



# **Contractor Health, Environmental, and Safety Handbook**

**May 25, 2016 Version 1.0**

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## **INTRODUCTION**

### **PURPOSE**

Pioneer Natural Resources ("Pioneer") values the safety and health of all workers and protection of the environment. Our company is committed to incident free operations, but this can only be achieved by our Contractors working safely and taking responsibility for the safety of all of their employees and subcontractors working on Pioneer property. Pioneer is expressly not responsible for the safety of the Contractor. Every person on a Pioneer site has "Stop Work Authority."

The terms "Contractor(s), you or your" as used herein means a person other than a Pioneer employee that performs work for Pioneer (the "Work") and includes his or her employer, subcontractors (of any tier), and suppliers engaged by Contractor's employer to perform any part of the Work.

This handbook sets out minimum expectations to Contractors regarding work performed on Pioneer property. It is the Contractor's responsibility to comply with all applicable laws and regulations and to follow the policies and procedures established by their employer, in addition to any Pioneer site-specific requirements. This handbook is intended to reinforce, not replace, the health, environment and safety program of your employer or any requirements set forth in the master service agreement between Pioneer and your employer. In the event of a conflict between this handbook and your employer's health, environment and safety program, the stricter rule applies. Your employer's service agreement with Pioneer may be cancelled or you may be requested to leave Pioneer premises and not return if the guidelines of this handbook are not followed.

Pioneer is continuously looking for ways to improve our health, environment and safety (HSE) programs. If a contractor has any feedback for improvement or changes to this document, please share them with a Pioneer representative.

### **SITE SPECIFIC ORIENTATION**

- a. Although there are common processes practiced on Pioneer sites, there are site specific requirements and hazards about which every Contractor is responsible for being aware of prior to commencing operations.
- b. Prior to commencing operations on a Pioneer location, you must complete a Pioneer corporate safety orientation, as well as a site specific orientation.
- c. Each employee will be given a hard hat sticker on completion of the safety orientations.

### **CONTRACTOR'S RESPONSIBILITIES AND SAFETY EXPECTATIONS:**

- a. Your safety and the safety of sub-contractors, visitors or agents hired by the Contractor while on a Pioneer site.
- b. If you see a potential issue, do not wait for someone else to address it – "You See It, You Own It."
- c. Contractors must safely *work together* in our "Drive to ZERO".
- d. Follow all of Pioneer's "Rules to Live By" ("R2LB").

- e. Comply with Pioneer’s Safety Principles.
- f. Implement and follow a comprehensive safety program that, at a minimum, complies with all federal, state, and local laws, including OSHA and/or MSHA depending on the location.
- g. Work safely on Pioneer locations. This is a condition of working for Pioneer as a Contractor.
- h. Conduct and/or attend safety meetings, complete Job Safety Analysis, conduct observations or use any other method to ensure you are well informed on the tasks to be conducted and the hazards associated with the job.
- i. Conduct an investigation into all work-related injuries and significant near misses on Pioneer locations, and provide the results to Pioneer within 72 hours of the investigation.
- j. Conduct and/or attend training on the policies and programs developed by the Contractor and Pioneer to perform the work being conducted.
- k. Wearing the appropriate personal protective equipment (“PPE”) provided by Contractor; and
- l. Provide suggestions to your employer and/or Pioneer on how any hazards can be engineered out of the workplace.

## **PIONEER NATURAL RESOURCES R2LB (“Rules to Live By”)**

- a. **R2LB** (“Rules to Live By”) involves life threatening/serious injury situations.
  - i. All safety is important, but R2LB principles are the highest priority.
  - ii. Employees of Pioneer and all Contractors can stop a job when a R2LB violation is observed.
  - iii. Employees of Pioneer and Contractors who intentionally violate a R2LB can be terminated.
  - iv. Employees of Pioneer and Contractors who violate a R2LB can be permanently barred from working for Pioneer.
- b. The “**Rules to Live By**” consist of:
  - i. Safe Work Permits
  - ii. Confined Space Entry
  - iii. Excavation and Trenching
  - iv. Driving Safety
  - v. Bypassing Safety-Critical Equipment
  - vi. Energy Isolation
  - vii. Fall or Elevated Work Safety

## **SAFETY PRINCIPLES**

- a. All incidents, injuries and occupational illnesses are preventable.

- b. Contractor is accountable for preventing incidents, injuries and occupational illnesses.
- c. Contractor's safety observations are a must.
- d. Contractor involvement is essential.
- e. Contractors are valued and their participation is essential to fulfilling our safety vision.
- f. All workplace exposures can be safeguarded.
- g. You have the right and responsibility to immediately raise and/or address any unsafe act or condition.
- h. Working safely is a condition of employment.
- i. Training is essential to working safely.

## **STOP WORK AUTHORITY ("YOU SEE IT, YOU OWN IT")**

- a. Contractors are empowered and expected to stop the work if you observe any person's safety, health, or the environment is at risk. There will be no repercussions to the Contractor who exercises "Stop Work Authority".
- b. If a Contractor is discouraged from exercising the "Stop Work Authority" or penalized for doing so, you should report this action immediately to your employer.

## **PROFESSIONAL CONDUCT**

- a. Pioneer has respect for every individual who Works for our company, and we expect employees of Pioneer and Contractors to conduct themselves in a professional manner. Horseplay, practical jokes, and harassment are not allowed. No form of harassment will be tolerated on Pioneer premises.

