by adequate positive-pressure ventilation from a source of clean air, and effective safeguards against ventilation failure are provided.

Class II locations - Class II locations are those that are hazardous because of the presence of combustible dust. Class II locations include the following:

Class II, Division 1 - A Class II, Division 1 location is a location (a) in which combustible dust is or may be in suspension in the air under normal operating conditions, in quantities sufficient to produce explosive or ignitable mixtures; or (b) where mechanical failure or abnormal operation of machinery or equipment might cause such explosive or ignitable mixtures to be produced, and might also provide a source of ignition through simultaneous failure of electric equipment, operation of protection devices, or from other causes, or (c) in which combustible dusts of an electrically conductive nature may be present.



NOTE: This classification may include areas of, areas where metal dusts and powders are produced or processed, and other similar locations that contain dust producing machinery and equipment (except where the equipment is dust-tight or vented to the outside).

- These areas would have combustible dust in the air, under normal operating conditions, in quantities sufficient to produce explosive or ignitable mixtures.
- Combustible dusts that are electrically nonconductive include dusts produced in the handling and processing produce combustible dusts when processed or handled.
- Dusts containing magnesium or aluminum are particularly hazardous and the use of extreme caution is necessary to avoid ignition and explosion.

Class II, Division 2 - A Class II, Division 2 location is a location in which: (a) combustible dust will not normally be in suspension in the air in quantities sufficient to produce explosive or ignitable mixtures, and dust accumulations are normally insufficient to interfere with the normal operation of electrical equipment or other apparatus; or (b) dust may be in suspension in the air as a result of infrequent malfunctioning of handling or processing equipment, and dust accumulations resulting there from may be ignitable by abnormal operation or failure of electrical equipment or other apparatus.

NOTE: This classification includes locations where dangerous concentrations of suspended dust would not be likely but where dust accumulations might form on or in the vicinity of electric equipment. These areas may contain equipment from which appreciable quantities of dust would escape under abnormal operating conditions or be adjacent to a Class II Division 1 location, as described above, into which an explosive or ignitable concentration of dust may be put into suspension under abnormal operating conditions.

Responsibilities

Managers/Supervisor/Employees

- The HSE Manager will develop electrical safety programs and procedures in accordance with OSHA requirements and/or as indicated by events and circumstances.
- Operations Managers and Supervisors are responsible for ensuring that only qualified employees and or qualified contractors perform electrical repairs or installations.
- Operations Managers are also responsible for ensuring all applicable electrical safety programs are implemented and maintained at their locations.
- Employees are responsible to use electrical equipment, tools, and appliances according to this program, for attending required training sessions when directed to do so and to report unsafe conditions to their supervisor immediately.
- Only qualified persons may work on electric circuit parts or equipment that have not been deenergized. Such persons shall be made familiar with the use of special precautionary techniques, PPE, insulating and shielding materials and insulated tools.



Safe Work Practices to Prevent Electric Shock

Safe work practices shall be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts when work is performed near or on equipment or circuits which are or may be energized.

Inspections

- Electrical equipment, tools, and appliances must be inspected prior to each use.
- The use of a hard fixed GFCI or a portable GFCI adapter shall be used with all portable hand tools, electric extension cords, drop lights and all 110-volt equipment.
- Faulty equipment, tools, or appliances shall be removed from service immediately and tagged "Out of Service", dated and signed by the employee applying the tag.

Repairs

- Only Qualified Personnel, who have been authorized by the department supervisor or manager, may make repairs to supply cords on electrical tools and to extension cords.
- The names of employees authorized to make repairs will be posted in the workplace.
- Only certified electricians shall be allowed to make repairs to electrical equipment and wiring systems.
- The supervisor obtaining the services of a certified electrician is responsible to verify the electrician's credentials.
- Employees shall not enter spaces containing exposed energized parts unless qualified and proper illumination exists to enable employees to work safely.
- If employees are subject to handle long dimensional conductor objects (ducts or pipes), steps for safe work practices shall be employed to ensure the safety of workers.

Extension Cords

- Use only three-wire, grounded, extension cords and cables that conform to a hard service rating of 14 amperes or higher, and grounding of the tools or equipment being supplied.
- Only commercial or industrial rated-grounded extension cords may be used in shops and outdoors.
- Cords for use other than indoor appliances must have a rating of at least 14 amps.
- Cords must have suitable strain relief provisions at both the plug the receptacle ends.
- Work lamps (drop light) used to power electrical tools must have a 3 wire, grounded outlet, unless powering insulated tools.
- Adapters that allow three wire, grounded prongs, connected to two wire non-grounded outlets are strictly prohibited.
- Cords must have a service rating for hard or extra-hard service and have S, AJ, ST, SO, SJO, SJT, STO, or SJTO printed on the cord.
- Cords may not be run through doorways, under mats or carpets, across walkways or aisles, concealed behind walls, ceilings or floors, or run through holes in walls, or anywhere where they can become a tripping hazard.
- High current equipment or appliances should be plugged directly into a wall outlet whenever possible.
 - All extension cords shall be plugged into one of the following:
 - A GFCI outlet;



- A GFCI built into the cord;
- A GFCI adapter used between the wall outlet and cord plug.
- All extension cords and or electrical cords shall be inspected daily or before each use, for breaks, plug condition and ground lugs, possible internal breaks, and any other damage. If damage is found, the extension cord or electrical cord shall be remove from service and repaired or replaced.
- Extension cords shall not be used on compressor skid to operated heat tapes or any other type of equipment on a temporary basis. Heat tapes or other equipment shall be hard wired per applicable electrical codes.

Outlets

- Outlets connected to circuits with different voltages must use a design such that the attachment plugs on the circuits are not interchangeable.

Multiple Outlet Boxes

- Multiple outlet boxes must be plugged into a wall receptacle.
- Multiple outlet boxes must not be used to provide power to microwave ovens, toasters, space heaters, hot plates, coffeepots, or other high-current loads.

Double Insulated Tools

- Double insulated tools must have the factory label intact indicating the tool has been approved to be used without a three wire grounded supply cord connection.
- Double insulated tools must not be altered in any way, which would negate the factory rating.

Switches, Circuit Breakers, and Disconnects

- All electrical equipment and tools must have an on and off switch and may not be turned on or off by plugging or unplugging the supply cord at the power outlet.
- Circuit breaker panel boxes and disconnects must be labeled with the voltage rating.
- Each breaker within a breaker panel must be labeled for the service it provides.
- Disconnect switches providing power for individual equipment must be labeled accordingly.

Portable Ladders

- Only approved, non-conductive ladders, may be used when working near or with electrical equipment, which includes changing light bulbs.
- Ladders must be either constructed of wood or fiberglass
- Portable ladders shall have non-conductive side rails.
- Wood ladders should not be painted, which can hide defects, except with clear lacquer.
- When using ladders they shall be free from any moisture, oils, and greases.

Overhead Lines

- When working near overhead lines, a clearance distance of 10' must be maintained or the lines will be de-energized and grounded. The lines shall be deenergized and grounded or other protective measures shall be provided before work is started.



- When working near overhead lines, unqualified persons must maintain a clearance distance of 10 feet. When an unqualified person is working in an elevated position near overhead lines, the location shall be such that the person and the longest conductive object he or she may contact cannot come closer to any unguarded, energized overhead line than the following distances:
 - For voltages to ground 50kV or below - 10 feet (305 cm);
 - For voltages to ground over 50kV - 10 feet (305 cm) plus 4 inches (10 cm) for every 10kV over 50kV.
- Vehicles and/or mechanical equipment must maintain a clearance distance of 10 feet (or greater) from energized overhead lines. Any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines shall be operated so that a clearance of 10 ft. (305 cm) is maintained. If the voltage is higher than 50kV, the clearance shall be increased 4 in. (10 cm) for every 10kV over that voltage.
- When possible, power lines shall be de-energized and grounded or other protective measures shall be provided before work is started.
- Minimum approach distance to energized high power voltages lines for unqualified employees is 10 feet.
- Minimum approach distance for qualified employees shall be followed per 29 CFR 1910.333(c)(3)(i) Qualified – Table S5 Selection and Use of Work Practices - Approach Distances for Qualified Employees – Alternating Current). Approach distances are 10' for 50kV plus 4" for every additional 10kV.

Confined or Enclosed Work Spaces

- When an employee works in a confined or enclosed space that contains exposed energized parts, the employee shall isolate the energy source and turn off the source and lock and tag out the energy source (Only qualified electricians can work on an exposed energy source).
- Insulating shields/barriers are used where necessary. Protective shields, protective barriers or insulating materials as necessary shall be provided.

Enclosures, Breaker Panels, Illumination and Distribution Rooms

- A clear working space must be maintained in the front, back and on each side of all electrical enclosures and around electrical equipment for a safe operation and to permit access for maintenance and alteration.
- A minimum two-foot working floor space in front of panels and enclosures shall be painted yellow.
- Proper illumination before employees are permitted to enter work areas containing exposed energized parts. Employees may not enter spaces containing exposed energized parts unless illumination is provided that enables the employees to work safely.
- Housekeeping in distribution rooms must receive high priority to provide a safe working and walking area in front of panels and to keep combustible materials to the minimum required to perform maintenance operations.
- All enclosures and distribution rooms must have "Danger: High Voltage – Authorized Personnel Only" posted on the front panel and on entrance doors.
- Flammable materials are strictly prohibited inside distribution rooms (Boxes, rags, cleaning fluids, etc.)



Lock Out/Tag Out

- Lockout/Tagout is used before performing electrical work. While any employee is exposed to contact with parts of fixed electric equipment or circuits which have been deenergized, the circuits energizing the parts shall be locked out or tagged or both.
- No work shall be performed on or near exposed energized parts. This applies to work performed on exposed live parts (involving either direct contact or by means of tools or materials) or near enough to them for employees to be exposed to any hazard they present.
- If any employee is exposed to contact with parts of fixed electric equipment or circuits which have been deenergized, the circuits energizing the parts shall be locked out or tagged or both.
- Conductors and parts of electrical equipment that have been deenergized but not been locked or tagged out shall be treated as live parts.
- Only authorized personnel may perform lock out/tag out work on electrical equipment and will follow Veracity Field Services's Control of Hazardous Energy – Lock out/Tag Out Program.
- Authorized personnel will be trained in lock out/tag out procedures.
- Affected personnel will be notified when lock out/tag out activities are being performed in their work area.

Contractors

- Only approved, certified, electrical contractors may perform construction and service work on Veracity Field Services or client property.
- It is the Manager/Supervisors responsibility to verify the contractor's certification.

Fire Extinguishers

- Approved fire extinguishers must be provided near electrical breaker panels and distribution centers.
- Water type extinguishers shall not be located closer than 50 feet from electrical equipment.

Electric Shock-CPR

- If someone is discovered that has received an electric shock and is unconscious, first check to see if their body is in contact with an electrical circuit. Do not touch a person until you are sure there is no contact with an electrical circuit.
- When it is safe to contact the victim, begin CPR if the person's heart has stopped or they are not breathing.
- Call for help immediately.

Electric Welders

- A disconnecting means shall be provided in the supply circuit for each motor-generator arc welder, and for each AC transformer and DC rectifier arc welder which is not equipped with a disconnect mounted as an integral part of the welder.
- A switch or circuit breaker shall be provided by which each resistance welder and its control equipment can be isolated from the supply circuit. The ampere rating of this disconnecting means may not be less than the supply conductor ampacity.



Equipment Grounding

- All gas compressors, air compressors, separators, vessels, etc. shall be grounded by means of using a lug and ground strap, nominal in size to a ½” bolt or larger, attached to a ground rod six feet or longer.
- Equipment bonding jumpers shall be of copper or another corrosion-resistance material.
- The transfer of hazardous or flammable material from a metal or plastic container with a flash point of 100 degrees F or less shall have a ground strap from the container and attached to the skid or a ground rod placed in the ground.

Assured Grounding

OSHA requires that employers shall use either ground fault circuit interrupters (GFCI) or an assured equipment grounding conductor program to protect personnel from electrical shock while working.

- Veracity Field Services shall use GFCI’s in lieu of an assured grounding program.

Ground Fault Circuit Interrupters

All 120-volt, single-phase 15 and 20 ampere receptacle outlets on construction or maintenance sites, which are not part of the permanent wiring of the building or structure and which are in use by employees, shall have approved ground fault circuit interrupters for personnel protection.

- All hand portable electric tools and extension cords shall use a GFCI.
- Additionally, approved GFCI’s shall be used for 240-Volt circuits in the same service as described above.
- GFCI’s must be used on all 120 volt, single-phase 15 amp and 20 amp receptacles within 6 feet of a sink, damp areas or on installed outdoor equipment.
- The GFCI must be the first device plugged into a permanent receptacle.
- The GFCI must be tested before each use.

Training

All employees are provided Electrical Awareness training.

Employees who face a risk of electric shock but who are not qualified persons shall be trained and familiar with electrically related safety practices. All employees shall be trained in safety related work practices and clearance distances that pertain to their respective job assignments.

Qualified employees must adhere to the approach distances in Table S5 of CFR 1910.333 (below). Veracity Field Services only has unqualified employees.

Voltage Range (phase to phase)	Minimum Approach Distance
Over 300V, not over 750V.....	1 ft. 0 in. (30.5 cm).
Over 750V, not over 2kV.....	1 ft. 6 in. (46 cm).
Over 2kV, not over 15kV.....	2 ft. 0 in. (61 cm).
Over 15kV, not over 37kV.....	3 ft. 0 in. (91 cm).
Over 37kV, not over 87.5kV.....	3 ft. 6 in. (107 cm).
Over 87.5kV, not over 121kV.....	4 ft. 0 in. (122 cm).



Over 121kV, not over 140kV.....4 ft. 6 in. (137 cm).

Personal Protective Equipment & Safeguards for Personnel Protection

- Conductive apparel shall not be worn unless it is rendered non-conductive by covering, wrapping or other insulating means. Conductive items of jewelry or clothing shall not be worn unless they are rendered non-conductive by covering, wrapping or other insulating means.
- Employees working in areas where there are potential electrical hazards shall be provided with, and shall use, electrical protective equipment that is appropriate for the specific parts of the body to be protected and for the work to be performed.
- Equipment shall be maintained in a safe, reliable condition. Such protective equipment shall be periodically inspected and/or tested.
- If the insulating capability of protective equipment may be subject to damage during use, the insulating material shall be protected. (An example might be an outer covering of leather used for the protection of rubber insulating material.)
- Employees shall wear nonconductive head protection wherever there is a danger of head injury from electric shock or burns due to contact with exposed energized parts.
- Employees shall wear protective equipment for the eyes or face wherever there is danger of injury to the eyes or face from electric arcs or flashes or from flying objects resulting from electrical explosion.
- Each employee shall use insulated tools or handling equipment if they might make contact with conductors or parts. Program shall state that if the insulating capability of insulated tools or handling equipment is subject to damage, the insulating material shall be protected.
- Ropes and handlines used near exposed energized parts shall be nonconductive.
- Protective shields, protective barriers, or insulating materials shall be used to protect each employee from shock, burns, or other electrically related injuries while that employee is working near exposed energized parts. When normally enclosed live parts are exposed for maintenance or repair, they shall be guarded to protect unqualified persons from contact with the live parts.
- Alerting techniques used to warn and protect employees from hazards which could cause injury due to electric shock, burns or failure of electric equipment parts can take the form of safety signs and tags, barricades & attendants).



FALL PROTECTION



Purpose

The purpose of this program is to provide fall protection procedures to prevent injury to employees while performing work assignments at elevated levels.

Qualifications of the Person or Position That Prepares Plans

Any changes to this Fall Protection Program must be approved by the Safety Manager, who is designated the Qualified Person to prepare plans for specified work sites. This is based on training received in fall protection planning and has demonstrated skills and knowledge in the preparation of fall programs, plans and the hazards involved.

Scope

Applies to all Veracity Field Services employees who have work assignments at work levels that exceed 6 feet in height where guardrails or nets are not utilized. This includes work near and around excavations. Guardrails, safety nets, or personal fall arrest systems shall be used where feasible. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Veracity Field Services employees and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

"Anchorage" means a secure point of attachment for lifelines, lanyards or deceleration devices.

"Body belt (safety belt)" means a strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.

"Body harness" means straps which may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system.

"Buckle" means any device for holding the body belt or body harness closed around the employee's body.

"Carabineer" - see Snaphook

"Connector" means a device which is used to couple (connect) parts of the personal fall arrest system and positioning device systems together. It may be an independent component of the system, such as a carabineer, or it may be an integral component of part of the system (such as a buckle or D-ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).

"Deceleration device" means any mechanism, such as a rope grab, rip-stitch lanyard, specially-woven lanyard, tearing or deforming lanyards, automatic self-retracting lifelines/lanyards, etc., which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.



"Deceleration distance" means the additional vertical distance a falling employee travels, excluding lifeline elongation and free fall distance, before stopping, from the point at which the deceleration device begins to operate. It is measured as the distance between the location of an employee's body belt or body harness attachment point at the moment of activation (at the onset of fall arrest forces) of the deceleration device during a fall, and the location of that attachment point after the employee comes to a full stop.

"Equivalent" means alternative designs, materials, or methods to protect against a hazard which the employer can demonstrate will provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the standard.

"Failure" means load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

"Free fall" means the act of falling before a personal fall arrest system begins to apply force to arrest the fall.

"Free fall distance" means the vertical displacement of the fall arrest attachment point on the employee's body belt or body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, and lifeline/lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.

"Guardrail system" means a barrier erected to prevent employees from falling to lower levels.

"Infeasible" means that it is impossible to perform the inspection work using a conventional fall protection system (i.e., guardrail system, safety net system, or personal fall arrest system) or that it is technologically impossible to use any one of these systems to provide fall protection.

"Lanyard" means a flexible line of rope, wire rope, or strap which generally has a connector at each end for connecting the body belt or body harness to a deceleration device, lifeline, or anchorage.

"Leading edge" means the edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an "unprotected side and edge" during periods when it is not actively and continuously under construction.

"Lifeline" means a component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

"Lower levels" means those areas or surfaces to which an employee can fall. Such areas or surfaces include, but are not limited to, ground levels, floors, platforms, ramps, runways, excavations, pits, tanks, material, water, equipment, structures, or portions thereof.

"Personal fall arrest system" means a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.



"Positioning device system" means a body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.

"Rope grab" means a deceleration device which travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.

"Safety Nets...Safety nets shall be provided when workplaces are higher than 25 feet above ground or water surfaces or other surfaces where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines or safety belts are impractical.

Nets shall extend 8 feet beyond the edge of the work surface where employees are exposed and shall be installed as close under the work surface as practical but in no case more than 25 feet below the work surface. Nets shall be positioned in a manner to prevent the user from coming into contact with below surfaces or structures. Proper clearance positioning of nets shall be determined by impact load testing. Work procedures shall not begin until nets are in place and have been properly tested.

New nets shall meet accepted performance standards of 17,500 foot pounds minimum impact resistance as determined and certified by the manufacturers and shall bear a label of proof test. Edge ropes shall provide a minimum breaking strength of 5000 pounds.

"Self-retracting lifeline/lanyard" means a deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.

"Snaphook" means a connector comprised of a hook-shaped member with a normally closed keeper, or similar arrangement, which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object. Snaphooks are generally one of two types: (1) The locking type with a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection; or (2) The non-locking type with a self-closing keeper which remains closed until pressed open for connection or disconnection. As of January 1, 1998, the use of a non-locking snaphook as part of personal fall arrest systems and positioning device systems is prohibited.

"Unprotected sides and edges" means any side or edge (except at entrances to points of access) of a walking/working surface, e.g., floor, roof, ramp, or runway where there is no wall or guardrail system at least 39 inches (1.0 m) high.

"Walking/working surface" means any surface, whether horizontal or vertical on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runways, formwork and concrete reinforcing steel but not including ladders, vehicles, or trailers, on which employees must be located in order to perform their job duties.

"Work area" means that portion of a walking/working surface where job duties are being performed.



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Drawing of Components



Figure A



Figure B

- 1. Tie-off Point
- 2. Lifeline
- 3. Rope Grab
- 4. Shock Absorbing Lanyard
- 5. Cross-Arm Strap
- 6. Retractable Lifeline
- 7. Full-Body Harness
- 8. Restraining Belt
- 9. Restraining Lanyard
- 10. Carabineer

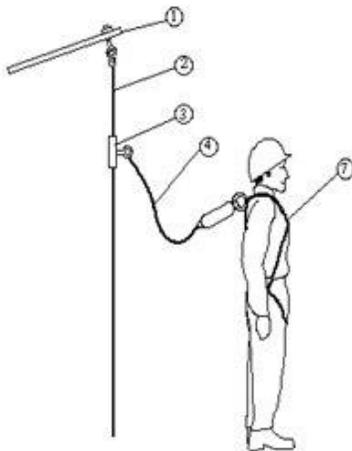


Figure C

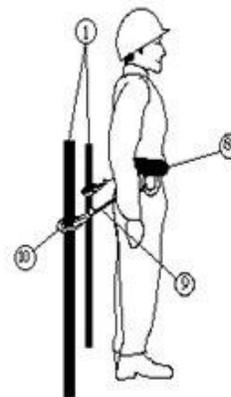


Figure D



Responsibilities

Operations Manager

It is the responsibility of the local operations manager (designated competent person) to implement this Fall Protection Program. Continual observational safety checks of work operations and the enforcement of the safety policy and procedures shall be regularly enforced. All jobs shall be pre-planned prior to the start of work.

Supervisor

The Supervisor shall ensure that all persons assigned to work at elevated levels, exceeding 6 feet in height or more above lower level and where guardrails or nets are not utilized, be protected by personal fall protection equipment.

- Supervisors shall make exposure determinations and shall discuss with their employees the extent to which scaffolds, ladders or vehicle mounted work platforms can be used.
- Ensure that fall protection equipment is available and in safe working condition.
- Provide for emergency rescue in the event of a fall. Pre-plan the job to ensure that employees have been properly trained in the use, limitations, inspections and rescue procedures and that training records are on file.

Employees

Employees shall ensure they have and use the fall protection equipment as required by this program and:

- Understand the potential hazards of working at elevated levels as well as gaining access to and from the work location.
- Understand the use and limitations of such equipment.
- Pre-plan the job with his/her supervisor to agree that the job can be done safely.
- Inspect such equipment before each use and to report defective equipment immediately to their supervisor.

Procedure

Fall protection is required whenever employees are potentially exposed to falls from heights of six feet or greater to lower levels. This includes work near and around excavations. Use of guard rails, safety net, or personal fall arrest systems should be used when the standard methods of protection are not feasible or a greater hazard would be created.

Industry or Regulatory Standards

Fall protection equipment meets industry or regulatory standards. Fall protection equipment meets the requirements of applicable ANSI Z 359.1, ASTM or OSHA requirements. When purchasing equipment and raw materials for use in fall protection systems all applicable ANSI and ASTM requirements should be met.



Minimum Standards

Fall protection must be provided to employees working at heights that exceed applicable regulatory thresholds.

The Height at Which Fall Protection is Required

Fall protection is required whenever employees are potentially exposed to falls from heights that exceed applicable regulatory thresholds. Guard rails, safety nets or personal or fall arrest systems should be used. Some applicable regulatory thresholds may include:

- General Industry 1910.23(b) - Protection for wall openings and holes. Every wall opening from which there is a drop of more than 4 feet shall be guarded.
- Construction Industry 1926.501(b)(1) - Unprotected sides and edges. Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.
- Marine Terminals 1917.112(b)(1) - Guardrails shall be provided at locations where employees are exposed to floor or wall openings or waterside edges, including bridges or gangway-like structures leading to pilings or vessel mooring or berthing installations, which present a hazard of falling more than 4 feet (1.22 m) or into the water.
- Shipyard Industry 1915.73(d) - When employees are exposed to unguarded edges of decks, platforms, flats, and similar flat surfaces, more than 5 feet above a solid surface, the edges shall be guarded by adequate guardrails.
- Steel Erection 1926.760(a)(1) - Each employee engaged in a steel erection activity who is on a walking/working surface with an unprotected side or edge more than 15 feet (4.6 m) above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.

The following are minimum standards for Veracity Field Services employee personal fall protection systems:

- All D-rings must be a minimum of 2¼ inches (inside diameter).
- All snap hooks shall not allow pressure to be applied to the gate in the opening direction.
- No pelican hooks on lanyards should be used as a primary connection.
- Connectors shall be drop forged, pressed or formed steel, or made of equivalent materials.
- Connectors shall have a corrosion-resistant finish, and all surfaces and edges shall be smooth to prevent damage to interfacing parts of the system.
- D-rings and snap hooks shall have a minimum tensile strength of 5,000 pounds.
- D-rings and snap hooks shall be proof-tested to a minimum tensile load of 3,600 pounds without cracking, breaking, or taking permanent deformation.
- Snap hooks shall be sized to be compatible with the member to which they are connected to prevent unintentional disengagement of the snap hook. Only a locking type snap hook designed and used to prevent disengagement of the snap hook by the contact of the snap hook keeper by the connected member shall be used.
- Horizontal lifelines shall be designed, installed, and used, under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of at least two.



- Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds. Where vertical lifelines are used, each employee shall be attached to a separate lifeline.
- Lifelines shall be protected against being cut or abraded.
- Self-retracting lifelines and lanyards which automatically limit free fall distance to 2 feet or less shall be capable of sustaining a minimum tensile load of 3,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.
- Self-retracting lifelines and lanyards which do not limit free fall distance to 2 feet or less, rip stitch lanyards, and tearing and deforming lanyards shall be capable of sustaining a minimum tensile load of 5,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.
- Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds per employee attached, or shall be designed, installed, and used as part of a complete personal fall arrest system which maintains a safety factor of at least two and under the supervision of a qualified person.
- Systems used by an employee having a combined person and tool weight in excess of 310 pounds shall be modified to provide proper protection for such heavier loads.
- The attachment point of the body harness shall be located in the center of the wearer's back near shoulder level, or above the wearer's head, except when climbing.
- Body harnesses and components shall be used only for employee protection and not to hoist materials.
- Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse.
- Provide for prompt rescue of employees in the event of a fall or shall assure the employees are able to rescue themselves.
- Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.
- Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists unless prior approval is obtained from a competent person.
- If and when a personal fall arrest system is used at hoist areas, it shall be rigged to allow the movement of the employee only as far as the edge of the walking/working surface.

Stopping a Fall

The arresting force on an employee stopped by a fall shall be limited to a maximum arresting force of 1,800 pounds when wearing a body harness.

The fall arrest system shall be rigged such that an employee can neither free fall more than 6 feet, nor contact any lower level.

The fall arrest system shall bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet.

The fall arrest system shall have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet, or the free fall distance permitted by the system, whichever is less.



Protection From Falling Objects

When employees are required to work in the near vicinity of others working with materials, tools, or equipment at elevated levels, Barricades around the immediate area of the overhead work shall be erected to prohibit employees from entering the barricaded area.

Employees performing work at elevated levels shall keep tools, materials, and equipment away from the edge to keep potential objects from falling over the side. Where practical, tools, etc. shall be secured with rope, wire, etc. to keep them from falling.

Portable Ladders

Three point climbing is required while ascending/descending ladders. While on ladders, both hands and one foot, or both feet and one hand shall always be in contact with the ladder.

Tools required to perform a task shall be transported by a mechanical carrier such as a tag line, suspended bucket or tool belt.

- Tools shall not be carried by hand while climbing.
- Hands must be free to grip the ladder.
- Tools shall not be carried in clothing pockets.
- Tools shall be pulled up to the job site only after reaching the area of work.

When work is to be performed from straight/extension ladders, fall protection shall be utilized when heights exceed 6 feet.

Straight ladders shall be tied off at the top to prevent them from moving. A second person shall steady the ladder at the base while it is being tied off at the top by another employee. Do not tie off fall protection equipment to the ladder.

Storage

A dedicated storage area shall be provided for the storage of fall protection equipment and all components. The storage area shall keep the equipment clean, dry, and free from oils, chemicals, paints, and excessive heat.

Inspections

Fall protection equipment shall be inspected before each use for wear, damage, other deterioration, or other defects.

Elevated Personnel Platforms

Work performed, regardless of the nature of the work, from personnel platforms raised by forklifts, cranes, scissor lifts, etc., shall require the use of a full body harness and shall be connected to the platform.

Prompt Rescue of an Employee in the Event of a Fall

Veracity Field Services shall provide for prompt rescue of employees in the event of a fall or shall assure the employees are able to rescue themselves.

The pre-planning stage prior to the beginning of each elevated work assignment shall be evaluated by the supervisor to provide rescue of employees involved in a fall.



Fall Protection Plan

This option is available only to employees engaged in leading edge work who can demonstrate that it is infeasible or it creates a greater hazard to use conventional fall protection equipment. The fall protection plan shall conform to the following provisions:

- The fall protection plan shall be prepared by a qualified supervisor and developed specifically for the site where the leading edge work is being performed.
- The fall protection plan shall document the reasons why the use of conventional fall protection systems (guardrail systems, personal fall arrest systems, or safety net systems) are infeasible or why their use would create a greater hazard.
- The fall protection plan shall identify each location where conventional fall Protection methods cannot be used.
- These locations shall then be classified as controlled access zones.

Site Specific Fall Protection Plan

A site specific Fall Protection plan is developed by a qualified person. The fall protection plan shall be prepared by a qualified person for the specified work site.

Controlled Access Zones

When used to control access to areas where leading edge or other operations are taking place the controlled access zone shall be defined by a control line or by any other means that restricts access.

When control lines are used, they shall be erected not less than 6 feet (1.8 m) nor more than 25 feet (7.7 m) from the unprotected or leading edge.

The control line shall extend along the entire length of the unprotected or leading edge and shall be approximately parallel to the unprotected or leading edge.

The control line shall be connected on each side to a guardrail system or wall.

- Control lines shall consist of ropes, wires, tapes, or equivalent materials.
- Each line shall be flagged or otherwise clearly marked at not more than 6-foot (1.8 m) intervals with high-visibility material.
- Each line shall be rigged and supported in such a way that its lowest point (including sag) is not less than 39 inches (1 m) from the walking/working surface and its highest point is not more than 45 inches (1.3 m).
- Each line shall have a minimum breaking strength of 200 pounds.

Only employees engaged in the related work shall be permitted in the controlled access zone.

Safety Monitoring System

When the use of conventional fall protection equipment is deemed infeasible or the use of this equipment creates a greater hazard a Fall Protection Plan which includes a safety monitoring system shall be implemented by the supervisor.

Supervisors shall designate a competent person to monitor the safety of other employees. The competent person shall be assigned to:



- Recognize fall hazards;
- Warn employees if they are unaware of fall hazard or are acting in an unsafe manner;
- Be on the same working surface and in visual contact of working employees;
- Stay close enough for verbal communication; and
- Not have other assignments that would take his/her attention from the monitoring function.

Incidents Involving a Fall are Investigated

Incident investigations shall be conducted to evaluate the fall protection plan for potential updates to practices, procedures or training in order to prevent reoccurrence.

Changes to the fall protection program shall be implemented if deemed appropriate from incident corrective actions.

Training

Employees are provided training on fall protection. A training program shall be provided for each employee who might be exposed to fall hazards. Training shall enable each employee to recognize the hazards of falling and shall train each employee in the procedures to follow to minimize these hazards.

The employee will be trained in the use and operation of fall arrest systems, inspections and maintenance procedures.

Retraining is performed as necessary. Retraining shall be provided when the following are noted:

- Deficiencies in training,
- Workplace changes
- When fall protection equipment is modified.

Fall protection training is documented. Written certification records showing participants, training dates and signatures of instructors must be maintained.

Training records shall be retained in the corporate office.

Inspections

All parts of fall protection equipment, body harnesses, and associated attachments and equipment are to be visually inspected by the user for excessive wear and damage prior to each use. The Fall Protection Inspection Form can be found at the following site: <https://veracityfieldservices.com/forms>



FIRE EXTINGUISHERS



Purpose

The purpose of this program is to provide fire extinguisher procedures to ensure equipment is operable and employees have the knowledge to safely operate in case of a fire incident.

Scope

Applies to all Veracity Field Services (the company) employees and all company locations.

Responsibilities

The Safety Manager is responsible for developing procedures for the use and care of fire extinguishers and for developing a training program for the proper use of these devices. The Manager is responsible for implementing fire extinguisher training at his location. The shop foremen are responsible for enforcing the provisions of this section of the safety manual. All employees are responsible for following these provisions.

Procedure

Selection and Distribution

Portable fire extinguishers shall be provided for employee use and selected and distributed based on the classes of anticipated workplace fires and on the size and degree of the hazard which would affect their use. Fire extinguishers used by this company are for four classes of fires:

- Class A Fire Extinguishers. Use on ordinary combustibles or fibrous material, such as wood, paper, cloth, rubber and some plastics. Travel distance for employees to any extinguisher is 75 feet (22.9 m) or less.
- Class B Fire Extinguishers. Use on flammable or combustible liquids such as gasoline, kerosene, paint, paint thinners and propane. Travel distance from the Class B hazard area to any extinguisher is 50 feet (15.2 m) or less.
- Class C Fire Extinguishers. Use on energized electrical equipment, such as appliances, switches, panel boxes and power tools. Travel distance from the Class C hazard area to any extinguishing agent is 50 feet (15.2 m) or less.
- Class D Fire Extinguishers. Use on combustible metals, such as magnesium, titanium, potassium and sodium. Travel distance from the combustible metal working area to any extinguishing agent is 75 feet (22.9 m) or less.

Labeling Of Fire Extinguishers

Fire extinguishers are to be mounted in easily accessible locations that are indicated by a sign that reads "Fire Extinguisher". Fire extinguishers are to be located so that no employee will ever be more than 75 feet from an extinguisher. No equipment, boxes or product may be placed (even temporarily) in the way of a fire extinguisher. Each fire extinguisher will be assigned a unique number.



Maintenance

All fire extinguishers shall be mounted no higher and no lower than four (4) feet from the floor. All fire extinguishers shall be maintained as follows:

- Numbered to identify their proper location
- Fully charged and in operable condition
- Clean and free of defects
- Readily accessible at all times

Inspection, Maintenance and Testing

All fire extinguishers are to be visually inspected by Veracity Field Services employees monthly. All fire extinguishers are to receive an annual maintenance check by certified personnel from a fire extinguisher dealer. Fire extinguishers are to be inspected and re-charged by certified personnel after any use.

Any fire extinguisher that shows a loss of pressure during the monthly inspection will be inspected and re-charged by certified personnel. Completed fire extinguisher inspection logs will be maintained in the safety files and become a part of the safety records. They are to be maintained for 5 years.

Use

In the event of a fire, one employee will get the nearest fire extinguisher and use it to attempt to put the fire out. All other employees in the immediate area will prepare to evacuate if needed. All other employees in the building need to be advised that a fire is in progress.

The employee attempting to extinguish the fire will break the safety seal on the handle and pull the pin. He will then aim his extinguisher at the base of the fire and discharge it with a sweeping motion from side to side; continuing until the fire is out or the extinguisher is emptied.

Remember that a standard fire extinguisher will be emptied in about 10 to 15 seconds. If the fire is not out when the extinguisher has been completely discharged, the employees must evacuate the area.

Training and Education

The purpose of this section is to establish training procedures which are necessary for the proper use and understanding of a fire extinguisher and incipient stage fire fighting. Training will occur prior to initial assignment and at least annually thereafter.

On even numbered years this training will be conducted by a member of the local fire department (where possible) and will include "live fire" hands on use of the extinguisher. On odd number years this training will be conducted by the Safety Manager and will include a demonstration of the use of a fire extinguisher, without actually discharging the unit.

