Contractor Safety Manual

(Changes since last revision noted in red)

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1. GENERAL REQUIREMENTS

1.1. This Contractor Safety Manual (Manual) contains the minimum requirements you and your company (Contractor) and your subcontractors shall comply with while on property owned, operated, or under the control of MountainWest Pipeline. It is intended to preserve the independent contractor relationship while helping improve contractor health and safety performance. Contractor shall ensure that any subcontractor it uses to perform Work (defined below) on behalf of Contractor for Company meets or exceeds these same requirements. This Manual shall be attached to and incorporated in any agreement between Contractor and Company for Work performed for Company and shall supplement Contractor's own safety program. This Manual cannot address all health and safety on-the-job circumstances; therefore, it is Contractor's responsibility to evaluate the specific job hazards and the health and safety requirements associated with these activities and take any additional precautions necessary to prevent harm to persons or damage to property or the environment appropriate for the circumstances. Notwithstanding anything to the contrary in this Manual, any agreement between Contractor and Company, or Contractor's own safety program, no safety requirement shall be less stringent than the minimum state and federal safety standards.

1.2. Contractor shall be solely responsible for the safety of its employees, subcontractors, and agents in the performance of the Work. As a condition of doing business with Company, Contractor is expected to have developed and must maintain effective health and safety programs that include but are not limited to:

1.2.1. Compliance with all applicable federal, state, tribal, and local laws, rules, regulations, and orders of governing authority bearing on health and safety to persons, property, or the environment and their protection from damage, injury, or loss;

1.2.2. Be enrolled in ISNetworld, submit required safety and insurance documentation, and have an approved status with Company;

1.2.3. On the first week of each month, Contractor shall enter the following information into ISNetworld:

a. Hours worked for the Company for the previous month;

b. The number of work-related injuries, illnesses and fatalities which occurred on a Company project for the previous month (enter "0" if no injuries, illnesses or fatalities occurred). Include a brief description of each incident and include the location;

c. The number of spills which occurred on a Company project for the previous month (enter "0" if no spills occurred). Include a brief description of each spill incident and include the location;

1.2.4. Accountability for safety by management;

1.2.5. Safety orientation and training for all workers, including new or inexperienced workers;

1.2.6. Documentation of safety training and safety awareness efforts;

1.2.7. Documented safety performance reporting and monitoring;

1.2.8. Assigned safety support responsibilities;

1.2.9. Incident investigation and reporting to determine cause and corrective actions needed to prevent reoccurrence;

1.2.10. Implementation and reinforcement of appropriate consequences to support the safety program;

1.2.11. As applicable, a written and enforced drug and alcohol policy that meets the DOT's (defined below) requirements in Drug and Alcohol Testing, 49 CFR Part 199 and Procedures for Transportation Workplace Drug and Alcohol Testing Programs, 49 CFR Part 40, each as amended; and

1.2.12. As applicable, a written and enforced Operator Qualification Program that meets Company-specific requirements and DOT's requirements in 49 CFR Part 192, Subpart N, each as amended. (Note: certain affiliates of Company add additional requirements beyond those required by DOT.)

1.3. Nothing contained in this Manual is intended to relieve Contractor of its responsibility for safety applicable to the Work performed for Company.

2. DEFINITIONS

2.1. The capitalized terms in this section shall have the meaning given them below. Capitalized terms used elsewhere in this Manual shall have the meaning given them in that particular section.

2.2. "CFR" means the Code of Federal Regulations.

2.3. "Company Property" means all property owned, operated, leased by, or under the control of Company, including rights-of-way and worksites.

2.4. "Competent Person" is defined as one who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to workers, property, or the environment, and who has the authorization to take prompt corrective measures to eliminate them. By way of training and/or experience, a competent person is knowledgeable of applicable standards, is capable of identifying workplace hazards relating to the specific operation and has the authority to correct them. Some regulatory standards add additional specific requirements that shall be met by Contractor's competent person.

2.5. "Confined Space" is a space that meets the following criteria:

2.5.1. Is large enough and configured so that a worker can bodily enter and perform assigned work inside;

2.5.2. Has limited or restricted means for entry or exit (e.g., tanks, vessels); and

2.5.3. Is not designed for continuous worker occupancy.

2.6. "Contractor" means the person or entity hired by Company to perform Work for Company, whether on or off Company Property, including any and all employees, subcontractors, suppliers, agents, and representatives performing any portion of the Work on behalf of Contractor.

2.7. "Dedicated Safety Representative" is a person assigned to a worksite whose sole responsibility on that job is to ensure compliance with safety requirements in connection with performance of the Work. The safety representative shall be qualified to perform the Work by education (e.g., OSHA (defined below) 40-hour course, higher education in related field), certification (e.g., CSP, CIH), or experience. This person shall have current certified first-aid/CPR training.

2.8. “Designated Safety Representative” is a person assigned to a worksite that is responsible for safety, but may also have more than one role in connection with performance of the Work. This person shall have current certified first-aid/CPR training.

2.9. “DOT” means the U.S. Department of Transportation, including its agencies.

2.10. “Exposure Limit” means concentration limits of airborne contaminants established by OSHA termed Permissible Exposure Levels (PELs) and the American Conference of Industrial Hygienists (ACGIH) termed Threshold Limit Values (TLVs); these levels represent the concentration to which nearly all workers may be repeatedly exposed without experiencing adverse health effects.

2.11. “Hazard” means a condition or inherent physical or chemical characteristic (flammability, toxicity, corrosivity, stored chemical, electrical, hydraulic, pressurized or mechanical energy) that has the potential for causing harm or damage to people, property, or the environment.

2.12. “Hazardous Atmosphere” means an atmosphere that exposes workers to risk of death, incapacitation, injury, or acute illness from one or more of the following:

2.12.1. A flammable gas, vapor, or mist in excess of 10 percent of its lower explosive limit (LEL). In the case of natural gas, 10% LEL equals 0.5 % by volume.

2.12.2. An airborne combustible dust in a concentration that obscures vision at a distance of 5 feet or less.

2.12.3. An atmosphere with an oxygen deficient concentration below 19.5 percent or oxygen enriched concentration above 23.5 percent by volume.

2.12.4. An atmospheric concentration of any substance that exceeds an Exposure Limit or other atmospheric condition that is IDLH.

2.13. “Immediately Dangerous to Life or Health” (IDLH) means an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual’s ability to escape from a dangerous atmosphere.

2.14. “Industrial hygiene” is the science or art devoted to the anticipation, recognition, evaluation, and control of those environmental factors (stresses) arising in or from the workplace that may cause sickness, impaired health and wellbeing, or significant discomfort among workers or among the public.

2.15. “Job Safety Analysis” (JSA) means a method used to identify, analyze, and record the following:

2.15.1. The steps involved in performing a specific job;

2.15.2. The existing or potential safety and health hazards associated with each step; and

2.15.3. The recommended actions or procedures to eliminate or reduce the hazards and the risk of a workplace injury or illness.

2.16. “Near miss” is an incident or situation with the potential for injury or property damage that did not occur.

2.17. “OSHA” is the Occupational Safety and Health Administration.

2.18. “Permit Required Confined Space” is a Confined Space that has one or more of the following characteristics:

2.18.1. Contains or has a potential to contain a Hazardous Atmosphere;

2.18.2. Contains a material that has the potential for engulfing an entrant;

2.18.3. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross-section; or

2.18.4. Contains any other recognized serious safety or health hazard.

2.19. "Process Safety Management" (PSM) is the standard adopted by OSHA in Process Safety Management of Highly Hazardous Chemicals, 29 CFR §1910.119 that is applicable to contractors performing maintenance or repair, turnaround, major renovations, or specialty work on or adjacent to a covered process. It only applies to facilities that meet the relevant definitions.

2.20. "Underground Facility" means any piece of equipment or apparatus buried or placed below ground for use in connection with the storage or conveyance of water, sewage, electronic, telephonic, or other form of electronic communications, cable television, electric energy, oil, gas, hazardous liquids, or other substances and including, but not limited to, pipes, sewers, conduits, cables, valves, lines, wires, manholes, and attachments.

2.21. "Work" means all services performed, and/or all supervision, labor, tools, equipment, machinery, materials, and supplies used or provided by Contractor, on behalf of Company pursuant to an agreement between Contractor and Company.

3. COMPLIANCE

3.1. Contractor shall have established written safety and health programs, at or before start of any Work, to prevent injury, illness, damage, and minimize accidents and loss to the public, employees, workers, property, and the environment. The program shall continue to final completion of the Work and conform to applicable laws, rules, regulations, and orders of governing authority and generally accepted industry standards.

3.2. Contractor and its subcontractors shall be evaluated by Company on their performance and Work practices, including but not limited to compliance with federal, state, and local health and safety and environmental requirements as well as the requirements of this Manual. To verify compliance, Contractor may be subject to detailed safety and environmental audits, including site visits, attendance at Contractor's safety meetings, and inspection of equipment, any time during the term of the working relationship with Company.

3.2.1. Contractor shall cooperate fully with Company's audits and inspections.

3.2.2. Company shall document Contractor's safe and at-risk safety performance.

3.2.3. The evaluation results may be used in the decision process for awarding future Work.

3.2.4. If Contractor's overall safety and/or environmental performance evaluation is unsatisfactory and Contractor is unwilling to demonstrate prompt and satisfactory improvement, Company may remove Contractor from the Work, as more particularly set forth in the agreement between Contractor and Company.

3.2.5. Serious, willful, or repeated violations of safety requirements by Contractor may be deemed a material breach of Contractor's agreement and reason for contract termination.

3.3. Contractor shall enforce safety procedures, strict discipline, and good order among Contractor's employees and subcontractors at any tier; fighting, horseplay, and other unsafe behavior are prohibited. If Company reasonably determines that a particular person does not follow safety procedures, is unfit or unskilled for the assigned Work, disregards instructions, or jeopardizes the goodwill between Company and the public, Contractor shall immediately replace the person upon receipt of Company's request to do so and shall not employ the person again on the Work.

3.4. If a safety violation is observed by Company, Company shall discuss the violation with Contractor's representative on the job at the time of discovery. Contractor shall promptly implement corrective actions and establish measures to prevent a recurrence.

3.5. If in Company's sole discretion, the Work presents a condition that is unsafe or harmful to people, property, or the environment, Company shall have the right to suspend the Work, in whole or in part, until the condition is corrected or terminate the Work.

3.6. Contractor shall inform Company immediately if Contractor is approached or contacted by a regulatory inspector at any time with respect to any aspect of the Work.

3.7. Contractor shall immediately forward any citations or notices of violation incurred during the Work to Company's representative.

4. STOP WORK AUTHORITY - DUTY TO INTERVENE

4.1. Company employees and contractors have the authority and obligation to stop individual tasks or group operations when the control of safety, health, or environmental risk is not clearly established or understood.

4.1.1. All Company employees and contractors have the authority and obligation to stop any task, activity, or operation where concerns or questions exist regarding risk to themselves, co-workers, the public, or the environment. Stop work actions take precedence over all other priorities and procedures.

4.1.2. No work will resume until all stop work issues and concerns have been adequately addressed.

4.1.3. Any form of retribution or intimidation directed at an individual or company for exercising their stop work authority will not be tolerated.

4.2. Contractor shall ensure that all of its employees, subcontractors, agents, and representatives performing any portion of the Work are informed of these "stop work" requirements.

4.3. Never circumvent the stop work authority of another worker.

5. LIFE SAVING RULES

5.1. While all safety policies and procedures are important and must be followed, Life Saving Rules focus on high-risk activities that could lead directly to serious injury or death. All Company employees and contractors are expected to comply with these rules. Company may remove any Contractor from the workplace who intentionally violates one of the following Lift Saving Rules.

5.1.1. **Atmospheric Monitoring / Ignition Sources**: Atmospheric monitoring (oxygen and LEL) must be conducted prior to and during entry into a potentially gaseous atmosphere (e.g., excavation, vault, confined space, inside gas leak, hot work) and ignition sources must be eliminated or controlled (e.g., smoking, open flame, non-rated electronic equipment, lack of static mitigation).

5.1.2. **Excavation Safety**: Never enter an unsafe trench, or a trench 5-feet or more in depth without proper protective systems in place.

5.1.3. **Fall Protection**: Never perform work at an elevated position of 4-feet or higher without adequate fall protection.

5.1.4. **Lockout/Tagout**: Known hazardous energy sources must be isolated, de-energized, locked-out and/or tagged-out and verified prior to performing work on facilities or equipment.

5.1.5. **Hazardous Atmosphere Entry (Excavations):** A flash fire suit and atmosphere supplying respirator must be worn when entering a hazardous atmosphere (≥ 20% LEL) resulting from escaping natural gas in an excavation.

5.1.6. **Suspended Loads:** Never walk or work under a suspended load.

6. GENERAL SAFETY REQUIREMENTS

6.1. Contractor shall have sufficient knowledge, experience, and understanding of natural gas workplace safety and health hazards and other regulatory requirements pertaining to the Work to be performed.

6.2. Contractor shall perform the Work using qualified workers who are adequately trained in the requirements of their particular jobs and skilled in the Work assigned to them.

6.3. Contractor shall provide proof of worker training or certifications to Company upon request.

6.4. Contractor shall comply with the requirements of OSHA, all other applicable federal, state, tribal, and local laws, rules, regulations, orders of governing authority, and other project and site-specific permits.

6.5. In cases where there is more than one method of compliance with a given safety rule, Contractor may deviate from Company's specified safety practices if it can demonstrate to Company that the alternative practice provides an equal or greater margin of safety and complies with regulatory requirements.

6.6. Contractor shall comply with any and all Company-posted requirements, information provided by Company on site-specific hazards, or emergency response plans provided by Company.

6.7. **Contractor shall review this Manual with its employees, subcontractors, and consultants.**

6.8. Contractor's Designated or Dedicated Safety Representative shall perform frequent safety inspections of operations, facilities, and equipment used in the performance of the Work and participate in joint inspections and audits with Company upon request. Contractor shall immediately address any unsafe condition, equipment, or action identified during an inspection.

6.9. Contractor shall have a Designated Safety Representative at the worksite at all times to ensure that appropriate safety practices are being followed. In addition to the Stop Work Authority Duty to Intervene requirements in section 4 above, the Designated Safety Representative shall specifically have authority to stop and correct Work that presents a serious hazard or violation. Company reserves the right, at its sole discretion, to require Contractor to provide one or more Dedicated Safety Representatives onsite throughout performance of the Work. Contractor shall provide the qualifications of the proposed safety representative to Company for review and approval upon request.

6.10. Contractor shall ensure workers comprehend job-specific safety related information, including individuals who do not understand English and individuals who cannot read. Contractor shall provide the information in a language, format, and vocabulary that the workers can understand. Contractor shall use training methods, which could include use of written translation, oral explanation, multilingual interpreters, or visual aids, intended to ensure understanding of the information. Company reserves the right, at its option, to suspend the applicable Work until the situation is remedied or have the applicable individuals removed from the worksite for their safety, and Contractor shall immediately replace such individuals with suitable replacements.

6.11. Contractor shall ensure that an individual who can communicate with Company's onsite representative in English is at the worksite at all times during the Work.

6.12. Contractor shall ensure that all applicable emergency equipment owned by the Contractor (e.g., eye wash stations, fire extinguishers, air packs, gas monitors, first aid kits, and

stretchers) is adequate for the Work to be performed, readily accessible, in good working condition, regularly restocked or refilled, and replaced upon the expiration date.

7. INCIDENT REPORTING AND INVESTIGATION PROCEDURES

7.1. Following appropriate contact with emergency response agencies, Contractor shall immediately notify Company of all incidents including, but not limited to, accidents, death, injuries requiring medical treatment beyond first aid, industrial illnesses, vehicle accidents, chemical spills (including but not limited to fuel, hydraulic oil, and drilling mud), sediment discharges (including sediment laden stormwater), line strikes and other damage to Company Property or the environment, significant gas releases, and significant near misses (e.g., incidents that may have resulted in serious injury, death, or substantial property or environmental damage) at worksites or in connection with performance of Work. Providing notice to Company does not relieve Contractor's responsibility to notify appropriate regulatory agencies when applicable.

7.2. Notice shall be made to Company's onsite representative. If the representative is not available, Contractor shall immediately call the appropriate emergency number– MountainWest Pipeline(801-324-4400)

7.3. Any utility strike, Company Property or other utility owned, must be reported to the affected utility immediately, and through Gold Shovel as soon as feasible.

7.4. Contractor shall fully investigate all incidents and shall provide Company Safety and Health Department (801-201-7613) with a written report that identifies the contributing factors, root causes and the corrective actions that shall be taken to prevent reoccurrence. Never intentionally provide false or incomplete information during a safety-related investigation. In certain circumstances, Contractor may be required to participate in a joint incident investigation with Company or others.

7.4.1. Contractor shall enter Incidents listed in paragraph 7.1 into the ISNetWorld Incident Management Tool (IMT) no later than the shift in which the incident occurred.

7.4.2. After completing the investigation, Contractor shall use the ISNetWorld IMT to complete the root cause analysis, enter corrective actions, and track corrective actions through to completion.

7.5. Except to cooperate with rescue personnel and to address imminent safety hazards, Contractor shall not disturb the scene of any incident that may require investigation by Company or a regulatory agency until authorized to proceed by Company.

8. WORKPLACE REQUIREMENTS

8.1. Professional Conduct:

Contractor shall conduct itself in a professional manner at all times while on Company Property. Horseplay, practical jokes, any type of harassment, abusive or objectionable language, or other inappropriate behavior on the job shall not be tolerated.

8.2. Use of Site:

8.2.1. Contractor shall confine its equipment, the storage of materials, and the operations of its workers at the worksite to areas within Company Property or as otherwise directed by Company and shall not unreasonably encumber the worksite with its materials or equipment. Close attention shall be made to maintaining site housekeeping and minimizing slip, trip and fall hazards.

8.2.2. Contractor shall remove and properly dispose all of its waste materials (including but not limited to scrap metal, welding rod) and rubbish from the worksite as it is generated. Contractor shall remove its tools, equipment, and surplus materials

upon completion of the Work. Contractor shall at all times keep the worksite free from spilled liquids and chemicals and shall have all appropriate spill prevention and response materials and equipment at the worksite. Chemicals in containers 5 gallons or greater shall be stored in secondary containment.