## **EMERGENCY RESPONSE AND DRILLS**

- a. Emergency Action Plans ("EAP") are used to plan for actions to be taken during emergencies. The EAP may be a formal written document and reviewed during a pre-job safety meeting. Contractors at the site need to understand the actions to take during an emergency.
- b. The EAP normally addresses:
  - i. A list of potential emergencies (e.g. fire, medical, weather related, explosion, threats etc.)
  - ii. Reporting of emergencies
  - iii. Actions to take in the event of an emergency (i.e. evacuate, provide first aid, call 911 etc.)
  - iv. Actions to take after the emergency (i.e. "all clear signal," reporting back to work, filling out of accident reports etc.)

## **SAFETY MEETINGS**

- a. Safety meetings are a key component of any successful health, environment and safety program and are necessary to achieve sustainable improvements in health, environment

and safety performance. It is suggested that formal safety meetings be conducted at least monthly by Contractors.

- b. Onsite Tailgate Meetings
  - i. Contractors at the job site should participate in daily tailgate meetings.
  - ii. Tailgate meetings are different from and in addition to Job Safety Analyses (JSAs), which should be conducted throughout the work day as job tasks change.
  - iii. Contractors should conduct or actively participate in onsite Tailgate meetings as made available, but at a minimum, daily.
  - iv. These meetings may include, but are not limited to:
    - 1. Reviewing JSAs.
    - 2. Behavior Based Safety observations.
    - 3. Discussing work to be completed and how to safely do the work.
    - 4. Analyzing lessons learned.
    - 5. Sharing incidents and near misses.
    - 6. Hazard recognition.
    - 7. Review of Emergency Action Plans in place and posted for the job site.
    - 8. Discussion of any environmental impact concerns such as improper waste management, potential spills/releases, or erosion control features.

## **JOB SAFETY ANALYSIS (JSA)**

- a. A job safety analysis ("JSA") is a brief analysis of the work to be done, designed to identify hazards and allows workers to determine ways to address hazards that may arise.
- b. Hazards include:
  - i. Safety hazards
  - ii. Biological hazards
  - iii. Physical hazards
- c. A JSA is completed for each job task to identify all potential hazards and specific controls against the individual known hazards. JSA development is a team effort of all personnel involved on a task at a particular site.
- d. The JSA continuously adapts as new information and site conditions change. Changes can be added to the original JSA for a task. If a task changes entirely, a new JSA may need to be written.
- e. Analyze risk and methods to reduce risk including:
  - i. Use a standardized JSA form
  - ii. Identify potential hazards specific to the project such as hazardous materials present or communication requirements.
  - iii. Identify potential hazards specific to the site such as high pressure or flammable vapors present.
  - iv. Identify potential hazards specific to the task to be performed.
  - v. Assure that workers performing the Work are properly trained to do so.
  - vi. List ways to eliminate or mitigate the hazard so the task can be done safely.

- vii. Review and/or prepare appropriate safety material for the tasks and hazards.
- f. Communicate the safety plan to all workers involved with the task.

## **SAFETY OBSERVATION PROGRAM**

- a. DEFINITION – The act of observing workplace activities to assess Safe/Unsafe Behaviors and work practices, coupled with a safety conversation.
- b. PROCESS – The Safety Conversation is the most important part of the observation and includes the following steps:
  - i. Observe (Stop the Task or Job if necessary)
  - ii. Accentuate the Positive
  - iii. Explore....Ask Questions
  - iv. Emphasize the Consequences
  - v. Agree
  - vi. Ask the worker if he or she has any other safety concerns
- c. VALUE – A way to enhance the safety culture of a work environment by encouraging observation, interaction, and discussion. Every Contractor is looking out for each other.

## **HAZARD COMMUNICATION**

- a. Contractors bringing chemicals to a Pioneer facility are required to follow the new Globally Harmonized System which includes:
  - i. Communicating the identity of any hazardous chemicals to others who may be immediately exposed.
  - ii. Informing other onsite of the labeling system in use, the protective measures to be taken, the safe handling procedures to be used, and the location and availability of SDS while working on Pioneer locations.
  - iii. Obtain the chemical identities and Safety Data Sheets of hazardous chemicals that Contractors may bring onto Pioneer locations, and inform others onsite who may be exposed of the associated hazards of each chemical.
  - iv. When transferring flammable or combustible materials, containers must be grounded and bonded.
  - v. Flammable liquids shall be stored in approved, metal containers, with self-closing lid. Do not use plastic.
  - vi. Flammable and combustible liquids must be handled and stored in accordance with 29 CFR 1910.106, 1910.110 and 29 CFR 1926.152 as applicable.

## **ACCIDENT INVESTIGATION AND REPORTING**

- a. All incidents, spills/releases, near misses, injuries, property damage and fires should be reported immediately or when it is safe to do so to Pioneer.