New employees will be given the odd number year training upon hire.

Initial Training Outline

- General principles of a fire



- Hazards employed with an incipient stage fire(s)
- When to "back off" (evacuate) of an incipient stage fire(s)
- General fire principles of a fire extinguisher
- Hazards employed with the use a fire extinguisher
- Use of a fire extinguisher

Retraining

Retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary. Retraining shall be provided for all authorized and affected employees whenever there is:

- An annual basis or
- A change in job assignment or
- Veracity Field Services has reason to believe that there are deviations from or inadequacies in the employee's knowledge or use of fire extinguishers or fire prevention procedures.

Training Documentation

- All training will be documented and each employee's understanding will be subject to a "hands-on" test.
- Documentation will consist of; as a minimum, the employee's name, the trainer's name, the date of the training, and an outline of training provided.



FIRST AID



Purpose

The purpose of this program is to establish the minimum first aid supplies, equipment and actions to properly respond to injuries.

Scope

This program is applicable to all Veracity Field Services (the company) employees and consultants while engaged in work at Veracity Field Services facilities and/or facilities operated by others.

Responsibilities

- It is the responsibility of the site manager to ensure that first aid kits are provided and maintained
- All employees are responsible for using first aid materials in a safe and responsible manner

Requirements

Planning

The site manager will:

- Ensure that a minimum of one employee, with a valid certificate, shall be present to render first aid at all times work is being performed where medical assistance is not available within 3-4 minutes.
- Ensure that provisions shall have been made prior to commencement of a project for prompt medical attention, including transportation, in case of serious injury.
- Ensure adequate first aid supplies and equipment are easily accessible when required.
- Ensure that in areas where 911 is not available, the telephone numbers of the physicians, hospitals, or ambulances to be used shall be conspicuously posted.

Medical Response

All minor first aid is to be self-rendered. Because of the risks presented by certain bloodborne pathogens, no employee or consultant is allowed to tend the minor injuries of another person while on company time.

In the absence of an infirmary, clinic, hospital, or physician, that is reasonably accessible in terms of time and distance to the worksite, which is available for the treatment of injured employees, a person who has a valid certificate in first-aid shall be available at the worksite to render first aid.

Employees authorized to render first aid will always observe universal precautions. (Universal Precautions means that the aid giver treats all bodily fluids as if they were contaminated).

If 911 is not available refer to the pre-established list of posted phone numbers for medical response providers. All Veracity Field Services authorized first responders shall have a cell phone as a means of communications; otherwise hand held radios or telephones shall be used as a means of communication.



Supplies and Equipment

First aid supplies shall be easily accessible when required. Always follow the manufacturer's instructions when using the materials in the first aid kit.

All Veracity Field Services first aid kits shall contain appropriate items determined to be adequate for the environment in which they are used and if on a construction site are stored in a weather proof container with individual contents sealed from the manufacturer for each type of item.

Veracity Field Services is responsible to ensure the availability of adequate first aid supplies and to periodically reassess the availability for supplies and to adjust its inventories. First Aid kits are to be inspected:

- On the first working day of each month to verify that they are fully stocked and that no expiration dates have been exceeded, and
- Before being sent out to each job, and
- Replace any items that have exceeded their expiration dates or that have been depleted.

Where the eyes or body of any person may be exposed to injurious corrosive materials, a safety shower and/or eye wash (suitable facilities) or other suitable facilities shall be provided within the work area. Ensure expiration dates are checked and water used in storage devices is sanitized.

An assessment of the material or materials used shall be performed to determine the type flushing/drenching equipment required. At client job sites, portable or temporary stations must be established prior to the use of corrosive materials.

Transportation

Based on the first responder's assessment of the injuries involved, decide whether the injured requires to be taken directly to a hospital's emergency room, occupational medicine provider or administer first aid on location.

Examples of serious injuries that result in the injured being transported to a medical provider are those resulting in severe blood loss, possible permanent disfigurement, head trauma, spinal injuries, internal injuries and loss of consciousness. Keep in mind that the needs and wellbeing of the injured are the first priority.

Proper equipment for prompt transportation of the injured person to a physician or hospital or a communication system for contacting necessary ambulance service shall be provided.

Choices to consider include: private automobile, company vehicle, EMS vehicles including medi-vac helicopters, or any other transportation that can provide safe transportation to the hospital or doctor's office in order to provide medical attention to the injured in the quickest manner without any additional complications or injuries to the injured employee.

Transportation needs must be preplanned and coordinated with the transportation provider prior to an incident requiring such service.



Training

Volunteers or selected employees are trained by the American Red Cross or equivalent in CPR and first aid. Each of these trained and certified employees are equipped with protective gloves and other required paraphernalia.



FIT FOR DUTY



Purpose

Veracity Field Services full and part-time staff are expected to report for work fit for duty, which means able to perform their job duties in a safe, appropriate and an effective manner free from the adverse effects of physical, mental, emotional and personal problems.

Scope

This program applies to all Veracity Field Services projects and operations.

Fitness for Duty Process

It is the goal of Veracity Field Services to provide a safe workplace for all employees. To accomplish this goal, we have adopted the following fitness for duty policy requirements. Supervisors will work with the human resources department when they have a concern about an employee's fitness for duty.

All requirements will be verified through documentation.

Training and Safe Work Requirements (Skills and Knowledge)

Employees must have the required skills to perform their assigned tasks. This is evaluated and documented by any or all of the following for evaluation of the employee's required skills:

- Prior employment reference checks
- Certifications, licenses or other documentation verification
- Task testing
- On the job monitoring
- Performance evaluations
- Training and training retention

Employees are properly trained for their assigned tasks. Employees must receive training specific to their assigned task. Examples might be welding, instrumentation, scaffold building, equipment operator qualifications, respirator fit test, etc. based on a training matrix that reflects the job description and/or tasks being performed. All training is to be documented.

Safe work practices and procedures must be followed. Safe work procedures must be in place prior to work beginning. Employees shall follow our and our client's safety requirements. Examples may include, hot work permitting, confined space, lockout tagout, process safety management, electrical safety, operator safety and other standard work practices, safety rules or procedures.

Personal Medical Reporting Requirements

As a condition of employment employees must report all medications to their supervisor they are taking that could impair their ability to work safely. The reporting must occur before the employee arrives for work or arranges for transportation to a remote site.



Client Drug and Alcohol Testing Requirements

Drug and alcohol testing for pre-employment, post-accident or random as prescribed by the host facility shall be implemented. Procedures must include and be implemented for drug and alcohol testing as prescribed by DOT or the host client facilities.

Employee Activity and Behavior

Employee's activities and behaviors will be monitored to determine if employee should be removed from the work site if their ability to perform their duties safely is questioned.

Fit for Duty Examination

Confidentiality

Medical Records and other related records are protected by state and federal confidentiality laws and Veracity Field Services policy. Employee medical records will not be released to unauthorized personnel without the employee's written consent or subpoena in accordance with state and federal laws.

Self-Referrals

Employees are responsible for notifying their supervisor if they are fatigued to the point of not being able to perform their duties safely. Employees must be responsible for ensuring they are physically and mentally fit to perform their job functions safely. Employees must take responsibility for their own safety as well as not reporting to work in a condition as to endanger the safety of their fellow workers.

Disciplinary action may occur for an employee reporting to work in a condition which could endanger their safety or the safety of any other person(s). See below for Management Referral in case there is a question of the employee's ability to work safely.

Management Referral

Management Personnel Responsibility

Management personnel are responsible for monitoring the attendance, performance and behavior of their employees. When an employee's performance and/or behavior (including the odor of alcohol or possible use of any illegal substance) appears to be present, unsafe, ineffective and/or inappropriate, it is every manager's responsibility to challenge the employee's behavior and the ability to function by removing the employee from the job.

Due to the safety issues involved, supervisors have a special responsibility to implement this policy in a consistent and fair manner.



FLAME RESISTANT CLOTHING



1.0 Purpose

This policy represents the minimum requirements for flame resistant (FR) clothing.

2.0 Scope

This program applies to all Veracity Field Services employees working in the West Texas field operations.

Table of Contents

1. Purpose
2. Scope
3. General Requirements
4. Heat index Table

3.0 General Requirements

In an effort to protect the employees of Veracity Field Services, a wide range of data, information, company history, and industry knowledge and experience has been collected and considered in developing a hazard assessment related to the use of flame resistant clothing and the health risk(s) to employees from heat stress. The hazard assessment can be found in the HSE Manual and the Procedures section of the solution center at: <https://veracityfieldservices.com/procedures>.

Based on the outcome of the Heat Risk Hazard Assessment, when the heat index is 91 degrees or higher (refer to the heat index table in section 4), Veracity Field Services employees during routine operations are at a substantially greater risk of injury due to heat stress. It is also recognized that the donning of FR shirts with long sleeves will contribute substantially to the overheating of the body and prevent the body's ability to evaporate the heat.

The following minimum flame resistant clothing requirements apply to all Veracity Field Services employees:

Construction

- FR clothing is not required for normal day to day operations.
- Workers should dress appropriately for site conditions and weather.
- Lightweight clothing, short sleeve shirts, and white [hard hats](#) are appropriate when the heat index is 91 degrees or higher.
- Where there is a specific hazard of flash fire, where engineering controls are not in place or cannot be deployed to provide adequate protection, appropriate FR clothing shall be donned and serve to cover all susceptible surfaces of the body including the respiratory function of the worker. In such a situation steps must be taken to protect employees from heat stress, regardless of the temperatures or heat index of the work environment.
- Employees shall maintain compliance with the company [Heat Illness Prevention](#) program.

Drilling, Workover, Completions & Production

When the heat index is 90 degrees or less



- FR jeans shall be worn.
- Long sleeve FR shirts shall be worn.
- The outermost garment shall be FR.
- Employees shall maintain compliance with the company [Heat Illness Prevention](#) program.

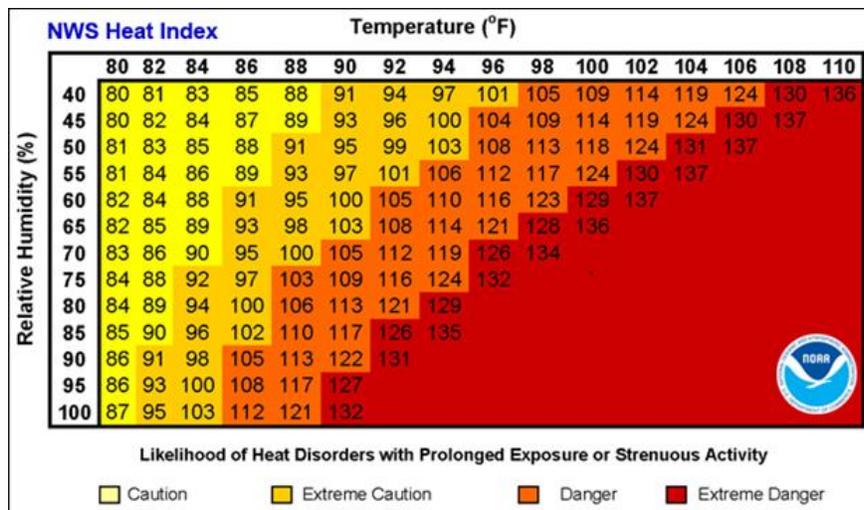
When the heat index is 91 degrees or higher

- FR jeans shall be worn.
- Light weight short sleeve FR shirts shall be worn.
- The outermost garment shall be FR.
- Light weight safety shoes are recommended.
- Where there is a specific hazard of flash fire, where engineering controls are not in place or cannot be deployed to provide adequate protection, appropriate FR clothing shall be donned and serve to cover all susceptible surfaces of the body including the respiratory function of the worker. In such a situation steps must be taken to protect employees from heat stress, regardless of the temperatures or heat index of the work environment.
- A white [hard hat](#) shall be worn.
- Employees shall maintain compliance with the company [Heat Illness Prevention](#) program.

Visitors & Vendors

Visitors and vendors not entering areas with a “specific hazard to flash fire” are allowed to be present on locations without flame resistant clothing. It is recommended that visitors wear cotton clothing when present in non-hazardous areas.

4.0 Heat Index Chart



If the temperature vs humidity is not available in the heat index table visit this link to use the heat index calculator:

[Heat Index Calculator](#)

Source: <https://www.weather.gov/safety/heat-index>



FORKLIFT & INDUSTRIAL TRUCKS



Purpose

The purpose of this program is to establish requirements for the safe operation and use of Powered Industrial Trucks.

Scope

This program applies to all Veracity Field Services employees who operate a Powered Industrial Truck in the scope of their job duties and assignments. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Veracity Field Services employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent. *NOTE:* All employees are required to be trained and certified prior to operating each specific type of forklift equipment. Veracity Field Services shall certify all authorized employees regarding competency on all types of equipment.

Definitions

Authorized Employee – A person, at least 18 years of age and who has completed the company's required safety training for the safe operations of forklifts.

Forklift (Powered Industrial Truck) – Any mechanical device used for the movement of supplies, material or finished a product that is powered by an electric motor or an internal combustion engine.

Key Responsibilities

Manager/Supervisor

- Shall ensure that each powered forklift operator is competent to operate a forklift safely, as demonstrated by the successful completion of the training and evaluation program.
- Shall ensure that all forklifts are inspected before each shift and all repairs are made before the forklift is operated.

Employees

- Shall be current on applicable training.
- Operate forklift in accordance to the forklift standards and manufacture requirements.
- Inspect forklift at the start of shift, and remove from service if defects are found until they are corrected.
- Operate forklift in a safe manner.

Procedure

General

All approved forklifts shall have a manufactures identification plate attached showing all specifications of the forklift and that the forklift is accepted by a nationally recognized testing laboratory.



Modifications and additions, that affect capacity and safe operation, shall not be performed without manufacturer's prior written approval. Capacity, operation, and maintenance instruction plates, tags, or decals shall be changed reflect the modification or addition.

If the forklift is equipped with front-end attachments other than factory installed attachments, the supervisor shall ensure that the forklift is marked to identify the attachments and show the approximate weight of the forklift and attachment combination at maximum elevation with load laterally centered.

The operator shall see that all nameplates and markings are in place and are maintained in a legible condition.

All forklifts shall be equipped with safety seat belts. All forklifts shall be equipped with a horn, backup alarm, beacon light, headlights and taillight.

Safety Guards

Forklifts shall be fitted with an overhead rollover cage, as per manufactures specifications.

If the type of load presents a hazard to the operator, the forklift shall be equipped with a vertical load backrest extension, as per manufactures specifications.

Training

Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, and written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee) and evaluation of the operator's performance in the workplace.

All operator training and evaluation shall be conducted by authorized persons who have the knowledge, documented training, and experience to train powered industrial truck operators and evaluate their competence.

Each operator is required to be re-evaluated every three years.

Training shall include the following topics, except in topics for locations where they are not applicable to safe operation of the truck due to type of equipment or facility conditions.

1. Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate,
2. Differences between the truck and the automobile,
3. Truck controls and instrumentation: where they are located, what they do, and how they work,
4. Engine or motor operation,
5. Steering and maneuvering,
6. Visibility (including restrictions due to loading),
7. Fork and attachment adaptation, operation, and use limitations,
8. Vehicle capacity,
9. Vehicle stability,
10. Any vehicle inspection and maintenance that the operator will be required to perform,



11. Refueling and/or charging and recharging of batteries,
12. Operating limitations,
13. Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate,
14. Surface conditions where the vehicle will be operated,
15. Composition of loads to be carried and load stability,
16. Load manipulation, stacking, and unstacking,
17. Pedestrian traffic in areas where the vehicle will be operated,
18. Narrow aisles and other restricted places where the vehicle will be operated,
19. Hazardous (classified) locations where the vehicle will be operated,
20. Ramps and other sloped surfaces that could affect the vehicle's stability,
21. Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust,
22. Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation, and
23. The requirements of CFR 1910.178 (Powered Industrial Trucks).

Mandatory refresher training shall be provided when unsafe operations are observed, after an incident, if operating a different vehicle type, changes in conditions or any time Veracity Field Services feels an operator requires refresher training.

Certification

Only trained and certified operators, including supervisors, are allowed to operate the device (this includes refresher training requirements).

The trainer shall certify in writing that each operator has been trained and evaluated as required.

The certification shall include the name of the operator, the date of the training, the date of the evaluation and the identity of the person(s) performing the training and/or evaluation.

Operations

General

- All operators shall wear a safety seat belt when operating a forklift.
- Forklifts shall not be driven up to anyone standing in front of a bench or other fixed object.
- No person shall be allowed to stand or pass under the elevated portion of any forklift, whether loaded or empty.
- Unauthorized personnel shall not be permitted to operate forklifts.
- No riders or passengers are permitted.
- It is prohibited for arms or legs to be placed between the uprights of the mast or outside the running lines of the forklift.



- When a forklift is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, and brakes set.
- Wheels shall be blocked if the forklift is parked on an incline.
- A forklift is unattended when the operator is 25 ft. or more away from the vehicle, which remains in view, or whenever the operator leaves the forklift and it is not in view.
- When the operator of a forklift is dismounted and within 25 ft. of the forklift still in view, the load engaging means shall be fully lowered, controls neutralized, and the brakes set to prevent movement.
- A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform or freight car.
- Forklifts shall not be used for opening or closing freight doors.
- Brakes shall be set and wheel blocks shall be in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading.
- Fixed jacks may be necessary to support a semi-trailer during loading or unloading when the trailer is not coupled to a tractor.
- The flooring of trucks, trailers, and railroad cars shall be checked for breaks and weakness before they are driven onto.
- There shall be sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc.
- An overhead guard (cages) shall be used as protection against falling objects.
- An overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.
- Fire aisles, access to stairways, and fire equipment shall be kept clear.

Traveling

- The operator shall slow down and sound the horn at cross isles and other locations where vision is obstructed.
- If the load being carried obstructs forward view, the operator shall be required to travel with the load trailing.
- The operator shall be required to look in the direction of, and keep a clear view of the path of travel.
- Grades shall be ascended or descended slowly.
- When ascending or descending grades in excess of 10 percent, loaded forklifts shall be driven with the load upgrade.
- On all grades the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.
- Under all travel conditions the forklift shall be operated at a speed that will permit it to be brought to a stop in a safe manner.
- Stunt driving and horseplay are prohibited.



- The operator shall slow down for wet and slippery floors.
- Dock board or bridge plates shall be properly secured before they are driven over.
- Dock board or bridge plates shall be driven over carefully and slowly and their rated capacity never exceeded.
- While negotiating turns, speed shall be reduced to a safe level by means of turning the hand steering wheel in a smooth, sweeping motion.
- Except when maneuvering at a very low speed, the hand steering wheel shall be turned at a moderate, even rate.

Loading

- Only stable or safely arranged loads shall be handled.
- Caution shall be exercised when handling off-center loads, which cannot be centered.
- Only loads within the rated capacity of the forklift shall be handled.
- Forklifts equipped with attachments shall be operated as partially loaded forklifts when not handling a load.
- A load engaging means shall be placed under the load as far as possible; the mast shall be carefully tilted backward to stabilize the load.
- Extreme care shall be used when tilting the load forward or backward, particularly when high tiering.
- Tilting forward with load engaging means elevated shall be prohibited except to pick up a load.
- An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack.
- When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

Operation of the Truck

- If at any time a forklift is found to be in need of repair, defective, or in any way unsafe, the forklift shall be taken out of service until it has been restored to safe operating condition.
- Fuel tanks shall not be filled while the engine is running.
- Spillage of oil or fuel shall be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting engine.
- When fueling with Liquefied Petroleum Gas (LPG), precautions and handling requirements set forth in the "Safe Handling of LPG" program shall be followed.
- No forklift shall be operated with a leak in the fuel system.
- Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.
- Operator must verify trailer chocks, supports, and dock plates are secured prior to loading/unloading.

Maintenance and Inspection of Forklifts



- Only authorized personnel shall perform maintenance, and make repairs.
- Those repairs to the fuel and ignition systems of forklifts, which involve fire hazards, shall be conducted only in locations designated for such repairs.
- Forklifts in need of repairs to the electrical system shall have the battery disconnected prior to such repairs.
- Only parts equivalent with those used in the original design shall replace all parts of any forklift requiring replacement parts.
- Forklifts shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts.
- Additional counter weighting of fork trucks shall not be done unless approved by the truck manufacturer.
- Forklifts shall be inspected daily by the operator before being placed in service, and shall not be placed in service if the inspection shows any condition adversely affecting the safety of the forklift.
- Inspection shall be made at least daily – prior to each shift. (visual – non documented) Inspection items shall be posted on each forklift. Operators must insure the vehicle is safe prior to operating.
- Where forklifts are used on a round-the-clock basis, they shall be inspected before each shift.
- Defects when found shall be immediately reported to the supervisor, and corrected before operating the forklift.
- When the temperature of any part of any forklift is found to be in excess of its normal operating temperature, thus creating a hazardous condition, the forklift shall be removed from service and not returned to service until the cause for such overheating has been eliminated.
- Forklifts shall be kept in a clean condition, free of lint, excess oil, and grease.
- Noncombustible agents, where at all possible, shall be used for cleaning trucks.
- Low flash point (below 100 degrees F.) solvents shall not be used.
- High flash point (at or above 100 degrees F.) solvents may be used if precautions regarding toxicity, ventilation, and fire hazard are mitigated with the agent or solvent used.



HAND & POWER TOOLS



Purpose

The purpose of this program is to provide establish requirements for the safe operation of hand and power tools and other portable tools, including proper guarding. All hand and power tools shall be maintained in a safe condition.

This program applies to all Veracity Field Services employees who use hand and power tools.

Scope

This program is applicable to all Veracity Field Services employees while engaged in work at Veracity Field Services facilities and/or facilities operated by others.

Responsibilities

Any tool which is not in compliance with any applicable requirement of this plan is prohibited and shall either be identified as unsafe by tagging or locking the controls to render them inoperable or shall be physically removed from its place of operation.

Managers/Supervisors

- Ensure that all employees using portable tools have been trained and fully understand the operations and maintenance procedures of such tools, including their proper use.
- Provide and train employees with all additional PPE that may be needed for the safe operation of portable tools.

Employees

- Shall ensure they have and properly use the correct tool for each task.
- Shall follow manufactures safety and operating instructions before using

Requirements

General

All tools, regardless of ownership, shall be of an approved type and maintained in good condition.

- Tools are subject to inspection at any time.
- All employees have the authority and responsibility to condemn unsafe tools, regardless of ownership.

Unsafe tools shall be tagged with a “DO NOT USE OR OPERATE” tag to prevent their use.

Employees shall always use the proper tool for the job to be performed. Makeshift and substitute tools shall not be used.

Hammers with metal handles, screwdrivers with metal continuing through the handle, and metallic measuring tapes shall not be used on or near energized electrical circuit or equipment.



Tools shall not be thrown from place to place or from person to person; tools that must be raised or lowered from one elevation to another shall be placed in tool bags/buckets firmly attached to hand lines.

Tools shall never be placed unsecured on elevated places.

Impact tools such as chisels, punches, and drift pins that become mushroomed or cracked shall be dressed, repaired, or replaced before further use.

Chisels, drills, punches, ground rods, and pipes shall be held with suitable holders or tongs (not with the hands) while being struck by another employee.

Shims shall not be used to make a wrench fit.

Wrenches with sprung or damaged jaws shall not be used.

Tools shall be used only for the purposes for which they have been approved.

Tools with sharp edges shall be stored and handled so that they will not cause injury or damage. They shall not be carried in pockets unless suitable protectors are in use to protect the edge. They shall not be carried in pockets unless suitable protectors are in use to protect the edge.

Wooden handles that are loose, cracked, or splintered shall be replaced. The handle shall not be taped or lashed with wire. The handle shall not be taped or lashed with wire.

Tools shall not be left lying around where they may cause a person to trip or stumble.

When working on or above open grating, a canvas or other suitable covering shall be used to cover the grating to prevent tools or parts from dropping to a lower level where others are present, or the danger area shall be barricaded or guarded.

The insulation on hand tools shall not be depended upon to protect users from high voltage shock (except approved live line tools).

Portable Electric Tools

The non-current carrying metal parts of portable electric tools such as drills, saws, and grinders shall be effectively grounded when connected to a power source unless:

- The tool is an approved double-insulated type, or
- The tool is connected to the power supply by means of an isolating transformer or other isolated power supply.

All powered tools shall be examined prior to use to ensure general serviceability and the presence of all applicable safety devices.



Powered tools shall be used only within their design and shall be operated in accordance with manufacturer's instructions. The use of electric cords for hoisting or lowering tools shall not be permitted.

All tools shall be kept in good repair and shall be disconnected from the power source while repairs or adjustments are being made.

Electrical tools shall not be used where there is hazard of flammable vapors, gases, or dusts without a valid Hotwork Permit.

Ground fault circuit interrupters or use of an Assured Grounding Program shall be used with portable electric tools. This does not apply to equipment run off of portable or truck mounted generators at 5kw or less that are isolated from ground or to equipment ran directly off of secondaries.

Pneumatic Tools

Pneumatic tools shall never be pointed at another person.

Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.

Safety clips or retainers shall be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.

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.

Compressed air shall not be used to blow dust or dirt from clothing.

The manufacturers stated safe operating pressure for hoses, pipes, valves, filters, and other fitting shall not be exceeded.

The use of hoses for hoisting or lowering tools shall not be permitted.

Before making adjustments or changing air tools, unless equipped with quick-change connectors, the air shall be shut off at the air supply valve ahead of the hose. The hose shall be bled at the tool before breaking the connection.

Compressed air tools, while under pressure, must not be left unattended.

All connections to air tools shall be made secure before turning on air pressure.

Air at the tool shall not be turned on until the tool is properly controlled.



All couplings and clamps on pressurized air hose shall be bridged (pinned) with suitable fasteners.

Hose and hose connections used for conducting compressed air to utilization equipment shall be designed for the pressure and service to which they are subjected.

Use only approved end-fitting clamps (screw type heater hose clamps are not acceptable).

While blowing down hose, do not point it toward people.

Power tools are to be operated only by competent persons who have been trained in their proper use.

Conductive hose should not be used near energized equipment.

Foot protection shall be worn while operating paving breakers, tampers, rotary drills, clay spades, and similar impactor-type tools or at other times when instructed by supervision.

All pneumatically driven nailers, staplers, and other similar equipment provided with automatic fastener feed, which operate at more than 100 psi. pressure at the tool shall have a safety device on the muzzle to prevent the tool from ejecting fasteners, unless the muzzle is in contact with the work surface.

Airless spray guns of the type which atomize paints and fluids at high pressures (1,000 pounds or more per square inch) shall be equipped with automatic or visible manual safety devices which will prevent pulling of the trigger to prevent release of the paint or fluid until the safety device is manually released.

In lieu of the above, a diffuser nut (which will prevent high pressure), high velocity release (while the nozzle tip is removed), plus a nozzle tip guard (which will prevent the tip from coming into contact with the operator), or other equivalent protection, shall be provided.

Powder Actuated Tools (Tools actuated by an explosive charge)

Only those employees who have been certified in their use shall operate these tools.

Explosive charges shall be carried and transported in approved containers.

Operators and assistants using these tools shall be protected by means of eye, face, and hearing protection.

Tools shall be maintained in good condition and serviced regularly by qualified persons. The material upon which these tools are to be used shall be examined before work is started to determine its suitability and to eliminate the possibility of hazards to the operator and others.

Prior to use, the operator shall ensure that the protective shield is properly attached to the tool.

Before using a tool, the operator shall inspect it to determine to his satisfaction that it is clean, that all moving parts operate freely, all guards and safety devices are in place, and that the barrel is free from obstructions.



Before using tools, the operator shall read and become familiar with the manufacturers operating guidelines and procedures.

When a tool develops a defect during use, the operator shall immediately cease to use it, until it is properly repaired in accordance with the manufactures specifications.

Tools shall not be loaded until just prior to the intended firing time, nor shall an unattended tool be left loaded. Empty tools are not to be pointed at any workmen.

In case of a misfire, the operator shall hold the tool in the operating position for at least 30 seconds. He shall then try to operate the tool a second time. He shall wait another 30 seconds, holding the tool in the operating position; then he shall proceed to remove the explosive load in strict accordance with the manufacturer's instructions.

A tool shall never be left unattended in a place where it would be available to unauthorized persons.

Fasteners shall not be driven into very hard or brittle materials including, but not limited to, cast iron, glazed tile, surface hardened steel, glass block, live rock, face brick, or hollow tile.

Driving into materials easily penetrated shall be avoided unless such materials are backed by a substance that will prevent the pin or fastener from passing completely through and creating a flying missile hazard on the other side.

Tools shall not be used in an explosive or flammable atmosphere.

Hydraulic Power Tools

The fluid used in hydraulic powered tools shall be fire-resistant fluids approved under Schedule 30 of the U.S. Bureau of Mines, Department of the Interior, and shall retain its operating characteristics at the most extreme temperatures to which it will be exposed.

The manufacturer's safe operating pressures for hoses, valves, pipes, filters, and other fittings shall not be exceeded.

All hydraulic tools, which are used on or around energized lines or equipment, shall use non-conducting hoses having adequate strength for the normal operating pressures.

Hydraulic Jacks

Loading and Marking

- The operator shall make sure that the jack used has a rating sufficient to lift and sustain the load.
- The rated load shall be legibly and permanently marked in a prominent location on the jack by casting, stamping, or other suitable means.

Operation and Maintenance

- In the absence of a firm foundation, the base of the jack shall be blocked. If there is a possibility of



slippage of the cap, a block shall be placed in between the cap and the load.

- The operator shall watch the stop indicator, which shall be kept clean, in order to determine the limit of travel. The indicated limit shall not be overrun.
- After the load has been raised, it shall be cribbed, blocked, or otherwise secured at once.
- Hydraulic jacks exposed to freezing temperatures shall be supplied with adequate antifreeze liquid.
- All jacks shall be properly lubricated at regular intervals.

Each jack shall be thoroughly inspected before each use. Jacks, which are in unsafe condition, shall be tagged accordingly, and shall not be used until repairs are made.

Abrasive Blast Cleaning Nozzles

The blast cleaning nozzles shall be equipped with an operating valve, which must be held open manually. A support shall be provided on which the nozzle may be mounted when it is not in use.

Fuel Powered Tools

All fuel-powered tools shall be stopped while being refueled, serviced, or maintained, and fuel shall be transported, handled, and stored in accordance with the Flammable and Combustible Liquids Program.

When fuel powered tools are used in enclosed spaces, the applicable requirements for concentrations of toxic gases and use of personal protective equipment, shall be adhered to.

Guarding Portable Tools

Guards shall be in place and operable at all times while the tool is in use. The guard may not be manipulated in such a way that will compromise its integrity or compromise the protection in which intended. Guarding shall meet the requirements set forth in ANSI B15.1.

Portable Circular Saws

- All portable, power-driven circular saws having a blade diameter greater than 2 in. shall be equipped with guards above and below the base plate or shoe.
- The upper guard shall cover the saw to the depth of the teeth, except for the minimum arc required to permit the base to be tilted for bevel cuts.
- The lower guard shall cover the saw to the depth of the teeth, except for the minimum arc required to allow proper retraction and contact with the work.
- When the tool is withdrawn from the work, the lower guard shall automatically and instantly return to covering position.
- All cracked saw blades shall be removed from service.

Switches and Controls

- All hand held powered tools, circular saws, drills, tappers, fastener drivers, horizontal or vertical angle grinders, etc., shall be with a constant pressure switch or control, and may have a lock-on control provided that turnoff can be accomplished by a single motion of the same finger or fingers that turn it on.
- All hand-held powered circular saws having a blade diameter greater than 2 inches, electric, hydraulic or pneumatic chain saws, and percussion tools without positive accessory holding means shall be equipped



with a constant pressure switch or control that will shut off the power when the pressure is released. All hand-held gasoline powered chain saws shall be equipped with a constant pressure throttle control that will shut off the power to the saw chain when the pressure is released.

- The operating control on hand-held power tools shall be so located as to minimize the possibility of its accidental operation, if such accidental operation would constitute a hazard to employees.
- Grounding of portable electric powered tools shall meet the electrical requirements that can be found in the Electrical Safety Program. All electric power tools shall be equipped with a three-prong plug.

Portable Abrasive Wheels

Safety Guards Exceptions

- Wheels used for internal work while within the work being ground.
- Mounted wheels used in portable operations 2 inches and smaller in diameter.
- Types 16, 17, 18, 18R, and 19 cones, plugs, and threaded hole pot balls where the work offers protection.
- Guards shall be made of steel or other material with adequate strength.
- A safety guard shall cover the spindle end, nut and flange projections. The safety guard shall be mounted so as to maintain proper alignment with the wheel, and the strength of the fastenings shall exceed the strength of the guard.
- Exception: safety guards on all operations where the work provides a suitable measure of protection to the operator may be so constructed that the spindle end, nut and outer flange are exposed. Where the nature of the work is such as to entirely cover the side of the wheel, the side covers of the guard may be omitted.
- Exception: the spindle end, nut, and outer flange may be exposed on portable machines designed for, and used with, type 6, 11, 27, and 28 abrasive wheels, cutting off wheels, and tuck-pointing wheels.

Mounting and Inspection of Abrasive Wheels

- Immediately before mounting, all wheels shall be closely inspected, and a ring test performed, to make sure they have not been damaged in transit, storage, or otherwise.
- Ring test – “tap” wheels about 45 degrees each side of the vertical centerline and about 1 or 2 inches from the periphery; then rotate the wheel 45 degrees and repeat the test; a sound and undamaged wheel will give a clear metallic tone - If cracked, there will be a dead sound and not a clear “ring.”
- The spindle speed of the machine shall be checked before mounting of the wheel to be certain that it does not exceed the maximum operating speed marked on the wheel.
- Grinding wheels shall fit freely on the spindle and remain free under all grinding conditions.
- A controlled clearance between the wheel hole and the machine spindle (or wheel sleeves or adaptors) is essential to avoid excessive pressure from mounting and spindle expansion.
- The machine spindle shall be made to nominal (standard) size plus zero minus .002 inch, and the wheel hole shall be made suitably oversize to assure safety clearance under the conditions of operating heat and pressure.
- All contact surfaces of wheels, blotters, and flanges shall be flat and free of foreign matter.
- When a bushing is used in the wheel hole it shall not exceed the width of the wheel and shall not contact the flanges.



Portable Grinders

Special "revolving cup guards" which mount behind the wheel and turn with it shall be used. They shall be made of steel or other material with adequate strength and shall enclose the wheel sides upward from the back for one-third of the wheel thickness. It is necessary to maintain clearance between the wheel side and the guard. The clearance shall not exceed one-sixteenth inch.

Vertical portable grinders, also known as right angle grinders, shall have a maximum exposure angle of 180 degrees and the guard shall be located between the operator and the wheel during use. Adjustment of the guard shall ensure that pieces of an accidentally broken wheel will be deflected away from the operator.

Other Portable Grinders

The maximum angular exposure of the grinding wheel periphery and sides for safety guards used on other portable grinding machines shall not exceed 180 degrees and the top half of the wheel shall be enclosed at all times.

Personal Protective Equipment

Employees using hand and power tools and exposed to the hazard of falling, flying, abrasive, and splashing objects, or exposed to harmful dust, fumes, mists, vapors or gases shall be provided with the particular PPE necessary to protect them from the hazard.



HAZARD COMMUNICATION



Purpose

The purpose of this program is to ensure the safe use of hazardous chemical substances.