8.3. Firearms, Drugs, and Alcohol:

8.3.1. Except for security personnel specifically authorized to carry firearms, the possession of any dangerous weapon, (i.e. firearms, explosive devices and knives with blades over three inches other than business tools) is strictly prohibited at the workplace, including on any Company property or in Company vehicles or equipment. This prohibition does not apply to the storing of a firearm in an unoccupied and locked non-company vehicle (or in a locked container attached to the vehicle) that is parked in the Company's designated parking lot, as long as possession of the firearm is lawful and the firearm is not in plain view from outside the vehicle. This prohibition also may be waived in unique circumstances if approved by applicable Company's top executive and is not applied where it would violate other federal or state laws. Except as allowed above, employees who enter Company premises with weapons (concealed or unconcealed) in their possession are violating this policy, regardless of whether they are licensed or permitted by law to carry such firearms.

8.3.2. No alcoholic beverages, illegal drugs under state and federal laws, non-prescribed controlled substances, or otherwise legal, but illicitly used substances that may impair a person's job performance or pose a safety hazard (collectively Prohibited Substances) shall be allowed on Company Property. Illicitly used substances include prescription drugs obtained without proper medical authorization for the user and prescribed drugs, over-the-counter drugs, and other substances not being used for their intended purposes or at the intended dosage. The only permitted possession and use of controlled substances on any Company Property shall be prescription medicines, properly dispensed by a licensed medical practitioner, which, in that medical practitioner's judgment, do not impair the person's ability to perform the Work safely and competently. Company may remove from Company Property any person suspected or found to be using, under the influence of, in possession of, or selling or attempting to sell a Prohibited Substance on Company Property.

8.3.3. Contractor shall inform its employees, suppliers, and subcontractors before entering Company Property that entry onto Company Property is consent to and recognition of the authority of Company and its authorized representatives to search the person, vehicle, and other property of individuals while entering, on, or departing from Company Property.

8.4. Drug and Alcohol Program (NON-DOT)

8.4.1. Written Program.

a. If Contractor performs any United States Department of Transportation (DOT) safety-sensitive Work for Company, Contractor shall also comply with the DOT Requirements section in the agreement between Contractor and Company.

b. Contractor, including its subcontractors at any tier, shall have a written drug and alcohol testing program prior to performing any Work. At a minimum, Contractor's program shall meet the requirements set forth below. Contractor shall maintain its written drug and alcohol testing program during the period of the Work performed for Company.

c. Contractor shall conduct all drug, drug metabolite, and alcohol testing in accordance with a written program that has been distributed to its employees.

d. All collection and testing shall be performed by Contractor in accordance with the laws of the state where the employee works, unless the employee works in a DOT-covered position, in which case the DOT regulations shall apply if in conflict with, or in addition to, any state requirement.

e. Prohibited drugs shall include, but are not limited to: marijuana (THCA), cocaine metabolites (benzoylecgonine), opiate metabolites (codeine and morphine), 6-Acetylmorphine, phencyclidine (PCP), amphetamines (AMP/MAMP), methamphetamines, methylenedioxymethamphetamines (MDMA, MDA, MDEA), and any other illicit drug as provided by the Federal Controlled Substance Act (21 USC §§ 801-971) and state law, as may be amended from time to time.

f. Contractor's program shall, at a minimum:

   i. Secure written consents from all applicants and employees for drug and alcohol testing and release of information.

   ii. Include procedures for:

      1. collection of a sample;
      2. testing of a sample;
      3. evaluation of a test; and
      4. disciplinary action or rehabilitative action on the basis of a test result.

   iii. Ensure that each employee is tested under the following circumstances:

      1. Pre-Employment;
      2. Post-Accident (optional);
      3. Random;
      4. Reasonable Suspicion/Cause;
      5. Return-to-Duty (optional); and
      6. Follow Up.

g. Contractor shall perform testing for prohibited drug and/or alcohol abuse at its sole cost and expense.

8.4.2. Responsibilities.

a. Contractor shall ensure that its employees and subcontractors comply with Contractor's drug and alcohol testing program prior to performing any Work for Company.

b. Contractor shall ensure that its employees and subcontractors either participate directly in Contractor's program, or its subcontractors have and follow their own written program.

c. Company reserves the right to require Contractor to perform, at its own expense, testing for prohibited drugs and/or alcohol abuse upon reasonable suspicion or following an incident or accident.

d. Contractor shall immediately remove from the Work any individual who is in violation of Contractor's drug and alcohol testing program.

8.4.3. Reports and Recordkeeping. Contractor shall maintain records detailing compliance with its written drug and alcohol testing program.

8.4.4. Consequences. Company may suspend or terminate Contractor's Work, in whole or in part, for failure to comply with any of the requirements of this section.

8.5. Smoking and Open Flame:

8.5.1. Smoking is prohibited in all Company buildings and areas within 25 feet of entrance ways, exits, air-intake systems, and open windows. Smoking includes use of electronic cigarettes and any other heated tobacco devices.

8.5.2. Smoking shall be allowed only in designated areas on or in the vicinity of the worksite. Designated areas, if any, shall be determined prior to the start of Work by Company and Contractor.

8.5.3. Matches and lighters of any kind may not be carried within hazardous areas (e.g., well sites, gas plants, compressor stations, meter stations, regulator stations, valve pits, and bell holes).

8.5.4. Smoking is prohibited within 100 feet of any worksite or area where flammable liquids or gases may be present.

8.5.5. Discarding matches, cigarettes (including cigarette butts), cigars, etc., from any vehicle while on Company Property or while performing Work for Company is prohibited.

8.6. Security:

8.6.1. Contractor shall be responsible for its equipment and held accountable for controlling the actions of its workers while on Company Property. Company shall not be responsible for lost or stolen articles.

8.6.2. Contractors shall be authorized to be on Company property.

8.6.3. Contractor shall not bring unauthorized individuals (e.g., friends, relatives, or observers) onto Company Property.

8.6.4. Contractor shall observe Company and landowner requirements for site security (e.g., close/lock doors and gates).

8.7. Adverse Weather Conditions:

8.7.1. When adverse weather conditions present a potential safety risk, Contractor shall use good judgment and take appropriate action up to and including shutting down the Work.

8.7.2. Following a weather-related shutdown, Contractor shall conduct an inspection of the worksite prior to resuming Work to identify any changes related to safety or environmental protection.

8.8. Cell Phone Use While Operating Motorized Vehicles or Equipment:

8.8.1. Contractor shall only use cellular telephones and handheld radios when allowed by applicable law in the state where the Work is performed, and if it is safe, prudent, and necessary to do so.

8.8.2. Contractor is expected to assess the risk of accepting or sending transmissions from a cellular phone or handheld radio including, but not limited to, distraction while driving and operating equipment.

8.8.3. Never engage in texting or emailing while driving on Company business.

8.8.4. Passengers may use cellular telephones or other communication devices only if the conversation is not a distraction to the driver or equipment operator.

8.8.5. The use of communication and electronic devices (e.g. cell phones, pagers, two-way handheld and mobile radios, laptops etc.) shall not be allowed at Company well sites where wire-line operations are being conducted. Exceptions may be

allowed as determined by mutual agreement between the wire-line service contractor and the Company representative on location.

8.9. Access and Egress:

Contractor shall identify and mark egress routes from buildings, facilities, or other worksites under its control, unless previously marked by Company, and keep them clear of obstructions at all times. Obstructions include vehicles, equipment, trash, temporary quarters, trenches, dirt berms, pipe, and other materials. All vehicles shall be parked in a manner to allow unobstructed access and egress from buildings, facilities, Work areas, and well sites.

8.10. Emergency Procedures:

8.10.1. Contractor shall develop, implement, and enforce its own emergency response plans for the Work for its workers and subcontractors. However, it is critical that Contractor understand any applicable site-specific emergency procedures provided by Company.

8.10.2. Contractor's emergency response plan shall include provisions covering personal injuries, fires, explosions, and other major emergencies. Contractor shall immediately notify Company of any emergency situation.

8.10.3. Release of information about any emergency to the news media shall be done in conjunction with Company and only with the sole permission of Company's management.

8.10.4. Contractor shall post and/or make available all applicable ambulance, life flight, hospital, fire, police, and sheriff telephone contacts in addition to all pertinent Company and Contractor emergency contact names and numbers.

9. SAFETY MEETINGS

9.1. Daily Tailgate Meetings:

Contractor shall conduct and document a daily morning safety meeting with all applicable workers to discuss Work activities, address any safety and health concerns and potential impacts to the environment for the Work to be performed, review any near miss incidents and how they could have been avoided, and prepare or review the appropriate Job Safety Analysis paperwork. The Job Safety Analysis shall be readily available to all affected employees at the job site. Contractor shall provide such documentation to Company upon request.

9.2. Pre-Project Meetings:

9.2.1. Before beginning any Work with the potential for safety or health hazards and/or potential impact to the environment, Contractor shall ensure that all workers involved:

a. Understand the conditions and actions required to complete the Work safely and with the least impact to the environment;

b. Participate in the development or review of a Job Safety Analysis, pre-job planning, and safety meetings;

c. Follow established worksite procedures or task-specific procedures if hazards are specifically addressed; otherwise, use a Job Safety Analysis;

d. Review the applicable Job Safety Analysis or Work procedure at the worksite and implement additional precautions as needed to address the conditions and circumstances at the time the Work is performed; and

e. Communicate potential hazards to other persons affected by Work activities.

9.3. Job Safety Analysis (JSA) Requirements

9.3.1. Contractor shall prepare a JSA Job Safety Analysis (JSA) and document on a form containing the following elements:

a. Identify the steps needed to complete the work, including tools and equipment that will be used.

b. Identify the potential hazards associated with each step of the work.

c. Identify applicable hazard controls including engineering controls and safe work practices.

d. Identify personal protective equipment (PPE) requirements for the work; see Section 11.

e. Identify the appropriate emergency response location (e.g., physical street address or GPS coordinates).

f. Identify applicable evacuation plans (e.g., formal site evacuation plan or a designated assembly point in the event of an emergency).

g. Identify emergency contact information.

9.3.2. The JSA Form shall be reviewed with all affected personnel on site, and all affected personnel shall sign the Form.

9.3.3. A new JSA and JSA Form must be completed if the job extends beyond a single work shift. The JSA Form must be updated whenever the scope of the job changes, additional workers join the project or if site conditions change such that additional hazards may be present.

9.4. Regularly Scheduled Safety Meetings:

9.4.1. Contractor shall conduct regularly scheduled safety meetings.

9.4.2. Attendance shall be required by all workers.

9.4.3. Contractor shall keep a written record of the meetings that includes date, location, names or signatures of attendees, and topics covered.

9.4.4. Contractor shall inform workers of factual circumstances resulting in incidents, accidents, and near misses and discuss how to correct and prevent such situations from recurring.

9.5. Facilities Subject to Process Safety Management (PSM)

9.5.1. Prior to commencing Work, Contractor shall schedule a Process Safety Management meeting with Company as required by paragraph 10.1

9.5.2. Contractor shall schedule additional PSM meetings with new employees, subcontractors, and others as required.

10. PROCESS SAFETY MANAGEMENT (PSM)

10.1. Company shall inform Contractor if a facility is covered under OSHA's PSM and discuss:

10.1.1. Control of site entrance; and

10.1.2. The potential for fire, explosion, or toxic release hazards related to the Work.

10.1.3. Emergency evacuation procedures.

10.2. Contractor personnel shall:

10.2.1. Report directly to the facility office and sign in;

10.2.2. Coordinate work through a Company representative while working in Process covered areas; and,

10.2.3. Sign out prior to leaving the site.

10.3. Contractor shall ensure that workers are trained to perform their jobs safely and have been instructed in the process hazards and emergency action plans for the facility.

10.4. Contractor shall maintain documentation of worker training. Documentation shall include worker identification, training dates, description of the training, and the means used to verify the worker understands. Contractor shall provide the documentation to Company upon request.

10.5. Contractor shall ensure that workers follow all safety and health requirements and the safe work practices identified in Company's written site-specific PSM operating procedures, a copy of which shall be provided to Contractor upon request.

10.6. Contractor shall advise Company of any unique hazards resulting from performance of the Work at a PSM-covered facility.

11. PERSONAL PROTECTIVE EQUIPMENT (PPE)

11.1. General:

11.1.1. "PPE Hazard Assessment" means the process of identifying, selecting, and documenting appropriate personal protective equipment (PPE) for workplace hazards.

11.1.2. Contractor shall conduct a job-specific PPE Hazard Assessment for all tasks that shall be performed as part of the Work and ensure that affected workers are informed of the findings of the PPE Hazard Assessment.

11.1.3. Contractor shall provide, at its own expense, and enforce the use of all appropriate PPE as determined by the job-specific PPE Hazard Assessment and any posted Company requirements.

11.1.4. It is Contractor's responsibility to ensure that all workers arrive at the worksite with the appropriate PPE; travel to obtain the appropriate PPE is not compensable.

11.1.5. Contractor shall ensure that all workers are trained in the proper use of applicable PPE prior to performing Work.

11.1.6. Approved hard hats, hard-toed boots or shoes, and safety glasses shall be worn on all Company worksites.

11.1.7. All workers on Company Property shall wear a shirt and long pants. Tank tops, sleeveless shirts, and short pants or cutoffs are not permitted.

11.1.8. Loose or floppy clothing, neck chains, loose jewelry, or loose long hair is prohibited when working around rotating or moving equipment.

11.1.9. Rings shall be removed when working in areas where they could catch on moving objects or sharp protrusions or come into contact with electrical circuits.

11.1.10. Clothing, including gloves, shall not be cleaned by blowing with compressed air, blowing with compressed gases, or washing in a flammable liquid.

11.2. Eye Protection:

11.2.1. Contractor and worksite visitors shall wear approved safety glasses (ANSI Z87.1) with side shields while performing or observing Work activities, except when inside passenger vehicles or office areas.

11.2.2. Individuals may wear contact lenses only if used in conjunction with approved eye-protection equipment.

11.2.3. Appropriately ANSI-rated special-purpose eye protection (e.g., goggles) in conjunction with a face shield may be required when working on or around energized electrical equipment; during grinding activities; handling hazardous

liquids, powders, chemicals, or vapors; working in the immediate area where hazardous materials are being handled; and other applicable conditions.

11.2.4. Welding hoods or pancake shields shall be used during all welding operations. Goggles or other suitable eye protection with appropriate filter lenses shall be used during all gas welding, gas cutting, or brazing operations. All filter lenses and plates used in welding hoods and goggles shall meet ANSI Z87.1 requirements and Z87.1+ when used for grinding.

11.2.5. Welders' helpers and entry attendants shall use proper eye protection. When not engaged in a welding or cutting activity, safety glasses with side shields shall be worn by welders and welders' helpers.

11.3. Foot Protection:

11.3.1. Hard-toed boots or shoes shall be worn at all times, except while in passenger vehicles, office areas, or control rooms.

11.3.2. All hard-toed footwear shall:

a. Comply with ANSI Z41.1 specifications and have a crush-resistant toe-box and non-slip soles;

b. Be in good repair; and

c. Be laced or fastened.

11.3.3. Leather footwear shall be required when performing tasks that present a flash fire or explosion hazard. (*During periods of wet or inclement weather, non-leather footwear (i.e., rubber boots or non-leather over-boots) may be used by employees when performing tasks that do not involve direct exposure to escaping gas.)*

11.3.4. Over-the-ankle boots (minimum 6-inch height) are required for all workers involved in construction and field activities in order to provide ankle support.

11.3.5. Electrical hazard rated footwear (e.g., non-conductive) shall be worn by workers performing energized electrical Work as defined in NFPA 70E, "Standard for Electrical Safety Requirements for Employee Workplaces," current edition (e.g., working on or around electrical equipment operating at over 50 volts AC nominal or 100 volts DC). The integrity of the insulated soles shall not be compromised. See Electrical Safety section of this Manual.

11.3.6. Site visitors not performing Work may be required to wear hard-toed shoes. Contractor shall consult with the onsite Company representative for authorized exceptions, if any.

11.4. Hand Protection:

11.4.1. Contractor shall wear appropriate gloves when the hands are exposed to hazards such as cuts, punctures, or abrasions (cloth, leather, or leather-palmed gloves); when performing welding or gas cutting operations (leather gloves); when handling chemicals or hazardous materials where absorption is a concern (chemical resistant gloves); and when performing energized electrical Work (gloves certified for electrical work – see Electrical Safety section of this Manual).

11.4.2. Gloves containing fibers that melt shall not be used when working in areas with the potential for a flammable gas atmosphere.

11.4.3. Contractor shall ensure that hand protection is in good repair and is adequate for the applicable job hazards.

11.5. Head Protection:

11.5.1. Contractor and visitors shall wear an ANSI Z89.1, Type 1 (Class E) approved hard hat at all times at the worksite, except while in passenger vehicles, office areas, or control rooms.

11.5.2. Hard hats shall be replaced as soon as practicable when cracked; dull in color; appear chalky; or when the suspension is torn, not adjustable, or the attachment lugs are broken.

11.5.3. Hard hats shall not be altered or modified (e.g., holes drilled or painted).

11.5.4. Hard hat stickers shall be positioned in a manner that shall not interfere with inspection of the shell.

11.5.5. While using Off-Highway Vehicles that are not equipped with a roll cage (e.g., snowmobile or all-terrain vehicle), Contractor shall wear an approved (DOT or Snell) helmet in place of a hard hat.

11.5.6. Welders shall wear a hard hat whenever not engaged in welding activities. Welding helmets that accommodate the use of a hard hat are recommended.

11.6. Hearing Protection:

11.6.1. Contractor shall wear approved hearing protection devices (ANSI 5.3.19, current version) in all designated high noise areas and during operations where noise levels may exceed 85 decibels. Exposure to impulsive or impact noise should not exceed 140 decibels.

11.6.2. When feasible, Contractor shall identify and post noise warning signs at Work areas that may exceed 85 decibels.

11.6.3. Contractor shall implement engineering and administrative controls to limit noise exposure where feasible.

11.7. Flame Retardant (FR) Clothing:

11.7.1. Contractor shall wear flame retardant (FR) clothing whenever:

a. A job involves the potential for exposure to escaping flammable gas or flash fire. Examples include, but are not limited to, the following:
   i. Working around dehydration units or line heaters;
   ii. Pigging operations;
   iii. Changing orifice plates;
   iv. Using a bar-hole probe in close proximity to an in-service gas line where a known leak is confirmed;
   v. Responding to a known outside gas leak or tear out;
   vi. Changing out a gas meter without first interrupting gas service (e.g., meter bypass hot change, service valve hot change, or compressed natural gas (CNG) hot change);
   vii. Tank cleaning or gauging;
   viii. Transferring bulk flammable liquids;
   ix. Performing hot-taps, tie-ins, squeeze-offs, or fusing on hot mains (plastic and steel);
   x. Performing Hot Work (defined below);
   xi. Performing gas blow down operations or line purging (including gas sampling);
   xii. Excavating near an in-service gas pipeline;
   xiii. Working in a bell hole near an in-service gas pipeline;

xiv. Performing maintenance or repair activities on an in-service pipeline;

xv. Performing inspection, maintenance, or repair activities involving a damaged or impaired pipeline; and

xvi. Working on or near energized electrical equipment with potential for arc flash (>50 volts AC or 100 volts DC).

b. Entering into a Confined Space, pit, or vault that has the potential for a flammable atmosphere.

c. Entering any Company facility designated as an Electrical Class I Hazardous Location (a location in which flammable gases may be present in sufficient quantities to produce explosive or ignitable mixtures). Examples include, but are not limited to, the following:

i. Compressor buildings;

ii. Meter stations;

iii. Regulator stations;

iv. Chromatograph buildings;

v. Valve pits;

vi. Vaults containing natural gas piping; and

vii. CNG compressor enclosures.