- b. Failure to report an incident may result in the termination of the Contractor's service agreement with Pioneer.
- c. If an injury classification changes over time, Contractors should notify Pioneer at the time of the change.
- d. Contractors should provide someone formally trained to lead a root-cause analysis (RCA) investigation to investigate and identify root causes of incidents so that systemic causes can be reduced or eliminated and future incidents prevented.
- e. Contractors should have a process in place to report, record and investigate incidents and near misses and correct any deficiencies found, to include:
  - i. Root cause analysis for significant events and near misses.
  - ii. Regular evaluation of incident cause trends to determine where improvements in systems, processes, practices or procedures are warranted.
  - iii. Sharing of relevant lessons learned.
- f. A root cause analysis should be conducted for:
  - i. Any accident resulting in an OSHA recordable injury.
  - ii. All fires.
  - iii. All motor vehicle crashes that take place on Pioneer property or involve a Pioneer company vehicle.
  - iv. Spills, "near misses" or minor incidents, which have the potential to result in a serious injury, spill, property loss, fire, or motor vehicle accident.
- g. Root cause analysis investigation can includes these steps:
  - i. Describe what happened, when, and where.
  - ii. Determine the actual and potential loss or losses.
  - iii. Determine the root causes of the incident.
  - iv. Determine the risk of recurrence.
  - v. Develop controls to reduce the risk of recurrence.
  - vi. Communicate the lessons learned.
- h. All RCAs completed for incidents on Pioneer property should be shared with Pioneer as soon as possible. Contractors are welcome to include employees of Pioneer on their RCA teams, as they deem appropriate and with approval of Pioneer.
- i. In situations where an incident involves multiple Contractors and employees of Pioneer , Pioneer may put together a team made up of personnel from all affected companies.

## **PROHIBITION OF CERTAIN ITEMS FROM COMPANY OWNED OR OPERATED PROPERTY**

- a. The use, possession, sale, manufacture, distribution, dispensation, concealment, receipt, transportation, or being under the influence of any of the following items or substances on Company owned or operated property is prohibited:
  - i. Illegal drugs and controlled substances and any other drugs or substances which may in any way affect safety, including inhalants, whether or not illegal.
  - ii. Drug paraphernalia.
  - iii. Alcoholic beverages, except as specifically authorized by an officer of Company. Consuming or having in one's blood stream alcoholic beverages while operating machinery/equipment or while driving any vehicle in connection with a transaction governed by this Agreement is prohibited.
  - iv. Firearms, ammunition, explosives and weapons, except as specifically authorized by Company.
- b. To the extent allowed by applicable law, Company may randomly conduct, or if at any time Company believes, in its sole discretion, that a violation of any prohibition stated may be occurring, or have occurred on Company owned or operated property, Company may conduct, or may authorize third party search and inspection specialists, including scent-trained dogs, to conduct reasonable searches and inspections of any or all persons located on Company owned or operated property including, but not limited to, searches and inspections of their persons and of their personal property.
- c. Such searches and inspections may include, but shall not be limited to; requiring any person present on the Company owned or operated property to submit to a urine or blood test to detect prohibited drugs, alcohol and other substances.
- d. Contractor and Company agree that any violation hereof by an employee of Contractor is grounds for termination of this Agreement.
- e. Further, it is agreed that a positive drug/alcohol test, a refusal to be searched, or a refusal to submit to the drug/alcohol test and analysis, will result in the affected individuals or company being barred from further and future access to any Company owned or operated property.

## **ADVERSE WEATHER CONDITIONS**

### Severe Weather

- i. Severe weather can happen at any given time throughout the year (i.e. tornados, flooding, severe thunderstorms, blizzards, etc.) Contractors are responsible for ensuring the safety of their employees during these types of conditions. Contractor should have a plan to address severe weather conditions in their emergency action plan.

### Extreme Heat

- ii. Workers who are exposed to extreme heat or work in hot environments may be at risk of heat stress. Exposure to extreme heat can result in occupational illnesses and injuries. Heat stress can result in heat stroke, heat exhaustion, or heat cramps. Heat can also increase the risk of injuries in workers as it may

result in sweaty palms, fogged-up safety glasses, and dizziness. Burns may also occur as a result of accidental contact with hot surfaces or steam.

- iii. Prevention of heat stress in workers is important. Employers should provide training to workers so they understand what heat stress is, how it affects their health and safety, and how it can be prevented.

#### Cold Weather Conditions

- i. Jobs should be planned so that workers are prepared for the weather conditions that they could encounter. Unless workplace hazards prevent it, clothing should be loose fitting and layered to adjust for changing weather conditions and prevent sweating.

## **HOUSEKEEPING**

- a. Contractors should observe the following housekeeping items:
  - i. Keep all work areas, walking surfaces, handrails, equipment, tools, life-saving and fire-fighting equipment clean and free of obstructions.
  - ii. Appropriately store tools or tie them off so that they do not cause a hazard to people in the surrounding area.
  - iii. Use only commercial fire-safe solvents for cleaning. A safe solvent is a class IIIA liquid; it has a flash point above 140°F and below 200°F. Prohibited cleaning agents include, but are not limited to, gasoline, diesel, and methyl ethyl ketone (MEK). Questions on appropriate solvents should be directed to the Pioneer person in charge.
  - iv. Discard oily rags separately from regular trash.
  - v. Use plastic buckets appropriately and not use plastic buckets to transport any hydrocarbons or flammable liquids.
  - vi. Properly label all containers (e.g., spray bottles, jugs, etc.) and all transferable metal containers containing any materials.

## **SMOKING**

- a. Smoking is not permitted in any areas where flammable or combustible liquids are handled or stored.
- b. Each office, plant, or field location shall have a designated or non-smoking sign posted.
- c. If there are any questions, contact your supervisor.

## **DRIVING AND VEHICLE SAFETY**

- a. Contractors are expected to follow all applicable rules and regulations (including locally established speed limits) when operating motor vehicles on Pioneer property.
- b. Contractors entering on Pioneer property are expected to park their vehicles where the first move is forward as much as possible.

- c. When backing is required, appropriate steps, such as use of a land guide or spotter, should be taken to ensure safety.
- d. Cellular telephone use, in hand-held mode, by the driver of a motor vehicle is strictly prohibited while the vehicle is in motion on Pioneer property. This includes receiving incoming calls, text and e-mail. Cell phones may be left on while driving to alert drivers of an incoming call, however, calls, text or e-mail should not be answered. Contractors should stop their vehicle in a safe location off the road and away from traffic to retrieve messages and return calls, text or e-mail.