Introduction

In 2012, OSHA revised the Hazard Communication Standard (HCS) to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). As a result, this Hazard Communication Program (HCP) has been revised to comply with the requirements of the OSHA HCS 2012.

It spells out how Veracity Field Services will inventory chemicals stored and used, obtain and use Safety Data Sheets, maintain labels on chemical substances and train employees about the hazards of chemicals they are likely to encounter on the job.

Preparation of this program indicates our continuing commitment to safety among our employees in all of our locations.

- Each facility is expected to follow this program and maintain its work areas in accordance with these requirements.
- Employees, their designated representatives, and government officials must be provided copies of this program upon request.
- In addition to the program, other information required as part of our hazard communication effort is available to workers upon request.
- Asking to see this information is an employee's right.
- Using this information is part of our shared commitment to a safe, healthy workplace.

Scope

This program is applicable to all Veracity Field Services employees and consultants who may be exposed to hazardous chemical substances. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Veracity Field Services employees and consultants and shall be used when an operator or client's program doesn't exist or is less stringent.

Responsibilities

Safety Manager or Designee

The Safety Manager, or designee, is responsible for administering the hazard communication program. This person is also responsible for:

- Reviewing the potential hazards and safe use of chemicals.
- Maintaining a list of all hazardous chemicals and a master file of SDSs.
- Ensuring that all containers are labeled, tagged or marked properly.
- Providing new-hire and annual awareness training for employees and consultants.
- Maintaining training records.
- Identifying hazardous chemicals used in nonroutine tasks and assessing their risks.



- Informing outside contractors who are performing work on Veracity Field Services property about potential hazards.
- Reviewing the effectiveness of the hazard communication program and making sure that the program satisfies the requirements of all applicable federal, state or local hazard communication requirements.

Employees

- Employees are responsible for following the requirements in the Hazard Communication Program.
- Any employee who transfers any material from one container to another is responsible for labeling the new container with all required information.
- All employees and consultants are responsible for learning the requirements of this section and for applying them to their daily work routine.
- Identifying hazards before starting a job.
- Reading container labels and SDSs.
- Notifying the supervisor of torn, damaged or illegible labels or of unlabeled containers.
- Using controls and/or personal protective equipment provided by the company to minimize exposure.
- Following company instructions and warnings pertaining to chemical handling and usage
- Properly caring for personal protective equipment, including proper use, routine care and cleaning, storage and replacement.
- Knowing and understanding the consequences associated with not following Veracity Field Services policy concerning the safe handling and use of chemicals.
- Participating in Veracity Field Services training.

Procedure

List of Hazardous Chemicals

An inventory/list of hazardous chemicals is maintained. An inventory of all hazardous chemicals used by Veracity Field Services should be maintained. Each chemical on the list should have the same name as shown on its corresponding Safety Data Sheet (SDS).

The Hazardous Chemical List is updated as necessary and at least annually by the Safety Manager or their designee. The Hazardous Chemical List must be available for review upon request.

Safety Data Sheets (SDS)

Safety Data Sheets (SDS) are obtained for all hazardous chemicals. Chemical manufacturers are responsible for developing SDSs. Veracity Field Services shall have a SDS for each chemical used.

The purchasing of any potentially hazardous chemical products from any supplier that does not provide an appropriate Safety Data Sheet in a timely fashion is prohibited.

Safety Data Sheets (SDS) are readily available to employees and consultants at www.veracityfieldservices.com. SDS must be made available, upon request, to employees and consultants, their designated representatives, the Assistant Secretary and the Director.



The Safety Data Sheets must be kept in the online SDS library for as long as the chemical is onsite or used by the facility.

The Manager is responsible for seeing that the Chemical Inventory List is maintained, is current and is complete.

SDS' for hazardous materials to which Veracity Field Services employees have been exposed must be maintained after the employee leaves the employment of Veracity Field Services.

Methods to be Used to Inform Employees of the Hazards of Non-Routine Tasks

The methods that Veracity Field Services will use to inform employees and consultants of the hazards of non-routine tasks (i.e., the cleaning of reactor vessels, etc.) and the hazards associated with chemicals contained in unlabeled pipes in their work areas include:

- Conducting a Job Hazard Assessment (JSA).
- Employees will be advised of methods and special precautions, PPE and the hazards associated with chemicals and the hazards associated with chemicals contained in unlabeled pipes in their work areas.
- In the unlikely event that such tasks are required, the supervisor, or designee, will provide a SDS for the involved chemical.

The Use and Care of Labels and Other Forms of Warning

Containers of hazardous chemicals are labeled. Container labels should contain the following information:

- Product identifier
- Signal word
- Hazard statement
- Pictogram(s)
- Precautionary statement(s), and
- Name, address and telephone number of the chemical manufacturer, importer or other responsible party.

The Manager will ensure that all hazardous chemicals used or stored in the facility are properly labeled.

Damaged labels or labels with incomplete information shall be reported immediately.

Workplace labels or other forms of warning will be legible, in English and prominently displayed on the container or readily available in the work area throughout each work shift.

If employees and consultants speak languages other than English, the information in the other language(s) may be, at the discretion of the company, added to the material presented as long as the information is presented in English as well.

Veracity Field Services will use the GHS labeling system for secondary containers for company owned or managed chemical inventories.



Portable containers into which hazardous chemicals are transferred from labeled containers that are intended for immediate use of the employee who performs the transfer, do not require a label.

If the portable container will be used by more than one employee or used over the course of more than one shift, the container must be labeled.

Chemicals received from vendors that are not properly labeled must be rejected.

Pictograms and Hazards



VERACITY FIELD
SERVICES, LLC

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

Example Label



Multi-Employer Job Sites and/or Multi Work Site

Chemical information is provided to employees and consultants on multiple worksites or multiple employer worksites.

The online solution center (www.veracityfieldservices.com) provides specific methods for providing other employer information concerning hazardous chemicals at job sites, methods of providing SDS sheets, methods of precautionary measures to be taken and methods of providing information on labeling systems:

Multi-Work Sites

Where employees and consultants must travel between work places during a work shift (multi job sites), the written program may be kept at a primary job site or in the online solution center located at www.veracityfieldservices.com.

Multi-Employer Job Sites

A pre-job briefing shall be conducted with affected parties prior to the initiation of work on the site.

- During this pre-job briefing, company workers shall share or discuss current copies of Safety Data Sheets and label information for every hazardous chemical they bring on-site.
- Veracity Field Services shall notify and provide required SDS and label information for all hazardous chemicals to the customer or client.
- The facilities labeling system and any precautionary measures required by the customer or client during normal conditions and emergencies shall be addressed.
- By providing such information to other than company workers or other employers, Veracity Field Services does not assume any obligations that other employers have for the safety of their employees, consultants third parties or the public.

Training

Employees are provided with information and training on the hazardous chemicals they may be exposed to. Employees and consultants shall be provided with effective information and training on hazardous chemicals in



their work area at the time of their initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and safety data sheets.

The Hazard Communication Program documented training shall, as a minimum, include:

- Requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 (General Industry) or 29 CFR 1926.59 (Construction Industry).
- Operations in the work area where hazardous chemicals may be present.
- Location and availability of the hazard communication program, chemical inventory list and SDSs.
- Methods and observations used to detect the presence or release of a hazardous chemical in the work area, such as monitoring devices, visual appearance or odor of hazardous chemicals when being released.
- Explanation of the labels received on shipped containers.
- Explanation of the workplace labeling system.
- Explanation of the SDS, including order of information and how employees can obtain and use the appropriate hazard information.

The Manager shall ensure records of employee training are maintained.

Implementation Requirement

Per OSHA Requirements

Effective Completion Date	Requirement(s)	Who
December 1, 2013	Train employees on the new label elements and safety data sheet (SDS) format.	Employers
June 1, 2015* December 1, 2015	Compliance with all modified provisions of this final rule, except: The Distributor shall not ship containers labeled by the chemical manufacturer or importer unless it is a GHS label	Chemical manufacturers, importers, distributors and employers
June 1, 2016	Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers
Transition Period to the effective completion dates noted above	May comply with either 29 CFR 1910.1200 (the final standard), or the current standard, or both	Chemical manufacturers, importers, distributors, and employers



HEAT ILLNESS PREVENTION



Purpose

This program is designed to reduce the risk of work-related heat illnesses. Veracity Field Services (the company) is committed to taking every precaution to protect employees who might be exposed to heat stress, including establishing safe work practices, heat illness prevention controls, and emergency preparedness, which will be detailed in this plan. Veracity complies with local, state, and federal regulations.

Scope

This procedure applies to all company employees exposed to hot environments in the course of/during their employment duties.

Definitions

Acclimatization- means 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 four to fourteen days of regular work for at least two hours per day in the heat.

Heat Illness- means a serious 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.

Heat Stress- stress on the body due to high temperatures or exertion, which can lead to heat illness if unchecked.

Preventative recovery period- means a period of time to recover from the heat in order to prevent heat illness.

Shade- means blockage of direct sunlight. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool.

Requirements

All managers and supervisors are responsible for implementing and maintaining the Heat Illness Program in their work areas.

Provision of Water

Employees shall have access to potable drinking water. Where it is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity at the beginning of the work shift.

Access to Shade

Employees will be provided with access to shade as well as sufficient rest periods will be provided in an area that is conducive to the cooling of the body, such as but not limited to cooling rooms or tents, trailer/s



on site, vehicle etc..etc. Employees suffering from heat illness or believing a preventative recovery period is needed shall be provided access to an area with shade that is either open to the air or provided with ventilation or cooling. Such access to shade shall be permitted at all times. See definition of “Shade”.

Control Measures

Each work location involved in working in hot environments shall implement measures that must be in place to control the effects of environmental factors that can contribute to heat related illnesses. The most common environmental factors are air temperature, humidity, radiant heat sources and air circulation.

Physical factors that can contribute to heat related illness shall be taken into consideration before performing a task. The most common physical factors that can contribute to heat related illness are type of work, level of physical activity and duration, and clothing color, weight and breathability.

Supervisors must ensure personal factors that contribute to heat related illness are taken into consideration before assigning a task where there is the possibility of a heat-related illness occurring. The most common personal factors that can contribute to heat related illness are age, weight/fitness, drug/alcohol use, prior heat-related illness, etc.

Each work site shall develop site specific procedures but shall include the minimum:

- Bring at least 2 quarts per employee at the start of the shift, and employees are encouraged to report to supervisor when water supply gets low.
- Supervisors will provide frequent reminders to employees to drink frequently.
- Every morning there will be short tailgate meetings to remind workers about the importance of frequent consumption of water throughout the shift during hot weather.
- Place water containers as close as possible to the workers.
- Water levels should not fall below the point that will allow for adequate water during the time necessary to effect replenishment.
- Working hours will be modified to work during the cooler hours of the day, when possible.
- When a modified or shorter work-shift is not possible, more water and rest breaks will be provided.
- Supervisors will continuously check all employees and stay alert to the presence of heat related symptoms.
- Supervisors will carry cell phones or other means of communication, to ensure that emergency services can be called and check that these are functional at the worksite prior to each shift.
- On occasion, workers will be reminded about address and directions to the worksite to inform medical responders and emergency procedures. The County Specific Emergency Action Plans are available at www.veracityfieldservices.com in the “Emergencies” tab.



Heat Illness Detection and Response

Heat cramps:

This affects employees who have perspired so heavily that they have depleted the body's water and salt.

Symptoms:

- Muscle cramps
- Pain or spasms in the abdomen, arms, or legs

First aid:

The victim should do the following:

- Sit and rest in a cool place.
- Drink sports drinks, juice, or water combined with food.
- After recovery, do not begin strenuous work again for several hours.
- Seek medical help if you have heart problems, are on a low-sodium diet, or if you don't feel better after one hour.

Heat exhaustion:

This is the body's response to not being able to cool itself efficiently due to dehydration. Without prompt treatment, this condition can lead to heat stroke.

Symptoms:

- Rapid, weak pulse
- Headache
- Heavy sweating
- Extreme weakness
- Dizziness or fainting
- Irritability
- Nausea or vomiting
- Cold, pale, clammy skin

First aid:

- Help the victim to do the following:
 - Sit and rest in a cool place.
 - Drink small amounts of cool water.
 - Take a cool shower or bath or apply ice packs.
- Monitor the victim carefully. If they do not improve within 30 minutes, get medical help.



- Confusion, vomiting, or fainting may indicate a more serious condition. Seek medical attention immediately in this case.

Heat stroke:

This condition occurs when the body is unable to control its temperature as a result of prolonged exposure or physical exertion in high temperatures. Untreated, it can quickly cause death or disability.

Symptoms:

- High body temperature
- Strong, rapid pulse
- Confusion
- Loss of coordination
- Hot, red, dry or moist skin
- Nausea and vomiting
- Seizure or unconsciousness

First aid:

- Contact emergency medical services immediately.
- Move the victim to a cool, shaded area.
- Remove any excess clothing.
- Cool the victim's body as quickly as possible, using ice or cold water.
- If the victim is able to drink, give him or her cool fluids.

Emergency Response Procedures

- If an employee shows signs of heat illness, they will be monitored and shall not be left alone or sent home without being offered first aid or emergency medical services.
- If an employee reports symptoms of heat illness or if a supervisor or coworker sees evidence of the symptoms, the supervisor will take immediate action appropriate to the symptoms.
- If symptoms indicate severe heat illness, the employer will provide for prompt medical attention according to the Emergency Action Plan for the respective county.

Training

Training in the following topics shall be provided to all supervisory and non-supervisory employees:

- The environmental and personal risk factors for heat illness;
- The importance of frequent consumption of small quantities of water, up to 4 cups per hour, when the work environment is hot, and employees are likely to be sweating 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;
- 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;
- Veracity Field Services procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary;
- Veracity Field Services procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider;
- Veracity Field Services procedures for ensuring that, in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders.

Supervisors must receive training in the prevention of heat related illnesses prior to supervising employees working in the heat.

Training for employees shall be in a form readily understandable by all affected employees.

Veracity Field Services shall ensure all contractors, subcontractors, staffing companies, etc. employees (including temporary) working outdoors have been trained in heat illness prevention.



HOT WORK



Purpose

The purpose of this program is to assure a safe work environment during welding, cutting and hot work operations.

Scope

This program is applicable to all employees directly involved or assisting in the welding, cutting and hot work operations. When work is performed on a no owned or operated site, the operator's program shall take precedence, however, this document covers Veracity Field Services employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent. Operators of equipment should report any equipment defect or safety hazards and discontinue use of equipment until its safety has been assured. Repairs shall be made only by qualified personnel.

If fire hazards cannot be taken to a safe place or guards cannot be used to confine heat, sparks, slag and protect the immovable fire hazards, the welding and cutting shall not be performed.

Definitions

Welding/Hot Work Procedures - any activity which results in sparks, fire, molten slag, or hot material which has the potential to cause fires or explosions.

Examples of Hot Work - Cutting, Brazing, Soldering, Thawing Pipes, Grinding, using an electric tool in a hazardous area and Welding.

Special Hazard Occupancies - any area containing Flammable Liquids, Dust Accumulation, Gases, Plastics, Rubber and Paper Products.

Hazards - includes, but not limited to the following; fires and explosions, skin burns, welding "blindness", and respiratory hazards from fumes and smoke.

Key Responsibilities

Managers and Supervisors

- Determine if its property is safe for welding and cutting operations.
- Establish safe areas for welding and cutting operations.
- Provide training for all employees whose task includes heat, spark or flame producing operations such as welding, brazing, or grinding.
- Develop and monitor effective hot work procedures.
- Provide safe equipment for hot work.
- Provide proper and effective PPE for all hot work.
- Monitor all hot work operations.
- Ensure all hot work equipment and PPE are in safe working order.



- Allow only trained and authorized employees to conduct hot work and conduct inspections of the hot work area before operations begin.
- Ensure permits are used for all hot work outside authorized areas.

Employees

- Follow all hot work procedures.
- Properly use appropriate hot work PPE.
- Inspect all hot work equipment before use.
- Report any equipment problems or unsafe conditions.

Procedure

General

A hot work permit must be completed before performing hot work. Precautions that are to be taken shall be in the form of a written permit. Before cutting or welding is permitted the area shall be inspected and a written permit shall be used to authorize welding and cutting operations. The Hot Work Permit can be found at: <https://veracityfieldservices.com/permits>.

Where practicable all combustibles shall be relocated at least 35 feet from the work site. Where relocation is impractical, combustibles shall be protected with flameproof covers, shielded with metal, guards, curtains, or wet down the material to help prevent ignition of material.

Ducts, conveyor systems, and augers that might carry sparks to distant combustibles shall be protected or shut down.

Where cutting or welding is done near walls, partitions, ceilings, or openings in the floor (grating, manholes, etc.), fire-resistant shields or guards shall be provided to prevent ignition.

If welding is to be done on a metal wall, partition, ceiling, or solid decking/flooring, precautions shall be taken to prevent ignition of combustibles on the other side, due to conduction or radiation of heat. Where combustibles cannot be relocated on the opposite side of the work, a fire watch person shall be provided on the opposite side of the work.

Welding shall not be attempted on a metal partition, wall, and ceiling or decking/flooring constructed of combustible sandwich panels.

Cutting or welding on pipes or other metal in contact with combustible walls, partitions, floors, ceilings, or roofs shall not be undertaken if the work is close enough to cause ignition by combustion.

Cutting or welding shall not be permitted in the following situations:

- In areas not authorized by management.
- In sprinkled buildings while such protection is impaired.



- In the presence of potentially explosive atmospheres, e.g. flammables.
- In areas near the storage of large quantities of exposed, readily ignitable materials.
- In areas where there is dust accumulation of greater than 1/16 inch within 35 feet of the area where welding/hot work will be conducted.
- All dust accumulation shall be cleaned up before welding or hot work is permitted.

Whenever welding or cutting is performed in locations where other than a minor fire might develop or any of the conditions mentioned above cannot be met, a fire watch shall be provided.

- The fire watch shall be provided during and for a minimum of 1/2 hour past the completion of the welding project.
- The fire watch shall be trained in the use of fire extinguishers and the facility's alarm system.
- During this time the fire watch will have appropriate fire extinguishers readily available.
- Suitable extinguishers shall be provided and maintained ready for instant use.
- A hot-work permit will be issued on all welding or cutting outside of the designated welding area.

Fire Prevention Measures

A designated welding area shall be established to meet the following requirements:

- Floors swept and cleaned of combustibles within 35 feet of work area.
- Flammable and combustible liquids and material will be kept 35 feet from work area.
- Adequate ventilation providing 20 air changes per hour.
- At least one 10 pound dry chemical fire extinguisher shall be within access of 35 feet of the work area.
- Protective dividers such as welding curtains or noncombustible walls will be provided to contain sparks and slag to the combustible free area.

Requirements for welding conducted outside the designated welding area:

- Portable welding curtains or shields must be used to protect other workers in the welding area.
- A hot-work permit must be completed and complied with prior to initiating welding operations.
- Respiratory protection is mandatory unless an adequate monitored airflow away from the welder and others present can be established and maintained.
- Plastic materials must be covered with welding tarps during welding procedures.
- Fire Watch must be provided for all hot-work operations.

After welding operations are completed, the welder shall mark the hot metal or provide some other means of warning other workers.

Confined Space

- A space that is large enough and so configured that an employee can bodily enter and perform assigned work;
- Has limited or restricted means for entry or exit (for example, tanks, vessels, coolers, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and
- Is not designed for continuous occupancy.



Refer to Veracity Field Services Confined Space Program before commencing any welding, cutting, and/or brazing operations in an area meeting the requirements of a confined space.

Ventilation is a prerequisite to work in confined spaces.

When welding or cutting is being performed in any confined spaces, the gas cylinders and welding machines shall be left on the outside. Before operations are started, heavy portable equipment mounted on wheels shall be securely blocked to prevent accidental movement.

When a welder must enter a confined space through a manhole or other small opening, means shall be provided for quickly removing him in case of an emergency.

- When safety belts and lifelines are used for this purpose, they shall be so attached to the welder's body that it cannot be jammed in a small exit opening.
- An attendant with a preplanned rescue procedure shall be stationed outside to observe the welder at all times and be capable of putting rescue operations into effect.

When arc welding is to be suspended for any substantial period of time, such as during lunch or overnight, all electrodes shall be removed from the holders and the holders carefully located so that accidental contact cannot occur and the machine shall be disconnected from the power source.

In order to eliminate the possibility of gas escaping through leaks of improperly closed valves, when gas welding or cuffing, the torch valves shall be closed and the fuel-gas and oxygen supply to the torch positively shut off at some point outside the confined area whenever the torch is not to be used for a substantial period of time, such as during lunch hour or overnight. If practical, the torch and hose shall also be removed from the confined space.

When welding must be performed in a space entirely screened on all sides, the screens shall be so arranged that no serious restriction of ventilation exists. It is desirable to have the screens so mounted that they are about 2 feet (0.61 m) above the floor unless the work is performed at so low a level that the screen must be extended nearer to the floor to protect nearby workers from the glare of welding.

A fixed enclosure shall have a top and not less than two sides which surround the welding or cutting operations, and a rate of airflow sufficient to maintain a velocity away from the welder of not less than 100 linear feet (30 m) per minute.

All welding and cutting operations carried on in confined spaces shall be adequately ventilated to prevent the accumulation of toxic materials or possible oxygen deficiency. This applies not only to the welder, but also to helpers and other personnel in the immediate vicinity. All air withdrawn will be replaced with air that is clean.

In circumstances for which it is impossible to provide such ventilation, airline respirators or hose masks approved for this purpose by the National Institute for Occupational Safety and Health (NIOSH) will be provided. In areas immediately hazardous to life, a full-face piece, positive pressure, self-contained breathing apparatus or a



combination full-face piece, positive pressure supplied-air respirator with an auxiliary, self-contained air supply approved by NIOSH must be used.

Where welding operations are carried on in confined spaces and where welders and helpers are provided with hose masks, hose masks with blowers or self-contained breathing equipment, a worker shall be stationed on the outside of such confined spaces to ensure the safety of those working within.

Fumes, Gases and Dust

Fumes produced by some welding processes can be toxic and may require source extraction. An assessment of the work to be performed must be completed before each job is undertaken. Fumes generally contain particles from the material being welded. Welding fumes can have an acute effect on the respiratory system.

Any welding, cutting or burning of lead base metals, zinc, cadmium, mercury, fluorides, beryllium or exotic metals or paints not listed here that could produce dangerous fumes shall have proper ventilation or respiratory protection. This includes inert-gas metal-arc welding or oxygen cutting of stainless steel.

Welders and helpers will refer to Veracity Field Services Respiratory Protection Program to determine the appropriate respiratory protection to be used during welding operations.

All welding and cutting operations shall be adequately ventilated to prevent the accumulation of toxic materials. This applies not only to the welder, but also to helpers and other personnel in the immediate vicinity.

Personal Protection

Helmets and hand shields shall be made of a material, which is an insulator for heat and electricity. Helmets, shields, and goggles shall not be readily flammable and shall be capable of withstanding sterilization.

Helmets and hand shields shall be arranged to protect the face, neck and ears from direct radiant energy from the arc.

Helmets shall be provided with filter plates and cover plates designed for easy removal.

All parts shall be constructed of a material, which will not readily corrode or discolor the skin.

Goggles shall be ventilated to prevent fogging of the lenses as much as practicable.

All glass for lenses shall be tempered, substantially free from scratches, air bubbles, waves and other flaws. Except when a lens is ground to provide proper optical vision correction, the front and rear surfaces of lenses and windows shall be smooth and parallel.

Lenses shall bear some permanent distinctive marking which may readily identify the source and shade.

The following is a guide for the selection of the proper shade numbers. These recommendations may be varied to suit the individual's needs.



Welding Operation		Shade Number
Shielded metal — arc welding 1/16, 3/32, 1/8-5/32 inch electrodes		10
Gas-shielded arc welding (nonferrous) 1/16, 3/32, 5/32 inch electrodes		11
Gas-shielded arc welding (ferrous) 1/16, 3/32, 1/8, 5/32 electrodes		12
Shielded metal arc welding: 3/16	7/32, 1/4 inch electrodes	12
	5/16, 3/8-inch electrodes	14
Atomic hydrogen welding		10 – 14
Carbon arc welding		14
Soldering		2
Torch brazing		3 or 4
Light cutting, hp to 1 inch		3 or 4
Medium cutting, 1 inch to 6 inches		4 or 5
Heavy cutting, 6 inches or over		5 or 6
Gas welding (light) up to 1/8 inch		4 or 5
Gas welding (medium) 1/8 - 1/2 inch		5 or 6
Gas welding (heavy) 1/2 inch or over		6 or 8

NOTE:

In gas welding or oxygen cutting where the torch produces a high yellow light, it is desirable to use a filter or lens that absorbs the yellow or sodium line in the visible light of the operation. All filter lenses and plates shall meet the test for transmission of radiant energy prescribed in ANSI Z87.1 — 1968 — American National Standard Practice for Occupational and Educational Eye and face Protection. Where the work permits the welder to be enclosed in an individual booth painted with a finish of low reflectivity such as zinc oxide (an important factor for absorbing ultraviolet radiation) and lamp black, or shall be enclosed with noncombustible screens similarly painted. Booths and screens shall permit circulation of air at floor level. Workers or other persons adjacent to the welding areas shall be protected from the rays by noncombustible or flameproof screens or shields or shall be required to wear appropriate goggles.

Adequate hand protection and clothing must be used to protect the body from welding hazards.

Cleaning Compounds

In the use of cleaning materials, because of their possible toxicity or flammability, appropriate precautions such as manufacturer instructions shall be followed.

- Degreasing and other cleaning operations involving chlorinated hydrocarbons shall be so located that no vapors from these operations will reach or be drawn into the atmosphere surrounding any welding operation.
- In addition, trichloroethylene and perchloroethylene shall be kept out of atmospheres penetrated by the ultraviolet radiation of gas-shielded welding operations.

Oxygen cutting, using a chemical flux, iron powder or gas shielded arc cutting for stainless steel shall be performed using mechanical ventilation adequate to remove the fumes generated.



Cylinders

Compressed gas cylinders shall be DOT-approved and legibly marked near the shoulder of the cylinder for the purpose of identifying the gas content with either the chemical or trade name of the gas.

- All compressed gas cylinder connections must comply with ANSI B57. 1-1965 Standards.
- Compressed gas cylinders shall be secured in an upright position at all times except, if necessary, for short periods of time while cylinders are actually being hoisted or carried.

All cylinders shall be kept away from sources of heat and from radiators and piping systems that may be used for grounding purposes. Cylinders and cylinder valves including couplings and regulators shall be kept free from oily or greasy substances and must not be handled with gloves or rags in the same condition.

Stored oxygen cylinders shall be kept at least 20 feet from the fuel gas cylinders or combustible materials, especially oil or grease, or separated by a non-combustible barrier at least 5 feet high with a fire rating of at least one-half hour. All empty cylinders shall have closed valves. Valve protection caps shall always be in place and hand-tight except when cylinders are in use or connected for use.

Cylinders shall not be kept in unventilated enclosures such as lockers and cupboards.

Fuel gas cylinders stored inside buildings shall be limited to a total capacity of 2000 cubic feet (300 pounds) of liquefied petroleum gas, except for those in actual use or attached ready for use.

All acetylene cylinders shall be stored valve-end up.

Assigned storage spaces shall be located where cylinders cannot be knocked over or damaged by falling objects or subject to tampering by unauthorized persons.

- Back flow protection shall be provided by an approved device that will prevent oxygen from flowing into the fuel-gas system or fuel from flowing into the oxygen system.
- An approved device that will prevent flame from passing into the fuel-gas system shall provide flashback protection.
- An approved pressure-relief device set at the appropriate pressure shall provide backpressure protection.

Special care must be taken when transporting gas cylinders:

- Cylinders must be secured with valve cap installed.
- Cylinders shall not be lifted by the valve protection caps, the regulators must be removed and cylinders shall not be dropped or permitted to strike each other.
- Removed regulators must be carried in the cab of the vehicle.
- Cylinders shall not be tampered with nor should any attempt be made to repair them.
- They shall be handled carefully - rough handling, knocks, or falls are liable to damage the cylinder, valve or safety device and cause leakage.

Safety devices shall not be tampered with.



Arc Welding and Cutting

All personnel operating, installing, and maintaining welding equipment shall be qualified or trained to operate and maintain such equipment.

- All workmen assigned to operate or maintain equipment shall be familiar with and electrical welding equipment shall be chosen for safe operation and comply with applicable Requirements for Electric Arc Welding Standards to include: 29 CFR 1910.254, 29 CFR 1910.252 (a)(b) (c) and if gas shielded arc welding is done the must be familiar with the American Welding Society Standard A6-1-1966.
 - Arc welding equipment must be designed to meet conditions such as exposure to corrosive fumes, excessive humidity, excessive oil vapor, flammable gasses, abnormal vibration or shock, excessive dust and seacoast or shipboard conditions.
 - It shall be operated at recommended voltage in accordance to the manufacturer recommendations.
 - All leads shall be periodically inspected and replaced if insulation is broken or splices are unprotected.
 - Leads shall not be repaired with electrical tape.
- All ground connections shall be checked to determine that they are mechanically strong and electrically adequate for the required current.

A disconnecting switch or controller shall be provided at or near each welding machine along with over current protection.

All direct current machines shall be connected with the same polarity and all alternating current machines connected to the same phase of the supply circuit and with the same polarity.

- To prevent electrical contact with personnel, all electrode holders shall be placed where they do not make contact with persons, conducting objects or the fuel of compressed gas tanks.
- All cables with splices within 10 feet of the holder shall not be used.

If the object to be welded or cut cannot readily be moved, all moveable fire hazards should be removed.

If an object to be welded or cut cannot be moved and if all the fire hazards cannot be removed, then guards shall be used to confine the heat sparks and slag and to protect the immovable fire hazards.

Resistance Welding

All personnel operating, installing, and maintaining welding equipment shall be qualified or trained to operate and maintain such equipment.

- Voltage, interlocks, guarding, grounding and shields shall be in accordance with manufacturer recommendations.
- Precautions such as flash guarding, ventilation and shields shall be provided to control flashes, toxic elements and metal fumes.

If the object to be welded or cut cannot readily be moved, all moveable fire hazards should be removed.



Transmission Pipeline

When arc welding is performed in wet conditions, or under conditions of high humidity, special protection against electric shock shall be supplied.

Pressure testing:

- In pressure testing of pipelines, the workers and the public shall be protected against injury by the blowing out of closures or other pressure restraining devices.
- Protection shall be provided against expulsion of loose dirt that may have become trapped in the pipe.

The welded construction of transmission pipelines shall be conducted in accordance with the Standard for Welding Pipelines and Related Facilities, API Std. 1104-1998.

Oxygen Fuel Gas Welding and Cutting:

Only approved apparatuses such as torches, regulators or pressure-reducing valves, setting generators and manifolds shall be used:

- Mixtures of fuel gases and air or oxygen may be explosive and must be guarded against.
- All hoses and hose connections shall comply with the Compressed Gas Association and Rubber Manufacturers' Associations' applicable standards.
- Workers in charge of the oxygen or fuel-gas supply equipment, including generators, shall be instructed and judged competent by the Veracity Field Services before being left in charge.

If the object to be welded or cut cannot readily be moved, all moveable fire hazards should be removed.

Fire Watch Requirements

A fire watch shall be under these conditions as a minimum and when welding, cutting, brazing and/or soldering is performed near combustible materials and/or locations where fire may develop:

- Locations where other than a minor fire might develop.
- Combustible materials are closer than 35 feet to the point of operation.
- Combustibles that are 35 feet or more away but are easily ignited.
- Wall or floor openings within a 35 feet radius of exposed combustible materials.
- Combustible materials are adjacent to the opposite side of metal partitions, ceilings or roofs.

Fire watch personnel shall be maintained at least a half an hour after welding or cutting operations have been completed and fire watchers shall have fire extinguishers readily available.

First Aid Equipment

First aid equipment shall be available at all times. All injuries shall be reported as soon as possible for medical attention. First aid shall be rendered until medical attention can be provided.



Training

Training shall include:

- Position Responsibilities
- Cutters, welders and their supervisors must be suitably trained in the safe operations of their equipment and the safe use of the process.
- Fire Watch Responsibilities - specifically, the fire watch must know:
 - That their ONLY duty is Fire Watch.
 - When they can terminate the watch.
 - How to use the provided fire extinguisher(s).
 - Be familiar with facilities and how to activate fire alarm, if fire is beyond the incipient stage.
 - Operator Responsibilities
 - Contractor Responsibilities
 - Documentation requirements
 - Respirator Usage requirements
 - Fire Extinguisher training.



HYDROGEN SULFIDE H₂S



Purpose

The purpose of this program is to establish minimum requirements for site specific H₂S safety, which will enhance safety in the occupational setting where hydrogen sulfide is present or is recognized as being potentially present.

Scope

This program sets forth accepted practices for Hydrogen Sulfide (H₂S). This program applies to all employees of Veracity Field Services, temporary employees, and any contractors working for Veracity Field Services. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Veracity Field Services employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

- Contingency Plan - a site-specific written document that provides an organized plan for alerting and protecting the public within an area of exposure following the accidental release of all potentially hazardous atmospheric concentrations of hydrogen sulfide.
- Exposure Level - permissible exposure level of hydrogen sulfide is 10 PPM for an 8-hour, time weighted average.
- Gas Detector Instrument - An instrument/detector to measure levels of H₂S. Instruments may be electronically or manually operated.
- Hydrogen Sulfide (H₂S) - is an extremely deadly, toxic gas that in its pure state is colorless and is heavier than air. Additionally:
 - It is the second most toxic gas known to man, ranking behind hydrogen cyanide and ahead of carbon monoxide.
 - It has the odor of rotten eggs at low concentrations.
 - In higher concentrations rapidly paralyze the olfactory nerves (sense of smell).
 - Is soluble in water and is flammable and poses a definite threat of explosion.
- Parts Per Million (PPM) - parts of vapor or gas per million parts of contaminated air by volume.
- Personal H₂S Monitor - An electronic instrument worn on the person that is set to alarm at 10 PPM of H₂S.
- Possible Locations of Where May Be Exposed to H₂S During Their Job Functions – While clients are required to notify Veracity Field Services of known H₂S locations the majority of time H₂S can be located in drilling operations, recycled drilling mud, blowouts, water from sour crude wells, blowouts, tank gauging (tanks at producing, pipeline and refining operations), during routine field maintenance involving hydrocarbons, tank batteries and wells.
- Venting - the process of discharging a material to the atmosphere through a series piping and/or venting devices, to facilitate the proper and safe dispersion of toxic materials and to minimize personnel exposure.



Key Responsibilities

Managers and Supervisors

- Shall ensure all employees who are to be assigned to work at locations where hydrogen sulfide is known to be present, or suspected to be present in any concentration, have been trained in hydrogen sulfide safety.
- To ensure employees have been medically approved to wear respirators and trained on the safe use of respirators, including a respirator fit test in accordance with Veracity Field Services's Respiratory Protection Program.
- To ensure employees have been trained and familiar with personal H2S monitors and gas detection instruments.
- To have been provided with the client's safety procedures.
- To ensure the necessary respiratory equipment to perform the work safely is available.
- That each employee has been provided with a copy of this program.

Employees

- Employees are responsible to comply with this program.