11.7.2. FR clothing shall meet the specifications outlined in NFPA 2112, “Standard on Flame-Resistant Garments for Protection of Industrial Personnel against Flash Fire.”

11.7.3. FR clothing used for working on or near energized electrical equipment with the potential for arc flash shall meet the specifications as required in NFPA 70E, “Standard for Electrical Safety in the Workplace.”

11.7.4. FR clothing used for energized electrical Work (50 volts AC or 100 volts DC) shall have a minimum arc rating of 8 cal/cm^2 (HRC 2) unless otherwise specified based on increased potential exposure.

11.7.5. Contractor shall not work in FR clothing that is heavily soiled with petroleum, paint, or other flammable products.

11.7.6. FR clothing shall be worn as the outermost layer of clothing.

11.7.7. Contractor shall follow the manufacturer’s recommendations for laundering and care of FR clothing.

11.8. Special Protective Clothing:

11.8.1. Contractor shall use high visibility warning vests that meet ANSI Class 2 requirements when working on a public road, pipeline, or railroad right-of-way (e.g., construction sites, near intersections, and along roads).

11.8.2. Contractor shall wear a high visibility warning ensemble that meets ANSI Class 3 requirements when working on high speed roadways or on a public road in dark conditions.

11.8.3. Contractor shall strictly comply with any specific requirements associated with Work in DOT highway or railway jurisdictions.

11.9. Respiratory Protection:

11.9.1. Contractor shall only utilize respiratory protection when engineering or procedural controls are not feasible to control respiratory hazards.

11.9.2. Contractor shall develop and maintain a written Respiratory Protection Program that complies with OSHA regulations set forth in 29 CFR §1910.134. Workers using respiratory protection shall be trained in its use, care, and limitations and shall be familiar with the different types of respiratory equipment available and which type is suitable for the Work.

11.9.3. Contractor shall ensure that its workers have been medically qualified, fit tested, and trained as required by OSHA regulations.

11.9.4. Workers using respirators shall be clean-shaven in the face-piece seal area during normal work hours and on-call assignments, and they shall not have facial hair that could interfere with the function of the mask. Head coverings, glasses, and foreign items shall be removed from the head and face before putting on a respirator with a full-face piece.

11.9.5. Contractor shall inform respirator users of the respiratory hazards to which they may be exposed.

11.9.6. Contractor shall ensure that filtering face piece respirators, respirator cartridges, or filters are changed in accordance with the manufacturer's recommendations and OSHA requirements when utilizing air purifying respirators.

11.9.7. Contractor shall ensure that all supplied air sources meet the requirements for Grade D breathing air.

11.9.8. When compressors or ambient air pumps are used to supply breathing air, the compressor or ambient air pump shall be situated to prevent the entry of contaminated air into the air-supply system.

11.9.9. Compressors used to supply breathing air shall be equipped with:

a. In-line sorbent beds and filters to ensure breathing air quality, maintained or replaced in accordance with the manufacturer's instruction. A tag containing the most recent change shall be maintained at the compressor;

b. An in-line carbon monoxide detection system sufficient to prevent carbon monoxide in the breathing air from exceeding 10 ppm.

11.9.10. Contractor may only work in an IDLH atmosphere if the following conditions have been satisfied:

a. Workers entering an IDLH environment shall be equipped with a full-face pressure demand supplied air respirator equipped with an auxiliary air supply, or a pressure demand self-contained breathing apparatus (SCBA).

b. Workers using a SCBA must be trained, qualified, and fit tested in accordance with OSHA requirements.

c. One worker, or more than one worker when needed, shall be located outside of the IDLH atmosphere to serve as an attendant. The attendant shall maintain communication (visual, voice, or signal line) with those who are working in the IDLH atmosphere and shall be trained to provide effective emergency rescue.

d. The attendant located outside the IDLH atmosphere shall be equipped with:

i. A full-face piece pressure demand supplied air respirator equipped with an auxiliary air supply, or a pressure demand SCBA; and

ii. Appropriate retrieval equipment for removing the person from a Hazardous Atmosphere.

12. ELEVATED WORK

12.1. General:

12.1.1. When working overhead, Contractor shall protect people below. Contractor shall ensure that tools, materials, and equipment subject to falling from height are adequately secured before Work is performed. Tools and materials shall be handed up or down, but never thrown. When it is necessary to hoist tools with a rope, exercise care to ensure the tools are securely attached to the line or loaded into a container and there is no danger of them being dropped.

12.2. Fall Protection:

12.2.1. Definitions:

a. Fall Protection Competent Person – A person who is knowledgeable of:
   i. The fall hazards at the worksite;
   ii. Correct procedures for assembling, maintaining, disassembling, and inspecting fall arrest equipment; and
   iii. The operation of guardrail systems, Personal Fall Arrest Systems (defined below), warning line systems, safety monitoring systems, and other protection to be used.

b. Personal Fall Arrest System – A system used to arrest a person in a fall from a working level at height. It consists of an anchorage, connectors, and body harness. It may include a lanyard, deceleration device, lifeline, or combination of these.

12.2.2. A Personal Fall Arrest System shall be worn:

a. On work surfaces greater than 6 feet in height with slopes greater than 1:3 (1 foot vertical; 3 feet horizontal slope);
b. When working on unfinished structures greater than 6 feet in height where the work surface is without guardrails, toe boards, or gated access ladders;
c. When working on unfinished structures greater than 6 feet in height without level, non-slip surfaces at least 144 square feet and the structural soundness to support 1,500 pounds;
d. When working on areas within 6 feet of the edge of a work surface greater than 6 feet in height or within 6 feet of any unguarded opening, skylight, service duct, stairwell, or elevator shaft on a roof or unfinished level of a structure;
e. When working along unguarded locations at the edge of a well, pit, shaft, excavation, trench, or similar location 6 feet or more in depth when the excavation is not readily seen because of plant growth or other visual barrier;
f. At locations 6 feet or more above dangerous equipment in operation;
g. When working within personnel lifts and man baskets;
h. When specified on a warning sign; and
i. Whenever deemed necessary by a Fall Protection Competent Person.

12.2.3. Contractor shall ensure that workers have been trained by a Fall Protection Competent Person on fall hazards and the fall protection systems used.

12.2.4. All components of the Personal Fall Arrest System shall comply with ANSI Z359.1.

12.2.5. Contractor shall inspect all components of a Personal Fall Arrest System before each use and replace if necessary. Fall protection equipment that has been

subjected to impact loading shall be immediately removed from service and shall be inspected by the manufacturer before reuse or destroyed and replaced.

12.2.6. Contractor shall ensure that components of a Personal Fall Arrest System are free from defect such as cuts, tears, abrasions, mold, undue stretching, missing or degraded stitching, alterations, or additions that might affect its efficiency. Contractor shall also inspect for damage due to chemical exposure, deterioration, distorted hooks, or faulty hook springs, loose or damaged mountings, non-functioning parts, wearing, or internal deterioration in the ropes or webbing.

12.2.7. Contractor shall follow the manufacturer's recommended procedures for fitting, adjusting, using, inspecting, testing, and caring for fall protection equipment.

12.2.8. A Personal Fall Arrest System shall not be used as a primary suspension device for positioning, or as a retrieval system, or for transporting materials.

12.2.9. Contractor shall evaluate the compatibility of all fall arrest systems and anchorage points prior to use.

12.2.10. Contractor shall select a suitable anchorage point that is strong enough to support at least twice the potential impact load (minimum 5,000 pounds/person attached) of a fall; that is located to prevent contact with an obstruction in the case of a fall; and is as vertical as possible in order to reduce swinging.

12.2.11. Contractor shall calculate tie-off distances accurately to limit a fall to a maximum of 6 feet, considering lanyard elongation, Work position, proximity to fall area, and the location of fall hazards. The anchorage and tie-off points should be located to avoid obstructions in the potential fall path.

12.2.12. The availability of rescue/retrieval equipment such as ladders, man lifts, retrieval winches, pulley rope controls, or descent devices should be identified before undertaking activities at height.

12.3. Personnel Lifts and Aerial Lifts:

12.3.1. Only personnel lifts, man baskets, and support systems designed to ANSI A92.2, current version shall be used. Personnel lifts and man baskets that have been modified are prohibited unless accompanied by written permission from the manufacturer.

12.3.2. Workers assigned to operate personnel lifts or work at elevation from a man basket shall be trained in the safe use and the recognition of hazards associated with their use, including the manufacturer's operating instructions.

12.3.3. Contractor shall ensure at least two trained operators are present while conducting a task which requires the use of a personnel lift, one to operate the lift and the second to serve as a back-up in an emergency situation.

12.3.4. Contractor shall ensure that personnel lifts and man baskets are inspected prior to each day's use and after any incident involving the lift.

12.3.5. Contractor shall ensure that all safety devices and operating controls are functional on personnel lifts prior to use.

12.3.6. Contractor shall utilize a Personal Fall Arrest System with the lanyard attached to a tie-off point located inside the platform whenever Work is performed in a personnel lift or man basket.

12.3.7. Contractor shall ensure that workers keep feet firmly on the floor of the man basket or lift and do not sit, climb, or position the body on the edge or rails of the man basket or lift, including toe boards.

12.3.8. Contractor shall not position or tie off personnel lifts or man baskets against another object or structure.

12.3.9. Contractor shall travel to the worksite with the aerial platform in the fully lowered position.

12.4. Guard Rails and Barricading:

12.4.1. Guard rails and barricades shall be constructed, maintained, and used in accordance with the applicable OSHA regulations and industry standards (e.g., 29 CFR §§1910.23 and 1926.501).

12.4.2. Contractor shall provide guard rails and/or barricading for:

a. Any walkway or wall opening from which there is a drop of more than 4 feet;

b. Any open-sided working surface from which there is a drop of more than 4 feet, including trenches and excavations; and

c. Any open-sided working surface directly above moving machinery.

12.4.3. Contractor shall take walkways with missing, broken, or loose guardrails out of service until repaired.

12.5. Portable Ladders:

12.5.1. Contractor shall ensure that all workers have been trained in the proper use, placement, care and maximum load carrying capacities of the ladders used (Type 1, 1A, 1AA Industrial Heavy Duty).

12.5.2. Contractor shall inspect all ladders before use. Any damaged or unsafe ladders shall be tagged and taken out of service.

12.5.3. Portable ladders shall be set at the correct angle. The distance from the foot of the ladder to the structure should be equal to 1/4 the length of the ladder.

12.5.4. Workers shall keep both hands free for climbing, descending, and performing Work on a ladder. Carrying hand tools or equipment while climbing on a ladder is prohibited unless secured in a pocket or on a belt. Articles that are too large to be carried in a pocket or on a belt shall be lifted and lowered by a hand line.

12.5.5. Workers shall not rush, but shall take one step at a time and face the ladder while climbing and descending.

12.5.6. Only one person at a time shall be on the ladder.

12.5.7. Portable ladders shall have anti-slip safety feet and be secured at the top before work begins in order to prevent the ladder from shifting. A second person shall hold the ladder until the climber can secure it at the top.

12.5.8. Only ladders that are not electrically conductive (dry wooden ladders or ladders with fiberglass rails) shall be used to perform electrical service Work.

12.5.9. Ladders shall extend at least 3 feet above the point of support when gaining access to a roof or other area.

12.5.10. Contractor shall use fall protection on ladders when additional significant hazards such as impalement, rotating machinery, or electrical shock are present.

12.5.11. Ladders shall be maintained free of oil, grease, and other slipping hazards.

12.5.12. Workers shall maintain their body's center of gravity between the side rails at all times while working from a ladder. In addition, workers shall avoid work from a ladder that involves significant pushing, pulling, or any action that may dislodge the person from the ladder.

12.5.13. The top two steps of a step ladder shall not be used as steps. This requirement does not apply to step ladders with three steps or less or to step ladders with a guard rail-equipped work platform at the top.

12.6. Scaffolding:

12.6.1. Scaffolds or elevated platforms shall be constructed, maintained, and used in accordance with the applicable OSHA regulations and industry standards (29 CFR §§1910.28; 1926.451-454).

12.6.2. Contractor shall ensure that a Fall Protection Competent Person is assigned to supervise scaffold erection, dismantling, alteration, and movement.

12.6.3. Contractor shall ensure that all scaffold materials and planking are thoroughly inspected for defects prior to use.

12.6.4. Where there is a hazard to workers working below an elevated scaffold, toe boards shall be in place.

12.6.5. Climbing or working from the handrail, mid-rail, or brace members of the scaffolding is prohibited.

13. MOTOR VEHICLE SAFETY

13.1. Contractor shall comply with the requirements of all federal, state, tribal, and local laws, rules, and regulations pertaining to safe vehicle operation and shall only use the vehicle for the purposes for which it was designed.

13.2. All drivers shall have a valid driver's license for the applicable size and type of vehicle used.

13.3. Vehicles operating on Company Property shall be equipped with:

13.3.1. One fully charged fire extinguisher;

13.3.2. One first aid kit; and

13.3.3. Two emergency reflectors.

13.4. Contractor shall train all drivers in and make use of safe driving and backing techniques.

13.5. Seat belts shall be worn by drivers and passengers at all times while the vehicle is operating and shall be in good condition.

13.6. Contractor shall not overload trucks or other vehicles with passengers or materials.

13.7. All loads shall be properly placed and secured; projections that extend over 24 inches shall be properly flagged with a red flag.

13.8. Natural gas meters and other sensitive electronic equipment being transported shall be secured and handled carefully, whether being taken to the worksite or being returned to a Company facility.

13.9. Contractor shall not allow persons to ride in the bed of a flatbed truck, dump truck, or pickup. No one shall be allowed to ride on the top, running boards, fenders, or hood of the vehicle.

13.10. When practical, it is recommended that vehicles be parked so they can be driven forward when next moved. If backing, the operator shall check for potential hazards behind the vehicle before backing. This may require the operator to walk around the vehicle or use a spotter.

13.11. Prior to departure, the vehicle operator shall conduct a "safety circle check" by walking around a vehicle to ensure there are no hazards that may prevent safe operation of the vehicle.

13.12. While transporting overweight, high, wide, or long loads, Contractor shall contact the appropriate regulatory agencies or utility companies and obtain any necessary approvals or permits.

14. HAZARDOUS MATERIALS TRANSPORTATION

14.1. Contractor shall strictly comply with all applicable federal, state, tribal, and local laws, rules, regulations, and orders of governing authority regarding handling, transporting, storing, and disposing of all hazardous materials, including but not limited to fuels, lubricants, chemicals, fertilizers, and herbicides. Contractor shall comply with DOT regulations at all times (49 CFR Parts 171-180 and 397).

14.2. See Section 22.3 for information on pipe wrap.

14.3. Contractor shall notify Company prior to generating any waste known or suspected to be hazardous, including aerosol cans. Company will characterize and dispose of such waste.

14.4. Contractor shall immediately report any spillage of fuels, lubricants, chemicals, drilling muds, or pesticides on Company Property or project locations to Company and the appropriate federal and state agencies.

14.5. The first priority in the event of a spill is the safety of workers and the public. In the event of a spill, Contractor shall immediately notify Company and, if safe to do so, take initial steps to control the spill using appropriate control materials. If the representative is not available, Contractor shall immediately call the appropriate emergency number – Mountain West Pipeline (801-324-4400).

14.6. Contractor shall maintain at the worksite appropriate materials to control spills of hazardous substances from spreading if it is safe to do so. These materials include, without limitation, absorbent pads, booms and skimmers, shovels, and appropriate containers. Disposal of spilled material and/or spill cleanup materials shall be coordinated with Company's Environmental Compliance Coordinator.

15. WORK ZONE TRAFFIC CONTROL

15.1. If a Work activity is conducted on or near a road, Contractor shall comply with all applicable parts of the most current DOT Manual on Uniform Traffic Control Devices and state requirements.

15.2. Contractor shall provide all signs, barriers, flaggers, and other notification necessary to protect its workers and the public from damage, injury, or loss. Barricades at public areas (e.g., road crossings) shall have flashing lights during hours of darkness.

15.3. All work conducted on high-speed roadways and in on or near a road at night requires the use of high visibility traffic vests conforming to ANSI Class 3 standards.

15.4. If working in areas covered by state or other permits issued to Company, Contractor shall strictly comply with the permit requirements (such as Work practices and notifications).

15.5. Contractor shall monitor construction accesses for sediment accumulations. Contractor shall promptly remove sediment tracked outside of project boundaries.

16. FORKLIFTS, BACKHOES/EARTH MOVING EQUIPMENT and other SIMILAR EQUIPMENT

16.1. Contractor shall ensure equipment covered under this section is inspected prior to use. Where defects are found that affect the safe operation of the equipment, the equipment shall be removed from service until appropriate repairs are made.

16.1.1. For hydraulically operated equipment, Contractor shall pay close attention to hydraulic lines and fittings. Replace or repair loose or leaking fittings and hose

that show signs of basketing, kinking, bulges, soft spots or cracking in the cover that exposes the reinforcement fibers to minimize risk of ruptures and spills.

16.2. Contractor shall only use forklifts designed to ANSI B56.1, current version. Forklifts and forklift attachments that have been modified are prohibited unless accompanied by written permission from the manufacturer.

16.3. Only trained and qualified workers shall operate forklifts and backhoes. Forklift training shall be conducted as specified in OSHA standard 29 CFR §1910.178.

16.4. Contractor shall strictly maintain all forklifts and backhoes in accordance with the manufacturer's recommendations.