## **FIRE PREVENTION**

- a. Fire prevention is vital to safe operations. Contractor shall provide its own fire protection equipment. There are many aspects of fire prevention, some of which are shared in the following:
  - i. Ignition sources may be created during work operations. Some examples are described below.
  - ii. Contractor should be aware weather conditions, such as high winds and that dry conditions can increase the threat of fire.
  - iii. Contractor should be aware that typical ignition sources are welding arcs, cutting torches, electric power tools (such as drills, sanders, and grinders), and lighters.
  - iv. Pneumatic tools that chip, gouge, grind, or drill are also ignition sources that require the use of hot work permits.
  - v. If there is any doubt about whether or not a piece of equipment can ignite an air-natural gas mixture, contact your onsite supervisor for guidance.
  - vi. When carrying only non-intrinsically safe devices (e.g., battery operated equipment or occupational hygiene monitoring equipment), you must also carry a continuously monitoring gas detector. If the gas detector alarm sounds, you must immediately stop work and vacate the area and inform your onsite supervisor of the alarm.
  - vii. Personal electronic devices (phones, pagers, cameras, and computers) are also ignition sources. (See section for Hot Work Permits for more information).
  - viii. Use flashlights approved by a recognized testing laboratory, such as Underwriter's Laboratory (UL), as suitable (intrinsically safe) for Class I, Division

## **LOCKOUT/TAGOUT**

- a. Contractors must be trained by their employers in Lockout-Tagout.
- b. Contractors must not stop or start equipment unless there has been clear authorization.
- c. Contractors should identify all relevant lockout points according to their onsite supervisor.
- d. Each Contractor must apply his own personal lock to each lockout point. The lock must be identified with a tag that includes name, date, employer's name, and the reason for the lockout.

- e. During initial lockout, a “restart test” should be completed to verify that the lockout has been successful.
- f. Group lockout procedures are typically used for processes with multiple lockout points – such as dryers, coolers, precipitators and pre-heaters.
- g. A checklist must be completed and posted at the lock box. This checklist will document the lockout points, and that a “restart test” was completed.
- h. You must review the checklist prior to applying to your lock to the lock box.
- i. Contractors may request to review the lockout point locations.

## **PERMIT-REQUIRED CONFINED SPACE**

- a. Contractors that provide services that would require entering a confined space are required to have a written confined space program that meets the requirements of OSHA Standard 29 CFR 1910.146 for permit-required confined spaces.
- b. All qualified Contractors who are to perform confined space entry operations must:
  - i. Perform a written job safety analysis (JSA) including all information regarding the confined space to be entered.
  - ii. Obtain information regarding confined space hazards and entry operations from Pioneer.
  - iii. Provide equipment such as personal protective equipment, fire extinguishers, testing equipment, communications equipment, alarm systems and rescue equipment that meet compliance for this standard.
  - iv. All equipment must have documented inspection/certification records.
  - v. Coordinate entry operations with Pioneer, as required.
  - vi. Review the permit space program that Contractor will follow with the Pioneer representative.
  - vii. Maintain a copy of the program at the work location for the duration of the job. The program must meet or exceed the requirements of the Pioneer program and must identify the entry permit that will be used by the contractor.
  - viii. Participate in the debriefing at the conclusion of the entry operations to communicate any hazards encountered during entry operations.
  - ix. Upon completion of the Work, Contractors shall close out the job with the Permit Approver (via telephone or physically). All associated permits shall be turned in to the Permit Approver.
  - x. Provide Pioneer with a copy of the completed entry permit for review, including any debriefing notes. A completed copy of the entry permit will be posted on location where the Work is being performed.
  - xi. Upon completion of the permitted entry, the contractor must file the completed entry permit at the Contractor’s office for one year.
  - xii. Post and review a written rescue plan prior to commencing work.

## **HOT WORK PERMITTING**

- a. A hot work permit is required if any hot work (i.e. welding, cutting, brazing, grinding) is to be done in an area where there is any combustible material (i.e. wood, conveyor belts, oil, coal, paper).
- b. The Contractor is required to provide their own Hot Work Permit.
- c. When a hot work permit has been issued a fire watch is required.
- d. The area of the hot work must be continue to be watched, or re-inspected, 30 minutes after the completion of the work, to ensure there are no smoldering fires, as dictated by the permit.
- e. Copies of completed hot work permits must be provided to Pioneer.

## **CRANE & SLING SAFETY**

- a. Ensure all lifting chains, wire ropes and slings are inspected for defects before use. If defects are found, remove the unit from service.
- b. Never turn your back on any lift.
- c. Use a control rope (tag line) on any load which may swing or rotate due to its design or rigging configuration.
- d. Never walk or stand under a suspended load.
- e. Establish barriers in the area of the lift to identify the hazard and control traffic.
- f. During the lift, utilize a "ground man" to control traffic.
- g. Only crane operators and riggers that are certified, or qualified through a certification program, are permitted to perform those functions.
- h. A lifting plan must be prepared prior to any lift.

## **EXCAVATING, TRENCHING, AND SHORING**

- a. All trenching and excavation shall be performed under the supervision of a competent person.
- b. Ensure the proper notification to **811** has been made prior to digging.
- c. The competent person is required to be on site and to oversee the excavation involving persons entering a confined space excavation.
- d. The competent person shall inspect the excavation before each shift begins and after any changes in the excavation environment.