Procedure

Characteristics of Hydrogen Sulfide

The characteristics of hydrogen sulfide include: being toxic, colorless, with the odor or rotten eggs at low concentrations, is soluble in water and is flammable:

- Toxicity – See table below. Hydrogen sulfide is a very dangerous and deadly gas - it is colorless and heavier than air. It can accumulate in low places and in small concentrations. Exposure to certain concentrations of H2S can cause serious injury or death.
- Color - H2S is colorless – you can't see it.
- Odor – it has a strong, pungent, somewhat distasteful odor similar to rotten eggs. In higher concentrations, it can deaden the sense of smell (olfactory nerve). Do Not Rely On Smell To Detect H2s – Rely Strictly On Instruments Designed To Measure Concentrations Of H2S.
- Solubility – H2S mixes with water.
- Flammability – H2S is an explosive gas.
- Toxic By Products – H2S presence can create sulfur dioxide which can ignite without warning

Toxic Effects of Hydrogen Sulfide

CONCENTRATION	PHYSICAL EFFECT
.01 PPM	Can smell odor.
10 PPM	Obvious and unpleasant odor. Beginning eye irritation. ANSI permissible exposure level for 8 hours (enforced by OSHA).



100 PPM	Immediately Dangerous to life or Health (IDLH) Kills smell in 3-15 minutes; may sting eyes and throat. May cause coughing and drowsiness. Possible delayed death within 48 hours.
200 PPM	Kills smell shortly, stings eyes and throat. Respiratory irritation. Death after 1-2 hours exposure.
500 PPM	Dizziness; breathing ceases in a few minutes. Need prompt rescue breathing (CPR). Self-rescue impossible because of loss of muscle control.
700 PPM	Unconscious quickly; death will result if not rescued promptly. 1000 PPM Unconscious at once, followed by death within minutes.

Health Effect of Exposure to Hydrogen Sulfide

Some basic health effects of H₂S can include eye irritations, effects nerve centers of the brain which control breathing.

General Requirements

Veracity Field Services should have a written confined space program per 29 CFR 1910.146 and employees must be aware of site specific contingency/emergency plans and owners contingency plan provisions.

Each person entering a H₂S designated location, regardless of the concentration, shall wear a personal H₂S monitor that is set to alarm at 10 PPM and shall carry a 5-minute escape pack with them at all times. When the alarms sound the employees must either evacuate the area or don the SCBA's or airline respirators. Employees must evacuate the area, don SCBA's or airline respirators upon sounding of H₂S alarm.

When work requires opening any equipment on location that has the potential of releasing concentrations of H₂S at 100 PPM or higher, two or more H₂S trained persons shall be present and follow these procedures prior to and during the opening of the equipment:

- Each person entering the H₂S location shall don a personal H₂S monitor prior to entry.
- A tailgate meeting will be held with everyone on location to discuss the work plan, the responsibilities of each person and the site specific contingency plan.
- Each person shall have either a self-contained breathing apparatus (SCBA) or a supplied airline respirator equipped with a 5-minute escape pack, and shall be worn when opening the equipment to the surrounding atmosphere.
- At least one person (per two workers), equipped with a SCBA will act as a stand-by person and may not participate in the work being performed until the atmosphere has been tested and found to have no H₂S present in quantities over 10 PPM. The stand-by person shall be stationed up wind, within 100 feet and in clear view of the workers.
- If an operator or other third party provides the stand-by person, it will be the responsibility of the Veracity Field Services manager/supervisor in charge to verify that the person has been H₂S, CPR, and First Aid trained, and that they have been provided the proper respiratory equipment.
 - Only Veracity Field Services employees may wear Veracity Field Services respirator equipment.
 - If Veracity Field Services employees will use client or other third party equipment, the equipment must be inspected to ensure it is safe to use and meets Veracity Field Services's requirements.



- After the equipment has been locked and tagged out (per Veracity Field Services Lockout/Tagout Program), opened and the H₂S concentration has been cleared to less than 10 PPM, the stand-by person will no longer be required. Work may then be performed without respiratory equipment, except for the required 5-minute escape pack.

Safe Work Procedures

- Maintain compliance with permit requirements of Veracity Field Services and any requirements by the client.
- Verify that proper safety equipment is available, functioning properly and is utilized.
- Check and remain aware of wind conditions and direction.
- Perform a thorough check of the downwind area prior to the start of any potentially hazardous work activity.
- Check for other personnel and ignition sources.
- Ventilate work areas by venting and purging lines and vessels prior to beginning any work activities.
- Keep all non-essential personnel away from work areas.
- Immediately vacate the area when any H₂S monitor sounds and do not re-enter without proper respiratory protection.

Required Equipment

The following equipment shall be provided and used as required by this program:

- Methods of detecting H₂S by the use of fixed or portable monitors and will alarm at the appropriate permissible exposure limits of 20 PPM for 1910 or 10 PPM for 1926. Personal or area monitors that alarm when PEL exceeds the preset level of 20 PPM for OSHA 1910 or 10 PPM for OSHA 1926 requirements.
- Portable H₂S gas testing instrument, either electronic or manual pump operated, capable of testing the suspected concentrations of H₂S in the system.
- Each testing instrument must be capable of testing the suspected concentrations of H₂S by using the manufacturer's recommended calibrated tube or other means of measuring the concentration of gas.
- Testing instruments shall be calibrated periodically according to the manufacturer's recommendation, and at least annually.
- Calibration kits with regulator for calibrating the personal monitor.
- Calibration gas cylinder for testing the personal monitor.
- Approved self-contained breathing apparatus or airline respirator with escape SCBA should be used with H₂S with a 5-minute escape pack, and shall be worn when opening the equipment to the surrounding atmosphere.
- At least one person (per two workers), equipped with a SCBA will act as a stand-by person and may not participate in the work being performed until the atmosphere has been tested and found to have no H₂S present in quantities over 10 PPM. The stand-by person shall be stationed up wind, within 100 feet and in clear view of the workers.
- If an operator or other third party provides the stand-by person, it will be the responsibility of the Veracity Field Services manager/supervisor in charge to verify that the person has been H₂S, CPR, and First Aid trained, and that they have been provided the proper respiratory equipment.
 - Only Veracity Field Services employees may wear Veracity Field Services respirator equipment.



- If Veracity Field Services employees will use client or other third party equipment, the equipment must be inspected to ensure it is safe to use and meets Veracity Field Services's requirements.
- Respirator wearers requiring corrective eyewear will be fitted with spectacle kits according to the respirator manufacturer, at no expense to the employee.
- Respirators and their components, including all fittings of hoses, shall not be interchanged, which if done, would violate the approval rating of said respirator or related equipment.

Medical

Each employee shall have completed a medical evaluation by a physician or licensed health care professional to determine the employee's ability to wear a respirator as required by the Veracity Field Services Respiratory Protection Program.

Each employee will successfully complete the medical questionnaire and examination before being allowed to be fit tested with a respirator.

Training

Employees required to work on H2S locations will be trained. Training shall consist of:

- Physical and chemical properties of H2S
- Sources of H2S
- Human physiology
- Signs and symptoms of H2S exposure, acute and chronic toxicity
- Symptomatology of H2S exposure
- Medical evaluation
- Work procedures
- Personal protective equipment required working around H2S
- Use of contingency plans and emergency response
- Burning, flaring, and venting of H2S
- State and federal regulatory requirement
- H2S release dispersion models
- Rescue techniques, first aid, and post exposure evaluation
- Use, care, and calibration of personal monitors and gas detection instruments
- Respirator inspections and record keeping

Each respirator wearer will complete Respiratory Protection training and a Respirator Fit Test, after being given a medical clearance and before entering any H2S location.

Employees and other personnel visiting H2S locations who will not be involved in the work shall be briefed on the following prior to entering:

- Site-specific sources of H2S
- Health hazards of H2S
- Routes of egress



- Emergency assembly areas
- Applicable alarm signals and
- How to respond in the event of an emergency.

Rescue

Each employee, when working alone in a H2S designated area, shall plan and become familiar with self-escape procedures to include being aware of wind direction and obstacles to avoid when exiting the work area.

Employees working under the buddy system shall pre-plan an emergency rescue and/or evacuation procedure prior to commencing work, and arrange for periodic communications with his/her supervisor, and document the discussion on each employee's service report.

Respirator Inspections

Respirators will be inspected by the employee before each use and at least monthly.

The inspection will include the respirator face piece, hose, harness, 5minute escape pack cylinder and all other components of the air supply systems used.

Monthly inspections will be documented as per Veracity Field Services Respiratory Protection Program, and will be kept on file at the local office for review during safety audits.

Monitors and Gas Detector Calibration

Each personal H2S monitor shall be calibrated at least monthly and the results recorded on the calibration log.

Those monitors that do not require calibrating shall be bump checked with calibration gas to test alarms, monthly or prior to use if not used routinely.



INCIDENT REPORTING



Purpose

The purpose of this program is to have effective procedures for reporting incidents.

Responsibilities

Individual responsibilities for reporting incidents are pre-determined and assigned prior to incidents.

Veracity Field Services Safety Manager

- Ensures incidents are documented and reported as required by this procedure and regulation.

Site Manager and Supervisors

- Ensures incidents are reported as required by this procedure.

Employees

- Immediately report any actual or suspected injury, job related illness, spill, or damage to any property to their immediate supervisor. If their immediate supervisor is not available, the employee is then to immediately notify the project manager.
- Incident Reporting
- Veracity Field Services investigates accidents and near-misses to prevent recurrence and ensure employee safety. Accidents are undesired events that result in harm to people, damage to property, loss to process and/or the environment and/or damage to the reputation of the company. Near-misses are defined as, undesired events which, under slightly different circumstances, could have resulted in harm to people, damage to property, loss to process and/or the environment or damage to the reputation of the company. Both accidents and near misses are collectively referred to as Incidents.
- Employees and contractors are to report all Incidents, unsafe acts and unsafe conditions to their supervisor as soon as possible and in accordance with the Reporting Guidelines set forth below. Reported Incidents may receive varying levels of investigation based on the severity of risk potential of the Incident.
- Reporting Guidelines
- Incidents Reporting Procedures
- In the event of an incident that requires immediate emergency response, contact 911 or the appropriate emergency services listed in the Emergency Action Plan (EAP) for the County the injured person is located. The EAP is located at www.veracityfieldservices.com.
- All incidents shall be reported, documented and investigated for causal factors, and the results must be reported to Veracity Field Services utilizing the incident notification form located in the Veracity Field Services Solution Center at www.veracityfieldservices.com. The incident notification form will also be utilized as a means for tracking changing conditions or diagnosis surrounding incidents. It is the responsibility of the Veracity Field Services supervising representative and the safety advisor to cooperate in the action of gathering and reporting incident related information.
- Spill and Hazardous Substance Reporting



- In the case of spilled Oil, petroleum product, and used oil, the Railroad Commission shall be notified when 210 gallons (5Bbls) or more is spilled outside of containment- click [here](#) for specific spill reporting requirements.
- Spills of hazardous substance shall be reported through the Veracity Field Services Solution Center. It is required that spills in excess of specified amounts ([click here for Reportable Quantities](#) or view chart below) be reported to the appropriate Railroad Commission District Office (see a map of the district boundaries [here](#)) by telephone. Such notice shall be followed by a letter submitted to the district office giving the full description of the event including, but not limited to, the volume of crude oil, gas, geothermal resources, other well liquids, or associated products that are lost. Click [here](#) to view oil and gas district office contact information.

Spill Reportable Quantities			
Product	Location	Reportable Quantity	Resource
Hazardous substance	onto land	"Final RQ" in Table 302.4 in 40 CFR 302.4 (PDF) Exit the TCEQ	30 TAC 327 Exit the TCEQ
	into water	"Final RQ" or 100 lbs, whichever is less	
Any oil	coastal waters	as required by the Texas General Land Office	Texas General Land Office Exit the TCEQ
Crude oil, oil that is neither a petroleum product nor used oil	onto land	210 gallons (five barrels)	30 TAC 327 Exit the TCEQ
	directly into water	enough to create a sheen	
Petroleum product, used oil	onto land, from an exempt PST facility	210 gallons (five barrels)	30 TAC 327 Exit the TCEQ
	onto land, or onto land from a non-exempt PST facility	25 gallons	
	directly into water	enough to create a sheen	
Associated with the exploration, development and production of oil, gas, or geothermal resources	under the jurisdiction of the Railroad Commission of Texas	as required by the Railroad Commission of Texas	Railroad Commission of Texas Exit the TCEQ
Industrial solid waste or other substances	into water	100 lbs	30 TAC 327 Exit the TCEQ
From petroleum storage tanks, underground or aboveground	into water	enough to create a sheen on water	30 TAC 334.75-81 Exit the TCEQ
From petroleum storage tanks, underground or aboveground	onto land	25 gallons or equal to the RQ under 40 CFR 302 Exit the TCEQ	30 TAC 327 Exit the TCEQ
Other substances that may be useful or valuable and are not ordinarily considered to be waste, but will cause pollution if discharged into water in the state	into water	100 lbs	30 TAC

Procedure

Incident Reporting Matrix

The Incident Reporting Matrix identifies, based on type of incident, who shall be verbally notified and when. It also specifies which type of report from the field shall be completed based on the type of incident.



VERACITY FIELD
SERVICES, LLC
INCIDENT NOTIFICATION MATRIX

TYPE OF INCIDENT	WHO TO NOTIFY VERBALLY	WHEN	INCIDENT REPORT FORM
Minor First Aid	See Table 2	ASAP	Yes
In-patient Hospitalization Amputation Loss of an Eye	CEO, Safety Manager, OSHA	Within 24 hours to OSHA	Yes
Fatality	CEO, Safety Manager, OSHA	Within 8 hours to OSHA	Yes
Workman's Comp	Workman's Comp Carrier	1 business day	Employer's Report of Injury

Table 1

OSHA defines "in-patient hospitalization" as a formal admission to the in-patient service of a hospital or clinic for care or treatment. Treatment in an emergency room only is not reportable.

OSHA defines "amputation" as the traumatic loss of all or part of a limb or other external body part. This would include fingertip amputations with or without bone loss; medical amputations resulting from irreparable damage; and amputations of body parts that have since been reattached. If and when there is a health care professional's diagnosis available, Veracity Field Services should rely on that diagnosis.

Main Guidelines of OSHA Reporting

OSHA is notified within 8 hours of a work-related fatality. Within eight (8) hours after the death of any employee as a result of a work-related incident, Veracity Field Services must report the fatality to the Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.

Within twenty-four (24) hours, Veracity Field Services must report in-patient hospitalization, amputation, or loss of an eye (severe injuries) to OSHA.

How injuries and/or fatalities are reported to OSHA - Veracity Field Services must report severe injuries and/or fatalities using one of the following methods:

- by telephone or in person to the OSHA Area Office that is nearest to the site of the incident,
- by telephone to the OSHA toll-free central telephone number, 1-800-321-OSHA (1-800-321-6742),
- or by electronic submission using the reporting application located on OSHA's public web site at www.osha.gov.



Internal Reporting Guidelines

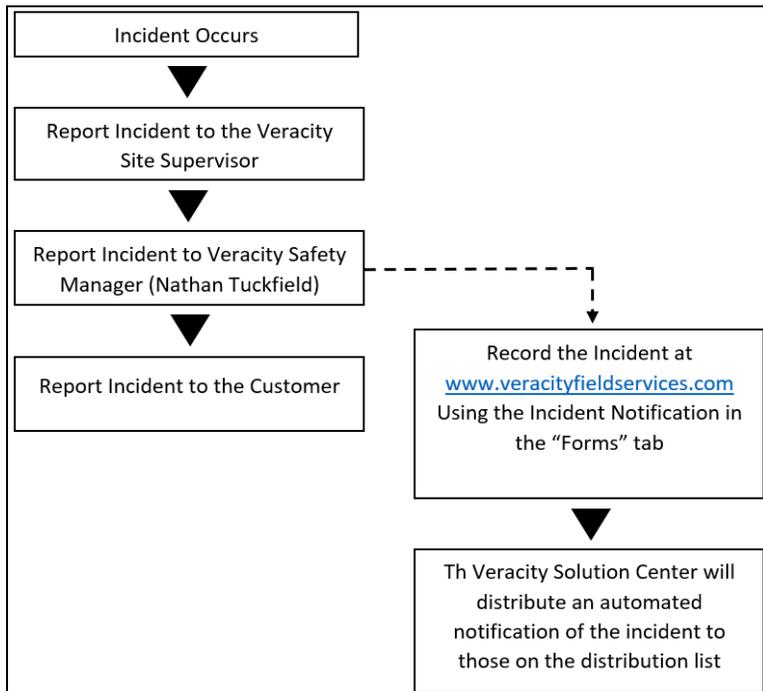


Table 2

Initial Identification/Assessment of Evidence

Initial identification of evidence immediately following the incident could include a listing of people, equipment, and materials involved and a recording of environmental factors such as weather, illumination, temperature, noise, ventilation, etc.

Collection/Preservation and Security of Evidence

Evidence such as people, positions of equipment, parts, and papers must be preserved, secured, and collected through notes, photographs, witness statements, flagging, and impoundment of documents and equipment. Everything shall be dated.

Witness Interviews and Statements

Witness interviews and statements must be collected. Locating witnesses, ensuring unbiased testimony, obtaining appropriate interview locations, and use of trained interviewers should be detailed. The need for follow-up interviews should also be addressed. All items shall be dated.



The final incident investigation report consists of findings with critical factors, evidence, corrective actions, responsible parties, and timelines for corrective action completion.

Written Incident Report

The Veracity Incident Notification form must be completed for every Near Miss and Incident that occurs in company operations. Spills must be documented in the Spill Notification Form- each can be located at: <https://veracityfieldservices.com/forms>

The supervisor takes the below steps following an injury incident.

- Provide emergency assistance, as needed, and qualified for
- Secure the area as quickly as possible to retain area in the same condition at the time of the incident
- Notify management by phone per the Incident Notification Matrix
- Identify potential witnesses
- Use investigation tools, as needed (camera, drawings, video, etc.)
- Tag out for evidence any equipment that was involved
- Interview witnesses (including the effected employee) and obtain written, signed statements and email/fax to the Veracity Field Services Safety Manager
- Implement any immediate corrective actions needed

Training

Veracity Field Services shall train personnel in their responsibilities for incident reporting. Training requirements relative to incident reporting are described below:

- Training frequency will be based on the specific area of responsibility but shall not exceed once every two years.
- Training requirements relative to incident investigation and reporting shall include:
 - Awareness
 - First Responder Responsibilities
 - The Initial Investigation at the Accident Scene
 - Managing the Accident Investigation
 - Collecting Data
 - Analyzing Data
 - Developing Conclusions and Judgments of Need
 - Reporting the Results



LADDER SAFETY



Purpose

The purpose of the program is to prescribe rules and establish minimum requirements for the construction, care, and use of the common types of ladders.

All ladders that are purchased and placed into service, or any ladders that are engineered, manufactured and installed on any Veracity Field Services (the company) owned or controlled equipment shall follow the requirements set forth by this program.

Scope

This program is applicable to all employees and consultants who may utilize ladders. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this program shall be used when an operator's program doesn't exist or is less stringent.

Definitions

Ladder - an appliance usually consisting of two side rails joined at regular intervals by cross- pieces called steps, rungs, or cleats, on which a person may step in ascending or descending.

Stepladder - a self-supporting portable ladder, nonadjustable in length, having flat steps and a hinged back. Its size is designated by the overall length of the ladder measured along the front edge of the side rails.

Single ladder - a non-self-supporting portable ladder, nonadjustable in length, consisting of but one section. The overall length of the side rail designates its size.

Extension ladder - a non-self-supporting portable ladder adjustable in length. It consists of two or more sections traveling in guides or brackets so arranged as to permit length adjustment. Its size is designated by the sum of the lengths of the sections measured along the side rails.

Fixed ladder - a ladder permanently attached to a structure, building, or equipment.

Individual-rung ladder - a fixed ladder each rung of which is individually attached to a structure, building, or equipment.

Cage - a guard that may be referred to as a cage or basket guard, which is an enclosure that is fastened to the side rails of the fixed ladder or to the structure to encircle the climbing space of the ladder for the safety of the person who must climb the ladder.

Key Responsibilities

Managers and Supervisors

- Managers and supervisors are responsible for ensuring that all employees, and/or consultants have been trained in the use and inspection of ladders in accordance to the manufacture's guidelines.



- Managers and supervisors are responsible for ensuring that all employees and consultants are aware that if an inspection discovers a defect, the ladder shall be taken out of service and repaired or discarded.

Employees

- Employees and consultants shall inspect ladders prior, during and at the completion of each use to ensure the condition of the ladder and the safety of its occupants.
- Employees and consultants are responsible for following this program and reporting any damage or repairs that may be needed to their supervisor.

Procedure

Inspection, Care and Safe Work Practices of Ladders

Inspection

- Ladders shall be inspected by a competent person for visible defects on a periodic basis and after any occurrence that could affect their safe use.
- Ladders used by Veracity Field Services employees and/or consultants must meet OSHA/ANSI specifications.
- Ladder rungs, cleats, and steps shall be parallel, level, and uniformly spaced, when the ladder is in position for use.
- Portable and fixed ladders with structural defects, such as, but not limited to, broken or missing rungs, cleats, or steps, broken or split rails, corroded components, or other faulty or defective components, shall either be immediately marked in a manner that readily identifies them as defective, or be tagged with "Do Not Use" or similar language, or shall be withdrawn from service and discarded or repaired.
- If a ladder is tipped over, it shall be inspected by a competent person for side rail dents or bends, or excessively dented rungs- check all rung to side rail connections, check hardware connections and check rivets for shears.
- All wood parts shall be free from sharp edges and splinters and not painted.

Care

- Ladders shall always be maintained in good condition, the joint between the steps and side rails shall be tight, all hardware and fittings securely attached, and the movable parts shall operate freely without binding or undue play.
- Metal bearings of locks, wheels, pulleys, etc., shall be frequently lubricated.
- Frayed or badly worn rope shall be replaced. Safety feet and other auxiliary equipment shall be kept in good condition to ensure proper performance.
- Rungs shall be kept free of grease and oil.
- Ladders shall be stored in a well-ventilated area in a manner to prevent sagging and warping.



How to Safely Use Ladders

- Ladders shall be used only for the intended purpose for which they were designed. Never use ladder in a horizontal position or as scaffolding and do not place ladders on top of boxes, barrels, crates, etc.
- The ladder shall be secured at the top or held by another person at the base.
- The footing of the ladder shall be placed on a stable and level surface.
- Extension ladders are placed against the top support at a 4:1 incline. Ladders shall be used at an angle such that the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder. (The distance along the ladder between the foot and the top support.)
- When ladders are not able to be extended then the ladder shall be secured at its top to a rigid support that will not deflect.
- Ladders shall not be used in a horizontal position as platforms, runways, or scaffolds.
- Ladders shall not be used by more than one man at a time.
- Ladders shall not be placed in front of doors opening toward the ladder unless the door is blocked open, locked, or guarded.
- If a ladder is used in a high traffic area, barricades shall be placed to avoid accidental displacement due to collisions.
- Do not stand on the top two rungs or top of step ladders.

On two-section extension ladders the minimum overlap for the two sections in use shall be as follows:

Size of Ladder (feet)	Overlap (feet)
Up to and including 36'	3
Over 36 up to and including 48'	4
Over 48 up to and including 60'	5

- The upper supports of ladders used to access elevated work areas must extend a minimum of 3 feet above the elevated surface. The ladder side rails shall extend at least 3 feet (.9m) above the upper landing surface. When ladders are not able to be extended then the ladder shall be secured at its top to a rigid support that will not deflect.
- Ladders shall extend a minimum of 3 feet above top of upper landing surface. The ladder side rails shall extend at least 3 feet (.9m) above the upper landing surface. When ladders are not able to be extended then the ladder shall be secured at its top to a rigid support that will not deflect.
- The employee or consultant shall always maintain a three (3)-point grip on the ladder and carry tools/equipment on a belt or hoist up. Do not carry anything in the hands that could cause injury in case of fall.
- The employee or consultant shall face the ladder while ascending or descending.
- The bracing on the back legs of step ladders is designed solely for increasing stability and not for climbing.
- The ladder shall not be moved while occupied.



Portable Ladders

Stepladders shall not be longer than 20 feet. Single ladders shall not be longer than 30 feet. A two-section extension ladders shall not be longer than 60 feet. All ladders of this type shall consist of two sections, one to fit within the side rails of the other and arranged in such a manner that the upper section can be raised and lowered.

Keep all ladders at least ten (10) feet away from power lines.

Load limits for ladders may not be exceeded. Ladders shall not be loaded beyond the maximum intended load for which they were built, nor beyond the manufacturer's rated capacity.

Weight includes the combined weight of the climber and his tools/equipment. Ladders are rated as the following:

- I (holds 250 lbs)
- I-A (holds 300 lbs)
- II (holds 225 lbs)
- III (holds 200 lbs)

Fixed Metal Ladders

Ladders shall be constructed to withstand a minimum of 200 pounds.

All metal rungs shall have a minimum diameter of $\frac{3}{4}$ inches and wooden rungs shall have a minimum diameter of 1 $\frac{1}{8}$ inches.

Rungs shall not be more than 12 inches apart and shall be uniform throughout the length of the ladder.

Rungs shall be a minimum length of 16 inches and provide protection, so a foot cannot slip off the end.

Rungs shall have a minimum of 7 inches between itself and the structure behind it.

A fall restraint system must be provided for all fixed ladders greater than six feet in length.

- A Cage is required when the fixed ladder is at least twenty feet tall.
- Cages on fixed ladders shall not begin at a point less than 7 feet nor greater than 8 feet from the walking surface below the cage.
- Cages shall provide a clear width of 15 inches in each direction of the rung's centerline.
- Cages shall not extend less than 27 inches, but not greater than 28 inches from the centerline of the rung.
- A climbing fall restraint system may be substituted for a ladder cage.



LOCKOUT TAGOUT (LOTO)



Purpose

The purpose of this program is to establish procedures for affixing appropriate lockout/tagout equipment to energy isolating devices and to otherwise disable machines or equipment to prevent unexpected energization, start up or release of stored energy to prevent injury or incident.

Scope

This program covers the servicing and maintenance of machines and equipment where the unexpected energization or startup of the machine or equipment, or the release of stored energy could cause an incident. This program establishes minimum performance requirements for the control of such hazardous energy. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Veracity Field Services employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

Affected employee - An employee whose job requires them to operate or use a machine or equipment on which servicing and maintenance is being performed under lockout/tagout, or whose job requires the employee to work in an area in which such servicing or maintenance is being performed.

Authorized employee - A person that performs lockout/tagout procedures on machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes authorized when that employee's duties include performing servicing or maintenance covered under this program.

Capable of being locked out - An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out if lockout can be achieved without the need to dismantle, rebuild or replace the energy isolating device or permanently alter its energy control capability.

Energized - Connected to an energy source or containing residual or stored energy.

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 and 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 isolating devices.

Lockout - The placement of a lockout device on an energy isolating device in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.



Lockout device - A device that utilizes a positive means, such as either a key or combination type lock, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

Normal operation - The utilization of a machine or equipment to perform its intended operation.

Potential Energy Sources - Any source of gas, electrical, mechanical, hydraulic, pneumatic, chemical, gravity, steam, thermal, tension or other energy sources.

Servicing and/or maintenance - Workplace activities such as constructing, setting up, adjusting, inspecting, modifying and maintaining and/or servicing machines and equipment, where the employee may be exposed to an unexpected energization or startup of the equipment or release of a hazardous energy source.

Setting up - Any work performed to prepare a machine or equipment for performing its normal operation.

Tagout - The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout device - A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until tagout device is removed.

Key Responsibilities

Managers and Supervisors

- Responsible to control and enforce this plan and to see that all their employees and contractors that are affected by lockout/tagout procedures, have the knowledge and understanding required for safe application, usage, and removal of all energy controls and devices.
- Ensure employees are trained and comply with the requirements of this program.

Employees

- Employees who are affected by this program are required to attend training on an annual basis.
- Are required to follow the provisions of this program.

Procedure

General

Only an authorized employee or employees performing the servicing or maintenance shall perform lockout or tagout.



Devices

Lockout Device - If an energy source can be locked out a device that utilizes a lock to hold an energy isolating device in a safe position shall be used. Each site shall have the same type of lock as specified by Veracity Field Services.

Tagout Device – If an energy source cannot be locked out with a lockout device then a tagout device shall be used. Tagout devices are a warning only level of protection and shall be weather and chemical resistant, standardized in color with clear written warning of hazardous energy; i.e. Do Not Operate, Do Not Start, Do Not Energize, etc. Each site shall have the same style of tags specified by Veracity Field Services.

Specific Energy Control Procedures

Each manager or supervisor is responsible for developing specific step-by-step shutdown and startup procedures for a particular machine or piece of equipment in their respective area.

- A written, step-by-step isolation procedure for shutdown and startup shall be prepared for each type of machine or piece of equipment.
- This procedure shall include:
 - Equipment number if assigned.
 - Equipment location.
 - Energy Source(s) (i.e. electrical, hydraulic, gas pressure, etc.)
 - Location of isolating controls (i.e. breaker switches, valves, etc.)
 - Quantity of isolating controls
 - Quantity of locks required to isolate the equipment
 - Other hardware required to isolate the equipment (i.e. chains, valve covers, blocks, etc.)
 - List any residual energy required to be dissipated before work begins.

Specific Sequence for Application of Energy Control

1. Notification

Authorized employees must notify all other affected employees of the application and removal of lockout/tagout devices. Notification shall be given before the controls are applied and before they are removed from the machine or equipment.

2. Preparation for Shutdown

Before an authorized or affected employee turns off a machine or equipment, the authorized employee shall have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled and the methods or means to control the energy.

3. Machine or Equipment Shutdown

The machine or equipment shall be turned off or shutdown using the procedures established for the machine or equipment. An orderly shutdown must be utilized to avoid any additional or increased hazard(s) to employees as a result of the equipment stoppage.



4. Machine or Equipment Isolation

All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source.

5. Lockout/Tagout Devices and Application

- Each authorized employee shall have the proper number of locks and devices to be able to perform proper lockout/tagout procedures for machines or equipment that they may be working on.
- Lockout or tagout devices shall be affixed to each energy isolating device by authorized employees.
- Lockout and tagout devices shall include name of individual placing device. Devices shall indicate the identity of the employee applying the device.
- Lockout devices shall be affixed in a manner to hold the energy isolating devices in a safe or off position.
- Tagout devices shall be affixed in a manner that will clearly indicate that the operation or movement of isolating devices from the safe or off position.
- Tagout devices used with energy isolating devices with the capability of being locked out shall be fastened at the same point at which the lock would have been attached. If a tag cannot be directly attached to the energy isolation device it shall be located as close as safely as possible to the device in a position that will be immediately obvious to anyone attempting to operate the device.
- Each energy source shall be locked out completely isolating the equipment.
- Isolating machines or equipment shall include, but are not limited to:
 - Pumps, compressors, generators, electric distribution, storage tanks, etc.
 - Each type of equipment to be isolated shall have specific procedures for isolation, i.e. for compressors: suction, discharge, power, starting, fuel, dumps shall be closed, locked and tagged out properly. The blow-down valve shall be opened, locked and tagged out properly. (NOTE): If compressor has a side stream hooked up, the side stream shall be closed, locked and tagged out properly.

6. Stored Energy and the Possibility of Reaccumulation

Following the application of lockout or tagout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained and otherwise rendered safe.

If there is a possibility of re-accumulation of stored energy, verification of isolation shall be continued until the servicing or maintenance operation is completed, or until the possibility of such accumulation no longer exists.

7. Verification of Isolation

Prior to starting work on machines or equipment that have been locked or tagged out; the authorized employee shall verify that isolation and deenergization of the machine or equipment have been accomplished.

Procedures for Handling Multiple Groups of Workers Involved in a Group Lockout

A crew of authorized employees may use a group lockout or tagout device. This will afford the group of employees a level of protection equal to that provided by a personal lockout or tagout device. Procedures include:

- A tailgate meeting shall be conducted to review the lockout procedures and other information as required for safe work to continue – all crafts and effected departments shall be involved.



- An authorized employee will isolate the equipment and ascertain the exposure status of individual group members.
- All workers will then place their individual locks on the device's group lockout or tagout device after they have verified the procedure.
- An authorized employee has primary responsibility for a set number of employees working under the protection of a group lockout or tagout device. The authorized employee should ascertain the exposure status of individual group members. Each Veracity Field Services employee or contractor shall attach a personal lockout or tagout device to the group's device while he/she is working and then removes it when finished.
- During shift change or personnel changes, there are specific procedures to ensure the continuity of lockout or tagout procedures. These include:
 - In the event shift or personnel changes occur during maintenance and/or repair activities, the designated Veracity Field Services employee in charge shall take the necessary steps to maintain the continuity of the lockout/tagout protection. This includes maintaining that all provisions in this procedure are adhered to and the transfer of lockout/tagout devices between authorized employees is accomplished.
 - No work shall be allowed to proceed following personnel or shift change unless these requirements are met. The job supervisor must observe that all personnel or shift change locks or tags are properly transferred during the process.
 - Before the last outgoing person is allowed to leave they must remove their lock (or warning tag) and the incoming Veracity Field Services person shall affix their lock or (warning tag) to prevent the lock out device or tag warning device from ever not being locked or warning if a lock out device is not practicable.
 - This also applies to all group lockout tagout situations.
 - This also applies to all contract personnel working on Veracity Field Services or client projects.
 - If any outgoing person leaves the site and their lock/tag is still attached then follow Removal of Locks guidelines below.

Release from Lockout/Tagout

When servicing or maintenance is completed or when Lockout / Tagout devices must be temporarily removed, the equipment requires testing and the machine or equipment is ready for testing or to return to normal operating conditions, the following steps shall be taken, in this order:

- Check the machine or equipment and the immediate area surrounding the machine or equipment to ensure that all nonessential items such as tools have been removed and that the machine or equipment components are operationally intact.
- Check the work area to ensure that all personnel have been safely positioned or removed from the area.
- Remove the Lockout/Tagout device
- Energize and proceed with testing
- Deenergize and reapply control methods including Lockout / Tagout devices
- Document the procedure by use of the completed isolation log and provide to supervisor for filing.



Removal of Locks

The authorized employee who applied the lock shall be the one to remove their lock. However, after all work has been completed, certain conditions may arise which prohibit this person from being present to remove the lock.

The following procedures shall be followed to allow for the removal of a lock that another person has applied:

- Every effort shall be made to contact the authorized employee who applied the lock to obtain the key(s).
- If the key(s) cannot be made available, the employee who requests removal of the lock shall contact their supervisor.
- The supervisor shall verify that every effort was made to contact the original authorized employee who applied the lock and to obtain the key(s).
- The employee removing the lock shall note on the Service Report that the lock(s) were removed with permission by supervisor.
- All reasonable efforts will be made by supervisor to notify that employee their lock has been removed, ensuring that the authorized employee has this knowledge before they return to work.
- If the equipment is client owned, the supervisor or employee requesting to remove the lock(s) shall contact the client to get the lock removed. Clients must remove their lock(s).
- NOTE: Veracity Field Services employees shall not remove any client locks.

Contractors

Contractors performing lockout procedures on Veracity Field Services property shall comply with this procedure. Contractors shall supply their own locks. Veracity Field Services shall initially lockout Veracity Field Services machines and equipment before the contractor will be allowed to apply their own lock in addition to the Veracity Field Services's.

Periodic Inspections of the Energy Control Procedure

Periodic inspections of the energy control procedure are conducted and documented at least annually to ensure procedures and requirements are being followed. Periodic inspections of the energy control procedure must be conducted at least annually to ensure that the procedure is being followed.