16.5. Contractor shall not allow anyone to pass or stand under the raised portion of a forklift or backhoe.

16.6. When a forklift is used to elevate workers in a man basket:

16.6.1. Secure the basket to the lifting carriage or forks of the forklift using chains;

16.6.2. Do not allow workers to ride in the basket during travel from one location to another location;

16.6.3. Workers shall wear a Personal Fall Arrest System with the lanyard attached to a structural member of the basket while working inside the basket;

16.6.4. Chock the wheels of the forklift when the basket is in use;

16.6.5. Secure all tools inside the basket while in operation; and

16.6.6. The forklift must be attended by the forklift operator when a worker is in the basket.

16.7. The operator shall not allow any person to ride or be transported on a backhoe or forklift.

16.8. When a forklift or backhoe is left unattended, the forks and/or bucket shall be fully lowered, controls placed in the "off" or "neutral" position, the power shut off, and the brakes set. If parked on an incline, chock the wheels.

16.9. When operating a forklift (if so equipped) or a backhoe, wear seat belts.

16.10. At all times, follow safe speeds, load handling, turning, and other safe driving practices.

16.11. Contractor shall not allow any forklift or backhoe to be operated when it is in need of repairs, defective, or unsafe. Such forklifts and backhoes shall be removed from service for repair.

16.12. Contractor shall not refuel or service a forklift or backhoe while the engine is running or when it is located near a water body. Contractor shall remain present during refueling. Effort should be made to avoid refueling equipment on Company property for project locations.

16.13. Contractor shall ensure loads are stable and secure before moving.

16.14. Contractor shall ensure all backhoes and earthmoving equipment are equipped with a back-up alarm.

17. TRENCHING AND EXCAVATION

17.1. Contractor shall conduct any ground disturbance or excavation in accordance with all applicable OSHA regulatory standards, including Safety and Health Regulations for Construction, Subpart P – Excavations, 29 CFR Part 1926, applicable state excavation laws, and all permits or authorizations obtained by Company for the Work.

17.2. Notification and Line Locating:

17.2.1. Before excavating, Contractor shall be responsible for notifying, as required by law, all affected Underground Facility operators or the association organized to receive notification (telephone number 811) of excavation activities in the area of the proposed excavation.

17.2.2. Contractor shall provide notice at least two business days, or as otherwise required by law, prior to any ground disturbance or excavation. Contractor shall not begin excavation or ground disturbance work until all Underground Facilities have been identified and marked by Company or other operator of the Underground Facilities.

a. In the event that temporary markings are moved, damaged, or are no longer visible, Contractor shall arrange to have the Underground Facilities remarked before any excavation continues.

b. If the excavation exceeds the period for which the notice is valid, Contractor shall continue to provide additional notification as required by law.

17.2.3. Contractor shall treat all overhead utilities as energized and all Underground Facilities as energized, or otherwise in service.

17.2.4. Contractor shall not use any power-operated or power-driven excavating or boring equipment within 24 inches (18 inches in Colorado and New Mexico) of the markings unless:

a. Contractor determines the exact location of the Underground Facilities by excavating with hand tools or vacuum excavator to confirm that the excavation shall not damage the Underground Facilities; or

b. Company or other operator provides Contractor with written or electronic notice waiving the requirement.

c. Contractor shall use non-conductive tools when hand digging in an excavation where known underground electrical utilities are present.

17.2.5. When vac trucks are used for potholing, Contractor shall ensure:

a. Vac truck, associated equipment, and the loading and off-loading sites are inspected prior to beginning the work to assure safe operation of the equipment.

b. Vacuum release(s) shall be fully functional.

c. Hoses shall be in good condition and laid out so as not to create a tripping hazard.

d. Vac transfer system and truck shall be grounded and bonded, hose must be conductive is transferring flammable materials

e. Equipment shall be set up to minimize spill potential.

f. Access around the vac truck is controlled or cordoned off to allow access to only those employees necessary to conduct the vac truck operation.

17.2.6. Excavating or boring equipment may be used for the removal of existing pavement if there is no Underground Facility contained in the pavement, as marked by the operator.

17.2.7. Contractor shall verify the installation of high visibility markings of all Underground Facilities.

17.2.8. When an excavation is within 15 feet of a high pressure pipeline (> 60 psi) or any intermediate high pressure (IHP) pipeline designated by Company, Contractor shall not proceed unless a Company representative is present, or in the case of a DOT regulated pipeline, a DOT Operator Qualified (OQ) Company representative is present, to continuously monitor excavation and backfilling activities.

17.2.9. When any contact with or damage to any Underground Facility occurs, Contractor shall immediately notify Company or other operator of the facility and the notification center of the location of and extent of damage to the Underground Facility and shall cooperate with Company and other operator of the damaged Underground Facility to mitigate the damages incurred to the extent reasonably possible.

17.2.10. If contact with a pipeline results in escaping natural gas, or if Contractor otherwise discovers natural gas leaking from a pipeline, Contractor shall:

a. Turn off all machinery and vehicles in the area and prevent the use of other sources of ignition, such as open flames or cellular phones;

b. Evacuate everyone from the endangered area and keep vehicles and bystanders away;

c. Not attempt to make any repairs or operate any pipeline valves;

d. From a safe place, call 911;

e. Immediately notify the operator of an affected Underground Facility if the operator is other than the Company; and

f. Immediately notify Company's onsite representative. If the representative is not available, Contractor shall immediately call the appropriate emergency number–MountainWest Pipeline (801-324-4400).

17.2.11. If a natural gas line is pulled, jarred, scratched, or damaged (including any type of coating damage), Contractor shall:

a. Stop all Work and check for signs of escaping gas;

b. Evacuate everyone from the endangered area and keep vehicles and bystanders away because of the potential for leaking gas;

c. Immediately notify the operator of an affected Underground Facility if the operator is other than the Company;

d. Immediately notify Company's onsite representative. If the representative is not available, Contractor shall immediately call the appropriate emergency number– MountainWest Pipeline (801-324-4400).Contractor shall move to a safe place prior to initiating the call;

e. Not attempt repairs or backfill until Company has evaluated and repaired any damage. Unrepaired damage to a natural gas line or coating shall eventually cause a failure to occur.

17.2.12. If a locate wire associated with plastic pipe is damaged or broken, Contractor shall:

a. Move to a safe place prior to initiating the call,

b. Immediately notify Company's onsite representative. If the representative is not available, Contractor shall immediately call the Mountain West Pipeline emergency number (801-324-4400), and

c. Immediately notify the operator of an affected Underground Facility if the operator is other than the Company.

17.2.13. Blasting:

a. No blasting shall be conducted unless pre-approved by Company. Contractor shall first exhaust all other methods of excavation. Contractor shall notify Company if Contractor believes that blasting is necessary. Company shall

determine whether blasting shall be permitted and shall approve the length of any rock section requiring blasting.

b. Prior to the start of blasting, Contractor shall submit to Company a blasting plan, prepared by a recognized authority on blasting. The blasting plan shall include, at a minimum: description of explosives used, quantity, transportation and storage of explosives, charge size, timing, sequence, depth, spacing, location and orientation of blast pattern in relation to existing infrastructure and buried utilities, and time delay per charge.

c. Contractor shall comply with all federal, state, tribal, and local laws, rules, regulations, and orders of governing authority having jurisdiction regarding the use and storage of explosives. All necessary permits for blasting shall be secured by Contractor and a copy given to Company. Contractor shall exercise utmost care and carry on blasting activities under the supervision of properly qualified personnel.

d. Contractor shall use blasting mats to prevent the scattering of loose rock and to prevent damage to structures. Contractor shall control blasting in close proximity to existing buried pipelines or adjacent structures so that ground vibrations are within the safe particle velocity as defined by Contractor and approved by the affected owner or operator. Contractor shall exercise utmost care to prevent damage to any underground or above-ground structures or to springs or other water sources. (Note: blasting in proximity to existing jurisdictional natural gas pipelines requires leak survey inspections.)

e. Contractor shall not conduct any blasting unless Company is present. Prior to blasting operations, Contractor shall notify owners or operators of existing buried pipelines or adjacent structures a minimum of 7 days in advance of blasting. Company may assist Contractor in obtaining contact information of owners or operators of existing buried pipelines or adjacent structures. Contractor shall not proceed with blasting without the permission of owners or operators of existing buried pipelines or adjacent structures. In the event owners or operators of existing buried pipelines or adjacent structures withhold permission to blast, Contractor shall notify Company, and Company shall make the determination if the Contractor may continue with blasting. Contractor shall take all possible precautions necessary to protect the public, workers, property, and livestock.

17.3. Contractor shall provide a person knowledgeable in excavation and trenching work to act as an Excavation Safety Competent Person as defined in 29 CFR §1926.650(b) and section 2 of this manual. This individual shall be onsite during all trenching and excavation Work.

17.4. Contractor shall not allow employee to perform work with his/her head positioned in an excavation (i.e., work head-first) without a dedicated spotter in place and an adequate mechanism for retrieval as determined by the Competent Person.

17.5. Contractor shall protect excavations 5 feet or greater in depth and excavations determined to present a hazard by an Excavation Safety Competent Person from cave-ins by using an adequate protective system (e.g., sloping, shoring, or shielding) meeting the requirements outlined in 29 CFR §1926.652. Protective systems shall have the capacity to resist without failure applied or transmitted loads. Support systems shall be installed plumb and square, and to prevent lateral movement.

17.6. Contractor shall ensure that workers do not perform Work or enter or exit the trench from outside of the protective system provided.

17.7. Contractor shall not allow workers in a trench box when it is being installed, removed, or moved horizontally or vertically.

17.8. Contractor shall not allow workers to step or stand on cross members installed to support trench sidewalls.

17.9. Contractor shall locate a stairway, ladder, ramp, or other safe means of egress in trenches or excavations that are 4 feet or more in depth so as to require no more than 25 feet of lateral travel for workers. Egress shall not be obstructed by obstacles that cannot be easily stepped over for escape (e.g., large diameter pipe).

17.10. Contractor shall provide benching, sloping or other safe means of entering and exiting a shallow trench (less than 4 feet in depth). Employees are prohibited from jumping into a shallow trench.

17.11. Contractor shall give special consideration to the stability of the soil, which shall be classified by an Excavation Safety Competent Person and inspected at least daily prior to allowing workers to enter the excavation or trench.

17.12. Contractor shall ensure that the spoil pile generated during trench excavations is maintained at a minimum distance of 2 feet from the edge of the excavation at all times.

17.13. Contractor shall protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavation face by scaling to remove loose material, installation of protective barriers, or other means that provide equivalent protection.

17.14. Contractor shall ensure that standard guardrails are in place on walkways and bridges where workers or equipment are required to cross over excavations that are 6 feet or more in depth.

17.15. Pipe and other materials staged along the side of an excavation must be set back a minimum of two feet from the cut edge of the excavation. Contractor shall prohibit employees from performing work in the two feet area.

17.16. Contractor shall take all appropriate measures to minimize the attractive nuisance caused by open ditches, pipe, and equipment staging, including without limitation use of temporary fencing, guard services, or other effective means.

17.17. All open bellholes, potholes and ditches, and not actively being worked in, shall be backfilled, plated, fenced, or guarded by Contractor as necessary for public safety in accordance with permit requirements and when directed by Company to prevent public access. Where plates are used, the plate must be of sufficient strength and overlap to support the load imposed and secured to prevent displacement. The plate must be labeled with the word “HOLE” unless covering an opening in a roadway.

17.18. Contractor shall ensure that sufficient lighting is in place to facilitate safe operations at each Work location.

17.19. Contractor shall ensure that a spotter is used if there are overhead power lines, Underground Facilities, or tight working conditions at the Work area (see Overhead Utilities section of this Manual).

17.20. If excavation Work will interrupt the natural drainage of surface water (such as streams), Contractor shall use diversion ditches, dikes, or other suitable means to prevent surface water from entering the excavation and to provide adequate drainage of the area adjacent to the excavation. Contractor shall comply with conditions of all environmental permits associated with the work (i.e., stream alteration permits). In addition, Contractor shall utilize best management practices to minimize the potential for surface water entering the excavation. Contractor shall not work in excavations in which there is accumulated water unless precautions have been taken to protect individuals.

17.21. Contractor shall notify Company of the need to dewater an excavation. All dewatering activities shall be performed in accordance with applicable regulations or permits obtained by the Company for the Work.

17.22. In excavations where there is an oxygen deficiency, flammable gases or liquids, or where other Hazardous Atmospheres exist or may be anticipated, test the atmosphere in the excavation before allowing workers to enter. When needed, make available emergency rescue equipment, including a breathing apparatus and a rescue harness and line.

17.23. Prior to backfilling, verify that equipment, materials, or other debris generated during Work activities have been removed from the trench.

17.24. Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operations, provide support systems (e.g., shoring, bracing, or underpinning) to ensure the stability of such structures for the protection of workers, except when the excavation is in stable rock or a registered professional engineer has determined that such excavation Work shall not pose a threat to workers.

17.25. Contractor shall install appropriate warning fencing, guardrails, or barricades where a Work area hazard is accessible to public or vehicular traffic, which shall conform to the requirements contained in the Manual on Uniform Traffic Control Devices, current version.

17.26. Contractor shall adequately mark objects and equipment that project into a roadway.

17.27. Contractor shall not drive or park machinery or vehicles within 10 feet of the edge of an excavation unless the banks are frequently inspected and confirmed to be stable.

17.28. When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, utilize a warning system (e.g., barricades, hand or mechanical signals).

17.29. Instruct all workers to remain clear of all active machinery including, but not limited to, excavators, backhoes, frontend loaders, and side-booms. Operators shall not be allowed to swing or lift, in any way, objects over people's heads.

17.30. All workers involved in the excavation shall remain clear of the swing radius of digging equipment and machinery.

18. OVERHEAD UTILITIES SAFETY

18.1. Contractor shall ensure that workers are trained to recognize the hazards of working around overhead utility lines and how to minimize the chance of contact.

18.2. Contractor shall take precautions to ensure the safety of workers and ensure the integrity of the existing overhead utility lines.

18.3. Contractor shall conduct a hazard assessment to identify and mitigate hazards prior to working around overhead utility lines. The hazard assessment shall include the following:

18.3.1. Identifying all overhead utility lines (on or off the worksite) that may be impacted by the Work;

18.3.2. Verifying that appropriate signage and visual warning devices are installed to alert workers to the hazards;

18.3.3. Contacting the power company to determine the voltage present and any special requirements;

18.3.4. Clearly marking or otherwise restraining all lifting or boom-type equipment to show the maximum height or extension possible as measured from ground level or to limit the maximum limit of extension, respectively; and

18.3.5. Using adequately trained and dedicated spotters at locations where equipment and vehicles pass or work under or around utility lines.

18.4. Contractor shall implement a minimum of three layers of controls to prevent overhead utility strikes (use of a dedicated spotter and at least two other controls) in all instances where activities, including equipment and vehicle crossings, take place near overhead utilities. Acceptable controls include:

18.4.1. A dedicated spotter (always required):

a. A trained employee not engaged in any other activity; and

b. Assigned to monitor and direct traffic around lines, and should use an appropriate audible alarm (e.g., air horn) to warn the driver of potential danger.

18.4.2. Signage that covers three parts of the view plane:

a. High – Devices used to mark the limits of danger zones (e.g., ribbons and string, “car lot” ribbon tied to overhead goal posts);

b. Medium – Devices placed at eye level that provide warning information (e.g., “beware of overhead lines,” “high voltage,” and distance to conductor signs);

c. Low – Devices placed at ground level to impede the travel of unauthorized equipment (e.g., barrels, flagging, and traffic cones).

18.4.3. Physical barriers:

Non-conductive, highly visible devices (e.g., goal posts, barricade tape) set outside the limits of approach (limits shall vary by jurisdiction, land restriction, and voltages) on both the coming and going away sides.

18.4.4. Proximity alarms:

Ancillary alarms affixed to equipment booms/masts that warn an equipment operator prior to reaching the danger zone.

18.4.5. Utility controls:

Site-specific controls prescribed and authorized for use by the utility owner (e.g., shielding, de-energizing, bonding, insulating).

18.5. Keep all equipment attachments in the lowest possible position when traveling under overhead utilities.

18.6. Use dry tag lines made of a nonconductive type material when working near energized lines.

18.7. Grounding and Bonding in the vicinity of overhead utilities:

18.7.1. Use barricades or insulation to protect workers from hazardous ground fault situations that can develop within the first few feet or more outward from a grounding point;

18.7.2. Ground and bond welding pipe strings at a minimum of 500-foot intervals;

18.7.3. Add temporary grounds when voltage levels of 15 volts or greater are found;

18.7.4. Perform bonding and grounding on stacked pipe;

18.7.5. Complete bonding across cut-outs and tie-ins before other work begins in the area;

18.7.6. Install grounding mats at valve settings, cathodic test stations, cathodic rectifier installations, and other appurtenances that have direct electrical contact to the pipe is recommended; and

18.7.7. Perform voltage testing of all pipe, equipment, and foreign structures in the Work areas as necessary to adequately characterize induced current hazards.

18.8. Clearance Distances:

18.8.1. When operating equipment or working near overhead lines, whether in an elevated position or on the ground, the person on a conductive object should not approach an unguarded and energized line closer limits listed below or as approved by the utility owner;

18.8.2. Equipment in transit shall lower boom, crane, or other structure whenever possible and maintain clearance distances as follows:

a. Up to 50 kV = 10 ft
b. Over 50 to 200 kV = 15 ft
c. Over 200 to 350 kV = 20 ft
d. Over 350 to 500 = 25 ft
e. Over 500 to 750 kV = 35 feet
f. Over 750 to 1,000 kV = 35 feet
g. Over 1,000 kV = as established by utility owner

18.9. Equipment:

18.9.1. All ladders used around power lines shall be made of non-conductive materials;

18.9.2. Grounding straps may be required on rubber-tired vehicles (project specific);

18.9.3. Drag chains may be required as electrical grounds for rubber-tired construction equipment (project specific);

18.9.4. Do not perform refueling activities within 50 feet of a power transmission line unless a more stringent distance is specified by the utility owner, which shall govern;

18.9.5. Use only non-conductive chokers, slings, and lifting devices during material handling activities;

18.9.6. Keep materials bonded at all times when transporting conductive loads, (e.g., pipe, air compressor, pumps) in the proximity of high voltage lines.

19. HAZARD COMMUNICATION PROGRAM and CHEMICAL MANAGEMENT REQUIREMENTS

19.1. Contractor shall develop and maintain a written Hazard Communication Program that complies with OSHA regulations (29 CFR §1910.1200). Contractor shall ensure that workers are trained on the regulations and informed of the hazards associated with chemical and petrochemical products required to perform the Work.