- e. If an excavation or trench is greater than 20 feet (6 m) deep, a registered professional engineer is required to review and approve in writing the excavation or trench in question.
- f. The competent person is required to evaluate all excavations before people are allowed to enter. The evaluation will be completed at least once per shift, or if conditions (such as sloping or shoring systems, weather conditions or potential atmospheric conditions) change.
- g. Walkways or bridges with guardrails shall be provided anywhere workers cross over a trench.
- h. Spoil piles should be kept three feet or more from the trench.
- i. Emergency action plan shall be developed before any entry into the excavation or trench.
- j. Ladders, ramps, or other suitable egress shall be provided so that workers are always within 25 feet (7.6 m) of an egress when working in an excavation or trench that is 4 feet or deeper.
- k. Do not work above or below a co-worker on sloped or benched excavations.
- l. Make certain that all necessary PPE, SCBAs, lifelines, and harnesses are used and or available in the event of an emergency if required.

## **FALL PROTECTION**

- a. Use fall protection when there is the potential of falling.
- b. Areas of concern must be identified during the pre-planning meeting.
- c. Fall protection equipment must be inspected prior to use and in good condition.
- d. Harnesses must be properly worn.
- e. Shock absorbing lanyard may only be used when there is sufficient clearance to protect the worker.
- f. Rope-grab, self-retracting lanyards, fall restraint, or other fall protection measures may be required.
- g. Written rescue procedures must be established.
- h. Fall protection must be used in aerial platforms.

## **SCAFFOLDING SAFETY**

- a. Scaffolds must be erected under the supervision of a qualified person.
- b. Scaffolds must be designed to support at least four (4) times the anticipated weight of people and materials that will use them.

- c. Selection of components, training in erection and use, and disassembly of scaffolds must comply with the *Regulation for Construction Projects* and industry best practices.
- d. Before using scaffolding, check to ensure that:
  - i. Base is sound, level and adjusted and legs are plumb
  - ii. All braces are in place
  - iii. Locking devices and ties are secured and cross members are level
  - iv. Planks, decks and guardrails are in good condition, installed and secure
  - v. Remove snow and ice from scaffold platforms, ladders and access areas
- e. Use an access ladder to climb on or off a scaffold, not the scaffold frame, unless it is specifically designed to be climbed.
- f. Ensure that the scaffold is securely attached to the building structure. The effects from winds increase when scaffolds are covered.
- g. Protect all planked or working levels with proper guardrails, mid-rails and toe boards along all open sides and at the ends of scaffold platforms.

## **PERSONAL PROTECTIVE EQUIPMENT**

- a. All Contractors shall wear appropriate personal protect equipment (PPE). It is your responsibility to bring and to wear PPE as required by the specific task being performed, the potential hazards that person will be exposed to, and the specifics of the job site. Contractors must adhere to the PPE requirements recommended on the Material Safety Data Sheets (SDS) for material they are handling.
- b. Head Protection
  - i. Contractors must wear a hardhat when working in field operations.
  - ii. Contractors must maintain and replace the hat's suspension system, as needed.
  - iii. Hard hats should not be altered (e.g., drilled, riveted, or painted to change the design) in any way.
  - iv. Hard hats must be made of non-metallic material and must comply with ANSI/ISEA standard Z89.1 Class
  - v. 23.3.5 Contractors must wear their hard hats squarely on their head and not cocked to one side or turned in a reverse position.
  - vi. 23.3.6 Welders must wear hard hats except during welding operations when the hard hat would pose a hazard to welders due to body positioning or restrictions from wearing a hood while performing their work.
- c. Eye Protection
  - i. Contractors must wear appropriate eye protection. At a minimum, safety glasses with side shields are required at all times, unless the specific hazards dictate increased protection.
  - ii. If you wear prescription glasses, then prescription safety glasses or safety glasses worn over the prescription glasses is required.



- iii. Safety glasses are not safety goggles. Goggles/face shield (as defined by the SDS) should be worn to protect against chemical splash and potential hazards from the sides; safety glasses do not provide this protection.
- d. Foot Protection
  - i. Safety footwear is mandatory in field operations. Steel toed or non-conductive electrician safety toe footwear meeting ANSI Z41.1 shall be worn at all times while working on Pioneer work sites.
  - ii.
- e. Hand Protection
  - i. Appropriate gloves must be worn when your hands are exposed to hazards such as cuts, punctures, or abrasions, when handling chemicals or hazardous materials, where absorption is a concern (rubber gloves), and when performing electrical work and welding.
- f. Hearing Protection
  - i. Hearing protection is required in posted areas, or when the work will result in noise levels above 85 DB.
- g. Protective Clothing - Flame Resistant Clothing (FRC)
  - i. Flame-Resistant Clothing (FRC) is required for protection against flash fires and arc flashes.
  - ii. Contractors must observe the following clothing standards at Pioneer work sites:
    1. FRC Long pants and shirts with sleeves or approved coveralls are required.
    2. Shirts must be tucked in with sleeves rolled down for maximum protection.
    3. Cotton clothing is recommended under FRC, due to cotton's fire protection qualities.
    4. Do not wear synthetic garments such as polyester, nylon, or rayon under FRC.
    5. Pant legs shall be worn over boots and not tucked in.
    6. Clothing should be orderly (no holes, tears, loose material) and appropriately fitting, sleeves rolled down, and shirttails tucked in trousers.
    7. Wear suitable protective clothing (specified on SDS) when handling chemicals or hazardous substances.
    8. Immediately remove clothing and shoes saturated with petroleum products or chemicals to prevent skin irritation and possible ignition.
    9. Do not wear rings, necklaces and other loose jewelry when working in areas where they could catch on moving objects, sharp protrusions, or be exposed to electrical circuits.
- h. Respiratory Protection

- i. Contractors whose crews perform work that requires respiratory protection must have a written Respiratory Protection Program. Contractors must ensure that their crews are properly trained, medically cleared, and properly fit-tested.