The Veracity Field Services Safety Manager or their designee performs the inspection (it must be someone other than those actually using the lockout/tagout in progress). The inspector will produce a certified review of the inspection including date, equipment, employees and the inspection shall be documented. They will verify that:

- Each authorized and/or affected employee has been trained as required.
- Any new equipment added has specific lockout procedures developed and documented.
- Current procedures are adequate for performing complete isolation of equipment and resulting in a zero energy state.
- A copy of the audit maintained on file at the managers/supervisors office.

EMPLOYEE TRAINING

The training must include recognition of hazardous energy source, type and magnitude of energy available, methods and means necessary for energy isolation and control.



Each authorized employee shall receive adequate training.

All affected employees are instructed in the purpose and use of the energy control procedure.

Any other employees whose work operations are or may be in an area where energy control procedures may be utilized are instructed in the purpose and use of the energy control procedure.

Additional training includes:

- The purpose and use of energy control procedures.
- When tagout systems are used, employees shall also be trained in the following limitations of tags:
 - Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that is provided by a lock.
 - When a tag is attached to an energy isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defeated in any way.
 - Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area, in order to be effective.
 - Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.
 - Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.
 - Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.

Retraining

Retraining shall be conducted whenever a periodic inspection reveals, or whenever Veracity Field Services has reason to believe that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures.

Retraining is required when there is a change in job assignments, in machines, a change in the energy control procedures, or a new hazard is introduced.

The retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.

Training Documentation

Veracity Field Services shall certify that employee training has been accomplished and is being kept up to date. All training and/or retraining must be documented, signed and certified.



Lockout/Tagout Isolation Log

Veracity Field Services employees shall complete an isolation log prior to working on energized equipment or equipment with the potential for stored energy. The Lockout/Tagout Isolation log can be found at: <https://veracityfieldservices.com/forms>

SAMPLE LOCK



SAMPLE TAG





MOBILE EQUIPMENT



Purpose

This program is written to be in compliance with local regulatory requirements and provide directives to managers, supervisors, and employees about their responsibilities in the operations and management of Veracity Field Services mobile equipment.

Key Responsibilities

Veracity Field Services Safety Manager

- The designated Safety Manager is responsible for developing and maintaining the program and related procedures. These procedures are kept in the designated safety manager's office.

Site Manager

- Responsible for the implementation and maintenance of the program for their site and ensuring all assets are made available for compliance with the plan.

Employees

- All shall be familiar with this procedure and the local workplace vehicle safety program.
- Follow all requirements, report unsafe conditions, and follow all posted requirements.

Mobile Equipment

The following requirements apply for all Veracity Field Services locations:

Veracity Field Services must develop and implement safe work procedures for the use of powered mobile equipment in the workplace and must train workers in those safe work procedures.

The equipment operator of mobile equipment shall be directly responsible for the safe operation of that equipment and shall comply with all laws and regulations governing the operation of the equipment.

Maintenance records for any service, repair or modification which affects the safe performance of the equipment must be maintained and be reasonably available to the operator and maintenance personnel during work hours

All mobile equipment shall be maintained in safe operating condition and operation, inspection, repair, maintenance and modification shall be carried out in accordance with manufacturer's instructions or, in the absence of the instructions, in accordance with good engineering practice.

Servicing, maintenance and repair of mobile equipment shall be done when the equipment is not in operation, except that equipment in operation may be serviced if the continued operation is essential to the process and a safe means is provided.

Only authorized employees shall be allowed to operate mobile equipment. Authorization to operate mobile equipment will be issued to employees qualifying under appropriate training and proficiency testing. The person



must also have in possession of an applicable operator's license and an airbrake certificate where required and be familiar with the operating instructions pertaining to the equipment and be authorized to operate the equipment. Authorization will be issued on after these requirements are met.

A supervisor must not knowingly operate or permit a worker to operate mobile equipment which is, or could create, an undue hazard to the health or safety of any person or is in violation of any local or federal regulations.

Mobile equipment in which the operator cannot directly or by mirror or other effective device see immediately behind the machine must have an automatic audible warning device which activates whenever the equipment controls are positioned to move the equipment in reverse, and if practicable, is audible above the ambient noise level.

Unauthorized personnel shall not be permitted to ride on equipment unless it is equipped to accommodate riders safely.

At the beginning of each shift, the operator shall inspect and check the assigned equipment, reporting immediately to his/her supervisor any malfunction of the clutch or of the braking system, steering, lighting, or control system and locking/tagging out the equipment if necessary.

The operator shall immediately report defects and conditions affecting or likely to affect the safe operation of the equipment to his or her immediate supervisor or other authorized person and confirm this by a written report as soon as possible. If an inspection of powered mobile equipment identifies a defect or unsafe condition that is hazardous or may create a risk to the safety or health of a worker Veracity Field Services must ensure that the powered mobile equipment is not operated until the defect is adjusted, repaired or the unsafe condition is corrected.

The operator of mobile equipment must not leave the controls unattended unless the equipment has been secured against inadvertent movement such as by setting the parking brake, placing the transmission in the manufacturer's specified park position and by chocking wheels where necessary.

No operator shall leave unattended a suspended load, machine or part or extension of it unless it has been immobilized and secured against inadvertent movement.

Powered equipment shall not be left unattended unless forks, buckets, blades and similar parts are in the lowered position or solidly supported.

Before a worker starts any powered mobile equipment Veracity Field Services shall ensure that the worker makes a complete 360 degree visual inspection of the equipment and the surrounding area to ensure that no worker, including the operator, is endangered by the startup of the equipment. No worker shall start any powered mobile equipment until the inspection is completed.

All powered mobile equipment is inspected by a competent person for defects and unsafe conditions as often as is necessary to ensure that it is capable of safe operation. A written record of the inspections, repairs and



maintenance carried out on the powered mobile equipment is kept at the workplace and made readily available to the operator of the equipment. As soon as is reasonably practicable the defect must be repaired or the unsafe condition is corrected.

All mobile equipment shall be equipped with a working signal alarm for backing up. The operator shall make sure the warning signal is operating when the equipment is backing up.

The operator shall use access provided to get on or off of equipment. Do not jump to the ground.

No operator shall operate mobile equipment without the protection of an enclosed cab or approved eye protection for the type of hazards to the eye.

Where there is a danger to the operator of a unit of powered mobile equipment or any other worker who is required or permitted to be in or on a unit of powered mobile equipment from a falling object or projectile Veracity Field Services requires that the powered mobile equipment is equipped with a suitable and adequate cab, screen or guard.

Every forklift will be equipped with a seat belt for the operator if the forklift is equipped with a seat and the operator of a forklift is required to use the seat-belt. Before starting the engine, the driver shall fasten seat belts and adjust them for a proper fit.

Each mobile equipment vehicle used for lifting must be provided with a durable and clearly legible load rating chart that is readily available to the operator. The operator shall not load the vehicle/equipment beyond its established load limit and shall not move loads which because of the length, width, or height that have not been centered and secured for safe transportation.

Mobile equipment used for lifting or hoisting or similar operations shall have a permanently affixed notation stating the safe working load capacity of the equipment and the notation must be kept legible and clearly visible to the operator.

The operator shall not use, or attempt to use any vehicle in any manner or for any purpose other than for which it is designated.

The operator's manual for powered mobile equipment must be readily available to a worker who operates the equipment.

An employer must ensure that a competent person services, inspects, disassembles and reassembles a tire or tire and wheel assembly of powered mobile equipment in accordance with the specifications of both the tire manufacturer and the manufacturer of the powered mobile equipment.

All mobile equipment must be equipped with (a) an audible warning signal; (b) a means of illuminating the path of travel at any time and tail lights when, because of insufficient light or unfavorable atmospheric conditions, (c)



adequate illumination of the cab and instruments; and (d) a mirror providing the operator with an undistorted reflected view to the rear of the mobile equipment.

Adequate and approved fire suppression equipment shall be provided on mobile equipment.

The operator of a gasoline or diesel vehicle shall shut off the engine before filling the fuel tank and shall see that the nozzle of the filling hose makes contact with the filling neck of the tank. No one shall be on the vehicle during fuelling operations except as specifically required by design. There shall be no smoking or open flames in the immediate area during fuelling operation.

When a worker is required to work beneath elevated parts of mobile equipment including trucks, the elevated parts shall be securely blocked.

Materials and equipment being transported shall be loaded and secured in a manner to prevent movement which could create a hazard to workers or another person. This includes keeping the cab, floor and deck of mobile equipment free of material, tools or other objects which could create a tripping hazard, interfere with the operation of controls or be a hazard to the operator or other occupants in the event of an accident.

Where the operator of a vehicle, mobile equipment, crane or similar material handling equipment does not have a full view of the intended path of travel of the vehicle, mobile equipment, crane or similar material handling equipment or its load, the vehicle, mobile equipment, crane or similar material handling equipment shall only be operated as directed by a signaler who is a competent person.

The signaler shall be stationed, in full view of the operator and with a full view of the intended path of travel of the vehicle, mobile equipment, crane or similar material handling equipment and its load; and clear of the intended path of travel of the vehicle, mobile equipment, crane or similar material handling equipment and its load.

Where a vehicle, crane or similar equipment is operated near a live power line carrying electricity at more than 750 volts, every part of the equipment shall be kept at least the minimum distance from the live power line for the particular voltage as required by local or federal law.

Under no circumstance will a worker be directed, required or permitted to work under or remain in the range of a swinging load or part of unit of powered mobile equipment due to the inherent danger.



NOISE HEARING CONSERVATION



Purpose

The purpose of this program is to provide a process to minimize employee-hearing loss caused by excessive occupational exposure to noise.

Scope

This program is applicable to all employees who may be exposed to noise in excess of 85 decibels (decibels). When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Veracity Field Services employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

Audiometric testing - means detection by the person being tested of a series of pure tones. For each tone, the person indicates the lowest level of intensity that they are able to perceive.

Decibels – means the sound energy measured by a sound level meter using the “A” scale. The “A” scale is electronically weighted to simulate the response of the human ear to high and low frequency noise.

Slow Response – means the setting on the sound level meter that averages out impulses of brief duration that would cause wide fluctuation in the sound level meter reading.

Standard Threshold Shift – means a change in hearing threshold relative to the baseline audiogram of an average of 10 dB (corrected for age) at 2000, 3000 and 4000 Hz in either ear.

Key Responsibilities

Managers and Supervisors

- Ensure requirements of this program are established and maintained.
- Ensure employees are trained and comply with the requirements of this program.

Employees

- Wear hearing protection when required, attend the training, and cooperate with testing and sampling.

Procedure

Occupational hearing loss is a cumulative result of repeated or continued absorption of sound energy by the ear; employee protection is based on reduction of the noise level at the ear or limiting the employee's exposure time. Veracity Field Services shall offer hearing protection to all employees exposed to potential high noise levels in working areas and to those employees requesting hearing protection.



Hearing Conservation Program

A continuing effective hearing conservation program shall be administered when employees are exposed to sound levels greater than 85 dbA on an 8 hour time-weighted average basis.

Employees will wear hearing protection in signed areas while on an owner client facility.

Monitoring Procedures to be Used When Exposure Limits Exceed the Established Level

When information indicates that employee exposure may equal/exceed the 8 hour time-weighted average of 85 decibels, a monitoring program shall be implemented to identify employees to be included in the hearing conservation program.

Surveys

Surveys will be conducted by a qualified employee or third party.

To evaluate noise exposure in terms of possible hearing damage, it is necessary to know the overall sound level ("A" scale measurement), the exposure time of the individual in hours per day and the length of time the individual has worked in the area being surveyed. This data shall be supplemented by the following:

- Name of area and location
- Date and time of survey
- Name of person conducting survey
- Description of instrument used, model and serial number
- Environmental conditions
- Description of people exposed

Veracity Field Services shall notify each employee if their job is exposed to noise 85 decibels or greater.

Veracity Field Services shall evaluate hearing protector attenuation for the specific noise environments in which the protector will be used. The adequacy of hearing PPE shall be reevaluated whenever noise exposures increase to the point that the PPE provided may no longer provide adequate protection. Veracity Field Services shall then provide more effective PPE where necessary.

All sound measuring equipment must be calibrated before and after each survey. Records of sound measuring equipment calibration and noise level surveys shall be kept for 20 years.

Noise Surveys must be repeated whenever changes in the workplace may expose additional personnel to high noise or hearing protection being used by employees may not be adequate to reduce the noise exposure to a level below 85 decibels.

Sound Level Surveys

- All owned facilities that are suspected of having noise levels exceeding 85 decibels must be screened.



Exposure Surveys:

- A representative sampling of employees shall be conducted to determine the exposure to noise over a period of time.
- Noise dosimeters must be capable of integrating all continuous, intermittent and impulsive sound levels from 80 dB to 130 dB and must be calibrated so a dose of 50% corresponds to a time weighted average of 85 dB.

Signage

Clearly worded signs shall be posted at entrances to, or on the periphery of, areas where employees may be exposed to noise levels in excess of 85 decibels. These signs shall describe the hazards involved and the required protective actions.

Audiometric Testing

Veracity Field Services must establish and maintain an audiometric testing program for all employees whose exposures equal or exceed the 8 hour time-weighted average of 85 dbA and making audiometric testing available to all employees whose exposures equal or exceed an 8 hour time-weighted average of 85 decibels.

Baseline Testing Guidelines

- Veracity Field Services shall establish a baseline audiogram for each exposed employees within 6 months of their first exposure. Within 6 months of an employee's first exposure at or above the action level, a valid baseline audiogram shall be established against which future audiograms can be compared.
- When a mobile van is used the baseline shall be established within one year.
- A qualified third party shall perform all audiometric testing, evaluation, reporting and retesting.
- Prior to establishment of a baseline audiogram at least 14 hours without exposure to workplace noise is observed. Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to workplace noise. Hearing protection may be used to meet the requirement. Employees shall also be notified to avoid high levels of noise.

Annual Testing Guidelines

Veracity Field Services shall provide an annual audiogram and if a standard threshold shift has occurred the employee will be notified in writing within 21 days of determination. At least annually after obtaining the baseline audiogram, Veracity Field Services shall obtain a new audiogram for each employee exposed at or above an 8-hour time-weighted average of 85 decibels. Each employee's annual audiogram shall be compared to that employee's baseline audiogram to determine if the audiogram is valid and if a standard threshold shift has occurred. If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift, the employee shall be informed of this fact in writing, within 21 days of the determination.

Steps That Are Taken When Standard Threshold Shift Occurs

- Hearing protection shall be re-evaluated and/or refitted and,
- If necessary a medical evaluation may be required and



- The employee shall be advised to wear hearing protection and if necessary a reassignment of duties may be deemed appropriate.

Required Recordkeeping

Veracity Field Services shall maintain accurate records of all employee exposure measurements and all records are maintained as required by CFR 1910.95 (Occupational Noise Exposure).

Employee audiograms are considered medical/exposure records. These records must be kept for the length of employment plus 30 years.

Hearing Protection Devices

- Hearing protectors are available to all employees exposed to an 8 hour time-weighted average of 85 decibels at no cost to the employee.
- Hearing protection shall be replaced as necessary.
- Veracity Field Services shall ensure that hearing protectors are worn. Employees shall be properly trained in the use, care and fitting of protectors. This is done at no cost to employees.
- Employees shall be given the opportunity to select their hearing protectors from a variety of suitable hearing protectors provided by Veracity Field Services.

TRAINING

Employees must be provided with training on at least an annual basis and shall be updated to be consistent with changes in the PPE and work processes.

A training program shall be provided for all employees who are exposed to action level noise.

The training shall be repeated annually for each employee. Training shall be updated consistent to changes in PPE and work processes. Veracity Field Services shall make available to affected employees copies of the noise exposure procedures and shall also post a copy in the workplace. Veracity Field Services shall also allow the Assistant Secretary and the Director access to records.

All training must and shall be documented.

All staff shall have a copy of this program, noise exposure procedures and it shall be posted at the worksite and a copy made available to all employees and their representatives if applicable.



PERSONAL PROTECTIVE EQUIPMENT (PPE)



Purpose

The purpose of the Personal Protective Equipment Program is to set forth the procedures for the use, care, and maintenance of personal protective equipment required to be used by employees and consultants of Veracity Field Services (the company) for the prevention of injuries.

Scope

This program is applicable to all employees and consultants. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this program shall be used when an operator's program doesn't exist or is less stringent. Consultants are required to purchase their own PPE supplies.

Key Responsibilities

HSE Manager

- Assists in the selection of appropriate PPE. If a task exposes an employee or consultant to hazards which cannot be eliminated through engineering or administrative controls, the HSE Manager assists managers to identify and select PPE suitable for the specific task performed, conditions present, and frequency and duration of exposure. Employees need to give feedback to management about the fit, comfort, and suitability of the PPE being selected.
- Assists managers in assuring all PPE meets regulatory requirements.
- Ensures a certified PPE hazard assessment is completed. The hazard assessment must indicate a determination if hazards are present or are likely to be present, which necessitate the use of PPE. The certifier's name, signature, date(s) should be present on the assessment documents. Sources of hazards include but are not limited to: hazards from impact/motion, high/low temperatures, chemicals, materials, radiation, falling objects, sharp objects, rolling or pinching objects, electrical hazards, and workplace layout. Certifies in writing the tasks evaluated, hazards found, and PPE required to protect employees and consultants against hazards and ensures exposed employees and consultants are made aware of hazards and required PPE before they are assigned to the hazardous task.

Managers and Supervisors

- Supervisors and managers shall regularly monitor employees and consultants for correct use and care of PPE and obtain follow-up training if required to ensure each employee and/or consultant has adequate skill, knowledge, and ability to use PPE.
- Supervisors and managers shall enforce PPE safety rules following the guidance of this program.

Employees

- Complying with the correct use and care of PPE.
- Reporting changes in exposure to hazardous conditions that might require a follow-up assessment of the task for PPE.
- Reporting and replacing defective or damaged PPE, which shall not be used.
- Wearing of required PPE is a condition of employment.



Procedure

General

Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, must be provided, used and maintained in a sanitary and reliable condition.

Veracity Field Services is responsible for employee-owned equipment and consultants are responsible for consultant owned equipment. Where employees provide their own protective equipment, Veracity Field Services must assure its adequacy, including proper maintenance and sanitation of such equipment.

Veracity Field Services does not provide safety footwear, hardhats or any other PPE to consultants.

All PPE issued shall be at no cost to employees only as required by federal regulation.

Eye Protection

Employees and consultants must use appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids or chemical gases or vapors. Eye and Face PPE must comply with ANSI Standard Z87.1-2003 (Z87+), *Occupational and Educational Personal Eye and Face Protective Devices*.

Safety Glasses

Safety glasses, with side shields, that meet ANSI Z-87.1-2003 standards with “high Impact lenses” are required to be worn by all employees, consultants, contractors, and visitors while on Veracity Field Services owned or controlled property, at all times, as described below:

- At field locations, in shops and warehouses, except in approved, designated, striped safety zones.
- In all yard work zones or by everyone when in the vicinity of loading or unloading equipment, performing mechanic or maintenance work, test stand operations, operating equipment such as forklifts, welding, or any type of work which has the potential to inflict an eye injury.
- In any office, restroom, or any other building while performing any type of work where a potential eye injury may be present.
- Visitors will be provided with visitor glasses. In the absence of approved prescription safety glasses, “Over the glass” type safety glasses or goggles, must be worn over the nonsafety glasses until approved prescription safety glasses are obtained.
- Workers assisting welders must wear absorbent safety glasses that protect the wearer from ultra-violet (UV) and/or infrared rays (IR).
- Dark shaded lens (sunglasses) darker than a # 1 shade is prohibited to be worn indoors unless welding or assisting a welder.
- A doctor must support “exceptions for medical reasons” in writing to exempt safety eyewear requirements.
- Safety glasses are not required:
 - Inside offices.
 - Inside vehicles.



- Parking lots when traveling from vehicles to and from trailers or buildings that do not pass through active work areas.

Goggles

- Chemical splash proof goggles shall be worn when handling or mixing liquid chemicals, solvents, paints, etc., and/or as recommended on the Safety Data Sheet of the material being handled.
- Dust proof goggles shall be worn when blowing equipment down with air or while performing other jobs where safety glasses are not adequate to prevent airborne particles from entering the openings around the lenses and side shields.

Face Shields

- Full face shields shall be worn over safety glasses when operating hand held or stationery grinders with abrasive or wire wheels, while chipping paint or concrete or, performing jobs where there is the potential for flying objects striking the face and safety glasses or goggles would not provide adequate protection.

Head Protection

Employees must wear hardhats when working in areas where there is a potential for injury to the head from impact events. Helmets must comply with ANSI Standard Z89.1-1997 Class E, *American National Standard for Industrial Head Protection* for Type II head protection or be equally effective.

- Employees must wear hardhats when working in areas where there is a potential for injury to the head from falling objects.
- Hardhats will not be altered in any way.
- Do not paint hardhats.
- Do not drill, cut, bend, or apply heat.
- Hardhats will be inspected by the employee or consultant regularly for cracks, chips, scratches, signs of heat exposure (sun cracks), etc.
- Defective hardhats will be replaced immediately.
- Hardhats must be made available to visitors.
- Employees will be trained in the use, care and maintenance of head protection equipment.

Hearing Protection

Hearing protection is required to be worn by all employees, consultants, contractors, and visitors while in posted "High Noise" areas.

Warning signs will be posted in areas known or suspected to have noise levels exceeding 85 dBA either constantly or intermittently.

When signs are not posted, employees and consultants shall wear hearing protection when noise caused by machinery, tools, etc., prevents normal conversations from being heard clearly.

Rule of thumb: If you must yell to be heard, hearing protection is required

Types

- Molded Inserts (ear plugs)



- Canal Caps (head band type)
- Headband or hard hat mounted earmuffs and/or earplugs shall be provided to employee's in sizes and configurations that will be comfortable to the employee.

Care and Maintenance

- Inspect hearing protection prior to each use.
- Hearing protection must be kept clean to prevent ear infections.
- If earplugs are of disposable type, they must be discarded when they become dirty, greasy, or cracked.
- Earmuffs that have deteriorated foam inserts, cracked seals or are defective must be replaced.

Fit

- Due to individual differences, not everyone can wear the same type of hearing protection. A variety of styles may have to be tried before one is found to be comfortable and provide adequate protection.
- Employees shall be instructed how to obtain the proper fit.

Hand Protection

Gloves

- Gloves are required to be worn when performing work which may expose the hands to extreme temperatures, cuts and abrasions, or exposure to chemicals.
- Welding gloves made of leather or other heat resistant materials shall be worn when performing arc welding or oxy/gas cutting.
- Impervious (chemical resistant) gloves shall be worn when handling chemicals that specify gloves as personal protection equipment when handling.
- Refer to the specific chemical's Safety Data Sheet for the correct glove type.
- Persons assigned to working with chemicals, i.e., solvent vats, shall be issued their own individual gloves for hygiene purposes.
- Leather gloves should be worn when working with sharp materials or when handling rigging equipment.
- Cloth gloves should be worn when handling objects or materials, which could cause blisters, splinters, cuts, etc.
- Heat resistant gloves shall be worn when handling hot materials or objects that have been heated beyond ambient temperatures.
- Insulated gloves shall be worn to prevent frostbite in extreme cold climates.
- Glove Inspections
 - Gloves shall be inspected before each use for holes, tears, and worn areas.
 - Chemical gloves shall be periodically air tested for pinholes by twisting the cuff tightly, apply low air pressure to expand the glove, and then submersing in water to check for bubbles.
 - Defective gloves shall be discarded immediately. Exception: machinists are exempted from wearing gloves while working with rotating machinery.

Foot Protection

Safety footwear shall be worn by all employees with regularly assigned duties at field locations, in shops and warehouses.



- Office workers and visitors who enter these areas on an infrequent basis will not be required to wear foot protection provided they stay clear of the work being performed.
- If required to be in close proximity of the work, the work will be stopped while visiting the area or safety footwear will be worn.
- The boot must provide ankle protection and have soles designed to protect from punctures with defined heels for climbing ladders.
- Metatarsal guards will be worn when duties present a hazard of equipment or material crushing the foot.
- All safety footwear must meet ANSI Z41-1999 standards.

Fall Protection

Personal fall protection is required when performing certain elevated jobs in excess of four feet. Consult the Veracity Field Services Fall Protection Program.

Electrical Protection

Consult the Veracity Field Services Electrical Safety Program.

Proper Fitting or Sizing of PPE

Consideration must be given to comfort and fit. PPE that fits poorly will not afford the necessary protection. Continued wearing of the PPE is more likely if it fits the wearer comfortably. PPE is generally available in a variety of sizes. Care should be taken to ensure that the right size is selected.

Defective Equipment

Procedures must be in place to ensure defective or damaged PPE is not used. PPE that is in disrepair must be discarded or removed from service until repaired.

Training on the Use of PPE

Training should be given to employees and consultants concerning when to wear PPE, what PPE should be worn, how to put on and take off and adjust PPE. The limitations of the PPE and its use, care, and maintenance should also be included in the training.

Retraining on the Use of PPE

Each affected employee and/or consultant must demonstrate an understanding of training received and the ability to use PPE properly. When there is a reason to believe that any employee or consultant who has been trained does not have the required understanding and skill or there are changes in the workplace, the employee or consultant must be retrained.

PPE Training is Documented

Training shall be documented and records maintained. The training certification shall include:

- Name of employee(s) or consultant(s) trained;
- The dates of training; and
- The training content.



PPE Matrix For Veracity Field Services

Location: Insert Location or Work Site

D = Depends on situation M = Mandatory - = Not Mandatory unless hazards become present

SUBJECT TO CHANGE BASED ON INDIVIDUAL WORKSITE HAZARD ASSESSMENT **CHANGE ALL AS NEEDED**

CATEGORY	EQUIPMENT	HAZARD	INSPECTION	MAINTENANCE	Job/Task	Field Tech	Housekeeping	Shop Work	Driving	Office	Winter Conditions
Head Protection:											
	Hard Hat (Class G or E Only)	Striking Head or Falling Objects	Each use	Dispose		-	-	D	-	-	-
Eye and Face Protection:											
	Safety Glasses w/shields	Objects Striking Eyes	Each use	Dispose		D	D	M	*	-	M
	Impact Vented Goggles	Small Particles in Eyes	Each use	Dispose		-	-	D	-	-	D
	Chemical Splash Goggles	Chemicals or Oil in Eyes	Each use	Dispose		D	D	D	-	-	-
Hearing Protection:											
	Disposable Earplugs	Damage to Hearing (85 dB)	Each use	Dispose		D	D	D	-	-	-
	Ear Muffs (w/Disposables)	Damage to Hearing (105 dB)	Each use	Dispose		D	D	D	-	-	-
Personal Protective Clothing:											
	Cold Weather Clothing	Cold Temperature	Each use	Clean & Repair		D	D	D	D	-	D
	Rainwear	Wet body	Each use	Dispose		-	-	D	-	-	-
	Protective Sleeves	Biohazardous materials	Each use	Dispose		-	M	-	-	-	-
	Insert more or delete as needed										
Foot Protection:											
	Slip Resistant Footwear	Injury to Body	Each use	Replace		M	M	M	-	-	-
	Anti-Slip Cleats during Winter	Injury to Body	Each use	Dispose		M	M	M	-	-	M
Hand Protection:											
	Anti-cut Gloves	Cuts	Each use	Dispose		M	D	M	-	-	-
	Vinyl Disposable Gloves	Biohazardous materials	Each use	Dispose		-	M	-	-	-	-
	Heavy Duty Gloves	Injuries to Hands	Each use	Dispose		-	-	M	-	-	-
	Cold weather Gloves	Environmental Exposure	Each use	Dispose		-	-	-	-	-	M
	Rubber Gloves	Hot Water Burns	Each use	Dispose		M	-	-	-	-	-



PPE Hazard Assessment Certification Form

Name of work place: _____

Work place address: _____

Work area(s): _____

Conducted by Name/Signature: _____

Date of assessment: _____

Job/Task(s): _____

(Use a separate sheet for each job/task or work area)

EYES		
<p><u>Work activities, such as:</u></p> <p><input type="checkbox"/> abrasive blasting</p> <p><input type="checkbox"/> chopping</p> <p><input type="checkbox"/> cutting</p> <p><input type="checkbox"/> drilling</p> <p><input type="checkbox"/> welding</p> <p><input type="checkbox"/> soldering</p> <p><input type="checkbox"/> torch brazing</p> <p><input type="checkbox"/> working outdoors</p> <p><input type="checkbox"/> computer work</p> <p><input type="checkbox"/> punch press operations</p> <p><input type="checkbox"/> other:</p>	<p><u>Work-related exposure to:</u></p> <p><input type="checkbox"/> airborne dust</p> <p><input type="checkbox"/> dirt</p> <p><input type="checkbox"/> UV</p> <p><input type="checkbox"/> flying particles/objects</p> <p><input type="checkbox"/> blood splashes</p> <p><input type="checkbox"/> hazardous liquid chemicals mists</p> <p><input type="checkbox"/> chemical splashes</p> <p><input type="checkbox"/> molten metal splashes</p> <p><input type="checkbox"/> glare/high intensity lights</p> <p><input type="checkbox"/> laser operations</p> <p><input type="checkbox"/> intense light</p> <p><input type="checkbox"/> hot sparks</p> <p><input type="checkbox"/> other:</p>	<p><u>Can hazard be eliminated without the use of PPE?</u> Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p><u>If no, use:</u></p> <p><input type="checkbox"/> Safety glasses</p> <p><input type="checkbox"/> Safety goggles</p> <p><input type="checkbox"/> Dust-tight goggles</p> <p><input type="checkbox"/> Impact goggles</p> <p><input type="checkbox"/> Welding helmet/shield</p> <p><input type="checkbox"/> Chemical goggles</p> <p><input type="checkbox"/> Chemical splash goggles</p> <p><input type="checkbox"/> Laser goggles</p> <p><input type="checkbox"/> Shading/Filter (# _____)</p> <p><input type="checkbox"/> Welding shield</p> <p><input type="checkbox"/> Other:</p> <p><u>With:</u></p> <p><input type="checkbox"/> Face shield</p>
FACE		



<p><u>Work activities, such as:</u></p> <ul style="list-style-type: none"><input type="checkbox"/> cleaning<input type="checkbox"/> cooking<input type="checkbox"/> siphoning<input type="checkbox"/> painting<input type="checkbox"/> dip tank operations<input type="checkbox"/> metal pouring<input type="checkbox"/> other:	<p><u>Work-related exposure to:</u></p> <ul style="list-style-type: none"><input type="checkbox"/> hazardous liquid chemicals<input type="checkbox"/> extreme heat<input type="checkbox"/> extreme cold<input type="checkbox"/> potential irritants:<input type="checkbox"/> other:	<p><u>Can hazard be eliminated without the use of PPE?</u> Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p><u>If no, use:</u></p> <ul style="list-style-type: none"><input type="checkbox"/> Face shield<input type="checkbox"/> Shading/Filter (# _____)<input type="checkbox"/> Welding shield<input type="checkbox"/> Other:
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HEAD		
<p><u>Work activities, such as:</u></p> <input type="checkbox"/> building maintenance <input type="checkbox"/> confined space operations <input type="checkbox"/> construction <input type="checkbox"/> electrical wiring <input type="checkbox"/> walking/working under catwalks <input type="checkbox"/> walking/working on catwalks <input type="checkbox"/> walking/working under conveyor belts <input type="checkbox"/> working with/around conveyor belts <input type="checkbox"/> walking/working under crane loads <input type="checkbox"/> other:	<p><u>Work-related exposure to:</u></p> <input type="checkbox"/> beams <input type="checkbox"/> pipes <input type="checkbox"/> exposed electrical wiring or components <input type="checkbox"/> falling objects <input type="checkbox"/> fixed object <input type="checkbox"/> machine parts <input type="checkbox"/> other:	<p><u>Can hazard be eliminated without the use of PPE?</u> Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p><u>If no, use:</u></p> <input type="checkbox"/> Protective Helmet (Hard Hats) <input type="checkbox"/> Class G (General) Hard Hat (low voltage) <input type="checkbox"/> Class E (Electrical) Hard Hat (high voltage) <input type="checkbox"/> Type C (Conductive) Hard Hat (no electrical protection) <input type="checkbox"/> Bump cap (not ANSI-approved) <input type="checkbox"/> Hair net or soft cap <input type="checkbox"/> Other:
HANDS/ARMS		
<p><u>Work activities, such as:</u></p> <input type="checkbox"/> baking <input type="checkbox"/> cooking <input type="checkbox"/> grinding <input type="checkbox"/> welding <input type="checkbox"/> working with glass <input type="checkbox"/> using power tools <input type="checkbox"/> using computers <input type="checkbox"/> working outdoors <input type="checkbox"/> using knives <input type="checkbox"/> dental and health care services <input type="checkbox"/> garbage disposal <input type="checkbox"/> computer work <input type="checkbox"/> other:	<p><u>Work-related exposure to:</u></p> <input type="checkbox"/> blood <input type="checkbox"/> irritating chemicals <input type="checkbox"/> tools or materials that could scrape or cut <input type="checkbox"/> extreme heat <input type="checkbox"/> extreme cold <input type="checkbox"/> animal bites <input type="checkbox"/> electric shock <input type="checkbox"/> vibration <input type="checkbox"/> musculoskeletal disorders <input type="checkbox"/> sharps injury <input type="checkbox"/> other:	<p><u>Can hazard be eliminated without the use of PPE?</u> Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p><u>If no, use:</u></p> <input type="checkbox"/> Gloves <input type="checkbox"/> Chemical resistance <input type="checkbox"/> Liquid/leak resistance <input type="checkbox"/> Temperature resistance <input type="checkbox"/> Abrasion/cut resistance <input type="checkbox"/> Slip resistance <input type="checkbox"/> Latex or nitrile <input type="checkbox"/> Anti-vibration <input type="checkbox"/> Protective sleeves <input type="checkbox"/> Ergonomic equipment _____ <input type="checkbox"/> Other:



FEET/LEGS		
<u>Work activities, such as:</u> <input type="checkbox"/> building maintenance <input type="checkbox"/> construction <input type="checkbox"/> demolition <input type="checkbox"/> food processing <input type="checkbox"/> foundry work <input type="checkbox"/> working outdoors <input type="checkbox"/> logging <input type="checkbox"/> plumbing <input type="checkbox"/> trenching <input type="checkbox"/> use of highly flammable materials <input type="checkbox"/> welding <input type="checkbox"/> other:	<u>Work-related exposure to:</u> <input type="checkbox"/> explosive atmospheres <input type="checkbox"/> explosives <input type="checkbox"/> exposed electrical wiring or components <input type="checkbox"/> heavy equipment <input type="checkbox"/> slippery surfaces <input type="checkbox"/> impact from objects <input type="checkbox"/> pinch points <input type="checkbox"/> crushing <input type="checkbox"/> slippery/wet surface <input type="checkbox"/> sharps injury <input type="checkbox"/> blood <input type="checkbox"/> chemical splash <input type="checkbox"/> chemical penetration <input type="checkbox"/> extreme heat/cold <input type="checkbox"/> fall <input type="checkbox"/> other:	<u>Can hazard be eliminated without the use of PPE?</u> Yes <input type="checkbox"/> No <input type="checkbox"/> <u>If no, use:</u> <input type="checkbox"/> Safety shoes or boots <input type="checkbox"/> Toe protection <input type="checkbox"/> Electrical protection <input type="checkbox"/> Heat/cold protection <input type="checkbox"/> Puncture resistance <input type="checkbox"/> Chemical resistance <input type="checkbox"/> Anti-slip soles <input type="checkbox"/> Leggings or chaps <input type="checkbox"/> Foot-Leg guards <input type="checkbox"/> Other:
BODY/SKIN		
<u>Work activities such as:</u> <input type="checkbox"/> baking or frying <input type="checkbox"/> battery charging <input type="checkbox"/> dip tank operations <input type="checkbox"/> fiberglass installation <input type="checkbox"/> sawing <input type="checkbox"/> other:	<u>Work-related exposure to:</u> <input type="checkbox"/> chemical splashes <input type="checkbox"/> extreme heat <input type="checkbox"/> extreme cold <input type="checkbox"/> sharp or rough edges <input type="checkbox"/> irritating chemicals <input type="checkbox"/> other:	<u>Can hazard be eliminated without the use of PPE?</u> Yes <input type="checkbox"/> No <input type="checkbox"/> <u>If no, use:</u> <input type="checkbox"/> Vest, Jacket <input type="checkbox"/> Coveralls, Body suit <input type="checkbox"/> Raingear <input type="checkbox"/> Apron <input type="checkbox"/> Welding leathers <input type="checkbox"/> Abrasion/cut resistance <input type="checkbox"/> Other:



BODY/WHOLE		
<u>Work activities such as:</u> <input type="checkbox"/> building maintenance <input type="checkbox"/> construction <input type="checkbox"/> logging <input type="checkbox"/> computer work <input type="checkbox"/> working outdoors <input type="checkbox"/> utility work <input type="checkbox"/> other:	<u>Work-related exposure to:</u> <input type="checkbox"/> working from heights of 10 feet or more <input type="checkbox"/> impact from flying objects <input type="checkbox"/> impact from moving vehicles <input type="checkbox"/> sharps injury <input type="checkbox"/> blood <input type="checkbox"/> electrical/static discharge <input type="checkbox"/> hot metal <input type="checkbox"/> musculoskeletal disorders <input type="checkbox"/> sparks <input type="checkbox"/> chemicals <input type="checkbox"/> extreme heat/cold <input type="checkbox"/> elevated walking/working surface <input type="checkbox"/> working near water <input type="checkbox"/> injury from slip/trip/fall <input type="checkbox"/> other:	<u>Can hazard be eliminated without the use of PPE?</u> Yes <input type="checkbox"/> No <input type="checkbox"/> <u>If no, use:</u> <input type="checkbox"/> Fall Arrest/Restraint <input type="checkbox"/> Traffic vest <input type="checkbox"/> Static coats/overalls <input type="checkbox"/> Flame resistant jacket/pants <input type="checkbox"/> Insulated jacket <input type="checkbox"/> Cut resistant sleeves/wristlets <input type="checkbox"/> Hoists/lifts <input type="checkbox"/> ergonomic equipment: _____ <input type="checkbox"/> Other:
LUNGS/RESPIRATORY		
<u>Work activities such as:</u> <input type="checkbox"/> cleaning <input type="checkbox"/> mixing <input type="checkbox"/> painting <input type="checkbox"/> fiberglass installation <input type="checkbox"/> compressed air or gas operations <input type="checkbox"/> confined space work <input type="checkbox"/> floor installation <input type="checkbox"/> ceiling repair <input type="checkbox"/> working outdoors <input type="checkbox"/> other:	<u>Work-related exposure to:</u> <input type="checkbox"/> dust or particulate <input type="checkbox"/> toxic gas/vapor <input type="checkbox"/> chemical irritants (acids) <input type="checkbox"/> welding fume <input type="checkbox"/> asbestos / <input type="checkbox"/> pesticides <input type="checkbox"/> organic vapors <input type="checkbox"/> oxygen deficient environment <input type="checkbox"/> paint spray <input type="checkbox"/> extreme heat/cold <input type="checkbox"/> other:	<u>Can hazard be eliminated without the use of PPE?</u> Yes <input type="checkbox"/> No <input type="checkbox"/> <u>If no, use:</u> <input type="checkbox"/> Dust mask <input type="checkbox"/> Disposable particulate respirator <input type="checkbox"/> Replaceable filter particulate w/cartridge _____ <input type="checkbox"/> half face <input type="checkbox"/> full face <input type="checkbox"/> PAPR (Air recycle) <input type="checkbox"/> PPSA (Air supply)



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EARS/HEARING		
<u>Work activities such as:</u> <input type="checkbox"/> generator <input type="checkbox"/> ventilation fans <input type="checkbox"/> motors <input type="checkbox"/> sanding <input type="checkbox"/> sparks <input type="checkbox"/> pneumatic equipment <input type="checkbox"/> punch or brake presses <input type="checkbox"/> use of conveyors <input type="checkbox"/> other:	<input type="checkbox"/> grinding <input type="checkbox"/> machining <input type="checkbox"/> routers <input type="checkbox"/> sawing	<u>Work-related exposure to:</u> <input type="checkbox"/> loud noises <input type="checkbox"/> loud work environment <input type="checkbox"/> noisy machines/tools <input type="checkbox"/> punch or brake presses <input type="checkbox"/> other:
		<u>Can hazard be eliminated without the use of PPE?</u> Yes <input type="checkbox"/> No <input type="checkbox"/> <u>If no, use:</u> <input type="checkbox"/> ear muffs <input type="checkbox"/> ear plugs <input type="checkbox"/> leather welding hood



RESPIRATORY PROTECTION



Purpose

It is the intention of Veracity Field Services, LLC (the company) to provide a respirator protection program that meets or exceeds all federal standards. Veracity Field Services, LLC will attempt to engineer potential harmful vapors and oxygen deficient atmosphere exposure hazards out of a company owned or operated work environment. If engineering control measures are not feasible or during emergency situations with high exposure, respirators shall be provided to employees which are applicable and suitable for the purpose intended. Veracity Field Services Consultants are responsible for providing their own respiratory protection PPE and equipment.

Scope

This program applies to all Veracity Field Services, LLC company owned or operated facilities, projects and operations. Employees and/ or consultants potentially exposed to airborne contaminants must wear respiratory protection. Respirators are to be used when engineering control measures are not feasible or during emergency situations with high exposure. Respirators shall be provided to employees which is applicable and suitable for the conditions.. Consultants shall provide their own respiratory protection that is applicable and suitable for the conditions. The term “employer” is intended to reference the employer of the employee.

Respiratory Program Administrator

A program administrator has been designated. Overall responsibility for the respiratory protection program is assigned to the Veracity Field Services, LLC Safety Manager in order to ensure that specific requirements are followed.

The Administrator must be knowledgeable of the complexity of the program, able to conduct evaluations and have the proper training.

This assignment is made, however, with the understanding that individual supervisors must implement and enforce major portions of the program and independent consultants shall implement and enforce all portions of the program. It is understood that the Program Administrator will report performance problems to the appropriate manager for resolution. The person who will have responsibility for administering all the aspects of this program will be the Project Manager or their designee.

The responsibilities of the Program Administrator will include, but are not limited to:

- Conducting an annual written evaluation of the program. The program evaluation should be completed no later than December, 31, of each year.
- Ensuring an adequate supply of respirators, cartridges, and repair/replacement parts are available to employees, and consultants must do the same. The Program Administrator may delegate this duty but will retain overall responsibility. The person(s) to whom this duty has been delegated is the Project Manager and/or Field Supervisor.
- Respiratory protective equipment must be selected based on respiratory hazards. Hazards must be identified and NIOSH certified respirators must be selected and provided based on those hazards and factors affecting performance.



- Ensuring that all respirator users have been trained in the use, selection and limitations of the type of respirators they will be using prior to the first time the respirator must be used. While the duty of conducting the training may be delegated, the Program Administrator retains final responsibility for seeing that all employees are appropriately trained.
- Ensuring that all respirator users have been medically evaluated and found fit to use the type of respirators that will be required in their job. The medical evaluation must be completed before an employee can use a respirator.
- Ensuring that all respirator users are fit-tested at least annually and more often if other federal requirements apply.
- Ensuring that respirators are individually issued, are cleaned and sanitized on a regular basis, and respirators are stored in a clean and accessible location. This duty may also be delegated but the Program Administrator retains final responsibility for seeing it through.
- Ensuring that respirators are selected based on the hazard that will be encountered. In special circumstances, the Program Administrator will contact the corporate health and safety staff for guidance in selecting the correct respirator.
- Ensuring that employee exposure is monitored to assure correct respirator type is used. Exposure monitoring may be delegated to others, however, the Program Administrator has final responsibility of monitoring completion and to request assistance when necessary.
- Ensuring an employee must leave the area if a vapor/gas breakthrough, changes in breathing resistance, and/or leakage of the facepiece occur. Employees must leave the respirator use area if they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece.
- Ensuring that the elements of the Respiratory Protection Program for the selection, use, cleaning/maintenance, storage and fit-testing of respirators are followed.
- Ensuring that respirator parts are not exchanged between brands of respirators.
- Ensuring medical evaluations, respirators and required training are provided at no cost to the employee.

Medical Evaluation Requirements

General

General requirement responsibilities apply to Veracity Field Services employees and consultants separately. Because Consultants are not employees of the company, they are responsible for and must manage their own respiratory protection program.

A medical evaluation must be completed before a worker can use a respirator. The medical evaluation must be confidential, during normal working hours, convenient, understandable and the employee should be allowed to discuss the results with the PLHCP.

The employer may discontinue an employee's medical evaluations when the employee is no longer required to use a respirator.

Medical Evaluation Procedures

Under guideline parameters required by federal regulation, the employer shall identify a physician or other licensed health care professional (PLHCP) to perform medical evaluations using a medical questionnaire or an



initial medical examination that obtains the same information as the medical questionnaire. The medical evaluation shall obtain the information requested by the Medical Questionnaire (or equivalent).

The medical evaluation prior to fit-testing will be confidential, conducted during normal working hours, be at a convenient time and location, be understandable and the employee will be given a chance to discuss the results with the PLHCP.

Supplemental Information for the PLHCP

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

- 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 employer shall provide the PLHCP with a copy of the employers Respiratory Protection Program.

Note: When the employer replaces a PLHCP, the employer must ensure that the new PLHCP obtains this information, either by providing the documents directly to the PLHCP or having the documents transferred from the former PLHCP to the new PLHCP. However, OSHA does not expect employers to have employees medically re-evaluated solely because a new PLHCP has been selected.

Medical Determination

In determining the employee's ability to use a respirator, the company shall obtain a written recommendation regarding the employee's ability to use the respirator from the PLHCP. The 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 whether or not 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.

All recommendations are to be sent to the employers Safety Manager.

Additional Medical Evaluations

At a minimum, the employer shall provide additional medical evaluations that comply with the requirements of this program if:

- An employee reports medical signs or symptoms that are related to ability to use a respirator;
- A PLHCP, supervisor, or the respirator Program Administrator informs the employer that an employee needs to be re-evaluated;



- Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee re-evaluation; or
- A change occurs in workplace conditions (e.g., physical work effort, protective clothing, and temperature) that may result in a substantial increase in the physiological burden placed on an employee.

Work Site Procedures

Each work site where respirators are required to protect the health of the worker shall have work site procedures that follow the guidelines of this program. Specific procedures may also be required by our client which will be followed. The following areas shall be included:

- Identification of specific hazard requiring respiratory protection
- The selection of the appropriate respiratory protection equipment based on the specific hazard and concentration levels, characteristics, etc. Specific brand and models of respiratory equipment to be used shall be identified in the procedures.
- Verification that each user of respiratory protection is qualified (medical approval, current fit test, annual training and demonstrates competency).

Respirator Selection Criteria

The employer provides respiratory equipment to employees. Respiratory equipment must be provided to employees at no cost to them.

The selection of the respiratory equipment is based on the hazards the employee is exposed to. The employer shall:

- Perform hazard identification,
- Select and provide respirators based on those hazards and factors affecting performance,
- Establish brands and models to be used, and
- Estimate exposures and contaminant information.

Hazard Identification

Due to the many varied work locations the employer's identification of respiratory hazards will be contained in the various work site specific safety plans. However, common respiratory hazards that will be encountered include:

- Dust
- Fumes
- Gases
- Chemical particles
- Oxygen Deficiency

Characteristics of Hazardous Operation or Process

- Hot operations: welding, chemical reactions, soldering, melting, melding and burning
- Liquid operations: painting, degreasing, dipping, spraying, brushing, coating, etching, cleaning, pickling, plating, mixing, galvanizing and chemical reactions



- Solid operations: pouring, mixing, separations, extraction, crushing, conveying, loading, bagging and demolition.
- Pressurized spraying: cleaning parts, applying pesticides, degreasing, sand blasting and painting
- Shaping operations: cutting, grinding, filing, milling, melding, sawing and drilling

Gaseous Contaminants

- Inert gases (helium, argon, etc.), which do not metabolize in the body but displace air to produce an oxygen deficiency.
- Acid gases (SO₂, H₂S, HCl, etc.) which are acids or produce acids by reaction with water.
- Alkaline gases (NH₃, etc.), which are alkalis or produce alkalis by reaction with water.
- Organic gases (butane, acetone, etc.), which exist as true gases or vapors from organic liquids.
- Organometallic gases (tetraethyl lead, organo-phosphates, etc.), which have metals attached to organic groups.

Particulate contaminants

- Dusts are mechanically generated solid particulates (0.5 to 10µm)
- Fumes are solid condensation particles of small diameter (0.1 to 1.0 µm)
- Mists are liquid particulate matter (5 to 100 µm)
- Smoke is chemically generated particulates (solid and liquid) of organic origins (0.01 to 0.3 µm)

Selection of Respirator

The following factors shall be taken into account when selecting the proper respirator:

Concentration and Type of Contaminant

The concentration and type of contaminant will determine the model and type of respirator and cartridges/filters or filters to be used. The concentration is based on a sampling of the atmosphere.

Location of Hazardous Area

(Confined Space, nearby contaminants, etc.)

Worker Activity

(Extreme heat, cold, welding hood requirement, etc.)

Types of Respirators

Air-purifying respirators can be either full-face or half masks with mechanical or chemical cartridges to filter dusts, mists, fumes, vapors or gases.

Powered air-purifying respirators use a blower to pass the contaminated air through a filter. The purified air is then delivered into a mask or hood. They filter dusts, mists, fumes, vapors and gases, just like ordinary air-purifying respirators.

Air-purifying respirators cannot be used in oxygen-deficient atmospheres, which can result when another gas displaces the oxygen or consumption of oxygen by a chemical reaction occurs. Oxygen levels below 19.5% require



either a source of supplied air or supplied-air respirator protection. Levels below 16% are considered to be unsafe and could cause death. To determine the proper cartridge for air-purifying respirators contact the the employer's Safety Manager or a qualified on-site safety representative of the client. You should also consult the Material Safety Data Sheet of the substance that needs to be filtered.

All cartridges are assigned a color designating the type of contaminant they will filter:

White:	Acid gas
Black:	Organic vapors
Green:	Ammonia gas
Yellow:	Acid gas and organic vapors
Purple:	Radioactive materials
Orange:	Dust, fumes and mists
Olive:	Other gases and vapors

Once the wearer of the respirator can detect an odor, irritation, or taste of the contaminant, the cartridge should be replaced. All cartridges and/or filters shall be changed at the beginning of each shift.

Supplied-air respirators provide the highest level of protection against highly toxic and unknown materials. Supplied air refers to self-contained breathing apparatuses (SCBAs) and air-line respirators. SCBAs have a limited air supply that is carried by the user, allowing for good mobility and fewer restrictions than air-line respirators.

Air-line respirators have an air hose that is connected to a fresh air supply from a central source. The source can be from a compressed air cylinder or air compressor that provides at least Grade D breathing air.

Emergency Escape Breathing Apparatuses (EEBAs) provide oxygen for 5, 10 or 15 minutes depending on the unit. These are for emergency situations in which an employee must escape from environments immediately dangerous to life or health (IDLH).

SCBA (Self Contained Breathing Apparatus)

Veracity Field Services, LLC does NOT allow employees to work in an Immediately Dangerous to Life and Health (IDLH) environment.

In order to maintain the NIOSH/MSHA approval of any respirator, mixing parts from other respirator manufacturers is prohibited. This includes airline hoses, valves, gaskets, cartridges, etc. For example, do not use North cartridges or valve gaskets with an MSA product.

Brand and Models

Veracity Field Services, LLC will use a qualified supplier to procure NIOSH-certified respirators. Only NIOSH-certified respirators shall be used in compliance with the conditions of the certification of the company Respiratory Protection Program (fit testing model, no mixing of different manufacturer parts, cartridges, filters, etc.).



The specific model will be based on the hazard, concentration of contaminant, oxygen level, work environment and type of work being performed. To aid in the selection process the following will be used to identify the proper North respiratory equipment for the work being performed and hazard that is present.

- NIOSH Pocket Guide to Chemicals
- North Cartridge Selection Guide
- North Respirator Selection Guide

Estimate of Exposures and Contaminant Information

- No employee shall enter an IDLH environment.
- Normal oxygen levels shall be maintained.
- No employee shall be exposed to an atmosphere containing concentrations that would exceed the STEL or PEL for the identified atmospheric hazard.

Respirator Fit Testing

Users of respiratory protective equipment must be fit tested. Employees are required to pass qualitative fit test (QLFT) or quantitative fit test (QNFT) before initial use, if a different respirator is used, and annually thereafter.

Before an employee may be required to use any respirator with a negative or positive pressure tight-fitting face piece, the employee must be fit tested with the same make, model, style, and size of respirator that will be used. This section specifies the kinds of fit tests allowed, the procedures for conducting them, and how the results of the fit tests must be used.

All respirator users are fit-tested at least annually and more often if other federal requirements apply.

Supplied Air Respirators are required to be fit tested as well.

The employer shall ensure that employees using a tight-fitting face piece respirator pass an appropriate qualitative fit test (QLFT) or quantitative fit test (QNFT) as stated in this program.

The employer shall ensure that an employee using a tight-fitting face piece respirator is fit tested prior to initial use of the respirator, whenever a different respirator face piece (size, style, model or make) is used, and at least annually thereafter.

The employer shall conduct an additional fit test whenever the employee reports, or The employer's 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 employer, 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 face piece and to be retested.



The fit test shall be administered using an OSHA-accepted QLFT or QNFT protocol. The OSHA-accepted QLFT and QNFT protocols and procedures are contained in this section.

QLFT may only be used to fit test negative pressure air-purifying respirators that must achieve a fit factor of 100 or less. Half face air filtering respirators may be fit tested with irritant smoke while full face air filtering respirators require Portacount fit testing.

If the fit factor, as determined through an OSHA-accepted QNFT protocol, is equal to or greater than 100 for tight-fitting half face pieces, or equal to or greater than 500 for tight-fitting full face pieces, the QNFT has been passed with that respirator.

Fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air-purifying respirators shall be accomplished by performing quantitative or qualitative fit testing in the negative pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.

Qualitative fit testing of these respirators shall be accomplished by temporarily converting the respirator user's actual face piece into a negative pressure respirator with appropriate filters, or by using an identical negative pressure air-purifying respirator face piece with the same sealing surfaces as a surrogate for the atmosphere-supplying or powered air-purifying respirator face piece.

Quantitative fit testing of these respirators shall be accomplished by modifying the face piece to allow sampling inside the face piece in the breathing zone of the user, midway between the nose and mouth. This requirement shall be accomplished by installing a permanent sampling probe onto a surrogate face piece, or by using a sampling adapter designed to temporarily provide a means of sampling air from inside the face piece.

Any modifications to the respirator face piece for fit testing shall be completely removed, and the face piece restored to NIOSH-approved configuration, before that face piece can be used in the workplace.

Fit Test Procedures

The requirements in this section apply to all OSHA-accepted fit test methods, both QLFT and QNFT.

The test subject shall be allowed to pick the most acceptable respirator from a sufficient number of respirator sizes so that the respirator is acceptable to, and correctly fits, the user.

Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject's formal training on respirator use, because it is only a review.

The test subject shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.



The test subject shall be instructed to hold each chosen face piece up to the face and eliminate those that obviously do not give an acceptable fit.

The more acceptable face pieces are noted in case the one selected proves unacceptable; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the following points:

- If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.
- Position of the mask on the nose
- Room for eye protection
- Room to talk
- Position of mask on face and cheeks

The following criteria shall be used to help determine the adequacy of the respirator fit:

- Chin properly placed;
- Adequate strap tension, not overly tightened;
- Fit across nose bridge;
- Respirator of proper size to span distance from nose to chin;
- Tendency of respirator to slip;
- Self-observation in mirror to evaluate fit and respirator position.

Use the Fit Test form.

User Seal Check

Before conducting the negative and positive pressure checks, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. The test subject shall conduct a user seal check, either the negative or positive pressure seal checks described below:

Positive Pressure Check

Close off the exhalation valve and exhale gently into the face piece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the face piece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.

Negative Pressure Check

Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s), inhale gently so that the face piece collapses slightly, and hold the breath for ten seconds. The design of the inlet opening of some cartridges cannot be effectively covered with the palm of the hand. The test can be performed by covering the inlet opening of the cartridge with a thin latex or nitrile glove. If the face piece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.



The test shall not be conducted if there is any hair growth between the skin and the face piece sealing surface, such as stubble beard growth, beard, moustache or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed, including glasses.

If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician or other licensed health care professional, as appropriate, to determine whether the test subject can wear a respirator while performing her or his duties. If the employee finds the fit of the respirator unacceptable, the test subject shall be given the opportunity to select a different respirator and to be retested.

Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.

The fit test shall be performed while the test subject is wearing any applicable safety equipment that may be worn during actual respirator use which could interfere with respirator fit.

Test Exercises

Each test exercise shall be performed for one minute except for the grimace exercise which shall be performed for 15 seconds. The test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried. If due to medical or health conditions the employee cannot perform the test exercises the fit test shall not be performed and the employee not allowed to use a respirator until all elements of the fit test can be achieved.

The respirator shall not be adjusted once the fit test exercises begin. Any adjustment voids the test, and the fit test must be repeated.

The following test exercises are to be performed for all fit testing methods prescribed in this procedure:

- Normal breathing. In a normal standing position, without talking, the subject shall breathe normally.
- Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.
- Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.
- Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).
- Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject shall read from the Rainbow Passage

Rainbow Passage

“When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the



horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.” Continue to read for one minute.

- Grimace. The test subject shall grimace by smiling or frowning. (This applies only to QNFT testing; it is not performed for QLFT)
- Jogging in place. The test subject shall jog in place being careful to be aware of their surroundings.
- Normal breathing. Same as exercise (1).

Qualitative Fit Test (QLFT) Protocols

General

The employer shall ensure that persons administering QLFT are able to prepare test solutions, calibrate equipment and perform tests properly, recognize invalid tests, and ensure that test equipment is in proper working order. The employer shall ensure that QLFT equipment is kept clean and well maintained so as to operate within the parameters for which it was designed.

Irritant Smoke (Stannic Chloride) Protocol

This qualitative fit test uses a person's response to the irritating chemicals released in the "smoke" produced by a stannic chloride ventilation smoke tube to detect leakage into the respirator.

General Requirements and Precautions. The respirator to be tested shall be equipped with high efficiency particulate air (HEPA) or P100 series filter(s).

Only stannic chloride smoke tubes shall be used for this protocol. No form of test enclosure or hood for the test subject shall be used.

The smoke can be irritating to the eyes, lungs, and nasal passages. The test conductor shall take precautions to minimize the test subject's exposure to irritant smoke. Sensitivity varies, and certain individuals may respond to a greater degree to irritant smoke. Care shall be taken when performing the sensitivity screening checks that determine whether the test subject can detect irritant smoke to use only the minimum amount of smoke necessary to elicit a response from the test subject.

The fit test shall be performed in an area with adequate ventilation to prevent exposure of the person conducting the fit test or the build-up of irritant smoke in the general atmosphere.

The person to be tested must demonstrate his or her ability to detect a weak concentration of the irritant smoke.

- The test operator shall break both ends of a ventilation smoke tube containing stannic chloride, and attach one end of the smoke tube to a low flow air pump set to deliver 200 milliliters per minute, or an aspirator squeeze bulb. The test operator shall cover the other end of the smoke tube with a short piece of tubing to prevent potential injury from the jagged end of the smoke tube.
- The test operator shall advise the test subject that the smoke can be irritating to the eyes, lungs, and nasal passages and instruct the subject to keep his/her eyes closed while the test is performed.



- The test subject shall be allowed to smell a weak concentration of the irritant smoke before the respirator is donned to become familiar with its irritating properties and to determine if he/she can detect the irritating properties of the smoke. The test operator shall carefully direct a small amount of the irritant smoke in the test subject's direction to determine that he/she can detect it.

Irritant Smoke Fit Test Procedure

- The person being fit tested shall don the respirator without assistance, and perform the required user seal check(s).
- The test subject shall be instructed to keep his/her eyes closed if wearing a half face respirator.
- The test operator shall direct the stream of irritant smoke from the smoke tube toward the face seal area of the test subject, using the low flow pump or the squeeze bulb. The test operator shall begin at least 12 inches from the face piece and move the smoke stream around the whole perimeter of the mask. The operator shall gradually make two more passes around the perimeter of the mask, moving to within six inches of the respirator.
- If the person being tested has not had an involuntary response and/or detected the irritant smoke, proceed with the test exercises.
- The exercises identified in the Test Exercises of this procedure shall be performed by the test subject while the respirator seal is being continually challenged by the smoke, directed around the perimeter of the respirator at a distance of six inches.
- If the person being fit tested reports detecting the irritant smoke at any time, the test is failed. The person being retested must repeat the entire sensitivity check and fit test procedure.
- Each test subject passing the irritant smoke test without evidence of a response (involuntary cough, irritation) shall be given a second sensitivity screening check, with the smoke from the same smoke tube used during the fit test, once the respirator has been removed, to determine whether he/she still reacts to the smoke. Failure to evoke a response shall void the fit test.
- If a response is produced during this second sensitivity check, then the fit test is passed. The glass tube shall be disposed of properly.

Quantitative Fit Test (QNFT) Protocols

Using controlled negative pressure and appropriate instrumentation to measure the volumetric leak rate of a face piece to quantify the respirator have been demonstrated to be acceptable to OSHA.

The employer shall ensure that persons administering QNFT are able to calibrate equipment and perform tests properly, recognize invalid tests, calculate fit factors properly and ensure that test equipment is in proper working order.

The employer shall ensure that QNFT equipment is kept clean, and is maintained and calibrated according to the manufacturer's instructions so as to operate at the parameters for which it was designed.

Portacount Fit Test Requirements

- Check the respirator to make sure the respirator is fitted with a high-efficiency filter and that the sampling probe and line are properly attached to the face piece.



- Instruct the person to be tested to don the respirator for five minutes before the fit test starts. This purges the ambient particles trapped inside the respirator and permits the wearer to make certain the respirator is comfortable. This individual shall already have been trained on how to wear the respirator properly.
- Check the following conditions for the adequacy of the respirator fit: Chin properly placed; Adequate strap tension, not overly tightened; Fit across nose bridge; Respirator of proper size to span distance from nose to chin; Tendency of the respirator to slip; Self-observation in a mirror to evaluate fit and respirator position.
- Have the person wearing the respirator do a user seal check. If leakage is detected, determine the cause. If leakage is from a poorly fitting face piece, try another size of the same model respirator, or another model of respirator.
- Follow the manufacturer's instructions for operating the Portacount and proceed with the test.
- The test subject shall be instructed to perform the exercises in Test Exercises section of this procedure.
- After the test exercises, the test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried.

Portacount Test Instrument

The Portacount will automatically stop and calculate the overall fit factor for the entire set of exercises. The overall fit factor is what counts. The Pass or Fail message will indicate whether or not the test was successful. If the test was a Pass, the fit test is over.

Since the pass or fail criterion of the Portacount is user programmable, the test operator shall ensure that the pass or fail criterion meet the requirements for minimum respirator performance.

A record of the test needs to be sent to the Safety Manager and kept on file, assuming the fit test was successful. The record must contain the test subject's name; overall fit factor; make, model, style, and size of respirator used; and date tested.

Use, Maintenance and Care of Respirators

This section requires The employer to provide for the use, cleaning and disinfecting, storage, inspection, and repair of respirators used by employees. OSHA Appendix B - Respirator Cleaning Procedures (Mandatory) shall be followed.

Use

- The effective facial seal of respiratory protective equipment is vital. Anything that can affect the seal must be prohibited and include facial hair, glasses, etc. Respirators with tight-fitting facepieces shall not be worn by employees who have facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function.
- Each time a respirator is put on a positive and negative pressure check shall be performed.

Cleaning and Storage Requirements

Respirators are properly cleaned and stored. 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. All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture,



and damaging chemicals, and they shall be packed or stored to prevent deformation of the facepiece and exhalation valve.

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 by the employee as often as necessary to be maintained in a sanitary condition,
- Respirators used in fit testing and training shall be cleaned and disinfected after each use by the Safety Manager or designated person.
- Each individual who is assigned a cartridge respirator is responsible for seeing that the respirator is cleaned, inspected and properly stored.

Cleaning Procedures

- Remove filters, cartridges, or canisters. Disassemble face pieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
- Wash components in warm 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, preferably running water. Drain.
- When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in commercially available cleansers of equivalent disinfectant quality. Another alternative is to use wipes containing alcohol that are intended for use with respirators.
- Rinse components thoroughly in clean, warm, preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on face pieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
- Components should be hand-dried with a clean lint-free cloth or air dried. Reassemble face piece, replacing filters, cartridges, and canisters where necessary. Test the respirator to ensure that all components work properly.

Storage and Inspection

- Respiratory equipment shall be stored in a manner to protect it from damage, contamination, temperature extreme, etc.
- Respiratory equipment intended for emergency use shall be stored in an area that is readily accessible and be clearly marked.

The employer shall ensure that respirators are inspected as follows:

- Respirators are inspected before use. 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 inspected at least monthly and in accordance with the manufacturer's recommendations, and shall be checked for proper function before and after each use; and emergency escape-only respirators shall be inspected before being carried into the workplace for use.



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

Breathing Air Quality and Use

The employer shall ensure that compressed air accords with the following specifications:

- Compressed breathing air shall meet at least the requirements for Type 1-Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989, to include:
 - Oxygen content (v/v) of 19.5-23.5%;
 - Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;
 - Carbon monoxide (CO) content of 10 ppm or less;
 - Carbon dioxide content of 1,000 ppm or less; and
 - Lack of noticeable odor.
- The employer shall ensure that oxygen is not used in compressed air units.
- The employer shall ensure that oxygen concentrations greater than 23.5% are used only in equipment designed for oxygen service or distribution.
- The employer shall ensure that cylinders used to supply breathing air to respirators meet DOT requirements and that:
 - Cylinders are tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR part 173 and part 178);
 - Cylinders of purchased breathing air have a certificate of analysis from the supplier that the breathing air meets the requirements for Type 1--Grade D breathing air; and
 - The moisture content in the cylinder does not exceed a dew point of -50 deg. F (-45.6 deg. C) at 1 atmosphere pressure.
- The employer shall ensure that compressors used to supply breathing air to respirators are constructed and situated so as to:
 - Prevent entry of contaminated air into the air-supply system;
 - Minimize moisture content so that the dew point at 1 atmosphere pressure is 10 degrees F (5.56 deg. C) below the ambient temperature;
 - Have suitable in-line air-purifying sorbent beds and filters to further ensure breathing air quality. Sorbent beds and filters shall be maintained and replaced or refurbished periodically following the manufacturer's instructions.
- Have a tag containing the most recent change date and the signature of the person authorized by the employer to perform the change. The tag shall be maintained at the compressor.
- For compressors that are not oil-lubricated, the employer shall ensure that carbon monoxide levels in the breathing air do not exceed 10 ppm.



- For oil-lubricated compressors, the employer shall use a high-temperature or carbon monoxide alarm, or both, to monitor carbon monoxide levels. If only high-temperature alarms are used, the air supply shall be monitored at intervals sufficient to prevent carbon monoxide in the breathing air from exceeding 10 ppm.
- The employer shall ensure that breathing air couplings are incompatible with outlets for nonrespirable worksite air or other gas systems. No asphyxiating substance shall be introduced into breathing air lines.

Repairs

The employer shall ensure that respirators that fail an inspection or are otherwise found to be defective are immediately 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

Voluntary Use

If an employee chooses to voluntarily wear a respirator when not required by this Program (contaminants do not meet protection standards, odors, etc.) they will be advised of the following in their training:

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for employees.

However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the employee. Sometimes, employees may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

- Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
- Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
- Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
- Keep track of your respirator so that you do not mistakenly use someone else's respirator.

Workplace Monitoring



A program of monitoring potential employee exposures has been implemented through the corporate health and safety department. Project personnel may also be assigned with the task of conducting air monitoring. Direct-reading instruments will also be used in the characterization of potential exposures. All the data collected is used to determine the appropriateness of the respiratory equipment.

Recordkeeping

The employer will establish and retain written information regarding medical evaluations, fit testing and the respirator program. Records of medical evaluations required by this section must be retained and made available in accordance with 29 CFR 1910.1020. The employer shall provide the employee with an opportunity to discuss the questionnaire and examination results with the PLHCP.

Records will be treated confidentially and maintained on file in the employer's corporate office by the Safety Manager.

Program Evaluation

The employer 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 employer shall regularly consult employees required to use respirators to assess the employees' views on this program's effectiveness and to identify any problems. Any problems that are identified during this assessment shall be corrected. Factors to be assessed and verified 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.

Training

Employees are provided training on Respiratory Protection. Training shall address employee knowledge of respirators, fit, use, limitations, emergency situations, wearing, fit checks, maintenance and storage, medical signs and symptoms of effective use and general requirements of the OSHA standard. The training must be provided before requiring the employee to use the respirator.

Retraining

Retraining shall be administered annually, and when the following situations occur:

- Changes in the workplace or the type of respirator render previous training obsolete;
- Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill; or
- Any other situation arises in which retraining appears necessary to ensure safe respirator use.



VERACITY FIELD
SERVICES, LLC

Veracity Field Services, LLC Qualitative Respiratory Fit Test Record Sheet

Note: Employee Must Have Completed Respiratory Protection Training and Passed Airway Exam Prior To Fit Testing

Test Date: _____

Employee Name: _____ SS# _____

Test Agent: Irritant Smoke (Stannic Chloride)

Respirator Identification:

Model: North 7700 Series Half Mask Size (circle one): Small Medium Large
Manufacturer: North Safety Products Approval No: 42 CFR 84
Additional Information: Respirator must be equipped with North HEPA filters

Fit Test Protocol (Test Subject Initials indicate steps were performed):

___ TOLD TO KEEP EYES CLOSED DURING SMOKE EXPOSURE

- | | |
|---|--|
| ___ Test subject smelled irritant smoke before fit test | ___ Wore respirator 5 minutes before fit test |
| ___ Protocol reviewed before fit test | ___ Test subject did not have hair in fitting area |
| ___ Shown how to wear respirator | ___ Performed positive pressure & negative fit check successfully after seating respirator |
| ___ Mirror available for use by subject | |
| ___ Must wear PPE (hard hat, etc.) if needed | |

Fit Test Steps (1 minute each except Grimace = 15 seconds)

- | | | |
|---------------------|------------------------------------|------------------------------|
| ___ Breath normally | ___ Breathe deeply | ___ Turned head side to side |
| ___ Nod up and down | ___ Talking (Read Rainbow Passage) | ___ Grimace |
| ___ Jog in place | ___ Breath normally | |

“When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow”.

Fit Test Results: _____ Pass _____ Fail

Test Subject Signature: _____ Date: _____

Examiner's Name: _____ Examiner's Signature: _____ Date: _____

Distribution: Employee Local File - Veracity Field Services, LLC Safety & Training Dept



RIGGING & MATERIAL HANDLING



Purpose

The purpose of this program is to ensure a safe and incident free lifting operation.