19.2. Contractor shall maintain a chemical inventory list of all hazardous substances and shall have a copy of the manufacturer's Safety Data Sheet (SDS) readily available for any quantity of chemical used by Contractor in performing the Work. Safety Data Sheets shall be provided to Company a minimum of 24 hours prior to bringing chemicals onto Company property or project.

19.3. Safety Data Sheet submittal and approval by Company is required for all chemicals which are expected to be utilized during the Work, regardless of container size or expected volume (including retail sized containers and aerosol cans). If chemicals are not approved by Company, Company will assist Contractor with identifying suitable alternatives

19.4. Contractor shall properly store all hazardous materials in clearly marked, appropriate containers in secure areas to prevent damage, vandalism, or theft. Contractor shall regularly inspect containers for signs of deterioration and shall replace deteriorating or damaged containers immediately.

19.5. Label all hazardous materials, chemicals and storage containers with the name of the material, the hazards associated with its use, and necessary precautions to be taken.

Contractor shall require that all workers read the labels to become familiar with the products being used.

19.6. All chemicals stored in containers 5 gallons or greater shall be stored in secondary containment. Secondary containment shall be sized to contain the entire volume of the largest container stored.

19.7. If Contractor anticipates storing greater than or equal to 1,320 gallons of petroleum products (including but not limited to diesel fuel, gasoline, engine oil, and vegetable oil) within the project boundaries at any one time, Contractor shall prepare a Spill Prevention Control and Countermeasure (SPCC) plan and submit the plan to Company prior to beginning the Work. The SPCC plan shall be prepared in accordance with the requirements set forth in 40 CFR 112 and be certified by a licensed professional engineer. The SPCC plan must be in place before the 1,320 gallon threshold is exceeded at the site.

19.8. Where contact or exposure to hazardous materials could exceed OSHA Permissible Exposure Limits or could otherwise have harmful effects, Contractor shall use appropriate PPE, such as gloves, goggles, aprons, chemical-resistant clothing, and respirator. Avoid unnecessary contact with hazardous materials.

19.9. Contractor shall provide the following information or materials to workers prior to commencement of any Work with the potential for exposure to hazardous substances:

19.9.1. A description of the purpose, function, and operation of the facility;

19.9.2. A description of inherent hazards associated with facility operation and procedures established to prevent injury and illness to workers;

19.9.3. A list of applicable chemical compounds used at the facility;

19.9.4. Copies of the manufacturer's Safety Data Sheets (SDS) for chemicals that Contractor may encounter; and

19.9.5. Appropriate safety equipment required for completion of the Work.

20. FIRST AID REQUIREMENTS

20.1. An individual qualified in first aid and CPR must be onsite at all times during performance of the Work. Contractor's first aid resources shall meet all applicable regulatory requirements and be available during all aspects of the Work. This includes qualified first aid and CPR cardholders, emergency medical equipment, and transportation for the treatment of any sick or injured workers.

20.2. Provide readily available first aid kits meeting ANSI Z308.1 at the worksite. The contents of the kit shall be adequate for the size of the worksite. Contractor shall be responsible for determining the appropriate medical supplies.

20.3. Where the eyes or body of any person may be exposed to corrosive materials, provide suitable resources for quick drenching or flushing of the eyes and body within the work area for immediate emergency use.

20.4. Contractor shall train workers to utilize PPE such as latex gloves, eye protection, and protective CPR ventilation devices to avoid exposure to blood and/or body fluids. Contractor shall comply with all applicable requirements of OSHA's Blood Borne Pathogen standard set forth in 29 CFR §1910.1030.

21. OCCUPATIONAL HEALTH AND INDUSTRIAL HYGIENE

21.1. Contractor shall be aware of occupational health hazards that may be encountered at the worksite (e.g., chemical exposures, noise, radiation, heat, and cold).

21.2. Where the potential exists for exposure to hazardous substances, Contractor shall conduct exposure monitoring as required by regulation or as otherwise deemed appropriate.

21.3. Provide all workers exposed to physical agents such as ionizing or non-ionizing radiation, ultraviolet rays, noise, or other physical agents with adequate shielding or protection appropriate for the type of exposure involved.

21.4. Radioactive sources used in performing the work are potentially dangerous. Contractor shall comply with all federal, state, tribal, and local laws, rules, regulations, and orders of governing authority regarding the use and handling of radioactive sources.

21.5. Where potential exposure to ionizing radiation sources exists, workers shall wear dosimetry badges. Periodically monitor radiation sources using a Geiger counter or other similar device. Perform swipe sampling or other types of monitoring when required under the circumstances. Only appropriately trained workers shall conduct such monitoring.

21.6. Contractor shall ensure the fitness of its workers to perform their job functions. This requires supervisors to be alert to such impairments as fatigue, physical disability, emotional state, and hours worked, which may only be noticed by closely working with or supervising workers.

22. HAZARDOUS SUBSTANCES

22.1. Naturally Occurring Radioactive Material (NORM):

22.1.1. NORM may be present in the scale that forms on equipment used in the production of oil and gas. It may also be present in pipeline sludge or in produced waters. NORM is naturally occurring in the earth and is brought to the surface during producing operations. Workers may be exposed to possible external or internal radiation. When NORM is present, Contractor shall control external exposure by implementing appropriate controls (e.g., limiting exposure time, increasing distance from source, and shielding). Internal hazard occurs when airborne radioactive materials are inhaled, ingested, or enter the skin through open wounds. Contractor shall minimize these hazards by properly wearing an approved respirator, by practicing good personal hygiene, and by protecting wounds and cuts. Contractor may also mist loose material with water to prevent inhalation.

22.1.2. Contractor shall ensure that workers working with NORM are trained in the hazards associated with NORM and the procedures to avoid inhalation or ingestion whenever there is a potential for exposure.

22.2. Lead:

22.2.1. Lead may be present in various abrasives used for abrasive blasting, in paints and coatings on above-ground facilities and structures, and in contaminated soils.

22.2.2. Abrasives which contain lead are prohibited from use on Company facilities.

22.2.3. Contractor shall ensure that all workers who may be exposed to lead are properly trained, monitored for exposure, medically evaluated (when necessary), and that engineering controls and PPE are utilized to prevent exposure above the Exposure Limit.

22.2.4. Contractor shall comply with all requirements of the applicable OSHA lead standards (29 CFR §1926.62 or 29 CFR §1910.1025); as well as any other applicable federal, state, tribal, or local laws, rules, regulations, and orders of governing authority.

22.3. Pipe Wrap – Asbestos and Polychlorinated Biphenyls (PCBs):

22.3.1. Definitions applicable to this section:

a. Friable – Means any material containing more than one percent asbestos and that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Breaking pipe wrap into pieces does not necessarily cause it to become friable. Non-friable pipe wrap can become friable if power tools are

used to remove it; if it is cut, sawn, ground, or abraded; or if it becomes pulverized into a powder. Pipe wrap subjected to weathering may also be friable.

b. Intact – An OSHA designation for asbestos-containing material that has not crumbled, been pulverized, or otherwise deteriorated so that the asbestos is no longer likely to be bound with its matrix.
   i. Pipe wrap that has been separated into pieces during removal or repair is not considered to be non-intact solely because the wrap has been cut, sliced, pried, or otherwise separated into smaller units for the purpose of removal.
   ii. Use of power tools (e.g., abrasive blasters, power grinders, power winches, sanders, or saws), or other measures that abrade or pulverize pipe wrap may cause it to become non-intact and are not allowed.

c. Pipe Wrap Competent Person – A person capable of identifying hazards associated with asbestos and PCBs, and having the authority to take prompt corrective measures to eliminate such hazards.

22.3.2. Contractor shall assume that all Somastic® and coal-tar pipe wrap contains asbestos unless instructed otherwise by Company. Contractor shall also assume that all coal-tar pipe wrap contains PCBs unless otherwise instructed by Company.

22.3.3. Contractor shall be responsible for the proper removal, transport, and disposal of all pipe wrap. This includes pipe sections that are removed from the ground with the pipe wrap intact, as well as pipe wrap that is removed from the pipe by Contractor.

22.3.4. Contractor shall handle and transport all pipe wrap in accordance with applicable federal, state, tribal, and local laws, rules, regulations, and orders of governing authority, including without limitation OSHA Safety and Health Regulations for Construction, 29 CFR §1926.1101; 40 CFR Part 61; 40 CFR Part 761; and 49 CFR Parts 10-199. If state, tribal, or local laws are more stringent than federal laws, the more stringent requirements shall take precedence.

22.3.5. Contractor shall coordinate the disposal of all pipe wrap with the Mountain West Pipeline site representative.

22.3.6. Workers removing pipe wrap shall be trained prior to performing the work and shall be re-trained on an annual basis. At a minimum, the training shall cover the following elements:

a. Applicable sections of the OSHA Asbestos Standard for Construction as specified in 29 CFR §1926.1101(k)(9)(viii);
b. Methods of recognizing asbestos and PCB-containing pipe wrap, including the requirement to presume that all pipe wrap contains asbestos and that coal-tar pipe wrap contains PCBs;
c. Proper work practices to be used during pipe wrap removal;
d. The health effects associated with asbestos and PCB exposure;
e. The relationship between smoking and asbestos in producing lung cancer, and the availability of smoking cessation programs;
f. The proper use, fitting instructions, and limitation of respirators;
g. Medical surveillance program requirements; and
h. The requirement for affixing labels to sections of coated pipe and bagged pipe wrap destined for a disposal facility.

22.3.7. A worker designated as a Pipe Wrap Competent Person shall receive additional training on the following:

a. Methods of determining the presence of asbestos- and/or PCB-containing pipe wrap;
b. The circumstances and activities that may cause pipe wrap to become friable;
c. Understanding and interpreting air monitoring data;
d. Understanding a negative exposure assessment; and
e. The requirement to immediately stop Work if at any time the person determines that pipe wrap has become friable.

22.3.8. If state, tribal, or local laws, rules, regulations, or orders of governing authority regarding employee training, certification, and/or work practices are more stringent than federal laws, the more stringent requirements shall take precedence.

22.3.9. Contractor shall employ the work practices and procedural controls identified in 29 CFR §1926.1101(g)(11). All removal or disturbance of pipeline coal-tar wrap shall be performed manually, using wet methods. Power tools, such as grinders, shall not be used.

22.3.10. Contractor shall assign a Pipe Wrap Competent Person to the Work who shall:

a. Be present during all pipe wrap removal operations and inspect the pipe wrap prior to and during removal to ensure that it remains intact and is non-friable;
b. Take prompt corrective measures as necessary to ensure compliance with procedures outlined in this Manual; and
c. Inspect pipe wrap prior to and during removal to ensure that it remains intact. Only pipe wrap determined by the Pipe Wrap Competent Person to be intact shall be handled and removed in accordance with the procedures outlined in this Manual.

22.3.11. The Pipe Wrap Competent Person shall immediately stop Work, evacuate the area, and contact Company if at any time he or she determines that pipe wrap has become non-intact or friable (e.g., crumbled, pulverized, reduced to a powder, or otherwise deteriorated to the point where it is likely that the asbestos fibers are no longer bound in the tar matrix). Under these circumstances, Company shall complete the applicable regulatory notifications and pipe wrap removal shall be completed by a certified asbestos abatement contractor.

22.3.12. At a minimum, Contractor shall comply with the following Work practices during pipe wrap removal:

a. Expose the pipe, taking care to minimize disturbance of the pipe wrap.
b. If the Work requires that the pipe be supported or lifted, utilize appropriately rated straps or slings to carefully lift the pipe. Care should be taken to minimize abrasion of the wrap and to capture dislodged pieces. Do not use steel chains, hooks, cables, or similar devices on the portion of the pipe that is covered with pipe wrap.
c. Using amended water (soapy water), thoroughly wet the area of pipe wrap that shall be removed. A soft brush, spray bottle, or hand sprayer should be used. Continue to wet the wrap during the removal process.
d. Place plastic sheeting underneath the area where pipe wrap shall be removed in order to capture the dislodged wrap.

e. Shrink wrap the entire area to be removed using 10 to 12 wraps around the circumference of the pipe, then secure both ends of the shrink-wrapped areas with duct tape. Shrink wrapping is not required for pipe ≤ 2 inches in diameter, and pipeline appurtenances that are not feasible to wrap.

f. Using a utility knife, scraper blade, chisel, or similar tool, score all the way through the shrink wrap and the pipe wrap around the circumference of the pipe along the inside edge of the duct tape on both sides of the area to be removed. In this context, score means to slice with a smooth edge, not cut with a saw tooth or friction cutting tool.

g. Disbond the wrap from the pipe by hitting the pipe wrap through the shrink wrap with a mallet around the circumference of the pipe. Score along the top edge of the pipe through both the shrink wrap and pipe wrap, then scrape the loosened wrap from the surface of the pipe.

h. Remove the coating from the shrink wrapped surface using hand tools (e.g., mallet, hammer, or scraper) to dis-bond and remove the pipe wrap. Never use power tools (e.g., abrasive blasters, power grinders, pipe benders, sanders, or saws), or other measures that might abrade, pulverize, or otherwise make the wrap friable or non-intact.

i. Remove only as much pipe wrap from the pipe as is necessary to perform the task at hand.

j. Clean all hand tools (e.g., hammers and scrapers) used during the pipe wrap removal process by wet wiping or other equally effective method.

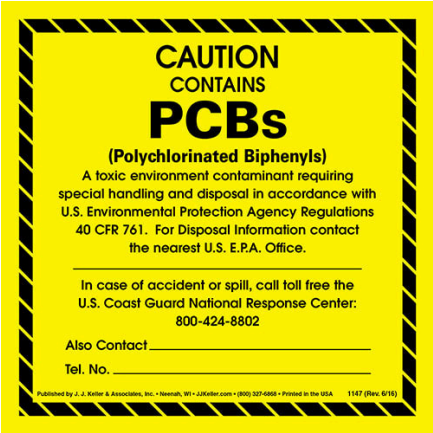
k. Gather the plastic sheeting, folding it inwards to contain the pipe wrap removed during the maintenance or repair activity, and place in double bagged polyethylene plastic disposal bags along with all other asbestos containing wastes generated during the operation, including PPE. Plastic bags shall be heavy duty (6 mil plastic, at least). Each bag shall be tightly sealed using duct tape.

l. Bags containing pipe wrap shall be pre-printed or labeled with the following warning information:

DANGER
Contains Asbestos Fibers
Avoid Creating Dust
Cancer and Lung Disease Hazard

CAUTION
Contains PCBs
(Polychlorinated Biphenyls)

22.3.13. Contractor must label bags and containers with a PCB Label. Contractor shall also mark bags and containers to indicate the date on which the pipe wrap was removed from the ground. Contractor shall transport the wrap to a disposal facility that has been pre-approved by Company within 30 days of removal.



6 in x 6 in Large Mark, $\mathbf{M_L}$

2 in x 1 in Small Mark, $\mathbf{M_S}$

22.3.14. Scrap pipe covered with pipe wrap shall be hauled by Contractor to a Company approved disposal facility or pipe recycling facility with the wrap intact whenever possible in coordination with Company's Environmental Compliance Coordinator. Before transporting, Contractor shall use plastic sheeting and duct tape to secure loose wrap that may become dislodged during transport. Trucks hauling asphaltic pipe wrap and/or pipe sections shall be totally enclosed or covered during transport.

22.3.15. When transporting pipe wrap, pipe sections, valves, fittings, components, and other materials, Contractor shall:

a. Cut each pipe section to be disposed of in Company's covered bins to a length less than 14 feet; pipe to be disposed at other locations shall be cut to lengths as specified.

b. Cut and remove branch connections (e.g., tees, pups, elbows, valves, and long bends) from pipe that could extend under or over another pipe section or cause pipe sections to roll.

c. Separate each pipe section from other pipe with padding, separators, or dividers along the pipe between each row so that the forks of a forklift can reach between each row for safe lifting and removal.

d. Load valves, fittings, components, and other materials by first strapping to pallets, placing in baskets, or other manner so that the forks of a forklift can safely lift and remove the items.

e. Properly secure loads to prevent movement during transport.

22.3.16. Pipe sections covered with asphaltic wrap destined for storage prior to disposal or recycling shall be individually wrapped by Contractor in plastic and sealed tightly with duct tape (burrito wrapped). Contractor shall label the pipe with the PCB small mark label (pictured above), and mark the pipe sections to indicate the date of removal from the ground and shall transport them for disposal or recycling within 30 days of removal.

22.3.17. Pipe sections destined for recycling (not stored) shall be individually wrapped by Contractor in plastic and sealed with duct tape (burrito wrapped) prior to transport.

22.4. Hydrogen Sulfide (H_2S):

22.4.1. Workers entering locations where H_2S may be present shall be trained to understand the properties and toxicity of H_2S and shall know how to protect themselves and others in case of emergency, and comply with applicable Company procedures pertaining to H_2S.

22.4.2. Contractor shall ensure that portable H_2S monitors (set to alarm at 10 ppm or lower) are worn by workers when entering an area where H_2S may be present in the atmosphere.

22.4.3. Contractor shall provide and ensure that workers utilize appropriate respiratory protection and other PPE when entering into an area where H_2S may be present in the atmosphere.

22.5. Pipeline Liquids, Sludge, and Powders:

22.5.1. Inorganic arsenic, inorganic mercury, benzene, polychlorinated biphenyls and iron sulfide may be present in pipeline liquids, sludge, and powders.

22.5.2. Workers shall be trained to understand the properties and toxicity of these substances and how to protect themselves.

22.5.3. Contractor shall identify and provide appropriate gloves, protective clothing, respirators, and other PPE necessary to prevent worker exposure.

22.5.4. Contractor shall immediately notify Company whenever unexpected pipeline liquids, sludge, or powders are encountered. Company shall characterize these substances and establish disposal requirements. All pipeline liquids, sludge, or powders encountered shall be containerized in an appropriate container with a closing lid (such as a 55 gallon drum) and labeled as directed by Company's Environmental Compliance Coordinator.

22.5.5. Contractor shall comply with all applicable local, tribal, state and federal laws, rules, regulations, and orders of governing authority pertaining to worker exposure assessments, and handling and disposal of the above-referenced compounds. These regulations include, but are not limited to, the following:

a. Toxic Substance Control Act (40 CFR Part 761);
b. OSHA Inorganic Arsenic standard (29 CFR §1910.1018);
c. OSHA Permissible Exposure Limits (29 CFR §1910.100, Table Z-2);
d. OSHA Benzene standard (29 CFR §1910.1028);
e. OSHA Respirable Crystalline Silica (29 CFR §1926.1153);
f. Resource Conservation and Recovery Act (40 CFR §261 and §262).