## **HYDROGEN SULFIDE**

- a. Hydrogen sulfide (H<sub>2</sub>S) is a highly toxic, flammable, colorless gas that is heavier than air. When inhaled in moderate concentrations, H<sub>2</sub>S can cause immediate death. Even at low concentrations H<sub>2</sub>S can affect the eyes as well as the respiratory tract. H<sub>2</sub>S has an offensive odor, similar to rotten eggs, which rapidly deadens the sense of smell; therefore, odor is an unreliable means of detecting this poisonous gas. H<sub>2</sub>S burns with a blue flame and produces sulfur dioxide that is another toxic gas.
- b. Signs should always be posted in areas where H<sub>2</sub>S is present. Contractors working in an H<sub>2</sub>S environment shall have H<sub>2</sub>S training.
- c. At a minimum H<sub>2</sub>S training course content should include:
  - i. Physical and chemical properties of H<sub>2</sub>S.
  - ii. Health hazards of H<sub>2</sub>S.
  - iii. Personal Protective Equipment.
  - iv. Information regarding potential sources of H<sub>2</sub>S.
  - v. Alarms and emergency evacuation procedures.
  - vi. H<sub>2</sub>S safe work practice procedures.
  - vii. Emergency contingency plan procedures.
  - viii. Methods to detect the presence or release of hydrogen sulfide (e.g., alarms, monitoring equipment).
  - ix. Use of respiratory protective equipment.
- d. Contractors working in a H<sub>2</sub>S environment will have a personal monitor alarm set at 10 PPM and calibrated to meet manufacturer specifications.

## **CARBON DIOXIDE (CO<sub>2</sub>) AND CARBON MONOXIDE (CO)**

- a. Carbon dioxide (CO<sub>2</sub>) and carbon monoxide (CO) are generally non-toxic, non-flammable, colorless, tasteless, and odorless gases. CO<sub>2</sub>, in high concentrations, has an acidic taste and a slightly pungent odor.
- b. It is heavier than air and tends to accumulate in low-lying areas. Extended overexposure to CO<sub>2</sub> and CO blocks the intake of oxygen, stimulates breathing and increases the heart rate. This reaction can result in discomfort, nausea, and ultimately unconsciousness and death.
- c. Liquid CO<sub>2</sub> can be hazardous if trapped in a line or container and allowed to heat up. The properties of CO<sub>2</sub> are such that as the temperature increases in a closed system, the pressure in the system increases dramatically.

## **BENZENE**

- a. Benzene, a liquid found in most crude oil and condensate, can also be found in produced gas in a gaseous form.
- b. Benzene is known to cause cancer in humans, so it is important that exposure to it be limited.
- c. To know what benzene concentrations exist and the PPE requirements that apply, refer to the SDS for the products and product streams to be handled.
- d. Exposure and risk to benzene can be reduced by keeping work area and clothing as clean as possible.
- e. Leather gloves or clothing saturated with liquid containing benzene should be removed and cleaned or discarded to prevent prolonged skin exposure.

## **HAND AND POWER TOOLS**

- a. Maintain tools in good condition and replace or have defective tools repaired by qualified personnel.
- b. Deformed or damaged tools should not be used. Modified tools should not be used unless approved by the manufacturer. (Home-made tools are not allowed)
- c. Only use hand tools for their intended purpose. For example, do not use wrenches as hammers or screwdrivers as chisels or pry bars. Do not use pipe wrenches on hex nuts and make sure that grinder wheels are properly rated for the speed of the grinder.
- d. Verify that guards are in place and do not modify the guards.
- e. Use explosion-proof and non-sparking tools and extension cords when potentially explosive atmospheres exist.
- f. Ensure that power tools are equipped with a three-wire grounded conductor cord. Use the three-pronged plug only in a three-prong service outlet.
- g. Verify that a ground fault circuit interrupter (GFCI) exists on outlets or cords that are not part of the permanent building or structure supplying power to portable electric tools.
- h. When operated, most portable electrical tools contain a motor, which generates sparks that are hot enough to ignite a mixture of natural gas and air. Do not use electrical tools where flammable vapors exist.

## **AIR**

- a. EPA's Clean Air Act is a comprehensive federal law that provides framework for federal, state, and local efforts to protect air quality through regulation.
- b. Air permits regulate the amount of allowable emissions of any air contaminant that can be released into the air. Permits may include limits on throughput, operating hours on

equipment, and down-time of equipment as well as requirements for maintenance, monitoring, record keeping, and reporting.