Scope

When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Veracity Field Services employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Key Responsibilities

Management shall determine if this program is required for regulatory compliance within his/her region. Management shall select a training facility or use an in-house qualified trainer to supply and document the training.

Supervisors shall assist the managers in the tasks described above. The supervisor shall verify that each of their employees have the proper training before being involved in rigging operations.

Only qualified and trained personnel can attach or detach lifting equipment to loads or lifting loads.

Procedure

General

Only "qualified riggers" are allowed to attach any loads to a lifting hook and only "qualified operators" are allowed to operate a crane while engaged in lifting operations.

Material Handling

- Rigging equipment shall be inspected to ensure it is safe. Rigging equipment for material handling shall be inspected prior to use and on each shift and as necessary during its use to ensure that equipment is safe.
- Defective rigging shall be removed from service. Defective equipment shall not be used and removed from service immediately.
- Rigging equipment shall not be loaded in excess of its recommended safe working load. Rigging equipment shall not be loaded beyond its recommended safe working load and load identification shall be attached to the rigging.
- Rigging equipment, when not in use, shall be removed from the immediate work area. Rigging equipment not in use shall be removed from the immediate work area so as not to present a hazard to employees.
- Tag lines shall be used unless their use creates an unsafe condition.
- Latches will be in place on all hooks, eliminating the hook throat opening. Hooks on overhaul ball assemblies, lower load blocks, or other attachment assemblies shall be a type that can be closed and locked, eliminating the hook throat opening. Alternatively, an alloy anchor type shackle with a bolt, nut and retaining pin may be used.



- All employees shall be kept clear of loads about to be lifted and of suspended loads. No employee shall be allowed under a suspended load.

Training and Education

Veracity Field Services employees shall display their competency in the following topics:

- The selection of proper hardware (eye bolts, shackles, hooks, wire rope products, synthetic slings, chain slings, etc.) for the correct application (weight, hitches, angles, temperatures, center of gravity, etc.).
- The inspection of the selected hardware before, during and after the lift.
- The proper methods of securing the load, attaching the load to the hook, lifting the load, handling of the load during the movement of the load and lowering and placement of load.
- The proper storage of the rigging equipment.
- All Veracity Field Services employees shall re-certify their training on a four (4) year basis.



RISK ASSESSMENT & IDENTIFICATION OF HAZARDS



Purpose

The purpose of this procedure is to provide guidelines for identifying, assessing and controlling workplace risks/hazards and to ensure the potential risks/hazards of new processes and materials are identified before they are introduced into the workplace.

Key Responsibilities and Involvement

- Unsafe risks/hazards must be reported immediately by all employees and addressed by their supervisor. The supervisor discusses the worksite hazard assessment with employees at the respective work location during the employee's documented orientation.
- Veracity Field Services must assess a work site and identify existing or potential risks/hazards before work begins at the work site or prior to the construction of a new work site.
- Employees and/or sub-contractors are actively involved in the risk/hazard identification process. The Veracity Field Services program must provide processes to ensure employees and/or sub-contractors are actively involved in the hazard identification process and hazards are reviewed with all employees concerned, provide mechanisms to involve workers and their elected representatives in the development of the worker safety and health program goals, objectives and performance measures and in the identification and control of hazards in the workplace.
- The respective supervisor or project manager advises the Safety Manager when additional hazards are introduced into the work place in order to revise planning and assessment needs.

When the Risk/Hazard Identification Process is Used

The hazard identification process should be used for routine and non-routine activities as well as new processes, changes in operation, products or services as applicable.

The Safety Manager shall conduct a baseline worksite risk/hazard assessment which is a formal process in place to identify the various tasks that are to be performed and the accompanying identified potential risks/hazards. The results are included in a report of the results of the risk/hazard assessment and the methods used to control or eliminate the risks/hazards identified. The risk/hazard assessment report must be signed and have the date on it.

Inputs into the baseline risk/hazard identification include, but are not limited to:

- Scope of work;
- Legal and other requirements;
- Previous incidents and non-conformances;
- Sources of energy, contaminants and other environmental conditions that can cause injury;
- Walk through of work environment;

Risks/Hazards identifications (as examples) are to include:

- Thermal Exposure
- Isolation of Energy
- Hearing Protection
- Bloodborne Pathogens



- Confined Spaces
- Driving
- General Safety Precautions
- And any other established policy or procedure by Veracity Field Services
- Any other site specific work scope

All identified risks/hazards are assessed for risk and risk controls are assigned within the worksite hazard assessment for that specific hazard.

Training

Employees are trained in the risk/hazard identification process. Employees will be trained in the hazard identification process including the use and care of proper PPE.

Review of Risk/Hazard Assessment

Existing worksite risk/hazard identifications are formally reviewed annually or repeated at reasonably practicable intervals to prevent the development of unsafe and unhealthy working conditions and specifically updated when new tasks are to be performed that have not been risk assessed, when a work process or operation changes, before the construction of a new site or when significant additions or alterations to a job site are made.

Formal Process for Identifying Risk Assessment

Veracity Field Services must establish procedures to identify existing and potential workplace hazards and assess the risk of associated workers injury and illness. This program must identify processes are in place to identify potential hazards by the use of JSA's, JHA's, facility wide or area specific analysis/inspections.

Risks/hazards are classified and/or ranked based on severity. The program must identify hazards are classified/prioritized and addressed based on the risk associated with the task / (Risk analysis matrix outlining severity and probability).

Certification of Risk/Hazard Assessment

The Safety Manager completes and signs the certification of risk/hazard assessment for the worksite risk/hazard assessment (also see PPE Program) and includes it within the site specific HSE plan. Risk/hazard assessments are reviewed annually and updated when new tasks are to be performed that have not been risk assessed.

Job Safety Analysis (JSA)

For those jobs with the highest injury or illness rates, jobs that are new to our operation, jobs that have undergone major changes in processes and procedures or jobs complex enough to require written instructions will have a Job Safety Analysis performed. The JSA form can be found at: www.veracityfieldservices.com.



VERACITY FIELD SERVICES RISK ASSESSMENT MATRIX

CONSEQUENCE					PROBABILITY				
Severity	People	Assets	Environment	Reputation	A	B	C	D	E
					Not Done	Rarely	Once a week	Several Times in a Week	Multiple Times in a Day
0	No health effect	No damage	No effect	No impact					
1	Slight health effect	Slight damage	Slight effect	Slight impact					
2	Minor health effect	Minor damage	Minor effect	Limited impact					
3	Major health effect	Localized damage	Localized effect	Considerable impact					
4	Single fatality	Major damage	Major effect	National impact					
5	Multiple fatalities	Extensive damage	Massive effect	Global impact					

Key	Manage for continuous improvement (Low)	Incorporate risk reduction measures (Medium)	Intolerable (High)
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Methods to Ensure Identified Risks/Hazards Are Addressed and Mitigated

The program must demonstrate how identified hazards are addressed and mitigated. This can be accomplished by dedicated assignment, appropriate documentation of completion and implemented controls. The following describes how identified hazards are addressed and mitigated:

- Risk assessed hazards are compiled with and addressed and mitigated through dedicated assignment, appropriate documentation of completion, and implemented controls methods including engineering or administrative controls and PPE required into the worksite hazard assessment of the site specific HSE plan. No work will begin before the worksite assessment is completed. Additionally, no risk assessed as High (Intolerable) shall be performed.
- If an existing or potential hazard to workers is identified during a risk/hazard assessment Veracity Field Services must take measures to eliminate the hazard, or if elimination is not reasonably practicable, control the hazard. If reasonably practicable, Veracity Field Services must eliminate or control a hazard through the use of engineering controls. If a hazard cannot be adequately controlled using engineering controls, Veracity Field Services must use administrative controls that control the hazard to a level as low as reasonably achievable. If the hazard cannot be adequately controlled using engineering and/or administrative controls, Veracity Field Services must ensure that the appropriate personal protective equipment (PPE) is used by workers affected by the hazard. Veracity Field Services may use a combination of engineering controls, administrative controls, and personal protective equipment if there is a greater level of worker safety because a combination is used.



Emergency Control of Hazards

Only those employees competent in correcting emergency controls of hazards may be exposed to the hazard and only the minimum number of competent employees may be exposed during hazard emergency control. An example is a gas leak in a building. Only those personnel with training on fire safety, gas supply shut off and other related controls will attempt to resolve the emergency control of a hazard. Veracity Field Services will make every possible effort to control the hazard while the condition is being corrected or under the supervision of client emergency response personnel in every emergency.



SCAFFOLDING



Purpose

The purpose of this program is to prevent injuries due to falls from elevated work areas and ensure employees and contractors are able to inspect scaffolding materials and erected scaffolds.

Scope

This program is applicable at every work area where scaffolding is erected. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers COMPANY employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

Bearer - A horizontal member of a scaffold upon which the platform rests and which may be supported by ledgers.

Brace - A tie that holds one scaffold member in a fixed position with respect to another member.

Coupler - A device for locking together the components of a tubular metal scaffold which shall be designed and used to safely support the maximum intended loads.

Double pole or independent pole scaffold - A scaffold supported from the base by a double row of uprights, independent of support from the walls and constructed of uprights, ledgers, horizontal platform bearers, and diagonal bracing.

Guardrail - A rail secured to uprights and erected along the exposed sides and ends of platforms.



Heavy Duty Scaffold - A scaffold designed and constructed to carry a working load not to exceed 75 pounds per square foot.

Ledger (stringer) - A horizontal scaffold member which extends from post to post and which supports the putlogs or bearer forming a tie between the posts.

Light Duty Scaffold - A scaffold designed and constructed to carry a working load not to exceed 25 pounds per square foot.

Manually Propelled Mobile Scaffold - Manually propelled mobile scaffold.

Maximum intended load - The total of all loads including the working load, the weight of the scaffold, and such other loads as may be reasonably anticipated.

Medium duty scaffold - A scaffold designed and constructed to carry a working load not to exceed 50 pounds per square foot.

Mid-Rail - A rail approximately midway between the guardrail and platform, used when required, and secured to the uprights erected along the exposed sides and ends of platforms.

Putlog - A scaffold member upon which the platform rests.

Runner - The lengthwise horizontal bracing or bearing members or both.

Scaffold - Any temporary elevated platform and its supporting structure used for supporting workmen or materials or both.

Toe board - A barrier secured along the sides and ends of a platform, to guard against the falling of material.

Tube and coupler scaffold - An assembly consisting of tubing, which serves as posts, bearers, braces, ties, and runners, a base supporting the posts, and special couplers which serve to connect the uprights and to join the various members.

Tubular welded frame scaffold - A sectional, panel, or frame metal scaffold substantially built up of prefabricated welded sections that consist of posts and horizontal bearer with intermediate members. Panels or frames shall be braced with diagonal or cross braces.

Working Load - Load imposed by men, materials, and equipment.

Key Responsibilities

Managers and Supervisors

- Responsible for ensuring that scaffolds are erected by a qualified person, that set up inspections are performed, and all daily inspections are performed before work starts for the day.



- Responsible for ensuring that all employees, and/or contractors have been trained in the use and inspection methods for scaffolds. Only qualified and competent personnel are allowed to use or modify scaffolding systems.
- Responsible for ensuring that all employees and contractors are aware that if an inspection discovers a defect, the scaffold cannot be used until repairs are made.

Employees

- Responsible for following this program by inspecting the scaffolds daily and report any damages or repairs that may be needed to their supervisor.

Procedure

General Requirements

Scaffolds shall be furnished and erected in accordance with applicable standards for persons engaged in work that cannot be done safely from the ground or from solid construction. Except that ladders used for such work shall conform to ladder safety standards.

Scaffolds shall only be erected by a qualified third party, who is competent to certify the scaffolding safe to use.

The footing or anchorage for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose boards shall not be used to support scaffolds or planks.

Scaffolds and their components shall be capable of supporting without failure at least four times the maximum intended loads. Scaffold components must meet OSHA requirements 29 CFR 1910.28 and 29 CFR 1926.451.

Wood scaffold planks must be cross-supported every 8 feet. Scaffold deck boards shall be cleated, wired or nailed into place.

All working levels of scaffolds will be floored completely except where internal ladders require space for ladder openings.

Scaffolds and other devices mentioned or described in this program shall be maintained in safe condition. Scaffolds shall not be altered or moved horizontally while they are occupied.

Any scaffold damaged or weakened from any cause shall be immediately repaired and shall not be used until repairs have been completed.

Scaffolds shall not be loaded in excess of the working loads for which they are intended.

Bolts used in the construction of scaffolds shall be of adequate size and in sufficient numbers at each connection to develop the designed strength of the scaffold.

All platforms shall be overlapped (minimum 12 inches) and secured from any movement.



An access ladder or equivalent safe access shall be provided.

Scaffold planks shall extend over their end supports not less than 6 inches or more than 18 inches.

The poles, legs, or uprights of scaffolds shall be plumb, and securely and rigidly braced to prevent swaying and displacement.

Materials being hoisted onto a scaffold shall have a tag line.

Overhead protection shall be provided for workers on a scaffold exposed to overhead hazards.

Toe boards and guardrails shall be installed if a scaffold or platform is erected to a height of 6 feet or more. Scaffolds shall be provided with a screen between the toe board and the guardrail, extending along the entire opening, consisting of No. 18 gauge wire one-half inch mesh or the equivalent, where workers are required to work or pass under the scaffolds.

Work shall not be performed on a scaffold during storms or high winds.

Work shall not be performed on scaffolds that are covered with snow or ice, unless all snow and ice has been removed and all planking has been sanded to prevent slipping.

Tools, material, and debris shall not be allowed to accumulate in quantities to cause a hazard.

Inspections

Scaffolding shall be inspected, by a qualified person, in conjunction with the manufactures required recommendations. The competent person must also insure scaffolds are safe prior to and during scaffold use.

- At a minimum, the following shall be inspected by the competent person after erection, before the start of the day or beginning of a shift change to ensure scaffolds are safe prior to and during use:
 - Ground or surface footing shall be inspected to ensure that there is no settling.
 - All main supports and cross braces shall be inspected for any signs of damage, missing pins, bolts and any locks and/or safety keepers.
 - All walking surfaces and/or planks shall be inspected for damage and proper placements and any possible movement.
 - All walkways and planks must be secure to prevent any movement.
- Inspection shall be made to ensure that the scaffold is stable and any movement is prevented.
- If during the inspection, a defect or damage to the scaffold is discovered, the scaffold shall be tagged out by the competent person, complied with and use prohibited until needed repairs are made.

Mandatory Signs and Tags for Defects Found

Signs and tags shall be visible at all times when work is being performed, and shall be removed or covered promptly when the hazards no longer exist. Employees shall be instructed in complying with signs and tags.



Defective or unsafe equipment or conditions shall be tagged out by the competent person using a weather resistant tag secured to the scaffolding structure on all four sides and must be complied with. An example would be improper footing conditions were observed.

Danger signs shall be used only where an immediate hazard exists. Danger signs must be posted around the immediate area of the scaffold, to alert other workers of possible danger from falling objects from the scaffold.

Caution Signs and/or barricade tape shall be used to mark off a larger area around scaffolding warning other workers to use caution.

Modifications

Modification and repairs shall be performed by a qualified person, who is competent to certify the scaffolding safe to use to ensure non-qualified personnel do not create additional hazards.

Employees shall not perform any modifications or repairs, unless they have been trained and certified, and failure to comply may result in disciplinary action and or termination.



Training Requirements

COMPANY is required to train all employees that work on scaffolds regarding hazards by "qualified" persons. The supervisor shall have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. The training shall occur before use and include the following areas:

- Basic safety information and duties of a competent person assembling/disassembling scaffolding (see below). Basic safety information must be provided prior to use and when conditions change.
- Hazards including fall protection, electrical safety, falling object protection (see below).
- Tags – types and the requirement to comply with.
- The proper use of the scaffold, and the proper handling of materials on the scaffold.
- The correct procedures for dealing with electrical hazards and for erecting, maintaining, and disassembling the fall protection systems and falling object protection systems being used.
- The maximum intended load capacity of the scaffolds used.

The supervisor shall have each employee who is involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold trained by a competent person to recognize any hazards associated with the work in question.

- The training shall include the following topics, as applicable:
- The nature of scaffold hazards.
- The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in use.
- The design criteria, maximum intended load-carrying capacity and intended use of the scaffold.

When the employer has reason to believe that an employee lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds, the employer shall retrain each employee so that the requisite proficiency is regained. Retraining is also required in at least the following situations:

- Where changes in scaffolding at the worksite present a hazard about which an employee has not been previously trained.
- Where changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard about which an employee has not been previously trained.
- Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency.

Hazards Associated with the Use of Scaffolds

- Nearby electrical lines or source of electrical hazards
- Poor foundation – scaffold shall be erected on a firm and stable base.
- Damaged scaffold components.
- Overload of scaffold components (load capacity).
- Unstable, incomplete or incorrect use of scaffold.



- Base frames not adequately braced, tied or supported.
- Scaffold exceeds height to base dimensions ratio.
- Inappropriate access or egress points.
- Slips and falls.
- Falling objects.
- Manual handling.
- Movement of plant and machinery – all cranes and mobile machinery shall keep within designated areas and away from scaffolding.

Duties of a Competent Person Assembling/Disassembling Scaffolding

General

- To select and direct employees who erect, dismantle, move, or alter scaffolds.
- To determine if it is safe for employees to work on or from a scaffold during storms or high winds and to ensure that a personal fall arrest system or wind screens protect these employees. (Note: Windscreens should not be used unless the scaffold is secured against the anticipated wind forces imposed.)

For Training

- To train employees involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting scaffolds to recognize associated work hazards.

For Inspections

- To inspect scaffolds and scaffold components for visible defects before each work shift and after any occurrence which could affect the corrective actions.
- To inspect ropes on suspended scaffolds prior to each work shift and after every occurrence which could affect the structural integrity and to authorize prompt corrective actions.
- To inspect manila or plastic (or other synthetic) rope being used for top rails or midrails.

For Suspension Scaffolds

- To evaluate direct connections to support the load.
- To evaluate the need to secure two-point and multi-point scaffolds to prevent swaying.

For Erectors and Dismantlers

- To determine the feasibility and safety of providing fall protection and access.
- To train erectors and dismantlers to recognize associated work hazards.

For Scaffold Components

- To determine if a scaffold will be structurally sound when intermixing components from different manufacturers.
- To determine if galvanic action has affected the capacity when using components of dissimilar metals.



Tube And Coupler Scaffolds - Light Duty

Uniformly distributed load	Not to exceed 25 p.s.f.	
Post Spacing (longitudinal)	10 ft. 0 in.	
Post Spacing (transverse)	6 ft. 0 in.	
Working Levels	Additional Planked Levels	Maximum Height
1	8	125 ft.
2	4	125 ft.
3	0	91 ft. 0 in.

Tube And Coupler Scaffolds - Medium Duty

Uniformly distributed load	Not to exceed 50 p.s.f	
Post spacing (longitudinal)	8 ft. 0 in.	
Post spacing (transverse)	6 ft. 0 in.	
Working Levels	Additional Planked Levels	Maximum Height
1	6	125 ft.
2	0	78 ft. 0 in.



SHORT SERVICE EMPLOYEE



Purpose

The purpose of the Short Service Employee (SSE) Management program is to prevent work related injuries and illnesses to new hires and temporary workers. The Supervisors and co-workers must be able to readily identify Short Service Employee participants. Veracity Field Services (the company) will assign experienced employees to oversee the daily activities of those assigned to the SSE program.

Scope

- Applies to all Veracity Field Services employees.

Definitions

Short Service Employee (Who is Covered Under the Short Service Employee Program) – An employee with less than six months experience in the same job or with his/her present employer.

Mentor – An experienced employee, who has been assigned to help and work with a new Short Service Employee by his/her supervisor.

Key Responsibilities

- Managers and Supervisors shall ensure that this program is implemented and followed.
- Employees shall follow the requirements of this program.

Monitoring of Short Service Employees at the Job Site

- Veracity Field Services shall monitor its employees, including SSE personnel, for HES awareness.
- If, at the end of the six-month period, the SSE has worked safely, adhered to HES policies and has no recordable incident attributable to him/her, the SSE identifier may be removed at the discretion of Veracity Field Services.
- Veracity Field Services shall require any employee that does not complete the six-month period recordable free to get operator approval in writing prior to returning to operator property.

Subcontractors

- Subcontractors must adhere to the requirements of the Short Service Employee program.
- Subcontractors must manage their Short Service Employees in accordance with the requirements of the Short Service Employee program.

Procedure

General

A Short Service Employee may not work alone. A work crew of less than 5 employees may not have more than one Short Service Employee.



Supervisors will assure that all new, transferred and temporary employees have been through Veracity Field Services Safety Orientation and have a complete knowledge of the expectations for their job function.

Mentoring Oversight and Monitoring

A Short Service Employee is mentored by an experienced/ knowledgeable employee. A mentoring system shall be implemented to provide guidance to Short Service Employees and assist with their development. A mentor may only be assigned to one crew that includes Short Service Employees and he/she must remain on site with them.

Supervisors will identify all employees and temporary personnel with less than 180 days of service, or those employees they desire to return to a mentoring status for improvement in job and/or safety performance. Any Short Service Employee experiencing an OSHA Recordable injury during the initial 180 days will repeat the mentoring program or shall be dismissed for poor performance.

Managers and the Safety Department will randomly audit for process compliance. This will involve interviewing employees in the Short Service Employee program (documentation is not required).

Short Service Employees are monitored for compliance with HSE policies and procedures. Short Service Employees shall be monitored for compliance with health, safety and environmental policies and procedures. Once the Short Service Employee has demonstrated competency and compliance with HSE policies and procedures, the contractor may remove the hi-visibility identifier.

Short Service Employee Identification

Short Service Employees must wear uniquely colored hardhats (or another type of identifier). Short Service Employees shall be visibly identified through the use of a different colored hardhat or other method of identification. The method used to identify SSEs should be communicated to the Owner Client.

Notification and Communication Processes

The host facility must be notified when a Short Service Employee will be working at their site. Prior to starting work, Veracity Field Services shall notify the host facility (project coordinator, contractor contact, and/or on-site supervisor) if Short Service Employees are present on work crews.

Mentors will converse daily with those persons assigned to them, preferably at the start of the day. This will be in addition to other tailgate or daily safety meetings held in the work area.



SILICA EXPOSURE CONTROL



Purpose

The purpose of an exposure control plan (ECP) is to set out our approach to protecting workers from harmful exposure to airborne silica dust.

A combination of control measures will be required to achieve this objective. We commit to being diligent in our efforts to select the most effective control technologies available, and to ensure that the best practices, as described in this ECP, are followed at our worksites.

The work procedures we establish will protect not only our workers but all workers on our worksites.

Key Responsibilities

Due to the significant risk posed by respirable silica, it is critical that all personnel involved in operations that could potentially create silica dust take specific action to ensure that, as much as possible, a hazard is not created.

VERACITY FIELD SERVICES is responsible for:

- Substitution of less hazardous products for those that contain crystalline silica is required.
- Ensuring that the materials (e.g., tools, equipment, personal protective equipment) and other resources (i.e., worker training materials) required to fully implement and maintain this exposure control plan (ECP) are readily available where and when they are required.
- Providing a job-specific ECP for each project, which outlines in detail the work methods and practices that will be followed on each site. Considerations will include
 - Availability and delivery of all required tools/equipment
 - Scope and nature of grinding work to be conducted
 - Control methods to be used and level of respiratory protection required
 - Coordination plan
- Conducting a periodic review of the effectiveness of the ECP. This would include a review of the available dust-control technologies to ensure these are selected and used when practical.
- Initiating sampling of worker exposure to concrete dust when there are non-standard work practices for which the control methods to be used have not been proven to be adequately protective.
- Ensuring that all required tools, equipment, and personal protective equipment are readily available and used as required by the ECP.
- Ensuring supervisors and workers are educated and trained to an acceptable level of competency.
- Maintaining records of training, fit-test results, crew talks, and inspections (equipment, PPE, work methods/practices).
- Coordinating the work with the prime contractor and other employers to ensure a safe work environment.

The supervisor (foreman and lead hand) is responsible for:

- Obtaining a copy of the ECP from the employer, and making it available at the worksite



- Selecting, implementing, and documenting the appropriate site-specific control measures
- Providing adequate instruction to workers on the hazards of working with silica-containing materials (e.g., concrete) and on the precautions specified in the job-specific plan covering hazards at the location
- Ensuring that workers are using the proper respirators and have been fit-tested, and that the results are recorded
- Directing the work in a manner that ensures the risk to workers is minimized and adequately controlled
- Communicating with the prime contractor and other sub-contractors to ensure a safe work environment

The worker is responsible for:

- Knowing the hazards of silica dust exposure
- Using the assigned protective equipment in an effective and safe manner
- Setting up the operation in accordance with the site-specific plan
- Following established work procedures as directed by the supervisor
- Reporting any unsafe conditions or acts to the supervisor
- Knowing how and when to report exposure incidents

Silica Properties

Silica is the second most common mineral on earth and makes up nearly all of what we call “sand” and “rock.” Silica exists in many forms—one of these, “crystalline” silica (including quartz), is the most abundant and poses the greatest concern for human health. Some common materials that contain silica include:

- Rock and sand
- Topsoil and fill
- Concrete, cement, and mortar
- Masonry, brick, and tile
- Granite, sandstone, and slate
- Asphalt (containing rock and stone)
- Fibrous-cement board containing silica

Silica is a primary component of many common construction materials, and silica-containing dust can be generated during many construction activities, including:

- Abrasive blasting (e.g., of concrete structures)
- Jackhammering, chipping, or drilling rock or concrete
- Cutting brick or tiles
- Sawing or grinding concrete
- Tuck point grinding
- Road construction
- Loading, hauling, and dumping gravel
- Demolition of structures containing concrete



- Sweeping concrete dust

Unprotected workers performing these activities, or working in the vicinity, can be exposed to harmful levels of airborne silica. Workers in other industries can also be exposed to silica, for example in the manufacture of toothpaste or pottery, or when loading coal (which can contain quartz) into the hold of a ship.

Health Hazards

Exposure to silica has been shown to cause silicosis, lung cancer, pulmonary tuberculosis and other airway diseases. Crystalline silica dust can cause a disabling, sometimes fatal disease called silicosis. The fine particles are deposited in the lungs, causing thickening and scarring of the lung tissue. The scar tissue restricts the lungs' ability to extract oxygen from the air. This damage is permanent, but symptoms of the disease may not appear for many years.

A worker may develop any of three types of silicosis, depending on the concentrations of silica dust and the duration of exposure:

- Chronic silicosis—develops after 10 or more years of exposure to crystalline silica at relatively low concentrations
- Accelerated silicosis—develops 5 to 10 years after initial exposure to crystalline silica at high concentrations
- Acute silicosis—develops within a few weeks, or 4 to 5 years, after exposure to very high concentrations of crystalline silica

Initially, workers with silicosis may have no symptoms; however, as the disease progresses, a worker may experience:

- Shortness of breath
- Severe cough
- Weakness

These symptoms can worsen over time and lead to death. Exposure to silica has also been linked to other diseases, including bronchitis, tuberculosis, and lung cancer.

Code of Practice

VERACITY FIELD SERVICES has a code of practice governing the storage, handling, use and disposal of silica if there is potential for exposure. The code of practice includes measures to be used to prevent the uncontrolled release of silica and the procedures to be followed if there is an uncontrolled release. Engineering controls such as ventilation or wet methods must be used to control silica-containing dusts.

Risk Identification, Assessment and Control

The potential for worker exposure to silica should be identified during the hazard assessment. A worker's exposure to silica is kept as low as reasonably achievable. Employees must not be exposed to airborne concentrations of



silica in excess of 0.025 mg/cubic meter over an 8 hour time period. Atmospheric testing results should be assessed before a worker is exposed.

A key step in developing a silica exposure control plan is to identify the work activities that would put workers at risk of exposure.

- Work activities — that may generate airborne silica dust—for silica, the route of exposure is through the inhalation of airborne dust. The employer should have a qualified person review the planned work activities to identify those that may generate airborne silica.
- Identify workers at risk of exposure—For example, workers who finish concrete would be at greater risk of exposure than plumbers or electrical workers.
- Amount of exposure—some work activities generate more dust than others, and the amount of exposure should be estimated. Published resources are available that provide air sampling data and compare silica dust levels from various construction activities.
- Duration of exposure—Workers who grind concrete for a full shift would be at greater risk than workers jackhammering for an hour.

Control Options

Effective control options must be used to eliminate or reduce the risk to workers from the hazards of silica dust exposure. The following hierarchy of control measures must be followed:

- Elimination/substitution (e.g., using products with less silica or using work methods that would eliminate the need for surface grinding)
- Engineering controls (e.g., water, local exhaust ventilation, enclosure)
- Administrative controls (e.g., coordination of tasks with subcontractors, signage)
- The use of proper PPE such as gloves, coveralls and eye protection when exposed to silica. Personal protective equipment such as gloves, coveralls and eye protection will be used to control silica exposures.

Our firm commits to developing knowledge and expertise about these controls, and to establishing policies/procedures to protect workers from harmful exposure and to minimize reliance on respirators. Effective engineering controls such as HEPA vacuum attachments and wetting methods, which control silica dust at its source, are readily available. These controls have been proven to reduce airborne dust levels significantly when selected and operated in accordance with best practices. We know that engineering controls alone do not reduce airborne silica to safe levels; so in most cases other control measures, including respiratory protection, will be necessary.

If we take on a job that could release an unusually high amount of dust, and we are unsure of the adequacy of our control measures, we will conduct air sampling in order to ensure that control methods are protective.

We will reduce or eliminate worker exposure to silica dust by selecting a combination of the following controls listed in order of preference:

- Elimination and substitution



- Engineering
- Administrative
- Personal protective equipment

Elimination and Substitution

We recognize the importance of planning the work in order to minimize the amount of silica dust generated. During the project planning phase, we will advocate for the use of methods that reduce the need for cutting, grinding, or drilling of concrete surfaces (e.g., formwork planning). Whenever possible, we will schedule work when concrete is still wet, because we know that much less dust is released at that time.

Engineering Control of Dust

Selecting an appropriate control measure depends on the specifics of the operation. In some cases, local exhaust ventilation (LEV) is more effective at controlling exposure (e.g., during grinding operations) than wetting methods. In a different application, wetting may be more effective (e.g., during cutting operations) than LEV. However, using LEV may reduce the amount of final cleaning required, as the silica dust is captured.

Our dust control systems may employ three well-established techniques:

- Local exhaust ventilation (LEV)
- Wet dust suppression (WDS)
- Restricting or isolating the work activity with barriers or full enclosures (this may be the only option where LEV or WDS is not practical or effective)

Local Exhaust Ventilation (LEV)

When LEV is used in our work, we will employ the following systems and safe work practices:

- Vacuum attachment systems to capture and control the dust at its source whenever possible.
- Dust control systems (used regularly and well maintained).
- Grinding wheels operated at the manufacturers' recommended rpm (operating in excess of this can generate significantly higher airborne dust levels).
- Retrofit shrouds or exhaust cowlings for corner grinding; use manufacturer-specified rpm speeds and a well-maintained HEPA vacuum.
- Diamond stone grinders, which allow for the use of a more efficient suction casing on the grinder, whenever practicable.
- HEPA or good quality, multi-stage vacuum units approved for use with silica dust. [The vacuum units should be capable of creating a target airflow of at least 70 cfm. This should achieve a face velocity at the shroud of about 1.3 m/s (260 fpm)—the higher the face velocity, the more dust captured at source.]
- Work planning, so that concrete grinding can be completed when wet (dust release can be significantly reduced).
- Good housekeeping work practices (for example, use vacuums with high-efficiency particulate air (HEPA) filters, or use wet sweeping).
- Train workers and supervisors on how to properly use and maintain the equipment.



Wet methods for Dust Control

When water spray systems are used in our work, we will follow these safe work practices:

- Pneumatic grinders will be used instead of electric-powered grinders if water is the method of control.
- Pressure and flow rate of water will be controlled in accordance with tool manufacturers' specifications (for cutting saws, a minimum of 0.5 liters of water per minute should be used).
- When sawing concrete or masonry, we will use only saws that provide water to the blade.
- Wet slurry will be cleaned from work surfaces when the work is completed, using a wet vacuum or wet sweeping.

Barriers and Enclosures

When barriers or enclosures are used in our work, we will follow these safe work practices:

- The site foreman will determine the type and design of barrier or enclosure (based on the work activity and the work area) and ensure it is constructed in accordance with the work plan. Barriers may be simple hazard-flagging ribbon or more restrictive hoarding.
- We will use commercially available negative air units when constructing a full enclosure.

Administrative Controls

We will follow these safe work practices:

- Exposure control plans and the site risk assessment/work plan will be submitted to the general contractor prior to the start of work.
- We will establish procedures for housekeeping, restricting work areas, personal hygiene, worker training, and supervision.
- As part of our project planning, we will assess when silica dust may be generated and plan ahead to eliminate or control the dust at the source. We recognize that awareness and planning are key factors in the prevention of silicosis.
- Warning signs will be posted to warn workers about the hazards of silica and to specify any protective equipment required (for example, respirators).
- Work schedules will be posted at the boundaries of work areas contaminated with silica dust.
- Work that generates silica dust will be conducted after hours, when access to other unprotected workers cannot be restricted.
- We will develop a site-specific exposure control plan to cover project-specific issues (e.g., scope of work, project location and site-specific hazards) and to be kept available at the worksite.

Personal Protective Equipment

Respiratory protection

- All workers who wear respirators will do so in adherence with our respirator program.
- Respirators must be selected based upon measured exposure levels and the assigned protection factor of respirators.



- Only approved respirators will be used.
- Workers who wear respirators will be clean-shaven. Filtering face piece respirators give little or no protection to workers with beards, and even a minor growth of stubble can severely reduce the effectiveness of respiratory protection.
- All workers who wear respirators will be fit-tested.
- Workers will be properly trained in the use of respirators, and a high standard of supervision, inspection, and maintenance will be followed.

Protective clothing

VERACITY FIELD SERVICES will provide workers in a restricted area with protective clothing that protects other clothing worn by the worker from silica contamination, ensure that workers' street clothing is not contaminated by silica, and ensure that a worker does not leave a restricted area until the worker has been decontaminated.

Health monitoring

Exposures to airborne concentrations of Silica must be kept below the permissible exposure limits shown in 29 CFR 1910.1000 Table Z-3.

Full shift personal samples shall be representative of the employee's regular, daily exposure to silica.

Documentation

Records must be kept of the following:

- All workers who are exposed to respirable silica dust while on the job
- Worker education and training sessions
- Respirator fit-testing
- Equipment maintenance and repair
- Worksite inspections

The exposure control plan must be reviewed at least annually and updated as necessary by the employer, in consultation with the workplace health and safety committee or the worker health and safety representative.

Education and Training

A worker who may be exposed to silica is to be informed of the health hazards associated with exposure to that substance, is informed of measurements made of airborne concentrations of harmful substances at the work site, and is trained in procedures developed by VERACITY FIELD SERVICES to minimize the worker's exposure.