22.5.6. Contractor shall coordinate the disposal of wastes with the Company representative.

22.6. Contaminated Soils:

22.6.1. Contractor may encounter contaminated soils from a variety of sources while excavating for pipeline construction and maintenance activities. Examples include: historic mine tailings containing heavy metals (e.g., lead and arsenic), petroleum from underground storage tank releases, and various solvent contaminated soils (e.g., perchloroethylene). If contaminated soils are encountered, Contractor shall immediately stop Work and contact a Company representative for further instruction regarding soil handling and disposal options. If Company representative is not available contact Mountain West Pipeline (801-324-4400).

22.6.2. Contractor shall ensure that all workers who may be exposed to contaminated soils are properly trained, monitored for exposure (when necessary), medically evaluated (when necessary), and that engineering controls and PPE are utilized to prevent exposure above Exposure Limits.

22.7. Crystalline Silica

22.7.1. Crystalline silica is a major component of sand, rock and mineral ores and is likely to become a respiratory hazard when the work involves abrasive blasting, concrete or cement cutting/drilling/sanding, backfilling, masonry products, and hydraulic fracturing.

22.7.2. Workers shall be trained to understand the properties and toxicity of respirable crystalline silica and how to protect themselves.

22.7.3. Contractor shall identify and provide appropriate employee exposure monitoring, dust suppression/control methods, gloves, protective clothing, respirators, and other PPE necessary to prevent worker exposure in accordance with 29 CFR §1926.1153.

23. ELECTRICAL SAFETY

23.1. Qualified Electrical Worker – A designated worker who has the skills and knowledge related to the construction and operation of the electrical equipment and installations to be worked, and has received training to recognize and avoid the hazards involved. Usually, this is a licensed electrician or someone with certain equivalent experience and training. A person can be “qualified” to work with certain equipment and methods and still be “unqualified” for other work.

23.2. Contractor shall perform all electrical Work in accordance with the current editions of applicable federal, state, tribal, and local laws, rules, regulations, and standards including, but not limited to:

23.2.1. National Fire Protection Association Publication (NFPA) 70E, “Standard for Electrical Safety in the Workplace,” current edition;

23.2.2. National Electrical Code (NEC), current edition;

23.2.3. Electrical, 29 CFR Part 1910, Subpart S;

23.2.4. Electric Power Generation, Transmission, and Distribution, 29 CFR §1910.269;

23.2.5. The Control of Hazardous Energy (Lockout/Tagout), 29 CFR §1910.147; and

23.2.6. Electrical Protective Equipment, 29 CFR §1910.137; and

23.2.7. American Petroleum Institute, RP 500, “Recommended Practice for Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class I, Division I and Division 2,” current edition.

23.3. Hazardous electrical Work, as defined by NFPA 70E, shall only be performed by a Qualified Electrical Worker using proper PPE and applicable safe work practices, insulated tools and equipment.

23.4. All electrical equipment used on Company Property shall be listed by an approved testing laboratory for the specific application. All electrical installations shall conform to the National Electrical Code, current edition.

23.5. Installation of electrical systems or modifications to electrical systems shall be done under the supervision or direction of a licensed electrician.

23.6. Contractor shall ensure that workers near overhead power lines know the voltage of the line and the safe approach distance.

23.7. Contractor shall be aware of, and take precautions to prevent, the build-up of static electricity in areas with a potential Hazardous Atmosphere.

23.8. Contractor shall implement the following work practices to minimize the possibility of creating static electricity or other ignition source in the presence of hydrocarbons or other flammable/combustible liquids:

23.8.1. Containers – Only use metal buckets (handles should also be metal) for collecting hydrocarbons or other flammable/combustible liquids. The metal bucket shall have direct metal contact using a bonding cable to the nozzle or fill pipe from which the liquid is discharged. The nozzle and fill pipe shall also be metal. Slowly discharge the liquid into the bucket to maintain a low velocity and minimize amount of static electricity generated.

23.8.2. Tanks – Ground metal storage tanks. All workers shall ground their bodies by taking hold of a grounded metal surface, such as a steel walkway, before opening a gauge hatch on a tank.

23.8.3. Tank/Vacuum Trucks – During the loading and unloading of hydrocarbons or other flammable/combustible liquids, ground tank/vacuum trucks using a bonding cable to the storage tank before the transfer line is connected. Disconnect the transfer line before the bonding cable is disconnected.

23.9. Contractor shall discuss the presence of cathodic protection systems with Company when working with tanks or piping and request that Company deactivate such cathodic protection during performance of the Work.

23.10. Whenever possible, a Qualified Electrical Worker (as defined in NFPA 70E) shall discharge all stored electrical energy and shall verify that equipment is de-energized and proper Lockout/Tagout (LO/TO) procedures have been implemented prior to beginning electrical Work.

23.11. All power lines shall be considered energized unless proper measures have been taken to de-energize.

23.12. All electrical tools and equipment shall be grounded or double insulated.

23.13. Use ground fault circuit interrupters on all 120 volt, single phase 15 and 20 ampere construction receptacle outlets along with an assured equipment grounding conductor program.

23.14. Take damaged or defective tools out of service.

23.15. Tampering with or unauthorized repair of electrical tools or equipment is prohibited.

23.16. Temporary lighting used in damp and/or hazardous locations shall be intrinsically safe or operated at a maximum of 12 volts.

23.17. Temporary lighting shall have guards over the bulbs.

23.18. Cover and label energized wiring in junction boxes, circuit breaker panels, and similar places.

23.19. Identify circuit breaker switches as to what they control.

24. LOCKOUT/TAGOUT (LO/TO)

24.1. Contractor shall ensure compliance with all requirements of OSHA's LO/TO standard (Control of Hazardous Energy, 29 CFR §1910.147). Contractor shall also develop written, site-specific energy control procedures to prevent inadvertent equipment activation.

24.2. Contractor shall coordinate all joint LO/TO activities with Company.

24.3. Contractor shall ensure that its workers are adequately trained in LO/TO and applicable energy control procedures.

24.4. LO/TO energy control procedures shall be followed prior to work on any equipment or process where stored energy or the unexpected energizing of equipment could cause injury to a worker. Potential energy sources include electrical, mechanical, pneumatic, hydraulic, thermal, chemical, natural gas, and all forms of potential and stored energy.

24.5. Repairs, maintenance, or alterations shall not be made on equipment in operation. All equipment shall be shut down and a LO/TO device placed in a manner that the equipment cannot be accidentally started.

24.6. Contractor shall ensure that a briefing is conducted with all workers affected by a LO/TO operation before each shift, and more frequently if warranted by personnel changes or changes in the scope of Work. The briefing should include the following items:

24.6.1. The specific equipment or process involved, along with any related equipment;

24.6.2. The estimated length of time required to complete the task;

24.6.3. The hazards involved in performing repairs or maintenance, including the potential hazards to workers if the equipment or process is prematurely energized; and

24.6.4. A review of the site-specific energy control procedure.

24.7. To ensure the machine or equipment has been properly locked out of service prior to starting any Work, a Qualified Person shall attempt to turn on the power source to verify that the machine or equipment does not become energized.

24.8. Before LO/TO devices are removed and energy restored to machines, equipment, or facilities, proceed as follows:

24.8.1. Inspect the Work area to ensure that nonessential items, such as tools, have been removed and that machine, equipment, or facility components are operationally intact.

24.8.2. Check the Work area to ensure that all workers have been safely positioned or removed and notified that LO/TO devices are being removed and that machines, equipment, or facilities shall be energized.

24.9. A LO/TO device shall be removed from the energy isolating point by the worker who applied the device.

24.10. LO/TO energy control procedures are not required for the following operations as long as equally effective methods are utilized:

24.10.1. Minor tool changes, adjustments, lubrication, and other minor servicing activities that take place during normal operations if they are routine, repetitive, and integral to the use of the machine, equipment, or facility for production, provided that the work is performed using alternative safety measures that provide equally effective protection.

24.10.2. Hot tap operations involving transmission and/or distribution pipeline systems, provided that Company determines that continuity of service is essential or shutdown of the system is impractical.

24.10.3. Work on cord- and plug-connected electrical equipment where hazardous energy is controlled by unplugging the equipment from the source and the worker performing the task has exclusive control of the plug.

25. CONFINED SPACE ENTRY

25.1. Confined Spaces include, but are not limited to:

25.1.1. Storage tanks, process vessels, boilers, and other tank-like compartments, usually with only a manhole for entry;

25.1.2. Attics, crawlspaces, open-topped spaces of more than 4 feet in depth such as pits, vaults, sumps, trenches, tanks, vessels, large valve boxes, and large electrical pull boxes not subject to good natural ventilation; and

25.1.3. Septic tanks, sewers, underground utility tunnels, pipelines, and similar structures.

25.2. Guard openings to spaces below grade with a temporary barrier in order to prevent falls into the Confined Space.

25.3. Workers who are expected to enter, work in, or work around a Confined Space shall be trained in and comply with the Confined Space entry requirements found in the OSHA's Confined Space standards (29 CFR §1910.146 and 29 CFR Part 1926 Subpart AA).

25.4. Contractor shall assess hazards specific to the entry, develop hazard control measures, and provide for emergency rescue of workers.

25.5. Contractor shall have a documented entry plan or an equivalent permit approval. Only workers trained in Confined Space entry, monitoring, and rescue procedures shall conduct Confined Space entries.

25.6. Contractor shall post signs indicating, "DANGER – Confined Space – Entry By Permit Only" or similar wording, unless already posted.

25.7. Prior to work or entry into a Permit Required Confined Space, Contractor shall complete a Confined Space entry permit. The permit shall be approved by Contractor's supervisor and site-specific hazards shall be discussed with the entrant prior to entrance. Provide one or more trained persons to act as an attendant whenever work is performed within a Confined Space.

25.8. Contractor shall coordinate entry activities with Company when both Company and Contractor are working in or near Permit Required Confined Spaces.

25.9. Contractor shall ensure all Confined Spaces are tested for oxygen content, flammability, and any potential toxic air contaminants.

26. FIRE PREVENTION

26.1. Contractor shall supply fire suppression and protection equipment appropriate to the Work being performed and the jurisdiction in which the Work is performed. At a minimum, all vehicles at the worksite shall be equipped with an appropriately sized fire extinguisher. ABC-type extinguishers are recommended for all Company worksites.

26.2. Fire extinguishers shall be readily available, properly inspected, tagged, and sealed, and workers shall be trained in their use.

26.1. Contractor shall comply with all applicable laws, rules, and regulations of the governing authorities concerning the use, prevention, and suppression of fires. Heavy equipment shall not to be used for fire suppression outside the limits of the pipeline right-of-way without prior approval of the appropriate governing authority unless there is imminent danger to life or property.

26.2. Contractor's vehicles and auxiliary engines on the worksite shall be in a safe operating condition and shall have an exhaust system in good operating condition (e.g., manifold, muffler, and tail pipe).

26.3. Each internal combustion engine shall be equipped with a spark arrester unless it is:

26.3.1. Equipped with a turbine-driven exhaust supercharger;

26.3.2. A multi-position engine, such as a chainsaw that must operate in accordance with applicable codes;

26.3.3. A passenger vehicle or light truck equipped with a factory designed muffler and exhaust system in good working condition; or

26.3.4. A heavy truck or other vehicle used for heavy hauling, equipped with a factory-designed muffler and with a vertical stack exhaust system extending above the cab.

26.4. In prairie and forested areas, Contractor shall have appropriate fire-fighting equipment onsite as determined by permit and/or the local governing authority. Appropriate equipment may include, but is not limited to, a water truck with spray bar/nozzles and fire extinguishers. In the event of a forest or prairie fire, Contractor may be required to provide trained workers and equipment to aid in fire-fighting efforts.

26.5. When handling flammable materials, smoking, open flames, and electric arcs are prohibited.

26.6. Shut down all combustion engines before fueling.

26.7. All welding or use of acetylene torches shall be done in an area that has been cleared of flammable material. When required by governing authority or Company, Contractor shall provide each welder with a helper to overlook the Work and extinguish any flame started by a hot welding spark. Each helper shall be equipped with a fire extinguisher and a shovel.

26.8. Dispose of rags saturated with combustible materials in proper containers with labels.

26.9. Flammable liquids, such as gasoline, kerosene, and fuel oil, shall be transported and stored only in appropriate metal containers with labels.

26.10. Fire-fighting equipment shall not be altered, tampered with, or blocked. All workers shall be familiar with the location of the portable fire extinguishers and emergency response plan, including fire alarms.

26.11. If a fire cannot be immediately and easily extinguished with portable fire extinguishers, workers shall evacuate the area rather than try to fight the fire. All workers who are not trained and designated to fight fires shall immediately evacuate the area at the first sign of fire or initiation of the fire alarm and are prohibited from using an extinguisher.

27. HOT WORK

27.1. Definitions Applicable to This Section:

27.1.1. Class I Location (Electrical) – A location in which flammable gases or vapors are or may be present in the air in sufficient quantities to produce explosive or ignitable mixtures (e.g., compressor buildings, meter stations, regulator stations, chromatograph buildings, valve pits, and vaults containing natural gas piping).

27.1.2. Hot Work – Any activity having the potential to cause ignition of a flammable, combustible, or explosive material that is either present in the Work area or located within hazardous proximity to the Work area. Hot Work includes, but is not limited to, the following:

a. Open flames;
b. Metal cutting with oxygen/acetylene torch;
c. Grinding operations where sufficient heat is generated to ignite flammable or combustible materials;
d. Soldering;
e. Brazing;
f. Heat applied coatings;
g. Welding (electrical arc or oxygen/acetylene);
h. Operations that may create static electricity (e.g., abrasive blasting);
i. Space heating;

j. Operations involving energized equipment where electrical arcing may occur, including AC and DC powered tools, equipment and electrical devices that are not intrinsically safe, non-incendiary or explosion proof; and

k. Operation of a vehicle or equipment in a confined area where the presence of flammable gases or vapors exists or may be present.

27.1.3. Hot Work Permit – A permit issued whenever Hot Work is performed outside of a Safe Hot Work Area. The permit is only valid until a crew change occurs, the work shift ends, or the job is completed, whichever occurs first. Emergency conditions automatically cancel the permit.

27.1.4. Hot Work Permit Area – An area located within 50 feet of a Hot Work operation and containing any of the following:

a. Potential flammable vapor sources (e.g., wellheads, drains, pressure relief devices, vents, sample points, process vessels, storage tanks);

b. Flammable or combustible materials; or

c. A facility designated as a Class I Location.

27.1.5. Safe Hot Work Area – An area that has been determined not to contain uncontrolled flammable or combustible materials (solid, liquid or gas), nor is there any possibility that flammable or combustible materials could be present during the Hot Work.

27.2. When feasible, Contractor shall move the object of the Hot Work to a Safe Hot Work Area. Where relocation is impracticable, combustibles located within the Hot Work Permit Area shall be relocated, protected with flameproof covers, or otherwise shielded with metal or noncombustible guards or curtains.

27.3. Contractor shall ensure that the worksite is properly prepared for any anticipated Hot Work. Site preparation shall comply with other applicable sections of this Manual (e.g., LO/TO, Confined Space Entry) and may include, but is not limited to, the following:

27.3.1. De-energizing, locking, and tagging out all energy sources;

27.3.2. Disconnecting, blinding, depressurizing, plugging, ventilating, flushing, or otherwise cleaning as needed to ensure that no Hazardous Atmosphere shall be introduced or created by subsequent Work;

27.3.3. Ensuring that heat conduction and/or heat radiation cannot occur through walls, roofs, pipes, etc. and ignite nearby flammable or combustible materials;

27.3.4. Ensuring that all flammables and/or combustibles are removed from the Hot Work Permit Area or are suitably covered or wetted;

27.3.5. Covering drains, expanded metal flooring, and holes or cracks in flooring or ground with fire resistant coverings when falling sparks or slag may be present;

27.3.6. Barricading and posting warning signs in areas directly below Hot Work where sparks and/or slag may fall; and

27.3.7. Obtaining and positioning appropriate firefighting equipment and protective gear.

27.4. When there is a potential for a Hazardous Atmosphere, Contractor shall continuously monitor the atmosphere around the area where Hot Work shall be performed for adequate oxygen content, explosive atmosphere, or other potential hazards to workers.

27.4.1. If at any time an LEL reading of ≥ 10% is obtained, Contractor shall immediately stop Hot Work.

27.4.2. Monitors shall be functioning properly and shall be calibrated in accordance with the manufacturer’s recommendations.

27.5. Hot Work shall not be permitted under any of the following conditions:

27.5.1. In the presence of an explosive atmosphere (mixtures of flammable gases, vapors, liquids, or dusts with air) or where such atmospheres may develop (e.g., greater than 10% of the LEL);

27.5.2. Where ignition can be caused by heat conduction (e.g., on metal walls, structures, or pipes in contact with flammable liquids on the other side);

27.5.3. In areas where large quantities of exposed, readily ignitable materials are stored;

27.5.4. When wind conditions are such that sparks could be carried to combustible or flammable materials, or vapors from these materials could be carried to an ignition source; or

27.5.5. When appropriate firefighting equipment is not readily available at the worksite.

27.6. Contractor shall use a dedicated fire watch whenever Hot Work operations are performed at locations where a fire might reasonably develop. Fire watch workers shall:

27.6.1. Have fire-extinguishing equipment readily available and be trained in its use;

27.6.2. Be familiar with the type of work, location, or facility and be able to sound an alarm in the event of a fire;

27.6.3. Watch for fires in all exposed areas;

27.6.4. Only attempt to extinguish a fire when doing so is within the capacity of the equipment available; otherwise, evacuate the area and sound an alarm (if available); and

27.6.5. Maintain the fire watch for at least 30 minutes following the completion of Hot Work operations to detect and extinguish possible smoldering fires.

27.7. A fire watch is not required for Hot Work operations involving only the use of electrical equipment.

27.8. Contractor shall ensure that a daily briefing for each Hot Work Permit is conducted with each worker who shall be involved in the Hot Work task in order to discuss:

27.8.1. Specific Hot Work hazards associated with the facility, location, or operation;

27.8.2. How the Hot Work shall be accomplished;

27.8.3. Duties and responsibilities as a member of the Hot Work operation;

27.8.4. The safety procedures that shall be observed;

27.8.5. The exit routes from the Hot Work Permit Area; and

27.8.6. Any other pertinent information, including coordination with other work in the immediate area.

27.9. Contractor shall provide adequate ventilation when Hot Work may cause the release of toxic fumes or gases. All electric ventilation equipment shall meet Class I requirements.