- c. Consult with Pioneer before making changes to equipment, starting up new equipment, or shutting down existing equipment as these modifications can lead to permit violations. A permit violation could result from:

- i. Bringing fuel burning equipment onsite like a generator
- ii. Replacing a motor or pump in process equipment
- iii. Changing out equipment to different HP rating
- iv. Exceeding the allowable throughput of operating hours
- v. Adding or replacing a compression unit onsite before getting proper regulatory authorization
- vi. Placing a new storage tank in service
- vii. Failing to conduct required maintenance
- viii. Failing to maintain required documentation
- ix. Opening a thief hatch and not properly closing

- d. Emission control devices are used to reduce the emissions or air contaminants. Any emission control device may not be turned off or removed without authorization from your Pioneer Representative or Pioneer Environmental Department. If the control device is not operating correctly or is out of operation, please contact your Pioneer Representative or the Pioneer Environmental Department. Any improper use of an emission control device can lead to permit violations and fines from federal and state agencies. Common emission control devices and how they are used are as follows:

- i. Flares – Truck load-out flares are used to control the air contaminants during the load-out of oil and produced water. Please consult with your Company Representative or the Pioneer Environmental Department if you need guidance for proper use of a truck load-out flare.
- ii. Thief Hatch – Thief hatches on production tanks and water tanks must be Closed and Latched at all times. If a thief hatch is found open on a Facility, close and latch immediately and notify your Company Representative.
- iii. Vapor Recovery Units (VRUs) – VRUs are used to control the emissions from production tanks and water tanks. If a VRU is not working properly or is turned off, notify your Company Representative. Only shut-down or remove a VRU with authorization from your Company Representative or Pioneer Environmental Department.
- iv. Catalyst – A catalyst is an emission control device that reduces air contaminants from engines. All catalysts are must be properly installed in an engine before startup of the compression unit. Please contact you Company Representative before the startup of any engine.

- e. Emission event is any gas released that is not authorized by the facility permit. Gas leaks from tanks, pipelines, valves, vessels, wells or other sources are potentially serious safety hazards and should be reported to Pioneer immediately. Common emission events include:

- i. Thief hatch left open after gauging/loading
- ii. Blanket gas turned off
- iii. Gas line being shut off to sales
- iv. Gas line leak
- v. Equipment leaks

- vi. Not using truck load-out flare during unloading of oil or water from tanks
  - vii. Flare pilot not lit
  - viii. Relief valve or dump valve hanging open
  - ix. Kimray failure
  - x. Bypass of emission control device (example: Flares, VRUs)
  - xi. Electrical outage on an emission control device
  - xii. Catalyst failure or malfunction
  - xiii. Engine not operating according to factory specs
  - xiv. Not installing catalyst
  - xv. Pipeline blow downs
  - xvi. Visible black smoke from a flare
  - xvii. Explosion/fire
- f. Maintenance Startup and Shutdown (MSS) - MSS is any type of maintenance, startup, or shutdown that is authorized by the facility permit. Any MSS activity must be authorized and documented by your Company Representative or the Pioneer Environmental Department before starting work. Common MSS activities include:
- i. Tank degassing
  - ii. Tank Cleaning
  - iii. VRU maintenance
  - iv. Thief hatch cleaning and maintenance
  - v. Engine/Compression unit maintenance
  - vi. Compressor blow-downs

## **WASTE**

- a. Waste is any material that no longer serves its original purpose. Examples of waste streams are:
- i. Trash
  - ii. Light bulbs
  - iii. NORM (naturally occurring radioactive material)
  - iv. Asbestos
  - v. Oily rags
  - vi. Batteries
  - vii. Produced water
  - viii. Spill cleanup residue
  - ix. Used oil
  - x. Paint wastes
- b. Waste Minimization – We can minimize waste in several ways:
- c. Source reduction – order only what is needed for the job and avoid having to discard unwanted or outdated products.
- d. Product substitution – replace products with alternatives that are non-hazardous and more environmentally friendly.
- i. Source control – good housekeeping, waste segregation, and spill prevention help minimize wastes

- ii. Reuse and recycling – material that can be legitimately used for its intended purpose is not classified as a waste.
- e. Waste Management – Do not attempt to classify your waste streams without proper training. Please contact your Pioneer Representative or the Pioneer Environmental Department if you have any waste management questions.
- f. Hazardous Waste – EPA regulates hazardous waste under the authority of the Resource Conservation Recovery Act (RCRA). A waste may be considered to be hazardous if it exhibits certain physical properties (characteristic hazardous) or if it is included on specific lists (listed hazardous) in RCRA.
- g. Characteristic Hazardous Waste – has at least one or more of the following properties:
  - i. Ignitibility – liquids with a flash point less than 140 degrees such as used oil, gasoline, and paint thinner.
  - ii. Corrosivity – liquids with a pH less than or equal to 2.0 or greater than or equal to 12.5 such as strong acids or bases.
  - iii. Toxicity – material exceeds regulatory limits in RCRA for specific metals and compounds such as benzene, lead, and cadmium.
  - iv. Reactivity – material that is unstable, reacts violently with water, explodes, or produces toxic vapors under certain conditions such as pressurized aerosol cans.
- h. Listed Hazardous Waste – includes certain chemical products from specific manufacturing processes that are included on the F, L, U, and P lists in RCRA such as methanol, spent chlorinated solvents, and some refinery wastes.
- i. Universal Waste – Universal waste streams are regulated under special programs in RCRA. Examples include used light bulbs and batteries (NiCad, mercury, and lithium).
- j. Exempt Waste (exploration and production E&P exemption) - wastes that are uniquely associated with oil and gas exploration and production are not regulated as hazardous waste. This exemption applies to material that came from downhole (crude oil, produced water, drill cuttings) and material that have been used downhole (drilling muds, workover and stimulation fluids, and freeze protection fluids). The exemption does not apply to unused products that have not been downhole.
- k. Non-Exempt Waste - Many oil and gas waste streams are not RCRA-exempt. These include but are not limited to:
  - i. Unused drilling mud
  - ii. Paint waste
  - iii. Fuels (gasoline, diesel, used oil)
  - iv. Light bulbs
  - v. Batteries
  - vi. Aerosol cans
  - vii. Trash
  - viii. Construction debris
- l. Naturally Occurring Radioactive Material (NORM) - NORM is radioactive, but typically the levels are so low that it does not present a health hazard. All waste streams with gamma readings greater than two times background levels must be sampled and subjected to lab analysis to determine the NORM levels prior to transportation offsite. If equipment,

tools, or piping contain NORM in excess of 50 uR/hr, they must be labeled as NORM and disposed of properly. Contact your Pioneer representative or the Pioneer Environmental department if you encounter NORM at any concentration.