Training is required prior to using silica-containing materials or working in an environment known to contain airborne concentrations of Silica. Periodic refresher training is also required. We will train all employees who might encounter silica dust in their job role in the following:

- Hazards associated with exposure to silica dust
- The risks of exposure to silica



- Signs and symptoms of silica disease
- Safe work procedures to be followed (e.g., setup of enclosures, disposal of silica waste, personal decontamination)
- Use of respirators and other personal protective equipment (e.g., donning and doffing of personal protective equipment, and cleaning and maintenance of respirators)
- Use of control systems (e.g., LEV and wet methods)
- How to seek first aid (for example, the location and use of eyewash stations)
- How to report an exposure to silica dust



CONTROL PLAN

Date control plan completed:			
Prime contractor:		Superintendent:	
Project manager:		CSO/First aid attendant:	
Project:	Address:		
Veracity Field Services completing work:			
Address:		Contact:	
Contact phone:		Contact fax:	
On-site supervisor(s):			
Worker(s):			
Scope of work to be completed:			
Work start date:		Duration: <input type="checkbox"/> Days <input type="checkbox"/> Months <input type="checkbox"/> Years	
Employer responsible for:			
Supervisor responsible for:			
Worker responsible for:			
HAZARDS IDENTIFIED (other than silica)		CONTROL MEASURE(S)	
<input type="checkbox"/> Falls			
<input type="checkbox"/> Slipping			
<input type="checkbox"/> Confined space			
<input type="checkbox"/> Workers above			
<input type="checkbox"/> Workers below			
<input type="checkbox"/> Noise			
<input type="checkbox"/> Electrical			
Overview of work procedure (How are you going to work safely?):			
Workers trained in (training records must be available for review):			
Proper use of grinding equipment	Y <input type="checkbox"/> N <input type="checkbox"/>	Proper use of admin controls	Y <input type="checkbox"/> N <input type="checkbox"/>
Proper use of engineering controls	Y <input type="checkbox"/> N <input type="checkbox"/>	Proper use of PPE	Y <input type="checkbox"/> N <input type="checkbox"/>
Proper disposal methods	Y <input type="checkbox"/> N <input type="checkbox"/>	Other (fall protection, swing stages, etc.)	Y <input type="checkbox"/> N <input type="checkbox"/>



In place before work start	Y <input type="checkbox"/> N <input type="checkbox"/>		
Effective	Y <input type="checkbox"/> N <input type="checkbox"/>		
Cleanup			
Vacuum used properly	Y <input type="checkbox"/> N <input type="checkbox"/>		
Large pieces picked up	Y <input type="checkbox"/> N <input type="checkbox"/>		
Vacuum capacity maintained	Y <input type="checkbox"/> N <input type="checkbox"/>		
Pre-filters in place	Y <input type="checkbox"/> N <input type="checkbox"/>		
Vacuum attachments used	Y <input type="checkbox"/> N <input type="checkbox"/>		
Collection bags in place	Y <input type="checkbox"/> N <input type="checkbox"/>		
Waste properly disposed of	Y <input type="checkbox"/> N <input type="checkbox"/>		

TABLE 1 (Codes for task/risk management matrix)							
Engineering controls		Administrative controls		PPE		Supplies/Equipment	
1	Exhaust fan	1	Signage	1	Respirator	1	Hand grinder
2	LEV	2	After hours work	2	Gloves	2	Ceiling grinder
3	Wetting	3	Scheduling	3	Coveralls	3	Floor grinder
4	Partial enclosure			4	Hearing protection	4	Disposal bags
5	Full enclosure			5	Eye protection	5	HEPA filter (vacuum)
6	Shroud			6	Reflective vest	6	HEPA filter (respirator)
7	Barriers			7	Rubber boots (CSA)	7	Shovel
				8	Fall arrest	8	Lifeline



SITE-SPECIFIC SILICA EXPOSURE CONTROL PLAN

Location: _____ Date: _____

Work description:

Primary silica control options (check those options used and explain use if needed)

- ◆ Substitution controls (using procedures or products that do not create silica; must review MSDSs)
 - Other means of demo: _____
 - Different products: _____
 - Other substitutions: _____

- ◆ Engineering controls (when using ventilation, draw air out and don't expose others to exhaust dusts)
 - Vacuuming: _____
 - Wetting: _____
 - Ventilation: _____
 - Isolation: _____
 - Other means: _____

- ◆ Administration controls (reducing exposure by work schedules, timing, or planning options)
 - Control points: _____
 - Work schedule: _____
 - Other means: _____

Secondary silica control options (check those options used and explain use if needed)

- ◆ Personal protective equipment
 - Half-mask respirators: _____ Cartridge type: _____ Fit tests confirmed: _____
 - Full-face respirators: _____ Cartridge type: _____ Fit tests confirmed: _____
 - Supplied air units: _____
 - Coveralls required: _____

- ◆ Hygiene and decontamination options (reducing exposures after work has stopped or during breaks)
 - Water or washing facilities on site: _____
 - Vacuuming clothing/self: _____

 - Safe work procedures and other details: _____



Ventilation plan (sketch)

← Show direction of airflow including makeup air locations and discharge air outlets

Area or location in building of ventilation plan (e.g., floor #, wing)

Date plan was reviewed by workers and posted for workers to see

Types of neg. air fans & no.'s *

* Indicate on plan by number the location of the negative air fans

Ventilation safety checklist

- Makeup air free of possible contaminants
- Exhaust fan operation has failure warning
- Dilution fans not stirring up dust
- Wetting of materials used to keep dust down
- Workers not placed between contaminants created and exhaust inlet ports
- Discharge air not affecting others
- All workers equipped with approved respirators

Note: Attach additional sheets if needed or other documents if required due to hazards or work conditions.



Print supervisor's name

Supervisor's signature



SPILL PREVENTION & RESPONSE



Purpose

The purpose of this plan is to document spill prevention and response requirements. Each Veracity Field Services work site will develop a spill prevention and response plan based on the requirements and template provided.

Scope

This procedure applies to all Veracity Field Services operations. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Veracity Field Services employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Requirements

Each work site spill prevention and response plan shall contain the following requirements.

- Chemical substances should be stored in proper containers to minimize the potential for a spill. Whenever possible, chemicals should be kept in closed containers and stored so they are not exposed to storm water.
- The program must identify chemicals used that may be potentially spilled or released. This will include both liquid chemicals used at our facilities or brought on to owner client sites.
- Spill kits must be adequate for any anticipated spills. A proper spill kit must contain the appropriate supplies for materials that may be spilled. Supplies must be easily accessible when required, and considerations must be made for both the type and quantity of materials. The contents of spill response kits shall be periodically assessed to ensure the availability of adequate spill response supplies and adjust inventory as necessary.
- Veracity Field Services shall ensure the availability of adequate spill response supplies by periodic inspection to assess their availability and adjust the inventory as necessary.
- Employees must be instructed on spill prevention and the proper response procedures for spilled materials. The training should include materials available for use, proper waste disposal and communication procedures.
- Areas where chemicals may be used or stored must be maintained using good housekeeping best management practices. This includes, but is not limited to clean and organized storage, labeling and secondary containment where necessary.
- Proper communication measures for employees to initiate in the event of a spill will be created on a site by site basis. Communication procedures will be based on type and quantity of materials spilled.
- Environmental spills shall be reported to environmental authorities when required. Reporting procedures will be based on type and quantity of materials spilled.



STOP WORK



Purpose

The Stop Work Authority process involves a stop, notify, correct and resume approach for the resolution of a perceived unsafe condition, act, error, omission or lack of understanding that could result in an undesirable event.

All Veracity Field Services employees have the authority to stop work when the control of the HSE risk is not clearly established or understood. All Veracity Field Services employees have the authority and obligation to stop any task or operation where concerns or questions regarding the control of HSE risk exist.

Scope

This program applies to all Veracity Field Services projects and operations.

Roles and Responsibilities of Employees and Management

- Employees are responsible to initiate a Stop Work Intervention when warranted and management is responsible to create a culture where SWA is exercised freely.
- Supervisors are responsible to ensure a culture is created where SWA is exercised and honored freely to resolve issues before operations resume and recognize proactive participation.
- Management must establish and support clear expectations to exercise SWA, create a culture where SWA is exercised freely and hold those accountable that chose not to comply with established SWA policies.

Stop Work Authority Steps

- When an unsafe condition is identified the Stop Work Intervention will be initiated, coordinated through the supervisor, initiated in a positive manner, notify all affected personnel and supervision of the stop work issue, correct the issue and resume work when safe to do so.
- No work will resume until all stop work issues and concerns have been adequately addressed.
- Employees will not be reprimanded for issuing a Stop Work Intervention. Any form of retribution or intimidation directed at any individual or company for exercising their right to issue a stop work authority will not be tolerated.

Follow-Up

- All Stop Work Interventions shall be documented for lessons learned and corrective measures to be put into place.
- Stop Work reports shall be reviewed by a supervisor or manager in order to measure participation, determine quality of interventions and follow-up, trend common issues, identify opportunities for improvement, and facilitate sharing of learnings.
- Veracity Field Services places a high importance of follow-up after a Stop Work Intervention has been initiated and closed. It is the desired outcome of any Stop Work Intervention that the identified safety concern(s) have been addressed to the satisfaction of all involved persons prior to the resumption of work. Most issues can be adequately resolved in a timely manner at the job site, occasionally additional investigation and corrective actions may be required to identify and address root causes.



Training

Employees must receive Stop Work Authority training before initial assignment. The training must be documented including the employee name, the dates of training and subject.

Stop Work Form

Employees must complete a stop work form for each stop work intervention, the form can be found at: www.veracityfieldservices.com.



TRENCING & EXCAVATION



Purpose

The purpose of this training program is to protect employees from safety hazards that may be encountered during work in trenches and excavations.

Scope

Veracity Field Services is required to participate as a contract employer at client locations with trenching and excavation work; however, Veracity Field Services does not initiate trenching operations.

When work is performed on a non-owned or operated site, the operator's program shall take precedence; however, this document covers Veracity Field Services employees for basic awareness purposes that addresses all items and shall be used when an operator's program doesn't exist.

Definitions

Accepted engineering practices means the standards of practice required by a registered professional engineer.

Aluminum Hydraulic Shoring means a manufactured shoring system consisting of aluminum hydraulic cylinders (crossbraces) used with vertical rails (uprights) or horizontal rails (wales).

Bell-bottom pier hole means a type of shaft or footing excavation, the bottom of which is made larger than the cross section above to form a belled shape.

Benching (Benching system) is a method of protecting employees from cave-ins by excavating the sides of an excavation to form one or more horizontal steps, usually with vertical or near-vertical surfaces between levels.

Cave-in means the movement of soil or rock into an excavation, or the loss of soil from under a trench shield or support system, in amounts large enough to trap, bury, or injure and immobilize a person.

Cross braces mean the horizontal members of a shoring system installed from side to side of the excavation. The cross braces bear against either uprights or Wales.

Excavation means any man-made cut, cavity, trench, or depression in an earth surface formed by earth removal.

Faces or sides mean the vertical or inclined earth surfaces formed as a result of excavation work.

Failure means the movement or damage of a structural member or connection that makes it unable to support loads.

Hazardous atmosphere means an atmosphere that is explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful, which may cause death, illness, or injury.



Health Safety Officer means the individual at Veracity Field Services responsible for developing and implementing this program, conducting unannounced work site inspections, and ensuring that the departments comply with the program requirements.

Kickout means the accidental movement or failure of a cross brace.

Protective system means a method of protecting employees from cave-ins, from material that could fall or roll from an excavation face into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide the necessary protection.

Ramp means an inclined walking or working surface that is used to gain access to one point from another. A ramp may be constructed from earth or from structural materials such as steel or wood.

Sheeting means the members of a shoring system that retain the earth in position and in turn are supported by other members of the shoring system.

Shield (Shield system) means a structure used in an excavation to withstand cave-ins and which will protect employees working within the shield system. Shields can be permanent structures or portable units moved along as work progresses. Shields used in trenches are usually referred to as "trench boxes" or "trench shields."

Shoring (Shoring system) means a structure that is built or put in place to support the sides of an excavation to prevent cave-ins.

Sides - See "Faces."

Sloping (Sloping system) means sloping the sides of the excavation away from the excavation to protect employees from cave-ins. The required slope will vary with soil type, weather, and surface or near surface loads that may affect the soil in the area of the trench (such as adjacent buildings, vehicles near the edge of the trench and so forth).

Stable rock means natural solid mineral material that can be excavated with vertical sides that will remain intact while exposed.

Structural ramp means a ramp built of steel or wood, usually used for vehicle access. Ramps made of soil or rock are not considered structural ramps.

Support system means a structure such as underpinning, bracing, or shoring, which provides support to an adjacent structure, underground installation, or the sides of an excavation.

Tabulated data means tables and charts approved by a registered professional engineer and used to design and construct a protective system.

Trench (Trench excavation) means a narrow excavation (in relation to its length) made below the surface of the ground.



Trench box or shield - See "Shield".

Uprights mean the vertical members of a trench shoring system placed in contact with the earth and usually positioned so that individual members do not contact each other. Uprights placed so that individual members are closely spaced, in contact with or interconnected to each other, are often called "sheeting."

Wales are horizontal members of a shoring system placed in the direction of the excavation face whose sides bear against the vertical members of the shoring system or earth (the uprights or sheeting).

Key Responsibilities

Management shall determine if this program is required for regulatory compliance within his/her region. If this program is deemed necessary, then management shall determine which employees within his/her region is required to receive this training. Management shall select a training facility or use an in-house qualified trainer to supply the training.

Only trained personnel can be involved in working in trenches or excavations. Veracity Field Services personnel DO NOT initiate trenching.

Procedure

Competent Person Duties – The Safety Manager or their designee shall have the following duties:

Protective Systems or Equipment

- Monitoring water removal equipment and operations.
- Removal of workers if conditions dictate.
- Atmospheric testing.
- Inspecting excavations subject to runoff from heavy rains to determine need for diversion ditches, dikes, or other suitable protection.
- Determining cave-in potential to assess need for shoring or other protective system.
- Examining damaged material or equipment used for protective systems to determine its suitability for continued use.
- Classifying soil and rock deposits, by both visual analysis and by testing, to determine appropriate protection; re-classifying, if necessary, based on changing conditions.
- Determining the appropriate slope of an excavation to prevent collapse due to surcharge loads from stored material or equipment, operating equipment, adjacent structures, or traffic, and assuring that such slope is achieved.

Inspecting Trench and Protective Systems

- Inspections prior to entry and authorizing immediate removal of employees from the hazardous area where evidence of possible cave-in, failure of protective systems, hazardous atmospheres, or other hazardous conditions exists.



Unsafe Access/Egress

- Designing structural ramps that are used solely by employees as a means of access or egress. Structural ramps used for access or egress of equipment must be designed by a competent person qualified in structural design.

Utilities and Pre-work Site Inspection

The location of underground installations shall be determined before excavation.

When utility companies or owners cannot respond to a request to locate underground utility installations within 24 hours, or cannot establish exact location of these installations, Veracity Field Services may proceed, provided it does so with caution and provided detection equipment or other acceptable means to locate utility installations are used.

Excavation shall be done in a manner that does not endanger the underground installations or the employees engaged in the work. Utilities left in place shall be protected by barricades, shoring, suspension or other means as necessary to protect employees.

Protection of the Public

Barricades, walkways, lighting and posting shall be provided as necessary for the protection of the public prior to the start of excavation operations.

Guardrails, fences, or barricades shall be provided on excavations adjacent to walkways, driveways and other pedestrian or vehicle thoroughfares. Warning lights or other illumination shall be maintained as necessary for the safety of the public and employees from sunset to sunrise.

Wells, holes, pits, shafts and all similar hazardous excavations shall be effectively barricaded or covered and posted as necessary to prevent unauthorized access. All temporary excavations of this type shall be backfilled as soon as possible.

Protection Against Falls

Walkways or crossings shall be protected by standard guardrails or railings shall be provided where employees and the general public are permitted to cross over excavations. Where workers in the excavation may pass under these walkways or bridges, a standard guardrail and toe board shall be used.

Protection of Workers in Excavations

Access and Means of Egress

Stairs, ladders or ramps shall be provided where employees are required to enter trench excavations over 4 feet deep. The maximum distance of lateral travel (e.g., along the length of the trench) required to reach the means of egress shall not exceed 25 feet.



Structural Ramps

Structural ramps used solely by employees as a means of access or egress from excavations shall be designed by a competent person. Structural ramps used for access or egress of equipment shall be designed by a person qualified in structural design, and shall be constructed in accordance with the design.

Ramps and runways constructed of two or more structural members shall have the structural members connected together to prevent movement or displacement.

Structural members used for ramps and runways shall be of uniform thickness.

Cleats or other appropriate means used to connect runway structural members shall be attached to the bottom of the runway or shall be attached in a manner to prevent tripping.

Structural ramps used in place of steps shall be provided with cleats or other surface treatments on the top surface to prevent slipping.

Ladders

When portable ladders are used, the ladder side rails shall extend a minimum of 3 feet above the upper surface of the excavation.

Ladders shall have nonconductive side rails if work will be performed near exposed energized equipment or systems.

Two or more ladders, or a double-cleated ladder, will be provided where 25 or more employees will be conducting work in an excavation where ladders serve as the primary means of egress, or where ladders serve two-way traffic.

Ladders will be inspected prior to use for signs of damage or defects. Damaged ladders will be removed from service and marked with "Do Not Use" until repaired.

Ladders shall be used only on stable and level surfaces unless secured. Ladders placed in any location where they can be displaced by workplace activities or traffic shall be secured, or barricades shall be used to keep these activities away from the ladder.

Non-self-supporting ladders shall be positioned so that the foot of the ladder is one-quarter of the working length away from the support.

Employees shall not be allowed to carry any object or load while on the ladder that could cause them to lose their balance and fall.

Exposure to Vehicular Traffic

Employees exposed to vehicular traffic shall be provided with, and shall wear vests or other suitable garments marked with or made of reflectorized or high-visibility material. Warning vests worn by flagmen shall be red or orange, and shall be of reflectorized material if worn during night work.



Employee Exposure to Falling Loads

No employee shall be permitted underneath loads (or where loads may fall) handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles provide adequate protection for the operator during loading and unloading operations.

Warning System for Mobile Equipment

A warning system shall be used when mobile equipment is operated adjacent to the edge of an excavation if the operator does not have a clear and direct view of the edge of the excavation. The warning system shall consist of barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation.

Hazardous Atmospheres

The atmosphere shall be tested for air contaminants (oxygen, flammable gases, etc.) in excavations over 4 feet deep or if a hazardous atmosphere exists or could reasonably be expected to exist. A hazardous atmosphere could be expected, for example, in excavations in landfill areas, in excavations in areas where hazardous substances are stored nearby, or in excavations near or containing gas pipelines.

Adequate precautions shall be taken to prevent employee exposure to atmospheres containing less than 19.5 percent oxygen and other hazardous atmospheres. These precautions include providing proper respiratory protection or forced ventilation of the workspace.

Forced ventilation will be provided where necessary to ensure the atmosphere is safe.

When controls are used that are intended to reduce the level of atmospheric contaminants to acceptable levels, continuous air monitoring will be performed. The device used for atmospheric monitoring shall be equipped with an audible and visual alarm.

Atmospheric testing will be performed using a properly calibrated direct reading gas monitor. Direct reading gas detector tubes or other acceptable means may also be used to test potentially toxic atmospheres.

Personal Protective Equipment

All employees working in trenches or excavations shall wear approved hard-hats and steel toed shoes or boots.

Employees exposed to flying fragments, dust, or other materials produced by drilling, sawing, sanding, grinding and similar operations shall wear approved safety glasses with side shields.

Employees exposed to hazards produced by, or performing, welding, cutting, or brazing operations shall wear approved spectacles or a welding faceshield or helmet.

Employees entering bell-bottom pier holes or other similar deep and confined footing excavations shall wear a harness with a lifeline securely attached to it. The lifeline shall be separate from any line used to handle materials and shall be individually attended at all times while the employee wearing the lifeline is in the excavation.



Employees shall wear approved gloves or other suitable hand protection.

Employees using, or working in the immediate vicinity of, hammer drills, masonry saws, jackhammers or similar high noise producing equipment shall wear suitable hearing protection.

Each employee at the edge of an excavation 6 feet or more deep shall be protected from falling. Fall protection shall be provided by guardrail systems, fences or barricades.

Emergency rescue equipment, such as breathing apparatus, a safety harness and line, and a basket stretcher shall be readily available where hazardous atmospheric conditions exist or may develop during work in an excavation. This equipment shall be attended when in use. Only personnel that have received approved training and have appropriate equipment shall attempt retrieval that would require entry into a hazardous atmosphere.

Protection from Hazards Associated with Water Accumulation

Employees shall not work in excavations that contain or are accumulating water unless precautions have been taken to protect employees against the hazards posed by water accumulation. The precautions taken must include inspection by a competent person before work begins, special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water or use of safety harnesses and lifelines.

If water is controlled or prevented from accumulating by the use of water removal equipment, the water removal equipment and operation shall be monitored by a competent person trained in the use of the equipment.

If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering the excavation. Precautions shall also be taken to provide adequate drainage of the area adjacent to the excavation.

The competent person shall inform workers of the precautions or procedures that are to be followed if water accumulates or is accumulating in an excavation.

Stability of Adjacent Structures

The competent person will determine if the excavation work could affect the stability of adjoining buildings, walls, sidewalks or other structures.

Support systems (such as shoring, bracing, or underpinning) shall be used to assure the stability of structures and the protection of employees where excavation operations could affect the stability of adjoining buildings, walls, or other structures.

Excavation below the level of the base or footing of any foundation or retaining wall that could be reasonably expected to pose a hazard to employees shall not be permitted.

Protection of Employees from Falling Objects and Loose Rocks or Soil

Adequate protection shall be provided to protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. Such protection shall consist of:



- Scaling to remove loose material;
- Installation of protective barricades, such as wire mesh or timber, at appropriate intervals on the face of the slope to stop and contain falling material; or
- Benching sufficient to contain falling material.

Excavation personnel shall not be permitted to work above one another where the danger of falling rock or earth exists.

Employees shall be protected from excavated materials, equipment or other materials that could pose a hazard by falling or rolling into excavations.

Protection shall be provided by keeping such materials or equipment at least 2 feet from the edge of excavations, by the use of restraining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.

Materials and equipment may, as determined by the competent person, need to be stored further than 2 feet from the edge of the excavation if a hazardous loading condition is created on the face of the excavation.

Materials piled, grouped or stacked near the edge of an excavation must be stable and self-supporting.

Using the following categories, soil is classified into different types, which determine the kind of cave-in protection required. Only a competent and trained person can determine the soil type by using these classifications.

- Grain sizes are usually classified into four types: gravel, sand, silt, clay. Gravel is the least stable, and clay is the most stable.
- Saturation is the amount of water that the soil is currently holding. Complete saturation is much less stable than soil that is only slightly damp. However, soil with no water content is unstable.
- Cohesiveness is a test that determines how well the soil sticks together. The more it sticks together, the more stable the trench walls will be. The field test usually consists of rolling the soil in your hand into the shape of a worm and observing how and when it separates.
- Unconfined compressive strength determines how much weight per square foot the soil can withstand. This will determine how easily the soil will shear and cave in

Soil Types

Soil classifications must be determined by testing and protective systems designed according to soil classifications.

- The most stable type of soil is Type A. It is dense and heavy and consists primarily of clay.
- Type B has a medium level of stability and is made of soils such as silt, sandy loam, and medium clay.
- The least stable soil is Type C, which consists of gravel, loamy sand, and soft clay.

Timber shoring or aluminum hydraulic shoring must be determined according to the appendixes A & C of 29 CFR 1926 (Excavations).



The devices should be used while in good repair and maintenance. If damaged they must be inspected.

Employees should be protected from hazards of falling, rolling or sliding materials or equipment. Shields should not be subjected to excessive forces and will be installed to protect employees from lateral loads. Employees are restricted from being in the shield when installing or removing. The shield must be designed to resist calculated trench forces.

Daily Inspection

The competent person shall conduct daily inspections of excavations, adjacent areas, and protective systems for evidence of a situation that could result in possible cave-ins, failure of protective systems, hazardous atmospheres or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rainstorm or other hazard increasing occurrence. These inspections are only required when the trench will be or is occupied by employees.

Where the competent person finds evidence of a situation that could result in a possible cave-in, failure of protective systems, hazardous atmosphere, or other hazardous conditions, exposed employees shall be immediately removed from the hazardous area until precautions have been taken to assure their safety.

There shall be a written log of all inspections conducted. This log shall include the date, work site location, results of the inspection, and a summary of any action taken to correct existing hazards.

Training

All personnel involved in trenching or excavation work shall be trained in the requirements of this program and regulatory requirements.

Training shall be performed before the employee is assigned duties in excavations.

Retraining will be performed whenever work site inspections conducted by the competent person or Health Safety Officer indicate that an employee does not have the necessary knowledge or skills to safely work in or around excavations.

Training records shall include the date(s) of the training program, the instructor(s) of the training program, a copy of the written material presented, and the names of the employee(s) to whom the training was given.



Appendix A

HAZARD ASSESSMENT

West Texas Field Operations

Veracity Field Services

George Bunker, George Bunker, LLC, Independent Consultant

03/09/2019

Certification of Hazard Assessment

Heat Stress Associated with High Heat Work Environments

Identifying PPE and Best Work Practices



1.0 Purpose

This hazard assessment specifies the risk and hazards of working in a high heat environment, the PPE that should be utilized and other protective measures required to provide the highest level of safety to Veracity Field Services (the company) employees.

2.0 Scope

The assessment specifically focused on the region of the West Texas oilfields and Veracity Field Services operations in Winkler, Ward and Loving counties in construction, drilling, workover, completions and production operations.

Table of Contents

1. Purpose
2. Scope
3. OSHA Enforcement
4. Extreme Heat and the Risk of Heat Stress in West Texas
5. Conclusion
6. Heat Index

3.0 OSHA Enforcement

Although there is not a specific regulatory standard that requires flame resistant clothing (FRC) for workers in oil & gas operations, OSHA practices enforcement activities under regulatory statute in citing 29 CFR 1910.132(a), regardless of the fact that the courts have ruled that the act of citing this standard constituted “improper rulemaking under the aegis of an enforcement standard.” [See Sec’y of Labor v. Petro Hunt LLC, OSHRCJ, No. 11-0873 \(June 2, 2012\).](#)

In a memo dated March, 19 2010 OSHA lays out their [requirements for wearing FRC](#). Within the memo OSHA states “Where appropriate, CSHOs shall cite 29 CFR 1910.132(a) for the failure to provide and ensure the use of FRC in oil and gas drilling, well servicing, or production-related operations when there is a potential for flash fire hazards as discussed below.

Drilling Operations

- FRC is usually not needed during initial rig up and normal drilling operations prior to reaching active hydrocarbon zones, unless other activities warrant their use; e.g., fracing a previously drilled well while rigging a well in close proximity.
- A potential for flash fire exists once active gas or hydrocarbon zones are reached. Appropriate FRC shall be worn by exposed employees working on the well site prior to drilling into identified gas or hydrocarbon zones. CSHOs should verify that employees are wearing FRC in advance of reaching such zones.
- Appropriate FRC should also be worn when there is a history of fluid or gas kicks from underground producing zones.



- Once FRC is identified for use as provided above, employees should wear appropriate FRC until the final casing is cemented and the well is effectively closed.

Well Servicing Operations

FRC should be worn during well servicing or workover operations, such as:

- Pulling wet string tubing
- Snubbing tubing
- Swabbing operations
- Fracturing or perforating the well
- Using bridge plugs or packers
- Open hole work
- Flow testing, blowing down or venting the well
- Plugging an abandoned well
- Flowback operations
- Cementing
- Stimulation
- Wireline operations
- Any operation working with wellhead or wellbore under pressure

Production-Related Operations

The potential for flash fire also exists in production-related operations that fall outside of drilling and well servicing. FRC should be worn during production-related operations, such as:

- Equipment openings (e.g., line breaking or valve changes)
- Gauging
- Transfer of hydrocarbons
- Maintenance operations on production equipment
- Hot work operations
- Tank heating
- Using open flame
- Start-up operations”

4.0 Extreme Heat and the Risk of Heat Stress in West Texas

According to the Centers for Disease Control and Prevention, in the West Texas oilfields heat stress is commonly experienced by workers exposed to extreme heat and can result in [heat stroke](#), [heat exhaustion](#), [heat cramps](#) or [heat rashes](#). The U.S. Bureau of Labor Statistics (BLS) reports that "exposure to environmental heat" caused [177 deaths](#) and 13,580 cases of days away from work in the private sector workforce from [2003 to 2008](#). In relation, the BLS reported 140 workers killed in [fire and explosions](#) between 2003 and 2012. Although there is ample



evidence to support the fact that flame [resistant clothing](#) contributes to the number of heat related illness and fatalities, there is no data to support flame resistant clothing would or could prevent death in any of the 140 fatalities suffered from fire or explosion. More so, it has been widely established that the frequency rate of less serious injuries increases during the [hot summer months](#) of June, July and August, lending credibility that in the early stages of heat stress, a person might become irritable or start to have [difficulty concentrating](#), which places him or her at an increased risk of injury from an accident. The following table relates the average annual number of US fatalities from heat stress vs fire and explosion in the US:

	Heat Stress	Fire & Explosion
Average Number of Fatalities	29.5	14

Based on historical data, company experience and regional industry specific experience, when the heat index is 91 degrees or above, Veracity Field Services workers are at greater risk on a day to day basis from heat stress related injuries and fatalities due to specifically, the body’s inability to cool itself.

One of the leading contributors to the body’s ability to cool itself in an outdoor environment is sweat and dry air, so it stands to reason that the greatest inhibitor to the cooling of the body is clothing and humidity. Although OSHA references NFPA 2012 and 2013 in the letter of interpretation “[Enforcement Policy for Flame-Resistant Clothing in Oil and Gas Drilling, Well Servicing, and Production-Related Operations](#)” this recommended practice has not been [incorporated by reference](#), instead it is a [consensus standard](#).

Heat stress can be attributed to external factors like temperature, but other factors such as workplace uniforms also can contribute to the impact of these sources of heat. [A worker may not consciously realize the effect of his or her garments on core body temperature](#).

[The CDC recommends wearing "light-colored, loose-fitting, breathable clothing"](#) to avoid trapping in excess heat. Considering how FR clothing can affect a worker's thermal comfort is essential when evaluating, specifying and purchasing flame-resistant garments for workers who will be active in a high heat environment.

Providing appropriate thermal protection while also ensuring heat stress relief is a complicated process. These two functions actually work against one another- thermal protection tries to shield us against a wide range of thermal exposures, while heat release seeks to prevent our bodies from becoming overheated.

It is not the intention of Veracity Field Services to test OSHA when it comes to their stance on this issue, rather, OSHA directives, known hazards, company and industry experience as well as existing and potential controls have been considered to create a simple no nonsense solution that serves to satisfy all parties without compromising the safety of our employees.

5.0 Conclusion

In an effort to protect the employees of Veracity Field Services, this Hazard Assessment has considered a wide range of data, information, company history and industry knowledge and experience to conclude that when the heat index is 91 degrees or higher (refer to the heat index table in section 6), Veracity Field Services employees during routine operations are at a greater risk of injury due to heat stress. It is also recognized that the donning of FR shirts with long sleeves will contribute substantially to the overheating of the body and prevent the body’s



ability to evaporate the heat. It is recommended that the company implement the following minimum recommendations to reduce the risk associated with heat stress.

Construction

- FR clothing is not required for normal day to day operations.
- Workers should dress appropriate for site conditions and weather.
- Light weight clothing, short sleeve shirts and white [hard hats](#) is appropriate when the heat index is 91 degrees or higher.
- Where there is a specific hazard of flash fire, where engineering controls cannot be deployed to provide adequate protection, appropriate FR clothing shall be donned and serve to cover all susceptible surfaces of the body including the respiratory function of the worker. In such a situation steps must be taken to protect employees from heat stress, regardless of the temperatures or heat index of the work environment.
- Employees shall maintain compliance with the company Heat Illness Prevention program.

Drilling, Workover, Completions, Production, Maintenance, and Other Support Services

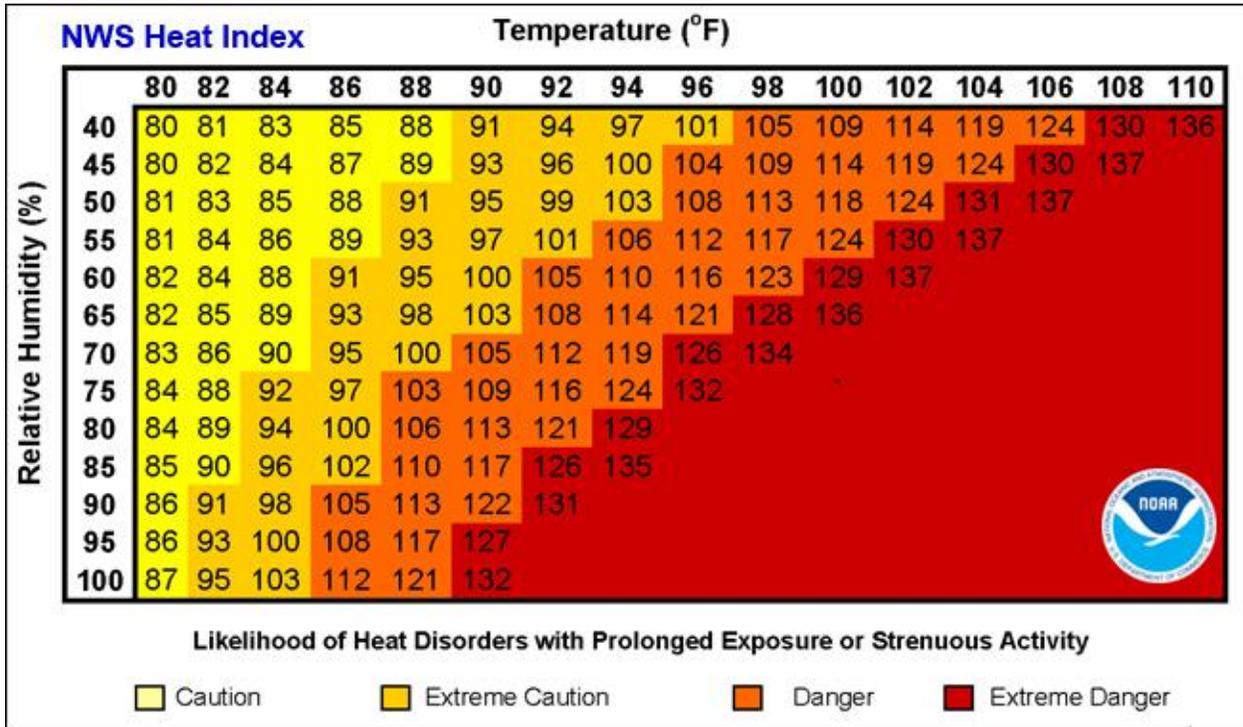
When the heat index is 90 degrees or less

- FR jeans shall be worn.
- Long sleeve FR shirts shall be worn.
- The outermost garment shall be FR.
- Employees shall maintain compliance with the company Heat Illness Prevention program.

When the heat index is 91 degrees or higher

- FR jeans shall be worn.
- Light weight short sleeve FR shirts shall be worn.
- The outermost garment shall be FR.
- Light weight safety shoes are recommended.
- Where there is a specific hazard of flash fire, where engineering controls cannot be deployed to provide adequate protection, appropriate FR clothing shall be donned and serve to cover all susceptible surfaces of the body including the respiratory function of the worker. In such a situation steps must be taken to protect employees from heat stress, regardless of the temperatures or heat index of the work environment.
- A white [hard hat](#) shall be worn.
- Employees shall maintain compliance with the company Heat Illness Prevention program.

6.0 Heat Index



Source: <https://www.weather.gov/safety/heat-index>