27.10. Contractor shall ensure that no welding, cutting, or other Hot Work is performed on used drums, barrels, tanks, or other containers until they have been cleaned so that there are no flammable liquids, gases, or materials present, such as greases, tars, acids, or other materials that when subjected to heat might produce flammable or toxic vapors. Any pipelines or connections to the drum or vessel shall be disconnected or blanked, and all hollow spaces, cavities, or containers shall be vented to permit the escape of air or gasses before preheating, cutting, or welding. Purging with inert gas is recommended.

27.11. Contractor shall ensure that any fixed fire suppression systems have not been impaired. If one or more of the systems must be taken out of service to accomplish the Hot Work,

Contractor shall make additional portable or fixed fire protection equipment available at the worksite.

28. HOT TAPPING

28.1. Hot Tap – A procedure used to avoid the interruption of natural gas service during repair, maintenance, or service activities on pressurized piping to install connections or appurtenances.

28.2. Contractors conducting Hot Tapping Work shall ensure that all workers are qualified and competent as defined in 49 CFR 192.627.

28.3. Contractor shall comply with the procedures outlined in Company's Standard Practice 2-32-02, "Hot Tapping High Pressure Gas Pipelines."

29. WELDING

29.1. Contractor shall ensure that all welders are qualified in accordance with applicable codes (e.g., 49 CFR 192.225) and Company procedures.

29.2. Welders shall inspect all equipment prior to use and ensure equipment has not been modified and is used in accordance with the manufacturer's recommendations.

29.3. Suitable flashback/check valve devices shall be installed on hoses to prevent reverse gas flows on gas welding and cutting equipment.

29.4. Contractor shall comply with the procedures outlined in Company's Standard Practice 2-10-01, "Welding on Steel Pipelines."

29.5. At the end of each working day, Contractor shall remove spent welding rods from Company property. Contractors shall dispose of spent welding rods in accordance with applicable regulations.

30. PRESSURE TESTING (Hydrostatic/Pneumatic)

30.1. Prior to pressure testing a pipeline that has previously been in service, contact Company's Safety & Health Department (801-201-7613), which shall determine if the inside surfaces are contaminated with a toxic, combustible, or flammable material (e.g., Iron oxide, iron sulfide, condensate) that requires removal prior to testing.

30.2. Contractor shall implement and maintain a safety plan for all field pressure testing and shall take appropriate measures to keep persons not required for test operations out of the testing area and in a safe location, particularly during any period when test pressures reach the maximum allowed.

30.3. Contractor shall consider the forces that would be present if any portion of the system failed while filling, under test, depressurizing, or dewatering. Contractor shall also consider the potential for water hammer, leakage of isolation valves, variable system pressures, fill and dewatering pig velocity changes, and other site-specific conditions.

30.4. Contractor shall utilize fresh water for hydrostatic testing. Water withdrawals from local waterways will be performed in accordance with permits or authorizations obtained by Company. No wastewater, brine, or chemicals shall be used for hydrostatic testing.

30.5. During pressure testing activities, Contractor shall post warning signs, such as DANGER–HIGH PRESSURE TESTING IN PROGRESS, at the test site.

30.6. When testing in a populated area, a public relations campaign (e.g., warning signs, barricade tape, lights, and/or security guards) may be required to inform and protect the public from hazards associated with testing activities. Contractor shall also comply with all requirements outlined at 49 CFR 191.505.

30.7. Prior to commencing testing operations, Contractor shall inspect and confirm that test heads and other test equipment are in good working condition and meet working pressure requirements. Ensure all pressurized hose connections are of the type that contain an internal shut off valve when disconnected or that a restraint (whip lines) is fixed between the two sections of hose on each side of the connector.

30.8. Contractor shall confirm that the following conditions are checked prior to testing:

30.8.1. There are no Victaulic™ or equivalent coupled lines or fittings that are subject to test pressure.

30.8.2. Fill lines are adequately restrained and able to contain initial water pack pressure.

30.8.3. Manifolds and other facilities are properly installed and shall be adequately protected from damage in the event that violent failures or water surges occur.

30.8.4. Methods of isolating facilities being tested from test equipment and pumps are adequate.

30.8.5. Dewatering discharge lines are properly restrained, cribbed, or anchored.

30.9. Contractor shall not tamper with or tighten any fittings (e.g., connections, bolts, hoses) while component is under any pressure.

30.10. Contractor shall not tighten connections that are under pressure. If a leak develops, depressurize to a safe level and then re-tighten.

30.11. Contractor shall maintain a safe distance between facilities that are being tested and the workers conducting the test (a minimum of 100 feet is recommended). The safe distance may be increased and the temperature probe, manifold, pressure recorders and deadweight gauge may have to be set back further than 100 feet due to potential projectiles or extreme volume/pressure.

30.12. Contractor shall restrict access to the immediate area involving the pressure test (e.g., test shelter, manifolds, pressure pumps, instruments) to only those workers actively engaged in the testing operation.

30.13. Personnel performing the test should approach the pressurized line only in the performance of their duties. Where possible, personnel should use safety barriers for protection from the pressurized line and position the testing equipment in such a manner so as to minimize employee exposure to potential hazards.

30.14. Contractor shall be aware of freezing temperatures that could cause water-filled sensing lines to freeze and give incorrect readings.

30.15. Verify that test equipment and materials are rated to withstand the test pressures.

30.16. Verify that all supply lines and hose connections are secure with retaining devices before and during the test.

30.17. Visually inspect and ensure soundness, proper installation, and valve positioning of all equipment used.

30.18. Prior to pressure testing, all backfill shall be complete, except a minimum amount of pipe may be exposed as necessary for final tie-in.

30.19. Contractor shall inspect and x-ray all temporary welds on test headers subject to test pressures.

30.20. Contractor shall install open vent valves at the appropriate time when stored energy can be isolated and/or trapped between two points such as valves, skillets, etc.

30.21. When using a pressure relief valve (pop-off valve), Contractor shall set it to a pressure just above the maximum test pressure to ensure that the pipeline and testing equipment do not exceed the maximum pressure ratings.

30.22. When bleeding the pressure from a section of the line, Contractor shall use extreme caution and ensure that vent lines are adequately anchored (especially elbows or fittings changing the direction of gas flow). Slowly bleed pressure following a test.

30.23. Always verify that complete depressurization has occurred through the use of pressure gauges and visible checks.

30.24. Monitor the atmosphere for safety during any blow down, bleed off, or depressurization.

30.25. Contractor shall perform all hydrostatic test dewatering in accordance with permits and authorizations obtained by Company for the Work. Dewatering requirements may include, but are not limited to, discharge through a filtration system, use of an energy dissipation device, or containment of discharge water to allow for analytical testing.

30.26. During the initial planning stage of a de-watering operation, Contractor shall analyze the existing and temporary piping system to identify the pressure associated with fluids and other forces that could adversely affect the integrity of the pipeline or the stability of the drainage and its components.

30.27. Contractor shall securely support and tie down dewatering lines at the discharge end to prevent uncontrolled movement during dewatering. Contractor shall restore and reclaim any areas where erosion or scarring is caused by test water discharge.

31. STEEP GRADE PIPELINE INSTALLATIONS

31.1. Contractor shall identify steep grade installation locations on each project.

31.2. Contractor shall minimize use of equipment on steep grades. The use of secondary access roads (if available) shall be used for routine movement around steep grades when feasible.

31.3. Contractor shall formulate a site-specific steep grade work plan (plan) based upon identified conditions and shall ensure that all affected workers are aware of the plan's requirements. If circumstances (e.g., weather events, equipment, personnel) change during the Work, Contractor shall stop the Work, modify the plan to address the new circumstances, and communicate the changes to all affected workers.

31.4. Contractor's onsite supervision shall have sufficient knowledge and experience of steep grade installation processes to ensure that the Work is performed safely. Contractor shall select only qualified, experienced, and competent crew members to perform steep grade Work. All workers must be properly trained and knowledgeable on the items listed in the plan.

31.5. Side-boom tractors utilized for steep grade applications shall be equipped with short booms to maximize stability. Contractor shall instruct equipment operators to carry the pipe and maintain a boom position that maximizes stability of the machine and pipe.

31.6. Contractor shall equip dozer tractors with 1.25-inch high-grade cable with open spelter socket ends on the winch cable. All connection points shall meet or exceed 100% of the cable strength.

31.7. Contractor shall use 1.5-inch high-grade cable with machined eyes for slings utilized in aiding equipment or pipe up or down the steep grade.

31.8. All nylon slings utilized in aiding and stabilizing the pipe up or down the steep grade shall have a capacity rating exceeding the weight of the pipe. Contractor shall secure the nylon sling to prevent slippage and place softeners to protect against abrasive edges.

31.9. Equipment operators shall conduct a thorough inspection of all equipment, cables, and accessories in accordance with the manufacturer's recommendations each shift prior to beginning Work or more frequently as warranted by Work conditions. All deficiencies identified shall be repaired or new equipment shall be procured prior to commencing Work.

31.10. Contractor shall utilize hands-free communication devices for all steep grade installations. The foreman shall direct the Work from a safe location, allowing only necessary communications to occur. All personnel utilizing the communication devices shall be trained on the use, care, and storage of the devices. Contractor shall inspect and test communication devices prior to beginning Work to ensure operational capabilities. All deficiencies identified shall be repaired or new communication devices shall be procured prior to commencing Work.

31.11. Contractor shall attempt to complete Work from the top of a steep grade working down the grade when applicable.

31.12. No workers or equipment shall be allowed in the "line of fire" below the operation. Contractor's Designated or Dedicated Safety Representative (or other assigned individual) shall be present to ensure that all workers stay clear and assist in monitoring the entire operation.

32. COMPRESSED GAS CYLINDERS

32.1. Contractor shall properly label, handle, store, transport, and inspect all cylinders to ensure compliance with regulations and industry standards.

32.2. Close cylinder valves and place protective caps over the cylinder valves when not in use or when the cylinders are being transported by any means. Store cylinders in the upright position and secure to a stationary object or structure.

32.3. Keep cylinders away from heat, fire, molten metal, and electrical lines. Contractor shall not use cranes to transport cylinders unless a special carrier is used.

32.4. Contractor shall not operate acetylene or liquid gas cylinders in a horizontal position because the liquid may be forced out through the hose and cause a fire hazard or explosion.

32.5. Separate oxygen and acetylene or other flammable gas cylinders by 25 feet or a 5-foot high fire wall when in storage.

33. COMPRESSED AIR USED FOR CLEANING

33.1. Compressed air used for drying or cleaning shall be limited to 30 psig by a pressure regulator or pressure-reducing nozzle, as specified in OSHA's standard set forth in 29 CFR §1910.242. Nozzles shall be equipped with dead end protection.

33.2. Contractor shall not direct compressed air toward a person for any reason. When using compressed air for cleaning in a dry and dusty situation, Contractor shall, at a minimum, wear protective eye goggles, gloves, and a dust filter for respiratory protection.

34. SLIPS, TRIPS, AND FALLS

34.1. Worksites and other areas where people may walk shall be kept clean and orderly. Contractor shall not leave tools, debris, or other objects on the floor, decking, or other areas where they present hazards during performance of the Work or after Work is completed.

34.2. Contractor shall immediately clean up oil spills and slippery spots. Extra precautions shall be taken when walking on steel decking during wet/icy weather and/or under oily conditions.

34.3. Contractor shall not walk on piping or take dangerous shortcuts, and Contractor shall avoid jumping from elevated places.

35. HAND AND POWER TOOLS

35.1. Contractor shall appropriately place tools so as to not cause a hazard while in use. Hand and power tools shall be kept in good condition with guards kept in place without modification. Guards are required on hand grinders and hand buffers. Remove defective tools from service or repair by a qualified repair person.

35.2. Contractor shall ensure that grinder wheels are properly rated for the speed of the grinder.

35.3. Contractor shall use hand tools for their intended purpose and in accordance with the manufacturer's instructions;

35.4. Contractor shall wear appropriate eye, face, hand, hearing and other applicable PPE.

35.5. Fuel-powered tools shall not be used inside of a building or excavation without adequate ventilation or vented exhaust.

35.6. Shut off all fuel-powered tools while being refueled.

36. ABRASIVE BLASTING

36.1. Contractor shall assume that all paint coating removed by abrasive blasting operations contains lead unless instructed otherwise by Company. When applicable, workers performing abrasive blasting operations shall comply with all elements of OSHA's Lead standards (29 CFR §§1910.1025 or 1926.62).

36.2. Contractor shall wear appropriate respiratory, eye, face, hearing protection, and other applicable PPE.

36.3. When clothing is contaminated with lead, do not remove dust by blowing or shaking. Contractor shall dispose of lead-contaminated clothing in accordance with applicable federal, state, tribal, and local laws, rules, regulations, and orders of governing authority.

36.4. Contractor shall only use abrasives that contain less than 1% free crystalline silica and do not contain heavy metals (e.g., lead, arsenic, cadmium, or chromium).

36.5. Collect spent abrasive blasting materials generated during all blasting activities. The use of plastic ground sheeting and/or the construction of containment barriers is recommended. Collected blasting media shall be containerized in a 55 gallon drum with lid, or similar container if approved by Company. The use of air pressure or water stream that may redistribute the spent blasting material is prohibited. Waste characterization and disposal of spent blasting media shall be coordinated with Company's Environmental Compliance Coordinator.

36.6. Contractor shall erect vertical shrouds or suspend work if constant wind speeds exceed 15 mph, or if there is visible movement of debris beyond the Work area.

36.7. Check all hoses every day for leaks and signs of wear.

36.8. Contractor shall equip blasting nozzles with a cut-off device (dead man's switch).

37. PAINTING

37.1. Contractor shall address the potential hazards associated with painting operations including, but not limited to, inhalation of toxic vapors or spray mist and fire hazard due to solvents in the paint.

37.2. Contractor shall ensure that workers wear appropriate respiratory protection and eye protection when applicable.

37.3. Contractor shall be aware of and eliminate ignition sources at the worksite.

37.4. When applicable, Contractor shall provide ventilation (either mechanical or natural) to keep the worksite atmosphere less than 10% Lower Explosive Limit (LEL) and the oxygen (O_2) content greater than 19.5%.

37.5. Contractor shall not use natural gas as a substitute for air during spray painting operations.

37.6. Contractor shall containerize all waste paint, thinners, and other waste chemicals. Company will assist Contractor with characterization and disposal of painting wastes.

38. CRANES AND RIGGING:

38.1. The swing radius of all cranes shall be protected to prevent workers from being struck by the counterweight.

38.2. For the purposes of this section, “rigging” means any combination of rope, wire rope, chain, sling, sheave, hook, and associated fittings used in a hoisting operation.

38.3. Wire rope, alloy steel chain, metal mesh, synthetic fiber rope, and synthetic fiber web slings shall meet the requirements of ASME B30.9-1990.

38.4. Slings shall be of sufficient strength to withstand the imposed loads, with minimum safety factors as required by regulation.

38.5. Only trained and qualified workers shall operate mobile cranes, side boom lifts and gin pole trucks. Operators of mobile cranes with a lifting capacity greater than 2,000 pounds must be certified. Contractor shall perform all Work utilizing cranes in accordance with OSHA’s standards set forth in 29 CFR §1910.179 and 29 CFR Part 1926, Subpart CC. Contractor shall strictly maintain all cranes and gin pole trucks in accordance with the manufacturer’s recommendations.

38.6. Only trained and qualified workers shall perform rigging and signaling tasks.

38.7. Prior to conducting a lift, Contractor shall ensure the crane is on firm ground and within the degree of level specified by the crane manufacturer.

38.8. Cranes shall maintain a minimum of 20-foot clearance from all overhead power lines.

38.9. Prior to conducting a critical lift as defined by Company, Contractor shall establish and implement a task-specific lifting plan.

38.10. All workers shall be clear of a load before it is picked up and shall remain clear at all times. Workers should face the crane, side boom lift, or gin pole truck in full view of the crane operator and/or signal man. Workers, including those holding the tag line, shall never be under suspended loads or go between the load and other objects where they may be trapped or crushed.

38.11. The crane operator shall not leave the controls while a load is suspended.

38.12. Use non-conducting tag lines to control all suspended loads. Chains or steel cables are not acceptable. Tag lines shall be attached before a load is lifted.

38.12.1. If tag lines are impractical during final positioning of the load, exercise caution to ensure that no part of the person’s body guiding the load is between the load and other objects where they may be trapped or crushed.

38.12.2. No attempt to guide a load shall be made with the tag line wrapped around a hand or waist.

38.13. A signal person shall be used if the crane operator does not have full view of lifting operation. Where practical, the use of radios or other communication equipment is also recommended. The crane, side boom lift, and gin pole operator shall respond only to signals from the signalman, but shall obey a stop signal from anyone at any time.

38.14. The crane, side boom lift, and gin pole operator shall inspect lift lines, rigging, slings, and crane and gin pole fittings/fasteners daily when in use or prior to each lift and replace if necessary. The equipment shall be properly rated for the intended load and certification tags attached to all slings. All wire rope clamps shall comply with OSHA’s standards set forth in 29 CFR §1926.251. Wire rope shall not be secured with knots.

38.15. The operator shall inspect all cranes and gin pole trucks prior to use. Cranes shall be load marked per OSHA’s standards set forth in 29 CFR §1910.179 and 1926 Subpart CC. In addition, cranes shall have the most recent inspection records posted in the cab. All deficiencies found with safety devices and operational aids shall be corrected before using the crane.

38.16. Operational procedures and load charts shall be available in the cab of the crane.

38.17. Contractor shall not use a crane to pull a load sideways.

38.18. A crane boom shall not be used as a ladder for walking, except for necessary maintenance of the boom and its components.

38.19. When not in use, Contractor shall keep the crane boom or gin pole mast in the cradle, when feasible.

38.20. For rigging, Contractor shall not use a chain when it is possible to use a wire rope. Contractor shall determine the load weight before rigging it, and Contractor shall not exceed the safe working load of any equipment.

38.21. Before being unhooked, Contractor shall safely land and properly block all loads.

38.22. Contractor shall not shorten wire rope slings and chain by tying knots in them or by wrapping them around the crane hook. Contractor shall cover or blunt protruding ends of strands in splices on slings.

38.23. Contractor shall protect slings from sharp edges by blocking or protective pads. When multi-leg slings are used, Contractor shall evenly load each leg of the sling.

38.24. Contractor shall remove kinked wire rope slings from service. Keep wire rope lubricated and free from corrosion.

38.25. All hooks shall be of the approved safety hook type to prevent slings from being accidentally released by the hook. Contractor shall not use job or shop hooks and links, or makeshift fasteners formed from bolts, rods, or other such attachments.