- m. Waste Mixtures – Never mix waste streams. A small amount of hazardous wastes, mixed with non-hazardous or exempt wastes, can make the entire mixture hazardous.
- n. Waste Handling – All waste streams (hazardous wastes, universal wastes, and exempt wastes) need to be managed properly. Please consult your Pioneer Representative or the Pioneer Environmental Department to determine how to dispose of your wastes.
- o. All waste streams should be labeled and stored in containers that are in good condition. Waste streams that are shipped offsite should have placarding, be shipped in DOT-approved containers, and be manifested properly.

## **SPILLS**

- a. Pioneer considers any incident that releases a contaminant into the environment to be a spill.
- b. Pioneer defines a release to be any substance (fluids, vapors, or chemicals) that leaves primary containment. Consequently, a release into secondary containment is considered to be a spill.
- c. All spills regardless of size or location should be reported to your Pioneer Representative or the Pioneer Environmental Department as soon as possible.
- d. Some effective ways to prevent and minimize the impacts from spills are:
  - i. Develop and follow fluid transfer guidelines when fueling, pumping, and moving fluids from one container to another.
  - ii. Install and routinely inspect secondary containment.
  - iii. Routinely inspect hoses, connections, gaskets, and valves.
  - iv. Properly maintain equipment.
  - v. Spill kits and spill response equipment (absorbent materials, shovels, plastic bags and lining, gloves, etc.) should be available and utilized if a release should occur.
- e. All spills must be properly remediated. Contractors should be trained and aware of the appropriate PPE to wear during spill cleanup activities. Disposal of the spill residue should be performed under the direction of the Pioneer Representative or the Pioneer Environmental Department.

## **WATER**

- a. The Clean Water Act requires EPA to develop criteria for water quality that accurately reflect the latest scientific knowledge on the impacts of pollutants on human health and the environment.
- b. Water Use – Water that is used in the oil and gas process must be permitted, tracked, reported, and approved by local water districts. With recent droughts and population increases, water usage is under closer scrutiny than ever before.

- c. Drinking Water – Public water system wells must be permitted, drilled by a licensed driller, and sampled and analyzed by a certified lab. Lab analyses must meet federal drinking water standards.
- d. Storm Water - Storm water runoff is generated when precipitation from rain or snow melt events flow over land or impervious surfaces and does not permeate into the ground. As this runoff flows over parking lots, street, bar ditches, and roof tops, it accumulates debris, chemicals, sediment, and other pollutants which can adversely affect water quality. EPA and state agencies regulate storm water runoff through the use of multi-sector general storm water permits and National Pollutant Discharge Elimination System (NPDES) permits.
  - i. Multi-Sector General Storm Water Permits – these permits require the preparation of Storm Water Pollution Prevention Plans (SWPPPs) which ensure that potential pollutants are identified and that systems are in place to reduce and/or eliminate these pollutants from being transported offsite by storm water. Storm water that is transported offsite typically must be sampled.
  - ii. NPDES Permits – NPDES discharges are directly into creeks, rivers, streams, oceans, or wetlands. These must be sampled and meet permitted limits.
  - iii. Construction Projects - Construction projects of a certain size may require a construction storm water permit. Consult your Pioneer Representative or the Pioneer Environmental Department to determine if your project is required to have one of these.
    - 1. If required, Contractor will obtain a project specific construction storm water permit and comply with the conditions of the permit (inspections, etc).
    - 2. When applicable, work performed on Pioneer’s well pads, pipeline roads, and other facilities shall be done in a manner consistent with Pioneer’s Erosion Control Manual.
    - 3. Best Management Practices (BMPs) for soil erosion control will be utilized and maintained at the work site.

## LAND USE

- a. Examples of responsible land use are:
  - i. Reduce surface disturbance
  - ii. Soil management
  - iii. Minimize new road construction
  - iv. Re-vegetate and reseed
  - v. Minimize drilling waste
- b. US Army Corps of Engineers Permits - Construction projects that involve working in creek beds or wetlands will likely require an Army Corps of Engineers permit. Corps permits are also necessary for any work, including construction and dredging, in waters of the US. Consult your Pioneer Representative or the Pioneer Environmental Department to determine if your project is regulated by the US Army Corps of Engineers.



## **WILDLIFE**

- a. Do not feed, harass, approach, or kill wildlife. There are regulations to protect specific wildlife from harm.
- b. Migratory Bird Act - This law implements the treaties that the US has signed with a number of countries protecting birds that migrate across our national borders. It makes illegal the taking, possessing or selling of protected species.
- c. Endangered Species Act - Under the ESA, species may be listed as either endangered or threatened. "Endangered" means a species is in danger of extinction throughout all or a significant portion of its range. "Threatened" means a species is likely to become endangered within the foreseeable future. All species that are listed are protected under the ESA.
- d. Contact your Pioneer Representative or the Pioneer Environmental Department if you have questions regarding wildlife at your job location.