38.26. All hooks, running ropes, and hoist chains shall be inspected regularly and before each use to ensure that they are in good working condition.

38.27.

39. DRILLING AND WELL SERVICING OPERATIONS

39.1. Contractor shall install and test derrick guy lines and ground anchors in accordance with the manufacturer's specifications.

39.2. On drilling or well service derricks where there is a risk of the primary escape line route being blocked or otherwise compromised, Contractor shall provide an auxiliary means of escape through the installation of a properly designed and installed auxiliary escape line.

39.3. Any device used to attach safety lines to the derrick shall have a breaking strength equal to or greater than the combined breaking strength of all lines attached to it.

39.4. Workers shall wear appropriate PPE when working with or adding chemical to the chemical pot on the boiler or anytime a potentially harmful chemical is being handled.

39.5. Contractor’s third-party rig manager/tool pusher shall be experienced and have the appropriate training required to oversee exploration, drilling, and well servicing activities. The rig manager/tool pusher shall have a current well control certification.

39.6. Contactor shall contact Company prior to depressurizing lines or vessels to determine if any site-specific safety procedures are required. Hazards may include exposure to petroleum hydrocarbon liquids and gases, release of liquids and gases (toxic and/or flammable) to the environment, and fire.

39.7. Contractor shall hold a pre-job safety meeting before a derrick is raised or lowered. The rig manager/tool pusher or other Competent Person shall make a pre-lift or lowering inspection of all equipment associated with the derrick raising or lowering operation. Once a derrick is raised, a Competent Person shall visually check the derrick for proper setup and to ensure derrick is properly secured.

39.8. The rig manager/tool pusher or a Competent Person shall be present and in charge of the telescoping, raising, or lowering of a derrick.

39.9. When a mast section is being hoisted, Contractor shall only attach rigging to designated lifting points on each section of the derrick.

39.10. Except for the rig operator at the controls, no worker shall be on or beneath the derrick during telescoping or while raising or lowering of the derrick.

39.11. Contractor shall equip diesel engine-powered equipment being placed within 75 feet of a wellhead or an active oil and gas facility with a positive air shutoff. Contractor shall install the air shut off in such a manner that it is immediately available to the equipment operator.

39.12. Contractor shall test the draw-work brakes on drilling or service rigs at the beginning of each shift to ensure that they are in good working order. Contractor shall inspect the brake linkages, equalizer mechanism, and associated equipment at the same time and document the inspection.

39.13. Unless the draw-works is equipped with an automatic feed control, the operator shall not leave the brake without setting the brake and securing the brake handle with the hold down chain. Except during drilling, the operator shall not leave the draw-works controls while the hoisting drum is in motion.

39.14. Where a hold down chain is used to secure the draw-works brake handle, Contractor shall provide the slot for holding the chain with a seat. Where a side lug is provided, it shall be curved upwards to prevent accidental disengagement of the hold down chain.

39.15. The rig manager/tool pusher and drill stem testing operator shall coordinate the safety of the drill stem test operation and conduct a pre-job safety meeting to ensure all safety regulations are outlined and followed during the operation. The drill stem test operator shall be responsible for coordinating all other third-party contractors' procedures and operations in order to ensure that all workers involved in the drill stem test operation are not subjected to hazards and unnecessary risks.

39.16. Contractor shall ensure that:

39.16.1. The maximum safe operating parameters of a rig, based on the design of the equipment has been determined and certified by the manufacturer or a professional engineer;

39.16.2. The maximum safe operating load of a derrick is determined and certified by the manufacturer or a professional engineer;

39.16.3. The maximum safe operating depth and load rating of the rig and are not exceeded; and

39.16.4. A certified professional engineer shall make structural changes, additions, or repairs to a rig or overhead equipment. A professional engineer shall re-certify the maximum safe operating depth and load rating of the rig and derrick prior to putting the rig back into service.

39.17. Contractor shall install machine guards of sufficient strength and design to contain broken parts on the draw works and rotary table drives. Contractor shall install guards of sufficient height and design to prevent workers from coming into contact with the hoisting drums, brake assemblies, or other associated equipment.

39.18. Contractor may use a portable heater only for the service for which the manufacturer has approved it. Contractor shall maintain adequate ventilation to prevent a build-up of toxic gases. Contractor shall remove all flammables from the immediate area.

39.19. Prior to moving a rig, Contractor shall conduct a joint safety meeting with the rig manager, truck pusher, Company representative, rig personnel, and trucking personnel, as well as any other workers present.

39.20. The rig manager, truck pusher, and Company representative shall identify and discuss all safety concerns and potential hazards; establish procedures to address identified hazards (e.g., live wells on or near the site, power lines, unsafe sections of the route, obstructions, and construction); and confirm that there is adequate illumination.

39.21. Contractor shall not use the rotary table for final making up or initial breaking out of a pipe connection. The rotary table shall not be engaged when picking up a new single. The rotary table drive shall not be engaged until the rotary table is clear of workers and materials.

39.22. Contractor shall not handle or use hoses, lines, or chains near the rotary table while it is in motion. Crowbars, pry bars, and cheater bars shall not be used to shift the Kelly bushing into place.

39.23. When visibility on the rig floor is obscured, no worker shall work on the rig floor while the rotary table is in motion. The use of non-slip floor material around the rotary table is recommended.

39.24. Prior to spud-in of a well, Contractor shall conduct a pre-spud safety meeting with all associated workers that includes a review of all safety issues in drilling the well, review of the emergency response plan, and completion of the drilling rig inspection form.

39.25. Contractor shall equip every drilling rig with a reliable weight indicator. When the indicator is suspended above the floor, Contractor shall secure the indicator by means of wire rope or chain safety line and make it clearly visible from the driller's position.

39.26. During the servicing of a well, Contractor shall locate the air intake and exhaust of the pump motor not less than 20 feet from the rig tank, up wind of the wellhead and service rig, when circulating hydrocarbons.

39.27. During loading or unloading operations, Contractor shall locate the tank truck vent at a distance of not less than 20 feet upwind from the wellhead, rig, and rig tank.

39.28. Contractor shall not conduct well swabbing operations after sundown without adequate lighting.

39.29. In high benzene, H_2S areas or where air quality is a concern, the gauger shall wear respiratory protection equipment when an external means of gauging is not provided. At times when respiratory protection equipment is required, another fully equipped and trained worker shall constantly monitor the gauger during tank gauging operations.

39.30. During swabbing operations, Contractor shall pipe swab fluids to a battery, flare pit, skid tank, or mobile trailer tank located not less than 150 feet (when possible, this shall be dictated by location size) from the well bore.

39.31. Contractor shall properly ground the swabbing truck with the truck engine shut off.

39.32. Tank truck drivers shall be out of the truck cab when the flammable fluids are being transferred by means other than the tank truck’s pump.

39.33. If Contractor provides worksite trailers or other temporary housing for its workers, the trailers and temporary housing facilities shall be located a safe distance from the facility, equipment, wellhead, worksite, overhead equipment, sewer manholes, operating equipment, and safety or fire-fighting equipment. Electrical wiring, fixtures, and stairs shall meet applicable building codes, OSHA specifications, and industry standards. All trailers shall be properly grounded.

39.34. Emergency response drills, pit drills, and trip drills shall be conducted on a regular basis to ensure workers are familiar with emergency action plans. Maintain written records of drills at the rig site.

39.35. Blow-out preventers (BOPs) shall be tested when initially installed and every two weeks thereafter. Some workover or drilling operations may require the BOPs to be tested every week or on a more frequent basis as needed. Written records of tests shall be maintained at the rig site.

39.36. Contractor shall place grating over the cellar in order to prevent workers from falling into the cellar. The grating shall be constructed of a material and design to support workers, tools, and anticipated loads. Wooden boards are unacceptable.

39.37. Contractor shall suspend all operations on or near drilling (as deemed necessary by rig manager/tool pusher or Company) and workover rigs, metal tanks, and equipment, and operations involving explosives (including, but not limited to, wire line perforating) until 30 minutes after an electrical storm has passed.

39.38. During drilling, completion, or servicing operations on gas wells with 5,000 psi or greater, Contractor shall install remote flare line igniters. Contractor shall install remote igniters during work on wells with high H_2S levels and any other locations where the venting of gas is deemed to be a necessity. Remote flare igniters shall not be needed when the well can be readily shut-in, such as during coiled tubing, snubbing, and flow back operations.

39.39. The use of rig elevators by workers to access the rig floor, tubing board, or derrick crown is prohibited.

39.40. Contractor shall only use low-pressure centrifugal pumps for casing, drill pipe, or work string fill up. Contractor shall not use high-pressure pumps unless a safety- or pressure-control valve is installed to prevent excessive pressure to the fill-up hose.

39.41. Workers shall not be on the catwalk or under the V-door area while the laydown/pickup machine trough is in operation. If Work needs to be performed in this area, shut down the laydown/pickup machine completely and secure the trough.

39.42. Use drip pans under equipment, motors, and other machines to contain any leaking hydraulic fluid, oil, transmission fluid, or other liquids.

39.43. If a radioactive source becomes stuck in a well, Contractor shall use special precautions to prevent damaging the source during recovery operations. If the source cannot be recovered, Contractor shall isolate the radioactive material by cementing it in place or by other means consistent with applicable regulations.

40. ISOLATION/PURGING OF EQUIPMENT

40.1. Contractor shall conduct purging as part of commissioning, repair, or decommissioning of lines and vessels in accordance with accepted industry practice, Company's site-specific procedures (if applicable), and in consultation with Company.

40.2. Contractor shall control or remove any harmful substance contained within equipment, pipes, and pipelines to eliminate any possible hazard during repair or modification work. Isolation equipment (blind flanges, double block and bleed, or other Company approved methods) used for this purpose shall be of sufficient rating to withstand 125% of the highest pressure anticipated. Clearly mark the unit to indicate that the isolation equipment has been installed.

40.3. Where equipment or lines could contain a substance that is hazardous to health or safety, Contractor shall ensure that the worker wears the appropriate PPE as identified in the Job Safety Analysis while performing the Work.

41. PIPING SYSTEMS AT WELL SITES

41.1. Contractor shall ensure that piping systems installed and maintained at a well site are designed, constructed, installed, operated, and maintained to safely contain any material at

the maximum operating pressures anticipated and in accordance with American Petroleum Institute (API) standards.

41.2. DOT jurisdictional piping systems at natural gas storage well sites shall conform to applicable 49 CFR 192 and Company requirements.

42. PRESSURIZED PRODUCTION EQUIPMENT

42.1. Contractor shall protect pressurized equipment with the proper pressure control devices in accordance with applicable regulatory requirements.

42.2. Contractor shall perform all repair and maintenance operations in accordance with LO/TO and Hot Work procedures outlined in this Manual.

42.3. The pressure setting on a relief valve shall not be changed without prior approval of Company. Clearly mark or tag the pressure set point on all relief valves.

42.4. Contractor shall direct relief valve exhausts away from areas where workers are likely to walk, work, or stand, and ensure no person places any part of their body directly over a relief valve. Direct flammable vapor release away from potential ignition sources, and whenever possible, maintain in a closed loop system.

42.5. Contractor shall properly support and extend each vent line that exhausts gas from a pressure relief device to a location that enables the gas to be discharged without hazard to equipment or workers.

43. VALVES AND EQUIPMENT

43.1. Contractor shall not hammer the plug of a plug valve during repair or maintenance activities. If greasing does not free the plug so it turns easily, recondition or replace the valve.

43.2. Contractor shall tighten and loosen pressure gauges with a wrench. Do not put strain on the case by tightening the gauge with hands.

43.3. Contractor shall exercise care when changing plates in the two-compartment type orifice fitting to ensure that the pressure in the outer compartment is bled off before bolts are loosened, preventing possibility of a dangerous discharge.

43.4. Do not attempt to pry open orifice flanges with wrench handles or screwdrivers. Use jackscrews.

43.5. Do not hammer on pressured equipment, piping, or fittings.

44. ELECTRICAL STORMS DURING SEISMIC DRILLING OPERATIONS

44.1. Contractor shall suspend all operations involving explosives until 30 minutes after an electrical storm has passed. This includes making up charges, loading holes, or going near charges and/or loaded holes. Workers should immediately move away from magazines, caps, and powder and, if carrying explosives, lay them down and move at least 100 feet away.

44.2. When feasible before the electrical storm arrives, Contractor shall lower the mast on seismic hole drilling equipment and move away from the drilling equipment and any nearby electrical lines.

44.3. Contractor shall disconnect all lines from the recording truck. Make sure cables and geophones are not touching fences.

44.4. Stay away from flammable/explosive materials, metal objects, trees, power lines, cables, and fences.

44.5. Suspend grounded vehicle operations and move clear of the vehicle.

44.6. Stay inside rubber-tired vehicles, but not under trees.

45. APPLICATION OF HERBICIDES ON COMPANY OWNED OR LEASED PROPERTY

45.1. When applying herbicides for the control of undesirable vegetation on rights-of-way and other Company owned or leased property, Contractor shall take every precaution to protect personnel and the environment. Contractor shall comply with all state, federal and local regulations pertaining to the application of herbicides, and the permitting requirements of the applicable Bureau of Land Management (BLM) district.

45.2. Definitions:

45.2.1. Commercial Applicator: A certified applicator that uses or supervises the use of any herbicide which is classified as restricted use or who uses or supervises the use of any herbicide during commercial application.

45.2.2. Commercial Application: The application of any herbicide performed by contract or for hire

45.2.3. Restricted Use Herbicide: Herbicide which can only be bought and/or used by a certified/licensed applicator per state or federal law. Usually noted on label.

45.3. Prior to application of herbicides on BLM land, Contractor shall ensure a valid permit is in place and follow all requirements pertaining to the permit

45.4. Contractor shall ensure all herbicides are handled in accordance with product labeling including storage, handling, use and disposal requirements.

45.5. Contractor shall provide licensing documentation and an herbicide treatment plan upon request from Company.

45.6. Contractor must confirm that herbicide usage is not restricted by any existing site-specific requirements, local permits, or regulations.

45.7. Contractor shall confirm that herbicide is approved for use in the state where it will be applied.

45.8. Contractor shall ensure herbicides are only applied by Commercial Applicators.

45.9. Contractor shall ensure the Commercial Applicator(s) are provided with and use personal protective equipment as required by the herbicide labeling.

45.10. Contractor shall adhere to the following work practices;

45.10.1. The application of herbicides shall be postponed until the risk of adverse weather conditions (e.g., rain, high winds, temperature extremes, etc.) is minimized.

45.10.2. Exercise extreme care to ensure no herbicides are allowed to migrate to non-Company properties. The use of coarse spray application is recommended.

45.10.3. Do not apply herbicides that can travel through soil to areas where the soil permeability is high or to areas where the water table is shallow.

45.10.4. Do not apply an herbicide in or around any water way or drainage system, or where erosion and water runoff will take the treated soil in the event of heavy rain.

45.10.5. Use short-life herbicides in areas where heavy precipitation increases the risk of contamination to non-target areas

45.10.6. Select herbicides which are effective on the plants targeted without damage to desirable vegetation.

45.10.7. Contractor shall immediately notify Company if any amount of herbicide is spilled.

46. BORING PROCEDURE USING DIRECTIONAL DRILLING WHEN CROSSING SEWER LATERALS

46.1. Ensure the directional drilling equipment has a strike indicator and a grounding rod that has been properly installed.

46.2. Directional drilling equipment must be calibrated at the beginning of each day work is to be performed.

46.3. Depth and location of sewer main and lateral must be identified at each proposed gas crossing prior to directional drilling. Any sewer lateral that cannot be located and/or exposed prior to drilling must be videoed when permitted by city or other applicable municipality no more than 48 hours after the drilling process.

46.4. Contractor must submit an inspection report, if camera of sewer line is permitted by the city or municipality, to Company containing at a minimum: project address, manhole locations, sewer main size and material, sewer lateral tap address, stationing from manhole, tap type and depth, depth at proposed gas crossing, pipe defects or anomalies, and photos.

46.5. If the bore will come within two feet of where a sewer lateral or main is detected, the sewer must be exposed prior to directional drilling or other reasonable precautions shall be made to ensure bore unit will not come in contact with the sewer.

46.6. When pulling the pipe through the previously bored hole, ensure the pipe is not excessively stressed or strained.

46.7. After pulling pipe, allow sufficient time (at least 30 minutes) before completing the final tie-in.

46.8. When required by Company, a directional drilling profile will be submitted upon completion and include: stationing, depth, location, and size of all utility crossings."

46.9. When required by Company, an inadvertent return contingency plan shall be developed by Contractor and submitted to Company prior to initiating directional drilling activities.

47. WORKING OVER, IN OR NEAR WATER

47.1. Contractor shall follow the elevated work requirements in Section 11 where workers are working at height over or near water.

47.2. When work areas are more than 25 feet above the ground or water surface, and the fall protection requirements of Section 11 are not feasible, the use of safety net(s) is required. When used:

47.2.1. Nets must be certified and labeled by the manufacturer to meet an impact resistance of 17,500 foot-pounds. Ropes used to secure nets must have a minimum breaking strength of 5,000 pounds.

47.2.2. Forged steel safety shackles or hooks must be used to fasten the net to its supports.

47.2.3. The mesh of nets must not exceed 6 inches by 6 inches.

47.2.4. Nets must extend 8 feet beyond the edge of the work surface.

47.2.5. Nets must be hung with sufficient clearance to prevent a user's contact with any structures below, as close to the work surface as practical, but in no case to exceed a distance of 25 feet.

47.3. When working near, over or in water or from piers, boats, barges or other work platforms where the danger of drowning exists, workers must be provided with and properly don United States Coast Guard-approved life jackets. Life jackets must be inspected prior to use for any defect that might affect strength or buoyancy, where such defects are found the jacket must be immediately removed from service.

47.4. Ring buoys shall be a minimum of 30 inches in diameter with a minimum of 90 feet of 3/8-inch nylon or equivalent lines shall be readily accessible for emergency rescue operations. A sufficient number of rings shall be provided so as to limit travel access distance to less than 200 feet.

47.5. At least one watercraft must be available where workers are working over, in or adjacent to water where the danger of drowning exists. The watercraft shall be properly equipped and registered/licensed as required by federal, state and/or local regulations, shall be operated by knowledgeable persons and be readily available for emergency lifesaving.

48. SANITATION

48.1. Contractor shall ensure an adequate supply of potable water is provided at the jobsite.

48.2. Contractor shall provide a toilet and handwashing facility at all mobile jobsites where employees do not have nearby access to such facilities. For the purpose of this paragraph, “nearby” means prompt access, sufficiently close so that employees can use the facility when they need to do so.